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Remarks
ON
THE OPERATION OF ILEOSTOMY FOR ORGANIC DISEASE OF THE CÆCUM CAUSING OBSTRUCTION.

By THOMAS BRYANT, M.Ch.,
PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS, CONSULTING SURGEON TO GUY'S HOSPITAL, ETC.

THE operation of enterostomy as first performed by Nélaton, and strongly advocated by Trousseau, has never found much favour with British surgeons, and at the present day, when a general experience tells us that we may deal as boldly with the peritoneum and the viscera it encloses as with any other portion of the human frame, it is never likely to become common, since at its best it can rarely be more than a temporising measure, and only indirectly a curative one. That it may be the means of relieving some of the most urgent and distressing symptoms of obstruction as well as of prolonging life is not to be disputed, and that by so doing it may give nature an additional chance of removing the cause of the obstruction is equally clear; but it can do nothing in a direct way towards restoring the continuity of the intestinal tract when mechanically closed. Nevertheless, the principle of the operation is good, and the measure itself, even as it has been practised, has a distinct place in surgery, and must be regarded as a valuable addition to the surgeon's means of giving relief, when applied to the right class of cases and carefully performed. As an operative measure it has, however, a weak point, and that is the uncertainty which the surgeon always feels as to the anatomical position of the coil of distended intestine which he may have opened, for Nélaton's directions were to open the coil of bowel which presented at the wound which was made in the right iliac fossa. If the coil which presented happened to be low down in the ileum, all might be well; but if it happened to be a coil of jejunum, failure must soon follow, for the patient would die of inanition. It follows, therefore, that some method is wanted by which the surgeon can be guided towards the lower part of the ileum; and as in the following case I think I have discovered a way by which this desirable end may generally be secured, I have taken the present opportunity of bringing it before my professional brethren. The operation I am about to describe may well be called "ileostomy."

On Nov. 25th I was asked by Dr. Knaggs of Camden-road to see with him a lady aged sixty-two, the mother of nine children, who, although for three years subject to a winter cough, had otherwise been healthy up to last May, when, to quote Dr. Knaggs, who kindly favoured me with the history of the case, "she had a severe attack of flatulent dyspepsia, followed by diarrhœa, and for which all the usual remedies were tried in vain, including opium, sulphuric acid, chalk mixture, calomel in small doses, &c. By careful dieting and the frequent use of starch and opium enemata the diarrhœa subsided, and she became sufficiently well to get about again. At that time there were no signs of any tumour or of any abnormality of the abdomen. The patient then went out of town and returned apparently well. A month afterwards, on Oct. 20th, the diarrhœa again returned and a swelling made its appearance in the right iliac fossa; this gradually increased in size, but subsequently appeared to vary according to the state of the bowels—that is, after relaxation the tumour became smaller, and after a starch and opium enema it increased. The abdomen generally was distended."

On my visit on Nov. 25th I found a spare woman of fair power with a distended and tympanitic abdomen, the enlargement being very central and below the umbilicus. The loins and epigastric region were comparatively flat. Coils of small intestine were very visible through the thin abdominal parietes, and peristalsis was very visible. In the right iliac fossa there was an irregular swelling with ridge-like projections upon its anterior surface; firm pressure upon this caused pain, but made no impression upon the outline of the swelling. I regarded this swelling as being due to tumour, which I feared was of a carcinomatous nature. Under these circumstances I advised her to undergo an operation, based on the lines of colotomy for rectal stricture, and determined to open the lower part of her ileum before it joins the cæcum at the ileo-cæcal valve. Whilst arrangements were being made for this operation I advised the external application of belladonna and glycerine to the abdomen, the use of a four-ounce nutrient enema with opium in it, alternating with a nutrient suppository, every four hours, and a little fluid to be given by the mouth in spoonfuls every half-hour. For the purposes of operation I had her removed to Bolingbroke House, Wandsworth Common, a nursing home, in which she could be well nursed and looked after.

On Dec. 1st I performed the operation, aided by Mr. F. Burghard and the house surgeon, Mr. Lyster, by making an incision about two or two and a half inches long in the direction of the right semi-lunar line, with its centre corresponding to a line drawn across the abdomen from one anterior superior spinous process of the ilium to the other. Each layer of tissue was divided *seriatim*, and all bleeding was arrested by torsion and hot iodine sponges. When the peritoneum was reached it was carefully picked up by forceps and opened the whole length of the wound, when a coil of distended small intestine appeared at the wound. The two edges of the parietal peritoneum were now seized with tenaculum-pointed catch-forceps and held aside whilst I introduced my right index finger, which, having pushed aside the coil of intestine which presented itself, came down at once upon the cæcum, and in less time than I can write this line I hooked up the ileum just as it was about to join the cæcum at the ileo-cæcal valve. The bowel was distended, and its walls were very thick—this condition clearly indicating the chronicity of the obstructing cause.

I stitched this portion of the bowel to the parietal peritoneum by means of fine chromicised catgut sutures, and passed the sutures through only the serous and muscular coats of the bowel and the free edges of the divided parietal layer of the peritoneum. I then brought the angles of the wound together by sutures, and introduced two silk loops into the walls of the bowel to serve as guides to the second part of the operation, when the intestine will have to be opened in the course of two, three, or more days. The wound was finally dusted with iodol and boracic acid (one part to four), covered with some cut-up fragments of iodoform gauze and a layer of wood-wool tissue, and bandaged up. A suppository of one grain of the extract of belladonna and of opium was administered, and directions were given that the patient should be fed every three or four hours by nutrient four-ounce enemata, alternating with nutrient suppositories, and brandy and water was to be given by the mouth, in spoonful doses, if required.

Dec. 2nd.—The patient had passed a quiet night, and had slept at intervals. She had taken some spoonfuls of brandy and water. At 8 A.M. the temperature was 100°; pulse 88. Suppository of belladonna and opium (half strength) to be given.

3rd.—Had had a quiet twenty-four hours; very little pain; no sickness. Temperature 99·4°; pulse 86; urine normal.

4th.—This being the third day after the operation, the wound was examined, and it looked well. The intestine was then opened. The line of incision into the bowel was rendered easy by means of the guiding silk loops that had been introduced for the purpose. If these had not been in, much uncertainty would have been felt as to the right point of puncture. Flatus passed freely from the bowel, which at once collapsed. Some motion also soon passed by the rectum, which was then washed out, and food was ordered to be given by the mouth.

6th.—Doing well, though troubled with some bladder irritation. Temperature normal.

A daily report of the progress of this case is not necessary, as the operation wound went on well, and within three weeks the artificial anus was fairly established, and the motion which escaped from the wound was healthy and semi-solid. The patient herself improved in spite of her bladder trouble, which was a source of distress. The abdominal swelling and pain also disappeared, and the prognosis of the case may be said to be favourable.

Remarks.—In the case related it will be noticed that

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the object I had in view was to open the ileum just above the ileo-cæcal valve; for the working diagnosis made of the case was that of carcinoma of the cæcum. The operation determined upon was therefore on the lines of a lumbar colotomy for rectal stricture—that is, it had for its object the formation of an artificial anus above the seat of the intestinal obstruction. With this view I made my incision in the right semilunar line, its centre corresponding with a horizontal line drawn across the abdomen from one anterior superior spinous process of the ilium to the other, and the incision made was about one and a half to two inches in length. Through this incision, when all bleeding had been arrested, I passed my index finger, and pushing aside a coil of distended small intestine, and coming down upon the inner border of the cæcum I at once hooked up the ileum and brought it to the surface. It is to be noted that the coil of small intestine which first presented itself was not the coil which was wanted. The bowel was very thick, and felt like a stomach. It had evidently, from over-work, become much hypertrophied. The bowel was then sutured to the parietal peritoneum by six fine chromicised catgut sutures, three on each side, and care was observed not to pass the sutures deeper than the muscular layer of the intestine. Where the wound tailed off at either end, a suture was passed through both edges of the divided parietal peritoneum, as well as through the muscular walls of the bowel itself. The outside wound was then brought together at both ends by a few sutures introduced through the skin and muscles of the opening. The bowel was not opened at the time of operation, but two guiding loops of silk were passed through the serous and muscular coats of the bowel, to indicate to the surgeon the exact position at which, later on, the opening into the bowel should be made. And let me add that without this aid great difficulty would have been experienced, and consequently danger, in completing the operation; for on the third day the whole surface of the wound when exposed was covered with granulations, and there would have been no guide whatever to indicate the point at which the puncture could, with safety, be made, whereas with the guide the completion of the operation was effected with certainty and precision. In an urgent case the bowel would have to be opened at once; the opening, however, need not be a large one, and Nélaton's directions to make it about a quarter of an inch long should be followed. At a later period the opening can easily be enlarged and without pain, the bowel having no sensitive nerves. In my own case I made the opening about half an inch long. For the first three days after the first stage of the operation was completed the patient's powers were kept going by means of small nutrient enemata alternating with nutrient suppositories, administered every three hours, and a teaspoonful of brandy and water by the mouth every half-hour. A belladonna and opium suppository was given after the operation. After the bowel was opened and relief was afforded to the obstructed intestine, food was ordered by the mouth, and was well retained. The patient is now, nearly five weeks after the operation, convalescent, and her general condition has much improved. The bowel empties itself without pain through the artificial anus as well as through the normal channel. This operation which I have just described, and which for purposes of clearness may be called "ileostomy," is as applicable to examples of chronic obstruction of the cæcum from organic disease as is left lumbar colotomy for chronic obstruction of the rectum. It is, moreover, applicable to cases of acute or chronic ileo-cæcal intussusception in which, from some cause or other, the opportunity for opening the abdomen has been lost, or the time for doing it has passed, and in which relief to symptoms is urgently called for. It will also, in practice, be doubtless found to be applicable to other cases when no other means of giving relief can be suggested. Should the lower end of the ileum in any given instance be found not to be the right coil to be opened, the most distended one which presents, as advised by Nélaton, may be taken as a substitute, and the operation turned into one of Nélaton's enterotomy cases. The operation is not a difficult one, and in extreme cases, where an anæsthetic is likely to be dangerous, it might be done even without its aid. If the surgeon follows the method I have just described in this paper, he will, I am convinced, be as pleased with the operation as I was; and if he gives his patient the relief my operation of ileostomy has given mine, he will not be unwilling to repeat the measure in an appropriate case.

Clinical Lecture
ON
TOXIC HYSTERIA.

Delivered at the General Hospital, Birmingham, on Monday, March 3rd, 1890,

BY ROBERT SAUNDBY, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—The case I am going to show you to-day belongs to a curious group of nervous diseases which have been described as toxic hysteria. So far as I am aware, it has never been recognised in this country, and the only reference of the sort in any English journal is a brief account of a case of hemianæsthesia ascribed to lead poisoning, included by Dr. Allen Sturge in a paper published in the *British Medical Journal* for 1878, vol. i., p. 783. This case was seen by him in Paris under the care of Dr. Lépine; and it is entirely to French authorities that we owe the recognition of the curious relations that appear to exist between chronic intoxications—e.g., by lead, alcohol, &c., and certain hysterical phenomena. These have been almost exclusively observed in male patients, and under circumstances where, as in the case I am about to relate, an error of diagnosis might easily be made by anyone unacquainted with these relations, or at least great difficulty might be experienced in forming a conclusion as to their true nature. I am therefore glad of this opportunity, as one that may not soon recur, and I trust you will store this case in your memories as a remarkable illustration of that protean disease, hysteria, which lurks under so many strange shapes, to the confusion of our art and not seldom to its discredit.

John W. T——, aged thirty-seven, storekeeper, was admitted Jan. 2nd, 1890, complaining of stiffness, weakness, and numbness of the left leg, arm, and hand, and also of some numbness and stiffness of the right hand.

Family history.—His father died aged forty-two, his mother aged twenty-five; causes of death unknown. One brother living, aged forty-two, in good health; one sister died, aged thirty-two, of dropsy and jaundice.

Previous history.—The patient remembers no illness, except a feverish cold with which he was confined to the house for a fortnight when he was seventeen, until twelve years and a half ago, when he had a quinsy, followed by what he calls "lock-jaw," for which he was treated in the Queen's Hospital. This got well, but about the same time a numbness or tingling sensation came on in the feet, legs, and thighs, which gradually disappeared. His present illness began two years and a half ago with severe headaches, which were always worse on Sunday morning. On Saturday nights he worked until 11 o'clock, but on all other evenings he left work at 6 o'clock. After six months the headaches left him, but he began to feel a tingling in the left forefinger, which in the course of three months spread to all the fingers of the left hand, and by the fifth month had spread to the wrist. At the end of a year the left arm was affected by numbness, tingling, coldness, and loss of muscular power. The left foot and leg were then attacked by similar symptoms, which gradually reached as far as the knee. Six months ago the right hand began to be similarly affected, but in a much slighter degree. For the last two years his bowels had been very constipated, being opened about once a week, and then only by means of medicine. His work had been to serve out stores, and amongst these he had to give out white lead, which was kept in a barrel, from which he dug it out with a spade, causing a good deal of dust. He also had to give out turpentine, and to this he himself attributes his illness. He was constantly exposed to changes of temperature. He was a very moderate drinker, and denies having ever had syphilis.

Present condition.—The patient is a fairly well-developed, sparely nourished man, with an anxious expression of face. His left arm is firmly flexed at the elbow, wrist, and fingers, the thumb being adducted and flexed under the fingers. Teeth carious, no blue line on gums; tongue clean; appetite

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good; bowels confined; liver and spleen normal; heart normal; lungs normal; pulse 72, regular; respiration 18. He complains of frequency of micturition and that he cannot hold his urine so well as he did; quantity normal; contains no albumen, sugar, or bile, but there is $\frac{1}{15}$ gr. of lead to the pint. Generative functions normal.

Nervous system.—Special senses normal. No diminution of field of vision or colour-blindness in either eye. Plantar reflex diminished on the left side. Ankle clonus present on both sides, but more marked on the left. Patellar reflex exaggerated on the left side. Complete analgesia without anæsthesia over the left forearm and hand; elsewhere sensation unaffected; electrical reactions of muscles of forearm and leg are quite normal. Both the left arm and left leg are weakened. In bed he keeps his leg stiffly extended at the knee and flexed at the ankle to a right angle, and in walking he maintains the leg in this position, although, when asked, he can flex the knee, draw up the thigh, and extend the ankle. If one attempts to flex the knee, it is easy to feel that the resistance increases with the force used. There is very slight wasting of the muscles of the forearm and leg. Girth of forearms, right $9\frac{3}{4}$ in., left $9\frac{1}{2}$ in.; girth of calves, right 13 in., left $12\frac{3}{4}$ in.

On Jan. 25th he was put under chloroform, when the spasm of the left arm became quite relaxed. The limb was put on a splint, and when consciousness returned the spasm did not recur. He says his leg is "always worse in the morning (visit hour) and when anybody is looking at him." When asked to execute particular movements of his leg, or arm, the limb is often thrown into violent clonic spasms, which may extend to the whole of the same side and are attended by obvious nervous excitement.

March 2nd.—His hand and arm are still cyanosed, but the spasm has entirely gone. He still walks badly, holding the limb in the same rigid position. The analgesia seems to be almost if not entirely absent.

This is a case of hysterical spastic hemiplegia. It may be distinguished from the spastic paralysis of organic disease by the following circumstances: 1. Primary spastic hemiplegia is unknown as a disease of adult life; there is no history here of an apoplectic seizure, but of a slowly progressing paralysis. 2. There was analgesia of the affected forearm; whereas in organic disease sensation would be unaffected. 3. The gait differs from that of organic disease in the foot being flexed instead of being extended in the talipes equino-varus position. 4. The spasm is not constant; when standing he can point his toes and flex his knee. 5. Very slight wasting has occurred in spite of the paralysis having existed more than eighteen months. 6. The spasm relaxed completely under chloroform, and has not recurred at the wrist and elbow. 7. The continued improvement which has taken place under simple treatment.

Some years ago I met with a very similar case, which I recorded at the time in the *Birmingham Medical Review* (vol. ix., 1880, p. 274). The patient, Joseph W——, aged thirty, was a house painter, who attended as an out-patient in May, 1880, complaining of pain in the chest. He had a strong blue line on his gums, and was treated for lead poisoning. Six weeks after coming under observation he came up to show his left hand, which was firmly clenched and cyanosed. He stated that three days previously, while he was at supper, both hands became spasmodically flexed so that "he could not let go his knife and fork." This passed off in about half an hour, but the following morning the left hand, as he expressed it, "went altogether." The fingers were firmly flexed on the palm, the thumb lying over the fingers. The skin of the affected hand was cyanosed, and felt colder than on the opposite side. There was slight numbness, but no anæsthesia at first. On applying gold to the affected arm for twenty minutes there was complete anæsthesia of the opposite (right) forearm and hand; while, on applying the gold to the right arm sensation completely returned, but disappeared in the corresponding parts on the opposite (left) side. This is the hysterical phenomenon described by Charcot as "transference." The muscles reacted well to faradaism, and under treatment by this current the power of extending the fingers gradually returned, while the anæsthesia disappeared; but he began to complain of pain in the course of the sciatic nerve, with jerking of his leg. Soon after this he was brought into the hospital and treated in the surgery for what was regarded as a "hysterical" fit, and a few days later he returned with his hand as firmly contracted as ever. He then complained of a choking sensation, "as if a ball was coming up in his throat" (the familiar globus hystericus). Still later in the same year he was brought into hospital in a cataleptic condition, having had a fit in the street. His hand was easily moulded, placed on a splint, and fixed so as to maintain the extended position. After a few days the splint was removed, without the hand showing any tendency to resume its contracted state, and he was dismissed with a caution. He was known to have kept well up to December in the same year, after which time he was lost sight of. There could be no doubt as to the hysterical nature of this case, but, influenced by the writings of the French school, I was at first inclined to attribute the contracture and anæsthesia wholly to the lead poisoning. Later on, after he had been brought to the hospital in a hysterical fit, I learned he had been subject to such fits since he was fourteen years of age; he himself called the attacks "hysterics." Seven or eight years previously he had had an attack of tremor in the right arm. His family history was free from any evidence of neuropathic tendencies, but he was a house-painter before his first fit occurred.

In the light of the second case, and for the reasons already given, I have no hesitation in classing the first case as one of hysteria, but I had considerable doubt as to the importance to be attributed to the influence of lead, to which he had been exposed, and which the analysis of his urine showed had, to an appreciable extent, entered his system. Having looked in vain for any recent reference to the subject in the books at my disposal, I wrote to Professor Debove, who eleven years ago published two cases under the name of "Saturnine Hemiplegia,[1] and got in reply a reference to a more recent paper of his own, which I have not been able to obtain, and to a pamphlet by a Dr. Hischmann,[2] entitled "Intoxications et Hystérie," in which may be found a very clear account of what has been written on the relations of hysteria to chronic poisoning by lead, alcohol, and mercury. It seems to be now fully admitted by Professor Charcot and his followers that the nervous phenomena are truly hysterical and depend upon a fundamental hysterical diathesis. The part played by the poison is now regarded as merely that of an exciting cause. In reference to this Dr. Hischmann says: "It is even permissible to ask whether, in the absence of the poison, the hysteria would have shown itself? The question is difficult to answer, but one may suppose that, had there been no poisoning, it would have probably found some other exciting cause, such as a traumatism or a vivid moral impression."

Dr. Hischmann especially points out that these hysterical paralyses cannot be confounded with true toxic paralyses, as the electrical reactions, as we found in the present case, are always normal, whereas it is well known that in true toxic paralyses—e.g., in lead palsy—the faradaic contractility is more or less lost. Besides the symptoms described, cases have been recorded of apoplectic and epileptic seizures, transitory aphasia, hemianæsthesia, oculo-motor paralyses, unilateral blindness and colour blindness, mutism, and even paralysis of the extensors of the hand and wrist simulating in its localisation the ordinary drop-wrist of lead palsy, yet all of these of a hysterical nature. It is remarkable that this association of hysteria with lead has been almost exclusively observed in men, so far only one female case having been recorded.

Prognosis.—A cure may always be looked for in all hysterical affections, but it may be a long time coming. It is of the greatest importance to be sure of your diagnosis, and then to insist upon the essentially curable nature of the disease.

Treatment.—The treatment of these cases should be twofold. By the administration of iodide of potassium we may promote the elimination of the lead which has accumulated in the system, while, perhaps, acting through the imagination, we seek to get rid of the motor trouble. Several of the French cases have been cured by the application of a large magnet to the affected side, and in several cases the characteristic phenomenon of transference, or passage of the analgesia to the corresponding limb on the opposite side, has been observed. Others have been cured by the douche, others, again, by a weak galvanic current, especially when applied to the skin by means of a brush electrode. We have tried the douche

[1] Le Progrès Méd., 1879, Nos. 6 and 9
[2] Paris, G. Steintheil, 1888.

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for our patient, and he has greatly improved under it; he is now getting galvanism daily. He has also taken a mixture containing iodide of potassium and magnesium sulphate. We have not used isolation and massage, the value of which we have so often demonstrated in female hysterical patients, because we have no male isolation ward in which it could be carried out, but we have no doubt it would prove equally effective.

THE FILARIA SANGUINIS HOMINIS MAJOR AND MINOR, TWO NEW SPECIES OF HÆMATOZOA.

BY PATRICK MANSON, M.D., M.R.C.P., LL.D.

ON the 10th of November last Dr. Stephen Mackenzie very kindly invited me to examine the negro Mandombi,[1] then lying in the London Hospital, suffering from the "sleeping sickness of the Congo." Dr. Mackenzie told me there were filaria embryos in Mandombi's blood, and that he had remarked certain peculiarities about them—viz.: 1. They did not observe the periodicity characterising filaria embryos in the human blood, but could be found there at all times, whether by day or by night. 2. The embryos did not appear to be all of the same size. 3. They could not be kept under continuous observation during several days, as hitherto had been frequently done with similar parasites in other cases of filarial infection, but disappeared in some mysterious way from the slides after a very few hours.

On the occasion of my first visit—made about 3 P.M.—being principally interested in his "sleeping sickness," and not suspecting anything unusual about his parasites, I made but a very cursory examination of Mandombi's blood. I did, however, examine one filaria embryo with a high power, and I have a distinct recollection that it possessed a sheath, and seemed in every other respect like the ordinary filaria sanguinis hominis I was familiar with. On the 2nd of December Mandombi was reported to be dying, and Dr. Mackenzie, with a view to the anticipated post-mortem examination, again very kindly requested me to see him and to examine his blood, especially in reference to the blood parasites. I visited the patient at 9 P.M., and remained with him till 11 P.M., examining and preparing many slides of his blood. The first slide examined was a large one—one inch and a half by one inch. In it I counted thirty-three active filaria embryos. Although this examination was made with a low power, I could easily see that some of the parasites were much smaller than others; and I also saw that the style of movement indulged in by the smaller variety differed somewhat, in some instances, from that of the larger. The latter, which I propose for the time being to designate "filaria sanguinis hominis major," resembled the ordinary filaria of the blood, as described by Lewis and others; and, at this time, I had no doubt it was this parasite. The smaller parasite, which I propose to call "filaria sanguinis hominis minor," exhibited a greater locomotive tendency than its larger companion. This circumstance, together with the difference I observed in the sizes of the parasites, led me to make a very careful examination with higher powers of the microscope of Mandombi's blood worms. As a result of this examination, and of subsequent study of the filaria embryos in the blood of three other negroes, I have come to the conclusion that man is liable to be the host of at least two, if not three, distinct species of filarial hæmatozoa.

Mandombi died a few hours after my visit. Although at the post-mortem examination, made next day, there was no difficulty in procuring innumerable specimens of the two species of embryos, the parent form of neither could be discovered, notwithstanding a prolonged and careful search in every likely situation. All further study of Mandombi's parasites—at all events, of their behaviour in the blood during life—being at an end, it seemed that the opportunity of working out a very interesting point in helminthology had escaped us. Fortunately, however, within a very few days of this man's death I had the satisfaction of confirming, in an irrefutable manner, the truth of my conjecture as to the specific difference of filaria sanguinis hominis major and minor. For this opportunity I have again to thank Dr. Stephen Mackenzie. He informed me that he had had another Congo negro, S. C——, under his care in the London Hospital some time ago, but that, as the patient had begun to exhibit symptoms of insanity and was noisy and troublesome in the wards, he had been removed to a lunatic asylum. There Dr. Mackenzie and I visited him on Dec. 7th, and in blood drawn from his finger about 9 P.M. we found several filaria embryos exactly like the filaria sanguinis hominis minor of Mandombi. Though at that time, and many times subsequently, many slides of this man's blood were examined, I have not encountered in it one specimen of filaria sanguinis hominis major. This last, in conjunction with other considerations, was sufficient to prove that the one type of embryo is not a transition form of the other, nor in any way connected with it, but that the two forms of hæmatozoa are specifically distinct. This is further borne out by the result of an examination I subsequently made of the blood of three other negro lads from Old Calabar. For this opportunity I am indebted to the kindness of Dr. Grattan Guinness. In the blood of one of these I found nothing abnormal, but that of the other two contained filariæ; one of them, R. M——, had, like S. C——, only filaria sanguinis hominis minor, but the other, R. H——, like Mandombi, had both filaria sanguinis hominis major and minor. And, strange to say, just as in Mandombi, the major filaria was observed to be circulating in the blood during the day, although R. H—— was in perfect health, and went to bed and got up at ordinary hours. I have carefully scrutinised and measured this lad's filariæ sanguinis hominis major with the view of ascertaining if they are in any respect different from the ordinary filaria; but, as far as I can make out, with the exception of some slight differences, they seem nearly identical. The slight differences I allude to are the absence in R. H——'s filariæ of the granular aggregation so frequently seen about the middle of the body of the filaria sanguinis hominis as described by Lewis and others, a more delicate investing sheath and more marked oral movements. These slight differences, together with a different periodicity, lead me to suspect that the African filaria sanguinis hominis major is not the same as the filaria sanguinis hominis of India, China, America, &c., but, like its companion, the filaria sanguinis hominis minor, that it, too, is an entirely new species. And if this is the case with R. H——'s major filaria, it was probably the case with Mandombi's, and we may conclude that the disturbance of periodicity remarked by Dr. Mackenzie was not an abnormality, but quite in conformity with the usual habit of the worm. The fact that Mandombi and R. H—— came from the same district on the Congo bears on this. As the filaria sanguinis hominis minor was alone found in the blood of S. C—— and R. M——, we are justified in regarding the concurrence of filaria sanguinis hominis major and filaria sanguinis hominis minor in Mandombi and R. H—— as a coincidence simply, just as we would the concurrence of two separate species of ascaris in the same intestine. A fortunate coincidence, it is true, as by presenting the two species together, and in contrast, attention was called to their specific differences, which otherwise might have been overlooked, as they have probably been overlooked by other observers less fortunately circumstanced.

To facilitate comparison I have arranged the distinctive features of these two species of hæmatozoa, as far as I have made them out, and of Lewis's filaria, in the following table:—

Filaria Sanguinis Hominis. (*Lewis.*)	*Filaria Sanguinis Hominis Major.* *Fig. 1.*	*Filaria Sanguinis Hominis Minor.* *Fig. 4.*
1. Measures 1-80 in. by 1-3500 in., or thereabouts. (Lewis.)	1. Measures 1-80 in. by 1-3500 in., or thereabouts.	1. Measures 1-125 in. by 1-5500 in., or thereabouts.
2. Is provided with a sheath.	2. Is provided with a more delicate sheath.	2. Has no sheath.

[1] For a report of this case see THE LANCET of Nov. 22nd, 1890 (Clinical Society's meeting of Nov. 14th, 1890).

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3. Caudal end tapers gradually for about one-fifth of the entire length of the animal, and terminates in a sharp or nearly sharp point.	3. Caudal end tapers gradually for about one-fifth of the entire length of the animal, and terminates in a sharp or nearly sharp point. Fig. 3.	3. Caudal end tapers more gradually for two-thirds of the entire length of the animal, and is abruptly truncated where it has tapered to about one-third of the diameter of the thickest part of the body. Fig. 8.
4. Cephalic end is rounded off and has obscure oral movements of a pouting character.	4. Cephalic end is rounded off and has distinct oral movements of a pouting character. Fig. 2.	4. Cephalic end is either conical or truncated, passing from one form to the other rapidly by a peculiar jerking, extruding, and retracting movement. Figs. 5, 6, 7.
5. No tongue-like organ visible.	5. No tongue-like organ visible.	5. From time to time a minute tongue-like organ is rapidly protruded and withdrawn at the extremity of the cephalic end. Figs. 5, 6.
6. Appears in the blood at night, disappearing during the day.	6. Appears in the blood during the day, disappearing during night.	6. Observes no such periodicity.
7. Has a wriggling but no locomotive movement.	7. Has a wriggling but no locomotive movement.	7. Has a locomotive as well as a wriggling movement.
8. Many specimens have a granular-looking aggregation about the middle of the body.	8. No granular-looking aggregation about the middle of the body.	8. No such appearance is visible. In fresh specimens the body is, throughout, perfectly homogeneous and transparent.

It is desirable to add a few words in explanation and amplification of each of these points of contrast.

1. The measurements of filaria sanguinis hominis vary in different specimens and according to different observers. Those I have given are Lewis's, and they apply to African filaria sanguinis hominis major as well as to its Asiatic congener. They are not easily made on account of the restlessness of the animal during life, and the rarity with which it dies in a favourable attitude, as it generally ceases to move in a bent or contorted position. Filaria sanguinis hominis minor is usually well extended when death approaches, and can therefore be measured with accuracy. Its size varies within very narrow limits; and the largest specimens never approach in size the smallest examples of filaria sanguinis hominis major. The filaria sanguinis hominis major is about the breadth of a blood-corpuscle; the filaria sanguinis hominis minor rather more than half of this. But, though widely different in size, the proportion of the breadth to the length is very nearly the same in both species—viz., 1 to 45, or thereabouts.

2. The sheath, which is so distinctive a feature in filaria sanguinis hominis major, is not represented in filaria sanguinis hominis minor. I have looked for it most carefully and with high powers, and in all states of activity and torpor of the embryo, but have never seen any indicaton of it whatever. Dr. Stephen Mackenzie showed me a very effective method of demonstrating the sheath in the ordinary filaria sanguinis hominis. By adding an equal quantity of the warm urine of the filaria-bearing patient to a little of his finger blood, on examining the mixture with the microscope it is seen that by a process of endosmosis from the mixture of urine and serum and of exosmosis from the body of the filaria into the sheath, this becomes so distended with fluid that it stands out tense, distinct, and sharply defined, and is now no longer dragged after the animal as a lash, but moves with it as a rigid tube. It then looks like a piece of blown-out and transparent intestine. Owing to the peculiar and rather intractable mental state of S. C—— I was unable to apply this beautiful and conclusive test to his filaria sanguinis hominis minor embryos; but from what I saw, both in fresh and stained specimens, I am convinced it has no sheath.

3. The abrupt, truncated caudal end of filaria sanguinis hominis minor is strikingly unlike the pointed tail of the larger embryo filaria, Figs. 3 and 8. For purposes of diagnosis this feature is sufficiently distinctive, and in future, when a hæmatozoon is seen in the blood, it will probably be found that the shape of the tail is the only test necessary to apply to distinguish the smaller species.

4. Oral movements of a pouting character may be discerned in filaria sanguinis hominis major, but they are by no means distinct, though, I think, more so than in Lewis's filaria; in filaria sanguinis hominis minor similar but much more distinct movements are readily made out. In addition to these a rapid extension and retraction of this end of the animal are distinguishable. It looks as if the extreme anterior end (if I may use the expression) is suddenly drawn back, involuted, and shortened by some sort of muscular contraction, and then as suddenly allowed to spring forward as if by its own elasticity. (Figs. 5, 6, 7.)

5. I have never made out any kind of oral appendage in filaria sanguinis hominis major or in Lewis's filaria. But in filaria sanguinis hominis minor, by careful focusing and the use of a high power, one can see that from time to time a minute organ is shot out—snake-tongue fashion—from the presumed position of the mouth, or, perhaps, rather to one side of this. It is as suddenly retracted as it is protruded. Owing to extreme minuteness and quickness of movement the exact shape of this organ is difficult to make out. Sometimes I have fancied that it is long and filiform, with a broad and hemispherical base; at other times it has seemed to be spatula shaped. At one time it will project further than at another, perhaps to a distance equal to about half the diameter of the head. Should the animal turn towards the observer this so-called tongue appears as a circular black speck; and if the head is very carefully watched as it lies flat in profile on the slide, a similar black speck is often perceived moving up and down in what I may term the mouth and pharynx. Fig. 7. Nothing like a mouth or pharynx can be seen, and probably do not exist; I use these terms merely to indicate the position of the little moving speck. I may mention that Sonsino figures a somewhat similar organ as being present in certain canine hæmatozoa he found in Italy.[2]

6. The phenomenon called "filarial periodicity" is now recognised as a characteristic peculiarity of filaria sanguinis hominis as met with in India, China, America, &c. I made a series of observations on the embryo filaria sanguinis hominis minor in S. C—— and of the major and minor embryos in R. H——, but failed to remark any corresponding periodicity in the case of the minor embryos. Embryos were found at any time. I have no record of observations in S. C—— from midnight to 7 A.M., but as the parasite was found at the latter hour, and was also seen at midnight and at 10 P.M., there is every probability it was present during the few hours it was not sought for. The insanity of the patient and the scantiness of his stock of embryos rendered him rather an unfavourable subject for studying the question of periodicity; but the observations on R. H——, backed as they are by Dr. Mackenzie's observations on Mandombi, are conclusive as to the absence of periodicity in the minor embryos. The point is of some importance, as it will, when properly determined, serve to guide us in a measure to the intermediary host of S. C——'s parasites.

The following is the record of my examinations of S. C——'s blood. I would premise that a "slide" means the amount of blood under a three-quarter inch cover glass:—

Dec.	7th.—	9 P.M.:	Many slides yielded		3	minor embryos.	
,,	11th.—	4 P.M.:	10	,, ,,	5	,,	,,
,,	,,	6 P.M.:	6	,, ,,	3	,,	,,
,,	,,	11.55:	1	,, ,,	1	,,	,,
,,	12th.—	7 A.M.:	2	,, ,,	1	,,	,,
,,	,,	11 A.M.:	2	,, ,,	1	,,	,,
,,	,,	3 P.M.:	4	,, ,,	1	,,	,,
,,	,,	11 P.M.:	2	,, ,,	0	,,	,,
,,	13th.—	7 A.M.:	2	,, ,,	2	,,	,,
,,	,,	11 A.M.:	1	,, ,,	2	,,	,,
,,	,,	3 P.M.:	2	,, ,,	0	,,	,,
,,	,,	11.15 P.M.:	1	,, ,,	0	,,	,,
,,	14th.—	11 A.M.:	3	,, ,,	5	,,	,,
,,	,,	4 P.M.:	1	,, ,,	2	,,	,,

[2] Recherche sugli Ematozoi del Cane, Pisa, 1888.

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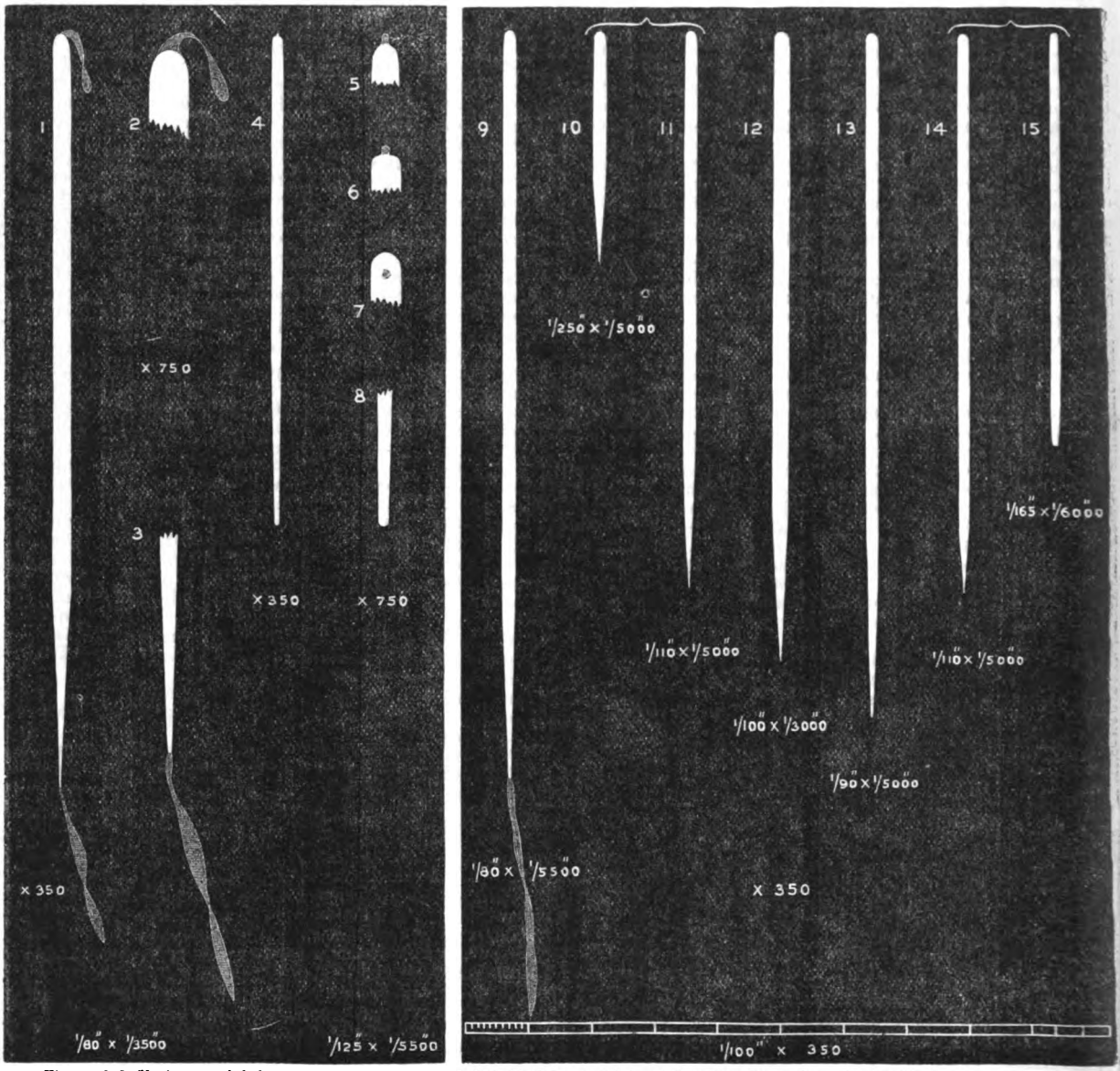
The following record of my examinations of R. H——'s blood also demonstrates the persistency of the presence of the filaria sanguinis hominis minor embryos both by day and by night. It also shows that the law of periodicity for the appearance of the major embryo is just the reverse of that which has hitherto been found to apply to the filaria sanguinis hominis of Lewis.

1st day,	12 noon:	2	slides	37	major embryos	1	minor embryo.
,,	4 P.M.:	2	,,	33	,,	2	,,
,,	9 P.M.:	22	,,	22	,,	0	,,
2nd day,	1 A.M.:	1	,,	0	,,	2	,,
,,	5 A.M.:	1	,,	0	,,	1	,,
,,	9 A.M.:	1	,,	0	,,	1	,,
,,	1 P.M.:	1	,,	26	,,	1	,,
,,	5 P.M.:	1	,,	12	,,	1	,,
,,	9 P.M.:	1	,,	17	,,	0	,,
3rd day,	1 A.M.:	no examination.					
,,	5 A.M.:	1	,,	0	,,	2	,,
,,	9 A.M.:	1	,,	1	,,	0	,,
,,	1 P.M.:	poor slide		4	,,	0	,,
,,	5 P.M.:	1	,,	12	,,	0	,,
,,	9 P.M.:	2	,,	40	,,	0	,,
4th day,	1 A.M.:	1	,,	0	,,	1	,,
,,	5 A.M.:	1	,,	0	,,	1	,,
,,	9 A.M.:	1	,,	0	,,	1	,,
,,	12 noon:	4	slides	33	,,	2	,,
,,	5 P.M.:	3	,,	35	,,	1	,,

I may state that the first two and the last two examinations were made in fresh blood; all the others were of blood which had been dried on a slide, and afterwards stained with eosine and mounted in glycerine jelly. If carefully done this latter plan seems to give as accurate results as the examinations of fresh blood, and is infinitely more convenient, as it may be undertaken at any time. The blood must not be dried over a lamp or passed through the flame.

Before definitely pronouncing on this inversion, in the case of filaria sanguinis hominis major, of the law of periodicity which has been found to apply to the filaria of Lewis, it would be well to repeat the observations I have made in R. H—— on other cases of filaria sanguinis hominis major, for it is just possible there may be something peculiar about R. H——, producing a disturbance of the rhythm of his parasites, and the parasite I have designated "filaria sanguinis hominis major" may, after all, be only an abnormal Lewis's filaria I do not think so, however. If future observations confirm mine, we may conclude that the filaria sanguinis hominis major enters the general circulation some time between 9 A.M. and noon, keeps in it all day, and disappears from it for the night some time between 9 P.M. and midnight. This, of course, has an important bearing on the question of the intermediary host, to whose habits this peculiar periodicity is undoubtedly an adaptation.

7. If a specimen of filaria sanguinis hominis major is



Figs. 1, 2, 3, filaria sanguinis hominis major; Figs. 4, 5, 6, 7, 8, filaria sanguinis hominis minor; **Fig. 9,** hæmatozoa of the gouia coronata; **Figs. 10 & 11, of pica media; Fig. 12, of the** dog; Fig. 13, of gracupica nigricollis; **Figs. 14 & 15,** of corvus torquatus.

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watched, although it is seen to wriggle about very actively, it does not appear to materially shift its position in the field. Filaria sanguinis hominis minor behaves somewhat differently in this respect. It wriggles about just as actively; but, in addition to this, it exhibits a tendency to bore its way among the blood-corpuscles in a more or less definite direction, and unless, as frequently happens, it becomes entangled in a rope of fibrine, it will in a very short time move off the field, if that is a small one, altogether. It is to be presumed, therefore, that when in the human body, and in perfectly fluid blood, this locomotive habit is a constant one, and in some way subserves the interests of the filaria. I have watched the embryo entangle itself in the fibrine in the manner I have just alluded to. The locomotive tendency probably contributes to bringing this about—a result, by the way, very much in the interest of the observer, who otherwise might have a difficulty in following the little animal in its peregrinations. It seems to push the threads of fibrine in front of it for a time, and then, wriggling over the accumulating fibres with its tail, twists them into a strand which presently constricts it, usually at a point a short distance from the head. In this way it is kept a prisoner to one spot. The movements are now no longer locomotor, but are made round the constricting point as round a centre. In some instances the string of fibrine from continued twisting becomes so tense that it produces a manifest constriction at the point where the filaria may be said to be hung up; sometimes it looks as if almost decapitated. My interpretation as to how this appearance is brought about may be wrong; but there can be no question as to the fact and frequency of this striking occurrence. As regards the duration of the movements, they slow down distinctly in twenty-four hours, become very languid in forty-eight hours, and usually cease entirely during the third day. I have seen the minor embryo alive, however, as late as ninety-six hours after its removal from the body, and probably by careful arrangements they could be kept alive much longer, just as in the case of filaria sanguinis hominis major. The disappearance of the embryos, remarked by Dr. Mackenzie in Mandombi's case, was probably owing, at least partly owing, to the locomotive propensity I have described leading the filaria sanguinis hominis minor to the edge of the slides, where it became dried up and invisible, or under a mass of corpuscles which concealed it. I believe the slides which Dr. Mackenzie watched and saw this disappearance in were slides that had been prepared from blood containing principally filaria sanguinis hominis minor, and only exceptionally specimens of filaria sanguinis hominis major. I have not seen anything to warrant the supposition that the embryos disintegrate rapidly on removal from the body.

8. Along the central axis of the body of filaria sanguinis hominis of Lewis, about the junction of the oral and caudal halves, a line of granular aggregations is often to be made out. I have never detected anything similar in these African filariæ, major or minor. The body of the filaria sanguinis hominis minor is perfectly transparent and homogeneous when fresh. It refracts the light less powerfully than filaria sanguinis hominis major does. Probably the absence of a double outline, which the presence of the sheath produces in filaria sanguinis hominis major, contributes to this effect. When first drawn from the finger there are no markings visible; but after a time, as the movements slow down, a delicate lacework-like pattern of lighter and darker shading is developed; and, just as happens under similar circumstances in filaria sanguinis hominis major, though less markedly, the integument of the animal is thrown into innumerable, minute, closely set, transverse rugæ. This is probably produced by the contraction of the desiccating body.

Doubtless in time other points of contrast in the two or three species of human hæmatozoa will be found, the parent forms of the new species, and the intermediary host or hosts will be discovered, and the complete life history of the parasites worked out. As regards the intermediary hosts, the absence of periodicity in the appearance of the minor embryo in the blood and the diurnal habits of the major—which I venture to assume as practically established—and the probable limitation of this form of parasitism to a particular district of Africa indicate that the intermediary host in both instances is a blood-sucker of a correspondingly limited geographical distribution, and a blood-sucker whose operations, unlike the species of mosquito which acts as intermediary host to the filaria sanguinis hominis of Asia, which is nocturnal in its habits, are conducted by day in the one case and by day or by night indifferently in the other. Some naturalists may be able, even at this early stage of the investigation, to indicate these animals.

It has long been known that a filaria, the filaria loa, frequently takes up its quarters under the conjunctiva of the inhabitants of certain parts of Africa. This particular position does not seem favourable for the escape of the offspring of the parasite from the body of the host; yet such escape is necessary for the continuation of the species. Might it not be that the worm, in the cases in which it is found lying under the conjunctiva, is one which has lost its way, so to speak, no uncommon occurrence with parasites, and that its proper habitat is one more calculated to favour the liberation of the embryo—viz., somewhere in connexion with the lymphatic or general circulation? Might it not be that the smaller of these new hæmatozoa is the embryo of the filaria loa? This, of course, in the present state of the inquiry, is almost purely speculative; but, nevertheless, it is a point worth investigating. It is to be remembered that filaria loa is principally confined to negroes. Leuckart, speaking of a mature specimen which he examined, says that its embryos were enclosed in thin egg-shells, and bore a close resemblance to filaria sanguinis (meaning filaria sanguinis hominis, Lewis), but were smaller (0·21 mm.).

In 1886 Magalhaes described certain filariæ—mature worms, male and female—which he found coiled up in a clot of blood in the left ventricle of the heart. He believed they were the parent form of the filaria sanguinis hominis (Lewis), and the description of their anatomy which he gives seems to bear out this opinion. But the situation they were found in is an unusual one for the parasite he believed them to be to occupy and, judging from the short notice of his paper in the *London Medical Record*, there seems to have been no particular care used to ascertain the exact characters of the embryos free in the blood. Possibly these may have been one of the new forms I describe, and the worms in the heart the mature form of this parasite. Again, "craw-craw," a papulo-vesicular disease found in negroes, and characterised by itching and an exudation of a serous-like fluid containing embryo filariæ, has been described. But the exact character of the embryos found in it have not been carefully laid down, as far as I know. They have been rather carelessly assumed by some authors to be the filaria sanguinis hominis of Lewis; but the measurements are not given, nor are any of the details that are so necessary to determine the species described. Might not this "craw-craw" embryo worm be the filaria sanguinis hominis major or minor? It is evident from this that it would very much conduce to accuracy and the advance of helminthological knowledge if observers gave exact descriptions of any strange parasite they may encounter, and, if possible, accompanied their descriptions with drawings and accurate measurements.

As regards the pathological significance of the new parasites, it is as yet premature to venture on any opinion. Most animal parasites are, as a rule, innocuous when in their normal position. Only under unusual conditions of numbers, location, or disease do they become a source of real danger to their hosts. Whether these new filariæ sanguinis hominis have any pathological importance we as yet cannot tell. Certainly the occurrence of the minor worm in two of the four instances in which it has hitherto been found, being in connexion with cerebral disease in both cases—in one instance cerebral disease of a peculiar and endemic description—is not without significance. It is true that at the meeting of the Clinical Society, at which Mandombi's case was discussed, I did say that I agreed with Dr. Stephen Mackenzie in regarding the presence of the filaria in the patient's blood as simply a coincidence, and in no way related to the disease. But I did not know at that time that he had the filaria sanguinis hominis minor in his blood as well as possibly a new species of the major filaria. I had never seen any case of cerebral disease, attributable to the worm, in the many instances of the ordinary filarial infection which I had studied. The Asiatic filaria sanguinis hominis gives rise to lymphatic disease of various kinds, never, as far as I am aware, to any affection of the central nervous system, such as Mandombi and S. C—— suffered from. But though I have no knowledge of the pathological bearings of the filaria sanguinis hominis minor, I would

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now, in the light of this new discovery, be inclined to modify somewhat the opinion I then expressed.

There is a natural tendency at first to exaggerate the importance of any new discovery. Whilst this temptation ought to be resisted, a certain amount of speculation is, perhaps, justifiable under the circumstances, more especially if it may tend to direct to fresh investigation. I feel tempted to suggest that these new filariæ may supply the key to an inter-relationship possibly existing between certain pathological entities almost peculiar to the negro, especially the negro in Africa. The pathological entities I allude to are the two I mentioned above—"craw-craw" and the filaria loa—and the "sleeping sickness." In the first place the geographical distribution of the three seems to coincide. Next, "craw-craw" and the "sleeping sickness" have been found associated with embryo filariæ in the fluids, and it is most probable that the filaria loa is similarly associated. "Craw-craw" is a papulo-vesicular and very itchy eruption. Strange to say, a similar eruption is frequent in "sleeping sickness" according to Corre[3] and others who have carefully studied the disease. Mandombi complained of excessive itching. Finally, "sleeping sickness" may develop years after the patient has left the endemic area, where, it is to be presumed, it was contracted. In S. C——, whose case is regarded by some of his friends who have experience of "sleeping sickness" as a maniacal variety of this disease, it did not break out till five years after he left the Congo. I lately heard, through Dr. Grattan Guinness, of another case in a young negro lad who had come from the same district to England to be educated. He kept well for eighteen months and then became affected with the characteristic symptoms of "sleeping sickness," of which he died after a year. The delay in the appearance of the disease is apparently more in keeping with a parasitic origin and explanation than with any other. The filariæ evidently lived a very long time, as proved by their presence in S. C—— six years and a half after he left Africa. To supply an explanation of the way in which filariæ could produce cerebral disease is another matter. One can imagine how it might occur, and should filariæ be found in the future to be responsible for the deadly disease called "sleeping sickness," it will most likely be discovered that it is in consequence of some abnormality in their position or health that they become pathogenetic. Doubtless, they are very common in Africa, and therefore it can only be in rare instances that they give rise to disease; but that they have a pathological relationship of some sort is more than likely, and such a suggestion is encouraged by analogy.

For further information on this as on many other points in connexion with the new parasites, we must look to medical men whose work lies in the regions where they are, presumably, endemic; that is, in the Congo country and tropical Africa generally. And it would be well for observers there to bear in mind the necessity for accuracy in their descriptions, and also to be alive to the possibility that just as man has been found to have two, or perhaps three, species of hæmatozoa, it is quite possible that he may have four or even more. Certainly some of the lower animals possess more than one species of blood worm. The dog has at least three, one (Fig. 12) of them being the progeny of the well-known filaria immitis, and the others of some as yet unknown parents. I have found two (Figs. 14, 15) distinct species of hæmatozoa in the Chinese crow (corvus torquatus), and two (Figs. 10, 11) species also in the blood of the Chinese magpie (pica media). One of the crow hæmatozoa (Fig. 15) resembles very closely, as regards shape, size, and the possession of a truncated tail, the filaria sanguinis hominis minor. I only know of one hæmatozoon (Fig. 9) besides the filariæ sanguinis hominis which has a sheath; this I found in the blood of the great crested pigeon of Java, the goura coronata. The fauna of the blood of man and animals offers an interesting and almost unworked field to the naturalist, and it is evident that its study is not wanting in interest and importance to the pathologist and the practical physician.

I would suggest that anyone located in the endemic area of the filaria sanguinis hominis major and minor who may be desirous of working out the facts of this form of helminthiasis should first make himself familiar with the appearance of the forms of the hæmatozoa of man and of the hæmatozoa of some of the lower animals, and also of the best way of rapidly and surely ascertaining their absence or presence in any given case.[4] That he should then systematically examine the blood of a large number of natives, noting their individual physical condition, and especially the presence or absence of peculiar diseases, such as sleeping sickness, craw-craw, &c. Search might then be made for the intermediary host of the new filariæ among the various blood-suckers attacking negroes in the endemic area: studying, in the first instance, at all events, those whose habits are not nocturnal. The embryo parasite will be found to be ingested by most of these, and will be discovered in the contents of the stomach in a state of digestion more or less advanced; but in some one or more species of blood-sucker it will be found that this digestion does not occur, and that the filaria embryo undergoes a metamorphosis similar to that of the filaria sanguinis hominis of Asia in the mosquito, or of Sonsino's dog hæmatozoon in the flea. In the event of a post-mortem examination being obtained in a filariated subject, no pains should be spared to find the parental forms; all bloodvessels—especially of the liver, lungs, right heart, the large intracranial sinuses, and the arteries at the base of the brain—being split up for this purpose. The lymphatics, too, ought to be carefully scrutinised.

Queen Anne-street, W.

[3] Maladies des Pays Chauds, par Dr. A. Corre. Paris, 1887.

[4] Travellers or others with no leisure for microscopic work might easily make a useful collection of slides of dried blood, which could be stained, mounted, and examined as opportunity offered.

ANEURYSM OF THE SUBCLAVIAN ARTERY SPONTANEOUSLY CURED BY SLOUGHING.

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THE cure of aneurysm, either by medicine alone or by surgical procedure, is a circumstance of which we are justly proud, but it is seldom that we see or hear of an aneurysm of a large vessel working out its own cure by sloughing. The case I am about to report is one in which this occurred.

Michael T——, aged fifty-two, a labourer, was admitted into the Newcastle Infirmary under my care on June 8th, 1888, complaining of pain in his right shoulder and of a pulsation in the neck of three months' duration. He has been a heavy drinker, of beer principally; had a slight attack of rheumatic fever three years ago. Twenty years ago he had gonorrhœa, but there is no history of his ever having suffered from syphilis. His father died at the age of fifty-six from the bursting of a bloodvessel; his mother died of old age; his brothers and sisters are healthy. Patient has been losing flesh rather rapidly of late. The pain he complains of shoots down the right arm from the clavicle to the elbow; it is worst at night, and scarcely allows him having any sleep. The pain is mostly of an aching character. He has never received any injury to his shoulder, but thinks that he may have strained himself. There is neither difficulty of breathing nor of swallowing; his pupils are equal, and respond to light. There is no cough or expectoration. His voice is unaffected. The veins on the right side of the neck are distended. Immediately above the outer half of the right clavicle is seen a swelling about the size of a pigeon's egg; it exhibits expansile movement, is tender to the touch, and on auscultation a systolic murmur is heard over it. The right arm is numb. In addition, he complains of it being colder than the left, and that he periodically loses sensation in it, but never over the whole arm at one and the same time. There is anæsthesia over the outer aspect of the forearm in its upper two-thirds, particularly in patches. The right radial pulse is weaker than the left, but appears to be synchronous with it. The carotid arteries pulsate equally. There is no dulness detected in the chest on percussion, except just under the right clavicle in its outer half. The apex beat of the heart is rather indistinct. Over the mitral area the first sound is prolonged, whilst over the aortic area the first is rough and murmurish, and the second is accentuated. A coarse and somewhat lengthened systolic murmur is heard, as already stated, over the pulsation above the clavicle, where it is followed by a sound of a thudding character. His pulse varies from 52 to 56. Beyond a degree of coarseness in the respiratory murmur nothing

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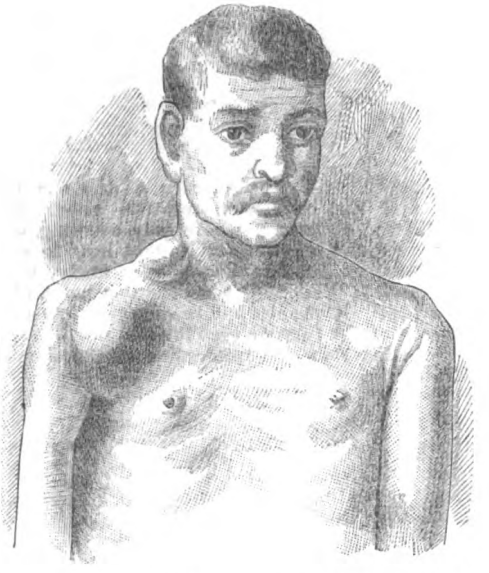
abnormal is detected in the lungs. The two sides of the chest are equal in their measurement. Urine has a specific gravity of 1020, is acid, and does not contain either albumen or sugar. He was treated by means of iodide of potassium, commencing with five grains for a dose thrice daily, and gradually increasing it until he took 100 grains three times a day.

After taking the iodide of potassium for a month, I find it stated in my notes that the excruciating pain has practically gone, that a degree of it is occasionally felt running along the course of the musculo-spiral nerve and its branches down the forearm, where the sense of numbness and coldness is complained of. It is noticed, too, that the right arm has become thinner than the left by three-quarters of an inch, and that its muscles are softer and exhibit the signs of myoidema. It cannot be said that the tumour above the clavicle has undergone any diminution in size. The dulness previously described as noticed under the outer half of the right clavicle has extended somewhat towards the manubrium sterni. The sounds heard over the cardiac area and the aneurysm have undergone no alteration. The pulse is 78; the right pupil is smaller than the left; the temperature is normal. By the middle of August the aneurysm had become decidedly smaller; its pulsation was less extensive, and pain as a symptom was very little complained of. At this stage in the treatment of his case the patient of his own accord left the infirmary. I saw nothing more of him until two months afterwards, when on Oct. 9th, 1888, he was readmitted suffering from pain in the right shoulder—more excruciating even than before,—and of complete paralysis of the right arm. After the patient left the infirmary he got employment as a drainer; his work required a good deal of muscular effort, digging, as he was amongst heavy clay. On finishing his work he used to throw his spade over his right shoulder, and carry it in this fashion. He followed this occupation until five or six days ago, when, owing to increasing severity of the pain, he was forced to relinquish it. The pain now complained of extends through to the right shoulder blade and runs down the outer side of the arm to the hand. For three weeks after leaving the infirmary he tells us that he was practically free from all pain, and thus he worked hard and drank heavily. On examination it is noticed that the swelling above the right clavicle is larger, that it is extremely painful, and that it is not pulsating so visibly. The tissues around the aneurysm are red, brawny, and very painful to the touch. The systolic murmur is still audible, but the diastolic thud has disappeared. A systolic murmur is detected over the aortic area, the second sound is accentuated, and the temperature is 103°. It is clear that the patient has been irritating the aneursym, partly by his work and by carrying his implements on his shoulder; and from the rise of temperature, the increase in the size of the tumour, the sudden paralysis of the arm, the redness and infiltration of the tissues all round the aneurysm, it seemed to me as if he were going to have suppuration of the sac or of the tissue in its immediate neighbourhood. Large doses of opium given internally afforded relief to his pain. By degrees all the redness and swelling around the aneurysm disappeared, pulsation gradually returned in the aneurysm, and correspondingly it increased in size. The paralysis of the right arm was permanent; the arm now measured three inches less than the left, and the finger ends of the right hand were becoming clubbed and claw-like. Now that the aneurysm was again pulsating freely the systolic murmur was only heard at its lower border, particularly underneath the clavicle. The murmur entirely disappears during inspiration, returning again during expiration; the right pupil is extremely contracted; the muscles over the right scapula are rapidly losing their fullness and are tender.

At this stage in the illness I exhibited the patient at a meeting of the Northumberland and Durham Medical Society, with the view of getting a surgical opinion as to the further treatment of his case. The foreign examiners in medicine and surgery of the University of Durham were present, and I was naturally wishful to have the benefit of their opinion. The man was seriously ill; medicine could do next to nothing for him. It was suggested that the clavicle should be sawn through, the whole arm removed, and the vessel ligatured. This, however, seemed to me too sweeping and radical an operation; one so unlikely to be attended by recovery that I decided to try galvano-puncture, knowing that whilst I could in no way remove the paralysis, I might so induce coagulation of blood within the aneurysm and prevent it becoming larger. Accordingly, within a few days after this, my colleague, Mr. Williamson, performed galvano-puncture. The passing into the aneurysm of an electrical current from four to six cells was almost immediately followed by an arrest of pulsation in the sac. The tumour soon felt hard, and for weeks afterwards it remained hard and was free from pulsation. A slight diminution in size of the aneurysm occurred during this period. By degrees, however, pulsation reappeared in the sac; it was first noticed at the upper border posteriorly, and from this it gradually spread well over the whole of the tumour. Pain, which was experienced immediately after the galvano puncture, and which had previously somewhat abated, again assumed the excruciating character already described, and was only controlled by large doses of opium and by the hypodermic administration of morphia. The only position in which the patient now got relief from pain, or was able to woo sleep, was by laying himself flat across his bed, face downwards.

From this period the details of the case need not be further gone into. The aneurysm gradually increased in size, a pulsating mass the size of a walnut began to show itself under the outer half of the clavicle, and with the development of this the pulsating tumour above the clavicle correspondingly increased in size. Fig. 1, taken in the early part of last year, shows very well the two pulsating tumours—both parts of one aneurysm,—separated by the clavicle. By the middle of the summer of 1890 the tumour above the clavicle was the size of a very large orange. At this time the patient was attending the infirmary only as an out-patient. On the evening of June 20th, whilst I was leaving the infirmary my attention was arrested by the pale and collapsed appearance of a man who was being carried into the accident room. I did not at first recognise, owing to the pallor and the alteration of the features through collapse, that it was the patient T——. He was pulseless and cold, and could only speak in a whisper. A few hours previously it appeared that T—— had suddenly become worse, and that the aneurysm had rapidly increased in size. It was now as large as a cocoanut, was soft and yet tense. The skin for more than two inches along its upper border was extremely thin, was of a deep bluish-black colour, and seemed to be just on the point of rupturing. There was very slight pulsation at the base of the aneurysm. His condition was extremely critical, and we expected every hour that the aneurysm would rupture externally. He was kept under the influence of opium and received only a very small quantity of milk and soda water to relieve his thirst. For the next two days he was very ill. A large bleb appeared on the upper surface of the tumour where the skin was most discoloured, and from this a few drops of thin, watery blood kept oozing. Next morning, when visiting at the infirmary, I found that

FIG. 1.



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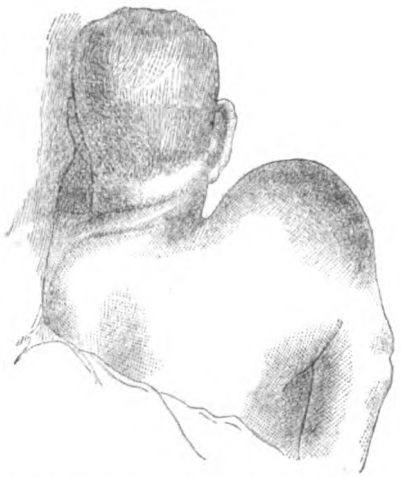
the patient, ill as he was, had been removed by his friends. He was subsequently visited at home by Dr. Bailes of the Newcastle Dispensary, who, seeing the serious condition of the patient, called in the assistance of Dr. Ridley, the resident medical officer of that institution. Each day these two gentlemen expected to hear that the sac had ruptured and that the man was dead. Additional blebs now appeared on the surface, and from these, too, blood kept oozing. The bleeding was now such that it had to be arrested by the application of tannin and collodion. Patient, who had by this time quite recovered from the

FIG. 2.



effects of shock due to the rupture of the sac already described, and the conversion of the aneurysm into one of a diffused character, whose only covering was the skin, was given the styptic, and taught how to apply it from time to time. He applied it very freely, with the following results: that whilst on the one hand bleeding had been controlled, his shirt had become so firmly adherent to the surface of the tumour that it could not be removed. A few days after this free application of the tannin and

FIG. 3.

collodion the tumour was felt to be rather loose and movable under the shirt. The patient thought he could remove his shirt, and in doing so he lifted off at the same time the huge aneurysm—now only a large mass of slough, composed of skin, blood-clot, a portion of artery, clavicle, and brachial plexus. By the one act he had lifted off both his shirt and his disease, and the remarkable thing is that in doing this very little blood escaped; the two ends of the artery were seen to be plugged with clot. The mass removed was over one pound in weight, was much decomposed, and had a most offensive odour. A deep breach of surface was all that reminded one of the situation of the aneurysm; projecting into this on either side were the ragged ends of a very denuded clavicle, the middle third of which had disappeared with the aneurysm. The surface of the wound soon began to granulate, and it is now being quickly obliterated. Thus has been cured a very large aneurysm in a manner that we never expected. The man is now in good health, and, but for the paralysis of the right arm, would be perfectly well.

Newcastle-on-Tyne.

THE EMPLOYMENT OF PILOCARPINE IN CERTAIN AFFECTIONS OF THE EAR AND THE ABUSES OF THIS REMEDY.

BY DR. ADAM POLITZER,
PROFESSOR OF OTOLOGY AT THE UNIVERSITY OF VIENNA.

THE favourable results obtained in a series of cases of severe eye affections, particularly of acute irido-cyclitis, hæmorrhages into the anterior chamber of the eye and opacity of the vitreous body, induced me in 1879 to give this remedy a trial, selecting to begin with several cases of labyrinth affection of an undoubtedly syphilitic nature. The *rationale* of this measure was that in virtue of the rapidly occurring change of matter the reabsorption of unorganised exudation products might be brought about. The results of this experiment were so satisfactory that at the second Otological Congress at Milan in 1880 I was able to recommend a continued trial of this method to my colleagues in cases of recent affections of the labyrinth. Since that time I have employed subcutaneous injections of pilocarpine in every variety of recent and chronic affections of the labyrinth, the results obtained by myself and others (Moos, Lucae, Wolf, Pollak Barr) being in several instances so favourable that the value of muriated pilocarpine in labyrinth affection must not be under-estimated. I have been in the habit of using a 2 per cent. solution, two drops of which are injected subcutaneously in the forearm, and the dose gradually increased a drop at a time to eight. Following rapidly upon the injection there is a considerably increased secretion of saliva and sweat, which ceases after the lapse of from thirty to forty-five minutes. Rarely it is accompanied by disagreeable symptoms, such as nausea, vomiting, giddiness, fainting, collapse, spasm of the bladder, which can be antagonised by taking from two to three drops of atrop. sulphurici 0·03, aqua destillata 10·0. The injections are to be made daily. If after the lapse of a fortnight the use of this remedy does not produce an improvement in hearing, it must be regarded as ineffectual and be abandoned. But if, on the other hand, an early and distinct improvement in hearing can be observed, the injections should be continued as long as there is a progressive increase in the faculty of hearing to be elicited upon examination. The period in which the maximum of the hearing distance is attained varies from six to forty days. It is to be noted that the increase in the hearing power is rarely regularly proportional, since it is usually most rapid in the first week or fortnight, while in the subsequent course of the treatment it progresses very slowly. In rarer cases the reverse is true, the hearing power at first increasing slowly and later more rapidly.

Vacillations in the hearing distance are not infrequently observed in the course of treatment, a rapid improvement of several days being promptly followed by a rapid diminution of it, lasting also for some days. The use of subcutaneous injections of pilocarpine, which was at first limited to syphilitic diseases of the labyrinth, was extended later also to those cases of deafness which were found to be dependent upon an affection of the auditory nerve apparatus. This proceeding was indicated by the rapid development of deafness apart from any discoverable anatomical damage in the middle ear, and confirmed by the result of the examination with the tuning-fork, the latter affording, I consider, important indications for the employment of pilocarpine. If the examination with the tuning-fork proves that in a case of extreme deafness the sound is heard perceptibly longer opposite the ear (air conduction)

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than from the mastoid process (positive experiment of Rinne); also that low tones are better perceived by air conduction than high ones; and, lastly, if there is a history of symptoms pointing to the implication of the labyrinth, such as giddiness or total inability to hear the ticking of a watch through the head bones, then the existence of an affection of the labyrinth is very probable, and it is in such a case that the subcutaneous injection of pilocarpine should be employed. I use but rarely subcutaneous injections of pilocarpine in certain forms of acute inflammations of the middle ear.

In the first of my works mentioned below I have cited several cases of acute inflammation of the middle ear in which perforation had not taken place. Where a protracted local treatment failed to produce reabsorption of the hardened exudation products lying in the cavity, and where after three or four subcutaneous injections of pilocarpine a constant improvement could be observed, the effect must be referred to the speedy solution and absorption of such exudation products. In like manner the subcutaneous injection of pilocarpine is to be recommended in those cases of acute suppuration of the middle ear in which perforation of the tympanic membrane has occurred, and in the course of which deafness supervenes, dependent upon some complication of the labyrinth.

Within recent years I have used muriated pilocarpine locally in affections of the labyrinth and the middle ear, injecting from six to eight drops of a 2 per cent. warmed solution through a catheter into the Eustachian tube and cavum tympani. When pilocarpine is thus employed in the above-mentioned concentration and quantity no unpleasant results supervene; it is only in rare cases that salivation and abundant diaphoresis are observed, and these soon after injection. In chronic catarrhs of the middle ear I inject pilocarpine into the tympanic cavity, particularly in those cases where the power of hearing is distinctly improved after inflation of the middle ear, and where a slight swelling in the Eustachian tube can still be discovered upon auscultation. The object of the local application in these cases is to bring about a slight reaction in the mucous membrane of the middle ear, and in this way to cause the absorption of inflammatory products. And, as a matter of fact, in some particular instances the improvement of hearing following these injections has been more pronounced than that obtained by the use of 10 per cent. solutions of soda, which until now have been most frequently employed. On the whole, the cases in which the local injections of pilocarpine produce a notable result are but few; in most cases the faculty of hearing does not improve at all, or the improvement is only indifferent and of short duration. Here, too, the treatment must not be extended beyond two or three weeks. It is quite otherwise with the so-called cases of chronic catarrhs in the middle ear, where the adoption of this method of treatment must be deprecated. I have already shown that, in the year 1885 (*Wiener Med. Zeit.* 4, 5, 6), and again in my Text-book of Ear Diseases (1887), the treatment of dry catarrhs of the middle ear with pilocarpine is worthless. The position to-day has not changed. It must also be insisted upon that in every case of extreme deafness where the tuning-fork can be heard longer from the mastoid process than opposite the ear (air conduction, negative experiment of Rinne), and, in addition, where low tones are not at all or only faintly perceived through the medium of air, while high ones are at the same time very distinctly heard, the subcutaneous treatment with pilocarpine is strongly contraindicated.

The above remarks have been found necessary from the circumstance that for some time past I (I am not singular in this experience) have been consulted by many patients suffering from extreme deafness who had been previously treated by other aurists for several weeks, or even for several months, with subcutaneous injections of pilocarpine without the slightest benefit, in the cases of which an examination showed the presence of a marked sclerosis of the mucous membrane of the middle ear.

While it is true that the subcutaneous injections of pilocarpine usually can be tolerated by the patient for several weeks without any unpleasant consequences, still there are cases in which its protracted use has produced loss of appetite, faintness, and considerable emaciation. When I consider the abundant salivation and diaphoresis, so disagreeable to the patient, which are associated with the daily use of this remedy, I feel it my duty to say that those practitioners who in all cases of extreme deafness indiscriminately—that is, without a previous careful examination by means of the tuning-fork and consequently without any differential diagnosis between affections of the middle ear and those of the labyrinth—subject their patients to a long and wearisome course of treatment with pilocarpine are not too conscientious in the discharge of their calling.

The following is a summary of the above: 1. The subcutaneous injections of pilocarpine are particularly indicated in recent affections of the labyrinth, be they of a syphilitic nature or not. In protracted diseases of the labyrinth these injections, if tried, must be abandoned if no improvement results after from ten to fifteen injections. 2. The subcutaneous injections of pilocarpine are but rarely employed in otitis media acuta, where the cavum tympani contains hardened exudative products, which resist reabsorption; moreover, in panotitis gemina diphtheritica, or in other diseases produced by infection. 3. The subcutaneous injections of pilocarpine are decidedly contraindicated in cases of dry sclerotic catarrhs of the middle ear. 4. Injections of several drops of a 2 per cent. solution of muriated pilocarpine through the catheter into the tympanic cavity are beneficial in some cases of catarrhs connected with swelling and a slight secretion of the mucous membrane of the middle ear, continued from one to three weeks alternately, with inflations of air by Politzer's procedure. The purpose of the present communication is to reduce to a just measure the therapeutic value of the subcutaneous injection of muriated pilocarpine in diseases of the ear, and to draw attention to the frequent abuse which has been made of this remedy for some time past.

DIVERTICULUM OF ŒSOPHAGUS CAUSING OBSTRUCTION; GASTROSTOMY; DEATH SIX YEARS AFTERWARDS.

BY WALTER WHITEHEAD, F.R.C.S., F.R.S. EDIN.,
SENIOR SURGEON, ROYAL INFIRMARY, MANCHESTER; LECTURER ON CLINICAL SURGERY, VICTORIA UNIVERSITY.

THE following is a good example of a rare lesion of the œsophagus; it is also of interest as affording an opportunity for the examination of a gastrostomy many years after operation. The patient, a married woman having had previously good health, began in her forty-ninth year to have difficulty in swallowing, which gradually increased in severity. On Nov. 13th, 1882, eight years later, when deglutition had almost become impossible, the patient came under my care. She was then unable to swallow any solid food, and even liquids invariably regurgitated. Attempts to pass bougies of various sizes uniformly failed. There was no history of syphilis, or of any kind of injury to the œsophagus, and the duration of the symptoms rendered the probability of cancer to be unlikely. The patient's condition was so critical that gastrostomy appeared the only method of averting imminent starvation, and this was in consequence performed four days later. Convalescence was rapid and complete, and the patient returned home on Dec. 6th. For two years she systematically used the gastric fistula for all alimentation, and her health continued excellent without suffering any inconvenience from the operation, or being conscious of any unusual condition of the gullet. She gained in weight, and was to all appearances in robust health—in fact, was so convinced that her old trouble had disappeared, and naturally objecting to the inconveniences of her singular mode of feeding, she commenced, by degrees, to take food by the mouth. For several months she was unconscious of any return of her old trouble, but gradually, and at first almost insensibly, she became aware that her power of swallowing was becoming less natural and her old symptoms steadily reviving. About this time (December, 1886) she consulted Dr. Watson of Burnley for sciatica, without, however, at first drawing his attention to the difficulty she experienced in swallowing. During his attendance he accidentally noticed that she swallowed in a peculiar manner, which he subsequently described as follows:—"When taking liquids the patient tossed her head backwards, gulping down the fluid at one mouthful. This was immediately followed by some

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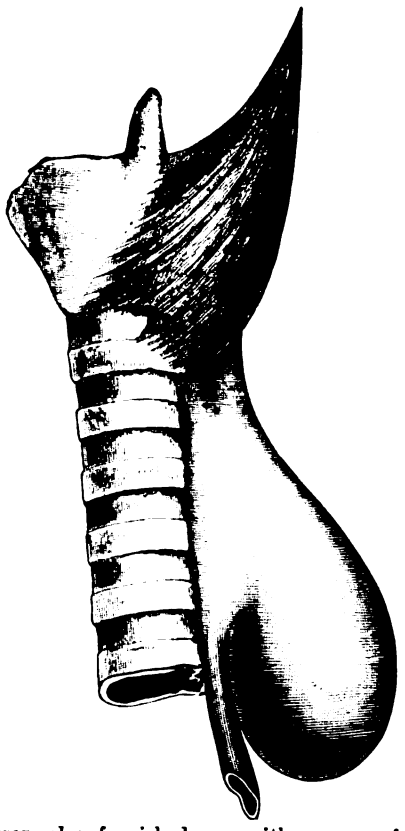
thickening and congestion of the neck and slight congestion of the face. On applying a stethoscope over the cricoid cartilage the usual gurgling sound was heard, immediately followed by eructations and a crackling noise, the latter being, perhaps, due to the meeting of the eructated gases with the descending fluid. When taking solids the same phenomena occurred, with this difference, that the eructations were accompanied by a whistling noise. Vomiting took place sometimes in a few minutes afterwards; at other times it was deferred for half an hour." Dr. Watson further informed me that the patient rapidly became anæmic, attacks of acute neuralgia became frequent, and eventually she died, apparently from sheer exhaustion, in January, 1888, without the obstruction of the œsophagus ever again becoming complete. He was fortunate in obtaining a post-mortem examination, and although not successful in securing the important parts removed, he was happily able to make a sketch of the œsophagus, which is here reproduced.



Dr. Watson also furnished me with a copy of his post-mortem notes, which are too valuable to be omitted. "I found," he states, "the different organs of the body smaller than normal, especially the stomach. The aorta, however, was enlarged. At the commencement of the œsophagus, just at the inferior constrictor, I found a large pouch, fully three inches in length and two inches in breadth. It apparently consisted of all three coats of the œsophagus, and projected from its posterior wall so as to lie between the œsophagus and the vertebral column. It was half full of partly digested food. There was a cicatricial scar and a small fistulous opening on the abdomen, indicating the point where gastrostomy had been performed. The attachment of the stomach to the skin consisted of the merest filament, and the opening into the stomach was almost closed."

Remarks.—Pressure or acquired diverticula—and this appears to be a typical example of that condition—are, according to authority, rare in women, for out of twenty-two reported cases collected by Zenker and von Ziemssen in which the sex was stated not one was recorded as occurring in a female.[1] The reasons which appear to justify this case being considered in the category of a pressure diverticula, in preference to regarding it as one of congenital origin, are: the late period of life when the symptoms commenced, their slowness of development, and, the position of the pouch—viz., at the back of the pharynx—at its junction with the œsophagus. Zenker and von Ziemssen,[2] in an article based upon a series of thirty-four cases, twenty-seven of which were verified by necropsies, found that in pressure diverticula the commonest situation was, as in this case, the posterior wall of the pharynx at its junction with the œsophagus, where the tube becomes suddenly narrower and more liable to injury. They further point out that the pouch in these cases is formed by a protrusion of the mucous membrane, through the separated fibres of the inferior constrictor, and is, in fact, a simple hernia of the mucous membrane—a pharyngocele—and that these occasionally attain dimensions of five inches and a half long by two inches broad. The only other possible alternative is to assume that the malformation may have originally been congenital, for when we remember that the gullet is developed by the union of the ingrowing pouch of the pharynx with the alimentary canal it is conceivable that if the upper end of the œsophagus were to open only a little in front into its anterior wall instead of exactly into the apex of the pharyngeal pouch, a small cul-de-sac would be left behind the œsophagus at its junction with the pharynx, and such a cul-de-sac might eventually form the commencement of a large diverticulum. It may be stated that Hamburger,[3] Rokitansky,[4] and Ziegler[5] consider the acquired forms to be due to the lodgment of foreign bodies in the œsophagus leading to weakness of the muscular fibres, and subsequent protrusion of mucous membrane as the result of pressure. The reasons for excluding the possible congenital origin of this case are based upon the fact that the congenital varieties are chiefly found upon the anterior wall of the œsophagus and low down, whereas in this instance the pouch was situated high up and on the posterior wall. An excellent example of the congenital class is reported by Dr. Norman Moore in THE LANCET, vol. i., 1882, p. 482; and Mr. Howard Marsh and Dr. Ilott describe two cases in the Transactions of the Pathological Society, vol. xxvii. Hamburger, Rokitansky, and Ziegler also mention traction diverticula, which, although they regard of no practical importance, are found, they state, in the front of the œsophagus low down, and generally opposite the bifurcation of the trachea. These also may arise as the result of the traction of cicatricial tissue on the œsophagus—e.g., a bronchial gland becomes inflamed and adherent to the œsophagus, the inflammatory material cicatrises and contracts; by the contraction the œsophageal wall is drawn outwards into a small pouch. If we hazard a conjecture as to the development of an acquired diverticulum, we may assume some injury inflicted upon this particular portion of the œsophagus, which from its anatomical formation is most exposed to accident, atrophy of some muscular fibres occurs, and a weak spot is formed in the wall of the gullet which eventually leads to the formation of a small pouch, and this, by repeated distension, ultimately increases to the dimensions of a considerable sac. Once having increased beyond a certain size, other factors would naturally come into play, food would collect in the sac, and by sheer weight drag it further downwards behind the œsophagus, tending to make its axis directly continuous with that of the pharynx. The distended sac meeting with the resistance of the vertebral column would push forwards and compress the œsophagus and close the route to the stomach below the opening into the diverticulum, and at the same time keep open the mouth of the sac, and thus facilitate increased influx of food. There are a few other features of the case which appear to possess too much practical importance to be entirely neglected. There can be no doubt that gastrostomy saved and prolonged the patient's life. For two years the patient was nourished and her health maintained solely by alimentation conveyed by the gastric fistula. During this period the œsophagus had the advantage of absolute rest, and it would be difficult to find a better example of the power of rest as a therapeutic agent. The condition of the adhesion between the stomach and the abdominal wall six years after gastrostomy had been performed and four years after the gastric fistula had been made use of affords material for reflection. In six years the originally broad, firm adhesion between the stomach and abdominal wall had been converted into a long filamentous band

[1] Von Ziemssen's Cyclopædia, vol. viii., p. 51.

[2] Ibid. [3] Klinik der Œsophaguskrankheiten, p. 179.
[4] Lehrbuch der Pathologischen Anatomie, vol. iii., p. 126.
[5] Ziegler's Pathology, vol. ii., p. 258.

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traversed by a narrow channel, illustrating how readily broad adhesions become in time attenuated into narrow bands. How far the disuse of the sinus had a tendency to induce the atrophy is difficult to estimate, but it would appear that in all cases of gastrostomy there are agencies at work which have naturally a tendency to weaken the adhesion between the stomach and the abdominal wall—the contraction of the abdominal muscles, the movements of the diaphragm depressing the stomach, and the distension of the colon raising it &c. There is another and final lesson to be learned from this case. In the events of its ever being necessary to dilate or enlarge a gastric opening of long standing, judging by this case, there would be considerable risk of opening the peritoneal cavity, and it almost imperatively suggests that under such circumstances it would be much safer to perform gastrostomy *de novo*, rather than attempt to utilise an old channel of such doubtful stability.

Manchester.

ON TESTS FOR LATENT GOUT.

BY DR. EMIL PFEIFFER,
OF WIESBADEN.

SIR WILLIAM ROBERTS, in a communication which appeared in THE LANCET of Jan. 4th, 1890, writes upon "Pfeiffer's Test for Latent Gout." I am extremely thankful that the eminent writer has occupied himself so thoroughly with the very interesting question of "free uric acid" and its bearing on the theory and practice of gout and urolithiasis, and especially that he has communicated my investigations as well as his own opinions regarding the subject to the English members of the profession so eminently interested in everything concerning gout and uric acid diathesis. As the result of my investigations leads me to the belief that the question of "free uric acid" in the urine is one of very great importance in the diagnosis and treatment of gout and urolithiasis, I deem it advisable to bring to the notice of the readers of THE LANCET a translation of the remarks which I have published in the "Verhandlungen des Congresses für innere Medicin (VIII. Congress, Wiesbaden, Bergmann, 1889)" on the same subject in June, 1889. My experiments and deductions therefrom are given as follows:—

"When the whole twenty-four hours' urine of a person is collected and two equal portions are separated from the whole quantity, to one of which is immediately added (the tenth part of its quantity) strong hydrochloric acid (of Heintz, sp. gr. 1·12), while to the other, previously passed through a filter on which some chemically pure uric acid has been placed, is also added the hydrochloric acid of Heintz, we find that after forty-eight hours, when we collect on separate filters and weigh the uric acid which has been deposited, the two portions have thrown down in many cases very different quantities of uric acid. In children, women, and old men you find as a rule equal quantities of uric acid thrown down, while in healthy male adults the portion passed through the uric acid is found to yield in most cases a considerably smaller quantity of uric acid than the portion that has not been in previous contact with it. As I have shown in former papers, this diminution of precipitated uric acid is caused by its being retained or abstracted by the uric acid placed on the filter. This abstraction of uric acid from the urine by the acid filter (*Harnsäurefilter*) takes place to the greatest extent in cases of patients suffering from uric acid diathesis—i.e., uric acid urolithiasis and gout.

"In cases of uric acid urolithiasis, when the patients are not yet in a cachectic state, we find as a rule that the whole of the uric acid is abstracted from the urine even by small quantities of uric acid—at least, as far as it can be thrown down by hydrochloric acid. When we pass in such cases 100 ccm. of the whole twenty-four hours' urine through from 0·2—0·5 grm. of uric acid, the filtrate mixed with the hydrochloric acid of Heintz yields no traces of uric acid. This examination is of great diagnostic importance, and one can in doubtful cases entirely exclude the presence of uric acid urolithiasis by the absence of this symptom; while, on the other hand, its presence proves the existence of this disorder. The same symptom is of almost equal importance in the diagnosis of gout; and this comes out very clearly in the case of gouty subjects, from whose urine the *Harnsäurefilter* abstracts the whole of the uric acid, when at the time of the examination they are not ailing, but present the appearance of perfect health. In clinical examinations of the abstraction of uric acid from the urine the following rules must, however, be observed:—Above all, the urine must be always a part of the whole passed in twenty-four hours. Single portions of urine collected at different times during the day may behave alike in gouty and in healthy cases. Of the whole twenty-four hours' urine three portions of 100 ccm. are separated, and the first and second portions passed through two filters, on one of which 0·5 grm. of chemically pure uric acid has been placed, on the other, 0·2 grm. When the filtrations are finished, the three portions are mixed with the hydrochloric acid of Heintz and put aside for forty-eight hours.

"A further rule is to make the examination only in the interval between the attacks, at a time when the gouty person feels quite well. Then it will be found that in gouty subjects—still liable to acute typical attacks—all, or almost all, uric acid is retained by the *Harnsäurefilter*, and that therefore the portions of the urine passed through it yield with hydrochloric acid no uric acid, or only traces of it. Numerous examinations of urine have shown that this symptom—viz., that on several consecutive days all the uric acid precipitable by hydrochloric acid is abstracted from 100 ccm. of the twenty-four hours' urine by 0·5 grm., or even by 0·2 grm., of uric acid—is only found in cases of uric acid diathesis—i.e., urolithiasis and gout; also that it is never found in cases of healthy persons or in patients suffering from other diseases. I think, therefore, that the following deduction may safely be made: When in the filtrates from the two *Harnsäurefilter* no trace, or at least no appreciable quantity, of uric acid is thrown down by hydrochloric acid, we may conclude in doubtful cases that we have to deal with gout, provided the patient has not been taking one of the drugs, such as salicylate of sodium (hydrochloric acid), which are found to produce a similar condition of urine. The rule to take two *Harnsäurefilter*, one with 0 5 grm. and one with 0·2 grm. of uric acid, is founded on the following fact. When we pass several portions of 100 ccm. of the twenty-four hours' urine of a healthy adult through increasing quantities of uric acid—viz., one portion through 0·2 grm., a second through 0·5 grm., a third through 1·0 grm., a fourth through 1·5 grm., and the remaining through 2·0 and 2·5 grm. respectively, we find in most cases, even in the urine of healthy persons, an upper limit, where the *Harnsäurefilter* abstracts from the 100 ccm. of urine all the uric acid capable of being precipitated by hydrochloric acid. It follows from this that the amount of uric acid abstracted from the urine varies, being in proportion to the quantity of uric acid previously placed on the filter; and it is only the great proneness of the urine of persons subject to gout to part with its uric acid which is characteristic of that disorder, and not the mere abstraction itself. While from 100 ccm. of the urine of healthy persons the uric acid is only abstracted by 2·0 or 3·0 grm. of uric acid, from the urine of gouty persons it is withdrawn by 0 2 or 0·5 grm. In order to estimate this proneness to deposition it is advisable to pass two portions of the urine through two different filters, containing 0·2 and 0·5 grm. respectively, for a urine that loses all its uric acid by passing through the 0·2 grm. filter, certainly contains it in a state more prone to precipitation than one which retains a certain portion and only parts with the whole of it to the 0·5 grm. filter. More than 0·5 grm. of uric acid should not be used, as larger quantities can abstract all the uric acid from the urine, even of healthy persons. But I have never found a case of a healthy person, or one suffering from a disease other than gout (with the exception above mentioned), in which 100 ccm. of the twenty-four hours' urine lost all its uric acid for several days in succession by passing it through the 0 5 grm. filter. I therefore reaffirm my contention, that the entire abstraction of the uric acid precipitable by strong hydrochloric acid from 100 ccm. of urine by 0·5 grm. of uric acid proves gout in doubtful cases; and this proof is still more certain when the same result is obtained by 0·2 grm. of uric acid.

The abstraction of all the uric acid from the urine of healthy persons by large quantities of uric acid has been proved by means of exact experiments made by Dr. W.

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Köhler, consulting physician to the hospital of Offenbach, with the newly found Kaiser Friedrich Spring at that place. Posner and Goldenberg, in a paper, 'Zür Auflösung harnsaurer Concretionen' (*Zeitschrift für klinische Medicin*, vol. xiii., 6th part), had some time before expressed the opinion that this might be the case. The abstraction of uric acid from the urine of gouty persons does not depend on the degree of acidity of the urine. Although the urine of gouty persons which contains the uric acid in the state of proneness to abstraction (*ausscheidbar*) is always very acid, the degree of acidity is nevertheless not greater than that of the urine of many persons in a good state of health. You find sometimes in the urine of a healthy person in which the uric acid is not at all prone to abstraction (*ausscheidbar*) just the same degree of acidity as in the urine of a gouty subject, the uric acid of which is completely taken up by the *Harnsäurefilter*.

"In the following table are shown the results of subjecting various samples of urine of different degrees of acidity to the action of the 0·2 grm. filter:—

Source of urine.	Degree of acidity in ccm. of potash solution (1-10 normal).	Uric acid in 100 ccm. before passage through filter.	Uric acid in 100 ccm. after passage through filter.
Healthy person	4·5	0·0537	0·0604
Uric acid diathesis .. :	3·9	0·0505	0·0297
Healthy person (to whom lithia had been administered)	1·0	0·0429	0·0315
Ditto Ditto	1·0	0·0275	0·0272

"It is also seen that the comparative richness in uric acid is of no importance, for of two samples of urine containing equal quantities of uric acid one may hold all, or almost all, of it in the state of proneness to deposition, while in the other there is no trace of uric acid exhibiting this tendency. The above table would seem to show this. The uric acid prone to abstraction by the *Harnsäurefilter* has been called by me 'free uric acid'; but it must be noticed that the uric acid cannot be considered as chemically free, as urine, according to Brücke, contains no free acid; but that it is only in a loose state of combination. The uric acid more fixedly combined with bases in the form of urates may on the other hand be conveniently termed 'bound uric acid.' The proneness of the urine to deposit uric acid is perceived in clinical observations by a sediment appearing on the sides and bottom of the vessels containing it presenting the well-known reddish brick-dust appearance. This precipitate is composed of crystals of 'free uric acid'; while, on the other hand, the amorphous loamy sediments, which give the urine a muddy appearance, consist of urates, in which the uric acid is for the most part in the 'bound' state. Although excessive proneness of the urine to deposit its uric acid is, as I have shown, a sure indication of the presence of gout, it cannot on the other hand be maintained that this characteristic obtains in every case; and, although this 'free acid' is present in large quantities in the urine of almost all cases of gout, still cases are met with in which the abnormal proneness to part with it is less developed. Besides there are cases of gouty cachexia which do not present any sign of this proneness for the simple reason that uric acid is not present in the urine, or at least only traces of it can be detected.

"Now the question arises whether in the case of gouty subjects this proneness to precipitation is peculiar to the uric acid in the urine alone, or if it is a quality common to that present in all the body and in the blood as well. The gouty deposits in the joints and surrounding tissues would seem to indicate the latter hypothesis, although no direct proof of it can be given.

"With reference to Sir A. Garrod's well-known thread experiment, by which he ascertained the presence of uric acid in the serum of the blood of patients suffering from gout, I should here remark that this experiment merely indicates its presence in a state of greater proneness to precipitation than is found to obtain in the cases of healthy persons. The conclusion arrived at by him, that there is an excess of uric acid in gouty blood, cannot be accepted as proved, because similar results are not obtained when the experiment is performed with blood serum in which this acid has been artificially dissolved in considerable quantity. From blood serum so treated when it is mixed with acetic acid crystals of uric acid are thrown down in large quantities, but they are not attracted by the thread."

From the perusal of what I have written in the foregoing account in June, 1889, it will, I venture to think, be learned that the objections brought forward by Sir William Roberts in January, 1890, against the validity of my test for latent gout have received due consideration; and also that the results of my investigations on this subject cannot be disposed of by experiments made only on the urine of healthy persons. With the view of verifying the conclusions arrived at by me in this connexion it is necessary that similar experiments be made on the urine of gouty subjects. The plan proposed by the same eminent observer to estimate the degree of proneness of the urine to deposit uric acid according to the time at which crystals begin to make their appearance in specimens of the twenty-four hours' collection kept in corked phials is certainly an important one; but daily experience shows that this time depends chiefly on the comparative richness of the urine in uric acid, and that the urines of healthy persons rich in this acid show crystals after several hours, although they contain little "free uric acid"; while the urines of gouty persons, which contain only little uric acid in "free" state show no crystals after one or two days. To raise this method of observation to the level of a test for gout very many accurate observations of the time at which the crystals begin to appear in the urine of both healthy and gouty persons would have to be made—a method which, if carried out systematically, would entail too much time and trouble to be of practical use. Again, in addition to the different degrees of richness in uric acid, the influence of temperature and acidity would have to be considered as disturbing factors with regard to the time at which deposits would make their appearance.

To the above-mentioned tests (the *Harnsäurefilter* and the "thread experiment") I would add a third, as described in my paper above referred to.

"When I tried some years ago to decide these questions by experiments I was convinced that, although investigations made to ascertain the influence of warm baths on healthy subjects may claim a certain value, their real influence on the urine in the gouty state can only be studied on subjects of that disorder. Having made all my experiments at Wiesbaden with the Kochbrunnen waters, it is to be understood that the following remarks refer solely to the results obtained by their use. Not having had any experience of their use, I say nothing as to the effects produced by other baths, which may be equally effective in the treatment of gout. My first investigations speedily revealed the fact that the urine in many gouty cases, after about twenty baths had been taken, presented a considerable diminution of the secretion of uric acid; and on prosecuting the experiments still further I found in numerous instances the following results. After about twenty baths of Kochbrunnen water of half an hour's duration each, and at a temperature of 27° R. (92° F.), had been taken on twenty consecutive days, the quantity of uric acid secreted during the twenty-four hours is never essentially diminished, but in the majority of cases is, on the contrary, greater than before commencing the baths. If the uric acid at the beginning of the series of baths should happen to be in the 'bound' state, it becomes almost entirely 'free' towards the end of the cure; or at least the quantity of 'free' uric acid shows an increase over that obtaining at the commencement of the treatment. In gouty cases under a regular course of the baths a remarkable diminution in the quantity of uric acid daily secreted is seen to take place. In a certain number of cases the diminution goes on until only traces of the acid are left, while in others—and these are the most numerous—the decrease takes place to but half of the original amount. At the same time the uric acid secreted in 'free,' or almost free, state at the beginning of the

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baths is partly or completely 'bound,' and remains so for some considerable time after leaving them off. This behaviour in the secretion of uric acid in the healthy and gouty state respectively, besides being of considerable importance from a therapeutical point of view, is of great value as an aid to diagnosis. There are a great many cases in which the gouty nature of the ailment is not quite clear from the clinical symptoms, and in which the examination of the urine with the *Harnsäurefilter* does not give any certain results. In such cases the systematic use of baths will demonstrate the gouty nature of the disease. When a remarkable diminution of uric acid—say to one-half or less—is seen to take place by the time the twentieth bath has been reached, the case must be considered as one of gout."

I would add that, as in the case of healthy subjects, the urine of patients suffering from rheumatic complaints shows no diminution in the excretion of uric acid under a course of baths, and that this diminution is only found in cases of gout. By this circumstance the method of distinguishing gout by a course of baths proves to be one of the most sure "tests for gout," and enables us with certainty to separate obscure cases of gout and rheumatism.

ON AN EPIDEMIC OF MEASLES AT THE FOUNDLING HOSPITAL.

BY H. MONTAGUE MURRAY, M.D., M.R.C.P.,
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IN an epidemic of measles which occurred at the Foundling Hospital during the present year, 107 children were attacked. I propose to classify the results then obtained, that they may be compared with the statements usually made in books. But in order that the following statistics may be intelligible, it is necessary to explain that the Charity maintains rather more than 500 children. All are admitted as infants, and are kept in the "country cottages" until from three to five years of age. They are then brought to London, and live at the Foundling Hospital until suitable occupations are found for them. This is generally between the thirteenth and sixteenth year. The present epidemic began in March, 1890. No cases of measles had occurred during the interval which elapsed between this and the immediately preceding epidemic in the spring of 1884. About 43 per cent. of the children admitted from the country homes are certified as having had measles while under observation—that is, during the first three to five years of their lives.

1. *Liability to infection.*—When the outbreak of measles occurred there were in the hospital 313 children. Of these, 107 were attacked. The remaining 206 were all certified as having had measles in the country, or as having suffered in the previous epidemic. In other words, no child, unless protected by a previous attack, escaped. It would seem therefore that exemption from the disease after exposure to the infection is very rare, and that, within the limits with which these statistics deal, the age of the child exposed is of no etiological importance. The facts here adduced do not, of course, bear on the alleged partial immunity of infants.

2. *Rarity of second attacks.*—Seven out of the 107 cases were stated to be second attacks. In each of these the first occurred in the country. In no case did a child who had had measles in the 1884 epidemic at the Foundling Hospital have it a second time in the epidemic this year. If the occasionally great difficulty of distinguishing in infants between isolated cases of rötheln and rubeola be borne in mind, it will be seen that these results point either to the extreme and generally recognised rarity of second attacks, or to the greater protective influence of measles acquired after the age of four. The latter alternative is, however, unsupported by other evidence.

3. *Period of incubation.*—The first case was admitted into the Infirmary on March 23rd. The rash appeared the same day. Each of the succeeding cases was admitted on the day the rash appeared, according to the following table. The appearance of the rash is taken as the point of comparison, because it is the only feature in the onset which could be in all cases fixed with absolute certainty.

In the first series of cases, those admitted from April 1st to April 4th, the incubation period seems to have been either exactly nine or to have varied between nine and twelve days. If it be assumed that the possibility of infection is synchronous with the commencement of the invasion stage, then this series may represent the number which took the infection on each of the three to four days of the invasion stage which must have preceded the appearance of the rash in the first case, and during which the girl was at large. There is no clear evidence showing how far individual peculiarities may affect the length of the incubation period. With a source of infection extending over a possible four days more definite results cannot be obtained. If nothing be allowed for such peculiarities, the period would be from nine to twelve days; but if any allowance be made, the effect would be to reduce proportionately the larger limit. Nor can nine days be taken as the absolute measure of the shortest incubation period, for some of the earliest cases might have derived the infection from the first child during the later days of the invasion stage. On the whole, however, I am inclined to consider that the numbers admitted from April 1st to April 3rd represent different days of infection, and that those admitted on the following two days more probably represent individual peculiarities. But this is little more than an assumption. This conclusion would make the incubation period from nine to eleven days. Some probability is given to this view by the fact that in the second series the mean of these numbers seems to represent the length of the incubation period. The drop in the number of cases admitted on the 13th and 14th is, however, of little value, as at that time there were no more unprotected children left.

		March.									April.														
Date		23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cases admitted. Girls		1	0	0	0	0	0	0	0	0	9	13	18	5	3	0	1	0	0	0	0	0	0	0	0
Boys		0	0	0	0	0	0	0	0	0	3	10	11	6	0	0	0	0	1	2	16	4	3	0	0
Total		1	0	0	0	0	0	0	0	0	12	23	29	11	3	0	1	0	1	2	16	4	3	0	0

The readiness with which the infection spreads may be gathered from the fact that some boys were among the earliest cases, though at no time, except in chapel and in the playground, are the children near one another, and even on those occasions are separated by a considerable space.

4. *The rash.*—In the majority of the cases in which the onset of the rash was observed it was noted that it appeared behind the ears before it could be seen on the forehead. In one case (a boy aged ten) the rash followed a hot bath, and took the form of a general, intensely purple eruption, consisting of confluent patches, suggestive of the malignant variety; but the patches disappeared on pressure. The rash gradually faded and in five days had disappeared. The boy made an uninterrupted recovery.

5. *Complications and sequelæ.*—These I have grouped together in one table, as no clear distinction could be made between them.

From the table on the next page it will be seen that one-third of the cases suffered from complications or sequelæ; that of these bronchitis and broncho-pneumonia make up more than half the list, and that one-third of the cases of broncho-pneumonia proved fatal. The dates given of the appearance of the broncho-pneumonia are not accurate; they are really those of the onset of the bronchitis, which in all cases preceded and accompanied it. One child had stomatitis in the second week and a subcutaneous abscess in the ninth, and appears therefore twice in the list. In both cases of "abscess" the subcutaneous tissue of the gluteal region was the part involved.

Cases of functional neuroses following measles are, so far as I can discover, very rare. I have therefore appended the notes taken almost in full.

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F. O——, a fair, healthy-looking girl aged twelve, complained on April 2nd of headache. In the evening she had a warm bath. The same night she was attacked by more or less rhythmical rolling movements of the head from side to side. With these there occurred alternating flexions (with elevation) and extensions of the right shoulder-joint, the elbow remaining to a varying extent flexed. The muscles principally involved were the sterno-mastoids, trapezii, splenii, and pectorales. The movements were coarser and less rhythmical than those of pure clonic spasm, but much more regular than those usually observed in chorea. They varied in intensity, were not aggravated by observation, and ceased only during sleep. The movements of the arm were less rhythmical than those of the head. On waking next morning they recommenced. At the end of two days (the 4th) the arm was restored to its normal condition, and the rolling of the head was mainly to the right, and due to the contractions of the left sterno-mastoid. Next day (the 5th) the rash and other phenomena of measles made their appearance. On the 6th the movements were barely perceptible, and by the 7th they had completely disappeared. The rubeola ran its usual course, and the patient was quite convalescent when, on May 5th, more than a month after the beginning of the attack, the movements recommenced. Beyond the fact that this time the arm and shoulder were less involved, no difference was noted. There was headache as before, and a temperature of 100·4° F. In two days (May 7th) the temperature was normal, the headache had disappeared, and the movements had begun to diminish. By the 19th they had entirely ceased, and they have not recurred since that time (six months). There was never any loss of motor power, disorder of sensation, or increase or diminution of reflex action, nor indeed any further evidence of disease.

Complication or sequela.	Date of appearance.	Total No.	Per-centage.	Deaths.
Broncho-pneumonia	2 on first day 3 on second day 3 on fourth day 1 on fifth day 1 on eighth day 1 on ninth day	11	10·38	4
Bronchitis	3 on first day 1 on third day 1 on fourth day 1 on tenth day 1 on twenty-first day 1 on thirty-first day	8	7·55	0
Ophthalmia	1 in first week 3 in third week 1 in fifth week 2 in ninth week	7	6·6	0
Stomatitis	1 first week 1 in second week 1 in sixth week 1 in seventh week 1 in eleventh week	5	4·72	1
Otitis	1 in eighth week	1	0·95	0
Abscess	1 in fourth week 1 in ninth week	2	1·9	0
Neuroses	See report of cases.	2	1·9	0
Total number of complications, 7		36	34	5

In the case of L. H——, aged six, a fair, thin, weak-looking girl, the rash appeared on April 2nd. The disease ran its course favourably. The highest temperature recorded was 103° F. There were no lung complications. At the end of a week the child seemed unduly pale and languid, and was ordered two ounces of wine daily. On the 12th she got up. Two days later (14th) it was found that she could not stand. If put on her feet, and encouraged to try, she kept her legs together, and, allowing all her joints to flex, sank to the floor much after the fashion of a hysterical patient. There were no sensory defects, no disordered action of the sphincters, and no loss of any movement while lying in bed, but those of the lower extremities seemed defective in power. The knee-jerks were extremely well marked—perhaps excessive—but there was no ankle clonus. Superficial reflexes were normal. The patient was kept in bed, iodine was applied to the spine, and strychnine given internally. For nearly a week her condition remained unchanged. On the 22nd she was encouraged to walk. Improvement from this time was slow but continuous. The strychnine was gradually discontinued. By May 12th her gait and muscular power were completely restored.

I have to express my obligation to Mr. Statham, Medical Officer to the Foundling Hospital, and to many of the other officials of that institution, to whose kindness I am indebted for most of the figures on which these statements are based.

Savile-row, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE PAROXYSMAL HACKING COUGH OF CHILDREN.

BY FRANCIS WARNER, M.D. LOND., F.R.C.P.,
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SIR ANDREW CLARK'S paper on the "Hacking Cough of Puberty," read before the Medical Society of London, having drawn attention to this subject, it may be worth while to describe an affection, apparently of a similar nature, commonly met with in children. I refer to children from six to eleven years of age who are over-mobile, with wandering eyes, frequent change of expression; the hands when held out present finger twitches and a balance which I have described as the "nervous hand," the wrist being somewhat flexed, the metacarpus arched or contracted laterally, the metacarpo-phalangeal joints extended back with slight flexion of the internodes, while the thumb is extended.[1] The finger twitches are of individual digits, and fine lateral movements are the most characteristic. The balance of head and spine is usually asymmetrical, and exhaustion is often indicated by fulness under the eyes due to relaxation of the orbiculares oculorum. These children are usually well made in body, and free from those minor defects in form of head, ears, palate, &c., which indicate low development. They are frequently the offspring of neurotic parents, or of a nervous mother. I have preferred thus to describe the class of children in whom the "hacking cough" is found in place of speaking of these as nervous or delicate, because I do not think that they necessarily have any tissue delicacy. Advice is commonly asked in such cases on account of "paroxysmal cough" with emaciation, disturbed nights, and loss of appetite. Inquiry and examination indicate, in addition to the signs given above, that the child is a tooth grinder and has ground teeth, body weight is below the average (often 7 lb. or 14 lb. under), appetite is variable—usually defective, and may be accompanied by vomiting; but at times the same child may have voracious appetite with sudden "ravings for food." The urine is generally clear, with a specific gravity of 1030–35, and crystals of nitrate of urea are readily obtained on mixing with an equal volume of the acid, while the addition of strong sulphuric acid produces a deep purple line of staining at junction of the fluids. The troublesome hacking cough, usually worse at night, the emaciation and exhaustion, suggest to the nervous mother that the child is consumptive, but diagnosis can be made by a normal temperature and the physical signs of healthy lungs. As this affection is common, it is important that it should be recognised. From an examination I have made of 22,000 children in schools, it appears that from 1 to 2 per cent. of the children present the signs of over nerve mobility as given above, and of these a large proportion suffer at some period of their childhood from "hacking or paroxysmal cough" without lung disease.

As to the pathology of this affection, I do not think that it is commonly reflex from peripheral irritation, either from intestinal worms, affection of tonsils or pharynx, &c., but it appears to be due to an unbalanced central nerve action. Among other nerve centres, the pneumogastric appears profoundly disturbed, as indicated by laryngeal irritation, gastric perversion, and dense urine (not copious as in hysteria). As to treatment, these thin children lose their morbid symptoms when they gain a normal body weight, and this is best encouraged by residence in the country, a quiet and regular life under discipline, by hydro-carbonaceous diet, which should be plentiful and forced on them if necessary. Among useful drugs may be included belladonna, arsenic, and

[1] See author's Mental Faculty, Cambridge University Press.

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bromides, with tonics, cod-liver oil, and malt; alcohol should, I believe, be strictly avoided. All sources of mental anxiety and excitement should be removed, while a quiet but firm government of the child is provided. The prognosis of these cases is good under proper management, and parents may be encouraged by knowledge of the fact that these nervous children often make the best men and women in later years, though a source of much anxiety in childhood.

Kensington, W.

ECZEMA CAUSED BY VIRGINIAN CREEPER.

By E. LYCETT BURD, M.D. CANTAB., &c.

A CORRESPONDENCE having recently taken place on the subject of eczema caused by the primula obconica, I think the following case will be of interest.

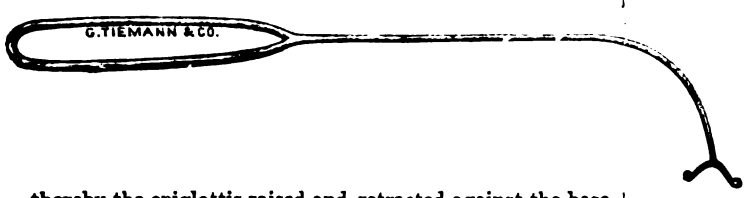
Mrs. W——, a lady of middle age, consulted me on Oct. 15th last on account of an attack of eczema then commencing. The cheeks were highly inflamed, the chin and parts round the nostrils covered by a weeping vesicular eruption; there was also a partly papular and partly weeping vesicular eruption on the back of the neck, wrists, arms, breast, and legs, with much irritation, heat, and pain. The eyelids were greatly œdematous, and were for a time completely closed. There was, however, no rise of temperature, and but little constitutional disturbance. No cause for the attack was then assigned, nor could I discover any. Under treatment, the patient being a good one and strictly carrying out all instructions, the attack quickly subsided, and she became convalescent. Suddenly, however, on Oct. 29th, the disease returned with, if possible, increased virulence, the face becoming again swollen and œdematous, and the vesicular weeping eruption appearing on that and other parts as before. On further consideration it was now recollected that on the day previously to each attack Mrs. W—— had been occupied in packing up and sending away to an artist friend a quantity of the leaves of the Virginian creeper (Ampelopsis Hoggii). This seemed to me hardly an adequate explanation, but the governess had on both occasions been helping her, and on both occasions had been similarly attacked. The gardener, too, who had picked the leaves was also attacked with some similar eruption, but as he was not under my care I cannot vouch for the identity of the disease in his case. I then learnt that towards the end of September Mrs. W—— had had similar dealings with the same leaves, followed by a similar though much slighter attack of eczema. This is to me an entirely unknown agent in the causation of eczema, nor can I find reference to a like case. I should be glad to hear if others have had a like experience.

Shrewsbury.

A NEW EPIGLOTTIC RETRACTOR.[1]

By DR. J. MOUNT BLEYER,
OF NEW YORK CITY.

WHILE busy several years ago in testing my tongue tractor for the purpose of forced laryngoscopy in children, and studying the action of the muscles, ligaments of the tongue and epiglottis, I found that if a firm pressure was made with the leaf-like projection of this instrument upon the glosso-epiglottic ligament, a tension was produced, and thereby the epiglottis raised and retracted against the base of the tongue. This knowledge led me to construct the epiglottic retractor, of which the illustration is a *facsimile*. It needs no further description than the one of its application. Often patients are presented to us with an epiglottis either misshapen or pendulous, and thereby obstructing our view of the interior of the larynx, thus making a diagnosis difficult. In order to retract the epiglottis, a 10 per cent. solution of cocaine is necessary to avoid reflex action of the muscles. The patient is instructed to hold his own tongue firmly by its end. The retractor, under the guidance of a laryngeal mirror, is passed upon the glosso-epiglottic ligament, direct pressure is then made upon it, the direction of this pressure being against the base of the tongue. The epiglottis is seen immediately raised and retracted against the tongue, giving thereby a thorough view of the interior of the larynx. Some practice is necessary, as with all instruments for intra-laryngeal work. This instrument, no doubt, will find its way into the armamentarium of the laryngologist. It is manufactured by the well-known firm of Messrs. George Tiemann and Co., New York City.



[1] Demonstrated before the German Surgical and Medical Society of New York, October, 1890.

New York.

DEFORMITY OF THE FEET IN AN AGED WOMAN.

By J. J. G. PRITCHARD, L.R.C.P. LOND., &c.

THE accompanying illustrations faithfully depict the appearance of the feet of an old woman who was admitted into the Lancaster County Lunatic Asylum recently, exhibiting the effects of neglect, and showing the way in which some people still exist in civilised England.

A. L——, aged seventy-four, was admitted last November in a very dirty condition. She is quite blind from sympathetic ophthalmia, and is nearly deaf. Her feet presented the appearance seen in the engravings, with the addition of a large amount of dirt filling up the interspaces. She walked with great difficulty on this account. She had lived with her son, a farm labourer, and badly off, for the last five years, and had not had her toe-nails cut for the whole of

this period. She had worn her stockings both day and night until they were worn out, and they were never washed. The last pair she had worn six months. She had frequently asked to have her nails cut, as they hurt her, and she could not do so herself, but it was never done. She was troubled with sickness at first, complaining that the diet was too rich. She was accustomed to have a drop

of tea and a little bread, some dry potatoes for dinner, and a taste of meat on Sundays, sometimes porridge

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with very little milk. Her only comfort was a pipe; she had smoked for thirty years. The nails were removed easily, some coming off in bed, and leaving an ordinary-looking nail underneath. The photographs were taken by my colleague, Dr. Harbinson.

Lancaster.

AN OVERDOSE OF STRYCHNIA TREATED BY BROMIDE OF POTASSIUM.

By W. B. CALEY, L.S.A.

ON Oct. 25th, at 9.10 A.M., I received a message that a patient had taken "a little more than a tablespoonful, instead of a teaspoonful, of his medicine." The day before I had sent him two ounces of Easton's syrup, labelled "A teaspoonful to be taken in water three times a day." At 9.50 I found the patient (a muscular man, twenty-nine years of age) in bed, in a darkened room. He lay on his back, with the bedclothes pushed up over his eyes. His arms were flexed across his chest, and rigid; his legs were extended, abducted, and rotated outwards. His face was distorted, the angles of the mouth were drawn down, exhibiting the risus sardonicus. On attempting to speak, his articulation was indistinct. The eyes were open, but the darkness prevented observation of the pupils. Respiration was suspended, save for an incomplete inspiration. The skin felt very warm, and was bathed in profuse sweat. The pulse was small, soft, and too rapid to admit of counting.

On relaxation the patient spoke distinctly, and complained of such little light as entered through the drawn blinds. He begged me not to touch him. After two minutes another paroxysm set in. Finding that he had taken more than one ounce of the syrup, at about 8.30—symptoms developing about twenty minutes afterwards, and increasing in violence until my arrival—I decided to give half an ounce of bromide of potassium. On offering this, dissolved in two ounces of water, the patient cried out he should bite the glass tumbler. A strong convulsion ensued. At 10 A.M., as soon as it was possible, he opened his mouth, and I poured in one ounce of the solution. This was swallowed with great and convulsive effort, accompanied by rigidity of the limbs. The remainder was swallowed in like manner. During the next fifteen minutes he yawned several times and shuddered, closing his mouth with a decided snap. At 10.20 A.M. the skin was perceptibly cooler; the pulse stronger, and 70. There was complete relaxation, much sweating, and salivation. The saliva saturated two handkerchiefs. At noon he got up, and sat in a darkened room. At 1 P.M. he had lunch. There was no difficulty in swallowing, but he felt twitchings at the corners of the mouth and brought his teeth together with exaggerated force. Besides this no other symptom occurred. The large amount of the bromide and the concentrated form in which the salt was administered caused nausea and a feeling of "burning" at the epigastrium. The patient sat up, read, and conversed until 9 P.M., and said that "he felt quite himself." The sedative caused no drowsiness. On measuring the remaining syrup, I found he had taken ten drachms in one dose, equal to $\frac{5}{6}$th gr. of phosphate of strychnia. The tablespoon used held exactly one fluid ounce.

This case suggests the unadvisability of dispensing Easton's syrup, and similar potent medicines, in undiluted form; and also the danger arising from the use of domestic measures, of such uncertain and varying capacity as the spoon mentioned.

New Swindon.

THE ANIMALS' INSTITUTE.—The Committee of the Institute has organised an Exhibition of Appliances to supersede Muzzling. The Exhibition is open to the public daily (free) at the Animals' Institute, 9, Kinnerton-street, S.W., and the principal feature of it is a humane sanitary collar, invented by Professor Atkinson.

A CENTENARIAN.—On the 18th ult. Mrs. Gillard, of Reckleford, Yeovil, died at the age of 108. She was born in London in 1782. With the exception of slight deafness she was in possession of all her faculties, but practically bedridden. Since 1844 she has resided with her youngest daughter, who has reached an advanced age.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

THE ROYAL FREE HOSPITAL.

A CASE OF GASTRIC ULCER SIMULATING CANCER OF THE PYLORUS; GASTRO-ENTEROSTOMY; DEATH; REMARKS.

(Under the care of Dr. SAINSBURY.)

THE chief reason for recording this case is the diagnostic difficulty presented by it. It was regarded as a case of cancer because of the presence of a well-defined epigastric tumour, though the history of the case was in favour of gastric ulcer. It is, we imagine, generally held that where symptoms point either to ulcer of the stomach or to cancer of this organ, the presence of a tumour possessing certain characters belonging to tumours of the stomach is decisive in favour of the latter affection. That it is not absolutely decisive the present case will demonstrate.

James H——, aged fifty, was admitted to the Royal Free Hospital on Sept. 18th, 1890, under the care of Dr. Sainsbury. He complained of pain in the stomach, increased or brought on by food; of vomiting, the pain being relieved by this act; and of emaciation. The family history was negative. There was no definite tendency to disease. The personal history was good until nine or ten years ago. Since that time he had suffered from "weakness at the chest," showing itself as heartburn and a liability of the stomach to be upset. During this period he had suffered occasionally from vomiting, and on four or five occasions he had brought up blood, recognisable as such, and of about one tablespoonful in quantity. There was a questionable history of melæna antedating the stomach symptoms, and accompanying them later. Ten to fifteen years he mentioned as the duration of this symptom. In addition there was a history of hæmorrhoids. Patient had been a heavy drinker of beer. For two years there had been an aggravation of the stomach symptoms. He was an in-patient at this hospital for a few days at the commencement of this period; then he entered the infirmary, and during six months suffered much from vomiting, the vomit resembling coffee grounds. The motions were very dark. The stomach pain was very severe. For the next nine months, after leaving the infirmary, he was well and free from pain. Then he became an out-patient here, and subsequently at the Great Northern Hospital, with a return of the stomach troubles. At this time the taking of food, for which there was a great craving, was not followed by pain till half an hour to an hour afterwards.

On admission it was noted that the patient usually lay on his back, though he could lie with comfort in any position. His face had a suffering expression, the complexion was somewhat sallow though the cheeks showed colour. He was much wasted: his present weight being 7 st. 9 lb., as against his normal weight 10 st. 1 lb. On careful examination of the abdomen, which was soft and flaccid and somewhat sunken, there was found, in the epigastic region just above a line midway between the xiphoid cartilage and the umbilicus, a rounded, well-defined tumour, which about filled the hollowed fingers, and measured 2 in. in diameter. There was but little tenderness; and hence manipulation was quite easy, and it was possible to define the tumour between the finger and thumb. The tumour was found to vary its position longitudinally, being sometimes felt on the left of the mid-line, sometimes well to the right near the costal margin. A stomach note was obtainable in the left axilla as high as the fourth rib. There were no other physical signs of importance in the abdomen or in the chest. The vomit was chiefly coffee-ground in character; it was not bulky, and on no occasion in the past could the patient remember any very copious vomiting. The bowels acted irregularly, the patient suffering much from constipation. The stools were hard and dark in colour. The case was diagnosed as cancer of the pylorus, with secondary dilatation of the stomach,

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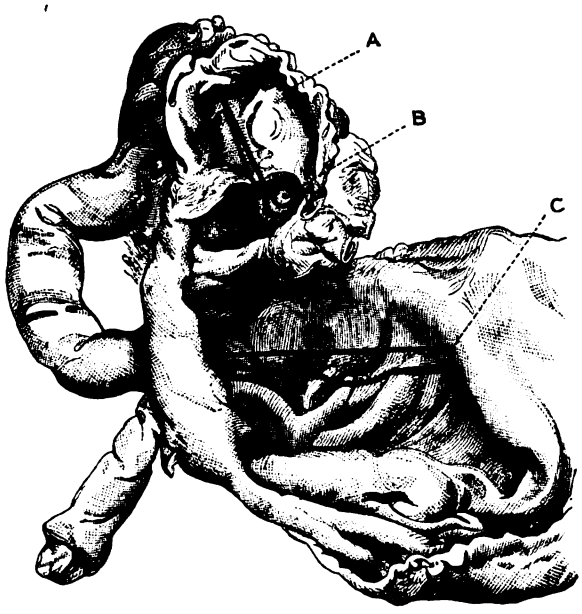
though the positive signs of the latter condition were not very decided. So well defined was the tumour that, in view of the hopeless nature of the affection, the question of pylorectomy was considered, not for the purpose of relieving symptoms—for vomiting was not urgent at the time, and, as before stated, the evidence of dilatation of the stomach was not pronounced,—but with a view to actual removal of the malignant mass. Mr. Barrow then saw the case at Dr. Sainsbury's request. He fully agreed as to the presence of a well-defined tumour, but thought that a new growth blocking the pylorus ought to have given evidence of more distinct dilatation of the stomach. At his suggestion it was agreed that we should wait a week or ten days, and watch the symptoms. At a second consultation at the end of about ten days the patient presented the same symptoms, but his general health was worse. There were no more distinct signs of obstruction, but the evidence of the tumour was very definite. We then proposed an abdominal exploration with pylorectomy if feasible. The patient, however, would not agree to any kind of operation.

The subsequent record of the case showed an almost daily presence of pain; this in general was worse towards night, and it was so severe and caused so much sleeplessness that hypodermic injections of morphia were called for. These alone afforded relief. The vomit was in general coffee ground in character—on one or two occasions clots were found,—but at times it consisted only of curdled milk of a light buff or fawn colour. Sarcinæ were not discovered. The bowels were constipated throughout, and up to Oct. 21st enemata were required every two, three, or four days. There is no doubt, from the character of the motions, that some blood was lost by the bowel, but melæna was not a feature of the case. This was the more unexpected that the rapid increase of pallor during this period suggested bleeding as a probable cause. During the last fourteen days to three weeks the patient grew rapidly worse, the pallor became much more marked, also the emaciation. It was then suggested to the patient that a more simple operation—viz., gastro-enterostomy—would probably give great relief, and to this he assented. The operation was performed on Oct. 24th by Mr. Barrow. An incision was made through the linea alba, commencing below the xiphoid cartilage, and extending downwards for about six inches. On introducing the hand the tumour could be distinctly grasped in the situation of the pylorus, and felt about the size of a turkey's egg—the head of the pancreas being intimately connected with it, and an enlarged lymphatic gland could be felt behind and below it. The omentum having been turned aside, a coil of small intestine was followed until its junction with the third part of the duodenum could be made out. That portion of jejunum was selected which was found to lie easily on the surface of the stomach, and its contents were squeezed out by drawing the gut two or three times through the fingers and thumb, and then a ligature consisting of india-rubber tubing was applied around each end of the emptied portion of bowel. An incision about an inch and a half long was made both into the stomach and into the emptied portion of bowel, the two openings were then accurately approximated by silk sutures, these passing only through the muscular and serous coats, and not involving the mucous membrane. The sutures uniting the posterior and lateral parts of the openings were so passed and tied that their knots were towards the mucous aspect, whilst those uniting the anterior portion were towards the serous. The process of suturing was a little prolonged on account of the bulging of the swollen mucous membrane of the bowel, a condition which Mr. Barrow attributed to his not having emptied a sufficient length of bowel, and thus the two ligatures were too close to the opening. An outer second row of sutures was also introduced. Then the abdominal wound was closed and dressed. Every care was taken throughout the operation to ensure its aseptic character.

On Oct. 25th, the day after the operation, the patient slept from 3 A.M. till nearly 6 A.M. He then felt less pain than he had previously experienced, and he appeared to be progressing quite favourably. He was fed with nutrient enemata at first every two hours, then every three hours, then every four hours. At 5 P.M. he began to vomit, the vomit being green. The vomiting then continued until 5 A.M. on the 26th; at 4 A.M. the vomit had become black. The patient died at 10.15 A.M. on the 26th, having been unconscious for one hour before his death.

At the necropsy, which was performed forty-three hours after death, the external abdominal wound was found clean and its edges adherent throughout. The stomach and small intestine in the immediate proximity of the gastro-enterostomy were adherent to the anterior abdominal wall by recent lymph. The rest of the peritoneum was perfectly healthy. The stomach was much distended, its position was nearly vertical (parallel to the spinal column). The duodenum and commencement of the jejunum were much distended as far as the enterostomy wound which had been made into the upper part of the jejunum. The gut had been brought up in a loop around the transverse colon on to the surface of the stomach. The stomach and duodenum were filled with a thin, blackish-brown fluid evidently containing much



A, Duodenum laid open. B, Ulcer at pylorus. C, Probe leading into gastro-enterostomy opening.

altered blood. On dissection the condition of parts shown n the diagram was discovered—viz., a large, sharply cut and thick-edged ulcer, situated exactly at the pylorus. It was oval in shape, the long axis lying across the pyloric orifice, and it involved the whole of the posterior surface of the outlet. The floor of the deeply excavated ulcer was formed by the eroded head of the pancreas, which latter, of very firm consistence, was closely bound to the pylorus. In the retroperitoneal tissue near the pancreas were one or two (?) enlarged glands. The gastro-hepatic omentum was not thickened, nor was there any evidence in any of the organs of the body of any new growth. The opening into the jejunum was patent when probed by the finger; but that there was an impediment, which must have been valve-like, is proved by the distended stomach, and the fact that water injected into the stomach before dissection did not escape into the jejunum. There was evidently an impediment to the passage of fluid from the duodenum across the sutured portion of the intestine into the jejunum, for the proximal portion of the gut (duodenum) was found much distended.

Remarks by Dr. SAINSBURY.—It is of interest to note that, though fed by the rectum only, the stomach and duodenum were distended with fluid. The vomit in the first instance was green, and I suppose this must be explained by regurgitation of bile poured into the duodenum and unable to escape into the jejunum, this flow of bile accordingly taking place independently of the stimulus of food passing into the stomach and duodenum. In the end, no doubt, blood in quantity must have been poured into the stomach, almost certainly from the ulcer; but from the sequence of events—viz., primarily bilious vomit, then black vomit—I am inclined to think that there was intestinal obstruction as a first event. It is impossible to assign the part played by this and by hæmorrhage in the causing of death. Again, I would

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draw attention to the very definite presence of tumour, which was felt not only through the abdominal walls, but also with the hand in the peritoneal cavity. From first to last there was no doubt as to the tumour. It was owing to this tumour that the history was strained a point, for the latter indicated a much longer duration of the disease than was compatible with tumour. This difficulty, however, was got over by supposing that malignant disease had started at the site of an old ulcer. This is said to occur. The sense of tumour was no doubt greater during life than after death, when vascular turgescence had subsided. The head of the indurated pancreas formed one with the adherent and thickened pylorus, and I can only suggest in explanation of the undoubted mobility of the tumour during life that the movements of the stomach as it filled or emptied, continued through a period of years, had loosened the posterior attachments of the pylorus. This point was, unfortunately, not tested at the post-mortem. Dr. Brinton, speaking from his large experience, has stated that in a few cases he had found it impossible to decide between cancer of the stomach and gastric ulcer. This case may serve as a commentary to this statement, and it will enforce the danger in clinical medicine of relying too much on one symptom or sign. The base of the ulcer and its edge were examined microscopically, but no evidence of malignant disease was obtained. As to the treatment, I do not see in what it erred, for gastro-enterostomy is a recognised treatment both for new growth and ulcer of the stomach.

MANCHESTER ROYAL INFIRMARY.

TWO CASES OF GASTROSTOMY FOR STRICTURE OF THE ŒSOPHAGUS; REMARKS.

(Under the care of Mr. SOUTHAM.)

IN the following cases the operation of gastrostomy was performed for obstruction of the œsphagus, which was probably of a malignant character. Although surgeons are generally agreed as to the advisability of performing this operation at an early stage, before the patient is exhausted, it is not often possible to gain the consent of the patient to the performance of the operation until a very late stage, when exhaustion is so extreme that much benefit cannot be expected. Gross collected records of 167 cases of gastrostomy for malignant disease, of which the mortality was 29·34 per cent.; most of them died quickly, but forty-six survived for more than a month. Of 207 examples of this operation performed for various conditions the mortality was 29·47, and the average prolongation of life was about eighty-two days.

CASE 1.—Edward T——, aged fifty-eight years, was admitted under Dr. Steell, on Feb. 10th, 1890, suffering from dysphagia of about six months' duration. During the last two months he had rapidly lost flesh, and about four weeks previousiy he began to lose his voice. When admitted he was unable to swallow solid food, and was much emaciated, weighing only 8st. 11lb. On exploring the œsophagus, an obstruction was encountered nine inches from the teeth, and a second one about four inches lower down, through which it was impossible to pass the finest bougie. On examining the larynx the left vocal cord was found to be paralysed. During the first fortnight after admission the patient gained four pounds in weight. At the end of this period, as he began to lose weight, and also to experience considerable difficulty even in swallowing fluids, he was transferred to the surgical wards to undergo the operation of gastrostomy.

March 8th.—Gastrostomy was performed by means of an incision three inches long, commencing at the outer edge of the left rectus and carried parallel with and about a finger's breadth below the margin of the ribs on the same side; the stomach was readily exposed. It was then drawn up and attached to the margins of the wound by six catgut sutures, which included, on the one hand, the entire thickness of the abdominal parietes, and, on the other, the serous and muscular coats of the stomach, care being taken to bring the opposed serous surfaces well into apposition. Two silk sutures were then passed through the serous and muscular coats of the stomach to act as a guide when the viscus was opened. On the fourth day, the patient having meanwhile been fed entirely by nutrient enemata, a small puncture was made into the stomach with a tenotomy knife, and a piece of a No. 7 Jacques' catheter was passed through the opening and secured. Through this the patient was afterwards fed, two ounces of warm milk being introduced every two hours. On the sixth day the tube was removed and left out of the wound, being reintroduced every three or four hours for the purpose of feeding. The patient left the hospital on the twenty-eighth day, being able to feed himself through the gastric fistula, having gained twelve pounds in weight during the last three weeks. He attended several times as an out-patient, but eventually died at home just three months after the performance of the operation.

CASE 2.—Thomas L——, aged forty-two years, was admitted on June 28th, 1890, in an extremely emaciated condition, weighing only 8st. 2lb. About six months previously he had commenced to experience difficulty in deglutition, and at the time of admission could only swallow fluids in very small quantities. On exploring the œsophagus, an obstruction was met with at a distance of thirteen inches from the teeth, which would not admit the smallest bougie. During the first week, as the result of careful feeding, he gained 4½ lb. in weight. During the second week, he was suddenly seized with complete inability to swallow, and though he was fed with nutrient enemata he lost 17lb. in weight. It was accordingly thought advisable to perform gastrostomy without further delay. The operation was performed on July 12th, in the same manner as in the preceding case, and the stomach was opened on the third day, as the patient was becoming extremely exhausted from want of food. On the following day, at the request of his friends and contrary to advice, he was removed to his home, a small cottage in one of the poor quarters of Manchester, where he was unable to be supplied with proper nourishment. Though he continued to be fed through the gastric fistula, he gradually sank, death taking place exactly three weeks after the performance of the operation.

Remarks by Mr. SOUTHAM.—According to recent statistics the rate of mortality after gastrostomy is still very high, being not less than 72 per cent. In a large proportion of cases death takes place within the first twenty-four or forty-eight hours, and is due to shock, which is not well borne by the subjects of stricture of the œsophagus, for they are usually worn out by exhaustion and inanition at the time of operation. As rapidity of operation is always an important factor in lessening the effects of shock, the simpler and the more speedy the method of attaching the stomach to the abdominal walls the greater is the probability of a successful result. The simple plan adopted in the preceding cases, where a single row of sutures was employed, not only ensures sufficiently accurate apposition of the serous surfaces, but it also has the advantage of great rapidity, for in both instances the operation was performed in less than fifteen minutes. Though the duration of life after operation was not very great in either patient, yet it was undoubtedly prolonged by the performance of gastrostomy, and in addition the pangs of hunger were relieved, and the comfort of the patients was also increased. In neither case was there inconvenience from regurgitation of food or escape of gastric juice from the fistula, these complications being avoided by the formation of a small opening and by not retaining the tube for a longer period than forty-eight hours. No post-mortem examination was obtained in either case, but from the rapid course which the disease ran there can be little doubt that the strictures were of a malignant nature.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Some Points in the Development of Cataract.—Diphtheritic Paralysis of External Recti.—Paresis of External Recti.—Supposed Case of Sanguineous Lacrymation.

AN ordinary meeting of this Society was held on Dec. 11th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Mr. W. A. BRAILEY read a paper on Some Points in the Development of Cataract, in which he said that, excluding the congenital and zonular forms, and also the cataracts secondary to other conditions, whether local, following glaucoma or iritis, or general, as from diabetes, 7 per cent. of the total

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cases seen in his private practice during the last two years were found to have some degree of opacity of the lens. But only one on the average out of these seven patients had his cataract sufficiently advanced to justify the operation of extraction. From examination of the records of all patients with immature cataract who had been re-examined within the last two years, it was found that 45 per cent. of them remained absolutely unchanged for the worse, the intervals between examination and re-examination varying between three months and eight years. Four other cases had even become slightly better as regards vision, thus making 58 per cent. in which the sight had not deteriorated. Twenty-three per cent. were decidedly worse, inclusive of 4 cases (13 per cent.) in which the cataract was sufficiently advanced to justify removal under ordinary circumstances. The slight improvement of vision in 13 per cent. of the cases was attributed to the hygienic measures adopted with regard to the use of the eyes. It was observed that the cataracts which had remained stationary or improved were mainly of the cortical variety, as shown by the presence of peripheral striæ or fissures in the lens, whereas those getting slowly and steadily worse were mainly nuclear. Other differences were found between the two groups, the cortical variety being attended, in about two-thirds of the cases seen, both at the onset and for long afterwards, with irritative symptoms, such as conjunctivitis, photophobia, lacrymation, slight redness of the optic discs, and by aching in the eyes and head, especially on use of the eyes. There was often also a slight increase in the refraction, and some augmentation of the power of accommodation, with occasionally slight spasm of accommodation. Finally it was suggested that while the senile nuclear cataract was a degenerative change, the cortical exhibited often the characters of an inflammation.—The PRESIDENT said the remarks made by Mr. Brailey were in accordance with general experience. He mentioned cases under his own care, and recalled the axiom of Sir William Bowman, "Never operate for cataract while the patient can see to read with either eye." The rate of development of cataract depended much on constitutional causes, but in come degree might be delayed, he thought, by hygienic precautions. He was unaware that any case had been met with in which partial cataract had ever disappeared. With regard to laminar cataract, Mr. Power mentioned the case of a young man whose vision had been good till eighteen years of age; his sight failed after two years of office work, and it was necessary to wait another year for full development before operating. He did not know that anyone could hold out any promise of recovery without operation.—Mr. SILCOCK said that such cases as those described by Mr. Brailey were familiar to most ophthalmic surgeons, but he thought the association of symptoms met with in one class of cases of which he had spoken might have been of value in prognosis.—Dr. W. J. COLLINS mentioned an instance of cataract which had been twenty-eight years maturing, and was not now complete. The original diagnosis and a sketch had been made by Sir William Bowman. The primary striæ were posterior, and there was some myopia. The latter might be referred to the increased density, the refractive index increasing with the percentage of solids in, apart from swelling of, the lens.—Mr. WAREN TAY was interested in Mr. Brailey's account of the symptoms, in addition to failing vision, which were present in cases of immature cataract.—Mr. MCHARDY thought there was insufficient evidence that free use of the eyes appreciably hastened the maturation of cataract, and that there was therefore no advantage in recommending a limitation of the use of the eyes. In his experience there was usually a change in the refraction of the eyes, in the direction of myopia, which varied with the state of tone of the patient, and was, he considered, chiefly dependent on the higher refractive index of the altered media. He recognised the possibility of improvement in vision, and cited the case of a man in official position who relinquished his employment on account of defective vision through the development of cataract, and was able a month afterwards to read the newspaper regularly. He eventually died some time later, without any necessity for operation having arisen.

Mr. DOYNE (Oxford) exhibited and read notes of a case he had brought before the Society last session under the title of Paresis of the External Recti. He now thought the condition was more correctly described as "spasm of convergence." The patient, a lad aged seventeen, had vision of $\frac{6}{6}$ with each eye separately, and Jaeger 8 when holding the types at three inches from his face. His eyes were usually in a normal position, but as soon as examination was begun spasmodic convergence showed itself. The refraction was always myopic, though the degree varied; under atropine, however, a low degree of hypermetropia became manifest. Extreme restlessness and sighing and profuse perspiration when under observation were noticeable symptoms. Mr. Doyne thought the case was one which might be classed as neurotic, but suspected also that there was deliberate malingering.

Mr. A. STANFORD MORTON read notes of four cases of Paralysis of the External Recti due to the poison of diphtheria. Three of these patients came under his observation during the last ten months, and the fourth was a patient of Mr. Tay in 1876. They all complained of somewhat similar symptoms, such as "crossing" of the eyes and "seeing double," together with more or less defective sight, weakness of the limbs and staggering gait. From a study of the cases it appeared that the paralysis of the external recti came on in from four to seven weeks after the sore-throat. Its shortest duration was four weeks, and in one case it is still in existence, having been present twenty-six weeks. In addition to the paralysis of the external recti there was in one case defective action of the superior and internal recti. The pupils acted well to light and convergence in all the cases. The accommodation was affected in three of the cases, being absolutely paralysed in one. Loss of the patellar-reflex was very marked. The shortest period in which this symptom was recovered from was three months. In two of the cases the reflex was still absent after a period of twenty-six and sixteen weeks respectively. These cases were reported because of their apparent infrequency.—Dr. SIDNEY TAYLOR (Norwich) referred to a case of paralysis of the external recti following an attack of epidemic influenza.

Mr. RICHARDSON CROSS read an account of a case of Supposed Sanguineous Lacrymation, occurring in a lady aged twenty-one, who was seen in June, 1889, on account of slight follicular conjunctivitis of the left eye and some discomfort referred to the inner part of the upper lid. On July 2nd she returned saying that a lotion of cupric sulphate and cocaine ordered at her first visit had caused considerable inflammation, and that on two or three occasions blood or a blood-stained tear had suddenly suffused the eye and fallen down the cheek. A cold douche for the eye and an iron tonic were prescribed, and some days later the patient again presented herself directly after a drop of blood had fallen. There was a small red-stained fibre in the canaliculus and a similar thread under the lower lid. No ulcer or hæmorrhagic spot could be discovered, but the eyeball looked redder than before, and the plica semilunaris was swollen and congested. After the lapse of a year, during part of which period the symptom was absent, in spite of somewhat impaired health, the patient returned complaining that one or more drops of blood-stained tears or blood, such as might come from the nose, suddenly suffused the eye and fell down on her book or her work, at all sorts of times, every two or three days, and even two or three times a day. The tear had been observed to come as if from under the inner part of the top lid, to run mainly along the plica and caruncle under the lower lid; and left a blood-stain on whatever it fell. Blowing the nose showed that a mere tinge had passed through the lacrymal canal. Stooping seemed to encourage the blood flow. It had often occurred while kneeling in church, and the mother had on several occasions taken little red films or clots from under the lower lid or from the inner side of the eye. The bleeding continued in spite of treatment by large doses of iron which improved the general health. In October the patient came again immediately after some blood-stained tears had fallen; there was still a small red fibre or clot between the plica semilunaris and the caruncle, and another under the lower lid. The conjunctiva, especially at the plica, was congested. At the end of the month the patient was walking with her mother when she stooped down to tie her shoe-lace, and at once the eye bled. Within a few minutes she was seen by Mr. Cross. The eye looked blood-stained, and a red film was in the conjunctival sac as before. Several spots of blood were on her handkerchief, which were tested with guaiacum and hydrogen peroxide, and gave a definite blood reaction. The eye sac was carefully examined; no spot could be detected from which the bleeding seemed to have occurred, the caruncle was slightly swollen, the plica distinctly so, and its vessels congested. Mr. Cross said there could be no doubt of the accuracy of

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the facts as stated by the patient. The symptom was a most exceptional one, and the literature in connexion with it very scanty. Hasuer and De Wecker had alluded to it, the latter in connexion with scorbutus. There had been no tendency to other hæmorrhage, no indication of hysteria, and the patient was very anxious to get rid of the malady. She had been at times distinctly anæmic.—Mr. WARREN TAY inquired if a microscopic examination had been made of the blood spots.—M. HARTRIDGE asked if the lacrymal gland had been investigated from the conjunctival surface.—Mr. CROSS, in reply, said the spots had not been examined with the microscope, and that no abnormal appearance could be detected beneath the upper lid. The patient was not a bleeder.

The following living and card specimens were exhibited:—

Messrs. CRITCHETT and JULER: Microscopic Sections of Epithelioma of Cornea and Conjunctiva.

Mr. TREACHER COLLINS: Rupture of the Posterior Capsule of the Lens following a Blow on the Eye.

Mr. BEAUMONT: Macular Coloboma(?).

Mr. LAWFORD: A Case of Subhyaloid Hæmorrhage.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Wednesday, November 26th, Mr. A. Messiter, President, in the chair.

Congenital Absence of Ribs on Left Side.—Mr. MESSITER showed a most remarkable example of this condition.

Fractured Olecranon; Suture for Fibrous Union.—Mr. BARLING showed a case of a man aged twenty-four on whom he had operated after fracture of the olecranon nine months after the injury. The fragments were separated by an interval of 1¼ in., and the muscles were extremely wasted, the measurement round the injured arm being 2½ in. less than on the opposite side. The surfaces of the fragments were freshened and brought together by one median silver wire suture, and the arm put up in the extended position. Union by first intention followed, and now, nine weeks after operation, the movements of the elbow joint are free in all directions, and the difference in circumference between the arms is only 1¼ in. The union between the fragments consisted only of some fibrous bands, and the upper fragment was so fixed by retraction of the triceps that it had been suspected that it was ankylosed to the lower end of the humerus. The suture remains *in situ*, and causes no inconvenience.

Hydatid Cyst of Kidney.—Mr. CHRISTOPHER MARTIN showed this specimen, removed from a lady aged forty-six by Mr. Lawson Tait. The cyst was first noticed two years ago, and the chief symptom was frequent micturition. There was no history of renal colic or of hydatid vesicles passing in the urine. The cyst was as large as a man's head, filling up the entire right costo-iliac space. It was globular, tense, elastic, fluctuating, and painless. The abdomen was opened by a lateral vertical incision 9½ in. long and the cyst enucleated, but the kidney was so disorganised that it was also removed. The pedicle was secured with a wire serre-nœud and treated extra-peritoneally. The patient made an uninterrupted recovery.

Placenta Prævia.—Mr. CHRISTOPHER MARTIN also showed a uterus at the seventh month of pregnancy containing a placenta prævia removed post mortem by Dr. Malcolmson from a widow aged twenty-eight. No suspicion of pregnancy was entertained until the woman was found dead in bed lying in a pool of blood. The uterus was opened from above, and the child extracted. The cervix was partially dilated and the placenta detached for about an inch round the os internum.

Dr. MALINS showed the following specimens:—(1) Fibroid Tumour of Cervix; (2) Channelled Polypus of Cervix; (3) Fibroid of Uterus; (4) Membranous Cast from Vagina.

Gall-Stones removed by Cholecystotomy.—Mr. F. MARSH exhibited nine gall-stones removed from a woman aged fifty-three. They were irregular in shape and of an average diameter of five-eighths of an inch. The patient had a good family history, and had always been temperate. Her last pregnancy occurred eighteen years ago, and terminated by a miscarriage. Since then she has had prolapse of the uterus, and has suffered from pains in the epigastric region, associated with flatulence and vomiting. Her bowels have generally been constipated. She has never had jaundice, though her complexion has often been yellow. Eight months ago she noticed a lump in the abdomen which was tender on pressure. Examination showed a rounded prominence extending for a few inches below the right seventh costal cartilage of the size and shape of a kidney. Microscopically the urine showed a quantity of minute crystals of oxalate of lime, with a few blood-corpuscles. The diagnosis lay between a distended gall-bladder, a movable kidney, and a renal tumour. An exploratory incision was made over the most prominent part of the tumour, which proved to be a distended gall-bladder. It was drawn into the wound and four ounces of sero-purulent fluid evacuated. The opening was then enlarged and the stones removed. A drainage-tube was placed in the bladder and the opening closed with a purse-string suture and fixed to the sides of the wound. Bile flowed through the tube for forty-eight hours, and was then replaced by a serous discharge. On the third day the tube was removed and the superficial edges of the wound brought together. The patient made a good recovery and is now quite well.

Exfoliation of Mucous Membrane of Gall-bladder from Suppurative Cholecystitis.—Mr. JOHN W. TAYLOR showed a specimen from a case of Suppurative Cholecystitis. Complete exfoliation of the mucous membrane of the gall-bladder had taken place, and on opening the latter, which contained a pint of pus, a slough consisting mainly of the mucous coat was found lying free within the gall-bladder, and was removed. Five or six gall-stones, black in colour, were removed at the same time. As soon as the contents of the gall-bladder had been discharged the ducts became patent, bile flowing freely from the day of the operation. The patient made a good recovery.

Mr. JORDAN LLOYD read a paper on Gonorrhœal Spermatocystitis (inflammation of the seminal vesicle).

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this Society, held on Oct. 23rd, 1890, Mr. W. Dale James (President) in the chair, Dr. MARTIN showed a Multilocular Ovarian Cyst, interesting from the rapidity of the growth, the increasing emaciation, and the very marked appearance of cachexia in the patient from whom he removed it.—Mr. DALE JAMES showed a case of Lupus Verrucosus of sixteen years' standing, and a patient with a Small Tumour, probably hydatid, at the lower part of the posterior scapular border.—Mr. GARRARD exhibited two specimens of Mulberry Calculi and one of Uric Acid Calculus, removed by lateral lithotomy.—Mr. R. FAVELL showed a specimen of Fibro-myoma of the Vagina. The tumour, which he had removed from the posterior vaginal wall, measured two inches and a quarter transversely, and one inch and a half from before backwards. Dr. GWYNNE read a paper on the Epidemic of Pneumonia, which occurred in Sheffield during the first half of the present year. After reading notes of a dozen cases, all of which presented features of special interest, he summed up by recording the following distinctive features of the epidemic as derived from a review of numerous cases that came under his care:—1. The tendency in the case of many individuals, attacked by influenza, for a slight patch of pneumonia to appear suddenly, generally at the case of the lung, with very slight rise of temperature, and almost as suddenly to disappear. 2. The common occurrence of blood-stained sputum. 3. The weak asthenic type of the disease that prevailed, many cases being subacute from the first and convalescence tedious, and many more assuming from the very commencement a typhoid character; the patient, in many instances, dying from the fourth to the seventh day of the disease. 4. The tendency to unusual complications; illustrated by cases where relapses, parotiditis, phlebitis, pericarditis, and abscess of the lung supervened. 5. The fact that in some instances the attack could be traced to distinct infection. 6. The marked immunity enjoyed by children.

At the meeting on November 6th the PRESIDENT exhibited a patient suffering from Syphilitic Ulceration of the Outer Surface of the Nose, as well as of the Palate and Pharynx. The unusual situation, and a superficial similarity of appearance to lupus before the scabs had been removed, were the points of interest in the case.—Dr. SIDNEY ROBERTS showed specimens from a case of Carcinoma of the Stomach and Liver. The patient, a soldier, aged fifty-four, the sub-

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ject of atheroma of the aorta, had been struck in the stomach in April, 1889, and had had profuse hæmatemesis for two or three days afterwards, but not subsequently. He had complained of some pain and fulness after food since, but had not vomited. The stomach presented on its inner aspect a large, more or less triangular patch, with ulcerated surface and thickened raised margin, affecting the middle of its anterior wall from the lesser to the greater curvature, about three inches in breadth below and one inch above. The peritoneal coat was not affected. The liver was uniformly enlarged, weighed 7½ lb., and was studded on its surface and throughout its substance with various-sized carcinomatous nodules. The spleen was not affected. The pancreas was indurated. The mesenteric glands were enlarged, soft, and pultaceous. The aorta was atheromatous. Dr. Roberts announced that he hoped to exhibit some microscopical sections of the growth at the next meeting.—Dr. BURGESS showed a Large Saccular Aneurysm of the Abdominal Aorta, which had burst into the posterior mediastinum, and the patient had lost flesh. Although there was a large pulsating tumour, yielding a superficial "whizzing" thrill, the patient himself had not remarked any swelling or beating. In a year the disease remained almost stationary. The symptoms had been relieved for a time by iodide of potassium.—Dr. KEELING related a case of a female patient aged twenty-eight, in the Public Hospital and Dispensary, in whom the left arm had been amputated for Malignant Disease commencing in the Cicatrix of a Burn. The side of the trunk and the left arm had been badly burnt in childhood, and a cicatrix had remained in front of the elbow-joint, limiting its extension. This scar had several times broken down and healed again, but on the last occasion (eight months previously) a large ulcer was left, which ultimately became malignant. For this, the arm was amputated midway between the shoulder and elbow, and at first with apparently good result. A few weeks afterwards, however, the disease reappeared in the armpit, and the stump was removed at the shoulder-joint, the axilla being thoroughly cleared out. The disease was, however, only temporarily checked; it had since appeared in the surrounding skin, and would soon have a fatal issue. The amputated limb with the growth, some microscopic sections, and a photograph were exhibited.—Mr. PYE SMITH read a paper entitled "A Review of my Death Certificate Counterfoils."

At the meeting on Nov. 20th, Dr. Porter and Dr. Burgess were appointed a deputation to proceed at once to Berlin for the purpose of investigating Dr. Koch's treatment of tubercle, and reporting the result of their visit to the Society.—Dr. COCKING showed a case of Favus of twelve years' duration in a Russian Jew, aged seventeen, who had been one month in England. The duration of the disease was twelve years. There were bright yellow cupped crusts of all sizes up to a threepenny piece, and large irregular crusts, without central depression, scattered over the whole scalp. They had an offensive "mousy" odour. The hair was scanty, dry, dull, and brittle. There was no favus of the trunk or limbs. The nails were normal.—Mr. ATKIN showed a patient with an Exostosis from the Cervical Vertebræ.—Mr. W. H. BROWN (Leeds) read Notes of a second case of Hystero-pexia, an operation which he had now performed twice successfully for retroflexed uterus, and which consisted in laying open the abdominal cavity and suturing the fundus uteri to the anterior abdominal wall.—Mr. ATKIN read a paper on some Surgical Complications of Gout, and raised the question as to the difficulties in signing accident assurance certificates where slight accidents had been followed by gouty symptoms. He expressed his disbelief that gout was ever a cause of iritis, but that it occurred along with chronic deforming rheumatism there was no doubt.

On Dec. 4th Dr. T. H. MORTON exhibited a Male Anencephalous Fœtus, stillborn on Dec. 1st. It was well nourished, weighed 8½ lb., and was 20 in. in length. The cranium was contracted, with arrested bone development, an opening existing in the posterior third of the vertex, and projecting therefrom was a livid clot-like tumour, enveloped by thin membranes.—Mr. THORPE exhibited a large Uric Acid Calculus encrusted with phosphates, and twelve smaller ones, which he had removed from the bladder by the supra-pubic method of litbotomy.—Dr. DYSON read a paper on Therapeutic Incidentals. He called attention to the frequency of the incidental effects of drugs, both those which frequently and ordinarily occurred, and which were not part of the effects aimed at in their administration, as well as those effects which occurred rarely and less frequently. A caution was administered against the too indiscriminate use of drugs on account of this frequent incidental action, which was often troublesome, and sometimes harmful. Individual peculiarities and idiosyncrasies were next discussed, and the diagnosis between real idiosyncrasy and pseudo-idiosyncrasy. The etiological considerations leading up to incidental action were then dealt with in some detail, special reference being made to alteration in the quality of drugs, to the peculiar susceptibility of certain classes of patients, and to the time and season of administration of the drug. Examples of incidental effects were mentioned which had come within the experience of the writer. These were bismuth, antimony, chloral, opium, iodide of potassium, bromide of potassium, iodoform, nux vomica, iron, iron and quinine, calumba, caffeine, podophyllum, and others.

At the meeting of Dec. 11th the report was read of Dr. Porter and Dr. Burgess, the Society's representatives at Berlin, on Dr. Koch's treatment for tubercular lesions. After very cordially acknowledging the courtesy and frankness with which they had been treated by the profession in Berlin, and some preliminary remarks on the fluid itself, the syringes used, and the situation chosen for the injection, the question of dose was dealt with at some length. Among the possible dangers from the reactionary effects of full doses might be mentioned obstruction of the urinary passages in tubercular affections of the prostate and ureters, and the possibility of perforation in tubercular ulceration of the bowels. A case in Dr. Levy's clinic was alluded to in which facial palsy had followed injection in a child aged three, probably due to the existence of tubercular disease of the middle ear. The symptoms of the reaction were then dwelt upon, instances of delayed and prolonged reaction being cited. The diagnostic value of Dr. Koch's fluid was then discussed at some length, and the principle laid down was that whereas the appearances, or definite symptoms, of local reaction might be regarded as conclusive evidence of tubercle, constitutional reaction could not be so regarded. In situations, such as the skin, larynx, or joints, where the local effects were actually visible, there was little or no room for doubt. In internal parts local reaction, as a rule, was less evident, but in particular instances in the lungs, bowels, or urinary passages, injection might clear up a doubtful diagnosis. An instance was given of a patient suffering from retraction of one side, the result of old pleurisy, in whom no tubercle had been suspected. On the other hand, failure to react to doses of 0·01 gramme, or even more, did not exclude tuberculosis. Several instances were given of cases with well-marked physical signs of phthisis, and bacilli found in the sputa, in which injections of considerable strength had failed to produce any effect whatever. The local effects in phthisis included various sensations referred to the affected part, and sometimes even distinct alterations in the physical signs during reaction; also increase in the quantity of sputa, and, according to some observers, alterations visible in the bacilli themselves. With regard to the most important question, the curability of phthisis, no opinion could at present be expressed. Dr. Fraentzel, who had treated phthisical cases by Dr. Koch's method longer than anyone else, had distinctly stated that the treatment would have to be pursued for months, and that the patients would have to be kept under observation for a longer period still, and every now and then be subjected to test injections. As in phthisis, so in joint diseases, it was too soon yet to come to any definite opinion as to the curative or even remedial value of Koch's treatment. The local effects, on the whole, had been even less positive than in cases of phthisis. The action of the remedy in destroying the tubercular tissue within the joint might culminate in the formation of an abscess requiring surgical interference, and in many cases no doubt surgery would have to step in and clear out the tubercular débris from the joint. Dr. Koch's fluid therefore could only be regarded as having an indirect effect in the cure of joint lesions, but it might be expected to avert the tendency to relapses. In conclusion, the deputation regretted their inability to secure some of the lymph for their respective hospitals, but they announced that they had applied for some, and had been promised an early attention to their request. In the meantime, until there had been a sufficient material accumulated upon which to draw some definite conclusions, they must remain "free to prove all things and hold fast the best."

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CLINICAL SOCIETY OF MANCHESTER.

AT a meeting held on Dec. 16th, Dr. Braddon, President, in the chair, the following communications were made.

Lymphœdema.—Mr. C. E. RICHMOND showed a case of lymphœdema involving the whole of the left lower limb. It exhibited the characteristic firm elastic swelling, the diameter of the affected limb being greatly in excess of that of the sound one. After enumerating the obstructive causes of lymphœdema, Mr. Richmond said that the only one ascertainable in this case was syphilis, where the tertiary sclerosis and gummatous changes in the lymphatic glands of the limb and pelvis might produce the necessary obstruction. The glands in the left groin, though not markedly enlarged, were still considerably more hardened and prominent than those of the right side. There was a fair history of previously acquired syphilis.

Operation for Catarrh of the Middle Ear.—Dr. MILLIGAN and Mr. HERBERT LUND showed a case in which the antrum mastoideum had been opened for suppuration following acute catarrh of the middle ear. The patient, a woman aged forty-seven, had a sharp attack of influenza, during which symptoms of acute inflammation of the right middle ear supervened. This was followed by extension to the mastoid process. The principal symptom complained of was extreme pain just behind the attachment of the auricle. Mr. Lund opened the antrum, and evacuated about one drachm of pus. A silver drainage-tube was inserted. The wound healed up in three weeks. The perforation in the membrana tympani closed and perfect hearing power was regained. Mr. Lund's suggestion, that in cases of chronic discharge from the middle ear which had resisted the usual methods of treatment it would be advisable to trephine the antrum and thoroughly drain the cavity, and so relieve the patient from a possible source of future trouble, led to a discussion in which Messrs. T. Jones, S. Bishop, Drs. Simpson, Bury, and others took part.

Mr. BISHOP showed a case of Charcot's Disease of the Knee-joint.

Mr. T. JONES mentioned a series of cases of Intestinal Obstruction treated by Laparotomy.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT the meeting on Dec. 17th the following paper was read:—

Difficulties and Obscurities of Diagnosis in Abdominal Disease.—Dr. BROOKHOUSE illustrated his subject by citing the following cases:—A case of a boy aged thirteen, whose symptoms were difficult to interpret, and did not lead to suspicion of the conditions revealed post mortem—viz., perforation of appendix and suppurative peritonitis. The case of a woman whose symptoms pointed for a long time to flatulent dyspepsia; but finally obstruction of the bowels set in, for which a colotomy was done. A malignant growth starting from the mesentery was then discovered. The case of a woman aged fifty-one, in which tumours existed in each loin, thought to be kidneys. Whilst under observation a swelling developed in the left groin, which was operated on for femoral hernia. No hernia was found. After death the cystic duct was found blocked by a gall-stone and the gall-bladder was distended; there was scirrhus of the left adrenal, and the lump in the groin turned out to be a malignant tumour growing from the pubic bone. Two cases, which recovered, in which obscure tumours existed in the iliac region. A case in which partial obstruction existed for a long time with abdominal pain. After death there was found stricture of the ascending colon, and adherent to the strictured portion was the duodenum, which had apparently been drawn down by a band. After insisting that great caution is necessary in forming and expressing an opinion in obscure cases, Dr. Brookhouse concluded with the following rules for investigation: To learn the family history, especially if the patient is young; to obtain the clinical history and note the order of symptoms; to learn what can be made out by physical examination; and, lastly, to appraise the value of what is spoken of as the physiognomy of disease. Remarks were made by the President, Messrs. Hatherly, W. B. Ransom, and Handford.

On the motion of Dr. Aplin, seconded by Dr. Handford, the Society passed a hearty vote of thanks to Colonel Seely, High Sheriff of Notts, for his munificent offer of £10,000 for the provision of convalescent homes and hospital for the needy convalescents of Nottingham and the county.

ROYAL ACADEMY OF MEDICINE, IRELAND.

A MEETING of the Obstetrical Section was held on Nov. 28th.

Notes on the Operative Treatment of Uterine Cancer.—The PRESIDENT read a paper on the above subject. Having alluded to the negative treatment pursued some years ago and then to the treatment by Chian turpentine, he proceeded to describe the various operative procedures practised in the present day, as well as the cases suitable for each. He expressed an opinion adverse to Marion Sims' operation on account of the difficulty of judging the amount of sloughing action which would take place, and strongly approved of the removal of the entire uterus, or a portion of it, for cancer of that organ. The removal of the entire uterus by Freund's and the vaginal operation were described, and a case of the latter operation was noted where catch-forceps were largely employed to secure the vessels in the broad ligament. The relative merits of the operations were then compared, and in suitable case where the cancerous disease can be removed by it the supra-vaginal method was recommended as being the best.—Dr. A. SMITH said it seemed to him that the question as to how and when a case should be operated on was always one of diagnosis. During his time in the Rotunda Hospital he had several cases of carcinoma; and in view of the desirability of operating he had divided them into certain and doubtful cases of carcinoma. The first class consisted of the cases in which there were both clinical and microscopic indications of carcinoma. The second class he found it necessary to subdivide into two others: one being a class in which there were clinical symptoms of carcinoma, whilst the microscope failed to indicate it; and the other being one in which the clinical symptoms were perfectly benign, but typical cancerous conditions were shown by the microscope. As regarded the first principal class of cases of the cancerous conditions where extensive operative interference was not possible, palliation only could be resorted to. In cases where the carcinoma was limited in extent, whether confined to the cervix or not, a point on which he desired information was as to whether there should be complete removal of the uterus or not. Statistics showed that in the majority of cases of cancer of the cervix there coexisted a very curious condition of the mucous membrane known as sarcomatous degeneration. It was therefore recommended that in every case there should be complete removal of the uterus.—Dr. BAGOT stated that there were a few points regarding the operative treatment of carcinoma to which he would like to draw attention. First as to the simple amputation of the portio vaginalis. No one would now dream of doing it as a radical operation even for an apparently very limited carcinoma of the vaginal portion. As to the supra-vaginal amputation or high operation of Schroeder, Dr. Mason had spoken of it as being the proper procedure in cases where the carcinoma was limited, or rather, he should say, apparently limited, to the cervix, and stated, as one of his reasons, that this operation was so much easier and less dangerous than vaginal hysterectomy. Now, as far as he (Dr. Bagot) knew, the latest statistics both with reference to the immediate mortality after the operation and regarding the period of immunity before the return of the disease did not quite justify this statement. The latest statistics which he had seen were those given by Dr. Pozzi in his "Traité de Gynécologie," 1890, where it was stated that the operation of supra-vaginal amputation was followed by a mortality of not less than 11 per 100 in the hands of good operators both in France and other countries, while the mortality after vaginal extirpation in France was, according to the same writer, about 5·88 per cent. Leopold, in Dresden, had performed eighty vaginal hysterectomies, with a mortality of 5 per cent., not losing a single patient out of the last fifty-two cases of this series. Imitri de Ott had performed thirty vaginal extirpations without a death. The reason that supra-vaginal amputation was preferred in cases where the disease appeared to be limited to the cervix

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by some operators, of whom Dr. John Williams was foremost in England, was because the various forms of cervical carcinoma usually tended to spread outwards towards the vagina, parametrium, &c., rather than upwards towards the body of the uterus. This was true in the majority of cases; but he maintained that it was impossible to determine with certainty, either before or during the operation, to what height the disease had spread. As to Freund's operation, Dr. Bagot thought that Dr. Mason had hardly brought clearly before the meeting the necessary indications for the performance of this operation, which, as far as he could judge, was only applicable to cases where the uterus was too large to be extirpated per vaginam, or where there was great fixation due to old perimetritic adhesions, as the uterus consequently could not be drawn down. Under such conditions one had to choose between Freund's abdominal and Martin's abdomino-vaginal or mixed method of operation, or else to have recourse to removal of the uterus by means of the parasacral incision of Wölflex or the sacral incision, as in Kraske's operation for extirpation of the rectum. As to early diagnosis, he thought that in all cases where there was the slightest suspicion a portion of the growth should be submitted to a competent pathologist. — The CHAIRMAN remarked that in the first of the President's cases the woman was stated to have been only twenty-three years of age, and to have had no children. He had not heard it stated that a microscopic examination was made, and therefore he felt at liberty to entertain a doubt that she had carcinoma. He had looked over authorities as regarded cases of total extirpation in which the disease had been only supposed to affect the vaginal portion of the cervix, and had found that Leopold, in seventy-eight cases of carcinoma, removed the whole uterus in fifty-seven of them in which the cervical portion was involved. Dr. Smith had said that in a large number of cases the first stage was a sarcomatous degeneration of the mucous membrane. He had at present a case in which he had scraped out the uterus carefully and got no indications of cancer; nevertheless, the woman was bleeding and losing flesh, and he believed he would have to deal with the case on the clinical symptoms alone. He was surprised to hear that the President considered supra-vaginal amputation to have afforded better permanent results than total removal; but, judging by the reports of Leopold's cases, and those of others that he had been looking over, he hardly thought that they would have resorted, in 200 or 300 instances, to total extirpation of the uterus if they thought they could have got as good results from the supra-vaginal operation, which was an easier one to perform. He considered it to be practically almost settled that unless the diagnosis of carcinoma of the mucous membrane was excluded by positive observation of matter scraped out from the uterus, their duty, in cases of carcinoma of the cervical portion, was to extirpate the whole uterus.—The PRESIDENT replied.

Complete or Annular Prolapse of the Urethral Mucous Membrane.—Dr. BAGOT read a paper on the condition described as annular or complete prolapse of the urethral mucous membrane. In describing the conditions and the symptoms to which it gave rise, he alluded to the contributions to the literature of the subject by M'Clintock, Tavignot, Patron, Winkel, Ruge, Hoffmeir, Benicke, Pozzi, Södermark, Skene, and others. Since Dr. Bagot's appointment as assistant physician to the Rotunda Hospital three cases of the disease had come under his notice. The first, a woman aged thirty-three years, complained of a swelling at the orifice of the vulva, from which there was a discharge. She suffered from intense pain on trying to pass urine. A dark-red tumour the size of a walnut projected from the vestibule. The central and most prominent part was sloughing, and in the middle of the sloughing mass the meatus urinarius was found. The tumour sloughed off and a spontaneous cure resulted. The second case was a child aged five years, who suffered from pain during micturition, and for some weeks her underlinen had been constantly stained with a sanguino-purulent discharge. A tumour of a bright-red colour, about the size of a large cherry, projected from the vestibule and filled the vulvar orifice. The external meatus of the urethra, dilated and funnel-shaped, was situated on the central part of the tumour. It bled easily on being touched. He removed this tumour with a scalpel, and stitched the urethral to the external mucous membrane by a few interrupted fine silk sutures. Dr. Earl had made microscopical examinations of the tumour; part showed the characters of a fibro-myoma, and part consisted of prolapsed and hypertrophied mucous membrane. A perfect recovery resulted. The third case was a child aged seven years, who had suffered from hæmaturia. A dark-red or purple tumour about the size of a cherry projected from the vestibule; this was removed as in Case 2. The child made a perfect recovery. The tumour was found, on microscopical examination, to be of angiomatous structure. In none of the patients was there a history of any affection of the urinary organs, nor was there at the time when they came under his notice any constitutional trouble. All seemed to enjoy fairly robust health. The disease appeared to be quite local.—Dr. KIDD remarked that during the time he was assistant master at the Coombe Hospital he saw a case of an old woman of about sixty years of age who had three prolapses—one of the rectum, one of the uterus, and an annular prolapse of the mucous membrane of the urethra.—Dr. MACAN said he saw the case in which Dr. Bagot mentioned that the sloughing had taken place, and he did not recognise it as a case of prolapse.—Dr. BAGOT, in reply, said there was no authenticated case of prolapse of the bladder.

Dr. WILLIAM SMYLY exhibited appendages removed from a case of Myoma Uteri. The tumour was about the size of his two fists. He determined to remove the tumour itself. He was prepared for a very difficult operation, as the tumour was well down in the pelvis; but on opening the abdomen he found that, in addition to the large myoma, there were a number of small nodules, so that he had to confine the operation to the removal of the ovaries. The operation was an easy one, and the patient had made a good recovery from it.

Dr. MACAN exhibited a Fœtus which had been retained for three months after the normal termination of pregnancy. He believed it to have been a case of postponed labour. Four years previously she had had a similar experience, and carried a fœtus for eleven months. He cross-examined her carefully as to the case now submitted, but got no history of labour having come on at the end of the ninth month and gone off again. She said she had no pains until the morning on which she was delivered. She had been in good health; but about the present retention she consulted Dr. O'Brien of Tipperary, who was acquainted with her previous history. In her former delivery her vagina was a good deal torn, and became enlarged afterwards. Dr. O'Brien recognised that the child had been dead for three months and that the vagina was closed, and therefore thought that ordinary delivery would be more dangerous than that by abdominal section, and thought that Porro's operation should be resorted to in order to remove the child and to prevent the accident from occurring again. When she came to him there was nothing but the history of the eleven months' pregnancy. He examined her carefully under ether. She had a profuse secretion of milk in the breasts; and he could feel through the vaginal walls a hard irregular tumour, but nothing that resembled a collapsed head, for if the child had been then dead two months there should have been considerable softening of the head; so that at first he was under the impression that she had a fibrous tumour. He went to the country, and after his return he received a message by telephone that she was in hard labour with strong pains. During the extra three months she had had good health, but in the last week she had a feeling of great lassitude. On a vaginal examination he found that the top of her vagina was funnel-shaped, and he could not feel where it was continued upwards into the uterus. He put her under ether and inserted a catheter, which brought away some decomposing blood. He then tried to break through the thin partition of the vagina with his finger and felt the hard bone of the child's head. He dilated the vagina with Barnes' bags. The extraction of the child was a very difficult process and occupied four hours and a half. Since the operation she had got on very well, but had had a rise of temperature to 101°, and washing out the uterus was attended with a fetid smell not of the ordinary kind. The placenta was flattened out by the tremendous compression it had undergone.

Dr. WILLIAM SMYLY exhibited appendages removed from a case of Double Pyosalpinx. The patient was admitted into the Rotunda Hospital on July 7th. She had had five miscarriages and had suffered from gonorrhœa. Five years after her last pregnancy she complained of menorrhagia and dysmenorrhœa, and she also had leucorrhœa. On

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a physical examination he found the uterus anteposed, with an elastic swelling in the posterior cul-de-sac. Considering the physical character of the tumour and the history of the case, he concluded that the tube was distended with pus, and he determined to remove it. During the operation he put his finger to the back of the uterus and found that the tube was brittle and that it broke. Fearing that fluid would get into the wound, he clipped the tube. It seemed to be almost of the consistency of wax. On proceeding to remove the appendages they proved to be very brittle, and broke in two places, and a considerable quantity of pus escaped. After having washed out the parts with hot water he inserted a drainage-tube, which was left in for seven days, during which there was a considerable discharge from it. When Dr. Bagot tried to remove the tube he found that it had become fixed by granulation having taken place at each end of it. He curetted the inside of the tube and got it away easily. The patient had no rise of temperature, had made a perfect recovery, and had enjoyed good health ever since.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE second meeting of the session was held in the Faculty Hall, St. Vincent-street, on Wednesday evening, Nov. 26th, Dr. Robert Park, President, in the chair.

Dr. MILROY showed several beautiful Microscopic Preparations made from the Cancerous Uterus, which Dr. Stuart Nairne had exhibited at the last meeting. In his remarks Dr. Milroy pronounced the tumour to be a very malignant form of sarcoma, and pointed out that the sections illustrated very clearly how such tumours spread by means of spider-like cells, which projected into the blood spaces, becoming detached and carried on by the blood stream.

Dr. ROBERT JARDINE read a paper on Puerperal Eclampsia, giving details of a case and discussing the whole subject at great length. The patient, a primipara aged thirty, had one fit at the onset of labour, and after recovering from it was completely blind until delivery was completed, some hours subsequently, by means of forceps. Albumen was present in the urine in large quantity, and she was very œdematous, but the œdema and albumen both disappeared within a week. She made a good recovery, except that her eyesight remained affected to a slight extent. She became pregnant a few months afterwards, and this pregnancy lasted until the 305th day from the cessation of menstruation. The external os was found to be completely occluded at her second confinement, and it was deemed necessary to incise it before delivery could be effected. Dr. Jardine read notes of this pregnancy at the last meeting of the Society last summer. While not attempting to advance any new theory as to the causation of eclampsia, the speaker pointed out the great similarity between these convulsions and those of childhood, especially in those cases where the urine is normal. He quoted many cases from various authors showing that uræmia was not by any means always present. In these cases shock to the nervous system, irritation of the alimentary track or of the uterus, &c., is generally the immediate cause, acting upon a highly strung nervous system, and causing an explosion or nerve storm.—The paper was very favourably commented upon by Drs. Sloan, Cameron, St. Clair Gray, Richmond, Cullen, and the President, and Dr. Jardine replied.

At an extraordinary meeting of the Society, called to consider the Midwives' Registration Bill, it was unanimously resolved—"That, whilst approving generally of the said Bill, this Society recommends that there be inserted in the Bill clauses to provide (1) for the efficient supervision of midwives by a registered medical practitioner, to be appointed by the County Council, and (2) for erasing from the Midwives' Register the names of women, and for suspending any women from acting as midwives who have unwarrantably delayed or failed to send for a registered medical practitioner when the labour is or has become abnormal."

FIRE AT A HAVRE HOSPITAL.—A part of the new hospital at Havre has been destroyed by fire. Those portions which were occupied by patients were, however, undamaged.

Reviews and Notices of Books.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S., Lecturer on Anatomy at St. George's Hospital Medical School. Twelfth Edition. Edited by T. PICKERING PICK, Surgeon to, and Lecturer on Surgery at St. George's Hospital Medical School. Longmans. 1890.

Quain's Elements of Anatomy. Edited by E. A. SCHÄFER, F.R.S., Professor of Physiology and Histology in University College, London; and G. D. THANE, Professor of Anatomy in University College, London. Tenth Edition. Longmans. 1890.

THE chief alterations in this edition of Gray's Anatomy are the introduction of sections on Topographical Anatomy, short paragraphs on the surface form of the various parts or organs, and an enlargement of the sections on Surgical Anatomy: the editor has to be congratulated on this new departure. We could wish, however, that he had shown more boldness, and have amplified the book in this direction even much more than he has done. The surgical anatomy of fractures and of the ligature of arteries is very thorough and complete, but that of the viscera is very meagre; indeed, of such important organs as the eye, nose, and ear there is none. There is no reference to any facts connected with surgery or medicine in the descriptions of the veins or of the lymphatics. Applied anatomy should be given more fully, so as to render special works on the subject unnecessary, or it should be omitted; and this edition falls between two stools by containing too much for the ordinary second and third year student, and not enough for him in his later years or for reference after he is qualified. Diagrams of the cranial nerves after Flower have been introduced, but they are on too small a scale to be as useful as the originals, and are not nearly so clear as the older schemata of the brachial and lumbar plexuses, which is the scale to which the newer diagrams should have been drawn. Mr. Pick has found himself in a curious dilemma in naming the descending branch of the hypoglossal nerve; for, although he reckons the hypoglossal as the twelfth cranial nerve, in accord with Soemmering and most modern anatomists, he still calls this branch "descendens *noni*," after Willis, for fear of leading into confusion. Surely the descending branch of the ninth nerve coming from the twelfth is sufficiently confusing to the new student. The name "descendens *cervicis*" has been suggested; but Mr. Pick does not like it, and we agree with him. Why not "descendens *hypoglossi*," which is definite and accurate? Notwithstanding these slight criticisms, Gray's "Anatomy," as edited by Mr. Pick, preserves its advantages of clearness of style and beauty of illustrations, and will still deservedly remain the favourite text-book of the majority of medical students and the easiest work of reference on any point of anatomical detail for medical practitioners.

The tenth edition of Quain's Anatomy is to be divided into three volumes, and the first part of the first and second volumes have been published. These deal with embryology and osteology; the former has been written by Professor Schäfer, the latter by Professor Thane. This division into numerous parts and volumes is very perplexing to the student, and, although common in Germany, is very rare in this country. It must lead to the purchase of separate parts by every student in accord with his individual necessities, and is very likely to prejudice the sale of the work as a whole. This, however, is a question for the publisher and the authors, rather than for the student or reviewer. There is no preface to either of these volumes, and we miss the kindly notices of the writers of the preceding editions to which we are accustomed when a text-book such as Quain's enters on a new career under the sole charge of new

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editors. A reference to the connexion held by the late Professor Allen Thomson with the last edition would have been a graceful tribute to his memory, as he was responsible for the embryological section in the last edition. For vol. i., part 1, dealing with Embryology, we have nothing but praise. The text is as clear and precise as is possible when dealing with a subject which accuracy and clearness can alone render intelligible, and the numerous well-engraved figures, many of which are excellently coloured, are a valuable addition to the text. A complete description of Human Embryology is given in 170 pages, and we know of no better account to which a student might be directed than is to be found here. The list of recent works dealing with the subjects of each section is a most commendable innovation. The first part of the second volume, which is devoted to Osteology, is very little different from the text of the last edition; the small importance attached to the markings for muscular attachments on the bones, which has always been a conspicuous feature in Quain as compared with Gray and Holden, is again maintained, although not with quite so rigid a consistency. The figures of most of the bones are, however, new, and although we still consider that they are inferior diagrammatically to some figures in other text-books, we must at the same time admit that they are very faithful to nature, and a great improvement on those in former editions. In representing some of the bones, such as the small bones of the carpus and tarsus, additional clearness would have been gained by a larger drawing than even that of full size. In the next edition we hope to see a further replacing of the old plates by some new engravings representing the different stages of ossification, especially in the bones of the skull. The morphological details, which are so valuable to the advanced student, are well given, and will keep up the well-deserved prestige of "Quain's Anatomy."

Lehrbuch der Chemischen Untersuchungsmethoden zur diagnostik Innerer Krankheiten. Von Dr. FELIX WESENER, Privat-docenten der klinischen Medicin und I. Assistenzarzte an der Poliklinik zu Freiburg i. B. Berlin: Friedrich Wreden. 1890.

IT can scarcely be said that, amongst the numerous special text-books that have flooded the schools at home and abroad, there is an absence of good text-books in any particular branch of medical study, though it would be unsafe to say that in many branches there is still no opening for a first-rate text-book. Without entering into this question we may at once admit that Wesener's text-book of chemical methods of research, to be used in the diagnosis of disease, is essentially a good one, and may be studied with advantage alike by both student and practitioner.

Until comparatively recent years it has been considered quite sufficient that a medical student should be able to detect albumen in urine; and perhaps also that he should be expected to know the process for the determination of the amount of sugar and of urea if he is being examined for something more than a mere pass; but beyond these, and the recognition of a few crystals such as cholesterin or uric acid under the microscope, very little was expected, and consequently little more was taught. The examination of the blood, of special dropsical or other fluids, such as pus or fluid from hydatid or other cysts, save for the number of corpuscles or for the quantity of common salt or albumen, was never dreamt of except by those who might almost be termed experts; it was sufficient to determine the acid or alkaline reaction of the contents of the stomach, and it was certainly never thought necessary to find out, by either qualitative or quantitative methods, the kind or amount of acid or alkali in such contents.

Fortunately, however, all this is now changed. Chemical methods have been elaborated, the spectroscope is now constantly made use of, and a new field is being gradually opened up in diagnosis and therapeutics. Professor Hamilton's admirable address on the "Pathology of Gastric Dyspepsia," delivered in August at the annual meeting of the British Medical Association, may do something to stimulate workers in this fertile field of chemical research; and for those students and practitioners who desire to fit themselves to investigate many of the points mentioned by him Wesener's book will come most opportunely, as it takes the place in the study of clinical chemistry that Dittmar's book at present holds for gas analysis. In the space of 270 pages the author gives a capital description of the methods of examination of the blood, not only generally, but in certain diseases of transudations and exudations, and of the contents of various forms of cysts. A considerable portion of the book is, very naturally, devoted to the subject of examination of the urine and of the various concretions that occur in the urinary tract. This part of the work is perhaps more exhaustive than any other; it is brought well up to date, and some valuable information as to the urine in various diseases is appended. The examination of the secretions of the salivary glands, of the contents of the stomach, of the fæces, of the mucus, sweat, and other secretions, are all treated in more or less detail, though in some cases the accounts are somewhat too sketchy; so sketchy, indeed, that we are bound to conclude that the author describes the work of others rather than the results of his own observations. It is due, however, to him to say that this is very seldom the case.

An exceedingly useful chapter on the technique of methods, and a list of the various reagents and the methods of their preparation, conclude what must be looked upon as an exceedingly valuable practical text-book. As we have spoken so freely of the excellences of this book, it is the more necessary that there should also be pointed out certain features that might easily be improved. Any text-book should be used merely as a means of introduction to work and for handy reference to that done by others on special lines of research. In the book before us the first requirement is met, but as regards the second, although names are freely mentioned, not a single reference to an original paper is given, and many students and busy practitioners who, with a list of literature on any special subject before them, would be tempted to carry their investigations further, will, unless they have access to other sources of reference, be compelled to leave their work at the point to which this text-book leads them. As regards arrangement of the chapters it would have been better had the general technique and the list of reagents been introduced at the beginning, instead of at the end of the work. These, however, are mere details which the experience of the author would probably lead him to improve should a second edition be called for, an event that from the general character of the book should occur at no very distant date.

The Nervous System and the Mind: a Treatise on the Dynamics of the Human Organism. By CHARLES MERCIER, M.B. London: Macmillan and Co.

IN this work on the nervous system and the mind Dr. Mercier's object is to provide "an exposition of the normal on a chart on which the aberrations of the morbid could be picked out." The lines upon which he desires to set out his task may be taken as those which would bring into a working harmony the philosophical teachings of Herbert Spencer, and the demonstrations in practical neurology of such masters as Hughlings Jackson. Beginning with the functions of the nervous system, Dr. Mercier tells us that the first most important and most imperative duty of the student of psychology is to recognise the impassable

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gulf, the fathomless abyss that separates the world of consciousness from the world of material things—that separates, in short, mind from matter. The student's next duty is to appreciate the association between these two orders of phenomena; an association which is to be taken as expressing the existence of an invariable (but unexplainable) concomitance of a mental change with a bodily change.

Dr. Mercier includes in his task the investigation of the facts of consciousness, the description of the mode of working of the nervous system, and the examination of the conditions under which, the extent to which, and the manner in which the changes of the one accompany the operations of the other. The introspective study of mental operations in one's self leads up to the broader study of the minds of others as inferred from their conduct. The scientific scope of Dr. Mercier's book is the following, as given by himself:—"The psychological unit is a *nervous process*, which when transmitted to muscles issues in a *movement*, and is accompanied by a *mental state*. Raise this unit to the highest power, and we find our subject falls into three natural divisions: the study of nervous processes, the study of conduct, and the study of mind."

When dealing with the physiological relations of the nervous system to muscular action and muscular movement Dr. Mercier makes some very interesting observations on coördination, which, he truly says, "is not a special function located in an isolated portion of the grey matter of the brain, and interfering only on occasions and in particular movements. It is an indispensable constituent of every movement whatever, and is a function of every portion of grey matter." A general location is also given to the element of control or inhibition which plays so important a part in healthy nervous action.

The author gives an excellent and forcible account of the *rationale* of the muscular distribution and nervous origin of the spasm in Jacksonian epilepsy; and he contrasts the clonic jerky paroxysmal character of this cerebral form of spasm, beginning in the periphery, with the continuous nature of the cerebellar spasm, which commences in the most central muscles, and is first evidenced by opisthotonos and retraction of the head. After dealing with the physical and with the physiological functions of the nervous system, Dr. Mercier proceeds to discuss its psychological function so far, in the first instance, as it relates to matter and motion, and without reference to consciousness. From this standpoint the function of the nervous system is, in the language of Herbert Spencer, to effect the adjustment of the organism as a whole to its environment; the term organism being taken as synonymous with "individual human being"; and the term environment as meaning the whole of the circumstances that act upon him or that he can act upon, whether those circumstances are physical, social, or moral. A study of the adjustment of the processes that occur within the organism to the conditions that exist outside of it involves a study of movements and of acts (both simple and coördinated)—processes which are effected by means of the nervous system. In short, the study of the psychological function of the nervous system is the study of *conduct*, which is the only criterion of intelligence. The nature and quality of the adjustment referred to becomes a test of the intelligence of the individual organism. After dealing with intelligence as manifested under various phases in relation to this adjustment, Dr. Mercier proceeds to deal with the constitution of mind, dwelling more especially upon those portions of introspective psychology that are of urgent importance to the alienist in his practical work.

The complex machinery of human conduct is in these pages well and skilfully handled, and the component parts are described and analysed with a simplicity and exactness which bring the subject within the grasp of readers who lay no claim to philosophical training. Without being commonplace or lax in his method, Dr. Mercier has the faculty of presenting his somewhat technical and involved subject in a pleasing and attractive form by the use of happy and pertinent word-illustrations of his meaning.

Dr. Mercier has succeeded in building up a scheme of practical neurology and psychology which cannot fail to interest and to instruct every student of mind, and which ought certainly to be in the hands of every student of insanity. There is no doubt that if the contents of this book were mastered by all asylum medical officers we should be spared much of the vagueness which sometimes characterises descriptions of mental processes in the insane.

A System of Obstetrics by American Authors. Edited by BARTON COOKE HIRST. Edinburgh: Young J. Pentland. 1888.

THIS work is uniform with Dr. Mann's system of gynæcology. It is some 1700 pages long, and its articles are of unequal value, as is almost inevitably the case with "systems." If this "system" "has its day" now and "ceases to be" some day, it at least cannot be called "little." It begins with a history of obstetrics by Dr. Engelmann, which is interesting, especially the references to existing savage tribes, whose customs Dr. Engelmann has carefully studied. Among the best articles is one on Ovulation, Menstruation, and Fertilisation, by Dr. Newell Martin. The article by Dr. Penrose on the Mechanism of Labour is unfortunate, we think, in describing six positions instead of the generally recognised four. The movement appears to us retrograde, and, even if it were not, a change is too late. The result of the perusal of this article by students would be to get them hopelessly confused. The chapter on the Use of Anæsthetics, by Dr. Reeve, is interesting, and includes a discussion of many of these drugs. Among other interesting chapters may be mentioned that on the Forceps, by Dr. Edward Davis; that on the Cæsarean Operation &c., by Dr. Robert P. Harris; that on Puerperal Infection, by Dr. Garrigues; that on the Etiology of Puerperal Fever, by Dr. Ernst; that on Complications of the Puerperal State, by Dr. Hirst; Insanity &c, by Dr. Lloyd; and the Management and Diseases of the New-born Infant, by Dr. Lewis Smith. There are in the work two kinds of illustrations, apparently by different hands. The Minute Anatomy and Microscopy, and the article on the Forceps, are apparently by one hand, the chapter on Pelvic Abnormalities by the other. The former are good, the latter are poor. The work is not a book, but a library, and can only take position as a work of reference. Whether it will displace such works as those of Spiegelberg in Germany, or of Tarnier in France, we doubt. Meanwhile, we are glad to be able to refer to many parts of it. We think it would have been more convenient if authorities had been collected either at the beginning or end of the chapters, instead of being scattered through the work. The paper and printing are excellent.

OUR LIBRARY TABLE.

On Bacteriology and its Results. A Lecture delivered by Dr. R. KOCH at the first General Meeting of the Tenth International Medical Congress, Berlin, August 4th, 1890. Translated by THOMAS WHITESIDE HIME, B.A., M.D. London: Baillière, Tindall, and Cox. 1890.—In convenient pamphlet form Dr. Hime has given a good translation of Koch's admirable work. He has appended one or two

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explanatory notes, and has placed within the reach of those who are too busy to refer to the original German a paper which, as we have stated in a previous review, should be read with the greatest care by all medical men, and most of all by sceptics and bacteriological agnostics.

Electricity in Facial Blemishes. By PLYM S. HAYES, A.M., M.D. Chicago: W. T. Keener.—This is a work of some 120 pages, of which nearly one-half is occupied with the histology of the skin and the description of the necessary apparatus. When the author gets to work he gives a good practical chapter on the removal of superfluous hairs. He recommends the employment of a blunt, slightly bulbous-headed needle in preference to one with a sharp point, uses from five to ten cells, and relies more upon the amount of the bubbling round the needle than on the ammeter to measure the strength of the current. He has found in some cases, but not in all, that the use of a cocaine, menthol, and chloral ointment previous to the operation diminishes the pain, and recommends zinc ointment as the best application to facilitate healing. Chapter 5 is devoted to port-wine marks, moles, and other facial blemishes, such as xanthoma, acne vulgaris, and rosacea, showing in what cases it is likely to be useful, and the book concludes with a series of "Don'ts," a popular American method of conveying cautions. On the whole, this little work is a reliable guide to electrolysis in the treatment of skin affections, although it may well be asked whether a monograph on such a small matter was required.

Illustrations of Diseases of the Skin and Syphilis. By TOM ROBINSON, M.D. Fasciculus I. London: J. and A. Churchill.—As there is no preface we are not informed what is to be the scope of the work of which this is the first number. It contains three coloured plates of large quarto size, illustrating (1) A Case of Congenital Syphilis; (2) Two figures, one of the late Palmar Syphilide, and the other of Palmar Eczema; (3) Kerion of the Scalp. The figures can scarcely be called fine examples of chromo-lithography; the best is Plate 2, but the colouring is crude. Plate 1 has the disadvantage of being from a drawing taken twenty-four hours after death, when the colour of the eruption was, of course, materially altered. Congenital syphilis in the form represented is such a common condition that one would have thought a drawing from life would have been readily procurable. The plates are accompanied by a history of the case and the treatment considered advisable by the author.

Etude sur la Syphilis, et son Traitement. Par le Dr. SIMON SMIRNOFF. Pp. 104. Paris: G. Masson.—The author is the president of the Russian Society of Balneology at Piatigorsk in the Caucasus. Within a space of forty kilometres there are, he tells us, four distinct groups of mineral waters: Ferruginous, at Géléznovodsk; sodium bicarbonate, at Essentouki (the Caucasian Vichy); Narzane and Kislovodsk are highly charged with carbonic acid; and Piatigorsk contains sulphur waters with a temperature of 40° C. It is these last which are so highly valued by the author as an adjuvant in the treatment of syphilis, though he relies on mercury as the true and only curative agent. He gives it chiefly by inunction either of the grey ointment or of the oleate of mercury in from two to four gramme doses. He thinks it advantageous to leave the mercury in the organism for some time, and deprecates the simultaneous use of sulphur baths or other eliminants, reserving them until after the mercurial inunction course is finished. He objects, therefore, to the mixed treatment. The author is strongly in favour of the unity of the virus of the soft and hard chancre, explaining the fact that most people with a soft chancre escape constitutional symptoms by the intensity of the process destroying the tissues before they can absorb the virus. The work shows evidence of independent thought and careful observation, and is illustrated with several interesting cases.

Practical Sanitary and Economic Cooking, adapted to Persons of Moderate and Small Means. By Mrs. MARY HINMAN BELL. Pp. 182. Published by the American Public Health Association. 1890.—This work was selected as the best of seventy essays received in competition for a prize of 500 dols. offered by Mr. Henry Lomb of Rochester, N.Y. Written for the instruction and use of the working classes in America, it contains occasionally matter which is inapplicable to this country, but there is a large amount which is of great practical value. The introductory portion of the essay is devoted to a discussion of "food principles," which we are disposed to think somewhat over the heads of the class for whose use the book was written, but is useful as showing the principles upon which standard dietaries should be founded. The instructions which follow on the cooking and re-cooking of meats appear very practical, and many useful hints are given for the avoidance of waste and the introduction of variety into the daily meals. In accordance with the conditions of competition thirty-six bills of fare are given of economical dinners for a family of six, twelve each for—(1) those of moderate means, (2) those of small means, (3) those who may be called poor. There are also twelve cold dinners, six for summer and six for winter. The book may be studied with advantage by those to whom economy, combined with comfort, is an object, and might be taken as a model for a similar work in this country. We may point out one defect in the recipes. Many of them give the somewhat vague quantity of a cup or half a cup of either solid or fluid to be used; it would be much better were a defined measure substituted for this term.

Tempting Dishes for Small Incomes. By Mrs. DE SALIS. Pp 88. London: Longmans and Co. 1890.—This *brochure* differs from many of Mrs. De Salis' other works in that the materials of the tempting dishes are inexpensive and the preparation of them is within the powers of a good plain cook. There are about 250 receipts given, with full and intelligible directions for their preparation. There are also some excellent instructions on the subjects of boiling, broiling, frying, roasting, and stewing, and some "hints to cooks," which would undoubtedly prove valuable if only that very independent class could be persuaded to study them and carry them into practice. A very full index makes the book thoroughly available.

We have received from Messrs. Burroughs, Wellcome, and Co. a copy of their *Pocket Diary and Memorandum Book.* It is a handsome and convenient little volume, containing space for notifications for each day of the year, and blank pages in alphabetical order. There is a cash account and a number of blank pages in each. We have also been favoured with a specimen of their *Physician's Appointment Blocks*, which cannot but be useful to practitioners. Any medical practitioner may, we understand, receive either or both of these diaries by sending his postal address to the offices of Messrs. Burroughs and Wellcome, Snow-hill Buildings, London, E.C.

New Inventions.

A SPLINT FOR THE TREATMENT OF FRACTURES AND DISLOCATIONS OF THE ELBOW IN THE EXTENDED POSITION.

THE frequent occurrence of more or less deformity following the at present generally accepted methods of treatment of injuries about the elbow-joint has led me to treat all such cases, with the exception of fracture of the coronoid, which is most rare, in the extended position with the hand prone. This position, as has been shown by the researches and experience of Drs. Illingworth and Nunn in

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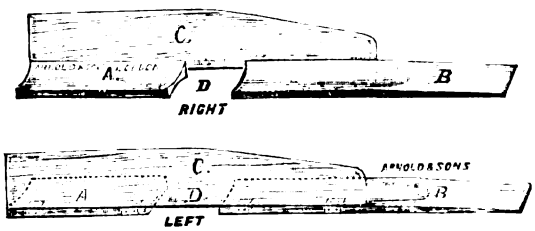
this country, and of Dr. Carl Lauenstein abroad, has many great advantages over the plans usually adopted. It is most important that the treatment of dislocations should not be detrimental to a possible fracture. The extended position obviates the danger of a fracture which is marked by swelling, and consequently overlooked, being left in such a position that union is either faulty or absent altogether. As a means of carrying out this method of treatment I have devised a splint which is simple, light, and



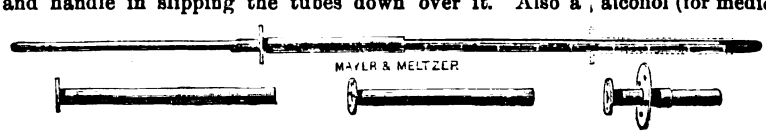
portable. It is comfortable to the patient, and is likely, I think, to be of great value in compound injuries of the elbow. It consists of three pieces, arranged as follows. A splint, A, for the arm; B, one for the forearm, extending down to the finger tips, and on which the hand lies prone; C, a third for the inner side, tapering below to suit the narrowing of the forearm. The space D between A and B is for the internal condyle; C keeps A and B in the same straight line, and is so hinged to them that it can swing round to either side, and thus the same splint will serve for either arm. When the splint is applied, C is at right angles to A and B. Messrs. Arnold and Sons, who have my original design, are the makers.

A. HANBURY FRERE, M.B., C.M.

DIRECTOR AND TUBES FOR THE DRAINAGE OF DEEP ABSCESSES.

MESSRS. MAYER and MELTZER, of 71, Great Portland-street, have made these for me. They may, I think, be found useful in cases of abscess of the brain, the lung, or the liver, or in cases of pelvic abscess. The director is without any handle; it is exactly 7 in. long, sharpish, and boldly grooved along its whole length. It is graduated in half inches, so that one can tell exactly at what depth it finds the abscess. The tubes are 1½, 2, 2½, and 3 in. in length; they slip down easily *over the director*. As soon as the surgeon has, with the director, found and opened the abscess, knowing exactly how deep it lies below the surface, he chooses a tube of the right length, and slips it down over the director. Thus he never loses the track; he is saved from the necessity of poking forceps down by the side of the director; his tube cannot go astray or get plugged, or fail to be exactly the right length. There is no hæmorrhage, no bruising or tearing of the tissues.

Messrs. Mayer and Meltzer have made a fine solid probe, eight inches long, to run down *inside* the director, as a guide and handle in slipping the tubes down over it. Also a



shield, to fit the tubes, for convenience in tying-in. I venture to think that such a director as this—without a handle, somewhat sharply pointed, grooved right down to the end, of known length, and graduated in half-inches,—may be a useful addition to our surgical instruments. The tubes, probe, and shield may be dispensed with: a bit of india-rubber drainage-tube, large enough to slip lightly over the director, and cut to the exact length indicated by the scale marked on the director, would perhaps answer all purposes.

Wimpole-street, Dec. 1890. STEPHEN PAGET.

IMPROVEMENTS IN CRUTCHES.

THERE have recently been some improvements in the manufacture of crutches, which are of interest to the profession, and which will some of them render the fate of those who have to use such aids to progression (whether temporarily or permanently) more endurable. These, which are the patented invention of a retired army officer, Mr. E. A. B. Beaumont, affect the make of a crutch in all its component parts. One alteration is the attachment of the cross-piece of the crutch to the shank by means of a ball-and-socket joint. This has been devised with the object of diminishing the wear-and-tear of the clothes caused by the friction of the crutch and the heating of the body by the constant rubbing. Another is the attachment of a handle to the shank of the crutch, to be grasped by the hand of the patient. This can be fixed to the required height. We consider that great care will have to be exercised in accurately adjusting this handle, which can be used with a cheap wooden crutch, for unless the hand reach this comfortably, there will be greater instead of diminished risk of crutch palsy. In the present form of crutch, as used by hospital patients, the hand grasps the shank, and can be easily moved up or down if the patient requires it, and the user can thus relieve pressure at once. The handle is useful, for more weight can be transmitted directly to the hand, and there will be less fatigue caused. Increased lightness is given by forming the shank of hollow metallic tubing; it is also made in a telescopic form. The foot of the crutch is also arranged according to the wish of the applicant, shod with leather, rubber, or other material to prevent its slipping, and fixed to the shank by means of a pin-joint, a hinge, or a ball-and-socket joint. The cross piece of the crutch may be obtained shaped in a manner different from that usually made, the solid part forming more or less of a half circle, the concavity of which is arranged with a cross piece of leather or more elastic material on which the weight of the body is borne. The label which at present accompanies and is attached to the crutch as sent out requires alteration in several particulars. Inquiries about these crutches should be addressed to 32, Egremont-place, Brighton, or to 39, Wellington-street, King's-cross, London, N.

Analytical Records.

WARRINGTON CHLOROFORM.

(A. H. MASON, 46, JEWIN-STREET, E.C.)

WARRINGTON chloroform, as we had occasion to point out a short time ago, is interesting chiefly because it is obtained by a special process from ketones. We have since had the opportunity of examining the following specimens from the same firm:—Pure chloroform without absolute alcohol, chloroform containing one-fifth of a 1 per cent. absolute alcohol (for medicinal use), and a sample of the alcohol so used. Pure chloroform is liable, as is generally known, to slowly decompose when exposed to light, and to render it more stable a minute amount of absolute alcohol is added. This reduces the gravity to 1·497, the specific gravity of ordinary chloroform being at least 1·500. The samples gave excellent results when submitted to examination. The specific gravity of the pure chloroform was found to be almost exactly 1·500, the medicinal chloroform 1·497, and the alcohol 0·799, corresponding to 99 per cent. absolutely pure alcohol. We were able to confirm, by testing, the entire absence of the impurities which are enumerated in the Pharmacopœia, and notwithstanding the minute amount of alcohol present in the medicinal sample, iodoform was obtained and identified, on agitating a pint of the chloroform for several hours with two ounces of pure distilled water, then pipetting off the water and treating it with iodine and alkali. This furnishes excellent testimony to the delicacy of the "iodoform test" for alcohol.

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CHLOROPHENOL FLUID, POWDER, AND SOAP.

(J. HARGREAVES AND SONS, 108, FYLDE-ROAD, PRESTON.)

It has been noticed not infrequently that the addition of bleaching powder to carbolic acid in dressing wounds causes healing to take place more rapidly than when the acid alone is used. This led to the notion that possibly the carbolic acid interacted with the chlorine of the bleaching powder to form chlorophenols, and subsequent experiments showed that chlorophenols are readily obtained either by treating carbolic acid with hypochlorites or with chlorine gas itself. Chlorophenols present the advantage over ordinary phenol of being less corrosive and poisonous, and they form soluble and easily decomposable compounds (chlorophenates) with the alkalies. The above firm have sent us samples of their fluid, powder, and soap containing a chlorophenol of special composition and manufacture as the antiseptic and disinfecting base. The fluid is miscible with water, and strongly alkaline. With acids, a liquid emulsion is obtained which is cleared by the addition of ether. The ether on evaporation yields the chlorinated oil, which possesses a persistent smell resembling iodoform. It burns with a smoky, greenish flame and gives a reddish-brown colour with perchloride of iron. The soluble powder in which sulphate of soda with a trace of starch is used as a vehicle and absorbent contains 10 per cent. of the liquid antiseptic. The soap is excellent in composition, perfectly neutral, and evidently superfatted, as we find ether dissolves out an appreciable amount of free fat. On submitting the soap, after treating with acid, to the action of steam, the antiseptic oil distils over. Chlorophenol has been stated to be specially effective in the treatment of nettlerash.

SNELLING'S PATENT HOP TEA.

(THE HOP TEA CO., ST. GEORGE'S HOUSE, EASTCHEAP.)

Novelty, if nothing else, may be justly claimed for the idea of blending Indian and Ceylon tea with English hops. It is interesting to recall and compare the therapeutics of each constituent. Tea is credited with the property of removing languor and sleeplessness, large or strong doses, however, causing a kind of narcotism. The action of hop depends upon the presence of two important substances—(1) an aromatic oil which acts as a primary stimulant and secondary soporific and sedative; and (2) the hop bitter, lupulinic acid, which serves as a stomachic and tonic. The flavour of the infusion is that of a sound tea to which has been contributed the delicate and bitter taste of the hop. The hop leaves are readily distinguished by the aid of a lens, and may be easily picked out. We succeeded in extracting (with alcohol) the oil (valerol, $C_6H_{10}O$) and the bitter principle (lupulinic acid) from the separated leaves. The tea used in the blend is of unquestionable purity, as indicated by our analysis, which is as follows:—Tannin, 10·44 per cent.; mineral matter, 5·44 per cent.; insoluble mineral matter, 2·36 per cent.; alkalinity in terms of potash, 1·43 per cent.

PERIODATE, SODA-WATER, AND LEMONADE (WEAVER).

(THE AERATED BEVERAGE AND BUFFET COMPANY, LIMITED, WREXHAM, NORTH WALES.)

Whether or not it is to be attributed to the presence of so-called periodate we do not know, but the taste of these mineral waters is peculiarly smooth and soft. The residues on evaporation gave a blue colour with hydrochloric acid and starch, which was intensified by the addition of hydrogen peroxide. The soda-water contains bicarbonate of soda. Dr. Klein, F.R.S., is responsible for the statement that periodate instantly kills cholera and typhoid fever germs. Periodate is undoubtedly antiseptic, but it is just a question whether a continued course of antisepeis is desirable.

IRON MALESCI.

(DR. MALESCI, CHEMICAL AND PHARMACEUTICAL LABORATORY, FLORENCE.)

Iron Malesci is described as being made so as to resemble the combined iron existing in the animal organism. It is a pale green fluid, exhibiting a strongly acid reaction to test paper, and contains, according to our examination, proto chloride of iron and common salt. The iron is readily precipitated by reagents such as ammonia, as dirty green hydrate, and the fluid from which the iron has been so separated gives no evidence on testing of the presence of any other substance than salt. Iron Malesci may be used doubtless with advantage in cases where iron salts are indicated, but it can scarcely be regarded as an organic compound of the metal.

CREOLIN (FOR DISPENSING PURPOSES ONLY).

(JEYES' SANITARY COMPOUNDS COMPANY, LIMITED, 43, CANNON-STREET, E.C.)

The manufacturers have made further improvement in their product, now well known under the name of creolin. The sample submitted to us is a dark brown, but non-turbid, oily fluid, which exhibits an alkaline reaction to test paper, and forms with water a soapy emulsion, smelling strongly of crude tar. Acids liberate an oil from it which does not give the carbolic reaction with perchloride of iron. Creolin is a useful and convenient disinfectant and deodorant, and possesses the undeniable advantage of being non-poisonous. It is, in fact, used for internal administration.

LIQUOR SENNÆ LEGUMINUM (PRESTONS). CREMOR ANTI-SEPTICUS (PRESTONS).

(THOS. HODGKINSON, PRESTONS, AND KING, 81, BISHOPSGATE-STREET WITHOUT, AND 26, DUKE-STREET.)

Liquor Sennæ Leguminum is prepared by a special process without heat from senna pods, and it is claimed not unreasonably that on this account a laxative is obtained which is free from the resinous matter, and consequently the griping principle, of the leaves. It is an opalescent fluid, sweet, and devoid of disagreeable taste. On heating the fluid clears, spirit distils over, and a prune-like smell is given off. Perchloride of iron gives a slight black reaction which would indicate tannin.

Cremor antisepticus consists of a semi-solid petroleum, probably vaseline, in which is incorporated the powerfully antiseptic and pleasant-smelling thymol. Steam readily expels the thymol, which gave a faint violet colour with iron perchloride, and a reddish purple with acetic and sulphuric acids. Cremor antisepticus is a convenient and safe form of antiseptic lubricant for surgical use.

ROBINS' READY-MADE LINSEED POULTICE.

(SEABURY & JOHNSON, 46, JEWIN-STREET, E.C.)

We regard this as an important addition to cataplasmic medicaments. The poultice consists of a dried coating of linseed meal founded on soft white felting, and is covered with aseptic gauze like coarse muslin. The addition of a mild and harmless antiseptic, the presence of which we were able to confirm, renders the meal less liable to decomposition, and so avoids any objectionable smell that may otherwise arise. Other medication which may happen to be prescribed, such as mustard, may easily be sprinkled over the linseed coating. The advantage and convenience of being able to prepare a linseed poultice ready for use in three minutes which will properly retain its heat and moisture are obvious.

A CHILDREN'S SURGICAL HOME FOR SHANKLIN.—An institution of this kind is, it appears, through the benevolence of an anonymous lady, to be established in Shanklin. The benefits of the Home will be restricted to children between the ages of three and fourteen, who will receive treatment free of cost.

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THE LANCET.

LONDON: SATURDAY, JANUARY 3, 1891.

THE new year which dawned on Thursday last brings round to-day the familiar occasion for an address to our readers upon ourselves, our work and our projects. The subject is of course one which is never absent from our own thoughts, but it is not often that we can permit ourselves to descant upon it. Yet in the hurry and pressure of the perennial task time slips by so largely unobserved that this anniversary occasion seems to recur only too frequently and at intervals too short. Yet, measured by the progress of events, it is not so. No new year finds us exactly where its predecessor found us when it broke, or presents us with the identical tasks and problems which have been dealt with in the past. The Laureate has described a land so "sleepy" that

> "....beneath the self-same wheel
> The self-same rut did deepen year by year."

But the day has long gone by when any such description could portray the region which stretches beneath the gaze of workers and chroniclers in the field of the medical sciences and arts.

To-day many circumstances conspire to make this truth apparent, and to emphasise its significance. The profound impression produced alike within professional circles and beyond them by KOCH'S great, though incomplete, work in Berlin; the quickened interest of society at large in the moral and physical well-being of the more neglected classes; the rapid growth of an enlightened sense of the intimate relation between moral depravity, social degradation, and physical disadvantages; the greatly accelerated development of that local government which is mainly concerned with problems of public health—all these are facts, and facts of capital importance, which must, and already do, modify profoundly the relation in which the profession of medicine stands to society at large. To-day it is its duty to lead opinion in paths which, ten years or five years ago, it was striving to open up to the mind and thought of the nation. Nay more, it may confidently be said that the past year has witnessed a great awakening of the popular mind, and that the immediate aims with which we addressed ourselves to the discussion of many questions connected with the treatment of outcast sections of the community, and the prevention of disease and crime in the beginning of 1890 would be obsolete to-day.

What, then, in view of the present posture of discussion and of affairs is our duty to one another and to the society about us? We ask ourselves the question, not as medical journalists alone, or even chiefly, for we clearly recognise that THE LANCET derives what weight and influence it possesses far less from any literary or scientific merit that it may be able to boast of than from the fact that it enjoys, and is known to enjoy, in a quite unique degree, the confidence of the whole medical profession throughout the British Islands and the English-speaking world. It always has been and will continue to be our endeavour to secure from the large circle of our friends the best available talent to deal with the various departments of our work; though if we could in this respect succeed to the full height of our desires, that alone would not suffice to secure success. On the other hand, so long as THE LANCET retains the confidence of its present subscribers or of their successors in professional rank and work, it must of necessity be a powerful factor in the formation of public opinion. More, perhaps, than any other journal in the land, THE LANCET depends upon the support, that is the moral support, of its readers, and thus the question which we have proposed to ourselves becomes in effect a question as to what is the public duty of the medical profession in reference to the stimulation and guidance of opinion upon these great public questions.

The question is more easily asked than answered, yet the difficulty of finding an answer arises less from the nature than from the multifariousness of the answer sought. It is plainly our duty, in reference to the discovery and utilisation of new remedies, to provide facilities for the fullest discussion of their merits within the compass of the technical press. The mischief which may result from the communication of mere guesses, hopes, and ill-founded expectations to the general newspapers has been strikingly illustrated within the past few weeks. It is small blame to the editors of these papers if they do not correctly and at once distinguish between what is known and what is only surmised, or to their readers if they are led away by technical statements into delusive hopes and mistaken courses. But in proportion as we deprecate this untrained discussion of abstruse scientific questions, we are bound to provide as its better and sufficient substitute a full and impartial treatment of the facts and theories by more instructed hands. With this object it has been our practice to obtain independent communications from our own correspondents in all parts of the world, and in a case of importance to commission a special representative to any place where interest may for the moment centre. To such efforts we shall continue to devote ourselves with unremitting attention, and this the more because the extent and nature of the correspondence which appears from week to week in our columns from volunteer contributors afford the best possible guarantee that, when once the facts have been brought to a focus, any shortcomings in the editorial treatment of them are sure of a speedy and effective redress.

Very much the same principles apply, with modifications, to the other matters of public interest to which we have referred. At every point at which our studies or our experience have given us special qualifications for the discussion of public questions, we recognise a public duty to make our garnered results available for the common good, and we recognise, moreover, that the present attitude of the public mind makes this duty more pressing than ever.

But, after all, the bulk of every medical practitioner's energy must be bestowed upon his private practice, nor can it be pretended, seeing how intimately the due discharge of his functions affects the well-being of his patients, that his more private duties are, in importance any more than in volume, subordinate to these more public ones to

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which we have been alluding. In this view the duty which medical men owe to one another as fellow members of a great and beneficent profession looms large and magnificent. To assist one another by the communication of ascertained facts and fruitful suggestions, to support one another by helpful countenance and serviceable aid—these are more than mere expressions of a good nature or conformity with professional rule. They are substantial contributions to the common work, and that a work than which no worthier falls to the lot of man. We are proud to believe that THE LANCET has in the past contributed not a little to such interchanges of reciprocated good offices, and we trust that it will never become less efficient to this end.

IT is now nearly two months since Professor KOCH published his memorable statement upon the anti-tuberculous action of the liquid discovered by him in his laboratory work; and although he himself could not have had very much experience with it in human tuberculosis, he felt that he had gained sufficient knowledge of its properties to give it to the world. Since then the "remedy" has been largely circulated—somewhat indiscriminately, it is true—and has been tested in all quarters. The result has in the main been confirmatory of Professor KOCH'S declarations, which, it may be remarked, hardly went so far as some of his enthusiastic followers would have had us to believe. Even now it is difficult to find an unequivocal case of cure, but there are scores of undoubted instances of striking amelioration in symptoms after treatment by the remedy. This is surely sufficient to justify the continued employment of this novel method of treatment, and we confess to some surprise at the statements made in some quarters, notably by M. HUCHARD, that nothing but failure has attended its use. For what, in brief, are the facts, so far as they can be gathered? In dealing with them it may be convenient to speak separately of the local and general "reaction," and, as the former indicates best the specific action of the remedy, we will take it first.

Undoubtedly the most striking and obvious of these local effects have been witnessed in cases of lupus. In hardly any case has the reaction been wanting; severe inflammatory œdema, followed by exudation and scabbing, with destruction of the lupoid nodules, has with unfailing certainty occurred after the injections, and the rapidity with which reparative action is set up has been no less surprising. Nevertheless, it is said that recurrence has not been obviated, and that a definite cure has not been established. It is suggested that the remedy which acts so intensely upon the tubercular tissue, but spares the tubercular bacilli, may set these free to exert their action upon fresh soil, and that no case can be expected to be cured without resort to surgical measures of extirpation, so as to rid the subject entirely of the foci of disease. Again, it has been argued that the selection of the lupoid patch by the remedy is no absolute test of the specific quality of the latter, but only that it exerts its effect on a part already weakened by disease. This is sufficiently disproved by the inefficacy of the treatment in any form of local disease other than tubercular. It must be conceded that this substance has a specific affinity for tuberculous tissue, causing its rapid necrosis. Many cases of tuberculous gland affections and joint disease have also been treated; but with less regular results than in the case of lupus. Still, it may be said that in by far the majority there has been evidence of indubitable "local reaction," and that in some few cases a very great improvement has taken place in the condition of the affected joints after the acute inflammatory disturbance has passed away. It would, indeed, have been unreasonable to expect that where the structures of a joint are greatly disorganised any such means should be capable of restoring their integrity; but yet it may be hoped that the necrotisation of the tuberculous tissue will facilitate its subsequent removal by the surgeon. The larynx affords opportunities for observing the local operation of the remedy hardly inferior to those given by the skin; and, although statements as to the therapeutic efficacy are here also somewhat conflicting, that the injections are followed by inflammatory œdema and increased ulcerative action admits of no doubt. Moreover, in several cases, the treatment has brought into view unsuspected foci of tubercle in the pharyngeal and laryngeal mucous membrane, and in one case, cited by Dr. FRAENKEL in a paper read before the Berlin Medical Society on the 17th ult., perichondritis of the arytenoid developed after three weeks' treatment. Such an occurrence, together with the continuance of the appearance of fresh foci, might seem to militate against the use of the remedy, or throw doubt upon its efficacy. On the other hand, it may be that in deep-seated infiltration the effects of its action are for a time concealed from view. As regards pulmonary phthisis, the results have certainly been equivocal, owing, it may be, in large measure to the different stages of the affection at which it has been applied, and the difficulty in determining from physical signs the degree of local reaction that takes place. We may disregard in this connexion the alleged disintegrative changes in the expectorated bacilli; but there is the greatest diversity in the records of the physical signs. In some cases these have indicated an apparent arrest of tuberculisation; in others a no less obvious extension of it; in others, again, no change has been detected at all. The vaguest surmises have been proffered to explain these diversities. Some, influenced perhaps by inherent doubts as to the wisdom of the practice, have not hesitated to affirm that the "remedy" is liable to excite fresh tubercular activity and to jeopardise life itself by awakening into action a dormant focus of disease. Nevertheless other equally credible authorities declare that, subjectively as well as objectively, the injections have been followed by distinct amelioration of symptoms. In may be noted as singular that two of the most frequent complications of actively progressive phthisis—hæmoptysis and pneumothorax—have been comparatively little excited by this treatment. As regards other forms of tuberculosis—pleurisy excluded—there has been little that is encouraging; and we may take it that the use of the agent is distinctly contraindicated in acute tuberculosis or in tubercular meningitis.

Turning now to the so-called "general reaction," notified mainly by the influence on temperature and pulse, it may be as well to remember that there are probably at least two factors at work in its production. There is

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(1) the toxic effect of the material itself, and (2) the secondary effect due to the local disturbance excited by it, including the absorption of the necrotic tissues. The first is common to the non-tubercular and the tubercular alike; the second is special to the latter. Now one of the most curious circumstances which further study of its effects has revealed is that the degree of this "general reaction" is not invariably proportionate to the amount of tubercular disease present. In some few obviously tubercular cases no reaction has been produced after considerable doses; in others, where the disease is apparently limited, the reaction has been most severe. Allowance must of course be made in this, as in the case of all toxic agents, for idiosyncrasy; but yet we hear of patients who have been tolerant of the fluid during several trials suddenly becoming markedly susceptible to it. No doubt there is an explanation for all these vagaries, but it is too soon yet to hazard one. That which is obvious is the very powerful toxic effect produced by the material as seen not only in the high temperatures produced, but in the symptoms of cardiac enfeeblement—the rapid pulse, collapse, cyanosis, and other alarming symptoms—which have unfortunately in some cases been fatal, and which prove how great is the need for caution in the use of the agent and for vigilance in the observation of its effects. These grave symptoms may arise in the absence of any notable temperature reaction, and apart from any very severe local reaction. No doubt their gravity is increased in the anæmic and debilitated subjects of certain forms of tubercular disease. All other symptoms of the period of reaction sink into insignificance beside these, which show that the fluid is more or less a direct cardiac poison; for, although such cerebral symptoms as stupor, and even coma or digestive disturbance, as anorexia and vomiting and jaundice, or the appearance of a cutaneous rash, or of albuminuria, have been noted, not one of them so immediately threatens life as the undoubted disturbances excited in the circulation. We believe that although for some of the anomalous symptoms which may characterise the reaction an explanation may be found in the local disturbance excited around an unsuspected tubercular focus, yet for others, and these the most serious, it is the general toxic effect of the remedy itself that is responsible.

We repeat it is too soon to appraise the value of the treatment, but it would be unwarrantable to reject it altogether. The year on which we have entered will bring with it the issues of a trial of a remedy for which much has been claimed. It will be a test not only of the remedy, but of the acumen and impartiality of those who use it; and it were well perhaps if all who do use it were to exercise scientific scepticism as well as caution. Now that the first excitement has passed away, we may hope that the enthusiasm of the moment will yield to a calm, dispassionate study of the phenomena of tubercular disease under the influence of the drug, and that conclusions will be drawn which can be accepted with confidence.

Meanwhile, we must deplore the decision of the German Government to retain as secret the mode of preparation of the remedy. It places that State in an invidious and unenviable position; it embarrasses the freedom of every user of the remedy; whilst it cannot fail to strengthen the hands of the empiric, who finds therein a justification for keeping his precious secrets. Once more we appeal—not to Professor KOCH personally, for we understand he has no longer the control of the matter—to the German Government to allow Professor KOCH to do that which he originally intended, and declare how his investigations led him to these remarkable issues. Such a step cannot surely lead to a greater likelihood of fraud than at present exists. The method of preparation is doubtless difficult and tedious, only to be pursued, perhaps, by a mere handful of experts; but if so, what harm could accrue from revealing it? Surely there are ways and means of safeguarding the public and the profession from imposition other than by retaining as a State secret the description of a bacteriological process which could be undertaken only by an expert.

WHEN the Government of Victoria selected Dr. D. ASTLEY GRESSWELL as their chief health officer we ventured to congratulate them on the choice they had made. But our congratulations fell short of that which the Victorian Government deserved, for they alone knew all that was involved in the appointment of an officer amongst whose known characteristics no place whatever could be found for attempts either to exaggerate or to gloss over the injurious influences and the evils of which he became cognisant in the performance of his duties. Dr. GRESSWELL has now, after several months of inspection, reported on the sanitary circumstances of Melbourne and its suburbs, which together constitute a city of 420,120 inhabitants, and, notwithstanding the existence of defects on a stupendous scale, the remedy of which must involve a great expenditure of time and of money, the thanks of the Board of Public Health have been expressed to him in a significant manner for the laborious but very outspoken report that he has laid before them.

The great excess of mortality from enteric fever which Melbourne has been experiencing for years past can no longer be a matter of surprise to anyone who has the most elementary knowledge of the laws of health. Many comparatively modern cities have profited by the experience which had been purchased at so great a cost of life in the more ancient ones of the old world; but there is little evidence that this has been the case as regards Melbourne. True it is that the houses are as a whole scattered over a wide area; but whilst this is the case we read of densely packed localities, of back-to-back houses erected so recently as 1888, and of the consequent lack of ventilation both around and within dwellings. Land must, at some time at least, have been reasonably cheap, for a large number of the houses, consisting of a number of rooms, are single-storeyed; and yet the report tells us of sites that are swampy and filthy, of no attempt to make their surfaces impervious, of ground water within a foot of the floors, of the absence of dampcourses, and the existence of drain gutters around that are made of wood which is rotting, and that favour soakage into the subsoil. Surface channels are largely relied on for drainage, and the story told of their defective construction, deficient cleansing, and of the facilities for soakage of filth which they provide is truly lamentable.

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Of so-called "closed drains" it will be enough to say that some of these are made of wood also, and that many are so contrived that drain air is continually being drawn from them into the houses. Catch-pits in gullies and in sewers, defective by-laws, and regulations as to building so designed that there is practically no means of enforcing them—and this in a district where in the city area alone nine or more new buildings have been erected every week for six years—all means an amount of accumulating mischief which it is deplorable to think of in the case of the capital of an Australasian colony. But it also goes to show that if ever there was a case in which active interference was called for with the greatest urgency it is that of the city to which the report relates.

Coming next to the question of conservancy, it would appear that a great change was made some years back from a cess-pit to a pail-closet system. But as to this a mistake was made which has also been common in the past history of this country; for the plan inaugurated was that of a single- as opposed to a double-pail sytem. The result is obvious. The scavengers cannot take away a single pail to cleanse it, and the result is accumulating filth and offensiveness. The refuse, too, is becoming an intolerable burden in the localities where it is deposited; houses are built on it, as also on excremental filth; and destructors are evidently needed at once. Thus, the health officer for Preston says that his district is used as a deposit for excreta and refuse, and that all over the area resorted to for that purpose the inhabitants have suffered severely from enteric fever. With regard to sewerage we need make no detailed comments. The system admittedly needs reconstructing anew; and although, in consequence of the scattered nature of the city and its suburbs, the cost must be an exceptionally heavy one, the Victorians have not hesitated to face the difficulty, and they have already engaged the services of Mr. MANSERGH to deal with the matter in a thorough manner. A list of local conditions illustrative of the need for such action is given by Dr. GRESSWELL, who states that the inhabitants complain of them as "terrible," "sickening," and "enough to breed any fever."

We were always under the impression that Melbourne had reason to boast of its water-supply, which is brought in from without, and is known as the Yan Yean service. And even now we hope that there is ground for satisfaction in so far as the sources are concerned, for Dr. GRESSWELL, not having had time to examine these, has nothing as yet to say concerning them. But, however admirable the water may be before it reaches Melbourne, all chance of safety from its use is put aside by the vicious arrangements which admit of suction of filth into the mains in their passage through the city. Not only may this result be brought about from the pollutions in the surrounding soil owing to leaky pipes, to direct services into watercloset pans, and also when new connexions are made; but it actually appears that the fire-plugs are so contrived that the contents of the street channels, which are but drains, can get into the water service through the ball-plugs and boxes with which the mains are fitted, both under conditions of low pressure and of such intermissions in the supply as are unavoidable. Well may the report refer somewhat ominously to the possibility of the Melbourne water-supplies playing a part "in determining the vital statistics" of the capital.

Many other matters are referred to in the document before us. They all have a bearing, more or less important, on the state of public health, and they one and all show how imperative it is that a new sanitary organisation should be set on foot. Even the sanitary officering is defective. The medical officers of health can hardly be expected to act independently under the present unsatisfactory arrangements as to tenure of office, and though the sanitary inspectors are evidently intelligent and hard-working men, yet their sanitary functions seem to be regarded as of secondary importance only. Thus nine-tenths of the time of one inspector is occupied in looking after stray cattle and in collecting the dog tax.

On the part of some it was felt that the recent report of the Royal Commission on the Sanitary State of Melbourne, which was compiled under the chairmanship of Professor ALLEN, was needlessly severe in some of its strictures. But it is clear that the statements of the Commissioners are more than endorsed by the report which Dr. GRESSWELL has felt it his duty to present to the Board of Health. It is evident that the whole matter will now be fully submitted to the inhabitants and to the authorities of Melbourne, and we sincerely trust that the occasion will be utilised for making a new departure such as will put an end to evils which must necessarily become aggravated as the city becomes more prosperous and hence more populous. Professor ALLEN has been spending much time in examining into our English public health system, and now that he has returned to Victoria he will be able, together with Dr. GRESSWELL, to indicate to the inhabitants of his native city how they may save life and health if they will but profit by the dearly bought experience of the mother country. Of this experience Dr. GRESSWELL's past career makes him a trustworthy and excellent exponent. Melbourne has now the opportunity of taking the lead in regard of sanitation amongst the capitals of Australia, and the attitude recently adopted by those holding office in the State and in the Public Heath Department is, happily, full of much promise in this direction. Thus, the Earl of HOPETOUN, Governor of the Colony, has publicly stated that Dr. GRESSWELL's report is admirable as a public document, and altogether "untinged with exaggeration," and the public press, in urging immediate reform, admits that the neglect of the past "has dug graves enough and raised tombstones enough."

DURING one whole week public interest in Paris may be said to have been concentrated upon the proceedings in the Assize Court, where a sensational murder case was being tried. MICHEL EYRAUD and GABRIELLE BOMPARD were arraigned for the murder of TOUSSAINT AUGUSTIN GOUFFÉ, a writ-server of the courts, and the circumstances of the case, involving as they did some most intricate legal and scientific difficulties, excited an extraordinary interest in the French capital. About the general facts of the murder there was no dispute. EYRAUD had apparently at one time lived a steady and reputable life, but subsequently became associated with BOMPARD, a woman of loose character, and

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the pair, being in financial straits, looked round for some wealthy dupe to decoy and rob. Several abortive attempts were made, but at length GOUFFÉ was enticed by the female prisoner into an apartment in the Rue Tronson Decoudray, and there murdered. The body was cut up and packed in a trunk, and it seemed for a time as if justice was to be defeated. But the guilty pair became alarmed, they fled to America, were tracked by the police, arrested and brought back to Paris, and put upon their trial. EYRAUD admitted his guilt and the extraordinary interest of the trial turned entirely upon the part played by GABRIELLE BOMPARD. She acknowledged having been in the room at the time when the murder was committed, but denied having taken any actual part in its commission, and alleged that in so far as she had been the accomplice and assistant of EYRAUD she had acted under the influence of hypnotism. There was some doubt as to the precise means employed to bring about the death of the victim. The theory of the prosecution was that the agent used in strangling GOUFFÉ (strangulation having been undoubtedly the cause of death) was a *cordelière*, or waistcord, belonging to a dressing-gown of BOMPARD, and that she had thrown it round GOUFFÉ'S neck while he was held by EYRAUD. Her own statement was that while she was talking to GOUFFÉ, EYRAUD glided behind the sofa on which GOUFFÉ was sitting, seized him by the neck, and strangled him by the pressure of his hands. The medical evidence, especially that of Dr. LACASSAGNE of Lyons, though not quite decisive, favoured the story put forward by BOMPARD.

The chief point at issue, however, was the degree of responsibility of BOMPARD, and whether there were sufficient grounds for believing that the series of complicated acts involved in the crime could be performed under hypnotic suggestion. Dr. BROUARDEL was the chief witness regarding the mental condition of BOMPARD. According to his evidence, she did not show any trace of mental alienation. When eight years of age she was tall for her age, but then stopped growing suddenly; at seventeen she was plump and fat, but afterwards became thinner. She was a vicious girl, given to lying, but at the same time intelligent and capable of expressing herself well in writing. She was constitutionally hysterical and subject to *crises des nerfs*, one of which she had had during the course of the trial. This hysteria was not, in Dr. BROUARDEL'S opinion, of a nature to produce intellectual "dislocation," and in no way diminished her sense of responsibility. Dr. BERNHEIM of Nancy having suggested that BOMPARD might have acted under hypnotic influence, Dr. BROUARDEL made some experiments, and found that the culprit was hypnotisable, but only to a very small extent. She was easily put into the hypnotic trance on being told that she would not be questioned regarding her share in the murder, but only about the events of her childhood. These experiments did not alter Dr. BROUARDEL'S conviction of the prisoner's responsibility. He believed her to be lacking in moral sense, and compared this defect to a malady like blindness or deafness. The counsel for the defence having pointed out that BOMPARD had hallucinations during her "attacks of nerves," Dr. BROUARDEL gave it as his opinion that this fact did not alter the culprit's responsibility. He found that even in the hypnotic sleep the moral sense remained intact up to a certain point. At the Salpêtrière two women, who had often been sent to sleep, were told while in a hypnotised condition to undress and go into a bath. One immediately did so, but the other, who had a stronger sense of shame, resisted the suggestion, and had an "attack of nerves." Moral consciousness thus remained to a certain extent. The witness further stated that he and his colleagues found that only simple acts could be done under such circumstances, and they were of opinion that a crime could not be thus committed.

Dr. SACRESTE'S evidence went to show that he had frequently hypnotised GABRIELLE BOMPARD, that she was a good hypnotic subject, and that the hypnotic trance produced on one occasion had been sufficiently deep to enable him to perform a painful surgical operation upon her. He was of opinion that while she could not be considered wholly irresponsible, she was not altogether a free agent. As regards the present crime, he could not say whether hypnotism had anything to do with it. He did not think a crime could be committed under its influence, although a subject might be gradually habituated to the idea.

Dr. LIÉGEOIS of Nancy gave evidence at great length regarding the hypnotic theory put forward by BOMPARD and her counsel. He stated that he and his colleague, Dr. BERNHEIM, found that in a state of profound hypnotism there was a complete absence of will in the subject, and that any suggestion made by the hypnotiser passes into the subject and inspires him or her to action. He gave instances of hypnotic subjects being excited to commit thefts, to fire a pistol at a friend, &c. As regards the present case, he thought there was reason to believe that BOMPARD might have acted under hypnotic suggestion. The fact of her having passed the whole night near the body of a man who had been murdered suggested that she was under some secret influence. In view of the proofs given that she was readily hypnotisable, and his conviction that it was possible for EYRAUD to have hypnotised her to act as his accomplice, he thought the jury could not ignore this theory.

Dr. BALLET and Dr. MOTTET having given evidence to show that in their opinion the alleged acts could not have been performed under hypnotic suggestion, the various counsel replied on the whole case. Maître DOUET, who represented the GOUFFÉ family, pithily remarked that the theories held by Dr. LIÉGEOIS could only lead logically to the closing of the Palais de Justice, as it would be easy for an accused murderer to say when brought to justice "I was under the influence of evil suggestions." The jury found both EYRAUD and BOMPARD "Guilty," the latter, however, "with extenuating circumstances." EYRAUD was condemned to death, his accomplice to penal servitude for twenty years.

We have given the facts of this strange case as they have been reported in the public press. Such reports are not always quite fair to expert witnesses, and we must take the reports of the evidence of the medical witnesses with some caution. The general facts are, however, clear, and there does not seem much doubt as to the scientific theories put forward respectively

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by the representatives of the Nancy and the Paris schools of hypnotism. According to the former, the most complicated acts, such as those involved in an elaborate murder, may be committed under hypnotic influence, and the moral sense may be reduced to complete abeyance. According to the Paris school, only simple acts can be done under hypnotic influence and the moral sense remains sufficiently awake to make the hypnotised subject resist immoral suggestions. We need hardly dwell upon the importance of the distinction thus drawn, or upon the far-reaching, and indeed revolutionary, results likely to ensue if the Nancy doctrine should be generally accepted. The responsibility of teachers who put forward such views is very heavy, and they owe it to their fellows to put their theories to the most searching and exhaustive tests. It is hardly too much to say that such doctrines are sufficient to shake criminal procedure to its foundations. Nevertheless, such a reflection must not prevent us from weighing the question impartially, and listening patiently to what may be said on behalf of the views of Drs. BERNHEIM and LIÉGEOIS.

The odd point about this trial is that there seemed to be practically no evidence that GABRIELLE BOMPARD had acted under hypnotic suggestion. The most that was proved was that she was a hysterical subject, that she had been frequently hypnotised, and that in the opinion of a minority of the medical experts her participation in the crime might have been due to hypnotic suggestion. That it was actually due to this cause there was no positive proof whatever. The theory put forward with so much ingenuity has given Paris one of its greatest sensations, and may have conferred some additional fame upon Maître ROBERT, who defended BOMPARD, but it has not cast much new light on the puzzling phenomena of hypnotism, and is hardly likely to exercise much real influence on the future of criminal procedure.

IN the last number of the *Quarterly Journal of Microscopical Science* two memoirs appear which are of great interest, as showing the efforts made by the scientific naturalists of the present day to bridge over the chasm that separates the vertebrate subkingdom from the invertebrate, and the willingness they exhibit to modify preconceived views, however high may be the authority on which they rest. The "annelid" theory, says Professor PATTEN, after fifteen years' of dextrous modelling, is now as far as ever either from fitting the facts of vertebrate structure or from shedding any direct light on the great problem of the origin of vertebrates. It certainly is not without significance that of all those who, with willing eyes and minds, have grappled with the annelid theory, not one has discovered a distinctively annelid feature in vertebrates, neither the mesoblastic somites, nephridia, segmental appendages, nor the segmental sense organs, which are found in nearly all segmented animals. Further, since the annelids are characterised by their typically unspecialised segments, it cannot be expected that their study should elucidate that profound specialisation of the vertebrate head which it is the goal of vertebrate morphology to expound. On the contrary, concentration and specialisation of head segments are greatest in the arachnids; and hence it is in these, on *a priori* grounds, that we should expect to find traces of the characteristic features of the vertebrate head. Finding from time to time confirmation of this idea, as the unexpected complexity of the arachnid cephalothorax revealed itself, Professor PATTEN feels justified in formulating a theory that vertebrates are derived from arachnids. He accordingly proceeds to point out that the cephalothoracic neuromeres, nerves, sense organs, and mesoblastic somites of the scorpion present in a general way not only the same specialisation and the same numerical arrangement in groups, but also the same difference as a whole from the body segments as do the corresponding parts in the vertebrate head; that the cartilaginous sternum of the arachnid represents the primordial cranium of vertebrates; that in the trilobites and merostomata, which include certain forms of entomostracous crustacea, the internal structure of the cephalothorax resembles in some respects that of scorpio and limulus; that the remarkable fish-like pterichthys and related forms, judging from their external structure, are closely related to the merostomata, and serve to connect arthropods with vertebrates; and lastly, that the embryology of vertebrates in its main features can be reduced to the arthropod type.

Professor GASKELL has attacked the problem from another point of view—that, namely, of the development of the nervous system,—and has thus been led to consider that this system has been formed by the continual increase of segmentally arranged nervous structures situated on the outside of and in close connexion with a non-nervous unsegmented tube. Now, this segmentally arranged nervous system presents certain peculiarities, which have to be taken into account and, if possible, explained: such, for example, as its tubular character; its curious dilatation in front, forming the ventricles of the brain; the large amount of non-nervous substance in its interior in the form of an epithelium, and its approximation to the surface at the infundibulum. All these peculiarities admit, Professor GASKELL thinks, of an easy explanation if we regard the epithelial tube lining the central canal of the nervous system as representing the alimentary canal of the invertebrate from which the vertebrate sprang. He takes the alimentary tube of a proto-crustacean as a type, and points out that the fine tube leading from the surface of the tuber cinereum to the cavity of the infundibulum in the vertebrate represents the œsophagus of the invertebrate; the cavities of the ventricles, with their simple epithelial roofs, as seen in the choroid plexuses of the third and fourth ventricles, represent the large globular cephalic stomach; and the spinal cord, terminating in the anus by the neurenteric canal, and lined by ciliated columnar epithelium, represents the straight narrow intestine of the crustacean. The brain of the vertebrate as a whole corresponds to the ganglionic masses of the arthropod, the crura cerebri corresponding to the œsophageal commissure; the brain proper, with the olfactory and optic lobes, to the supra-œsophageal ganglia; the hind brain and cerebellum to the infra œsophageal ganglia; and the medulla oblongata and spinal cord to the thoracic and ventral chain of ganglia. Professor GASKELL fully recognises the difficulty that immediately suggests itself, if his explanation is to be accepted of the disappearance of so large and important an organ

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as the liver. He proceeds to solve it by demonstrating that careful examination of the head of one of the lowest of the vertebrata, the ammocœtes, or young of the lamprey, shows a brain case that is not nearly occupied by the brain, but which presents in the space between the case and the brain a bilateral mass of glandular looking tissue composed of cells, and characterised by a large quantity of pigment ramifying between the cells. This he terms "arachnoidal tissue," and regards as a cephalic liver. Proceeding further, he explains the formation of the neuroglia and other parts, as the median eye; and, on the whole, may be said to have made out an extremely good case in support of his theory. It is only by such work as this, and the criticism to which it will be exposed, that some sure knowledge of the mode of origin of the vertebrata from the invertebrata will be obtained.

Annotations.

"Ne quid nimis."

PREPARATIONS FOR THE ENGLISH CENSUS.

DURING the last few days of 1890 were distributed to the 632 superintendent registrars and to the 2126 registrars of births and deaths the official instructions relating to their various duties in connexion with the approaching English census in April next. These instructions have been prepared by the Registrar-General, and have, in accordance with the Census (England and Wales) Act, 1890, been prescribed by the Local Government Board; they relate generally to the duties of superintendent registrars and registrars, by whom the local census arrangements will be made and controlled, and they include special instructions for the enumerators who will hereafter be appointed. Registrars of births and deaths are specially instructed concerning the important duty of revising what is technically called the "plan of division" of their subdistricts into enumeration districts, which was adopted for the last census in 1881, in order that it may be made applicable to the present condition of the subdistrict, and as suitable as possible for the enumeration of the entire population of the subdistrict. This duty, upon which the success of the census so much depends, will have to be completed during the present month. In the arrangement of a thoroughly good plan of division, in which the boundaries not only of each enumeration district, but of the portions of the different, and so often conflicting, local subdivisions of the country which these enumeration districts may contain, registrars will necessarily need, and will, it is hoped, willingly receive, the assistance of the various local authorities. The registrars of births and deaths, and their superintendent registrars, who in most cases are the clerks to the guardians, are, or certainly should be, well informed as to the boundaries of civil or separately poor-rated parishes, although these boundaries have in recent years been much altered by the operation of the Divided Parishes Acts. For the precise boundaries of urban sanitary districts, of municipal wards, and of ecclesiastical parishes and districts, however, registrars will in many cases have to depend in great measure upon information furnished by sanitary and municipal authorities, and by the incumbents of the various ecclesiastical parishes. The accuracy of the census returns is of so much importance to all these various authorities that it may be confidently hoped that any assistance required by registrars in the matter of boundaries will be readily afforded. It has been estimated that the number of enumeration districts at the approaching census will be about forty thousand, to each of which an enumerator will be selected by the local registrar during February next, each registrar furnishing to his superintendent registrar by the middle of that month a list of proposed enumerators. The superintendent registrar, having satisfied himself that the list includes none but duly qualified persons, is empowered by the Census Act to appoint the enumerators, and will then have to transmit the list for the approval of the Registrar-General. The registrars are instructed to select from among the applicants for the post of enumerator those best qualified by character, local knowledge, and education for the duties that have to be performed. It cannot, therefore, be too generally known that anyone willing to undertake the onerous and not highly paid duties of an enumerator at the census in April next should apply to the registrar of births and deaths for the district in which the applicant resides. Anyone, moreover, who will recommend to the notice of the local registrar an applicant for an enumeratorship who is thoroughly qualified for the duties will thus to an appreciable extent increase the prospect of a complete and successful enumeration of the English population at the tenth national census.

HEAT-DIFFUSING FIREPLACES FOR SICK ROOMS.

DURING the recent severe weather it has been wellnigh impossible, with the ordinary bedroom grate, to keep the temperature of the sick room up to 60° F., which is needful for the efficient treatment of acute lung diseases; thus any improvements in domestic fireplaces which combine economy in first cost, efficiency in action under the care of an ordinary domestic servant, and power of diffusing into the room the largest amount of heat generated with the smallest consumption of fuel, become a matter of interest to anyone called upon to treat disease requiring a well-regulated temperature. A good deal has been written since the late Lord S. G. Osborne and the late Mr. Mechi, in 1877, first called attention in *The Times* to a grate manufactured on artistic principles with firebrick fire baskets, insuring slow combustion, absorption of heat by the firebrick, and its economical diffusion into the room, and which marked a distinct advance in the construction of domestic fireplaces. Since that time various improvements have been suggested, and a correspondent informs us that by a careful comparison of several fireplaces, he considers none of them are nearly so efficient as the invention of Mr. Binney of Wokingham, known as the "Heat-diffusing Fireplace." The construction is so simple that it admits of application to a cottage as well as to a larger house. It consists of a fire-basket of firebrick, the sides sloping from before backwards at an acute angle, so that the heat rays "decussate" and warm opposite sides of a room. The back firebrick slopes at a similar angle to the perpendicular, thus arresting the heat rays and directing them at right angles to the floor of the room. The sloping back firebrick stops short at a line horizontal with the top bar of the fire-basket. Here it rests on the edge of ordinary firebrick, under which there is a vacant space or recess about three inches in depth from before backwards, into which the heat of the fire plays, thereby raising the firebrick to a white heat. This white heat is conducted to the sloping firebrick sides and back of the fire-basket, and from them is reflected into the room. So simple is the construction that at first sight the efficacy of this heat-generating recess can scarcely be credited. If, however, it is put to the practical test, it will be found that it not only adds to the heat-diffusing power of the whole of the firebrick in the basket, but that it also keeps the burning fuel, like

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itself, at a white heat. The space for the escape of smoke is about two inches in width, which is almost a certain cure for a smoky chimney, and insures at the same time efficient ventilation with the least possible loss of heat and the smallest attention. The invention deserves to be more widely known. In connexion with this subject, our attention has been drawn to the scientific discoveries made by Mr. O. Clausen, Russian civil engineer, having for its object the complete combustion of fuel, with the consequent abolition of smoke (soot), and the efficient and economic distribution of heat. This invention we expect to be in a position to test, and to analyse its chemical action, at an early date, and the result will be laid before our readers.

THE VALUE OF TIME.

A CORRESPONDENT, writing from a large commercial city, informs us that he remembers seeing many years ago the following in some mercantile offices: "Call upon a business man at business time only, and on business. Transact your business and go about your business in order to give him time to finish his business." Our correspondent feelingly asks whether a notice similar to the above, with the necessary modifications, might not be hung up in the consulting-room and surgery of every busy consultant or general practitioner. Much has been said as to the rapidity with which the out-patients of hospitals are disposed of. But this rapidity is perfectly compatible with correctness of diagnosis, prognosis, and prescribing by an experienced practitioner, and there is something to be said on the other side—the time wasted by patients in prolix descriptions and tedious repetition. The quaint story of the lady who consulted Abernethy and, knowing his impatience of such verbosity, held out her wounded finger and answered in monosyllables is well known, and the example might be followed with great advantage. The lady in question was rewarded by Abernethy's impromptu praise, that she was the most rational woman he had ever met in his life. Those patients who are most considerate for their doctor's time are certainly the most welcome.

THE AIR OF PUBLIC BUILDINGS.

THE senses of most persons have borne frequent testimony to the defective aeration of public buildings. It is needless to say that in this respect churches enjoy no exceptional privilege. Some of them, indeed, appear, in the light of recent exact observations, to stand out as illustrations of atmospheric impurity. Thus, according to Dr. Stewart Hunter, the air within one church in Edinburgh on a Sunday contained an amount of carbonic acid varying from 0·0048 to 0·0063, in another the proportion was 0·0043, and in a third 0·0030. The close air of a schoolroom which was also tested, and gave 0·0016, seems pure in comparison. The significance of such figures is obvious when we contrast them with the normal standard of 0·0004, and it argues a need of reform which is probably not limited to any one section of the kingdom or to one form of building. The importance of efficient ventilation, unfortunately, is only equalled by the difficulty of maintaining it as a constant condition. Much may doubtless be done by alterations of structure; and we have before suggested in this connexion the necessity of providing reliable roof ventilators, and galleries, where these are indispensable, of light though strong construction. It must also be remembered, however, that no architectural changes can correct the ill effects of overcrowding and long-continued gas consumption. Did those who build and those who occupy our churches, halls, and theatres duly appreciate the connexion between a close atmosphere and the insidious growth of chest diseases, we might plead with more evident acceptance for additional floor space, more and larger outlets, the abolition of heavy galleries, and a strictly regulated attendance.

RINGWORM IN FIJI.

MR. BOLTON G. CORNEY, the chief medical officer of Fiji, favours us with the following in reference to a paragraph which appeared in THE LANCET of Aug. 16th last:—"The disease mentioned in THE LANCET of Aug. 16th, p. 355, as having been made the subject of study by a French Commission sent by the Governor of New Caledonia to our own colony of Fiji for the purpose was the ordinary Tokelan ringworm (tinea imbricata of Manson). Its only connexion with leprosy originated in the mind of a certain journalist of Nouméa, by whom some cases there met with were alluded to in an alarmist and sensational newspaper article, which was afterwards copied into a leading Paris paper, and reproduced in brief in telegrams from Europe to Australia. There is no reason to believe that leprosy, which is endemic in all the larger groups of islands in the South Pacific, is of greater importance in New Caledonia now than it was formerly. Tinea imbricata was originally introduced both to Fiji and to New Caledonia on the persons of immigrant labourers—to the latter colony from the New Hebrides, and to the former, in 1864, from the Gilbert group; though the Solomon Islands, which form one of its principal fields, have also sent their quota to Fiji annually from 1868, when the 'labour traffic' began, until the present time. Tinea imbricata is easily controlled by chrysophanic acid, when cleanliness is observed as well."

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

DURING the coming year the lectures at the Royal College of Surgeons will be given as follows, the lectures to be given on dates to be determined later:—Mr. William Anderson will give three lectures on the "Varieties, Pathology, and Surgical Treatment of Contraction of the Fingers and Toes"; Mr. James Berry, three lectures on the "Pathology, Diagnosis, and Surgical Treatment of Diseases of the Thyroid Gland"; Mr. Reginald Harrison, three lectures on "Subjects taken from the Surgery of the Male Urinary Organs"; Mr. Watson Cheyne, three lectures on the "Pathology of Tubercular Diseases of the Bones and Joints"; Mr. B T. Lowne, on the "Structure and Development of the Head Capsule, Nervous System, and Sensory Organs of the Insecta in relation to recent Views on the Origin of Vertebrates from Arachnoids"; and Mr. J. R. Bradford, on "The Physiology of the Vaso-motor System." The subjects to be taken by the other lecturers—Prof. Stewart and Messrs. Plowright and Sutton—are not yet announced. Mr. Hutchinson, F.R.S., will deliver the Hunterian Oration in February.

THE CAMDEN TOWN MURDERESS.

ON the 23rd ult. Mary Eleanor Wheeler underwent the extreme penalty of the law for the murder of Mrs. Hogg. The appeal made to the Home Secretary on behalf of the condemned woman led to the appointment of a medical commission to inquire into the state of her mind. The main issue, of course, turned upon the question of criminal responsibility. It had been reported that the convict was subject to epileptic seizures, and that on more than one occasion she had attempted to take her own life. The existence of the epileptoid state wherein a person may be seized with an irresistible impulse to commit murder has long been recognised by the medical profession as beyond all possible doubt. This "impulsive insanity" may show itself as a sequel or as a substitution of an ordinary epileptic fit in an individual who has previously exhibited evidence of perverted brain

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function; or it may be the initial manifestation of such disturbance, either as the primary explosion of nerve energy or the sequence of "hidden seizures," the unobserved attacks of petit mal. Whatever the exact order of events, the history of such cases demonstrates that after the criminal act there is usually a complete absence of memory of the commission of the deed Another important feature is that the epileptic makes no attempt to conceal his crime. The storm of madness has passed, and left the penetrator of the deed, for a time at least, oblivious to the part he has played in the tragic event. Moreover, in such cases there may be not only a want of apparently sufficient motive, but the victim may be, and not infrequently is, a person bound by the strongest ties of affection and esteem to the insane person in his sane condition. Now Wheeler had a powerful motive for taking the life of Mrs. Hogg. Moreover, the murderous act was followed by elaborate preparations for disposing of the bodies of the victims, and, again, by protracted attempts to conceal the evidence of guilt. The wretched woman persisted in the statement of her innocence until just before her execution, when she admitted that the sentence passed upon her was a just one.

INFECTIOUS DISEASE AND DISCARDED MILK SUPPLIES.

THE recent outbreak of diphtheria at Surbiton is, we trust, a matter of the past in so far as Surbiton is concerned, unless diffusion of the disease should be maintained as the result of direct infection. The source of mischief having been detected in a special milk supply, and further distribution of this milk having been suspended in Surbiton, it is stated by Dr. Coleman, the medical officer of health, that no fresh cases occurred after a lapse of five days from the date of discontinuance of the implicated milk. So far so good; but for the general public other considerations of importance are involved. How did the milk service become contaminated at the farm whence it was derived, some fifty miles away from Surbiton? And, above all, what is being done with the milk which formerly went to Surbiton, but is no longer received there? Our present system of health administration, in so far as infection is concerned, is too localised in its responsibilities. Whether a sanitary district or a county be concerned it matters not; the evil is shunted over the border, and there it is left to produce the mischief over again which it has produced before. Surely some central organisation ought to take cognisance of such occurrences as that of Surbiton with a view to some inquiry as to the cause of the disease, and to the protection of localities that may be imperilled from the very circumstance that Surbiton is now avoiding risk.

SHAKING PALSY.

DR. FREDERICK PETERSON of New York, in a clinical analysis of forty-seven cases of paralysis agitans, while throwing no additional light on the etiology and pathology of this disease, draws attention to some interesting points in connexion with its symptoms. Thus he finds that the most common age for the disease to manifest itself is between fifty and sixty, although cases occur as early as thirty, and as late as from seventy to eighty. His figures also (twenty-nine and eighteen) bear out the generally-accepted opinion that males suffer more frequently than females; and his observation of its occurrence in a brother and sister, and still more in a husband and wife, seems to point to some predisposition to the malady in those who from a close contemplation of the tremor are, perhaps, led to an unconscious imitation of it. The left hand he finds to be most frequently affected, and the rate of the tremor varies from 3·7 to 5·6 per second. It is strange that among so many cases none should have occurred without the tremor, a type of the disease now well recognised. Among other symptoms noted were exaggeration of reflexes, muscular wasting, in one case diminished faradaic irritability, paræsthesia, and hyperidrosis. These are ascribed to vaso-motor changes. As regards treatment, Dr. Peterson has nothing fresh to say, but he emphasises the usefulness of hydrobromate of hyoscine in controlling the tremor. In some cases, at least, the depressing effects of this drug are so great as to completely outweigh any advantage that is gained from the cessation of the tremor.

BURIAL REFORM.

A SPECIAL MEETING of the Church of England Burial, Funeral, and Mourning Reform Association was held on the 19th ult. at the Church House, Dean's-yard, Westminster. The subject was discussed throughout in its more sanitary aspects. Sir A. Rollit, M.P., who presided, reported that at the request of the Association he had brought before the Association of Municipal Corporations the memorial which the former had prepared for the Home Secretary and the President of the Local Government Board. This memorial urges (*a*) the discontinuance of already overcrowded burial grounds; (*b*) the enforcement of adequate sanitary precautions when death has been the result of an infectious disease; (*c*) the more frequent inspection and more thorough supervision of all burial grounds; (*d*) the prevention of overcrowding by more stringent regulations; and (*e*) the provision, where necessary, of properly appointed mortuaries. The Association of Municipal Corporations unanimously adopted a large part of the memorial, and empowered Mr. Byron Reed, M.P., and Sir A. Rollit to support it before the Home Secretary and the Local Government Board. Those gentlemen promised to consider it carefully.

THE DENTAL HOSPITAL OF LONDON.

IN our last issue we referred to the establishment of a mechanical department to the Dental Hospital for the supply of artificial teeth to the necessitous poor, and now we have to record a further widening of the usefulness of this institution. Notwithstanding the fine premises at their disposal, it has been found for some time past extremely difficult for the staff and students to meet the demands of the steadily increasing number of patients applying for relief. It has, therefore, after considerable discussion, been decided to increase the working hours, and keep the hospital open till four o'clock, except on Saturdays; also to add five new members to the teaching staff. This arrangement will be of great value to the students (now close upon one hundred) as well as to the patients.

THE POLLUTION OF THE WEY.

THE Sanitary Committee of the Surrey County Council recently held a conference as to the pollution of the Wey, at which were present delegates from the various sanitary authorities of Guildford, Godalming, and Hambledon. The Mayor of Guildford said that the Corporation had had under consideration for a long time the question of proceeding with the draining of the borough. Plans had been submitted by Mr. Lailey, and these had been adopted, and negotiations had been entered into for the purchase of land for outfall works. It was proposed to treat the effluent chemically, and the total cost would be £25,000. The Mayor of Godalming said that the Godalming Main Drainage Board were in treaty for the purchase of twenty acres of land at Unstead Farm, and they would, on the completion of the purchase, commence at once; but in case of failure to acquire this land they had another site in view. The Board had decided to ask engineers from Acton and

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Wimbledon to explain their processes, and to give them their opinion as to the best method of treating the effluent. Mr. Welch, who represented the Hambledon Rural Sanitary Authority, stated that his authority was doing nothing, and that it had no scheme in operation in any of the districts, except Cranleigh, where one was carried out some years ago, but this was not found to answer very well now, as there was not sufficient land; attempts were, however, being made to effect an improvement. The authority did not contribute much to the pollution of the stream, as the pollution took place some distance from the river, and was therefore purified by the tributary stream before it reached the main stream. In each case it was stated that there was no intention to enter into a joint scheme with any other authority. Godalming, it was said, received certain trade effluents, and other districts would probably refuse to receive these effluents. The Hambledon Board would be willing to take the drainage of Shalford to the same site as the Godalming Board, but this was all. Admiral the Hon. F. Egerton, who presided over the meeting, said the matter would be discussed by the sanitary committee of the Council, and the conclusion arrived at would be made known at the next Council meeting.

DEATH AFTER VACCINATION.

DR. DANFORD THOMAS held last week at Islington an inquest on the body of a child who died on the ninth day after vaccination. It was stated the child had had a rash from birth, and was very delicate; six weeks before its death it suffered from bronchitis. The chairman of the local Anti-Vaccination League argued that the child was delicate from birth, and asked whether the doctor was justified in vaccinating it. The medical man who performed the operation stated that when the infant was brought to him to be vaccinated, he saw no reason why this should not be done, and gave it as his opinion, after a post-mortem examination, that death was due to convulsions following bronchitis. The jury returned a verdict in accordance with the medical evidence.

MOTHER SIEGEL" TO PAY A MEDICAL MAN £1000 FOR LIBEL.

A VERY instructive case was tried at the West Riding Division of the Yorkshire Assizes, showing the ways and methods of vendors of patent medicines, first as to the disparagement of the medical profession, and, secondly, the stimulants they apply to the admiring consumers of their mysterious drugs. The case was an action for libel in which the plaintiff was Mr. Richard Dacre Fox, F.R.C.S. Edin., M.R.C.S., L S A., formerly of Manchester, now of Leeds, and the defendants, Messrs. A. T. Whitehead, Limited, proprietors and vendors of a patent medicine known as "Mother Siegel's Curative Syrup." The patient in the case was Mr. Edward Perrin, a guard on the Manchester, Sheffield, and Lincolnshire Railway. His case was described in a pamphlet, "The Doctor's Terrible Mistake," which was said to consist in certifying that the man had catarrh and phthisis. Mr. Dacre Fox was consulting surgeon and principal medical officer to the Manchester, Sheffield, and Lincolnshire Railway. It was alleged in the pamphlet, of which 7,500,000 were published, that Mr. Fox examined the anxious guard, and then wrote out his death warrant in the following impressive style: "In the case of Guard Perrin. This man is evidently frightened. He is suffering from phthisis and dyspepsia. Cod-liver oil and iron are indicated." The pamphlet then shows, of course, how the medical man's diagnosis was all wrong; that there was no phthisis, only "indigestion and dyspepsia," which error of diagnosis and of treatment would soon have driven the poor guard to his grave had some providential friend not directed him to Mother Siegel's Syrup, which also of course cured him at once. The short answer to this charge by Mr. Fox was that he had never written any such certificate. He examined Perrin in 1879, and reported on his case to the secretary of the Provident Society. He never wrote any document which contained the statement complained of. The jury were satisfied of the truth of this evidence, in spite of Mr. Waddy's efforts to justify the defendant, and awarded the plaintiff, who said he had been much injured by the libel, £1000. No better use could be made of such unholy profits as those of proprietors of vaunted quack medicines than the compensation of medical men whom they insult and libel. But the interest of the case does not end here. A little interesting light was let in on the ways in which such useful cases as Perrin's are kept up to the mark of admiration and advertisement. Money was repeatedly paid to him. In cross-examination he admitted having twice received £2, and having made an offer to distribute their printed matter in his journeys through the country. Again in March, 1890, he applied for more money, and he got in all £14. It is evidently worth a poor man's while to take Mother Siegel's Syrup, and even to be the subject of a few satirical remarks in connexion therewith. Similar revelations have been made in regard to another notorious quack; but whether they will have any effect on people that believe in patentees of secret medicines and their ways is another question. We can only rejoice in the verdict in this case, and regret that the damages were not more. To be held up to ridicule before 7,500,000 people is rather serious.

NORTH-EASTERN SANITARY ASSOCIATION.

THE North-Eastern Sanitary Inspection Association is evidently by no means a mere mercantile institution. It is true that it makes it a prominent business to urge inspection of the sanitary circumstances of dwellings and of their drainage, and that, at a cost which must be deemed very reasonable, it provides the inspection and the subsequent advice as to the remedies that are needed. But, if this were its only objects, it could be left to fight its own way without calling for independent support. It seeks, however, to promote sanitary science "in any manner whatsoever"; and in this connexion it has fitted up exhibitions of sanitary appliances, open daily and free to the public; and it has recently set on foot an inquiry into the character and constitution of the air of public elementary schools. The importance of this latter subject can well be judged of when it is remembered that a vast proportion of the growing children of this generation spend the greater part of the day in the institutions referred to. Such a service doubtless tends to promote one of the principal objects of the Association, which is to lower death-rate and to increase health-rate.

HIGH ALTITUDES AND NERVOUS DISEASE.

IN a paper read before the American Climatological Association at its recent meeting in Denver, Dr. Eskridge discussed the effect which living at the high altitudes of Colorado has on nervous and mental diseases. While it s evident that in the absence of statistics much more complete and extending over a longer period than are now available, any results obtained must be somewhat unreliable, yet the impressions of physicians who have practised on ordinary levels and subsequently at the high levels of Colorado are not without their value. Dr. Eskridge is of opinion that persons suffering from insomnia derive more benefit from a stay in Colorado than they would from residence for a similar time at an ordinary seaside resort, so long as the insomnia is not due to organic brain disease. In persons naturally nervous and irritable, on the other hand, he believes that prolonged residence at high levels is dele-

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terious. In the course of ordinary nervous diseases no difference seems to be observable, but both alcoholism and the opium habit seem to prevail to an alarming extent. It must be borne in mind, however, that many addicted to such habits either go or are sent to Colorado in the hope of being weaned from the habit, while many suffering from chronic alcoholism naturally drift westward. No reliable statistics as to insanity are obtainable, and consequently no opinion as to undue prevalence or absence of this condition can as yet be formed. Strange but temporary mental effects, however, following ascents to high altitudes in Colorado, have been noted, and the occurrence of those is perhaps significant.

EPIDEMIC CHOREA.

A CURIOUS epidemic of chorea occurred some time ago in a school at Wildbad, of which the particulars are given in a paper by Wichmann in the *Deutsch. Med. Wochenschr.*, Nos. 29 and 30. Twenty-six children in all were affected, eighteen girls and eight boys, the girls being first affected, some more severely, some very slightly, while in all the boys the manifestations were slight. The patients continued to attend school, and there seems little doubt but that the contemplation of those who were affected with the disease had considerable influence in evoking the symptoms in the other children. This is confirmed by the fact that rapid improvement and subsequently complete restoration to a normal condition took place in those who were kept away from school.

EXCITABILITY OF NERVE-ROOTS.

IN the *Rivista Sperim. di Firenze* two Italian observers have recently related the results of a series of experiments undertaken to determine the influence which the posterior nerve-roots have on the excitability of the anterior roots. In the first series of experiments the posterior roots were treated with cocaine; in the second the posterior roots were divided; in the third the posterior roots were stimulated electrically; while in the fourth series the cord was divided below the medulla. It was found that when the posterior roots were rendered functionless the excitability of the anterior roots was diminished; but when the posterior roots were stimulated in any way there was produced an over-excitability of the anterior roots, which went on in a short time to diminished or even abolished irritability, and the same results were found when the cerebro-spinal system was intact and when the cord was divided below the medulla.

THE EFFECT OF INJECTIONS OF OXYGEN.

DR. FRANCESCO VALENZUELA, physician to the Provincial Hospital, Madrid, has just published in *El Siglo Médico* a paper on new methods of administering oxygen with especial reference to the treatment of senile pneumonia. Believing that oxygen inhaled in dyspnœa fails frequently to relieve because it does not come in contact with a sufficiently large vascular surface, he began administering the gas per rectum and also hypodermically. In every case in which the oxygen enema was given the dyspnœa was relieved in a decided and permanent manner. The ease and rapidity with which the gas was absorbed by the intestine were very remarkable. Oxygen, indeed, appeared to be as readily taken up by the intestine as by the lungs, four injections of five litres each being absorbed in an hour, thus proving the intestinal mucous membrane to be capable of serving as a most valuable adjunct to that of the lungs. In employing oxygen hypodermically Dr. Valenzuela believes it to be important to introduce the gas in its nascent state. The situation selected for the puncture was the arm, and the quantity of gas introduced varied from half a litre to a litre. Cellular emphysema was of course produced, and a sensation of heat was complained of, but both disappeared entirely in the course of a few hours. There was no calmative action or slowing of the respiration, but there was a marked stimulating action on the heart, such as is indicated in the collapse that follows pneumonia or fevers of a typhoid character, also in cerebral congestion and asphyxia. No indication is given of the temperature at which the oxygen is introduced, a point which, according to Dr. B. W. Richardson, is of great importance. Perhaps the Spanish observer, who does not appear to be aware of Dr. Richardson's work,[1] is mistaken in ascribing the advantage gained by using oxygen prepared *ad hoc* to its being nascent, whereas it is probably due to the temperature being high. It will be noted that Dr. Valenzuela confirms Dr. Richardson's statement that oxygen is relaxant and eliminative.

A NEW SOCIAL DANGER.

OPPONENTS of dancing have had a somewhat novel argument suggested to them. Some person whom we cannot but regard as over-cautious has discovered that even the drawing-room carpet is the home of dangerous microbes, and must not be disturbed, lest the infective swarm should arise and poison the atmosphere. With every allowance for the unknown components of dust, the objection is, in our opinion, certainly as whimsical as it is probably original. Such regular cleansing as a carpet undergoes ought to free it from any seriously morbific influence, the more so that a dancing room is less than any other exposed to such mischievous agency. Far more real is the disqualification from which this otherwise healthy form of amusement has always suffered in the opinion of medical men in consequence of its customary methods. The excessively late hours, the indigestible suppers, the needless glasses of wine, the close heated air, and the frequent after chill, though by no means essential to dancing, have done far more to injure its repute among reasonable people than any fancied bacillus or morbid spore is likely to do.

THE COLD AND ITS VICTIMS.

AS might have been foreseen, the influence of mere exposure upon health and life has been unusually noticeable during the rigorous close of the past year. Several cases of this kind have been reported in the metropolitan daily press, and we cannot doubt that their number would be largely increased if the facts respecting this matter were fully known. The robust and the well-provided feel the nip of winter, but how much more do those in whom illness, age, or want have weakened the defence of bodily vigour. In a case recently noticed in the press, intemperance had lowered the vital force, and exposure was followed by frost bite and fatal syncope. In another, want of work was the suggestive antecedent. It should be noted that in these, as in most other instances of mortal chill, it was the heart which gave way. The explanation is not difficult. The nerve panic induced by extreme cold acts unchecked; the cramping resistance of numberless contracted vessels and a stagnant blood stream provoke no adequate reaction, and the stifled organ stops and life with it. Prevention here is everything, and its appropriate methods, if they were clearly recognised, are probably not, even in the presence of poverty, so difficult of attainment as may be supposed. Discretion in the matter of exposure is not indeed possible to all; but it might certainly be exercised by, or on behalf of, many persons, especially at the extremes of life, much more commonly than it is. The spectacle of an aged man or infant out of doors in such biting weather as the present must in very many cases lack

[1] THE LANCET, vol. ii. 1879, p. 749.

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the excuse of necessity. It is, however, where poverty or illness brings privation that the pinch is most felt, and the safeguards afforded by food, fire, and warm clothing are most difficult of attainment. Yet the poor and their charitable helpers may take heart from the fact that the maintenance of sufficient artificial warmth does not call for elaborate measures or lavish expense. The hand of brotherly help will certainly be appealed to, but it need not squander or exceed in providing such absolute necessaries as fire, plain bedding, and flannel underclothes. Food of the simplest is alone requisite, if it be sufficient in amount and warm; while the absence of alcohol is an excellent guarantee for needful economy and for more sustaining provision. Much of this care is within reach of the frugal poor; but the time is fully ripe for charitable organisation in relief of their pressing necessities.

THE HOSPITAL SUNDAY FUND COLLECTION.

THE Council of the Hospital Sunday Fund have been able this year to record the largest amount which has ever been entrusted to their hands, the total sum received having exceeded £42,000. This very gratifying success is the more remarkable because the discussion which about the time that the collection was made began to rage on the subject of the administration of the London Hospital, seemed only too well calculated to have an adverse effect upon the pecuniary result. It is, of course, possible that if no unfavourable influences had been at work the growth of the fund would have been larger than it actually was; but, on the other hand, the circumstances of the hour undoubtedly caused all the friends of the fund to redouble their efforts to avert a threatened disaster. The result at least is highly satisfactory, and as the circulation of our Special Hospital Supplement, to the number of a hundred thousand copies, can hardly have been without effect to this good end, we may fairly congratulate the readers of THE LANCET on the result of an effort in which they have borne no inconsiderable share.

THE INFLUENZA IN CHILI.

DR. MOLINARE, who was commissioned by the Medical Society of Santiago (Chili) to draw up an account of the epidemic of influenza, has published his report in the *Revista Médica*, in which he states that the epidemic was rife during the months of January, February, March, and April. More than 150,000 individuals, or 70 per cent. of the population, were affected, 20,000 being on some days confined to bed from it. At first it was of a slight character, but towards the end of the epidemic the cases became much more severe. There do not seem to be any exact statistics of the deaths from influenza, but that the fatal cases were very numerous may be inferred from the high mortality during the first four months of this year as compared with that of the corresponding period of other years when no epidemic was present. The number of deaths during this period was 3787, or about 900 more than in the first four months of 1889, and it is thus probable that about 900 persons died either directly or indirectly in consequence of the influenza.

BEER-DRINKING EXTRAORDINARY.

BEER-DRINKING amongst students in Germany and other continental countries is proverbial, and we may say that the average Englishman is a beer-drinker if not a teetotaller. In Ireland and Scotland alcohol in the form of spirits is the chief beverage. In the prosperous times of 1873 and 1874 in this country the working collier was said to have forsaken his beer and taken to drinking champagne, but the ensuing depression soon put an end to this. Now, however, with a return of prosperity in the coal trade, we find his beer-drinking propensities developing. An extraordinary state of matters was proved to have taken place at Ince, near Wigan (during an inquiry by Mr. Brighouse, the county coroner, into the death of a man who had been drowned in the Leeds and Liverpool canal). A comrade of the deceased stated that he had seen him the previous afternoon, and up to that time he might have had a dozen pints of beer (six quarts). At night they had two glasses, and afterwards four small glasses of whisky. It was further shown that in the course of the afternoon and evening the deceased and another man had a wager as to who could drink three pints of beer in the shortest time, and that he drank these three pints in under five minutes' time—in fact, in half the time it took the other man. No wonder this man, when he started to go home, lost his way in the darkness and fog, and that when he fell into the canal he was unable to help himself out. The beer drunk by the Germans and Bavarians is a much lighter beverage, and, therefore, probably contains less alcohol. Could not the British brewer concoct a beverage which would be less intoxicating? It is a popular notion that no harm can result from the use of beer, that delirium *a potu* never follows its employment. But this is a delusion; gastric and hepatic derangements are common from its abuse, and in the cases of continuous beer drinkers, such as beersellers and draymen, delirium tremens is not unknown.

NEW YEAR HONOURS FOR MEDICAL MEN.

THE medical profession will learn with pleasure that Her Majesty has been pleased to confer the dignity of a baronetcy of the United Kingdom upon Richard Quain, Esq., M.D., F.R.S. Sir Richard Quain is well known as a distinguished member of the medical profession, as a Crown representative to and treasurer of the General Medical Council, and as Extraordinary Physician to Her Majesty. Professor George Murray Humphry, M.D., F.R.S., Professor of Surgery at Cambridge, has received the honour of knighthood; T. F. Odling, Esq., M.R.C.S., Assistant Medical Superintendent of Government Telegraphs for Teheran, is made a Companion of the Most Distinguished Order of St. Michael and St. George; Brigade Surgeon Thomas Edwin Burton Brown, M.D., and Surgeon-Major Thomas Holbein Hendley, have become Companions of the Most Eminent Order of the Indian Empire; and James Desmond M'Carthy, Esq., M.D., Chief Medical Officer of the Gold Coast Colony, is made Commander of the Order of St. Michael and St. George of the Third Class.

THE WINTER DROUGHT.

THE universal frost has already taught many households how real is the loss entailed by an ice-bound water-supply. The picturesque aspect of a Canadian winter, in the eyes of most persons, affords no adequate compensation. A frozen cistern and sealed waterpipes, with a prospect that the coming thaw will bring relief, and with it perhaps ruinous excess of water and of plumbers' expenses, are assuredly pressing considerations. How, then, shall we prevent these awkward concomitants of a fine old-fashioned Christmas? The question is more easily put than answered. Undoubtedly the cistern out of doors with unprotected pipes is the primary consideration. In spite of the advantage of obtaining cooler drinking water during summer, the inconvenience of this arrangement in cold seasons, notwithstanding any protective measures which may be adopted, requires no comment. Under any conditions, however, the house pipes also must in severe weather form a constant source of anxiety. Freeze they will sometimes, in spite of every precaution, though a trickling tap, with exposure as free as possible of the pipes to house

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air warmed by the fire, gas, or lamps judiciously placed, will go far to obviate this perplexing emergency. The constant risk of such accidents under the system of household storage, however, is one of the best arguments in favour of a direct water-supply. The danger from frost is not indeed thus easily obviated, but it is distinctly lessened, and the means of its prevention much simplified. The condition of waste pipes is of no small moment in this connexion. The possibility of sewage accumulation in drains, and of a consequent reflux of sewer air, is a contingency which must not be overlooked. Fortunately, most of the available waste water of the household is made to enter the waterclosets, and the regular cleansing of each of these by this means should be carefully provided for. A disinfectant is an advisable, almost a necessary, addition. By such means of prevention the very sensible privations and dangers induced by a water drought, if not removed, will at all events be materially modified.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE special effort which was inaugurated in the spring of last year with the object of placing this institution in a better position to carry on both its educational and its charitable work, is being, we are glad to learn, happily carried forward. The raising of so large a sum as £50,000 may well be a work of time, but we learn from a communication from Dr. Holman that a second donation of £500 has been received from an anonymous contributor to meet the contribution of £1000 conditionally promised by the Proprietors of THE LANCET. The sooner the condition is fulfilled and the whole amount of our contribution earned, the livelier will be the satisfaction which its payment will occasion certainly to the givers, and we doubt not to the receivers also of the donation.

SCARLET FEVER IN THE METROPOLIS.

THE returns continue to show a satisfactory reduction in the cases of infectious diseases, and especially of scarlet fever. In the fortnight ended Dec. 20th, the number of the latter reported to the Metropolitan Asylums Board was 528, a reduction of 155 upon the preceding return. Diphtheria shows a reduction of 67, the cases having been 267. The admissions of fever patients into the hospitals of the Board were 255, as against 374 in the preceding fortnight. On the night of Dec. 23rd, there were 2002 patients in the hospitals, including 544 convalescents in the Northern and Gore Farm Hospitals. Of the cases, 1673 were scarlet fever, and 152 diphtheria; there were 473 beds ready for the reception of scarlet fever, and 67 for diphtheria. There have been no cases of small-pox notified during the fortnight. Two cases of typhus fever were notified, one of which was admitted into the Eastern Hospital. Owing to the Christmas holidays, there was no meeting of the Asylums Board last Saturday.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

IT is said to be the common experience of insurance offices that the present season of the year is the most favourable to their operations. The reason is probably to be found in the circumstance that in the ordinary course of business large sums of money change hands at the end and beginning of the year, and that many people consequently come into the possession of funds, and are naturally more disposed then than at other times to contemplate a form of expenditure which is in the nature of an investment. This will be the case with many of our readers, and the occasion seems, therefore, not unsuitable for drawing attention afresh to a subject to which we have within the past few weeks devoted a large amount of space—namely, Life Assurance and the Medical Profession. The result of the inquiry which we recently instituted under this title was to show that the wise choice of an office with which to effect his assurance is a matter of very great importance to a medical practitioner. Not only is there the vital question of the solvency of the company in which he is about to repose his trust—a question which cannot be too carefully considered,—but there is also the subordinate, but only subordinate, question of the terms which the selected company will offer him. Some lay themselves out to meet his requirements; others decline to recognise that he has any special needs. Speaking in general terms, then, the following may be indicated as salient points under this view. First, a medical practitioner should be sure that he gets his policy commission free, either by insuring with a company which does not employ commission-paid agents, or by making an arrangement that the agency commission on his own premium shall be paid to himself. Next, he should be very suspicious of high-rated investment policies. The thing which above all other things a life assurance company is fitted to do is to assure lives. When it superadds to this function the function of investing its policyholders' money, it usually performs this latter part of the work at an inordinate expense to the customer. A charge of 10 per cent. upon the premiums received to defray working expenses is a moderate charge according to the practice of the Life Offices; but if such a charge is made upon money simply received in trust for investment, the arrangement is distinctly a disadvantageous one for the beneficiary. We pointed this out in our Life Assurance Supplement, and we observe that the foremost of the insurance papers have not only recognised the justice of the criticism, but have also urged upon the offices the importance of reconsidering their rates for such policies—i.e., for Endowments and Endowment-Assurance Policies—in the light of the principle which we have cited. The President of the Institute of Actuaries also, in his inaugural address, delivered a few days after the appearance of our Supplement, made some remarks in much the some strain, though without express reference to our criticisms. It may be hoped, therefore, that in time the Life Offices will correct this anomaly; but at present it is probably wise to select a sound office for life assurance proper but to keep one's investment operations in one's own hands.

ALCOHOL AND SOCIAL TRAGEDIES.

WE make no excuse for referring to two or three terrible social tragedies which within the last few weeks have shocked the public, and in which alcohol has figured as the principal factor. We feel the more compelled to do so as representatives of a profession which sees many such tragedies that never meet the public eye; which, moreover, has a special responsibility in regard to the use of alcohol. Moreover, we grieve to have to add that in two such distressing cases medical men have been principal figures. Murder, suicide, inhuman neglect, accidental death, are all found in every day's papers associated with drinking. We do not care to go into particulars. We warn all persons that drinking for drinking's sake — drinking else than the small quantity that can be taken with a meal—is as dangerous as it is discreditable. The new year may be an excuse for an appeal to our own readers, and we entreat them to take into their consideration the social and moral as well as the medical bearings of this national vice, and to resolve to discourage it alike in practice and by example. The leaders of the profession have done much in this way. But they can do more, and the general practitioners can do most of all, in the multiform relations of their position, to abate this terrible evil. We have no intention to dictate the dietetic

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or the therapeutic use of alcohol. But we feel that we should be unworthy of our function if we did not express from time to time our sense of the high responsibility of medical men to do what in them lies to help men, and women too, to overcome what is almost a racial diathesis engendered by long centuries of habit. For children the profession is agreed that the use of alcohol should be restricted to strictly therapeutical purposes.

CHOLERA INTELLIGENCE.

CYPRUS has removed all quarantine restrictions as regards arrivals from the Red Sea, and has substituted medical visits in the place of quarantine in the case of arrivals from Spain and the Balearic Isles. Cholera still prevails in Syria, but it is said to be limited in degree. The localities still infected in Syria are Alexandretta, Antioch, Kilis, Haram, Aleppo, Maarat, Edlib, Rihanieh, and Hama; and in Northern Mesopotamia, the town of Orfa, at the head of one of the branches of the Euphrates, is also a seat of the disease.

TAXATION AND SANITATION.

WE have been favoured with the copy of a paper on the above subject, which was read at the Sanitary Institute by Mr. S. M. Burroughs (Burroughs and Wellcome). He holds that levying rates on houses is wrong, and that all rates ought to fall on the land upon which the house is built. The man who is the lucky possessor of a freehold and lives upon it will obviously have a difficulty in discovering the advantages of this suggestion. Nevertheless, it is, unfortunately, a fact that many persons have refrained from putting their houses in a suitable sanitary condition, fearing that such improvements would be considered as having increased the value of the property and therefore entail an increase of taxation. We take it that there should be no increase in the taxation of a house because the drains have been put in order, better ventilation or light provided, and damp prevented. For a local authority to increase taxation because a house has been put into proper sanitary condition is a confession on the part of that authority that it has grossly neglected its duty. Theoretically, every house is to be regarded as in proper sanitary order, because, if it is not in such a condition, then the sanitary authority should prosecute the owner and make him rectify every defect. If the local sanitary authority neglect to do this, then such authority ought to be dealt with. Such is the law, though it is not always applied. If the owner or occupier of a house finds that the law has not been strictly enforced in his case, if he discovers that damp comes through his walls, that there is not sufficient air and ventilation, and that the drains are not in order, he does not increase the estimated value of the property by causing these evils to be remedied. He only corrects an error; he makes the house really worth the value at which it was estimated, and which it did not possess before it was in a proper sanitary condition. Though we know that it too often occurs in practice, we cannot theoretically admit that a house is taxed when in bad sanitary condition. Far from increasing the taxation of an owner or occupier who puts his house into a satisfactory sanitary condition, the local authorities should express their gratitude to such a person, as his carefulness in these respects may save the local authorities from blame. Another point dealt with in Mr. Burroughs' paper is that of a remedy for overcrowding in large cities. Here his views seem open to criticism. Mr. Burroughs conjures up a vision of "free railways" paid for by the landowners to take the workers in these congested areas to and from the suburbs. Has he ever contemplated the cost of taking the 500,000 persons who daily work in the City of London to and fro? If we reckon that on an average each man is half an hour in getting from his dwelling to his office and half an hour getting back, and that his return fare costs sixpence and the time lost is worth sixpence (taking the "docker's tanner" as the standard of time value), then the daily cost of transit is £25,000, the weekly cost (not counting Sunday) is £150,000, and the yearly cost £7,800,000. The money thus spent is as unproductive as expenditure can be, and is necessitated by the fact that in all our sanitary measures we so foster overcrowding that our cities are becoming uninhabitable. If we had "free railways," the result would be an increase of the congestion and such overcrowding on the lines that the time occupied in transit would be doubled. The sanitary millennium does not, we opine, lie in the directions in which Mr. Burroughs is pointing. We must discourage overcrowding, and this is not to be done by trying to make it cheap for persons to live or work in overcrowded districts.

THE LANCET RELIEF FUND.

IT will be seen from the annual report of the Almoners of THE LANCET Relief Fund, which appears in another part of this impression, that during the past year this, unlike most other charities, has proved more than sufficient for the demands made upon it, the account having been closed with a substantial balance of £125. It is no doubt the case that this balance might have been distributed if the Almoners had been free to entertain applications for the relief of chronic distress, but such cases are excluded by the rules of the Fund. It is expressly appropriated to the assistance of persons placed in circumstances of sudden emergency, and hence many applications, otherwise deserving, are rendered ineligible. It is, however, no small satisfaction to the donors of the Fund to know that the relief actually administered is much more than commensurate to the mere sum distributed, for, coming as and when they do, these small grants of money are at times simply invaluable to those whom they benefit. We should be glad to think that every suitable case had been relieved during the past year, but that is too much to hope, and with a view to the more complete utilisation of this resource during the year 1891 we will venture to suggest to our readers that they should coöperate with the Almoners of the Fund by making its existence known to any within their knowledge of those whom it most concerns. A form to be used in making applications for grants will appear in next week's impression of THE LANCET.

THE MANSFIELD HOSPITAL AND ITS MEDICAL STAFF.

THE honorary medical staff of the Mansfield Hospital have resigned in consequence of a dispute with the committee as to payment for their services to a patient in the hospital who, or whose friends, were able to pay. The matter is one for arrangement. It cannot be the interest of the managers of a hospital any more than of the honorary medical officers to let those be treated on terms of charity who can afford the ordinary charges.

THIRD REPORT OF THE ROYAL COMMISSION ON VACCINATION.

A THIRD report has just been issued by the Royal Commission on Vaccination. Like the two former ones, it contains evidence only; but it is of considerable interest, in so far as it includes the evidence of three leading anti-vaccinationists—namely, Dr. Alfred Russel Wallace, D.C.L., F.R.S., who may be regarded as the scientific opponent of vaccination; Mr. Alexander Wheeler, who has largely waged his war through the medium of the public press;

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and Mr. William Tebb, who is president of the London Society for the Abolition of Compulsory Vaccination. The report reaches us too late to be dealt with this week.

A CORRESPONDENT writes: "The profession at Meran has been amply provided with Koch's liquid, and sixty phthisical patients are now under treatment. The phenomena elicited are the same as those announced from Davos. The minimum dose yields no response; stronger doses induce prompt reaction; while no serious danger has arisen from the latter. Cases of marked improvement have been noted; cases in greater number, also, of diminished expectoration, and bacilli in the sputum. Two sanatoria have been erected in Meran itself, and one in Obermais.

A MEETING of the West London Medico-Chirurgical Society will be held on Friday, January 9th, at 5 P.M., in the Board-room of the West London Hospital, at which several cases which have been treated by the injection of Koch's fluid will be shown, to be followed by a discussion. Mr. Bruce Clarke, Mr. Edwards, and Mr. Keetley will exhibit cases.

WE understand that a meeting will shortly be held at Leeds to consider the most suitable way of founding a memorial of the late Mr. M'Gill of Leeds, whose recent death was noticed at the time in our columns. The date of the meeting will be found in the advertisements.

AN Italian hospital has just been opened in Tunis to meet the wants of the increasing immigration from Italy. Beds are also set apart for the sick and injured of other nationalities.

INFORMATION has arrived through Reuter's Express that a virulent epidemic of small-pox of a confluent type has broken out in Transcaspian territory.

Pharmacology and Therapeutics.

DISINTEGRATING TABELLÆ.

WE have received from Messrs. Allen and Hanburys several samples of the disintegrating tabellæ introduced by this firm. These have been submitted to a prolonged trial and have given the most satisfactory results. Although they retain their form in the dry state, on the addition of water they readily break up into fine particles, thus facilitating and ensuring the prompt action of the remedy. The ease with which they disintegrate entirely frees these preparations from the charge, so often brought against compressed drugs, of passing through the body unchanged. The tabellæ are supplied at very moderate cost, and will doubtless find favour with the profession. A large number of drugs are now prepared by this firm in this very convenient form. We can speak most highly of the compound sulphur tabellæ, which in their mild laxative action have given the utmost satisfaction.

URALIUM OR CHLORAL-URETHANE.

Uralium or chloral-urethane, which was very strongly recommended early last year by Dr. Poppi of Bologna as being a better hypnotic for insane and neurotic patients than most other drugs of this class, has recently been carefully tested by MM. Schmitt and Parisot of Nancy, who administered it in an alcoholic solution in a variety of cases where the patient suffered from insomnia. The smallest dose that was at all effectual was fifteen grains, but doses of even thirty-eight grains were by no means always successful; indeed, less so than chloral or opium. Added to the uncertainty of its effects, it was very disagreeable to take, and often disordered the digestion, and sometimes caused vomiting, followed by nausea which lasted for some days. In two cases, too, vertigo was complained of. It would seem, therefore, that Dr. Poppi's good opinion of uralium is not shared by the French observers.

INSTABILITY OF DIURETIN.

M. Lambert, from his experiments with diuretin, questions the advisability of administering it by the mouth. He points out that it is decomposed by all acids, and that even exposure to the carbonic acid of the atmosphere is sufficient to render it partially insoluble through the formation of sodium carbonate. It is also decomposed by bicarbonates, biborates, and other acid salts. Since it is therefore likely to be decomposed by the acid of the gastric juice, he believes it would be preferable to prescribe it enclosed in cachets, or as a clyster dissolved in lime-water.

PYOKTANIN.

Professor Stilling has given, in three recent numbers of *Merck's Bulletin*, a valuable report upon pyoktanin. He summarises its qualities in the following terms: 1. Pyoktanin is an antiseptic surpassing all remedies of this kind heretofore known in regard to both development-arresting and germ-destroying effect. The two strongest antiseptics employed in medical practice are sublimate and iodoform. The bacteriological researches have shown blue pyoktanin to be about three times as strongly antiseptic towards anthrax bacilli as sublimate is, and to be quite as efficacious as sublimate towards the staphylococcus aureus; while the inefficacy of iodoform towards pus cocci is a generally acknowledged fact. 2. Pyoktanin is an absolutely non-toxic substance. Herein it possesses a most desirable advantage over all the other antiseptic remedies, whose toxic effects are known to hold, generally, a pretty direct ratio to their anti-bacterial action. 3. In consequence of this non-toxicity of pyoktanin it is a matter of indifference in very many cases whether somewhat weaker or stronger solutions, or even the pure drug, be employed. (This principle is good pre-eminently in the treatment of wounds and ulcers; but of course it cannot apply to ophthalmology.) 4. Pyoktanin does not coagulate albumen—a negative quality of high value physiologically, which pertains to not a single one of the antiseptics heretofore known. 5. Pyoktanin possesses an extremely high degree of diffusibility; it permeates the interior of the eye like atropine, and acts similarly in other tissues. As far as surgery is concerned, Professor Stilling believes that his researches have demonstrated that suppuration can be cut short by bringing pyoktanin into intimate contact with the suppurating tissues. After giving details of his experience of this substance in many branches of ophthalmological work, he concludes by remarking that even here, though somewhat less so than for general medicine and surgery, the entire matter is still *in statu nascendi*.

PHARMACOLOGY OF CURARINE.

Dr. J. Tillie (*Journ. of Anat. and Physiol.*) has recently given the results of his experiments upon the action of curarine on the blood-pressure. He finds that the injection of watery solutions of curarine into the bloodvessels of rabbits, cats, or dogs causes an almost immediate fall of blood-pressure. When the dose is small or medium, the fall of blood-pressure is temporary, but in rabbits especially the initial fall may be followed almost immediately by a rise above normal. When the dose is very large—i.e., from 50 to 100 times the minimum paralysing dose—the immediate decrease of pressure is marked, of long duration, and the original level of pressure is not usually regained. The primary fall of blood-pressure appears to result from a direct action of curarine on the peripheral nerves, or on the muscle of the bloodvessels. An enormous increase of the reflex excitability of the vasomotor centres occurs in rabbits after the administration of small doses of curarine. If the blood-pressure is not already too high, slight stimulations affect, either directly or indirectly, the cardio-inhibitory centre as well as the vasomotor centres, so that the heart greatly slows as the pressure rises. If the blood-pressure reaches a very high level, the vagus pulse disappears and the heart beats very fast, and the waves caused by the artificial respiration almost disappear also; but whenever the pressure falls somewhat both reappear. During the period of low blood tension produced by a maximum dose of curarine the following fail to produce any alteration of the curve: (1) Stimulation of the skin; (2) stimulation of the central end of the divided sciatic nerve; (3) suspension of artificial respiration (4) stimulation of the spinal cord by induction current

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From a clinical point of view it is interesting to find that albumen, and frequently also blood pigment and blood in considerable quantity, could be readily caused to appear in the urine of a perfectly healthy rabbit paralysed by a small dose of curarine, if simply severe vaso-motor spasms were induced by slight stimulation (blowing the breath) of the skin.

REPORT OF THE LANCET
Special Sanitary Commission
ON
DISINFECTING IN LONDON.

THE progress simultaneously achieved in bacteriological science and in sanitary legislation has raised the problem of disinfection to a higher level. The compulsory notification of infectious diseases on the one hand, the Prevention of Diseases Act on the other hand, will necessitate a careful and in many cases a very radical revision of the methods employed by local sanitary authorities to purify infected bedding &c. When the necessity of disinfection was first acknowledged, but little was known concerning the germ life it was proposed to destroy. It was then generally supposed that if the objects to be disinfected could be exposed to dry heat equal to that of boiling water, the germs of infectious diseases would be annihilated. The construction of some box or chamber that could be heated to, let us say, about 250° F., was considered sufficient to meet all requirements. Now, however, Dr. Franklin, Dr. Parson, Dr. Buchanan's reports for the Local Government Board, the works of Davaine, Feltz, Baxter, Erdt, Koch, Pasteur, Dujardin-Beaumetz, Löffler, and other eminent authorities, prove that many known germs of infectious disease are not destroyed by dry heat. Such germs, after being placed in the old-fashioned disinfection stoves, produced colonies in culture broths of a very virulent character. But, on the other hand, numerous experiments have demonstrated that these same microbes were destroyed when exposed to super-heated steam under pressure. What, then, in the face of these facts, should be the system of disinfection employed, and what are the methods actually in use? It must at once be acknowledged that disinfection has been carried on in a very perfunctory and unsatisfactory manner.

We have known cases where infected clothing was thrown out into the garden, and remained there a long time before it was fetched away and taken to the stove. Also the stoves are sometimes so unsatisfactory that they even fail to kill the vermin. The sanitary inspector of a West-end district declared that he had seen "bugs come out of his stove livelier than ever." The attendant of the disinfecting stove in a very important central metropolitan district confessed that he often contented himself with allowing the temperature to reach 212° F., and then turned off the gas burners, "in case he should be called away and forget to return in time to prevent the things being scorched." The attendant in question is an old man, quite incapable of performing a scientific operation, such as disinfection. Also dry heat often injures, and sometimes totally destroys, the objects to be disinfected. For instance, chamois leather will wrinkle at only 180°; a lady's sealskin jacket would be completely spoilt at 220°, though the same jacket would not be damaged in the slightest by 240° of moist heat. There are also many articles of clothing which come out of a dry-heat stove apparently uninjured, but when these are worn it will be found that they tear and come to pieces very rapidly.

As a result of all these risks and inconveniences, the dry-heat stoves have fallen into comparative disuse. For instance, the stove belonging to the City of London is not very often employed, and yet there is a boiler attached whence steam can be discharged upon the objects that are being disinfected. This stove is heated by gas and Bunsen's burners. The steam when used is not under pressure, for it comes out through the chinks of the door &c. The City authorities, however, much prefer their sulphur chamber. This measures about 9 ft. by 9 ft., and is 9 ft. in height. Bedding &c. is placed within upon racks, sulphur ignited underneath, and this box remains closed for about five hours. When the bedding is considered especially foul or dangerous, it is not disinfected, but destroyed. For this operation a very convenient destructor has been built; there is a small chamber on a level with the ground; above it is a grate, on which the fire is placed. The incandescent cinders fall from the grate, ignite the bedding, and the smoke and effluvia from the burning bedding must pass through the furnace before it can reach the shaft or chimney. In Marylebone also greater faith seems to be placed in fumigation than in their dry-heat stove. Here chlorine is employed. A receptacle containing chloride of lime is put on some high piece of furniture and hydrochloric acid poured in. This is a somewhat delicate operation; the disinfectors might injure themselves by breathing the chlorine, especially when their clothes are damp, for the fumes follow them even when they have left the room. The stove, manufactured by J. C. Bacon and Co., is heated by small pipes of wrought iron of special manufacture and strength, capable of resisting very high hydraulic pressure. They are charged with water and heated by a small brisk furnace constructed outside the chamber. The manufacturers declare that the apparatus is capable of producing a very elevated temperature, "but usually an exposure during two hours to a heat of 220° F. is found sufficient. One of the sanitary inspectors told us that, though he heated this stove to 260° F. to disinfect milk cans, when dealing with bedding, clothing, &c., he found that 220° was "quite enough for anything." It is needless to observe that these assertions are absolutely opposed to the modern theories of disinfection. For St. George's (Hanover-square) a dry-heat stove is also employed. Here there is an ingenious device by which when the heat reaches 240° F. a metal bar melts and the gas burners are automatically extinguished. At Hammersmith dry heat is also used, but in combination with sulphur fumes. Here a strange-looking metallic cart is brought to fetch away the infected linen. Its appearance might cause considerable alarm to nervous neighbours. At the stoneyard the body of the cart is lifted from the wheels and pushed into the stove. The working of a crank opens out the sides of this cart in such a manner as to readily admit fumes and heat. Then sulphur is burnt in the chamber and the temperature is raised to 250° F. The whole thing looks clumsy and theoretically incorrect, but it seems to have rendered good practical service. During the last thirteen years the apparatus has been used for more than 3000 cases of small-pox.

In contrast with the above vague, unscientific, and unsystematic methods of disinfection we will take the means adopted on behalf of the sanitary districts of Fulham, St. Martin's-in-the-Fields, Willesden, Wood Green, Richmond, Streatham, and till quite recently St. Pancras. Mr. W. G. Lacy, formerly medical assistant at a London fever hospital, disinfects for these districts and for a great number of private houses, schools, &c., within a radius of twenty or more miles round London. Considering the immense amount of disinfection done at Mr. Lacy's establishment, we made a point of very carefully examining his works. These are conveniently situated by the water's edge near Wandsworth Bridge. Here no business, no beating of carpets, no cleaning or dyeing or other work except disinfecting is allowed. Every object brought to the works is disinfected before it is returned to its owner. This is an important consideration, for there are contractors who not only disinfect, but undertake other work. For instance, carpets that merely want beating are brought dangerously near to infected bedding. The carts that carry infected goods and those used for ordinary goods are stabled close together, and the men who beat carpets, arrange mattresses, &c., have constant intercourse with the men engaged in disinfecting work. Undoubtedly the first principle of all is that no other business shall be allowed on or near the disinfecting works. This rule is rigorously observed at Mr. Lacy's establishment, and whatever is brought to these premises, however clean and pure it may be, is disinfected before it can be taken away again.

As a scientific and professional disinfector, Mr. Lacy does not employ dry heat. He has two stoves—one for articles where penetration is not required, such as boots, books, mantelpiece ornaments, spring mattresses, &c., or for articles of clothing that can be spread out in such a manner as to expose all their surfaces. In this stove a moist heat of 270° F. is produced. This heat, though high, is not injurious, because of the moisture. For instance, wax

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matches melt, but the phosphorus does not ignite. The disadvantage of this process rests in the fact that the power of penetration is not always sufficient; and, secondly, that it is a slow process. It takes half an hour to heat the stove, and then the things should be kept in the stove for two hours at the very least. On the other hand, the stove is very large, and can disinfect the contents of about three rooms at a time, so that, on an emergency, infected articles taken from thirty to thirty-six rooms might be disinfected in this one stove during a full day of the twenty-four hours' continuous work. More effective, more certain in its results, and more useful is the other stove, where Mr. Lacy applies super-heated steam under pressure. Here the canvas bags—containing infected clothing, bedding, &c.—are put in without it being necessary to open them, or to spread out what they contain, because the steam under pressure will penetrate any distance, even into compact materials. Mr. Lacy fumigates the rooms first. This in itself is not sufficient, but it is an excellent precaution, so as to disinfect the outer surface of the linen, carpets, &c., about to be removed. These objects, especially the bedding, are placed in large canvas bags, and are put without unpacking into the steam high-pressure stove. This stove is of great strength in structure. Indeed, this is indispensable, otherwise it would blow up. It is heated to about 260° F., and the steam within it is at a pressure of 25 lb. to the square inch. The huge, thick, heavy door bulges out under the force of the pressure. No steam whatsoever can be seen coming out. Where steam is visible the temperature falls to 212° F., but there is a safety valve to prevent explosions.

To be satisfactory, a disinfecting stove should be as strong as a bomb shell, but a safety valve must be provided to prevent accidents. The doors must be screwed down and closed so as not to permit the escape of any steam whatsoever. Nor does it suffice to produce a pressure of 25 lb. to the square inch. This great pressure will compress the air in the thickness of mattresses, &c., and the moisture will not penetrate these bubbles of compressed air. To break them up, they should be made to rapidly expand by letting off some of the steam and then turning on again more steam. This method of disinfection is the most powerful known; superheated steam under pressure will penetrate layers of blankets and thick mattresses, while dry heat has been proved not to reach the centre of such articles. It is therefore not necessary, as is the case with the moist-heat stove, to open the bags, to take and spread out their infected contents, as the steam under pressure will penetrate such bags. Thus for each operation a greater number of articles can be disinfected, and the process is accomplished much more rapidly. The superheated steam under pressure is applied for only from thirty to forty minutes, while moist heat should be applied for at least two hours. Scientific experiments have demonstrated that germs, even when placed in the centre of a thick mattress, are killed in fifteen minutes by steam under pressure, at a temperature of 240° F. Mr. Lacy's steam pressure stove has the advantage of being exceptionally large. It will hold 5 cwt. of clothes, linen, &c., and has disinfected for the single district of Fulham more than nine tons of articles during the Christmas quarter.

In this respect we might mention the very excellent rule which is enforced at Fulham whenever a case of infectious fever breaks out in a laundry. The sanitary authority at once seizes all the linen that may be found in the laundry, and it is disinfected by steam under pressure. After that the linen is sent to the persons to whom it belongs; but, so as not to create unnecessary alarm, they are not told what has occurred.

Seeing that disinfection is done in a scientific and satisfactory manner for some of the London sanitary districts, we would urge that this important public service should be performed in a uniform and equally perfect manner for all parts of the metropolis. It is necessary that the authorities concerned should inquire into this matter more closely than they have done hitherto. The district of St. Pancras has built for itself a steam pressure stove which is a copy of the stove employed by Mr. Lacy, who formerly did all their disinfecting work. The Port of London, St. George's-in-the-East, Bethnal Green, Hampstead, and St. James's employ Lyons' steam pressure stove, and are therefore scientifically correct in their method. Perhaps, in some instances, the stove is rather small to meet an emergency; but, in that case, a second stove might without any great difficulty be brought to the rescue. In other districts of the metropolis the means of disinfecting are very unsatisfactory and uncertain. We would urge upon these latter districts to take immediate steps to place themselves on a level with the progress accomplished in bacteriological science. Such authorities should see: First, that disinfecting is carried out on premises devoted exclusively to that purpose, walled off, and carefully separated from other businesses; that the carts used for conveying infected linen &c. are not used for any other purpose and are stabled apart. These precautions, unfortunately, are not at present always observed. The disinfecting premises should have an entrance on one side for infected articles. A wall built round the stove should completely cut off the portion of the building where the infected articles are introduced into the stove from the part where the purified linen &c. is taken out of the stove. For this purpose, of course, the stoves must have two doors: one for the admission of the infected articles, the other for the withdrawal of the things that have been purified. Secondly, except for certain articles to which we have already alluded, where moist heat without pressure may be used and for which a separate and special stove may be constructed, the stove for the general work should be a steam stove with pressure equal to 25 lb. to the square inch. If a sanitary authority is not prepared to establish works of this description for itself, to be managed by its own officers, under its own strictly exercised control, then no contract should be made with a private firm of disinfectors unless the sanitary authority, represented by someone technically competent to judge in this matter, has personally visited the premises where the disinfecting is to be done and made sure that the operation will be performed strictly in accordance with the principles enumerated above. If action were taken at the present moment on these lines it would, we fear, reveal that a very deplorable state of affairs prevails in many districts of the metropolis.

THE LANCET RELIEF FUND.

SECOND ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians (Sir ANDREW CLARK, Bart., F.R.S.), the President of the Royal College of Surgeons (Mr. THOMAS BRYANT), the President of the General Medical Council (Mr. JOHN MARSHALL, F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond. (Hon. Sec.), with Sir HENRY PITMAN, M.D. Camb., F.R.C.P., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the second annual report, the Almoners think it well to again direct attention to the objects for which the Fund was established.

For the sustentation of the Fund the sum of at least £300 will be provided every January by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to registrable medical practitioners, or to the widows or orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress, the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE

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LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registrable medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected exigency which is not likely to recur, have pressing need of immediate and temporary pecuniary relief."

The balance in hand at the end of 1889 (after deducting a then uncashed cheque for £10) amounted to the sum of £74 19*s.* 6*d.* On January 1st, 1890, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. During the course of the year repayments to the amount of £29 have been made. The sum of £278 has been granted in relief either by way of loan or of gift, leaving a balance of £125 19*s* 6*d.*

There have been received altogether during the twelve months ending Dec. 31st, 1890, forty-five applications for relief. In twenty-five cases assistance was afforded, either as a loan or as a gift, according to the request of the applicant, the amounts of the grants ranging from £5 to £25.

CASE 58.—One of genuine emergency—viz., that of a medical man dying from blood poisoning, contracted in the exercise of his profession, and leaving his widow with five children utterly penniless, and without the means of burying him. Gift of £20, and a subsequent gift of £5; total, £25. This gift fully succeeded in its purpose in tiding over the temporary difficulties she had suddenly encountered, and was unable to meet.

CASE 64.—Applicant in great pecuniary difficulty, consequent upon just starting in practice and inability to meet a bill of £25, part of the purchase money. A loan promptly made enabled the applicant to tide over his difficulty, and the loan is in course of punctual repayment.

CASE 87.—Distressing case of a medical man dying after long-continued illness, leaving a widow and two daughters in impoverished circumstances. Relief was promptly supplied.

Instances naturally have occurred in which the assistance given has been abused and the recipients have shown themselves unworthy of the help afforded them.

In some cases of extreme urgency the application has been considered by the Almoners, a grant sanctioned, and a cheque for the amount forwarded to the applicant on the same day that the application was received.

The following are extracts from a few letters received from some of the recipients of the Fund:—

CASE 58.—"I am more thankful than it is possible to tell. I was totally unable to move in any way, as I was without the means to do anything. Now, thanks to your kindness, I shall be able to go to work at once. I received your kind gift, for which I am truly thankful. I was very nearly penniless when it came, and I am more grateful than I can tell you."

CASE 64.—"I beg to thank you most sincerely for the cheque received this morning from THE LANCET Relief Fund. I feel that I cannot adequately express my gratitude for the kindness and promptitude displayed in granting the loan. Such a fund as you have instituted must prove a veritable godsend to many a struggling medical man in these days of penny, even halfpenny, clubs. Again thanking you," &c.

The following letter was written by the lady who introduced the case to the Almoners:—

CASE 87.—"I duly received your kind letter and cheque, £25. I cashed the cheque and took it at once. When I placed the money before dear old ..... she was quite overcome. It would have done your heart good to have seen her and her daughters—the intense relief that shone in their faces. Please convey my and their warmest thanks to the Almoners for their handsome consideration of our application; and I fear I cannot give expression to what I feel. I can only say it is full of gratitude to you all for your great kindness and ready sympathy."

Upon the retirement of Mr. HUTCHINSON, F.R.S., from the Presidency of the Royal College of Surgeons, his successor, Mr. THOMAS BRYANT, as President of the College, became an Almoner of THE LANCET Relief Fund.

The present Almoners desire to record their cordial appreciation of Mr. HUTCHINSON'S services as an Almoner, and also their thanks to Sir HENRY PITMAN, the Hon. Auditor.

(Signed)

ANDREW CLARK, M.D., THOMAS WAKLEY,
JONATHAN HUTCHINSON, THOMAS WAKLEY, JUN.
THOMAS BRYANT, (Hon. Sec.)

[We regret that, through indisposition, Professor Marshall was unable to be present at the meeting of Almoners.]

Statement of Accounts for the Year ending Dec. 31st, 1890.

DR.

	£	s.	d.
To Balance at Bank Jan. 1st, 1890 (less outstanding cheque £10)	74	19	6
,, Proprietors of THE LANCET	300	0	0
,, Repayment of Loans:—			
Case No. 25 ... ... £13 0 0			
,, 52 ... ... 1 0 0			
,, 64 ... ... 15 0 0			
	29	0	0
	£403	19	6

CR.

	£	s.	d.	£	s.	d.
By Loans:—						
Case No. 52	20	0	0			
,, 53	5	0	0			
,, 56	20	0	0			
,, 64	25	0	0			
,, 67	7	0	0			
,, 77	20	0	0			
,, 79	20	0	0			
				117	0	0
By Gifts:—						
Case No. 49	10	0	0			
,, 51	5	0	0			
,, 57	10	0	0			
,, 58	20	0	0			
,, 59	5	0	0			
,, 60	10	0	0			
,, 69	10	0	0			
,, 73	20	0	0			
,, 76	6	0	0			
,, 78	10	0	0			
,, 83	10	0	0			
,, 85	5	0	0			
,, 86	5	0	0			
,, 87	25	0	0			
,, 88	10	0	0			
				161	0	0
By Balance at Bank Dec. 31st, 1890				125	19	6
				£403	19	6

I find by the Banker's Book that the actual balance on Jan. 1st, 1890, to the credit of the Almoners of THE LANCET Relief Fund, at the London and Westminster Bank (Westminster Branch), was £74 19*s.* 6*d.*, and that on the same date the sum of £300 was placed to their credit by the Proprietors of THE LANCET; and in addition during the year the sum of £29 was received in repayment of Loans, making a total of £403 19*s.* 6*d.*

I have examined the Banker's Book, and find the balance at this date to be £125 19*s.* 6*d.* I have also checked the receipts for disbursements, and find the above account strictly accurate.

December 26th, 1890. HENRY A. PITMAN, Hon. Auditor.

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PROFESSOR KOCH'S TREATMENT OF TUBERCULOSIS.

LECTURE BY PROF. VON BERGMANN.

PROFESSOR VON BERGMANN, who was the first to lecture on the results of Koch's method of treating tuberculosis, and whose opening address was reported in the LANCET of Nov. 22nd, p. 1120, gave a few days ago his last public lecture and demonstration of cases under treatment. As a lecturer Professor von Bergmann is most successful, possessing the gift of a ready and abundant flow of language, combined with a clear and concise mode of expression, as well as the gift of engaging and maintaining the attention of his audience from the outset to the finale. His last lecture was quite as well attended as his first, but the audience was not the same. At the former he was surrounded by the most eminent medical men of Berlin and of almost every great medical centre in Germany, from Greifswald and Kiel in the north, to Munich, which sent its most eminent physician and clinical teacher, von Ziemssen, to learn the new treatment. These eminent listeners had returned, each to his own city, to carry on the observations and treatment they had heard expounded so ably by Professor von Bergmann, the present audience being much younger and less known, but not less attentive listeners. This last lecture was more clinical and less discursive than the first; because, although the demonstration of patients at the first was even more numerous, there was greater need then of explanation, description, and theory, as the whole subject was perfectly novel to the audience. Since then there have been many lectures and demonstrations by medical men who have been employing Koch's remedy, with all the advantages of Professor von Bergmann's description of his experiences.

At the commencement of his last lecture Professor von Bergmann stated that the tuberculous nature of lupus was now placed beyond doubt He did not particularly rely on the fact that it gives the characteristic reaction of tubercular tissue when subjected to the influence of Koch's liquid as a proof of this; but quite apart from that fact he said he formed his opinion from: 1. The structure and organisation of the lupus tissue, with its giant cells. The latter were not pathognomonic, but when taken in connexion with other evidence they afforded strong evidence. 2. There was the irrefutable argument from successful inoculations of animals made with lupus tissue. Like all inoculations with tubercular material, they must be made by skilled hands, and when so made and in a suitable medium—e.g., the rabbit's eye—a specific and indubitable result was obtained. Hueter had proved that the tubercle bacillus was developed in consequence of such inoculations. 3. He relied on the observations of Koch, who had found the specific bacillus of tubercle in lupus nodules.

Lupus was one of the most interesting forms of tubercular affections in which to employ Koch's method, because not only was there less risk of violent and serious reactions, local or general, but the case progressed under the observer's eyes, and could be seen from hour to hour. But even in cases of lupus it was necessary to be very careful at the outset to observe the mode in which the patient reacted, and whether there were any acquired or congenital peculiarities in the patient with reference to Koch's liquid. Above all, the patient should be thoroughly examined, in order to ascertain as far as possible the extent of the tubercular disease in the body, and the extent and situation of tubercular deposits. One should be particularly careful to examine as to the existence of pulmonary or laryngeal tuberculosis, as there might undoubtedly be deposits of tubercle in those parts which escaped notice until an injection was given with Koch's liquid, and then suddenly its existence became demonstrated by local reaction, which might be even of a serious kind. If a case of lupus was presented for injection, which had only the local sore, and had no other deposits in the lungs &c., he would commence with an injection of one centigramme.[1] If several deposits were found in the body, he would not give more than 0·006 grm. It was important also to examine the sputum, as well as the state of he intestines.

[1] Or 1 cc. of the 1 per cent. solution.

The fatal case at Innsbruck was that of a patient with extensive and multiple deposits of tubercle in the body. There was dulness on percussion at both apices, and other evidence of pulmonary tuberculosis; there were deposits of tubercle also in the legs, arms, and in the intestines. In fact, the patient was extensively tubercular. Although only 0·002 grm. was injected, the temperature reached the great height of 41° C. (105·8° F.) in eight hours. This dose, 0·002 grm., was, as stated, far less than was frequently given by himself (von Bergmann) in cases of lupus without any ill effects. The mischief arises from the resorption of the products of the necrotic process set up by the action of the injected liquid. When the intestines were examined after death in this case, each of the tubercular ulcers in them was found to be red and swollen, and to present distinct symptoms of local reaction. There were also pneumonic spots scattered through the lung.

A woman was presented to the audience with lupus of the nose and cheek, and also râles in the apices of the lung and other symptoms of pulmonary tuberculosis. Owing to this complication, only 0·008 grm. was injected instead of 0·01 grm. The temperature rose to 39° C. (102·2° F.) during the night, and a few hours later to 39·1° C. (102·4° F.); next day it fell to 37° C. (98·6° F.), rising the following day to 38° C. (100·4° F.) On the following day the ulcers were well scabbed over, and by the end of the week the local sore was looking very well, and the patient felt so well that 0·01 grm. was injected, the temperature rising in consequence to 39·5° C. (103·1° F.). This patient had a very rapid, weak, compressible pulse, vomiting, and a tendency to collapse. But although such symptoms had been noticed in some cases, and rightly called for careful attention, he (the lecturer) had fortunately seen no serious results in his practice. Where there was extensive tuberculosis small injections only should be administered at the commencement.

Among the cases of lupus longest under treatment was a man who had received sixteen injections, the first on Nov. 8th, the fourteenth having been given on Dec. 5th and the fifteenth on Dec. 8th, the quantity then injected being 0·01 grm. This injection produced slight local reaction, but the new skin on the nose was becoming paler and more like natural skin; the new tissue formed was perfectly smooth, and looked as if free from tubercle. He would that day receive an injection of 0·06 grm., or six times as much as the first injection. This last injection was administered on the thorax.

A woman exhibited now had a perfectly smooth and soft skin where a lupus ulcer had existed on the nose and cheek. She had reacted most severely after an injection of 0·01 grm., and consequently it was thought advisable to abstain from injections for several days. She had received ten injections since November 6th, and could now endure 0·08 grm., which was injected in the back.

It was necessary to be very careful with children, as they reacted strongly. Among the complications which he had observed in the reactions of children was profuse diarrhœa, which might last five or six days, and be rather troublesome. It was desirable to stop the injections while it lasted.

An old man was presented to the audience with lupus of the nose, in whom the local reaction had been intense, the nose becoming greatly swollen and almost black, so that there appeared to be danger of gangrene setting in. But the general and local reaction had diminished, and the scabs had fallen from the affected part and left a fine healthy granulating surface. He would continue the injection so long as there was local reaction. At present there was no general reaction after 0·06 grm.; and now the patient would get 0·08 grm.

A boy was next presented, with lupus of the nose, who had suffered from very severe reaction at first, with somnolence, and collapse. Now no reaction occurred after the injection of 0·04 grm.

A little girl, presented to the audience, had scrofulous glands of the neck. These were truly tubercular, as proved by Koch, but apparently the number of bacilli were not very large. They lay in the giant cells, not in the cheesy matter. In cases of this kind the injections produced the same general reaction, but only a slight local reaction. In lupus the fever was pretty high seven hours after the injection, while in cases of scrofulous glands it rose much more slowly, and might not appear for from twenty-four to forty-eight hours. He had never seen severe local reaction in the case of scrofulous glands, but only a slight tenderness

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and swelling In the case of one man there had been none whatever. In one case the glands increased in size soon after the injection, and then became smaller again. So far he had not noticed any permanent diminution in the size of glands, but they had become much freer and softer. The girl shown to the meeting with scrofulous glands had received ten injections, and was now injected with 0·05 grm.

A man presented to the meeting with enlarged glands of the left side of the neck received a first injection of 0·004 grm., and had in consequence a temperature of 39·6° C. (102·7° F.). After the ninth injection of 0·004 grm. the temperature was only 37·9° C. (100·2° F.). As a rule there was no very high temperature after injection of cases with tubercular joints. But there were exceptions to the rule, and there were cases of tumor albus and hydrops tuberculosus of joints in both of which the general reaction showed a very high temperature.

A little boy was shown under treatment for coxitis since Nov. 29th, since when he had received only four injections. After the first injection of 0·005 grm. he had rigors and a temperature of 39·7° C. (102·2° F.). After the next injection of the same amount the temperature rose only to 38·1° C. (100·5° F.) He could now raise both legs off the table and bend them at right angles. A number of other cases of various forms of tuberculosis were shown, but which presented no special features, except one, which was the only one in which any pulmonary reaction of a serious kind had occurred. Dulness and some pneumonia were noticeable in the right lung in this case. He thought time alone could decide whether the apparent cures would prove to be permanent. Possibly it might be January, 1892, before they could decide the point. But if no recurrence returned before then, it was a great boon to the patient.

REPORT OF CASES UNDER TREATMENT IN THE GLASGOW ROYAL INFIRMARY.

On Thursday, Dec 4th, Drs. Wood Smith, Lindsay Steven, and Charles Workman received from the Empress Frederick of Germany a portion of Koch's fluid for the treatment of patients in the wards of the Glasgow Royal Infirmary. On Sunday, Dec. 7th, the treatment was commenced on three patients. The gentlemen who had received the fluid proposed to hand it over for division among the members of the staff, but at a meeting of that body held on Monday, Dec. 8th, it was decided, in the meantime, to ask the three gentlemen who had obtained the remedy to use it in cases which might be selected by the physicians and surgeons of the house, who formed themselves into a medical and surgical committee respectively for this purpose, Dr. Lindsay Steven to act as secretary to the former and Charles Workman to the latter committee. Twenty-eight cases in all are now under treatment—viz., 17 of phthisis pulmonalis, 3 of lupus, and 8 of tubercular disease of the bones and joints. The following members of the infirmary staff have selected patients for treatment—viz., Drs. Wood Smith, Alex. Robertson, Wallace Anderson, D. C. McVail, James Dunlop, W. Macewen, Henry Clark, D. N. Knox, and W. J. Fleming. The present report deals in some detail with four of the cases that have been longest under treatment, and which illustrate very well the reactions, both local and general, that have been observed in the infirmary. The progress of these cases, and reports of the others under treatment, will be published in due course. With regard to the method of observation, it is to be noted that each physician or surgeon retains the entire charge of his case, the subcommittee undertaking the injections and the recording of the results in a medical and surgical minute-book respectively. The temperatures are taken in the rectum every three hours, the pulse and respiration being recorded at the same time. Notes of the progress of the cases are made at short intervals. The examination of the sputa has been kindly undertaken by Dr. James Wilson Cameron, who has been working in the bacteriological laboratory of the infirmary during the past year.

CASE 1.—The first case was one of suspected phthisis. No bacilli could be found in the sputa, and no reaction occurred after the injections. He received injections of quantities varying from 0·001 to 0·01 grm., but as the absence of reactions seemed to indicate that the case was not tubercular the treatment was discontinued. His temperatures have since remained normal or subnormal, and his cough and expectoration have almost entirely disappeared.

CASE 2.—W. L——, aged twenty, single, tailor, admitted to ward 1 under Dr. Wood Smith with marked physical signs of phthisis. He was injected with 0·001 grm. of Koch's fluid at 11.30 A.M., which produced a decided reaction, the temperature rising all the evening till 3 A.M., when it reached the maximum of 102°, after which it slowly declined to 97° on the morning of the 9th. Two days afterwards 0·002 grm. of Koch's fluid was injected at 11 A.M.; marked reaction as before, the temperature beginning to rise at 6 P.M., and reaching 102° at midnight, when the pulse numbered 88, and the respiration 24. The treatment was continued up to Dec. 22nd, when 0·008 grm. was administered. On the whole the general health of this patient is considerably improved since the treatment was commenced.

CASE 3.—J. McD——, aged thirty-four, potter, married. Admitted to the ward, under Dr. Wood Smith, Nov. 21st, 1890. Cough and expectoration of eight months' duration, accompanied at the outset by deb lity, were prominent signs. Night sweats had never been severe. There has been no great loss of weight, and the cough has been accompanied by a small amount of white frothy mucus, but on admission the expectoration was noted to have been muco-purulent. There was no hæmoptysis, and no bacilli were found in the sputa. The reactions produced by the injections on this patient were extremely slight. The injection on Dec. 11th of a centigramme of the fluid only raised the rectal temperature to 102·6°, the pulse to 93, and the respiration to 34. The subsequent injection was given on Dec. 16th, but was reduced to 0·007. The temperature rose to 103°, and remained up for several hours. Severe constitutional disturbance accompanied the reactions. On the 19th 0·008 was injected, and on Dec. 22nd 0·01, and the general condition of the patient is reported to be fair.

CASE 4.—I. S—— was admitted complaining of lupus of the nose of three years and a half's duration. On two previous occasions the patient had been an inmate of the ward. The present condition shows that the ulcerative processes are chiefly marked on the septum nasi, and on the mucous membrane of the upper lip and skin of nose, and the surrounding parts were erythematous, not ulcerated, but covered here and there with crusts. On Dec. 6th, Dr. John Macintyre made a careful note of the condition of the mouth and throat. The soft palate and uvula had been destroyed by the disease in the part; two large swollen masses were observed, one on each side of the dorsum of the tongue, and extending to the hyoid fossa, were observed. The epiglottis was much thickened and showed the cicatrices of old ulceration. The nostrils are so altered by the destructive processes that a thorough examination of the nasal fossæ could not be made. The naso-pharynx is also involved. The disease has extended forwards from the soft palate, and there are also traces of it on the posterior wall of the pharynx. The diseased patches on the left shoulder and right hip are cicatrised, the only abnormality observed being a slight tendency to tubularity over the region of the right shoulder behind. For two days before commencing the treatment the temperature varied between 98° and 99·6°. The injection of 0·002 grm. produced a temperature of 104°, a pulse rate of 120, and a respiration rate of 36. The usual manifestations of lupus under this treatment appeared, and on Dec. 22nd the patient received 0·003 grm., which produced a temperature of 101° and a slight local reaction.

NORTH LONDON CONSUMPTION HOSPITAL.

Dr. J. E. Squire has some cases of phthisis under treatment at the North London Consumption Hospital, Hampstead. The first injections were given on Dec. 4th.

BIRMINGHAM SKIN AND LOCK HOSPITAL.

We learn that the lymph is being used by the staff of the Birmingham Skin and Lock Hospital on eight cases of facial lupus, and that all the cases are doing well, and show signs of improvement.

ROYAL HOSPITAL FOR CONSUMPTION, VENTNOR.

Dr. Sinclair Coghill, who was recently received in special audience by the Empress Frederick, has returned from Berlin, where he has been studying Koch's method, with an ample supply of the "fluid." The treatment of a number of selected cases of tubercular phthisis in all stages was commenced on Saturday, the 27th ult., at 9.30 A.M., at the Royal National Hospital for Consumption, Ventnor. Members of the profession are invited to be present at the inoculations, which will take place daily at the same hour, and during the reactions.

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DUNEDIN HOSPITAL.

AN important inquiry has just been completed, and a valuable report published, on the sanitary condition of the Dunedin Hospital, New Zealand. In July Dr. Batchelor, one of the medical officers of the hospital, addressed a letter to the trustees on the subject of two cases upon which he had operated, one of which died and the other made a very slow recovery, results which he believed to be "entirely due to unhealthy hospital influences." The trustees, conceiving that this statement reflected upon their administration of the hospital, though Dr. Batchelor disavowed any such intention, applied to his Excellency the Governor to appoint a commission to inquire into the subject. In compliance with this request Sir James Hector and Mr. E. H. Carew, R.M., were nominated, and appear to have made a very thorough and impartial inquiry, having held nineteen meetings and examined twenty-five witnesses, besides receiving documentary evidence and making a personal inspection of the various wards and offices. Dr. Batchelor and the trustees were each represented by counsel. The building had been erected in 1864 as part of a large group of Government and Parliamentary offices, and was used in 1865 for the New Zealand Exhibition; in 1866 it was converted into a hospital. The Commissioners after a careful inquiry reported that they "were satisfied that the complaints made have been largely supported by the testimony, and that some of the alleged defects are of a serious nature, and require immediate remedy." They have gone at some length into all the details, and have in a very clear and able report stated the grounds on which they based their conclusions. These may be briefly summarised. The site is objectionable, being situated on low ground in the most unhealthy part of the city, and the foreshore of the bay is in a very offensive condition; the original plan of the building was faulty; the system of ventilation, lighting, and heating imperfect; the floors are much worn and full of open cracks, and were described by a witness as being "as good contrivances as could be got for harbouring germs"; the walls in many of the wards are rough and absorbent, and are periodically coated with whitewash containing size; the wards are overcrowded, and on this point the Commissioners make the following remark: "It was attempted to be shown that in such matters there is a theoretical and a practical standard, but in our opinion this is not a fair statement of the circumstances. It is rather that the best results cannot be attained in the economical treatment and for the comfort of the patients in a hospital without perfect provision being made, but under some circumstances the administration must be prepared to expect less perfect results, and trust to extra diligence and precautions in the nursing and skilled treatment as a means of preventing epidemics and similar accidents. It is quite fallacious to suppose that there is one successful theory of safety and another successful practice of safety." There is no subsoil drainage of the hospital; the closets are only separated from the ward by double doors, and their ventilation is defective. There are no proper urinals. The baths and lavatories are actually in the wards only separated by a low screen; there are no special wards for infectious diseases, and no special case rooms; the kitchen is in the basement, is very unsuitable, and the arrangement for serving the food to the wards is described as "very crude and unsatisfactory"; the accommodation for the nurses is very defective, and there are no convalescent wards for patients. With such a list of defects the Commissioners were fully justified in condemning the hospital as insanitary, and it must be very satisfactory to Dr. Batchelor that the Commissioners state that the proofs from outside evidence "amply support the allegations of his own evidence." The Commissioners recommend the removal of the hospital to a better site; but if it be decided to improve the present building rather than construct a new one, they have made suggestions which would probably have the effect of rendering it more suitable for the purposes of a hospital, more sanitary, and therefore better adapted for the treatment of sick and wounded. We think Dr. Batchelor is entitled to much credit for having brought the subject under the consideration of the authorities, and the hearty thanks of the public of Dunedin and of the Government of New Zealand are due to the Commissioners for the able, exhaustive, and impartial manner in which they carried out the important duty confided to them.

CHRISTMAS AT THE LONDON HOSPITALS.

UNIVERSITY COLLEGE HOSTITAL.

ON New Year's Eve a Christmas entertainment was given to the patients at this hospital. The wards were very prettily decorated, and the presents to the patients were numerous and well considered. A glee party visited the various wards, singing in each a number of well-selected pieces. A concert was given in the consulting room to the convalescent patients. There was a large number of visitors, the centre of interest being the children's wards.

LONDON HOSPITAL.

Christmas week has passed very joyously for the patients of the London Hospital. The resident staff have worked hard with the sisters and nurses to make the poor patients forget their sufferings as far as possible. On Christmas Day the Committee dinner of roast beef and plum pudding was provided for all to whom the medical men could allow such a privilege. The latter part of the afternoon was devoted to small entertainments in the separate wards, when magic lanterns, theatricals, and ventriloquism afforded great pleasure. The Christmas dinner of the nurses was provided on the 26th, and all appeared happy and bright. The wards throughout the building were most tastefully decorated with evergreens. The Chairman (Mr. E. Murray Ind) made a few remarks to the assembled guests. Amongst the gifts received were a large assortment of toys from *Truth* and from her Royal Highness Princess Mary of Teck.

WESTMINSTER HOSPITAL.

At Westminster Hospital Christmas Day was kept as a day of festivity. The resident medical officers, the matron, and the nurses devoted themselves to the entertainment of the patients, who appeared to enjoy themselves very thoroughly. With the sanction of the medical staff the ordinary diet table was suspended, and every patient was provided with a dinner of turkey or chicken, with plum pudding for those able to partake of it. In each ward a Christmas tree was provided, from which the men received a packet of tobacco, the women and children sweets and oranges and toys; for every patient there were warm, useful articles of clothing. The number of patients in the hospital was 175, and, owing to the kindness of many friends, ample provision was made for their comfort and happiness; the presents received this Christmas having been more than usually numerous, and all of them most useful and appropriate.

ST. THOMAS'S HOSPITAL.

On Christmas Day the patients had the usual dinner of roast beef and plum pudding, with oranges &c. for dessert. The treasurer and his family, with the other resident officers, visited all the wards, distributing cards and saying a few seasonable words to the inmates. In the evening the Nightingale nurses sang carols in the various wards, to the delight of the patients and officers. On Wednesday evening there was a "tea," with music, and a large Christmas tree covered with presents for the children in Victoria Ward. Next week there will be an entertainment in one of the theatres for the amusement of such of the patients as are able to be moved from the wards, and later on the nurses' concert in the governors' hall.

ST. GEORGE'S HOSPITAL.

At the Convalescent Institution at Wimbledon, in connexion with this hospital, a large Christmas tree was provided through the kindness and liberality of residents in the neighbourhood, a sufficiency of presents being contributed for all the patients (about ninety), and all the staff of nurses and servants. A concert has also been provided to take place on Friday, when the gifts on the tree will be distributed. On Christmas Day the patients at the Convalescent Hospital were all supplied with roast beef and plum pudding &c., and a concert took place in the evening.

THE GERMAN HOSPITAL.

The annual festival at the German Hospital, Dalston, took place on Boxing Night, when a number of friends and subscribers visited the hospital for the purpose of witnessing the distribution of Christmas presents to the inmates, and a company of about 150 ladies and gentlemen attended the party. At the end of each ward was a monster Christmas tree literally covered with lighted candles and sparkling balls and stars of every imaginable colour.

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The fixing of the decorations had to be left chiefly to the officers, most of the patients, numbering about 120, being too ill to leave their beds. Special care was bestowed upon the children's ward, in which there are a number of distressing cases. There were, however, some half-a-dozen of the little patients sufficiently convalescent to be able to sit at a table and enjoy the multitude of good things that Santa Claus had sent them, whilst three little girls interested the visitors by singing a carol in German. With all the brightness that sympathising friends had been able to import to the wards, however, the sight was sad, and brought tears to the eyes of not a few of the visitors. Each ward was separately visited, and a carol having been sung in German by the nurses and the medical officers, presents of clothing, together with cake and oranges, were distributed to the adult patients.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

Christmas Day was spent at this hospital in the usual manner. Appropriate Christmas cards, supplied by friends of the institution, were distributed amongst the patients. The wards were tastefully decorated. A large number of the patients were able to sit up for dinner, and were regaled with the customary roast beef and plum pudding, while those in bed were furnished with a dinner of game or poultry. In the afternoon the patients' friends were admitted, and in the evening music was provided for the amusement of all the inmates. A small fund had been raised for the nurses and servants. The presents—as far as possible useful ones—were distributed in the course of the day.

PADDINGTON GREEN CHILDREN'S HOSPITAL.

On Friday there was a magic-lantern display, kindly given by Mr. R. Melvill Beachcroft, a Punch-and-Judy show, and a Christmas tree.

KING'S COLLEGE HOSPITAL.

1. A Christmas dinner — roast beef and plum pudding and the usual Christmas fare—was given to the patients. 2. On Boxing Day a Christmas tea was given, the wards being illuminated and decorated. The patients thoroughly enjoyed the Christmas cheer. Owing to the generosity of many friends, Christmas presents were given, with a good supply of toys for the children. On the 15th ult. the resident medical officers gave their annual Christmas tree entertainment to the patients and friends in the central hall.

LONDON POST-GRADUATE COURSE.

THE annual general meeting was held on Dec. 30th, at 15, Cavendish-square, Mr. Jonathan Hutchinson, F.R.S., LL.D., President, in the chair. The report of the Committee of Delegates for the year 1890 was read. The committee reported that during the year three courses of lectures and demonstrations, each of eight weeks' duration, had been given. The first course, from Jan. 13th to March 8th, had consisted of seventy-two lectures given at the Hospital for Consumption, Brompton, the Hospital for Sick Children, the Royal London Ophthalmic Hospital, the Hospital for Diseases of the Skin, and the Hospital for the Paralysed and Epileptic, by members of the staff of each hospital. The course was attended by thirty-three practitioners, of whom nineteen entered for the whole course and fourteen for special hospitals. The second course, from May 5th to June 27th, consisted of eighty-eight lectures given at the five original hospitals and two other institutions, the Bethlem Royal Hospital for Lunatics and the Paddington Infirmary. At the Bethlem Hospital a course of lectures and clinical demonstrations on Mental Diseases were given by the resident physician, Dr. Percy Smith. At the Paddington Infirmary a course of lectures on Clinical Medicine and Surgery was given by Dr. Broadbent and Mr. J. Hutchinson, and supplemented by pathological demonstrations by Dr. Savill, the medical superintendent. This course was attended by thirty-three practitioners, of whom eleven entered for the full course and twenty-two for special hospitals. The third course, from Oct. 13th to Dec. 6th, consisted of seventy-two lectures given at the five original hospitals and at the Paddington Infirmary. The lecturers on Clinical Medicine and Surgery at the Paddington Infirmary were Dr. Bristowe, Dr. Cheadle, Mr. Jonathan Hutchinson, Mr. R. Harrison, and Mr. Frederick Treves. The course was attended by fifty-four practitioners, of whom twelve entered for the full course and forty-two for the special hospitals. The total number of practitioners who entered in the year either for the whole or special courses thus amounted to 121. Of these there were 105 holding British qualifications, including five medical officers of the army and one of the navy, two holding Indian qualifications, seven colonial and seven American practitioners. Ladies being qualified medical practitioners were admitted to the classes at those hospitals of which the medical staff consented to their attendance, and eleven ladies availed themselves of these opportunities. The total number of lectures and demonstrations was 221, given by forty-five lecturers, nearly all of those belonging to the staffs of the hospitals mentioned. The committee regarded the number as very satisfactory, considering the novelty of the scheme and the difficulty of making its operation widely known. The committee believed that the instruction and clinical opportunities afforded by the course had been highly appreciated, and many expressions of satisfaction with its working and good wishes for its success had reached them. The recommendation of those who had attended and profited by the teaching would, they thought, do much to aid the progress of the scheme. The enlargement of the scheme of instruction by the introduction of other subjects than those included in the original programme was another point to which the committee desired to draw the attention of the meeting. It was announced that the lectures at the Bethlem Hospital would be resumed by Dr. Percy Smith and Dr. Savage. The committee had also made arrangements for a course of lectures and demonstrations on Diseases of the Throat and Use of the Laryngoscope at the London Throat Hospital during the first term of 1891. It was also announced that Mr. Hutchinson's lectures on Diseases of the Skin would be given by permission of the Laboratories Committee in the Lecture Theatre of the Examination Hall of the Royal College of Physicians and Royal College of Surgeons. Other subjects had been suggested as desirable additions to the course; and the committee were unable at present to provide instruction in these subjects; they regarded the widening of the curriculum as an object to be kept immediately in view. In conclusion, the committee expressed their high opinion of the valuable services of their secretary, Dr. Fletcher Little. The treasurer's report, stating the expenses, was then read. It was regarded by the committee as satisfactory and encouraging. On the motion of Mr. Brudenell Carter the report of the committee and the treasurer's report were approved and adopted. After some further business, and votes of thanks to the president and secretary, the meeting separated.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Sussex Combined Districts.—This extensive district includes four urban and seven rural sanitary districts, which taken collectively had during 1889 a general mortality of 12·6 per 1000 living, the rates varying from 9·3 in West Worthing to 17·0 in Arundel. But taking the whole district the rate was lower than in any previous year. The vital statistics are discussed at considerable length by Dr. Charles Kelly, who shows, amongst other things, that the zymotic rate for the whole area last year reached the lowest known point—namely, 0·8 per 1000. Taking the mean zymotic rates far 1880–89, the highest have been: Steyning, 1·9; Thakeham and Arundel, 1·6; and Worthing, 1·5. The various meteorological conditions that have prevailed are set out in tabular form, as are also records of soil temperature; and a detailed account of the various sanitary circumstances, the prevalences of disease, and the sanitary measures adopted is set out as regards each sanitary district separately. Amongst the occurrences of disease deserving attention was an outbreak of diphtheria in the autumn of 1889, which seemed to begin at Pulborough, whilst its chief incidence was in the small parish of West Chitlington. The people of this locality live chiefly in an area in which there is much low-lying brook-land, but it was

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rather those who dwelt on the higher ground who were affected. No very clear explanation of the circumstances under which the disease spread seemed to be forthcoming. Much the same may be said of a similar occurrence at Wick, in the district of East Preston.

Wolverhampton Urban District.—Dr. Malet draws attention in his report for 1889 to the influence of isolation in the borough hospital as having materially reduced the scarlet fever mortality in Wolverhampton, and it is certainly satisfactory to find it recorded that in cases where such isolation was carried out no further attacks in the families concerned took place after the removal to hospital. Unfortunately, the hospital which has such a record is stated to be used for scarlet fever only, a circumstance which seems to imply that the institution does not properly admit of the isolation at one and the same time of cases of more than one disease. Happily such diseases as enteric fever and diphtheria were not very prevalent during the year. The general death-rate was low for Wolverhampton—namely, 16·9 per 1000, and the zymotic rate was also low, but the deaths amongst children were above the average. The sanitary circumstances of the town are referred to in a general way, which seems to indicate negligence and default, but that part of the report hardly conveys information sufficiently explicit to be understood by outsiders.

Newcastle-upon-Tyne Urban District.—The mortality returns for 1889 do not bear favourable comparison with those of 1888, and one-third of the increase which has taken place is attributed to zymotic ailments; the general death-rate being 25·0 and the zymotic rate 3·0 per 1000. Amongst the cases of infectious diseases heard of during the year there were of scarlet fever 601, enteric fever 136, diphtheria 96, and typhus 7; and both these cases and the vital statistics based on them and other causes of death are discussed at some length by Mr. Henry Armstrong. Amongst the preventive measures adopted, removal to the excellent new isolation hospital played a prominent part; and in the case of some diseases, such as typhus, nearly all attacked were so removed. But even with the excellent organisation existing in this northern city the percentage of removals to hospital of all the cases of infectious fevers heard of did not reach more than 15·6. The general work of the Health Department is set out at some length, and it is evident that considerable importance is attached to the question of the association of diseases in the lower animals with the health of man, the inspection and supervision of dairies, cowsheds, milkshops, and slaughter-houses receiving much attention. During the year house accommodation was newly provided for 963 families, in 217 self-contained houses and 373 houses of two flats each; and perusal of the defects, which were noted when the plans were first submitted to the corporation, shows that increasing attention is being given to this important subject of the wholesome housing of the working classes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 3898 births and 5186 deaths were registered during the week ending Dec. 27th. The annual rate of mortality in these towns, which had been 21·3 and 21·5 per 1000 in the preceding two weeks, further rose to 27·8 last week. The rate was 26·3 in London and 29·1 in the twenty-seven provincial towns. During the past thirteen weeks of the current quarter the death-rate in the twenty-eight towns averaged 21·6 per 1000, and exceeded by 0·6 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 15·2 in Brighton, 16·6 in Hull, 20·7 in Derby, and 21·8 in Plymouth; the highest rates were 34·9 in Liverpool, 41·3 in Halifax, 43·6 in Manchester, and 44·6 in Preston. The deaths referred to the principal zymotic diseases, which had increased from 430 to 511 in the preceding four weeks, declined again last week to 472; they included 199 from measles, 90 from whooping-cough, 55 from diphtheria, 51 from scarlet fever, 39 from "fever" (principally enteric), 38 from diarrhœa, and not one from small-pox. No deaths from these diseases were recorded in Plymouth, Wolverhampton, Derby, and Hull; while they caused the highest death-rates in Sheffield, Bolton, Bristol, and Preston. The greatest mortality from measles occurred in Birkenhead, Manchester, Salford, Bolton, Bristol, and Preston; from scarlet fever in Preston, Sunderland, and Halifax; and from whooping-cough in Norwich, Cardiff, and Sunderland. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 55 deaths from diphtheria included 31 in London, 5 in Manchester, 5 in Portsmouth, 2 in Norwich, and 2 in Birmingham. No death from small-pox was registered in any of the twenty-eight towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1685, against numbers declining from 2122 to 1752 on the preceding seven Saturdays; the patients admitted during the week were 78, against 125 and 108 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding three weeks from 444 to 753, further rose last week to 806, and exceeded the corrected average by 296. The causes of 146, or 2·8 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester and Derby. The largest proportions of uncertified deaths were recorded in Salford, Sheffield, Huddersfield, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·1 and 20·9 per 1000 in the preceding two weeks, further rose to 24·6 during the week ending Dec. 27th, but was 3·2 per 1000 below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 16·6 in Leith and 19·4 in Aberdeen to 28·7 in Paisley and 29·1 in Glasgow. The 637 deaths in the eight Scotch towns showed an increase of 71 upon the number in the preceding week, and included 22 which were referred to whooping-cough, 19 to measles, 9 to diphtheria, 8 to diarrhœa, 7 to "fever," 5 to scarlet fever, and not one to small-pox. In all, 70 deaths resulted from these principal zymotic diseases, against 46 and 54 in the preceding two weeks. These 70 deaths were equal to an annual rate of 2·7 per 1000, which was 0·4 above the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 16 and 12 in the preceding two weeks, rose again last week to 22, of which 13 occurred in Glasgow and 5 in Edinburgh. The deaths from measles, which had been 12 and 11 in the preceding two weeks, rose again to 19 last week, and included 8 in Glasgow and 8 in Greenock. The 9 fatal cases of diphtheria showed a slight further increase upon those recorded in recent weeks, and included 4 in Glasgow. The deaths referred to "fever," which had been 2 and 6 in the preceding two weeks, further rose last week to 7, of which 4 occurred in Edinburgh and 2 in Glasgow. The 5 fatal cases of scarlet fever included 3 in Glasgow and 2 in Aberdeen. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 137 and 139 in the preceding two weeks, further rose last week to 182, but were 7 below the number in the corresponding week of last year. The causes of 69, or nearly 11 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·6 and 28·2 per 1000 in the preceding two weeks, further rose to 31·3 during the week ending Dec. 27th, and exceeded the rate recorded in any week since February last. During the past thirteen weeks of the current quarter the death-rate in the city averaged 24·3 per 1000, the rate for the same period being 20·6 in London and 18·6 in Edinburgh. The 212 deaths in Dublin showed an increase of 21 upon the number in the preceding week, and included 6, which were referred to different forms of "fever," 4 to whooping-cough, one to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had declined in the preceding four weeks from 17 to 9, were 10 last week; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 2·3 in London and in Edinburgh. The deaths referred to "fever," which had been 5 and 4 in the previous two weeks, rose again last week to 6. The fatal cases of

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whooping-cough, which had been 4 and 1 in the preceding two weeks, rose again to 4 last week. The 212 deaths in the city included 33 of infants under one year of age, and 59 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the number recorded in the preceding week. Four inquest cases and 3 deaths from violence were registered; and 70, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or nearly 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Brigade Surgeon Edward Corrigan Markey, C.B., to be Deputy Surgeon-General, ranking as Colonel, vice J. Landale, M.D., retired (dated Dec. 10th, 1890); Surgeon-Major John Maturin, F.R.C.S.I., ranking as Lieutenant-Colonel, to be Brigade Surgeon, vice E. C. Markey, C.B. (dated Dec. 10th, 1890); Surgeon-Major Hamilton George Gardner, M.B., retires from the Service, receiving a gratuity (dated Dec. 24th, 1890).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Deputy Inspector-General Alexander Turnbull to Hong-Kong Hospital (dated Dec. 20th 1890); Surgeons John Lowney and Henry F. Illiewicz to the *Duke of Wellington*, additional for disposal (dated Dec. 29th, 1890).

Correspondence.

"Audi alteram partem."

THE MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—As this Bill is now before Parliament and may possibly become law in some shape or other, and as the subject it deals with is important, I venture to trespass on your space, the more so as, having had great experience in the training of midwives, I can speak with some confidence on the subject.

The Bill, in my opinion, is not alone objectionable in many of its details, but is radically wrong as being founded on a false principle. Its title indicates this, and the framers evidently think that "registration" is all that is needed to improve the present class of midwives, whereas the "education" of these women should be first thought of, and registration, if it comes at all, should not come into operation immediately, or indeed till after the lapse of at least some years. What would have been thought if Parliament had passed the Medical Registration Act before medical schools or licensing bodies had been established and in full working order, so that all who desired to practise had an opportunity of obtaining the necessary education and qualifications to fit them for so doing? Yet this is what the advocates of the Bill under consideration want now to do.

No one can more sincerely desire that the education of midwives should be improved than I do, but I protest against their being registered at all until it is shown that means exist for educating them, that their education be conducted under the supervision of properly qualified medical men, and that when this has been completed they be examined by persons in whom both the public and the profession have confidence. The Bill under consideration does not in reality provide for any one of these essentials. It is, as its title states, simply a "Registration Bill," with this addition, that the General Council, or, failing it, the Privy Council, shall make rules for the admission to examination and course of study to be pursued previously &c.; but not one word as to when, for how long, how, or by whom these women are to be educated, while the proposed examination is certain to be most unsatisfactory.

If the Bill become law it is evident that a large number of women will at once seek to be educated as midwives. To whom are they to apply for this purpose? What qualified staff of teachers exists? If facilities for their education do not exist, it is manifest that either—(*a*) it will be impossible for them to pass the examination, assuming it to be of a standard sufficient to prove that they possess the necessary "knowledge and skill" which the Act is assumed to require; (*b*) or that the examination will become a mere form, if not a farce; or (*c*) that the number of women passing it will be so few that the number of midwives who become registered will be altogether inadequate to supply the demand. My own opinion is that the second of these alternatives will prove to be the actual result, and that the Act will have the effect of actually inflicting an injury on the public, for the women who at present act as midwives are known to be uneducated, and possess no title to pose as being educated, whereas those who become registered will produce their certificates of registration, and will pose as qualified practitioners in midwifery; while all the time they will be in no way superior to their predecessors save in this: that they may have picked up a few medical terms, by the use of which they may further impose on the illiterate poor amongst whom they will chiefly practise.

But let it be assumed that the difficulties as to education and examination are got over, and that a sufficient number of educated or partly educated women are annually put on the register, it will be admitted out of the thousands of midwives on it a good many will be guilty, or at least be accused of being guilty, of "drunkenness," "incompetence," "infamous or disgraceful conduct," or of some of the causes for which their names are to be erased from the register. The Privy Council are "to make regulations" "for providing" for the erasing of the names of those convicted of being guilty. But by whom are the charges to be investigated, where are they to be heard, and by whom is the cost to be defrayed? A magistrate or county court judge would manifestly be unfitted to investigate the purely professional matters which would crop up in all and be the chief ground for the charge in the majority of the cases. Of necessity there should be some form of medical court or courts: not the General Medical Council; it would not undertake the office. The court should be composed of, or at least in the chief degree consist of, medical men of experience and repute, who must be adequately paid for their services. It must be easy of access, for it would be unjust to compel a midwife to lose time and incur expense in travelling long distances. The members of this court would have a most irksome and difficult task to perform, and the expense attending it would be proportionally great; but unless they discharge their duties efficiently a number of most unworthy and dangerous midwives would be allowed to practise, not alone with the authority given them by holding the certificate of registration, but also with almost absolute impunity, for the Bill contains this extraordinary provision, that "no private person, except with the consent of the Attorney-General or of a County Council," may prosecute a registered midwife. Imagine the case of some poor labourer whose wife has died from the incompetency or in consequence of drunkenness of a midwife. How could he apply to the Attorney-General or have his voice heard in the County Council? No such protection is extended to registered medical men. Why should it be to midwives?

Next, how will the register be kept accurate? The Registrar of the General Medical Council will testify to the difficulty in this respect in the case of medical practitioners, all educated men and comparatively few in number. What will be the case of these nearly illiterate women, who will be likely to change their residences frequently, and how will personation be prevented?

But perhaps the greatest objection to the proposed system of registration of midwives is this, "that every woman who at the passing of the Act is *bonâ fide* acting as a midwife" shall be registered, provided she claims to be so within eighteen months. She may be a drunkard, she may be grossly ignorant, may have carried infection from house to house, regardless of the deaths which have followed in her wake, yet she is at once to be placed on the register, and her certificate of registration will be by the public accepted as a qualification to practise, and she will, moreover, practise with the impunity which the provisions of the Bill will confer. It will be said that to exclude these women would be unfair, as amongst them will be some fitted to act as midwives. But why inflict an injury on the public for the sake of a few deserving ones, especially when registration is at best a very doubtful advantage, and under existing circumstances a positive evil? This leads me to the question, Is registration of midwives necessary at all? I have endeavoured to show that it is doubtful if it will lead

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to improved education, and without improved education registration can be of no avail. Let us see how education without registration works where this latter system has been tried. In Ireland, thanks to the existence of the Rotunda and Coombe Lying-in Hospital and of maternities attached to general hospitals, a large number of midwives have for years been annually trained there, a number much more than sufficient for the requirements of that portion of the kingdom. There is now hardly a Poor-law Union in Ireland to which there are not one or more midwives attached; these women are paid small salaries, and supplement it by private practice. The country districts are too poor and too sparsely inhabited to support a midwife without the help of a salary, but in the towns educated midwives are to be found supporting themselves without this aid. In fact, Ireland is fairly well off for midwives; as a rule they are efficient and well conducted. Each woman on passing her examination at the end of her term of training is given a certificate, and this, with testimonials from medical men, must be produced by candidates for the poor-law appointments I have referred to; but registration of midwives does not exist in Ireland, nor is it needed. Why should not the same system be introduced into England? If an Act of Parliament is acquired, and I believe it is needed, it should be in the direction of encouraging the establishment of maternities in large towns, where midwives could be trained, and of enforcing their proper supervision during training by duly qualified medical practitioners and their subsequent examination by impartial examiners. In time these educated midwives would spread over England, as they have over Ireland. Doubtless the process would be slow, but it would be better to be so than to register, *en masse*, a number of women, ignorant, illiterate, and in many cases drunkards, whose presence on the register would lower it in the eyes of the public.

The chief advantage which registration under the proposed Bill confers is that, without it, midwives will be unable to recover fees. This is a small boon. It does not prohibit, nor could it without great cruelty to the poor prohibit, a woman from acting as a midwife without registration, and, as it in no way provides or even suggests improved means of educating women, I look on it as worse than useless, and affirm that if it becomes law, instead of benefiting, it will injure the poor, for whose benefit it is supposed to have been introduced.—I am, Sirs, yours faithfully,

LOMBE ATTHILL, M.D.,
Dublin, Dec. 18th, 1890. Ex-Master of the Rotunda Hospital.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I observe that in the course of some editorial comments on Professor Koch's treatment for tuberculosis which appear in your issue of Dec. 27th, you express approval of a report which has reached you to the effect that the distribution of the lymph is to be limited to hospitals exclusively, on the ground of the extreme care which it is necessary to exercise in its use. The view which is thus laid before the public with the weight of your authority can mean nothing less than that the necessary care is not likely to be exercised in private practice, and that the conditions of any other than hospital practice are not likely to be favourable to its successful use. As one of those who are involved in that implied reflection I crave your permission to make a rejoinder.

In the first place, I would invite your attention to the fact that, although the question of ultimate cure must remain an open one for many months to come, it has been established by the results of many hundreds of experiments that the Koch medium is a therapeutic agent of the highest value in the treatment of both medical and surgical tuberculous disease, and that its diagnostic use affords a means of recognising the presence of the bacillus with a certainty which is of the utmost importance in regard to the arrest of disease in its earliest stages. Therefore the restriction of which you express approval must deprive practitioners of a means of both diagnosis and treatment, which would be of incalculable value to the public in averting disease and either deformity or death. Now I would submit that in private practice the Koch treatment is likely to be of greater utility than in hospital wards, for it seems to me impossible to doubt that the hygienic conditions which prevail in the spacious and well-ordered sick rooms of private houses, and that the exclusive care of one or more well-trained nurses whose attention is concentrated on one patient, offer advantages which it must be difficult or impossible to secure in the wards of a hospital, especially in those in which the aggregation of a number of tuberculous patients load the atmosphere with germs of disease. If proof of my contention were needed, it would suffice to point out that the lymph has already been extensively used with satisfactory results in private practice; for it is well known that numbers of patients are already under treatment at Davos, St. Moritz, and in the Rivieran health resorts. Further, it has just been announced that a supply has been forwarded to Montreux, and reported from Berlin that some physicians in that city are realising as much as two thousand marks a day by the treatment of private patients. It should also be noted as highly significant that the deaths which have followed the injection of the lymph have occurred in hospitals, and not in private practice.

In view of these considerations, it appears to me to be sufficiently obvious that any limitation in the distribution of the lymph which may not be necessitated by the scarcity of the supply must involve grave injustice to that greater part of the anxious and suffering public whose relative affluence precludes their having recourse to hospitals for the relief of their maladies.—I am, Sirs, yours faithfully,

Gledhow-gardens, S.W., Dec. 27th, 1890. W. BEZLY THORNE.

*** We by no means wish to imply that the treatment cannot be carried out in private practice. But we should have thought it more conducive to the interests and welfare of all concerned if the profession were fully enlightened concerning its efficacy before the treatment were generally adopted. This decision must largely rest upon the results of *close and prolonged observation* of cases submitted to the method, and it is therefore perhaps to be regretted that the "lymph" has been utilised in private practice to the extent that it has been hitherto, not to speak of the absolute impossibility of the supply being made equal to the demand.—ED. L.

To the Editors of THE LANCET.

SIRS,—The excitement caused by the announcement of Koch's experiments, and particularly on his promised cure for "tubercular diseases," pervades all classes—medical and non-medical alike. In fact, we have become hysterical on this matter, and no wonder that the poor sufferers from consumption are in the same state. It is time, therefore, that those of us who have not quite lost our heads should look at the subject impartially, in the hope of calming down the over-excited public mind at present existing. First let me say that I regard Koch's experiments with the greatest respect, and look upon his labours as worthy of all praise as feats of careful and incessant industry. But here I pause and wait for further light, for up to the present time neither the much-vaunted remedy nor the results of its use have been sufficiently investigated. Until this is done I confess I am sceptical, and still believe in the old methods for doing battle with the foe—consumption. Moreover, there is one thing about the proposed remedy which puzzles me exceedingly. I can understand, for the sake of illustration, how vaccination acts in the prevention of small-pox on physiological and pathological principles, for as I understand its operation it destroys all that in the system which the contagium of small-pox would otherwise be fed upon; but, mark the difference, this inoculation for consumption is used for a disease already existing; and vaccination is hopelessly useless when a person is already labouring under small-pox infection. The same may be said of charbon, anthrax, or hydrophobia, for there is no evidence that the prepared and diluted contagium, used by Pasteur for inoculation, has the least influence after these diseases have seized their victims, nor has anything of the kind, so far as I know, ever been suggested. There is plenty of proof that consumption in its early stage is amenable to treatment, and its prevention by hygienic and other means is well established.

Dr. Mac Cormac so long since as 1865 wrote a valuable treatise on consumption, now, it is to be feared, too little known, or at least too little read, from which I transcribe a sentence that should be posted in big letters in every house.

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where there is any intelligence. He says: "Only breathe pre-breathed air, and sooner or later the uneliminated, because unoxidised, carbonaceous waste will be deposited as tubercle. Do not breathe pre-breathed air ever and you shall not incur tubercle, you or yours—no, not though you should survive a thousand years." Here the great antagonist of the foe, which the refined civilisation of the age fosters, is free ventilation, more particularly in our bedrooms during sleep. But, instead of providing for this, we shut our windows and doors, not allowing the fresh air to enter, and breathing a vile, impure, and pestiferous atmosphere for many hours. It is the same in many of our offices, workshops, and business places where many people are employed and much gas is consumed. We prevent, by persistent and ill-advised endeavours, the ingress of fresh air, and yet expect to be healthy and vigorous. We pass over the habitations of the poorer portion of the community, where our fellows are huddled together like beasts, or, worse, are breathing an atmosphere of disease and death, with the single observation that they are a disgrace to the civilisation of the age, and of which we make our boast.

Mr. G. W. Hambleton, whose recent papers on Consumption should be carefully studied, follows very much in Dr. Mac Cormac's steps. He says, speaking of modern civilisation, "Instead of walking we drive, instead of carrying we are carried, instead of running we are carried by train, instead of hunting we go to the salesman. Every day some new invention is discovered for saving labour, and thereby spoiling life. Indeed, the conditions of modern life are rapidly approximating to those of a cage at the Zoo, in which the animals have everything done for them; or, to put the matter in another light, modern life is essentially life in a hothouse.... We live with closed windows and over-heated rooms, we muffle ourselves up when we go out, and we take less and less exercise. Nature is not slow to visit the consequences upon us. From disuse the way is short to disease. The lungs not being healthily used become a prey to disease." Having a due regard for your space here, I conclude with the remark that for Koch's remedy there is no *raison d'être*; but from exercise in the open air, the free and full ventilation of our houses—our bedrooms especially—and from means which aid in giving free expansion to the lungs, we may hold out very fair hopes to consumptive patients of the future.—I am, Sirs, yours obediently,

King's Lynn, Dec. 29th, 1890. WM. DALE, M.D.LOND.

To the Editors of THE LANCET.

SIRS,—The great harm done by the manner in which Dr. Koch's remedy has been advertised is very serious. It is unfair to any who may come after with a remedy more effectual, but who may not possess the means of such wholesale advertisement. The tendency of the age is to follow a name. But I cannot understand men with a scientific training having their mental vision clouded by the unrestrained enthusiasm which so often warps the judgment of the ordinary mind. For my own part I recognise only truth and fact. What are the facts which present themselves in the case of Dr. Koch's discovery? 1. The "remedy" will not cure consumption in advanced stages, and in early stages it has only been *proved* that temporary benefit has been derived. 2. The remedy is a secret one.

I could name two drugs at least under which phthisis in the early stages shows great signs of improvement. Our mode of treating phthisical patients in hospitals by huddling them all together is a very clumsy one, but in private practice, where everything desirable can be obtained, many cases are cured. I know of a case where a cavity was filled up with new scar tissue. This was discovered on post-mortem examination, the patient having died of another disease.

The remedy is a secret one. Do you not agree with me, Sirs, that the medical profession will place itself in a very false position and lose respect if it be content to use this remedy unless it be put on a different basis to that of a quack medicine? Is Dr. Koch to become the "General" Booth of the medical world? Are the scientific men of this country like children that they may not be trusted with the secret? Let us stand up for the truth, and in science at least be no hero-worshippers, but worshippers only of truth. Dr. Koch may be the most pure-minded man under the sun, but there is a great smirking of the commercial element in the manufacture of this mysterious fluid.

I am, Sirs, yours obediently,

West Kensington, W., Dec. 29th, 1890. W. S. RICHMOND.

DENTAL LAW IN ITALY.

To the Editors of THE LANCET.

SIRS,—I notice in your issue of Dec. 20th a comment upon the dental law of Italy, in which you express approval of the fact that in future a degree in medicine and surgery must be taken by those who wish to practise dental surgery in Italy. Will you allow me to express my entire accord with you up to a certain point? I would certainly advise every dentist whose means, whose time, and whose capabilities will allow him, to take the highest degrees in medicine and surgery, as well as his dental diploma, but I do most strongly protest against the medical and surgical degree being made compulsory. I think it is quite possible to formulate a dental curriculum which shall run, *pari passu*, with a medical and surgical curriculum up to a certain point, so that all the general medical education is practically the same for both diplomas, but, in the place of certain medical subjects, dental subjects are substituted. We have aimed at this desideratum in recent alterations in the curriculum for the licence in Dental Surgery at the College of Surgeons, and I am bound to say that this scheme, when carried out in its entirety, and with efficient education and examination, will provide the public, in the future as it has done in the past, with a body of reputable and skilful practitioners in dental surgery.

In conclusion, I would only add that the present curriculum offers every inducement to students to take the double qualification, whilst at the same time it gives them ample time to procure that manual dexterity which two years' constant practice is none too little to secure, even at the cost of giving up certain branches of medical education, not so essential to a dentist as to a doctor.—I am, Sirs, yours faithfully, S. JOHN HUTCHINSON,

Dental Surgeon to University College Hospital,
Examiner in Dental Surgery, Royal College of Surgeons, England.
Brook-street, W., Dec. 1890.

LEAD POISONING FROM DRAUGHT BEVERAGES.

To the Editors of THE LANCET.

SIRS,—Your interesting annotation in THE LANCET of Dec. 20th recalls to my mind a similar case I had in February of this year. An old patient of mine sent for me about the middle of that month, and at my visit I found her suffering great pain in the bowels, especially about the umbilicus. After careful examination, and more particularly looking at her gums, where I discovered a very distinct blue line, I came to the conclusion that she was suffering from lead colic. Now this was a comparatively easy matter, but it was a more difficult one to find out how she contracted the complaint. I cross-questioned her in every possible way as to what she drank, but could not get anything satisfactory. At the end of the third day she expressed a wish to go to the hospital; and as she was a poor woman who did a little washing I let her go. It was through the kindness of Dr. Cheadle that I learned the further history of the case. It seems that at the hospital she disclosed what I could not get from her—that she was in the habit of drinking largely of ginger-ale, which she bought on draught from a small beer shop near where she lived. This fluid was tested and found to contain a large quantity of lead, no doubt produced by the free carbonic acid acting upon the lead pipes of the engine. She was soon discharged cured. I do not know the treatment adopted, but I always use potassium iodide in these cases.

I am, Sirs, yours very truly,

Harrow-road, Dec. 19th, 1890. A. L. GRIFFITH.

"HORSE EXERCISE FOR SCHOOL GIRLS."

To the Editors of THE LANCET.

SIRS,—Many in our profession, in which there are so many horsemen, will have read with pleasure the admirable annotation of last week, in which you comment so practically upon points of posture in riding. May I give a stanza which is in my memory, and which appears to be a better version of the true old apophthegm you quote?—*Videlicet*:—

Your head and your breast keep up,
Your hands and your heels keep down,
With your legs well in to your horse's sides,
And your elbows well in to your own.

I have also met with another sound observation about

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riding with propriety upon horseback, the truth of which horsemen recognise—namely, if a man make sure of keeping his heels down, all things else in riding will be added: that is to say, if the heels be right, all other excellences of equestrian posture will take care of themselves.

I am, Sirs, yours faithfully,

Birmingham, Dec. 29th, 1890. JAMES SAWYER.

THE FOUNDER OF "THE LANCET."

[THE early history of THE LANCET, the fierce conflicts in which it was used by its founder as the weapon by which he achieved successive victories over selfishness and wrong, and thus made comparatively smooth and easy the path for reformers in after years, form a subject which ought not to be allowed to pass into oblivion. We have no hesitation, therefore, in allowing to appear in our columns the following communication from the pen of a correspondent who is in a position to appreciate the advantages to the profession gained by the indomitable energy and persistent efforts of the great medical reformer.—ED. L.]

I have recently had the curiosity to go through the files of THE LANCET with the object of discovering and recording if possible the tone and aims of that journal from its inception, and the enormous labour has been amply repaid by the discovery of the rich mine of wealth which the volumes contain. I believe I have discovered the secret of the unparalleled success and the high reputation of the chief organ of the medical profession. In one of the volumes I came across what may be called THE LANCET'S confession of faith. "THE LANCET will perpetuate the memory of Thomas Wakley—the founder of this journal—by cherishing after his death the principles to which he consecrated his life." The solemnity of expression in the passage on the occasion of the death of the founder led me to further inquire by what motives he had been actuated, what such a memory and example required of his successors, and how far the solemn promise had been fulfilled by them. What had he to gain in requiring that medical men should be adequately rewarded for their labours? "I have," said Mr. Wakley in a public speech—"I have foresworn medical practice. I use only the lancet, and that in the form of a quill." From that time he became the champion of medical reform of all kinds. If we turn to *The Times* of 1827 we find that at that early period THE LANCET gave the first blow "to cupidity and corruption by establishing a free medical press, and rousing the profession to a sense of its injuries and indignities, and to a spirit of resistance." Mr. Wakley's great aim was always to uphold the rights of the profession as a whole by the adoption of straightforward courses of action. What has he gained for medical men? In former days, when scarcely a week passed without furnishing instances of imbecility and ignorance on the part of coroners, and reports of insults borne by medical men who were, without fee or reward, compelled to attend these "worthless, expensive, and pernicious exhibitions," he raised his voice with no uncertain sound against such palpable abuses, and earned for himself no small share of obloquy from those who considered themselves injured by his fearless exposure of base principles. Unmistakable deaths from poisoning were recorded by coroners' juries from time to time as "Deaths by the visitation of God." Abuses so apparent soon roused him to most energetic action, resulting in his candidature and election for the office of Coroner for the Western Division of Middlesex at the enormous cost to himself of many thousands of pounds. From that time THE LANCET has consistently supported the appointment of medical coroners, and now scores of medical men occupy that position. The Coroners Act, allowing the appointment of a permanent deputy coroner, and the Medical Witnesses Bill were introduced to Parliament on his instigation and passed in consequence of his exertions. As a direct result of his personal patience, an inquiry into the flogging to death of a soldier at Hounslow Barracks led to the abolition of flogging in the army. His keenest shafts, however, were aimed at empiricism and cant, "the prima materia of the devil," as Carlyle called it. He hated shams, and loathed the feebleness which succumbs to mere authority. He succeeded to a great extent in rescuing the very institutions which were established to prevent quackery from the quagmire of empiricism into which they themselves had fallen. His attack on the faults and absurdities connected with medical education should render the medical student of to-day, perhaps more than anyone else, grateful to the founder of THE LANCET, for it is through his instrumentality that every student has now secured to him able and earnest teachers, and the right of using freely the opportunities which public hospitals afford him for his improvement. The first great battle by which the rights of a free medical press were established was won by Mr. Wakley on their behalf. Up to the year 1825 no clinical lectures were delivered in the hospitals, and no reports of the cases which occurred in them were published. The famous action of Abernethy *v.* Wakley established the right of the medical journals to print public lectures, and was a triumph for the press, the influence of which has been great and lasting. With regard to the decision in the case of Bransby Cooper *v.* Wakley, Sir James Scarlett, the opposing counsel, admitted "that the example of this proceeding has given to the periodical press a triumph and an influence which it never had before."

Mr. Wakley was one of the first to urge upon his medical brethren the necessity for their being represented in Parliament by members of their own profession; and, ever ready to practise what he preached, he submitted himself as Parliamentary candidate for Finsbury. Twice he went to the poll, and twice was he defeated. Undaunted, he went again to the poll at the next election and was returned by an overwhelming majority. Before he had been many weeks in the House he began to manifest his care for the interests of the profession by asking questions of the greatest importance to its members, and throughout the whole of his Parliamentary career of twenty-four years was he the staunch champion of medical men, influencing the House to appoint select committees to inquire into abuses, introducing Bills, moving amendments, and in many other ways acting in their interests. He established a life assurance office for the purpose of enforcing the payment by the various offices of the fees for the medical examination of their clients, urging that, as medical reports were given in the interests of the offices, payment of the fees should therefore be made by them. What is the direct result of this action at the present day? Every office now pays the medical fees, and I observed in a recent issue of THE LANCET that during the past year one office had paid as much as £50,000 in recognition of the services of medical officers. In his threefold capacity of Member of Parliament for Finsbury, Coroner for West Middlesex, and Editor of THE LANCET, he wielded a power unequalled by any other man in the profession, and was not slow to use it for the advancement of its interests and welfare. Perhaps one of the most important public functions performed on behalf of the poor by Mr. Wakley was the establishment of an Analytical Commission which exposed the adulteration of food and converted the press into an instrument of police by establishing in THE LANCET the precedent of publishing, fearless of all legal consequences, the name and address of the establishment where adulteration was carried on. In many cases he would add: "This is the third article which we have found adulterated—the public should avoid this shop." As a result, legal actions bristled around him, but such was the genuineness of his work that in not a single instance was an unfavourable verdict recorded against him. Some years after the establishment of his Analytical Commission an Act of Parliament was passed requiring the appointment of public analysts throughout every district of the country. The public benefits resulting from this work cannot, indeed, be overrated.

What did he gain by the exertion of his indomitable courage on behalf of his professional brethren? Either as plaintiff or as defendant in the law courts Mr. Wakley must have fought some twenty-five or thirty actions, contesting in his own person with some of the leading barristers of that day over matters connected with the advancement of the profession at so great a personal expense that on several occasions the very existence of THE LANCET was imperilled. He lent his aid in reforming the Lunacy Laws, and was always the defender of the rights and privileges of the medical officers of the united services and of the Poor-law administration. He was the champion of the Fellows and Members of the Royal College of Surgeons,

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who were unfairly treated by a Council then wholly irresponsible and self-elective. In regard to this body he maintained that when a few individuals were appointed to watch over the interests of a large body of men, it was quite necessary, in order to secure upright conduct on their part, that the interests of those few should be identified with those of the many. To this end he laboured, exposing and denouncing the procedure of the "minacious oligarchy of our mismanaged temple," as he called the Council, and characterising certain of the by-laws then in force as "instruments of corporate iniquity." To attack abuses uncompromisingly wherever they existed, to spare no effort, toil, or trouble to effect reforms wherever they were required, to raise the profession as a whole from the lowly position it then occupied to such a level as it has now attained in public esteem, were some of the labours of a life remarkable at once for uprightness and disinterestedness of purpose.

"I've heard of hearts unkind,
Kind deeds with cold returning.
Alas! the gratitude of men
Hath oftener left me mourning."

The memory of Thomas Wakley should be written in letters of gold on the mind of every medical man. Examples and principles such as these are surely those which all should be proud to follow and adopt, for even now necessity for further reform in each and all of the directions I have indicated is not wanting. I earnestly hope and believe that you, the successors of so worthy an ancestor, will persist in the noble endeavour to carry out the promise made at the time when he ceased to labour among us, and in so doing—though you may easily fall short of the rare excellence which he at all times displayed — nevertheless you will have adopted a course which shall be honourable alike to yourselves and of the highest utility to the noble profession you have the honour to represent.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday Collection.

THE accounts of this collection for the present year have been made up, and give a total of £4712 3*s*. 2*d*, which goes to the Queen's Hospital. The institution is in need of funds, and the authorities will hail this liberal contribution with much satisfaction.

Death of Mr. Thomas Taylor.

On Dec. 30th died the oldest member of the medical profession in the Midlands, at the ripe age of ninety-five years. Though for some years past he has not, as might be expected from his age, taken an active part in life, he still preserved an interest in professional matters. Of sound knowledge, firm faith, and a character unsullied by any dark spots, he maintained to the last his reputation as a high-minded and honourable man. His love of literature was constant, and he took the greatest pride in the preservation and intimate acquaintance with the books he possessed. His habits were active even to his own hurt, for he refused to be conveyed by train or by carriage if ever there was a possibility of walking to his destination. Of him it is said that he had no enemies, and it is hardly possible to picture a more merited or worthy distinction. Quiet and gentle in manners, of the greatest probity in all transactions, he has left a name which remains untarnished by the long lapse of years.

Christmas at the Hospitals.

As usual, the annual festivities of the season find expressions of happiness and hope amid the surroundings of disease and suffering. The different hospitals have vied with each other in making bright and cheerful the interiors and the wards. Captious critics have even questioned the propriety of nurses devoting their time to decorations, and have hinted that someone must suffer in consequence. It would be ill to deprive them of the pleasure it evidently gives, and he would be a morose and gloomy man who sought to deny to the sick and suffering the gleam of hope and comfort which such associations afford, and the passing interest which tends to cast self into oblivion, if even for the short space of Christmas time.

Nurses' Responsibilities.

An inquest was held on Dec. 30th on the body of a pauper lunatic, who met her death under circumstances which gave rise to a verdict of manslaughter against the nurse in charge. The patient, it appeared from the evidence, was carried from bed into the bath-room, placed in a bath of very hot water, and died a few hours afterwards. It is a rule of the asylum that no patient must be placed in a bath with the taps turned on while the water is still running in. There is another rule, also, that the attendant must previously ascertain the temperature with a thermometer, and that it must not exceed 98°F. Unfortunately both these wise rules appear to have been violated.

Resignation of Sir Walter Foster.

The Committee of the General Hospital, at their meeting on Jan. 2nd, will proceed to fill up the vacancy caused by the resignation of Sir Walter Foster. Dr. Simon, who has been assistant physician for eight years, is considered to have a good claim to the succession, but no doubt it will be declared open and the appointment given to the best candidate who applies.

Birmingham, Dec. 30th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Christmas Hot-pots &c. for the Poor.

SOME years ago Sir David Radcliffe, when mayor of this city, conceived the happy idea of sending a large number of hot-pots, each containing a sufficient quantity of meat and potatoes to serve as dinner for a family of deserving poor persons. The custom has been followed by each successive mayor, aided by the liberality of the public, and Sir David Radcliffe's generous conception has now become a hardy annual. Like other generous acts, it has expanded, and by the generosity of some leading firms each recipient of a hot-pot also has a packet of tea and a jar of preserve. In addition to these, a large number of the poor are provided with free breakfasts on Christmas morning. The recipients are carefully selected by ministers of religion, care being taken to select the most deserving. This year the distribution was even more generous than usual, and a large number of the hungry were filled with good things.

The Weather: Accidents and Fatalities.

During the present month the weather has been intensely severe, the thermometer registering 22° of frost in one of the suburbs, and even 10° in the city. On the 19th there was a very heavy fall of snow, with dense fogs and hard frost. Hence many accidents and fatalities from falls in the frozen streets. The practice of salting the streets, though justified by the authorities on account of the ease with which it melts the snow, is much condemned by the public for the injury it causes to boots, and the cruel suffering it causes to horses, dogs, and cattle by the intense cold it causes. On Saturday, the 27th inst., six patients were taken to the Northern Hospital in the horse ambulance, three of whom were carters. One was suffering from a fractured leg and crushed hand, the second from a fractured leg, and the third from wounds in the chest, neck, and thigh, by stabs from an assailant, who has been arrested. An elderly women died soon after admission from the effects of burns, as did also a man who fell into the fire while under the influence of drink. The sixth case was that of a man sixty years of age, who was found in an apoplectic fit.

The Bolton Murderer.

The young man, Macdonald, who murdered the schoolmistress near Bolton, was hanged to-day within the walls of H.M. Prison, Kirkdale. But for the confession of the prisoner the evidence would have been purely circumstantial, and there might have been some difficulty in securing a conviction. There has been an entire absence of that mawkish sentiment which was displayed towards the notorious Mrs. Maybrick, the Crewe, and the New Brighton murderers. Macdonald's crime was so atrocious that no attempt was made to secure any remission of the capital sentence. A new gallows has been erected, and was used for the first time. It is in accordance with recommendations of the committee appointed by the Government, and has a length of chain to which the rope is affixed.

Strikes, Eleemosynary Relief, and Fever Epidemics.

In a former letter allusion was made to the great hardships inflicted by strikes, which mean hunger and even

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starvation to wives and children, resulting too probably in an epidemic of typhus fever; while last, but by no means least, there is the necessity for increased eleemosynary relief from the charitably disposed and for gratuitous medical advice at the hospital, dispensary, or home. Garston, a small thriving town within a few miles of Liverpool, has lately been the scene of a strike among the *employés* of the London and North-Western Railway. The consequences of this strike, which was wholly unjustifiable, will be very serious and far-reaching. A number of men, estimated at 800, who with their wives and families have lived for years in Garston, will have to leave, the London and North-Western Company having firmly resolved not to re-employ any striker. Much has been done by kind-hearted people to relieve the distress caused to wives and children as well as to the strikers themselves; but in such severe weather the consequences must be very serious, if not fatal. Like many other good things, eleemosynary relief does harm, encouraging many an idle fellow to strike or to be a hanger about public-house doors, living by begging and leaving wife and children to the charitable.

The Approaching Twenty-first Hospital Sunday in Liverpool.

The second Sunday in the New Year, the 11th of January, 1891, will be the twenty-first recurrence of Hospital Sunday in Liverpool, the first having occurred on Sunday, the 8th of January, 1871. The result will be awaited with much interest, the collections having increased steadily during the last few years, owing to increase of trade and commerce. The Mayor (Mr. Morgan) takes much interest in the welfare of the medical and other charities, and is seeking some means by which they may be more systematically organised.

The Murder of a Prostitute.

Before the recent assizes had concluded, a murder was committed in this city which has attracted much notice throughout the whole country. The victim was one of the many so-called "unfortunates" with which this city abounds; the accused, a young man who comes from the south of England, and had been in the deceased's company for some days in a house of ill fame. The murder was committed in a cab, and the prisoner was arrested "red-handed," the murderous weapon with blood on it being found in his trousers' pocket. Dr. Jay Gould, house surgeon at the Royal Infirmary, stated that the deceased only lived twenty minutes after her admission, and had six punctured wounds just above the left breast. At the post-mortem examination two of the wounds were found to be superficial, while the remaining four penetrated the chest. Of these, two entered the heart, one going through it and into the liver. All the four wounds were between the ribs. A verdict of wilful murder against the prisoner was returned.

Liverpool, Dec. 30th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Koch Cases at the Newcastle Infirmary.

THERE is little new to be reported regarding the cases under Koch's treatment at the Newcastle Royal Infirmary. I visited the wards yesterday, and saw the first case (one of tubercular lupus under Dr. Philipson) in which it was tried, and there appeared to be a considerable alteration in the appearance of the eruption. I also saw a new case of lupus, under Mr. Page, in which an improvement was taking place. The cases of pulmonary phthisis appeared to be *in statu quo*, except in one case. The sputa were increased in most cases. There has been an increase in the amount of urea excreted, but not, I believe, in the volume of urine. None of the patients, and there are now six under treatment, appear to have received the least detriment to their health, which is at least as good as before the treatment was commenced.

"Pink Eye" in Newcastle.

We have just experienced a severe epidemic of influenza amongst horses in the north (commonly known as "pink eye," from the sanguineous suffusion of the conjunctiva). The epidemic has given great concern to owners of horses. The North-Eastern Railway Company have been great losers from this epidemic, as the disease got amongst their stables of valuable draught horses. Mr. Clement Stephenson informs me that carriage horses have also been attacked, but not with such bad results, as isolation and ventilation could in their case be carried out with greater facility.

Jarrow.

Dr. Hugh M. Smellie, late house surgeon of the Jarrow Memorial Hospital, has received a handsome testimonial subscribed by 5000 workmen in Messrs. Palmer's Jarrow and Howden Works. Dr. Smellie gave some statistics as to accidents to workmen, and showed that during his three years of office at the hospital about 4000 accidents had been treated.—Mr. Jennings, surgeon, of Jarrow, has done good service in bringing a matter of some importance to the poor, and also to the profession, before the magistrates. In the case of a poor mother summoned for her child's non-attendance at school, Mr. Jennings contended that it was unfair to ask these very poor people to pay for medical certificates, and it was also unfair to ask the profession to do so, to satisfy the behests of the School Boards, without remuneration. Mr. Jennings believed that the profession would furnish them at a very small and fixed charge to be arranged by the Board. The magistrates appeared to give the matter their favourable consideration, and it is to come up again.

Newcastle-on-Tyne, Dec. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medico-Chirurgical Society.

THIS society held a special meeting on Wednesday of last week. The first business on the programme was the adjourned debate on Dr. W. Russell's paper on The Characteristic Organism of Cancer. A number of the younger members spoke, and all of them advanced objections and difficulties to the acceptance of the conclusions in the paper, while there was a general expression of appreciation of the work. Some suggested the fuchsine bodies were nucleoli, or degenerated leucocytes; others pointed out that cornified epithelium, red blood-corpuscles, fat granules, granules of chromogen, or granules of fuchsine might explain the appearances; another regarded them as due to hyaline degeneration; while other speakers dealt with the subject more generally, dwelling on the difficulty of believing that all forms of cancer could be due to the same organism, and that the organism must be carried by the blood; some expressing their total disbelief that cancer was due to an organism, or that it would ever be proved to be so. Dr. Russell, in his reply, dealt with the various difficulties that had been advanced, and said that he had faced them all months before he had stated in his paper that the nuclei of certain cells retained fuchsine; some protoplastic masses and horny epithelium, and certain parts of red blood-corpuscles and other structures, also retained it; but he had succeeded in discharging the colour from all these, and leaving the bodies in question stained. He had tested other degenerations and found they did not give the special colour reaction. Some suggestions, as that they were fuchsine granules, he passed by as not requiring special notice. As to the more general question, some of the objections were the same as had been advanced against all instances in which it was contended a microbe was the cause of a disease. He sympathised with the view that cancer would not be found to be due to a micro-organism, for he had contended for the same view. Referring to the figures illustrating the appearances of the organism in epithelial masses, that part of the work was done to bring it into line with work which had been done on the Continent, where it was contended that somewhat similar appearances were due to psorosperms. Although there might be differences between the fungus here and the better known yeasts, still the budding was distinct, and the connexion of the individuals could clearly be seen, and he knew no pathological process and no degenerative process in the body where this budding took place, and, whatever the differences might be, he maintained the process was more like that of the unicellular fungi than anything else. He suggested that they might be found in the morbid processes, and this was an important point which might be investigated by others, as he had not all kinds of pathological material at his disposal. The discussion lasted over two hours, and thereafter the first paper on the programme,

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a "Contribution to Venesection as a Remedy, from Notes of Practice," by Dr. Shand, was read. At the beginning of the meeting, Mr. A. G. Miller, one of the vice-presidents, and occupying the chair, requested reporters not to report the proceedings to the lay press.

The Edinburgh Training Home for Nurses.

The Training Home for the Edinburgh branch of the Jubilee Institution for Nurses was thrown open to subscribers for inspection on one of the days of last week. The Home is comfortably furnished, and has accommodation for eight nurses at present, but it is hoped to be able to increase it sufficiently to accommodate seventeen.

Edinburgh Health Lectures.

Mr. R. J. Mackenzie, Rector of the Edinburgh Academy, lectured on Saturday last on "Methods of Physical Education, Ancient and Modern," and dwelt upon the necessity of physical training.

Edinburgh Royal Infirmary.

The first of the festivities of the season at the Royal Infirmary was given on Christmas Eve, and consisted of a treat to the children and their friends. The entertainment comprised songs and recitations, and a Christmas-tree, with a gift for each child. It was held in the large theatre.

Cullen's Lectures.

A paragraph has appeared in the *Scotsman* stating that the MSS. of Cullen's lectures on medicine have been found in Nottingham. They consist of two volumes containing about 800 pages, and are dated 1766. This will be a find of interest to the Edinburgh Medical School.

Health of Edinburgh.

The mortality last week was 99 and the death-rate 19 per 1000. Diseases of the chest caused 46 and zymotic diseases 10 deaths, of which 4 were from typhoid fever and 5 from whooping-cough. The intimations for the week included 60 cases of typhoid fever, 3 of diphtheria, 14 of scarlatina, and 7 of measles. From this it will be noted that the epidemic of typhoid is still extending; there are about 100 cases in the City hospital, and many more in private houses. One of the best known medical men in town is down with it, and several of his household as well. It is to be hoped that the public health authorities will find a satisfactory explanation of this epidemic.

Dec. 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Census.

THE Registrar-General (Dr. Grimshaw) and Messrs. Bellingham Brady and Robert Matheson have been appointed to be Commissioners for carrying into effect the provisions of the Act 53 and 54 Victoria, cap. 46, entitled, "An Act for taking the Census of Ireland."

The late Dr. Harrison, Roscommon.

This gentleman, who was one of the leading practitioners in Roscommon and adjoining counties, died last week, and his funeral, which took place on Saturday, was very largely attended. Dr. Harrison, who was a doctor in medicine of the University of Edinburgh, and a Fellow of the Royal College of Surgeons in Ireland, was well known for his professional skill, and highly esteemed for his many excellent qualities. Immediately after the funeral, a public meeting was held in the grand jury-room, to consider in what way the memory of the deceased could best be perpetuated. The meeting was presided over by Lord Crofton, and a resolution unanimously adopted of condolence with Dr. Harrison's relatives in their great sorrow. The following resolution was passed:—"That a general committee, consisting of the present subscribers, with power to add to their number, be appointed to make such arrangements as may be determined on, to enable his many friends to place on record their testimony to Dr. Harrison's great professional ability, his unlimited charity, and his untiring zeal in the interest of all classes of the community." A subscription list was opened and nearly £400 was obtained.

Reopening of Galway County Infirmary.

Owing to the non-compliance of the governors with the Act of Parliament, as to appointing a surgeon, the grand jury could not pass a presentment for the maintenance of the hospital. Colonel O'Hara, one of the governors, instituted legal proceedings to compel the governors to elect a surgeon, and a *mandamus* was obtained in the Court of Queen's Bench. Many difficulties arose, and for two years matters remained in abeyance, and as funds were not forthcoming, it was feared that the infirmary would have to be closed. However, the chairman of the board, Mr. Persse, supplied the funds necessary for one year. Again the court ordered an election, but a quorum not attending, the matter again fell through. Subsequently the President of the Queen's College, Galway, in the interests of the students, offered the governors £500 to enable them to open the infirmary for the winter and spring session; and after some negotiation, all arrangements have been settled, and the infirmary will be opened next week.

Poisoning from Carbolic Acid.

A case of suicide from taking carbolic acid occurred last week at Bangor. The deceased lady swallowed about seven ounces of the acid.

Dec. 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

French Opinion of Koch's Method.

THE editor of the *Revue Générale de Clinique et de Thérapeutique* — Dr. Huchard—the same gentleman who so strongly opposed the formal appointing of French representatives to the late Berlin Congress, and who also had the passage of arms with Virchow as to some of the latter's long forgotten utterances about France and the French, has an article in his paper this week in which he sums up very unfavourably the results so far obtained from the employment of Koch's system of injections. He goes so far as to say that these injections are not only useless but positively (so far as observed in France) harmful. He admits that Koch is himself an investigator and observer of the highest order, and attributes what he calls the hysterical rush to this so-called remedy in a large measure to an abuse of the telegraphic system, by which garbled and feverish messages are flashed across the globe and acted upon without any further detailed information. But as to the fact that the remedy is a complete failure he has no doubt, and he adds that he fears suffering humanity can only regard it as one deception the more. True science, he says in conclusion, such as men like Laennec, Claude Bernard, Davaine, Pasteur, and Charcot have advanced, has need for longer and more sober study.

Statistics of Hypnotic Treatment.

The appearance in the reports of a London hospital of the statistics from the hypnotic in-patient and out-patient department would probably be looked upon as a startling novelty. Here, on the contrary, it is otherwise, for we have given us amongst the records of the Charity Hospital the result of M. Luy's treatment in what may be considered the department devoted to hypnotism in this leading clinical hospital. The treatment is styled "therapeutic methods derived from hypnotism," and is divided into "fascination," "transference," and "magnetic currents combined with electricity." The number of patients treated was 128, and of these sixty-seven are returned as cured, fifty-one as ameliorated, and ten in whom no change was produced. The hysterics of course figure largely in this number, amounting to forty-nine. Paralysis agitans comes next, and of these three out of nine were cured. According to this, high as the percentage of non-cures is, it would almost appear that those spending hours over the hopeless task of searching for the pathology of this disease would be more profitably employed in administering hypnotism to their patients. Epileptics were equally benefited by "transference." The same applies to cases of neuralgia, writers' cramp, tabetics, &c. In obstetrics, women were delivered without pain or danger by the "fascination" method, and even in organic diseases of the heart "transference" was attended with marked improvement. In conclusion, it is declared that these methods of hypnotic treatment give in acute or chronic diseases of the nervous system 50 per cent. of cures.

Compulsory Revaccination.

As your readers are probably aware, vaccination is not

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yet absolutely compulsory in France, although compulsion is practically secured in other ways, with the result that vaccination is the rule. Revaccination, however, has hitherto been almost optional. This is no longer to be the case, at least so far as medical students are concerned. The Superior Council of Public Instruction has just issued the following regulations: 1. Aspirants to the diploma of Doctor of Medicine or *officier de santé* will henceforth be admitted to the Faculty Schools only on the condition that they produce a certificate of successful revaccination. 2. Students who have already commenced their studies will be debarred from taking up their next inscription unless they produce a like certificate.

The Paris Policlinique.

The Municipal Council of Paris has made a grant of 5000 fr., or £200 per annum, to the Policlinique, which not only gives advice and medicine free of charge, but also distributes clothing to the poor through the medium of a committee of ladies.

Skating Fête in Aid of the Poor.

The Society of "Parisian Commercial *Fêtes*," aided by the Municipal Council, had organised a grand display to take place on the ice in the Bois de Boulogne on Sunday week, when unfortunately it thawed, and the project had to be postponed. It will probably now take place, however, as it is freezing as hard as ever. The *fête* will include balloon ascents, military concerts on the ice, illumination of the Bois with Bengal lights &c., and a grand torchlight procession by the garrison of Paris. The Bois will be closed for twenty-four hours beforehand, and during the *fête* admission will be charged at the rate of 1 fr. for foot passengers, 10 fr. reserved places, and 20 fr. for vehicles. The proceeds will be distributed amongst the poor, and unless another thaw spoils the good intention from being carried into effect, a handsome sum may be anticipated.

Paris, Dec. 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Discussion upon Koch's Treatment for Tuberculosis at the Berlin Medical Societies.

DURING the past week three medical societies in Berlin have occupied themselves with Koch's method. The first of these was the Society for Internal Medicine, of which Leyden is president, in which Dr. Lublinski introduced a fellow-physician who has been suffering from laryngo-tracheitis since 1887. After alternate changes for the better and for the worse, there appeared on examination a few weeks ago a thickening and redness of the posterior extremity of the left vocal cord, with ulceration of the posterior wall of the larynx and tubercular symptoms in the lungs. The patient has received seven injections, and his condition is very considerably improved. Dr. Jürgens then reported on the post-mortem results of two cases of phthisis treated by Koch's method; the very far advanced processes in the lungs showed no alterations caused by the injections, but on ulcerations of the various mucous membranes a decided tendency to granulation was observed. One of these patients had received four, the other eight injections.

At the Berlin Medical Society, Dr. B. Fraenkel, as the speaker of the evening, said that he could not allow the year to pass without Koch's method being discussed in their midst, which had not been done before. Dr. Fraenkel had therefore undertaken to report on his results. Within the last four weeks he had treated fifteen cases of phthisis with affections of the larynx and pharynx, seven cases of uncomplicated phthisis, and five of lupus with Koch's fluid. In the laryngeal cases the well-known general phenomena were accompanied by redness and swelling of the affected parts. These phenomena soon passed away, and were followed by a process of necrosis, sometimes with, sometimes without, disintegration of the tissues; in the former case the ulcers soon cleansed themselves and showed a tendency to granulation. In the cases of pulmonary phthisis Fraenkel observed diminution or cessation of bronchial respiration and dulness, better appearance of the sputum, and improved general condition. He summed up his experience in the statement that general improvement was obtained along the whole line, and that in many cases there was a prospect of cure. He urged caution in the selection of the cases (a good degree of general strength being highly desirable), objectivity in observing, perseverance, and careful treatment. With reference, however, to the sceptical tendency which is now observable, he declared with emphasis that he had no hesitation in calling Koch's fluid a remedy. The cool reception which the Society gave the somewhat enthusiastic close of Fraenkel's lecture seemed to prove that the majority of those present were unable as yet to share his optimism.

The report given by Dr. Paul Guttmann in the Hufeland Society was of special interest, owing to the circumstance that his experiments took place under the auspices of Koch himself. It is probably known to the readers of THE LANCET that the magistrates of Berlin have placed 150 beds at Professor Koch's disposal in the hospital of which Guttmann is the head. Guttmann discussed in the first place the importance of Koch's fluid as a reagent. As an example of the promptitude of the reaction he cited the following case. A physician, not belonging to Berlin, but on a visit here, had got a slight wound on the right index finger at a post mortem a year and a half ago, which led to an induration hardly half the size of a pea, which was entirely indolent. He submitted to an injection of 0·003 cc., after which fever set in, the induration reddened, became painful, and swelled to more than twice its size. After ten hours these phenomena passed away; it was therefore probably a case of inoculated tubercle. The speaker then discussed the therapeutic value of the medicament in tuberculosis of the lungs. He has now treated 109 patients, some of them for twenty-six days, besides whom there are six patients in his hospital who have been treated by Koch himself since the end of September. In a small number of the patients of the first category Guttmann was already able to affirm improvement, and some of that number had gained in weight. In 5 per cent. of the cases the tubercle bacilli had disappeared. Of the six patients treated by Koch some had gained considerably in weight, one four kilogrammes in three weeks; two girls who suffered from infiltration of the apex seemed to be cured. Guttmann summed up to the effect that in cases of pulmonary tuberculosis in which there is only infiltration of the apex there is hope of cure, and that in time considerable improvement may be effected in more advanced cases also, but that no success is to be expected in far advanced cases. Great loss of strength, amyloid degeneration, and albumen in the urine are to be regarded as contraindications, hæmoptysis as a temporary one. The lecture was followed by a very lively discussion, in which Dr. Ewald took a prominent part. He pointed out especially that the maximal dose for tubercular patients who do not react at first, and for healthy persons, the possible duration of the interval between two injections, and the question of a cumulative effect of the medicament, were not yet determined; further, that it was not yet clear how long one should inject if there were no reaction, and what was to be done against the hectic fever. He had not yet been able to ascertain retrogression of the physical phenomena. In answer to questions addressed to him, Guttmann stated that Koch himself does not regard slight affections of the heart as contraindications, and that the pulse is considerably accelerated very soon after the injection, long before the rise of temperature. In this discussion expression was also given by two physicians of their displeasure at the fact that the medicament has not been placed at the disposal of practitioners, a feeling very widely shared in medical circles here. The Berlin physicians especially have had occasion enough to make themselves familiar with the medicament, and have taken advantage of their opportunities with the keenest interest. It is practitioners, above all, who are called upon to treat those early stages of the disease which afford the best prospect of successful treatment, and cases can be observed by them with just as much care as in hospitals. The present method of distributing the fluids robs practitioners of a part of their practice, and is calculated to diminish the prestige of the medical profession in the eyes of the public. Efforts, however, it is said, are now being made with a view to producing the medicament in larger quantities, but as to their success or failure nothing is yet known.

I must mention, in conclusion, that the efficacy of Koch's fluid in tuberculosis of cattle is about to be tested; a successful result would be of far-reaching importance.

I availed myself of the opportunity afforded me by a Christmas trip to Hamburg to visit the General Hospital there, which is the largest in all Germany, and to inform

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myself as to the results which have been obtained there with Koch's fluid. The chief physician, Professor Kast, received me with the greatest amiability, and gave me the following information:—In surgical tuberculosis improvements, consisting in retrogression of inflammatory phenomena and improvement in functional capacity, have undoubtedly been obtained in the six weeks or so during which the treatment has lasted. No complete cure, however, has yet been effected. Professor Kast has treated consumptive patients in all stages. In the cases in which the disease was just beginning retrogression of the local phenomena took place, the general condition improved, appetite and weight increased; but the improvements were not much greater than those obtained by the methods hitherto in use. In the advanced cases a favourable influence of Koch's medicament was not observed. With reference to the therapeutic value of the remedy in pulmonary consumption, Professor Kast agrees on the whole with the opinions hitherto stated by physicians in great hospitals. Professor Kast also expressed his displeasure at the manner in which the treatment of patients is being carried on here in Berlin by the few privileged doctors who are in possession of the fluid. The indignation which this preference shown to individuals, and the fact that the remedy has not been placed at the disposal of practitioners, have excited, is spreading further and further in Germany. Numerous letters from all manner of places to the daily papers give evidence of this. The Medical Society in Breslau has accepted a resolution protesting against the manner in which the fluid is distributed as deeply injurious to the honour and prestige of the medical profession, and this protest has been sent to the Minister of Religious, Educational, and Medical Affairs, to Professor Koch, and to the Silesian Chamber of Physicians. The district unions of medical men in Berlin also, which have made it their task to defend and promote the professional interests of physicians and surgeons, are now beginning to take an attitude in the matter, and it is to be hoped that they also will call upon the Chamber of Physicians, the officially recognised body representing the medical profession, to protect their rights and their prestige. Professor Koch himself is said not to be in the best of moods, because probably the course the whole affair is taking does not answer his expectations. Be that as it may, he goes daily to see his patients in the hospital in Moabit which has been placed at his disposal. The building of the hospital to be erected for him at the expense of the Prussian nation is being pressed forward with great zeal, despite the very severe cold, so that it may be expected to be opened in spring. Dr. Cornet is about to open a hospital of 150 beds, which has been erected expressely for this purpose at Charlottenburg near Berlin, and will then assemble his patients, who have been scattered about hitherto in various parts of the city, there.

Professor Wieger.

The Emeritus Professor of Medicine, Dr. Friedrich Wieger, who died the other day, was one of the oldest teachers in the University of Strasburg. He was born in 1821, and studied there. In 1850 he was appointed *agrégé* of the Medical Faculty, and in 1865 Professor of Internal Pathology, an office which he retained when the University was reorganised in 1872. His most important work is the "History of Medicine and of the Medical School of Strasburg from 1497 till 1872."

Dr. Karl Seitz.

Dr. Karl Seitz, of Munich, has been appointed head of the University-clinic there for the diseases of children, in place of the late Professor Alfred Vogel. Dr. Seitz has been a private lecturer since 1886. The most interesting of his contributions to clinical medicine is his account of the relations between inflammation of the lungs and the meteorological conditions of Munich. Of late he had occupied himself chiefly with bacteriological studies, with special reference to typhus. He is in his thirty-third year.

German Death-rates.

In the week which ended on the 6th ult. the death-rates of the principal German cities were as follows: Aix-la-Chapelle, 16·8; Altona, 21·3; Barmen, 17·1; Berlin, 19; Bremen, 15·5; Breslau, 26; Chemnitz, 26·6; Cologne, 24·1; Dantzic, 25; Dresden, 20·5; Dusseldorf, 26·9; Elberfeld, 24·8; Frankfort, 17·4; Hamburg, with its suburbs, 23·9; Hanover, 14·4; Koenigsberg, 24·6; Krefeld, 20·3; Leipsic, 18·5; Munich, 29·8; Nuernberg, 23; Stettin, 27·3; Strasburg, 21·4; and Stuttgart, 16·3.

Berlin, Dec. 30th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Treatment of Tuberculosis.

LAST week the sanitary chiefs of the Austrian Army were called to Vienna, where a series of demonstrations and lectures on the use of Koch's remedy were given to them at the General Hospital and at the Garrison Hospital. The use of the remedy in private practice has been now more restricted by a recent order of the Austrian Government, by which the practitioners are ordered to notify every case of death occurring during the stage of reaction, or which may be caused by the reaction, and to submit all such cases to a post-mortem examination. The practitioners are also made responsible for any fatal event resulting from the use of Koch's treatment by neglect of the necessary attention to the symptoms. Only the use of lymph supplied by Dr. Libbertz of Berlin is permitted, and the attention of the physicians is called to the prescription supplied by Dr. Libbertz with every bottle. For preparing the solutions the use of 0·5 per cent. of the aqua carbolisata of the Austrian Pharmacopœia is recommended.

The results obtained up to the present by Koch's treatment at the General Hospital are very various, especially in regard to the cases of pulmonary affections. In some cases of surgical tuberculosis a well-marked improvement could be stated, and the cases of lupus seem to become better as far as the local affection is considered; but some of the patients have lost as much as from three to six pounds in weight at Kaposi's clinic. Some of the smaller hospitals in the country, and the garrison hospital here, have been supplied with the lymph last week. Two deaths of patients treated by Koch's lymph occurred at the Rudolfs-Spital here last week, but both were cases of highly advanced pulmonary phthisis which should not have been subjected to the treatment, and the fatal result was found to be due to the advanced state of the tuberculous process itself.

Koch's Treatment in Leprosy.

As I am informed, one of the leprous patients, under the care of Prof. Neumann, mentioned in my last letter to THE LANCET, shows signs of slight improvement after the injections. The tuberous nodules have become more flattened since the treatment commenced, and slight desquamation is to be observed at the same places.

Peptonuria after Koch's Injections.

According to a communication made by Professor Koehler at the last meeting of the Vienna Society of Physicians, the toxic effect of Koch's lymph is marked in some cases by the presence of peptones in the urine of the patients who have been injected. In 33 out of 200 cases the presence of peptones could be tested; also in two cases of non-tuberculous patients who had been injected for control, peptonuria occurred after the injection, though no reaction could be observed.

Vienna.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Opening of the New York Academy of Medicine.

THE most notable event of the medical year in this city was the opening of the new building of the Academy of Medicine. This event occurred on Nov. 20th, when a reception was given to the public, and congratulatory addresses were made. The Academy was organised nearly half a century ago by men whose names are now historical—viz., Valentine Mott, John Stearns, John W. Draper, John W. Francis, and others of scarcely less note. It has steadily grown in favour with the profession and the public, until it now takes rank with the most favoured institutions of the city. The new building is located in the present and, apparently, future centre of greatest activity, of social, scientific, and philanthropic societies and clubs, and is in itself one of the most conspicuous architectural structures in that vicinity. The building is unique in its exterior form, while its interior arrangements are adapted for large general meetings, for the meeting of its ten or more sections, for a pathological museum and rooms for pathological studies, and, finally, for its large and rapidly growing library. The membership is about 700,

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and the seating capacity of its main room is for 600. Its library consists of 40,000 volumes and 400 current medical periodicals.

Supervision of Immigration.

The constant arrival of immigrants from European nationalities who belong to the dependent classes has led to the preparation of a Bill in Congress which will provide for a careful inspection of every emigrant in foreign ports before embarkation is allowed. The Bill provides that there shall be a physician attached to each consular office, who shall personally inspect the emigrants. The consul is required to ascertain the necessary facts in regard to the conditions under which the emigrant leaves his home—whether as a pauper, criminal, or assisted; and each emigrant must have the consul's certificate as to these facts. The steamship companies will be held to rigid accountability in transporting uncertified immigrants.

Assassination of a Medical Officer of an Insane Asylum.

An insane man, who had escaped from the King's County Insane Asylum, returned after a few days and, with pistols pointed at the head of the superintendent, demanded his clothes. They were given to him, and he was allowed to depart, meantime threatening the life of persons whom he connected with his confinement. No effort was made to arrest him, and several days later he returned, fully armed, and, entering the office, inquired of the assistant physician for the superintendent. On being informed that he was out, the assassin shot the physician, killing him instantly. He then deliberately walked away, everyone present having fled, but was subsequently arrested. This occurrence has led the Commission in Lunacy to issue timely instructions in regard to the care of dangerous insane patients.

Koch's Discovery.

A veritable craze exists over Koch's discovery. Hundreds of young men have gone to Berlin from every part of the country, and elaborate preparations are being made for the immediate application of the remedy. The offers of wealthy men to build hospitals for the cure of tuberculosis is astonishing, and, if the remedy continues popular after its trial, there will be an immense increase of hospital accommodation.

Compound Lard.

Congress has lately been much engaged in discussing what is popularly known as the "Compound Lard Bill." The object of the measure is to regulate the manufacture, sale, importation, and exportation of compound lard. This article has been sold in market as pure lard, and has thus come in competition with the pure lard made from swine. The Bill undertakes to define and regulate the manufacture and sale of compound lard, under the pretence that, as a food product, it is a fraud, made so by false brands and sold for what it is not. The discussion has elicited many opinions from scientific men as to the value of this material as a cheap food. Compound lard is composed of beef stearine, cotton-seed oil, and hog fat. The contention was chiefly in regard to cotton-seed oil as a food. Many scientific men testified before the committee, and the general opinion was favourable to the compound lard. The analyst to the Department of Agriculture, who analysed many specimens, stated that the preparations were nutritious, and that the cotton-seed oil was as digestible as lard. Several State analysts regarded the compound as a proper food to be sold in the market, and that the cotton-seed oil was as digestible and nutritious as olive oil. It appears from one report that cotton-seed oil within the past ten years has almost entirely taken the place of olive oil in our markets, and, though still sold as olive oil, chemical and microscopical examinations show it to be pure cotton-seed oil. It is a well-known fact that immense quantities of cotton-seed oil are sent to Italy only to come back as olive oil.

New York, Dec. 1st.

Obituary.

MR. HENRY CRIBB, L.R.C.P. LOND., M.R.C.S., OF BISHOP STORTFORD.

THE natural gloom of recent winter days at Bishop Stortford has been much deepened by the untimely death of Mr. Henry Cribb, whose genial nature and presence were so familiar in the place. Few deaths appeal more powerfully to the community of a country town than that of a favourite medical man, in the prime of life, from an acute disease, which removes him almost before his neighbours and patients realise that he is ill. Such was Mr. Cribb's case, at the age of fifty, dying from typhoid fever, the source of which could not be made out. Mr. Cribb was the second son and youngest child of the late John Jennings Cribb, formerly practising at Cambridge. Having to retire early from practice, owing to failure of health, with slender means, his family were mainly supported by his brother, Henry Cribb, surgeon of Bishop Stortford, who immediately adopted his namesake and nephew "Harry." The deceased was mainly educated at the Nonconformist School at Bishop Stortford. On leaving school he was sent for twelve months to Germany, to acquire the language, being then intended for a commercial life, and on his return was articled to a firm of stockbrokers. On the expiration of his articles he failed to find such employment as he wished for, and his uncle, having no one to succeed to his practice, suggested to his nephew that he should study for the medical profession. He entered as a pupil at Middlesex Hospital, and on becoming qualified was taken into partnership by his uncle and his partner Mr. Hodson in 1866. His uncle survived only a few months, from which time up to his death the practice was carried on by Mr. Hodson and himself. Being of a very happy, genial disposition from his early boyhood, he became a general favourite, and formed many friendships which continued to the last. He took a prominent part in the public business of the town, and by his thorough truthfulness, honesty, and integrity of purpose became, to use the words of some of his friends, "the most popular and best beloved man in the place." His kindness and perfect straightforwardness in his dealings with his professional brethren secured for him their regard and unhesitating trust. The esteem in which he was held by all classes was strikingly manifested on the day of his funeral by the entire suspension of business and closure of every house, and by the attendance at the cemetery of several hundreds of rich and poor, who came to do him honour in spite of the inclemency of the weather. He was an ardent supporter of the Essex and Herts Medical Benevolent Fund, of which his uncle was one of the earliest and staunchest supporters. Mr. Cribb was the brother of Dr. Cribb of Highbury, and leaves, besides a wife, six children to mourn for him. Sorrow for his death extended to the neighbouring towns, especially Cambridge, by the consultants of which the late Mr. Cribb and his partner were highly esteemed.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following, having passed the qualifying Examination in Medicine, Surgery, and Midwifery, were granted the diploma of the Society, entitling them to register and to practise in the same:—

C. E. Baxter.	J. Lupton.
J. M. Bennett.	C. A. Morgan.
E. Boardman.	B. Nauth.
F. H. B. Brown.	B. S. Norris.
R. B. Eccles.	W. E. Passmore.
W. A. Eden.	F. C. Rogers.
A. A. Grosvenor.	J. T. West.
C. P. Lovell.	C. S. Woodd.

In the Examination in Arts last month there were 190 candidates, of whom 16 received certificates, having passed in all the subjects required for registration as medical student. 109 passed in one or more of the subjects.

Surgery.—C. A. Beck, Bonn University and Middlesex Hospital; J. M. Bennett, Liverpool University College and Sheffield; E. Boardman, Madras University and Royal Free Hospital; F. H. B. Brown, B.A.Oxon., Oxford and Guy's Hospital; J. H. Dempster, King's College; R. B. Eccles and A. Graydon, St. Thomas's Hospital; A. A. Grosvenor, B.A.Cantab., Cambridge and Guy's Hospital; S. Melville, University College, Liverpool; W. L. G. Morgan, St. Thomas's Hospital; J. S. Newington, Edinburgh University; B. S. Norris, Queen's College, Birmingham; W. E. Passmore, Westminster Hospital; H. de V. Stacpool, St. Mary's Hospital; J. T. West, Queen's College, Birmingham; C. S. Woodd, St. Bartholomew's Hospital.

Medicine, Forensic Medicine, and Midwifery.—C. E. Baxter, Sheffield and Charing-cross Hospital; F. H. B. Brown, B.A., Oxon., Oxford and Guy's Hospital; W. A. Eden, King's College; M. J. Houghton, Queen's College, Birmingham; C. P. Lovell, B.A. Oxon., Oxford and St. Thomas's Hospital; J. Lupton, Owens College, Manchester;

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C. A. Morgan, St. Thomas's Hospital; B. Nauth, L. M. S. Punjaub University, Lahore; B. S. Norris, Queen's College, Birmingham; L. E. Parkhurst, B.A. Oxon., Oxford and St. Mary's Hospital; F. C. Rogers, Owens College, Manchester; P. J. Ryan, University College; J. T. West, Owens College, Birmingham; C. S. Woodd, St. Bartholomew's Hospital.

The following passed in the subjects as indicated.

Forensic Medicine and Midwifery.—M. H. Knapp, St. Mary's Hospital.

Medicine.—C. A. Lapthorn, Middlesex Hospital; S. Melville, University College, Liverpool; C. T. Standring, King's College.

Forensic Medicine.—H. B. T. Symons, Aberdeen University and Charing-cross Hospital; A. L. Wykham, M.D., Harvard University, Washington.

FACULTY OF PHYSICIANS AND SURGEONS AT GLASGOW.—At the December sittings of the Board of Examiners in Sanitary Science, the following candidates, having passed the necessary examinations, were admitted diplomates in Public Health:—

David P. Gage, L.R.C.P. & S. Ed., &c., Kilwinning; Hamilton C. Reid, M.B., C.M., Coatbridge; William Spence, M.B., C.M., Dollar.

EPSOM COLLEGE.—Dr. Holman, the hon. treasurer, has just received a second cheque for £500 from the anonymous benefactor of Epsom College.

MANSFIELD AND MANSFIELD WOODHOUSE HOSPITAL.—The Treasurer has received the first annual subscription of £25 from the Duchess of Portland for the endowment of a bed at this hospital.

FOOTBALL CASUALTY.—During a match on Saturday at Blackburn, between the Blackburn Rovers Reserve and the Accrington Reserve, a player sustained a fracture of his leg.

SEWERAGE SCHEME, KNARESBOROUGH.—The Knaresborough and Tentergate Improvement Commissioners and Local Board of Health have adopted a scheme of main sewerage and sewage disposal for the town of Knaresborough. The sewage will be purified by the process of intermittent land filtration, without the use of chemicals.

MIDDLEMORE POST-GRADUATE LECTURES.—Mr. Eales delivered two lectures on Dec. 9th and 16th respectively, at the Birmingham and Midland Eye Hospital, on the subject of Headaches, and other Results of Ocular Strain and Distress, in which he explained the importance of good illumination. He then dealt with the subject of asthenopia, including the neurasthenic type and presbyopia; subsequently explaining how hypermetropia, myopia, and astigmatism were each liable to cause headache from ocular distress, the question of insufficiency of convergence and heterophoria being also discussed. The lectures were fully illustrated by working models and diagrams, the work of the resident surgeon, Mr. C. Armstrong Lumley.

LITERARY INTELLIGENCE.—We learn that the *Journal of Laryngology and Rhinology* will henceforward be published by F. A. Davis, 40, Berners-street, London, W.—Mr. Ed. Stanford has announced the publication, on Jan. 12th, of "Studies in Statistics, Social, Political, and Medical," by G. B. Longstaff, M.A., M.B., &c. The work is to be illustrated with maps and diagrams.—The editor of the *Nursing Record* announces that from henceforth the price of the journal will be one penny, instead of twopence as heretofore, and will contain several additional features of interest.—The *Hygienische Rundschau* is the title of a new fortnightly publication, edited by Dr. Carl Fraenkel and Dr. Erwin von Esmarch, and published by A. Hirschwald, Berlin. It is compiled after the fashion of the numerous *Centralblätter* which has become so characteristic a feature of modern medical journalism in Germany. It would seem almost indispensable that such summaries should be published, so wide and varied is the literary activity of our age. No doubt there is room for such a periodical as this, although the department of Hygiene includes many subjects—e.g., bacteriology—for which special publications of a like kind exist. This first number contains a leading article by Dr. von Esmarch on Disinfecting Apparatus, and concise abstracts of published articles on Infective Diseases, Drainage, School Hygiene, Food Supply, Clothing, State Medicine, and other cognate topics

NATIONAL HEALTH SOCIETY.—A complete course of twenty-four lectures on health subjects at local centres attended by some 500 ladies, has just come to a close. Another course begins in the present month at the following centres: Westminster, Hampstead, Highgate, Dulwich, and Maida Vale.

PRESENTATION.—At the conclusion of the examination at the Bolton Infirmary, on Saturday last, of a class of thirty females in the first aidambulance course, Mr. E. Claude Kingsford, L.R.C.P.Lond., M.R.C.S., was presented with a handsome timepiece, bearing an appropriate inscription, by the members of the ambulance class, in recognition of his services as lecturer.

QUEEN VICTORIA JUBILEE INSTITUTE FOR NURSES. Her Majesty has approved of a list of names which has been submitted to her previous to being entered on the roll of the Queen's nurses for the purpose of nursing the sick poor in their own homes. The list includes the names of seventy-one nurses and twenty-two superintendents. The inspector of nurses is Miss Rosalind Paget.

SOCIETY OF APOTHECARIES.—The results of the Examination in Arts qualifying for registration as medical student, held in the Hall of the Society on the 5th and 6th ult., have just been published. There were 189 candidates, and from the Pass List it appears that 16 were placed in the second class, and 110 were certified as having passed in some subjects, but not in all. The next examination will be held on March 6th and 7th.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At an examination held on December 16th, in the Royal Edinburgh Asylum, the following gentlemen were found entitled to the certificate in Psychological Medicine granted by the Association:—Stuart McCallum, M.B., C.M., Carlisle County Asylum; Alexander Mitchell, M.B., C.M., Stirling District Asylum; John Simpson, M.B., C.M., Royal Asylum, Edinburgh; A. R. Urquhart, Hon. Sec.

OPEN SPACES.—At a recent meeting, held at the Mission Hall, New Cross, in support of the proposal to provide a public recreation ground on ten acres of land on Pepys Hill belonging to the Haberdashers' Company's Hatcham Estate, New Cross, a resolution was adopted expressing the appreciation of the parishioners of St. Paul's, Deptford, for the generous offer of the Haberdashers' Company, and also for the liberal offer of Mr. Livesey of £2000 for the object in view, and that energetic efforts be made to carry out the scheme.

EXPERIMENTAL STUDY OF ATMOSPHERIC IMPURITY. The Manchester Field Naturalists' Society have, it is announced, resolved to set up apparatus for analysis of the air of Manchester, at the Town Hall, Owens College, in Hulme, in Ancoats, in Strangeways, and in Salford. The experiments will be conducted so as to afford definite information on: 1. The composition of the air in densely-populated districts, as compared with that in thinly-populated and suburban districts. 2. The relation between atmospheric impurity and prevalent sickness and mortality. 3. The amount and distribution of those impurities which are known to be specially prejudicial to plant life—for example, sulphurous acid. 4. The extent to which smoke and noxious gases are due (*a*) to dwelling-houses, (*b*) to factories. 5. The nature of fog and the character of the air during the prevalence of fog. To cover the necessary expenses £200 will be required. The sub-committee propose to work in concert with a similar body in London.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALDERSON, F. HERBERT, M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the West London Hospital.

CLOWES, WM. F. A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Essex and Colchester Hospital.

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DAVIES, D. L., M.B. Glasg., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the First Central District and the Workhouse of the Neath Union.

ENSOR, EDWIN T., M.D., L.R.C.P. Irel. & L.M., L.F.P.S., has been appointed a Medical Officer for the Parish of Kensington (No. 2 Relief District), vice C. M. Frost, resigned.

EUSTACE, J. N., M.B., B.Ch. Dub., has been appointed Resident Assistant Clinical Clerk to the Richmond Asylum, Dublin.

GABRIEL, ARRATOON, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Borough of Dunolly, Victoria, vice Manson, resigned.

GODFREY, G. P., L.R.C.P., L.R.C.S. Edin., has been appointed House Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GODFREY, THOS., M.R.C.S., has been appointed Consulting Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GORDON, T. E., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Stroud Union.

HASWELL, J. F., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse and the First Division of the Penrith District of the Penrith Union.

HUGHES, S., M.B., C.M., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for Coalville City, Utah, U.S.A.

LINDSAY, D. MOORE, L.K.Q.C.P., L.R.C.S. Irel., & L.M., has been appointed Medical Officer of Health for Wasateh County, Utah Territory, U.S.A.

LITTLEWOOD, H., F.R.C.S., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the Leeds General Infirmary.

MCLACHLAN, S. F., M.B., C.M. Glasg., has been reappointed Medical Officer of Health for the Longtown Rural District of the Longtown Union.

MOORE, GEO., M.R.C.S., has been temporarily appointed Medical Officer for the Shire of Moorabbin, Victoria.

MORRISON, J. T. J., M.A., B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal Orthopædic and Spinal Hospital, Birmingham.

ODELL, ROBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Second and Third Districts of the Hertford Union.

O'DWYER, JAS. J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Government Medical Officer and Vaccinator for the District of Gundagai, New South Wales.

PARSONS, GEORGE G., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to the Royal Albert Hospital, Devonport, vice Dr. Fraser, resigned.

PEARCE, A., M.R.C.S., has been reappointed Medical Officer of Health for the Salcombe Urban District of the Kingsbridge Union.

RENNEY, HENRY, M.D. Durh., has been appointed a District Medical Officer of the Sunderland Union.

SAUNDERS, F. H., M.B., C.M. Aberd., has been appointed Medical Officer for the Ripley District of the Knaresborough Union.

STOCK, W. H., L.K.Q.C.P. Irel., L.F.P.S. Glasg., has been appointed Medical Officer for the Shire of Yea, Victoria.

THOMSON, W. A. U., F.R.C.S., L.K.Q.C.P. Irel., has been appointed Medical Officer for the Henley and Bray Districts of the Cookham Union.

VICKERS, JOHN B., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Hospital, Barrow-in-Furness, vice Dr. M. C. Watson, resigned.

WALKER, H. SECKER, F.R.C.S. Eng., has been appointed Assistant Ophthalmic and Aural Surgeon to the General Infirmary at Leeds.

WARREN, WILLIAM, M.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Borough of Kew, Victoria, vice Walsh, resigned.

WILLIAMS, A. WINKELRIED, M.B., C.M., has been appointed Pathologist to St. John's Hospital for Diseases of the Skin, Leicester-square.

WILLIAMS, LEWIS, M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Physician to University College Hospital.

YOUNG, Mr. W. J., has been reappointed Analyst to the Whitechapel District Board.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

A. C., THE LANCET Office, 423, Strand, London.—Medical Officer to an Association in the Midland Counties. Salary and allowances about £220 per annum.

BISHOP'S STORTFORD UNION.—Medical Officer to the Union Workhouse. Salary offered is £85 per annum (to include all medicines), and £5 per cent. on that sum for supplying cod-liver oil and quinine, and the usual extra fees for midwifery cases. (Apply to the Clerk to the Guardians, Bishop's Stortford.)

BISHOP'S STORTFORD UNION.—Medical Officer and Public Vaccinator for the Hailingbury District. Salary offered is £57 10*s.* per annum, and £5 per cent on that sum for supplying cod-liver oil and quinine, and the usual vaccination and extra fees for midwifery and surgical cases. (Apply to the Clerk of the Guardians, Bishop's Stortford.)

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant for one year. Terms £50 for the first year, and, if reappointed, £70 for the second year, with board, lodging, and washing.

COUNTIES OF STIRLING AND DUMBARTON.—Medical Officer to act for the two counties and their districts. Salary £500 a year, with necessary travelling expenses, to be regulated by the County Councils. (Apply to Mr. Welsh, County Clerk, Stirling, or Mr. Babtie County Clerk, Dumbarton.)

COUNTY OF DUMFRIES.—Medical Officer for the County. Salary £300 per annum. He will receive the outlays necessarily incurred in the discharge of his duties. (Apply to Mr. Robson, County Clerk, Dumfries.)

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Five Additional Dental Surgeons.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Surgeoncy. No salary, but board and lodging provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. House Physicians.

INSPECTOR OF POOR, Ronsay, Orkney, N.B.—Resident Parochial Medical Officer. Salary £50 per annum.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.

LANCASHIRE COUNTY ASYLUM, Rainham, near Liverpool.—Pathological Assistant Medical Officer. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

LONDON HOSPITAL MEDICAL COLLEGE, Turner-street, Mile-end, E.—Assistant Demonstrator of Anatomy. Salary £90 per annum.

MEDICAL ASSOCIATION OF RONSAY AND EGILSHAY. — Resident Medical Practitioner. (Apply to the Secretary, Ronsay, Orkney Isles.)

MESSRS. ASKIN, GARRITAS, & THRING, 38, Sackville-street, London, W. Medical Officer and Bursar for an important Public College. Salary £200 per annum, in addition to board and residence, and small emoluments from Private Practice, which may amount to an additional £100 per annum.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. No salary, but board, lodging, and washing provided.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Pathologist, who will also be required to act as Fourth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer. Salary £120 per annum, with an annual increase to £150. Board, residence, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BIGGER.—On Dec. 21st, at Queen's-park-gardens, Streatham, the wife of Dr. W. Grimshaw Bigger of a son.

HEDDY.—On Dec. 30th, at 46, Redcliffe-gardens, South Kensington, the wife of William Jackson Heddy, M.R.C.S. Eng., of a son.

LEWTAS.—On Dec. 11th, at Simla, the wife of Surgeon-Major J. Lewtas, M.D., of a son.

PARAMORE.—On Dec. 28th, at Gordon-square, W.C., the wife of Richd. Paramore, M.D., of a son.

MARRIAGES.

CARDELL—RITCHIE.—On December 20th, at Trinity Presbyterian Church, Clapham-road, S.W., Arthur John Cardell, Surgeon-Dentist, Victoria-street, Westminster, to Helen, only daughter of Alexander Ritchie, C.C., Kelvin House, South Lambeth-road, Clapham.

CLARKE—DOUGLAS.—On Dec. 30th, at St. Thomas's Church, Brampton, by the Rector, the Rev. E. S. Shuttleworth, M.A., and the Hon. and Rev. R. E. Adderley, M.A., Vicar of St. Mary's and All Saints, Chesterfield, Edmund Weanne Clarke, B.Sc., M.B., C.M. Edin., M.R.C.S. Eng., to May, youngest daughter of Bowery Douglas, Esq., The Cottage, Chesterfield.

MACKENZIE—MARSDIN.—On Dec. 22nd, at St. Margaret's, Westminster, Hector William Gavin Mackenzie, M.D., to Emma Newcombe, widow of the late Septimus Marsdin, of Hull.

SALMON—DUNN.—On Dec. 22nd, at St. John's, Cranston-hill, Glasgow, Charles Edward Salmon, L.R.C.P., L.R.C.S.E., only surviving son of John Morgan Salmon, Esq., to Madge, elder daughter of the late Hugh Dunn, Esq., Town Clerk of Darlington, Durham.

DEATHS.

BAILLIE.—On Dec. 25th, at Roehampton, Cheltenham, Herbert Baillie, M.D., F.R.C.S., Surgeon-Major H.M. Indian Army, retired, aged 71.

LOWE.—On Dec. 26th, at Trinity College, Glenalmond, Howard Griffiths Lowe, M.R.C.S., L.S.A., Bursar and Medical Officer of the College, aged 37.

SOLLY.—On Dec. 21st, at 454, Commercial-road, London, Stephen Francis Solly, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., aged 54.

WILKINSON.—On Dec. 20th, at Fernlea-road, Balham, Charles Nelson Wilkinson, F.R.C.S., L.S.A., late of Upper Tooting, in the 73rd year of his age.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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BOOKS ETC. RECEIVED.

CASSELL & COMPANY, London.

Hygiene and Public Health. By B. A. Whitelegge, M.D., B.Sc. Lond. Illustrated. 1890. pp. 531.

CHURCHILL, J. & A., New Burlington-street, London.

Handbook to Dr. Koch's Treatment in Tubercular Disease. By Edward F. Grün, M.R.C.S., and Walter D. Severn, A.R.C. Sci. pp. 58. Price 3s. 6d.

GOVERNMENT PRINTING OFFICE, Washington.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. XI.: Phædronus—Régent. 1890. pp. 1102.

LECROSNIER ET BABE, Paris.

Œuvres Complètes de J. M. Charcot: Hemorragie et Ramollissement du Cerveau Métallothérapie et Hypnotisme Electrothérapie. Tome IX. 1890. pp. 544.

LEWIS, H. K., Gower-street, London.

Manual of Bacteriology. By Edgar M. Crookshank, M.B. Third Edition, revised and enlarged. 1890. pp. 460.

Antiseptics in Obstetric Nursing. By John Shaw, M.D. Lond. Illustrated. 1890. pp. 129.

Illustrated Lectures on Nursing and Hygiene. By R. Lawton Roberts, M.D. Lond. 1890. pp. 192.

LONGMANS, GREEN, & CO., London.

A Text-book of Chemical Physiology and Pathology. By W. D. Halliburton, M.D., B.Sc., M.R.C.P. Illustrated. 1891. pp. 874. Price 28s.

PHILIP, GEORGE, & SON, Fleet-street, London.

The Practical Guide to Algiers. By Geo. W. Harris. pp. 174.

SMITH, ELDER, & CO., Waterloo-place, London.

Dictionary of National Biography. Edited by Leslie Stephen and Sidney Lee. Vol. XXV. Harris—Henry I. 1891. pp. 457.

STANFORD, EDWARD, Cockspur-street, Charing-cross, London.

Studies in Statistics, Social, Political, and Medical. By George B. Longstaff, M.B. Oxon., L.R.C.P. With Maps and Diagrams. 1891. pp. 455.

THE S. S. WHITE DENTAL MANUFACTURING COMPANY, Philadelphia.

The Micro-organisms of the Human Mouth. By Willoughby D. Miller, D.D.S., M.D. Illustrated. 1890. pp. 364.

Lehrbuch der Arzneimittellehre und Arzneiverordnungslehre; von Dr. H. Tappeiner (F. C. W. Vogel, Leipzig, 1890).—Casuistisch-Statistische Beitrage zur Pathologie und Chirurgie der Gallenwege; von Dr. L. G. Courvoisier (F. C. W. Vogel, Leipzig, 1890).—The Publishers' Circular Christmas Number, 1890 (Sampson Low & Co., London).—Die Tuberkulose der Knochen und Gelenke; von Dr. Med. Fedor Krause (F. C. W. Vogel, Leipzig, and Williams & Norgate, London, 1891).—Foster's Bijou Guide to Ilfracombe and Neighbourhood, 1890 (W. R. Foster, Ilfracombe).—Eighth Annual Report of the Metropolitan Public Gardens Association, 1890; first edition (Hutchings & Crowsley, Limited, South Kensington).—Klinisch-Experimentelle Studien uber Chirurgische Infectionskrankheiten; von Dr. Julius Fessler (Dr. C. Wolf & Sohn, München, 1891).—Die Ætiologie und das Wesen der akuten eitrigen Entzundung; von Dr. Albert Kronacher (G. Fischer, Jena, 1890).—Index-Medicus: Authors and Subjects; Vol. XII. No. 11, November, 1890 (Trübner & Co., and Lewis, London).—The Abuse of a great Charity: by George M. Gould, M.D. (reprinted from the Medical News, Nov., 1890).—Addresses delivered on the occasion of the Commencement Exercises of Cooper Medical College, November, 1890; by L. C. Lane, A.M., M.D., and by Edwd. R. Taylor (Goodwin and Taylor, San Francisco).—Your First Game of Golf; by G. Hillinthorn (Day & Son, Berners-street, London).—Proceedings of the Society for Psychical Research, December, 1890 (Kegan Paul, Trench, Trübner, & Co., London; price 3s. 6d.—The Journal of Mental Science, Jan., 1891; New Series, No. 120 (J. & A. Churchill, London); price 3s. 6d.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on December 30th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	238	46	1	63	6	404	442
North-Western Hospital	290	29	..	9	1	329	443
Western ,,	156	16	..	20	2	194	262
South-Western ,,	214*	11	..	1	..	226	340
South-Eastern ,,	244	29	..	53	1	327	462
Northern ,,	331	28	..	18	..	377	480
Gore Farm ,,	121	..	..	..	..	121	300
Totals	1644	159	1	164	10	1978	2729

* 1 infant and mother.

Medical Diary for the ensuing Week.

Monday, January 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Stephen Mackenzie: Anæmia, its Pathology, Symptoms, and Treatment. (First Lettsomian Lecture.)

Tuesday, January 6.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Frost and Fire. (Adapted to a Juvenile Auditory.)

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Sir Hugh Beevor: Note on Media for Cultivation of Tubercle Bacillus.—Dr. F. J. Smith: Chylosis Ascites.—Mr. Hurry Fenwick: Large Hydatid in Pelvis obstructing both Ureters.—Dr. William Hunter: Subacute Gastritis.—Dr. S. West: Multiple Tubercular Tumours in Brain and Viscera.—Mr. Stephen Paget: Imperforate Rectum.—Dr. R. Maguire: Acute Verrucose Aortitis.—Mr. E. C. Stabb: Two Specimens of Dermal Cysts. Card Specimens: Mr. H. B. Robinson: (1) Webbed Fingers and Toes; (2) Cystic Disease of Testicle; (3) Columnar-celled Carcinoma of Small Intestine.—Mr. W. G. Spencer: (1) Lympho-sarcoma in Dog surrounding Trachea and Bronchi; (2) Lympho-sarcoma in Dog surrounding Aorta; (3) Leucocythemia in Cat.—Dr. G. Gulliver: Acute Endocarditis of the Right Side, with Pulmonary Embolism.

Wednesday, January 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Handfield-Jones, Dr. John Phillips, and others. Dr. W. S. Playfair: On Removal of the Uterine Appendages in cases of Functional Neurosis.—Dr. John Phillips: On a case of Death following Vaginal Injection of Acid Nitrate of Mercury.—Dr. W. S. A. Griffith: Case of Obstructed Labour in which a large Fibroma of the Ovary was mistaken for the Head of an Extra-uterine Fœtus.

Thursday, January 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Frost and Fire. (Adapted to a Juvenile Auditory.)

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Annual General Meeting. Election of Officers. President's Valedictory Address. Dr. R. T. Smith: On Lacerations of the Cervix Uteri.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. J. Edward Squire: Remarks on cases of Tuberculosis treated by Koch's Method.

Friday, January 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Annual Meeting. Dr. Whipham and Mr. G. R. Turner: A case of Intussusception, with Volvulus of the Small Intestine in Two Places.—Mr. G. B. Lockwood: A case of Acute Intussusception in a Child four years old; resection; death from shock twenty hours after operation.

Saturday, January 10.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 1st, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 26	30·31	S.E.	33	..	..	38	27	..	Foggy
,, 27	30·33	E.	34	33	..	40	32	..	Overcast
,, 28	30·15	E.	35	34	..	35	31	..	Overcast
,, 29	30·25	N.E.	31	..	..	32	30	..	Overcast
,, 30	30·27	E.	27	..	..	29	27	..	Overcast
,, 31	30·19	E.	27	..	..	37	22	..	Overcast
Jan. 1/91	30·17	E.	37	36	..	39	27	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE LANCET DURING 1890.

IT is interesting (writes a correspondent) to observe the steady growth in the capacity of THE LANCET, which is well illustrated by the following statistics. In 1886 it was enlarged to 96 pages, and in 1888 to 104. In 1888 THE LANCET beat its previous yearly records by 312 pages; in 1889 it leaped beyond that to the extent of 27 pages; and during the year just past it has exceeded even that figure by 304 pages in the year. This huge volume contains in all 14,032 columns, of which 5848 are allotted to literature concerning medicine and its cognate subjects, and 8,184 columns are devoted to advertisements. The index alone occupies 104 pages. Calculating from these figures, it will be found that the average number of pages allowed for each number has been 135, showing an average increase of 9 pages in each issue over last year's volumes. On examining the size of the individual impressions it is found that the first number of the year and the Students' Number (Sept. 6th) contained 184 pages, the largest number of THE LANCET ever issued. The next largest is the number containing the special supplement on life assurance and the medical profession, which contained 176 pages. The issue of March 1st, containing the report of the Hyderabad Commission on Chloroform, contained 160 pages; six numbers contained 144 pages, sixteen contained 136 pages, there were thirteen numbers of 128 pages, and several containing 120 pages each. This represents the increase of 304 pages over the previous year. A Special Edition of THE LANCET was published in connexion with the Hospital Sunday Fund, and there were three special supplements. The columns of literary matter include reports of clinical lectures extending over 532 columns; nearly 931 columns have been devoted to clinical articles, and the cases recorded in the Mirror of Hospital Practice required 270 columns. The columns devoted to analysis last year amounted to 13 only; while this year close upon 139 columns have been devoted to this important branch, and 136 columns have been used for notifying new inventions. Annotations have taken up 940 columns, and leading articles have reached over 532 columns, while special articles have extended to 1364 columns. About 153 columns have been devoted to the interests of public health, and reviews and notices of books occupy 178 columns. Correspondence has received space to the amount of 460 columns, and the answers to correspondents monopolises 150 columns; miscellaneous medical news cover some 415 columns of THE LANCET. Further, the Students' Number referred to above contained 128 columns devoted to information concerning the regulations and arrangements of the various medical schools and examining bodies. Notices and reports of the British Medical Association have occupied 40 columns, the reports of the General Medical Council amount to over 67 columns. Over 100 columns have been devoted to obituary notices, and 40 columns to foreign and university intelligence; special lectures have occupied 80 columns. Thus 5309 columns of matter have been accounted for, and the remaining 439 have been taken up with special supplements, reports of medical societies, law cases, and parliamentary news of interest to the members of the profession, and medical news of a general character.

M. O. H.—The details given do not suffice to enable us to judge of the grounds on which the refusal was based. But if it was on the assumption that the duty lay with the medical officer of health, the practitioner in question was altogether in error. A glance at the prescribed duties of health officers will at once show that the granting of certificates of fitness to attend school forms no part of such duties. Where parents require certificates, there would be no objection to the medical officer of health granting them as an expert and for a proper fee, unless the terms of his appointment debar him from such practice.

Mr. H. Jones.—No classification of the causes of insanity, so far as we are aware, includes the one mentioned by our correspondent.

THE TREATMENT OF CONSUMPTION.—A PROTEST.

To the Editors of THE LANCET.

SIRS,—In the advertisement columns of your last issue I see iodide of gold mentioned as "the true germicide and virus neutraliser" in relation to the tubercular bacillus, and attached to this somewhat sweeping title are the names of two analytical chemists, in brackets, from which I gather they desire to brand the discovery as their own. If any person interested will refer to THE LANCET of July 21st, 1888, he will find, at the end of my original article on the treatment of tubercular phthisis by hydrarg. perchlor., the following passage:—"I believe the persalts of some other metals (e.g., gold) might be found to have as good a germicidal effect, if preferred to the mercuric salt." In view of this communication, an attempt to claim the use of gold in the treatment of tuberculosis as a separate invention would be an infringement on my discovery, and doubtless I have only to draw attention to the matter for the gentlemen in question to acknowledge that they are about two years and a half too late. I may mention that long ago I tried both the chloride and iodide of gold in the treatment of consumption, as well as the persalts of mercury and other metals, and that I have been preparing a paper to submit to you wherein the results so obtained are mentioned, but which, through family bereavement, I have not had time to finish.

I am, Sirs, yours obediently,

Lavender-hill, S.W., Dec. 22nd, 1890. F. TAYLOR SIMSON.

MEDICAL PRACTICE IN SOUTH AMERICA.

J. A. C.—Opinions about the openings for practice in South America for English medical men vary, but that there are many such already settled there may be gathered by a glance at the pages of the Medical Directory. By comparing the list in the volume just published with those in former issues, it would seem that the number of British practitioners in South America is increasing. In Buenos Ayres there are now twenty-one, and in Monte Video nine. Most of the South American Republics refuse to recognise foreign diplomas, and insist upon all who wish to practise passing an examination; and the examiners, being already established, are frequently none too ready, it is said, to recognise the merits of new aspirants. In British Guiana British diplomas are recognised. We have, however, never heard that there is any paucity of practitioners there. As we are frequently asked about openings in South America, we should be very glad of any authentic information from any of our readers in that part of the world.

An Old Reader.—As regards the general literature on scarlatina, the article by Thomas in the second volume of Ziemssen's Cyclopædia of the Practice of Medicine may be referred to. It embodies, amongst other things, a fairly complete record of other writers on the same subject. One modern contribution to scarlatina is Dr. D. A. Gresswell's "Contribution to the Natural History of Scarlatina" (Clarendon Press, Oxford, 1890). The etiology of the disease from the point of view of the Medical Department of the Local Government Board is partly summed up in a separate issue, to be obtained from Messrs. Knight and Co., 90, Fleet-street, price 4*d.*, and entitled, "Milk-Scarlatina, 1886," and from the annual reports of the Medical Officer of the Local Government Board for 1886 [C 5171] and for 1887 [C 5526-I], procurable from Messrs. Eyre and Spottiswoode, East Harding-street, E.C

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WOMEN'S ORGANISATIONS FOR PREVENTION OF INTEMPERANCE.

THE Women's Societies in Ireland for discouraging intemperance have addressed themselves to the members of the medical profession in Ireland to use their professional influence in favour of the diminished use of alcohol. We cannot doubt that the profession will gravely consider the representations made to them by the women of Ireland. They may not adopt all their conclusions, but they will not ignore the amount of drunkenness among men and women, which it should be the object of all parties and professions to abate.

W. G. S.—The practitioners in the neighbourhood should bring the case under the notice of the Apothecaries' Society, the Dentists' Association, and the Medical Defence Union.

MILK IN CONNEXION WITH SEPTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—When an epidemic of infectious disease arises, and nothing can be made out as regards its origin, we are often inclined to blame the milk-supply, and a poor, unfortunate milkman is set upon and ruined, without anything of a positive proof being produced that the milk is at fault. Now I venture to put forward a test which will at any rate help us, in some degree at least, as to the direction in which we should make our inquiries. If by far the larger proportion of individuals attacked be children, it would only be natural to suppose that the milk was in some way or other the cause, inasmuch as children are by far the larger milk drinkers. If, on the other hand, grown-up people furnish the larger number of victims, it is not unlikely defective drainage is the cause. As illustrations of the correctness to a certain extent of the proposed test, I will adduce the facts connected with two different epidemics. In the first, by far the greater number of those attacked were children, and it was proved that the person who served out the milk also nursed a girl who was dangerously ill with diphtheria in the house at the very time. In the second instance, no person under nine years of age was affected; generally there were about two in each house attacked, and these, where there were basements, were the servants. At the time there was a heavy barometric pressure prevailing and the road ventilators were smelling badly. Nothing could be found wrong with the cows, labourers, water, or sanitary arrangements connected with the farm or dairy from which the suspected milk came, and hence I think the drainage may fairly be set down as having been the cause of the outbreak. From a review of these two epidemics I think, where notification is in force, the age of the persons attacked should be given with the other information. Now, on almost every occasion when an outbreak of infectious disease arises, we are counselled by the authorities to boil the milk in order to destroy any germs that may possibly exist; but as regards the advantage of this I have always been rather sceptical, knowing that they withstand a very high as well as low temperature; and a few days back I consulted various chemical text-books as to the point at which milk usually boils, but from none could I obtain the information. I then asked one or two persons whom I thought would be sure to know, with exactly the same result. However, I subsequently learnt the temperature was from 214° to 218°. After this I wrote to Mr. Watson Cheyne of King's College, one of our best authorities on micro-organisms, to know whether the boiling of milk was sufficient to destroy all existing germs, and his answer was as follows:—"The temperature necessary to kill depends upon whether the bacteria are in the adult or spore condition. In the spore condition in milk it would need somewhat prolonged exposure to a boiling temperature (in a water bath) to destroy them, but when I worked with these things I found the only certainly successful way was to boil for ten or fifteen minutes for three successive days, thus giving the spores a chance of sprouting in the interval and catching them as adults." What the value of the milk would be under these circumstances it does not require much knowledge to make out. However, whenever an epidemic arises, I think we should seize upon the opportunity to persuade the people, at any rate whose houses are attacked, to get their sanitary arrangements looked into by someone duly qualified for the task, and not allow deficiencies to remain uncorrected till another outbreak of infectious disease arises.

I am, Sirs, your obedient servant,

Surbiton. F. P. ATKINSON, M.D.

AN ADVERTISING PRACTITIONER AT EXETER.

THE quiet respectability of medical practice at Exeter has been naturally shocked by the distribution of handbills among the patients of other practitioners, announcing the establishment of the Polsloe-road Provident Dispensary, 3, Regent's-terrace, and the attendance there of physician and surgeon at certain hours, at a charge of 1*s.* a week. We must remind the practitioner that such an innovation in the methods of practice is not justified by calling the house a dispensary, or by the omission of the names from the bill.

R. E. L.—Whilst "erysipelas," as such, is a notifiable disease under Section 6 of the Infectious Disease (Notification) Act, 1889, pharyngitis qualified by the adjective "erysipelatous" is not referred to in the Section. Where statutory rights are claimed, the terms of the statute in question should be complied with.

WORK EXHIBITION.

AN exhibition, arranged under the direction of Messrs. Cassell, Petter, and Galpin, was opened this week at the Polytechnic Institution in Regent-street. It may be said to represent in a practical form the outcome of that firm's most noted publications—the *Popular Educator* and the *Technical Educator*. The exhibits include drawing, building construction, manufactures in wood, plaster, and metal, tools, &c. The exhibition was opened by Sir John Lubbock, Chairman of the London County Council, who, in the course of an able speech, said that such exhibitions not only were a great boon to exhibitors, but also helped to promote commerce and manufacture. He believed that the next fifty years would witness as great and marvellous discoveries as the last half century had produced, impossible though such a result might seem. The meeting was also addressed by Mr. Arnold Foster (representing Messrs. Cassell and Co.) and Sir Lyon Playfair. The latter gentleman thought the exhibition was a happy idea, as it was a means of the Polytechnic students showing what they could do with their hands. The exhibition promises to be one of considerable attraction and a means of instruction in a most interesting form.

A Subscriber.—The matter should be formally brought under the notice of the committee of the hospital.

Principal.—Our correspondent should show the form to his solicitor.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—There seems to me to be one phase of the question in regard to the extension of the term of study of medical students to five years which has not yet been touched on by any of your correspondents—viz., What effect will this extension to five years have upon qualified and unqualified assistants? Qualified assistants will be scarcer; consequently they will require at least £100 per annum, in-door. Two years ago I had about twelve applications for a vacancy as qualified assistant; last October I had to wait three weeks for one, give £20 per annum more, and allow second-class railway fare. What will it be in four or five years? I fear this scheme will financially improve the position of unqualified men; instead of getting a man who has had, under the old system, three years' training by practical men, a great number of general practitioners will have to get unqualified men (who must be inferior), and perhaps have to pay them £60, in-door. I think it is time that those gentlemen in authority either did not allow these unqualified men to be employed or defined their position, so that those who cannot afford to keep an M.R.C.S. might employ them. It seems a paradox that a medical man is allowed to keep a man to visit, dispense, and attend midwifery who perhaps has never been in a hospital as a student. Yet if a phthisical patient had a fatal hæmoptysis in the principal's absence, or other sudden death occurred from a clear cause, the patient not having been attended by a qualified man—if the principal gives a certificate he may lose his diploma. Those in authority should speak out very plainly on this matter; they are putting qualified assistants out of our reach. Let them either sanction or not these men's services as assistants; otherwise, many a well-intentioned practitioner takes a step in the dark which may be his destruction. As far as my humble opinion goes, I think the medical profession in ten years' time, in the manufacturing towns, will be worked entirely by unqualified assistants.

I am, Sirs, yours faithfully,

December, 1890. G. P.

THE MEETING OF THE ASSOCIATION OF FELLOWS OF THE COLLEGE OF SURGEONS.

Dr. Collins asks us to state that in his remarks at the above-named meeting on the 20th ult. he made reference only to Fellows, not to Members of the College.

A. B. C. should consult a registered medical practitioner.

DIET IN DIABETES.

To the Editors of THE LANCET.

SIRS,—When diabetic patients are getting on pretty well and the urine is free from sugar, or nearly so, they often wish to have a little more latitude in their diet. The question then arises, Which foods are the least injurious to begin with? If physicians who have devoted special attention to this disease would kindly inform us, it would be very helpful to many general practitioners. The lists which are given by consultants of foods allowed and forbidden do not help us at this stage. Last year I allowed a patient peas as a change from cabbage, and now he is going on with lentils. I presume these articles are less injurious than other cereals. But are they? An authoritative answer would oblige,

Yours obediently,

December, 1890. M.R.C.S. &c.

ERRATUM.—In our annual summary last week, under the heading "Army, Navy, and Indian Medical Services," page 1394, in the enumeration of the members of the reconstituted Army Sanitary Commission, the name of Sir C. Cameron was erroneously given in place of Sir Joseph Fayrer, K.C.S.I.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Warner, London; Dr. Bezley Thorne, London; Sir James Sawyer, Birmingham; Mr. S. Paget, London; Dr. W. Squire, London; Rev. Horace Waller; Dr. Macdonnell, Montreal; Dr. Wolf-Smith; Mr. Edward Mark, London; Mr. Blenkarne, Leicester; Dr. J. W. White, Toronto; Mr. Urquhart; Dr. J. E. Squire, London; Dr. Pardington, Tunbridge Wells; Mr. Emenson, Scotter; Mr. G. Smith, Birmingham; Dr. Leslie Phillips, Birmingham; Mr. F. Venrace, Birmingham; Messrs. Condy and Mitchell, London; Dr. S. Coghill, Ventnor; Drs. J. L. Steven and Workman, Glasgow; Mr. E. Cotterell, London; Mrs. Gardiner, East Dulwich; Mr. F. A. Davis, London; Dr. Rentoul; Messrs. Krohne and Sesemann, London; Dr. Halliday, Paisley; Signor S. Fujos, San José; Dr. Philpotts, Birkenhead; Dr. Cosgrave, Dublin; Dr. Lombe Atthill, Dublin; Mr. E. J. Powell, London; Dr. Hartshorn, Junction City; Dr. W. Wallace, Ventnor; Mr. Hirsch, London; Mr. Young J. Pentland, Edinburgh; Dr. Ashby, Manchester; Messrs. Anderson and Co., London; Mr. B. G. Corney, Fiji; Dr. J. M. Atkinson, Hong-Kong; Dr. Briggs, Liverpool; Mr. Haywood, Notts; Messrs. Oliver and Boyd, Edinburgh; Dr. E. Stevenson, Birkenhead; Messrs. King and Co., London; Dr. J. C. Simpson, London; Mr. Wethered, Great Marlow; Mr. W. Whitehead, Manchester; Messrs. Wm. Clowes and Son, London; Mr. W. S. Richmond, London; Mr. Johnson, Kansas City; Dr. Collins, London; Dr. Hunter, Matlock; Messrs. Bach and Co., London; Mr. Angus, Burgley; Mr. Cole, Holywell; Messrs. Lee and Nightingale, Liverpool; Mr. Haley, Wakefield; Dr. Wyeth, New York; Mr. H. Burton, Murple; M. Berthier, Paris; Messrs. Lloyd and Co., Leicester; Mr. H. J. Rope, Shrewsbury; Dr. W. Dale, King's Lynn; M. Jankowski, Switzerland; Mr. Blair, Leeds; Messrs. Allen and Hanburys, London; Mr. Henderson, Sussex; Messrs. Cassell and Co., London; Mr. Green, Derby; M. Schulz, Paris; Messrs. Keith and Co., Edinburgh; Mr. White, Chippenham; Messrs. Wright and Co., London; Mrs. Faithfull, Wimbledon-park; Messrs. Hewlett and Son, London; Mr. Blount, Paris; Mr. Gorman, Wilts; Messrs. Mason and Co., Chelsea; Mr. Russell, Liverpool; Mr. Browne, Douglas, Isle of Wight; Mr. Groves, Kilburn; Dr. Storms, Canada; Messrs. Benson and Co., London; Mr. Eaton, Birmingham; Messrs. G. Street and Co., London; Mr. Armstrong, Newcastle-on-Tyne; Messrs. Murray and Co., Paris; Mr. Sale, Salop; Mr. Sells, London; Messrs. Mitchell and Co., London; Dr. Metcalfe, Yorks; Dr. Yoman, Wilts; Mr. Martin, Bolton; Mr. Watson, Glasgow; Mr. Watt, London; Dr. O'Hanlon, Durham; Dr. Sorphioti, Geitz; Mr. Shipton, Stafford; Mr. Saunder, Manchester; Mr. Newell, Ipswich; Mr. Lewis, Rainhill; Mr. Scott, Manchester; Mr. Mason, Sheffield; Dr. Zangger, Zurich; Dr. May, Hanwell; Dr. Hughes, Holyhead; Mr. Welsh, Stirling; Mr. Cant, Lincoln; Mr. Birchall, Liverpool; Mr. Brown, Chalford; Mr. Roberts, Sheffield; Miss Armstrong, Ventnor; Messrs. Oppenheimer, Sons, and Co., London; Mr. J. Williamson, Lincoln; Messrs. Kegan Paul and Co., London; Mr. Miles, Charing-cross; Dr. Barbour; Dr. Lee, New South Wales; Messrs. Bentley and Son, London; Messrs. Barker and Son, London; Messrs. May and Co., Piccadilly; Clinical; Geddes Manufacturing Co., London; J. A. C.; Gynæcologist; G. P.; Maltine Manufacturing Co., Bloomsbury; Alpha, London; Jeyes' Sanitary Comp. Co., London; Pharm. Chem., London; Secretary, St. Andrew's Hospital, Northampton; A. H., Bedford; X., Enfield; Secretary, The Hospital, Canterbury; Box, London; Queen Charlotte's Lying-in Hospital, London; Spero, Sheffield; M.D., Finchley-road; Sanitas Co., London; C. E. D., London; Principal; A Subscriber; Morris Tube Co., London; Matron, Bury St. Edmund's.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Wilson, Belfast; Dr. McCulloch, Guernsey; Mr. Pineo, Merton; Mr. Hodder, Cork; Mr. Godwin, Oxford; Miss Lüttichau, London; Mr. Hamilton, Stoke-on-Trent; Mr. Winckworth, Shefford; Miss Carson, Burton-on-Trent; Mr. Pollard, Blackburn; Mr. Banks, Bedford; Mr. Parsons, Burnley; Mrs. Davies, Liverpool; Mr. Smee, Ryde; Dr. McDougall, Runcorn; Mr. Wilson, co. Down; Dr. Allen, Durham; Dr. Hughes, Holyhead; Mr. Pollard, Woolton; Mr. Oliver, India; Mr. Heywood, Manchester; Mr. Jones, Aberystwith; Mr. Pearce, Eday; Dr. Stais, Greece; Mr. Tully, Hastings; Dr. Stanley, Attercliffe; Dr. Pardey, Tasmania; Dr. Hazleton, Essex; Mr. Jones, Dowlais; Mr. St. Aubyn, co. Wexford; Mr. Wells, Cuckfield; M. Corby, Paris; Mr. Barcroft, Wilts; Miss Tozer, Wimborne; Mr. Owen, Fishguard; Dr. Singh, Bombay; Mr. Jones, Colchester; Dr. Waldo, Paris; Messrs. Bryant and Co., Toronto; Dr. Venis, Benares, India; Miss Rogers, North Wales; Mr. Tait, Golspie; Mr. Hinde, Bloxam; Messrs. Robinson and Co., Chesterfield; Mr. Davies, Lampeter; Messrs. Watkins and Osmond, London; Mr. Detmold, Bournemouth; Mr. Hanson, South Hampstead; Mr. Cornish, Manchester; Professor Buchanan, Watford; Mr. Howard, Norfolk; M. Rogoainski, Warsaw; Mr. Rucker, St. Petersburg; Mr. Tyte, Minchinhampton; Mr. MacRae, Hemel Hempstead; Mr. London, Acton; Messrs. Mardon Bros., Bishop Stortford; Mr. Gosman, Mere; Mr. Cullman; Miss Hooper, Upper Baker-street; Mr. Williams, Carmarthen; Dr. Drummond, Malvern; Mr. A. Smith, Croydon; Miss Sloan, Pittsburg; Mr. Hornibrook, London; Dr. Milton, Cairo; Mr. Myers, Birmingham; Mr. Clouting, Thetford; Mr. Wynne, Nottingham; Mr. Buckland, London; R. G. B.; Elder, London; Surgeon, London; W. T., Manchester; Inspector of Poor, Orkney; H. C. S., London; Alpha, Birmingham; Letture Scientifische, Geneva; Lorna, London; C. R., London; Surgeon, East Dulwich; 246, Commercial-road, Peckham; Fides; Surgeon, Rhondda Valley; J. S. R., Sandwich; 1, Richmond-place, Manchester; South Yorkshire, London; Leeds, London; Oldfield; Secretary, Orkney Islands; J. G., Tenbury; X. Y. Z., London; H. B., London; M.D., Birmingham; G. W. M., London; M.B., Birmingham; Vendor, Birmingham; Binaural, London; H. T. G., London; Alpha, Bournemouth; Surgeon, Liverpool; Medicus, London; East-end; H. W. H., Leeds; A. A. L., London; Delta, London; A. C., London; Borough, Malvern; Sylvanus, London; M.B., Chard; A. B., London; Studens Latinus, London; Zion, Antrim; J. A., London; X. L., London; Public Health, Edinburgh; Medicus, Margate; Medicus, Newark.

NEWSPAPERS.—*Cork Constitution, West Sussex Gazette, Birmingham Post, Manchester Guardian, Belfast News Letter, Bristol Times, Surrey Comet, Teesdale Mercury, Leicester Post, Kilkenny Journal, Sheffield Daily Telegraph, Leeds Mercury, Architect, Liverpool Daily Post, Spectator, Metropolitan, Surrey Advertiser, Law Journal, Guy's Hospital Gazette, Builder, Pharmaceutical Journal, City Press, Mining Journal, Bury Free Press, Cheshire Examiner, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Retford and Gainsborough Times, Carlisle Journal, Hebden Bridge Times, Belgian News (Brussels), Sanitary Journal, Windsor and Eton Express, Hertfordshire Mercury, Argosy (Georgetown, Demerara), Zoophilist, Bolton Weekly Journal, Ilfracombe Chronicle, Journal des Etrangers, &c.*, have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

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Agent for the Advertisement Department in France—J. ASTIER, 46, Rue Caumartin, Paris.

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Clinical Lecture

ON

CHRONIC ENLARGEMENT OF THE TESTICLE.

Delivered at University College Hospital, Oct. 13th, 1890,

BY CHRISTOPHER HEATH, F.R.C.S.,

HOLME PROFESSOR OF CLINICAL SURGERY.

WE have had lately, gentlemen, a large number of cases of chronic disease of the testicle; in fact, at the present moment we have three such cases in the wards, and I therefore take the opportunity of saying something on the subject.

In the first place with regard to the diagnosis; when you get a large scrotum before you, the first thing is to examine it carefully and see whether it is simply an enlarged testicle or whether there is anything else. You will therefore follow the rule, which I have so often impressed upon you, to examine the spermatic cord and see whether there is anything more than the cord protruding from the abdomen—whether, in fact, there is not a hernial protrusion. If there is nothing of that kind, and if the tumour is clearly in the scrotum, you will then proceed to examine the cord a little more critically, with the view of making out what is the exact condition of the vas deferens, because it is as well to ascertain that before you proceed to examine the testicle at all. If you find the vas deferens enlarged, then comes the question, Is that an enlargement which has spread from the urethra downwards to the testicle, or is it an enlargement spreading upwards from the testicle towards the body? A good deal will depend upon the history of the case. If you find that the individual has had acute epididymitis, generally following upon gonorrhœa or, at all events, some urethral irritation, which has subsided and has left a thickening of the cord behind it, the case is pretty obvious. You would expect to find, when you examine the testicle, that a thickened vas deferens leads down to an enlarged epididymis; and that is a very common condition of things, but one which is often misunderstood, because it is not remembered that the disease spreads from the urethra downwards to the testicle in a great many cases. You may not have seen the case in the acute stage, but there is the chronic thickening left; and pray remember that there are plenty of cases of urethral irritation, stricture, or what not, where there is an enlargement of the vas deferens spreading down to the epididymis and causing its enlargement.

In such a case it is of no use treating the symptoms; what you have to do is to treat the cause, to put the urethra in a healthy condition, and the testicle will almost take care of itself. But sometimes it does not, and then you have to treat the testicle. These cases of chronic enlargement of the testicle due to local causes are comparatively easy to treat. You can strap the testicle carefully or rub in a little mercurial ointment, or in very obstinate cases, and particularly where the body of the testicle has already become enlarged, you may find it necessary to give a course of mercury before you clear up the effusion which has taken place in the testicle itself. It is an inflammatory effusion between the tubes of the testicle due to inflammation spreading down along the vas deferens, and of course, if it has gone on for any length of time, it may become to a certain extent organised, and it will never entirely clear up. Still, no harm comes of it; it remains there very much *in statu quo;* and if you get the urethra into a healthy state, the testicle will probably give the patient no trouble. But the condition is very different when we find the cord very much thickened and we trace it down and find that the epididymis is evidently the primary seat of disease. Of that we have examples at the present moment in the ward.

There is a young fellow, whom I will show you presently, who has a beautiful example of a single nodule of tubercle in the epididymis. There are also two patients whose testicles I have removed, and they are good examples of a much more advanced disease of the epididymis spreading up eventually to the body. You will remember that in each case—both patients are still in the ward—I have removed the more seriously diseased testicle; but there is, unfortunately, another testicle left which is also diseased, and with which I have dealt in a manner that I will explain presently.

Tubercle of the testicle is a disease which appears in the epididymis, and which tends to spread in both directions, upwards along the vas deferens, and forwards to the body of the testicle, and will lead eventually to the disorganisation of the body of the testicle. It is, of course, a deposit of tubercle in a patient who has a tendency to that disease, and it is a disputed point whether the mischief begins in the intertubular or in the intratubular structures. I myself believe that it is within the tubes that the disease begins, and I think the proof of it is how readily it spreads from the tubes up the vas deferens and in the opposite direction along the tubuli seminiferi from the globus major to the body of the testicle, and affects all parts of the organ. However, it is a disputed point, and it is not necessary to labour it; but I think that clinical evidence is distinctly in favour of the mischief beginning within the tubes. No one doubts that it begins in the epididymis first, and, as I say, it spreads both ways. In one of the testicles which I removed, and which I show you, we have an example of disease developing in the epididymis and running on to abscesses; but you will see that the body of the testicle is still perfectly healthy, whereas in this other testicle, so far from the body being healthy, the greater part of it is outside the skin altogether, forming what we call a benign fungus or hernia testis.

This disease beginning in a patient with a tendency to tubercle is very often not recognised until there are distinct knots in the epididymis. The patient has no pain, and does not particularly notice it until his attention is accidentally called to it, and then he consults his medical man. In the early stage of the disease, such as in the young man I have mentioned, I think there is no doubt that, under very favourable circumstances, absorption may take place; the whole thing may clear up, and the testicle be practically restored to a healthy condition. But you require exceedingly healthy conditions for that. A hospital, I need hardly say, is not the very best place for these cases, and the patients cannot from their pecuniary position take every advantage with regard to their health. But when you have patients of the better class, and you find that a young fellow has one nodule in his testicle, or perhaps two, the proper line of treatment is to send him for a voyage—I mean a voyage to the Antipodes, to Australia, and in a sailing ship. He should be put under the most favourable circumstances as regards hygienic arrangements—I mean the thing should not be done cheaply, but he should go in a good ship, where he will have a good berth and plenty of good food. You may then find that after he has been away six or eight months he will come back, and the nodule may have disappeared. If you get a patient under circumstances which do not admit of such treatment as that, what is the best thing to be done? It may be said that the best thing would be to remove the testicle. But then you will find that people do not like having their testicles removed, and it is rather a severe operation for a disease which certainly at the moment only affects a very small portion of the organ I propose, therefore, in the case of this lad, next Wednesday to cut down upon the nodule in his epididymis and scoop it out very much in the same way as you saw me the other day treat the opposite testicles to both of these, in the two patients who are still in the ward. I removed the worst testicle in both cases and scooped out the nodules of tubercle in the better one, and fortunately this youth has only one testicle affected. But then you may say, "Surely the damage done to his epididymis will prevent that testicle being of much service afterwards." Very likely it may; still there is something satisfactory in keeping a portion of the testicle. An individual is not emasculated, although his testicle may not be of very much use to him, if he has a portion of the body of the testicle left. I will not say that he is capable of propagating his species with that testicle, and perhaps it is as well that he should not; still, he has the feelings of a man, and, as I say, he is not emasculated. There is another advantage that he gets from scooping out the mass in the epididymis: that any secretion taking place in the body of the testicle will find a vent either through the natural tube, or it may be through a small sinus. That is a point of importance, because patients who have nodules in the epididymis blocking it up completely get an uncomfortable feeling of fulness about the testicle, due no doubt to secretion going on in the body of the testicle and not being able to find its

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way out. The testicle is apt to get enlarged, swollen, and distended with seminal fluid, and unless there is a vent for it the patient suffers a great deal.

Then, supposing that we have a case more advanced than that. Let me remind you that the disease spreads up the vas deferens, and that in cases where you have abscesses forming in the epididymis the tendency of the disease is to spread up along the cord towards the urino-genital organs, especially towards the neck of the bladder, and to form one or two nodules in the prostate, to invade the vesiculæ seminales, eventually, in the later stages, leading to most painful ulceration about the neck of the bladder. Let me remind you of the case of a man we had here from South Wales at the beginning of the session. He had both testicles even more advanced in disease than these are. On examining the rectum with the finger, I found he had most extensive disease about the neck of the bladder. The prostate was diseased and the vesiculæ seminales, and altogether the man was in such a low condition that I refused to operate on him, and sent him home again. I am quite sure I did right. If I had done anything for that man probably he would have died, but now he will go home and die among his friends, instead of dying here as the direct result of an operation.

Here is the testicle of the man in whom I did interfere. This testicle was practically disorganised. Let me remind you that the opposite testicle had a large mass in the epididymis, and I ventured to treat that by cutting down through the opening made for castration upon the epididymis and scooping out all the disease I could find. He has done very well, except that he had an abscess in his inguinal canal, I have no doubt from the height at which I tied the cord. That I opened last week, and the patient is now doing exceedingly well, and seems likely to make a good recovery. This is a good example of the disease creeping up the cord without affecting the body of the testicle at all, for I may point out to you again that the body of the testicle is perfectly healthy. Here we have a specimen from the last case, which I operated upon last Wednesday, with another condition of things. This man had disease spreading up the cord, for the vas deferens is enormously thickened; but unfortunately he had the disease creeping forward in the body of the testicle, setting up suppuration and leading to the destruction of the tunics, and eventually to protrusion of this mass, which is made up of the seminal tubes, together with some granulation tissue. Let me point out how completely the whole body of the testicle is outside the skin, forming this fungus, whilst behind we have really nothing more than the epididymis. Now, under those circumstances, there could be no question about removing it. I removed this testicle, and I dealt with the opposite testicle in exactly the same way that I dealt with the former one—namely, I cut down upon the epididymis and scooped out all the disease I could find there. That patient also is doing well, but unfortunately he has some enlargement about his prostate and vesiculæ, though not so advanced but that I thought I should be justified in doing the best I could. I am afraid I have not cured him, though I am sure I have given him relief, and he may tide on for some considerable time.

Now let us follow in imagination what will be the outcome of these cases. Very probably they will each have a fistula left in the scrotum. That is a very small matter, and can be treated by injections if you like, but I do not know that there is any very great object in troubling about it. But I am afraid there is in one of these cases already disease about the prostate and vesiculæ which will steadily make progress, and probably before many months are over the patient will complain of a good deal of pain when he micturates, and he may have great frequency of micturition, and the two things together will wear the patient out. It is one of the most trying conditions a patient can be in to have tubercular disease about the neck of the bladder, which leads eventually to ulceration of the mucous membrane of the bladder. In fact, the two diseases go on together; and sometimes perforation takes place, and then we have in addition the annoyance of a urinary fistula. At other times that does not take place, and the patient goes on until he is worn out by the constant suffering.

I need hardly say that in a case of advanced tubercular testis you would find other organs almost certainly involved. Now, this man from whom I removed the fungus testis is a man of forty. Since the operation he has spat some blood, and we knew that he had some consolidation of the apex of his lung. Very possibly the disease in the lung may make more rapid progress than the disease in the testicle, and he may die from the disease in his lung, which perhaps will be the more merciful death of the two. Still, I think we give him relief for the time, and we get rid of a certain amount of disease; and supposing that had been the only disease, we should have had the great advantage that we should have got rid of the nidus of tubercle before it became generalised through the system. You see in the bottles here specimens of tubercular testis which show extremely well, because they have been injected with fine injection. The injection does not run into the tubercular masses, therefore the contrast between the red injection and the yellow tubercle is well seen.

To come to another subject, and that is the syphilitic testicle. Of late years syphilis has been found to have a much more important bearing upon disease of the testicle than used to be supposed. If you read the older books, you will find that a great many of the cases which are put down as chronic orchitis are clearly from the history of the cases syphilitic disease. It is only comparatively recently that the two forms of syphilitic disease have been recognised. There is the secondary and there is the tertiary. The secondary form is one of the later manifestations of secondary syphilis; so that when the eruption on the patient's skin has died away, and he fancies himself quite well, he notices that both his testicles are beginning to enlarge. When I say both, possibly one may have a little start of the other, but it is common to find both of them enlarged. You find that the enlargement is very general, and that it clearly begins in the body, and you have a uniform enlargement obscuring and hiding the epididymis completely. When you feel the cord you find it is quite healthy, and there is no mischief spreading up it. The disease is entirely confined to the body of the testicle, and not infrequently is complicated by a small hydrocele. Now, pray remember, when you get a patient before you with a large scrotum, and you find there is distinctly fluid there, that there may be something more behind. It may be a case of pure hydrocele, or it may be what is termed a "hydro-sarcocele," and these hydro-sarcoceles are almost invariably syphilitic. If there is any amount of fluid it is well to tap the hydrocele at once, in order that you may be able to examine the testicle more readily. You will find then, as I have said, that there is a uniform enlargement of the body of the testicle, and that the epididymis is not affected, or is so rarely affected in syphilis that you may practically ignore it.

These cases are remarkable for having completely lost that peculiar testicular feeling, as it is called, which is characteristic of the healthy organ. If you take a healthy testicle and squeeze the body of it, the patient will naturally feel an uncomfortable sensation, which we are all familiar with if we happen to give our testicles an accidental squeeze. But the patients with these large testicles have no sensation whatever. You may handle them or do anything you like, and the uniform absence of testicular feeling is very remarkable. On investigation you will always find that some two or three years before the patient has had syphilis. Very likely he was properly treated, but still there is a remnant of it hanging behind; and you must make up your mind that you will not cure that form of testicle without mercury. It is of no use to give iodide of potassium alone; you must combine it with mercury, but I think the best plan is to give the mercury in the form of bichloride. At the same time, you may let the patient rub in some mercurial ointment by wearing a scrotal bag and smearing the scrotum with mercurial ointment. Some of these patients, although they have no testicular feeling, have a great deal of tenderness about the testicle, with a sense of weight or dragging, which may be relieved by combining belladonna ointment with the mercurial ointment. There are no cases more satisfactory for treatment than these purely syphilitic testicles. You may be sure that you will cure the patient—that is to say, you will bring the testicle down to about its normal size. But I cannot say that you will be equally sure of restoring the function of the organs, because it may happen that this inflammatory deposit between the tubules may have gone to such an extent that it has become organised into a low form of fibrous tissue; and although you will clear away by means of the mercury all the recent deposit, you may not be able quite to clear up the whole of the fibrous tissue, and that has a tendency to contract and produce atrophy of the testicles afterwards. You will find in the older books that the authors speak there of fibrous disease of the testicle.

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But then surgeons did not recognise that that was simply a late stage of syphilis; and there is no doubt that if the deposit has had time to thoroughly organise, the pressure may be sufficient to destroy the tubules, and practically the testicle will be lost. That is the form of syphilis which it is most important to distinguish from new growth; for a youngish man may come before you with a large testicle, and it may be a case of sarcoma, and it is not at all easy always to be sure which disease it is. A good deal will depend upon the history. If there is a distinct history of syphilis, you may, at all events for the time being, give the patient the benefit of the doubt, and hope that it is syphilis, which you may clear up by mercury. If you are in doubt, it is better, unless the tumour is rapidly growing, thereby showing its malignant nature, to give the patient a course of mercury than to remove his testicle unnecessarily. But of course if you have a rapidly growing tumour of the testicle, the sooner you remove it the better—there is no question about that; whether it is sarcoma or carcinoma, it is better for the patient that it should be taken out.

Then supposing we have a later stage of syphilis. Of course in the later stages we have what is familiarly known as gummatous deposit—that lowly organised form of deposit that we find so common in various organs, and particularly those which are vascular. If you think for a moment how vascular the testicle is, you can easily understand how we may have large gummatous deposits in the organ. Here is an example. It is an injected testicle, but the injection has not run very well, and you can see above and below a large mass of yellow tissue which is a syphilitic deposit. Here also is a good example of a large gumma filling up the body of the testicle in two sections, one above the other. This occurs, of course, very much later on in syphilis. You find that the patient has been in good health and getting on perhaps in life, but his health breaks down a little, and he begins to show manifestations of tertiary syphilis in various organs. That is one way in which it occurs, but you may have it quite at the other extreme of life—in children. A syphilitic child will sometimes develop a gumma in the testicle which is apt to be mistaken for malignant disease, because we know that malignant disease also occurs in quite young children, and it is very difficult sometimes to be sure which it is. The tendency of a gumma in the testicle, like a gumma in the tongue or anywhere else, is to break down. You may only see the patient when the gumma has broken down, presenting very much the appearance of an abscess, and involving the skin; or if you see it late enough, the skin may be already open and presenting the characteristic yellow slough which we see so commonly in connexion with gummata. We had a good example of it here last summer. I do not know whether you remember it, but I remember the man extremely well. He had double syphilitic disease of the testicle and a sinus and discharge from the gumma in one testicle. The whole thing cleared up under the influence of large doses of iodide of potassium, and he was here the other day perfectly well.

Now, given a case where you have reason to think it is a gummatous deposit, there can be no question as regards treatment. But it is not always easy to be quite sure. I may say at once that I had a patient here some few months ago in a private ward, who had a tumour of the testicle and also a tumour of the arm. He came to my house first, and showed me his testicle, which I thought was syphilitic. I quite made up my mind, and wrote in my notes that it was syphilitic, but just as he was going away he showed me his arm. It looked so like a sarcomatous growth upon his arm that I was shaken in my opinion, and rather came to the conclusion that it was a sarcomatous disease of the testicle, and that he had a secondary sarcoma forming on his arm. He was a very intelligent man, and utterly denied anything like syphilis. He acknowledged that he had had some venereal troubles many years before, but utterly denied that he had ever had anything like syphilis. I took him into a private ward in the hospital, and advised him to have the testicle removed, and there could not have been a more typical gumma of the testicle than there was in that case. It was so good that I took it to the College of Surgeons to be mounted in a bottle, in order that we might have a well-marked undoubted specimen of gumma of the testicle to examine upon. The moment I found the patient had gumma of the testicle, of course it was quite clear what ought to be done for his arm. I put him on full doses of iodide of potassium, and the whole gumma cleared up, and I know that he is now in perfect health. I do not think he was much harmed by losing one testicle. It was a damaged testicle, and most likely it would have shrunk up and become merely a nodule; for this disease of the testicle when it shrinks up is apt to lead to extreme atrophy.

This brings me to say a word about sarcoma, though we do not happen to have had a case very lately of sarcoma of the testicle. Until late years sarcoma was not differentiated from carcinoma, and therefore all the older cases of sarcoma are put down as cases of carcinoma. Sarcoma of the testicle exists in the form of round-celled or spindle-celled, but is more generally, I think, of a mixed variety; and you will find that it is a rapidly growing tumour which has a tendency to form cysts, and that is important, because these cysts in the testicle in former days used to be called cystic disease of the testicle. There is no doubt that most cases of so-called cystic testicle are really cases of sarcoma with cysts developed; and the cysts seem to be developed very much as renal cysts are from obstruction of the tubules. The tubules cannot empty themselves because of the sarcomatous growth pressing upon them, and thus they become distended with their secretion, and form a series of cysts. Now a rapidly growing tumour of the testicle of that kind cannot be removed too soon; the thing should be done without any hesitation at all, and yet you never can guarantee that the patient shall not have further trouble. I remember an officer from India a few years ago from whom I removed a testicle which was distinctly cystic, but which was also sarcomatous. He got perfectly well and went back to India, but died within two years with growths in the neck and chest, and with just the ordinary history of sarcoma developing in other parts of the body. The form of cancer that you meet with is generally encephaloid. Scirrhus is extremely rare, but encephaloid cancer is not very uncommon. In these cases of encephaloid cancer we have very rapid growth; there is also a tendency to fungate, and the fungus is the true fungus hæmatodes of the older surgeons, by which I mean a large bleeding mass protruding from the scrotum, very different from the benign fungus, which is perfectly callous, and does not bleed at all. It is a great misery to the patient, and tends of course to shorten his life by the irritation which it sets up. In these cases of malignant disease the great tendency is to deposit in the glands higher up. You find the whole cord thickened and the glands in the lumbar region involved. You ought to remove these testicles in all cases as soon as you see them. Still, you may be pretty sure the patient will die some months afterwards from deposit in the internal organs.

ABSTRACT OF

The Lettsomian Lectures

ON

ANÆMIA, ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London, 1891,

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,
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LECTURE I.

MR PRESIDENT AND GENTLEMEN,—It has seemed to me that the time has come when the careful and detailed work on anæmia which has been accomplished in the last few years by many able observers, both in this country and abroad, may be usefully brought together, and thus allow of our taking a comprehensive view of the whole subject. This necessitates my commencing with some elementary details, with which you are familiar; but unless we agree upon what is to be regarded as the normal condition of the blood, and its beginnings and endings, we cannot indicate what are departures from it. Whether regarded as an internal medium or as a tissue, a mechanism exists, in ordinary circumstances, whereby the blood maintains a standard, both as regards its quantity and quality. Unfortunately we have no clinical means of estimating the quantity of the blood, and we are obliged to accept the physiological teaching that in

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man it generally represents about one-thirteenth of the body weight of the individual. The blood is composed of formed elements floating in a fluid—the plasma.

The *plasma* is a clear fluid consisting of fibrine, or fibrine factors, and serum. It is alkaline in reaction, owing to the presence of disodic phosphate, and sodium of bicarbonate. V. Jaksch has recently shown that its alkalinity is diminished in pernicious anæmia and leucbæmia. The serum has a specific gravity of from 1026 to 1029, whilst the specific gravity of the blood as a whole ranges from 1035 to 1075. Dr. Lloyd-Jones[1] has lately made some observations on the specific gravity of the blood, showing its variations at different ages, and the influence of food and exercise. It is probable that marked alterations in the specific gravity of the blood exercise an influence on the red corpuscles. In pernicious anæmia the specific gravity of the blood is usually between 1028 and 1038. In anæmia, in its higher grades, there is a marked diminution in the albuminous constituents, especially the hæmoglobin, of the blood.

The coloured or red blood-corpuscles.—They have in the adult an average size of 7·5 μ (micro-millimetres), but their range is between 2·5 μ and 14 or even 16 μ. To the smallest of these the term microcytes has been applied, and to the largest megalocytes. The size of the red corpuscles is influenced by age, and is markedly altered in disease. They vary also in the amount of hæmoglobin they contain. Nucleated corpuscles, which exist in the embryo, are probably never found in the blood in post-embryonal life except as the result of disease. The number of red corpuscles in health varies from 5,500,000 to 4,000,000 per cubic millimetre, or from 110 to 80 per cent., being lower in the female than in the male.

The sources of the red corpuscles.—Passing by their origin in the embryo, their sources after birth are practically confined to the bone marrow, the spleen, and perhaps the lymphatic glands. Their chief source is the marrow. As to their mode of origin in the marrow there is considerable dispute. By many it is believed that they take their origin in the parenchyma—either from marrow cells (Neumann, Osler, and others), or from leucocytes (Kölliker, Malassez, Gibson, and others), whilst Bizzozero and Torre, and more recently Denys, maintain that they arise entirely within the vessels of the marrow. Gibson,[2] who has studied the question very carefully, states that they arise from marrow cells, or leucocytes brought to the marrow, and that the earliest stage is a cell which has at first a thin ring of protoplasm containing hæmoglobin at its periphery. This gradually increases so as to fill the whole space between the cell envelope and the nucleus; and as the hæmoglobin-tinted peri-nuclear substance increases in amount, the nucleus appears to become smaller and to retreat towards the centre of the cell; the cell, as a whole, at the same time becoming smaller. He believes that the nucleus is the active agent in attracting the hæmoglobin to the cell, and that when this function is fulfilled it disappears. Osler[3] believes that the nucleated red corpuscle is derived from the clear-bordered marrow cell, there being, in his opinion, no essential difference between the protoplasm of the two cells. He thinks the colourless marrow cells are derived from small lymphoid elements resembling free nuclei (primary lymph cells—proto-leucocytes). Osler further believes in the development of red corpuscles from myelo-plaques and from the elongated cells of the stroma; in the latter supporting the observations of Schäfer. Bizzozero in a recent paper[4] has gone over the ground which he has previously explored, and insisted so strongly on certain points capable of verification that I have obtained the assistance of Dr. James Galloway to institute some investigations on the development of the red corpuscles from the marrow. These have been made on the marrow of fowls. Great importance is attached to the examination of fresh marrow, simple hardening in Müller's fluid, and examination of unstained sections; but great advantages are also obtained from staining sections by various dyes after hardening in corrosive sublimate, then in alcohol diluted with an equal volume of a 1 per cent. solution of chloride of sodium, and ultimately in absolute alcohol. It is insisted upon that to obtain a knowledge of the sources of the developing blood-corpuscles *sections* must be examined. The observations that Dr. Galloway and I have made agree with those of Bizzozero, that no hæmoglobin-tinted cells are to be found outside the lumen of the blood-vessels. The vascular arrangement of the marrow is peculiar. The arterial and venous trunks are situated in the axis, and the venules converge from the periphery to the axis like the spokes of a wheel. So great a disproportion exists between the calibre of the small arterial capillaries and the large venules that the circulation in the latter must at all times be very slow, and thus favour the developmental changes in the venules. Moreover, as many observers have demonstrated, but which, owing to the restrictions placed on experimental researches on animals in this country, we have been unable to verify, in animals made anæmic by repeated bleedings the yellow marrow is converted into red marrow. This is caused chiefly by absorption of the fat cells and a great dilatation of the venules. In healthy animals to some extent, and in a far more marked manner in anæmic ones, the corpuscles in the venules of the marrow presents an arrangement not observed in other parts of the body. In the axis of the venules are fully developed red corpuscles; between these and the periphery of the vessel are found two kinds of cells, leucocytes in greater numbers than are found in other veins of the body, and young red corpuscles distinguished by their round or slightly oval form and the character of their protoplasm and nucleus, many of which are undergoing indirect divison (karyokinesis). To those developing red corpuscles the name of "erythroblasts" has been given. It is stated by Bizzozero that in anæmiated animals three zones may be readily made out—a central one, of fully developed red corpuscles; a peripheral one, of leucocytes and erythroblasts; and a large middle zone, of greatly increased numbers of erythroblasts. Denys[5] has made similar observations, but he and Bizzozero disagree as to the nature of the erythroblasts. Denys asserts they are destitute of hæmoglobin, and are transitional forms between leucocytes and red corpuscles. Bizzozero, on the other hand, maintains that Denys' observations are founded on error, owing to his methods of hardening and staining depriving the erythroblasts of their hæmoglobin colouring matter. My own and Dr. Galloway's observations go to confirm Bizzozero, and by examining sections simply hardened in Müller's fluid, or stained by means of Müller's or Foa's reactions, one may convince himself that the erythroblasts at all stages really contain hæmoglobin. To summarise Bizzozero's conclusions, with which our own observations agree, it may be stated as regards the marrow: (1) That blood formation is entirely *endo-vascular;* (2) that the young red blood-corpuscles arise from pre-existing red corpuscles; (3) that they arise by a process of indirect division (mitosis). Colourless corpuscles also arise by mitosis from the cells of the parenchyma and from leucocytes within the venules of the marrow. Bizzozero has years ago shown that the development of red corpuscles in the marrow is the same in all vertebrata as in birds. All observers are agreed that the nucleated red corpuscle is the immediate precursor of the fully developed non-nucleated red corpuscle. There are still differences of opinion as to the process by which the nucleus disappears, some believing with Rindfleisch that it is extruded from the cell; others, with Kölliker and Neumann, that it undergoes disintegration. No satisfactory explanation is afforded of how the young cell eventually acquires its characteristic discoidal form on the theory that the red corpuscles are developed from leucocytes. If, however, it is admitted that they are developed from pre-existing red corpuscles, this is easily understood as a consequence of their ultimate and complete development.

Blood-forming functions of the spleen.—The spleen appears to take but little share in the formation of red corpuscles in health, but its latent capacity appears to be called into activity in some cases of anæmia. This has been shown by Bizzozero and Salvioli, and more recently by Gibson. The *lymphatic glands* also appear to have, according to Gibson, slight powers of generating red corpuscles, but there is no convincing evidence that the thyroid body has any such function.

The seats of destruction of red corpuscles (hæmolysis).—Large numbers of red corpuscles are being constantly destroyed in the formation of bile, urinary pigments, and other colouring matters derived from hæmoglobin. The chief seat of destruction is within the portal system, and

[1] Journal of Physiology, 1887.
[2] On Blood-forming Organs and Blood-formation: Journ. of Anat. and Physiol., vol. xx., 1886.
[3] Cartwright Lectures: Brit. Med. Journ., vol. i, 1886.
[4] Archiv für Mikroskopische Anatomie, Band xxxv., Heft 4, S. 424.
[5] La Structure de la Moëlle des Os et la Genèse du Sang chez les Oiseaux La Cellule, tom. iv., fas. 1.

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outside this in the bone marrow. The difficult problem of blood destruction has been very carefully studied by Dr. William Hunter.[6] He has shown that it is of two kinds: (1) *Passive destruction*, the ultimate destiny of the red corpuscles which live their alloted span of life—it is characterised by the large size of the pigment granules, which are always contained in leucocytes in the capillaries, and never in the hepatic cells; (2) *active destruction*, in which the hæmoglobin escapes from the corpuscles into the plasma and is secreted from the liver cells, in which it may be found, especially in the portal zone. Where *active* destruction takes place is still disputed. Hunter believes that it occurs in the gastric, intestinal, and splenic radicles of the portal vein, but Mott[7] and Schäfer have lately thrown doubt on the share taken by the spleen. In the spleen, marrow (and lymphatic glands?) are found "blood-corpuscle-holding cells," in which are found red corpuscles undergoing disintegration.

The colourless or white blood-corpuscles (*leucocytes*).—Many additions to our knowledge concerning the white corpuscles have been made in recent years, especially by Ehrlich.[8] It has been shown that the white corpuscles differ much amongst themselves—certainly as regards their morphological characters, and probably as regards their physiological functions. They take their origin from lymphatic structures, the spleen, and the marrow. In severe anæmia Ehrlich has shown there is an increase of the poly-nuclear, and later of the mono-nuclear leucocytes. They ultimately undergo disintegration, forming "elementary granules."

Blood platelets.—As many theories have been advanced regarding these formed elements as the bodies themselves have received names. They cannot all be regarded as artificial, as they have been seen by several good observers in the flowing blood where care has been taken to guard against injuries to the blood and bloodvessels. Hayem and Pouchet believe them to be developmental forms of red corpuscles, but the majority of observers regard them as broken-down red or white blood-corpuscles. They are markedly increased in most forms of anæmia, especially in the primary anæmias.

Hæmoglobin.—It is shown that whilst in health there is generally a fixed relation between the amount of hæmoglobin and the number of red corpuscles in the blood, this is liable to be disturbed in disease. Dr. Osler[9] has well summarised the variations that occur: "(1) In chlorosis the hæmoglobin is reduced out of proportion to the number of corpuscles, so that the individual worth of each red corpuscle in colouring matter may be greatly lowered. Thus, the true anæmia (or functioning properties of the blood) may be very much greater than the number of corpuscles per cubic millimetre would indicate; (2) in ordinary anæmia, from hæmorrhage or organic disease, the average worth of hæmoglobin of each corpuscle usually remains unaltered, and the percentage of colouring matter corresponds with the percentage of corpuscles; (3) in certain cases of pernicious anæmia the interesting fact has been ascertained that the percentage of hæmoglobin is increased, and the anæmia is in reality not so great as the reduction in the number of corpuscles would appear to indicate."

Having now considered the blood in health, we are in a position to discuss the departures from this standard, in so far as they relate to anæmia. Anæmia may be defined as a diminution of the quantity of the blood, of its corpuscles, or of its colouring matter. To the first the term "oligæmia" is applied, to the second "oligocythæmia," and to the third, "oligochromæmia." They all have this in common: that they indicate "a poverty of the blood in normal functional red corpuscles" (Cohnheim). We have seen that there is a constant using up and building up of blood. In health a balance is maintained. In anæmia there is a failure of adjustment between the gains and the losses, a want of balance between the income and expenditure. Until recently so little was known concerning blood formation and blood destruction that it was difficult to say where we should look for evidence as to which of these processes was at fault. Our knowledge is now reaching that point where we can make defective hæmogenesis or excessive hæmolysis the basis of our pathology. Anæmia may depend upon excessive destruction of red corpuscles, so that the blood-forming powers are unable to compensate for the loss. On the other hand, the blood-forming capacity may be defective, and not keep pace with even a normal degree of blood destruction. Or, lastly, defective hæmogenesis and excessive hæmolysis may each be in operation, and each aggravate the effect of the other. Defective hæmogenesis is indicated during life by the characters of the blood-corpuscles, especially their deficiency in hæmoglobin, and after death by the condition of inactivity of the cytogenic organs. Excessive hæmolysis is indicated by the characters of the blood during life, in the excessive secretion of dark bile, and the excess of pigments (urobilin) and iron in the urine, and post mortem by the evidences of excessive active destruction of blood, in the liver and kidneys especially. Defective blood formation may be due to a great variety of causes: insufficient quantity or unsuitable quality of food; failure of the masticatory, digestive, or assimilative powers; unfavourable hygienic conditions; the presence of growths intercepting the material for blood formation; and failure, congenital or acquired, of the cytogenic organs. Excessive blood destruction may be due to the processes of fever and inflammation, or to the presence of deleterious matters in the blood acting upon and destroying the red corpuscles.

Anæmia thus depending on such a variety of causes, it becomes necessary to arrange the cases in some order, and the classification which clinical convenience and pathological propriety suggest, and which I shall adopt, is into (1) Secondary and Symptomatic Anæmia, (2) Primary and Idiopathic Anæmia.

In Secondary and Symptomatic Anæmia we have conditions in which the blood deficiency is not the essential characteristic of the disease, and in which there are other symptoms present which are not explained by the existence of the anæmia. In Primary and Idiopathic Anæmia, on the other hand, the anæmia constitutes the main characteristic of the disease, and the other symptoms are all dependent upon it. Dr. Hunter[10] has well defined what characterises an idiopathic anæmia. Dr. Pye-Smith[11] would make a third division of cases of anæmia, "formed of all cases of anæmia associated with disease of the cytogenic organs, whether or not leuchæmic." These, which undoubtedly form, clinically and pathologically, a compact group, should, I think, be included under idiopathic anæmia. In leucocythæmia there is not only a great excess of colourless corpuscles, but a marked deficiency of red corpuscles, to which many of the symptoms are due. As long as the question of the origin of the red corpuscles from the white is unsettled it is difficult or impossible to decide upon the relation of these changes. If, as many believe, the red are transformed colourless corpuscles, an arrest of development is a ready explanation. If, on the other hand, as seems to me more probable, all red corpuscles arise from pre-existing red corpuscles, this inviting hypothesis is no longer tenable. I would merely draw attention to one point which appears to me to militate against the view that the deficiency of the red corpuscles is due to a non-transformation of colourless into red corpuscles, and this is the condition of the marrow. In leucocythæmia the marrow is usually in a condition of hyperplasia, which is favourable for the production of colourless corpuscles, especially of the "eosinophile leucocytes," which Ehrlich has shown are always increased; but, growing as this does at the expense of the bloodvessels, it is unfavourable for the production of red corpuscles, which we have seen are formed in the venules. Somewhat similar arguments might be used regarding "anæmia splenica," "anæmia lymphatica," and "anæmia myelogenica."

Thus, I consider all cases in which anæmia is not symptomatic should be regarded as idiopathic. The term "idiopathic anæmia" was, as is well known, first applied by Addison to that form of anæmia of which he gave such a masterly description. Others besides myself[12] have urged that it should be restricted to the class of cases described by Addison. The progress of our knowledge, in my opinion, now renders it advisable to enlarge its meaning so as to embrace all primary anæmias, and to use it as a generic term, including several species. Of those species two are well defined—chlorosis and the form described by Addison, which has by common consent come to be called "pernicious anæmia," and which name I now think it is useless to resist. Probably besides these two species there are other distinct forms of idiopathic anæmia, to which I shall have occasion to allude in subsequent lectures.

[6] Arris and Gale Lectures: Brit. Med. Jour., vol. ii. 1889.
[7] Practitioner, Aug. 1890.
[8] Zeitsch. für Klin. Medicin., Band i., 1880, S. 553.
[9] Cartwright Lectures: Brit. Med. Jour., vol. i. 1886, p. 862.
[10] Is Pernicious Anæmia a Special Disease? Practitioner, August, 1888.
[11] Guy's Hospital Reports, vol. xxvi.
[12] THE LANCET, vol. ii. 1878, p. 797.

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ON THE

STENOSIS OF THE TRACHEA AND LARYNX WHICH OCCASIONALLY FOLLOWS THE USE OF A TRACHEOTOMY TUBE;

WITH REMARKS ON THE PRESENT POSITION OF INTUBATION.[1]

BY BERNARD PITTS, M.C. CANTAB., F.R.C.S. ENG.,
AND
WILLIAM F. BROOK, F.R.C.S. ENG.

THE main object of this paper is to illustrate some of the causes which may prevent the return to the natural channel for breathing—after the use of a tracheotomy tube for a prolonged period—and to draw attention to the treatment of such cases. Most frequently the difficulty arises from a want of confidence on the part of the patient, and by a little encouragement and by the use of a tube with an upward opening it is easy to overcome this very common trouble. In the four cases we narrate the obstacle to natural breathing was some form of definite mechanical occlusion of the upper part of the trachea or of the lower laryngeal aperture. Such real obstruction is, fortunately, not of common occurrence, and the difficulty of overcoming it is very great, and in some cases insuperable. Some lessons may, we think, be learnt from a study of these cases. At any rate, we feel that we have gained experience, and are in a position to deal with any future cases with more precision and with quicker success. Tracheotomy in young children is usually performed high, and the cricoid is probably often divided. Unless the tube happens to fit the particular case exactly, a good deal of irritation of the back of the trachea, or even of the lower laryngeal aperture, is apt to be occasioned by the angle of the tube. The tube rarely fits comfortably if the cricoid has been divided, and it seems important to avoid this division if possible. No doubt much friction by this part of the tube is occasioned by movements of the larynx in swallowing and by restlessness on the part of the patient, and this friction would be greatly diminished if a tube with a movable collar, such as a Durham's tube possesses, were more universally adopted. Unless there be allowance for variation, a tube which fits well in a child of a certain age will be most unsuitable for a child of the same age, but with a more deeply placed trachea. At Great Ormond-street Hospital an ordinary bivalve has been in most frequent use, and possibly this may have occasioned some of the irritation in two of the cases requiring after-treatment for stenosis. The pressure sore that is too often found on the front wall of the trachea, and which is caused by the end of the tube, has not had in any of our cases anything to do with the after trouble; it is, however, evidence of the use of a tube of unsuitable shape.

CASE 1.—Edward F——, aged three, was admitted to Great Ormond-street Hospital on Dec. 3rd, 1886, under the care of Dr. Cheadle, with difficulty of breathing and marked stridor. He had been an in-patient for a short time early in the year for a similar attack, from which he recovered without operation. On examination, the throat was found congested, but no membrane was to be seen. There was no evidence of any syphilitic trouble in the family. The symptoms gradually became more urgent, and on Dec. 14th tracheotomy was performed by the house surgeon with instant relief. The tube was removed on Dec. 17th for five hours, but had to be replaced. The child now had a sharp attack of scarlet fever with high temperature and some lung complications, and was obliged to wear the tube continuously through the attack.—Feb. 15th, 1887: Trace of albumen; child pale and wasted. The tube was taken out, and on Feb. 18th the wound had nearly closed and the breathing was satisfactory.—March 1st: Right side dull; breath sounds weak; much stridor. Aspirator used, and a few drops of pus drawn off.—8th: The difficulty in breathing became suddenly urgent, and the house physician had to perform fresh tracheotomy, and only just managed to pull the child round.—April 20th: Better; running about the ward; gaining flesh, but still obliged to wear the tube.—June 20th: The tube was left out on trial; spasm of glottis one hour after, and the tube had to be replaced.—24th: Mr. Lewis, the house surgeon, under chloroform, passed a Macewen's tracheal catheter with a little difficulty up from the wound through the mouth, and then pushed the lower end downwards into the trachea below the wound; the catheter was retained, but during the night the child held the tube so tightly with his teeth as to prevent the entry of air, and it had to be removed. During the next three months Mr. Lewis repeatedly passed these catheters, and when the wound became smaller he introduced the tube from the mouth down the trachea beyond the site of the tracheotomy wound. The boy could not retain the tube long, rarely more than one hour at a time, and it occasioned great distress. There is no doubt, however, that he improved, the tracheotomy opening closed, and for a short interval he was able to breathe comfortably. Mr. Lewis makes a note that he always had great difficulty in introducing the tube through the mouth.—Oct. 17th: Had a bad attack of dyspnœa in the night, fifteen days after the last dilatation.—19th: Tracheotomy was again necessary. The house surgeon cut through a quantity of cicatricial tissue, and had some difficulty in getting the tube to pass into the trachea, owing to the narrowing of the lumen of the trachea.—Nov. 3rd: The child left the hospital for the Highgate Convalescent Home, still wearing a silver tube, and spent the next year either at the Convalescent Home or at his own home, wearing the tube continuously.

He was readmitted to Great Ormond-street Hospital on March 1st, 1889. He was then in fair condition, and able to phonate fairly well by putting his finger over the opening of the tube.—March 4th: The tube was left out for four hours; the opening rapidly contracted, making the reintroduction of the bivalve tube difficult.—5th: The tube was taken out as usual, and a sponge tied over the opening. After forty minutes, whilst the child was playing on the ward velocipede, he became distressed and the sponge was removed, but without any relief. He suddenly lay on the floor and became cyanosed, even to his finger tips. After a short struggle he became quite still, and the staff nurse inserted the tracheal dilator, and by smacking the child succeeded in making him breathe. The tube was inserted by the house physician so soon as he arrived on the spot, and the little fellow was soon comfortable again.—Aug. 21st: By request of Dr. Cheadle Mr. Pitts took charge of the case, and under chloroform intubated the larynx with an O'Dwyer's tube. There was no difficulty in passing the tube, and the end could be felt through the tracheotomy opening, but the breathing was not satisfactory, and it was evident that the tube did not lie straight in the trachea, but the lower end was tilted forwards and to one side. Several sizes of intubation tube were now tried, but without success; and, as the child was rather exhausted, the tracheotomy tube was replaced, and he was put to bed. The next day, Aug. 28th, chloroform was administered by Mr. Priestley, the surgical registrar, and the following is his description of the operation. The wound was extended upwards, and the thyroid partially divided. Retracting the parts with blunt hooks, it was found that there was a rather thick pinky-white band of fibroid tissue, which started from just below the cords and extended obliquely downwards from right to left, and thus a sort of diaphragm was formed, nearly blocking up the lower aperture of the larynx. There was also a general overgrowth of fibroid tissue round the commencement of the trachea, and at this point the trachea was seen to bend backwards. It was found necessary to paint the interior of the larynx with cocaine, as the irritation of the manipulations caused vomiting, but this was entirely kept under by the cocaine. With a pair of curved scissors the band was now dissected away and as much of the surrounding fibroid thickening as possible. The cords were examined from below, but no growth or thickening was found higher in the larynx. A long curved tracheotomy tube was introduced and the thyroid brought together by a silver suture. Two sutures were placed below the tube, so as to raise the height of the tube, and thus try to keep dilated the part where the dissection had been carried out.—Sept. 7th: Tube removed.—14th: Wound healed, voice improved, and breathing easy and without stridor.—Oct. 19th: For the last fourteen days there has been increasing inspiratory stridor and occasional distress during the night. Tracheotomy was performed and patient allowed to resume his old tube life till Dec. 16th, when it was determined to again try the effect of intubation with O'Dwyer's tube. Under an anæsthetic the largest

[1] Read before the Medical Society on Monday, Dec. 1st, 1890.

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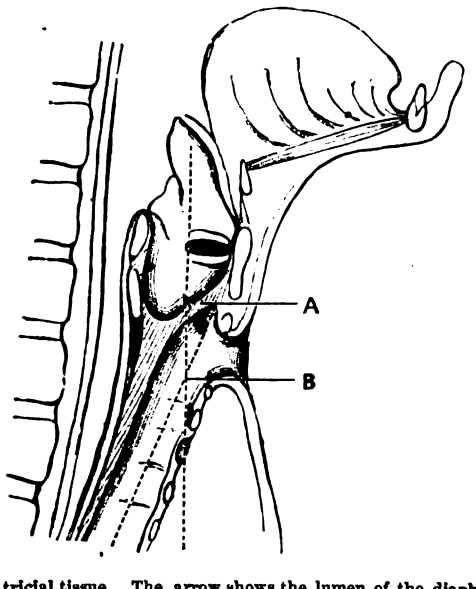
size intubation tube was easily passed by Mr. Brook, house surgeon, and a tracheal plug was applied to the opening in the neck. This tube was well tolerated and allowed to remain in till Dec. 18th. During this time the boy was quite comfortable, playing about the ward, and taking minced food and pudding. He remained without further intubation till Jan. 2nd, 1890, the tracheal wound being then quite healed. The intubation tube was passed without an anæsthetic by Mr. Brook, and left in twenty minutes. Intubation without an anæsthetic was again done at the end of the month, once during February, and for the last time on March 4th, 1890; the tube passed with great ease and was left in ten minutes. He was now allowed to go home, and has never been intubated since. During the last nine months he has remained quite well, and has been constantly helping his father as a fish hawker; he uses his voice constantly in crying his father's goods. He is here to-night, and if we can get him to shout, he will show that—notwithstanding his various tracheotomies, thyrotomy, and intubations—he has a remarkably loud voice, and one well suited for his profession as a hawker.

We have narrated the case of this boy rather fully, for it was the first of the series. For more than three years he baffled all the numerous efforts made to do away with the tracheotomy tube, and it was only after the thyrotomy that it was possible to determine the exact nature of the obstruction. Dilatation of his larynx by Macewen's catheters was most carefully carried out by Mr. Lewis, and all ordinary means were tried to get rid of the tracheotomy tube and failed, except for brief periods. It was never quite clear what was the primary cause of the dyspnœa. Shortly after the original tracheotomy he had a bad attack of scarlet fever, and probably this explains the irritation set up by the tube. In the twentieth volume of the Clinical Society's Transactions several very interesting cases are recorded by Mr. Bilton Pollard where he succeeded by the use of Macewen's tracheal catheters in establishing natural respiration. In the case of E. F——, success at first seemed to attend this method, but relapse always speedily followed. By reference to the diagram (Fig. 1) it is quite easy to see why this failure

FIG. 1.



A, Cicatricial tissue. The arrow shows the lumen of the diaphragm. B, The dotted lines show the alteration in the axis of the trachea.

occurred, and also why dilatation by O'Dwyer's method at first was useless. The cicatricial band formed almost a complete diaphragm, and the result of any form of intubation was merely to dilate the lumen of the diaphragm or else to push the diaphragm before the tube. The lesson that was learnt is that with failure by simple intubation to restore the natural passage, a free exploration of the tracheal wound should be made, and all cicatricial tissue at once be thoroughly removed, and the passage thus prepared for intubation, which should be then again employed and repeated from time to time, until all tendency to recontraction has passed away. After the thyrotomy and excision of cicatrix in E F——'s case, too long an interval was allowed before intubation was again used; with more confidence in intubation the last tracheotomy would have been unnecessary. The advantages of O'Dwyer's method over Macewen's tracheal catheters are sufficiently obvious. An O'Dwyer's tube has an increased circumference at the part wanted for such dilatation. It is well tolerated by the patient for a lengthy period, and food can be taken without difficulty.

CASE 2.—Charles C——, aged nine, was admitted on Aug. 24th, 1889, under Dr. Cheadle, with membrane on soft palate and difficult breathing. High tracheotomy was performed by the house surgeon, with relief of symptoms.—Aug. 26th: Progressing favourably till last night, when the child suffered from frequent cough and bleeding from the tube. An anæsthetic was given, and several bleeding points in the depth of the wound were secured. During the next three months all attempts to remove the tube were attended by immediate distress, even when an anæsthetic was administered. — Dec. 10th: Transferred by Dr. Cheadle to the care of Mr. Pitts. The tracheal wound was enlarged, and a quantity of granulation tissue was found at the front and sides of the trachea at the lower border of the wound; this was removed with scissors and a sharp spoon. The largest sized intubation tube was introduced and a rubber plug put into the tracheal wound. The tube was coughed out in half an hour and the tracheotomy tube was replaced.—11th: The house surgeon, Mr. Brook, intubated without an anæsthetic —12th: String was removed, as it occasioned some cough and discomfort. This tube remained *in situ* from Dec. 11th till the 18th; it was then removed and not replaced.—Jan. 1st, 1890: Tracheal wound healed; voice natural.

On Jan. 10th (twenty-four days since last intubation) he had a rise of temperature, and some pneumonia at the left base. No further intubation was done, and he was discharged well on March 6th, and the voice and breathing were quite normal. He has been kept under observation since, but no further intubation has been necessary. At the present time his voice is clear, and there is no stridor even after exertion. In this case, since dyspnœa had for four months constantly attended every effort to dispense with the tracheotomy tube, it was thought right to make an exploration of the wound before employing intubation. Possibly the removal of the granulation tissue might have been sufficient, but we thought it advisable to keep up some dilatation until the surface, laid bare by the removal of the granulation tissue, had completely healed.

CASE 3.—Albert H——, aged three years and three months, was admitted on July 31st, 1889, under the care of Dr. Cheadle, suffering from diphtheritic membrane on tonsils and marked dyspnœa. Tracheotomy was at once done by the house surgeon, and a large quantity of membrane was removed from the trachea —Aug. 4th: The wound was covered with membrane, and during the next week great sloughing of the wound went on.—9th: Much of the fluid taken by the mouth escaping by wound, sore rapidly increasing, and at the bottom of the wound the trachea to be seen lying bare for more than one inch of its extent, and through the large opening in it the posterior wall of the trachea can be seen.—10th: Rectal feeding necessary.—11th: Enemata returned, so nasal feeding substituted. Child very collapsed and almost pulseless.—Sept. 9th: Child has slowly improved; gets up wearing tube —Oct. 28th: Unable to phonate or to do without tube; bougie passed through larynx.—Dec. 12th: Dr. Cheadle transferred the patient to the care of Mr. Pitts. Intubation under chloroform. Tube retained three days, and then removed on account of rise of temperature. Tracheotomy tube replaced.—23rd: Both tonsils and some adenoids removed by Mr. Brook to facilitate intubation.—Jan. 2nd, 1890: Intubation again under chloroform, but the tube was removed next day, as there was a rise of temperature. Small tube difficult to pass.—11th: Intubation under chloroform. Tube retained till 16th, when a larger one was passed without an anæsthetic; this was retained until Jan. 20th, and then the largest tube but one was introduced.—28th: The largest tube was passed—i.e., one suitable for a child of twelve.—Feb. 3rd: The tube was taken out, and ten minutes after the child was unable to breathe, and the tracheotomy tube was put in, the opening having been kept patent by tracheal plug.

Intubation after this was several times tried, but became more difficult, and on Feb. 16th the child was placed under

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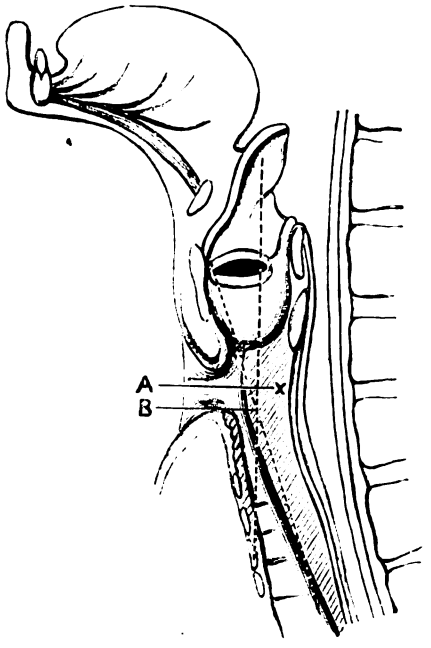
chloroform and examined, and the tracheotomy wound was freely enlarged; an examination showed that at the level of the tracheal opening there was a dense collar of cicatricial tissue encroaching on the lumen of the trachea. The trachea at the same point appeared to bend backwards, the part below forming an angle with the part above the obstruction collar, as shown in Fig. 2 The

FIG. 2.



A, The cicatricial tissue in this case extended a long way down the back and sides of the trachea.

cicatricial tissue was dissected away very freely, together with the lining of the tracheotomy opening. A large tracheotomy tube was then introduced. Intubation was recommenced on Feb. 27th; the largest size but one was left in. It was coughed out next day, but although the tracheal wound was plugged the patient could breathe comfortably through the mouth. The tracheal wound was allowed now to heal; intubation was repeated every few days until May 7th, when the child developed measles. At this period phonation (an extremely deep note) was just possible with great effort. During the attack of measles it was found necessary to keep the intubation tube almost constantly in. Intubation was frequently done during June, and on July 14th the child was sent home, as it was thought he might be intubated as an out-patient. He returned in three days after his discharge, a tube was put in, and he wore this at home for ten days, taking ordinary food as usual. The tube was now left out sixteen days, and then again worn for ten days; it was then taken out and replaced and retained for another week. During the last two months the mother neglected to bring the child to the hospital. By special request the mother brought the child to see us on Nov. 23rd. There was then some stridor and dyspnœa on exertion. Phonation only by great effort.

Remarks.—This case shows the great difficulty that may be experienced in the restoration of natural breathing. Considering the extensive sloughing of the tracheal wound and the necrosis of portions of the tracheal rings, it cannot be wondered at that an extensive formation of cicatricial tissue arose. Some kinking of the trachea opposite the tracheal opening is, we believe, of not infrequent occurrence, and this, combined with the cicatricial stricture, made the case remarkably intractable. Much time was wasted in the treatment by not attending to the lesson that ought to have been learnt from the first case—namely, where intubation is not at once satisfactory, to explore for and remove, as far as possible, all mechanical obstruction. We were unwilling, after the extensive sloughing that had occurred, to meddle with the wound if we could avoid it. This case must be considered as still under treatment. There must be as much necessity for constant dilatation as in a bad cicatricial stricture of the urethra. We believe, however, if the mother had not neglected to bring the child for the last two months it would now have been in a more satisfactory condition than he is at present. The parents unfortunately considered the child so well as not to require further treatment.

(To be concluded.)

CHOLERA IN NORTHERN SYRIA.

By JOHN WORTABET, M.D.,

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THE present epidemic of cholera in the north of Syria originated from Mesopotamia, where it was well known to have been for some time previously. It appears to have been imported to Aleppo by a nomadic tribe of Bedouins from a point on the Euphrates about fifty miles from that city, and where its first appearance was officially recognised about Sept. 13th. From this point it spread northwards, implicating Killis, Aintab, Barejeck, Orfa, and Marash; and to the south, where the principal places attacked were Hamath, Antioch, and Homs. The information about the former of these regions is too meagre and unreliable to enable me to give any details, and it is quite possible that the infection may have been brought to some of the places mentioned directly from some Mesopotamian focus. But there can be no doubt as to the extension of the disease from Aleppo southwards, and it is with this that I wish to deal in the present communication. This extension took place in spite of the so-called cordons and quarantines which the Government imposed between infected and sound spots. And yet it is equally certain that, to the unusually vigorous measures of this kind taken by the governors of Damascus, Beyrout, and Mount Lebanon, isolating these tracts from Aleppo, Hamath, Homs, and Antioch, the immunity, so far, of these places is due. It remains, however, to be seen whether they will succeed in warding off the disease permanently, or whether they will be useful only in retarding its approach until the cold weather sets in, when it is hoped its violence may be mitigated. That cordons and land quarantines carried out effectually, and under scientific and favourable conditions, will prevent the diffusion of cholera and destroy it on its way, has, I think, been satisfactorily proved this year in the case of the Hejaz pilgrims, who were put into quarantine at distant spots from any inhabitable land, and from which escape was impossible. Those pilgrims coming from Mecca, Medina, and Jeddah, and bearing with them the disease, were gradually freed from it during their forced detention on the waste shores of the Red Sea; and it was thus that, so far as can be seen, Egypt, Syria, and Turkey were saved from what seemed at one time to be an inevitable fate. The land pilgrims coming from Mecca to Damascus by short stages, isolated through an open and uninhabited route, and taking some weeks on the way, became free of it, and returned to that city in perfect health. But it is far different in a populous land where the means of communication are so great, where cordons have been repeatedly tried and always failed, and where, on the other hand, the value of public and private sanitation has been proved beyond all doubt. The simpler hygienic means, such as cleanliness of dwellings and streets, prevention of the sale of unripe and rotten fruits and unwholesome food, &c., were probably ordered and partially executed in the infected places by the local authorities; but in the equally important matters of drains, gutters, and cesspools, where more scientific and drastic measures are called for, it is to be feared that very little, if anything, was done. Still, it appears that the violence of the present epidemic in Aleppo is very considerably less than that of previous visitations. This is probably due to improved methods of sanitation, while it is certain that in Aleppo there had been up to Oct. 26th no case of cholera among the Europeans and better class natives, whose lives and surroundings were made as unfavourable to infection as possible.

Aleppo is a city of Northern Syria, having an estimated population of about 100,000, and lies in a plain 1600 feet above the sea-level. Its water-supply comes from a small stream which is used up in irrigating the gardens, and its drinking water comes from a spring near Aintah, which is

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carried in a covered conduit. On the appearance of cholera about Sept. 12th, and up to the 22nd of that month, no official bulletins were issued, but the officer of health estimated the fatal cases at 21. A local sanitary commission was then appointed, and the following weekly returns are drawn up from its daily reports. It is generally believed, however, that the rate of mortality is very much understated, while a few hold that it is somewhat above the real number of deaths. The number, therefore, is only approximately true, and is given as a fair idea of the natural course and duration of the epidemic in the East, and especially as regards its periods of rise, height, and decline. The last accounts from that city show at this date (Nov. 26th) that the epidemic has entirely ceased.

Estimated cases of death from Sept. 13th to 22nd ...	21
Sept. 23rd to 29th (say, second week)	42
,, 30th to Oct. 6th (third week)	120
Oct. 7th to ,, 13th (fourth week)	190
,, 14th to ,, 20th (fifth week)	165
,, 21st to ,, 28th (sixth week)	47
,, 29th to Nov. 4th (seventh week)	11
Nov. 5th to ,, 11th (eighth week)	37
,, 12th to ,, 18th (ninth week)	21
Total	654

Hamath, a town of about 40,000 inhabitants, lies about three days' journey south from Aleppo, and is built on the two sides of the Orontes, which, taking its rise from a point near Baalbec, runs due north, passes about a mile west of Homs, and at Hamath turns to the west, supples Antioch with its waters, and empties itself into the bay of the ancient Seleucia. Its elevation above the level of the sea is a little more than 1000 ft. Though the official records give Oct. 15th as the earliest date of the appearance of cholera in it, and thus a heavy mortality for the first week, it is more likely that it began some days before it was recognised and officially announced, and that its first cases were few. The following is the record which I have been able to obtain from the official papers:—

First week	—
Oct. 15th to Oct. 21st	88
,, 22nd to ,, 28th	303
,, 29th to Nov. 4th	213
Nov. 5th to ,, 11th	76
,, 12th to ,, 16th	7
Total	687

From Nov. 12th to this date (Nov. 26th) I have been unable to obtain any definite information, but the number of daily deaths has been gradually diminishing, and the epidemic there is said now to have ceased.

Of Antioch, whose population is estimated at 12,000, the records are as follows:—

Oct. 20th to Oct. 26th	22
,, 27th to Nov. 2nd	159
Nov. 3rd to ,, 9th	36
,, 10th to ,, 12th	5
Total	222

This is evidently very imperfect, but I give it for what it is worth.

The following are the returns from Homs, a town of 25,000 inhabitants and a day's journey south of Hamath:—

Oct. 27th to Nov. 2nd	63
Nov. 3rd to ,, 9th	234
,, 10th to ,, 16th	169
,, 17th to ,, 24th	130
Total	596

En résumé, it appears that the epidemic has almost entirely ceased in Aleppo after a duration of about ten weeks, the third, fourth, and fifth showing the highest number of deaths. A late telegram from Hamath gives the same news, though it is quite possible that fresh cases may still break out, as may be observed in the eighth and ninth weeks of the march of the disease in Aleppo, and that a slight rise during the period of decline may be an ordinary phenomenon in the history of cholera epidemics. If, however, the duration of the disease in Hamath, Homs, and Antioch is to be short, this may be due to an unusually long storm of rain and cold which has overrun the whole of Syria since the 15th of this month to this date, or to the unusual severity of the epidemic in those places, which has exhausted itself sooner than it did in Aleppo, where the relative rate of mortality was much milder. Judging from previous cholera visitations in Syria, it seems that the ordinary duration of an epidemic is rarely less, if ever, than ten weeks, and it looks very much as if it had, when the population is stationary, a definite course to run, like a case of typhoid fever and most of the acute diseases. How much this has to do with the life history of the cholera bacillus in a given place is difficult to say in our present state of knowledge. The whole coast of Syria and the whole of its southern part are so far intact, and I do not know how this can be accounted for except by believing that the measures of isolation taken by the authorities have been unusually rigid, and thus effectual in warding off the spread of the disease to these parts up to this date.

Beyrout, Nov. 26th, 1890.

CHOLECYSTOTOMY FOR GALL-STONES, PERFORMED ON THE STRENGTH OF SYMPTOMS WITHOUT PHYSICAL SIGNS.

BY A. W. MAYO ROBSON, F.R.C.S.,

HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY, PROFESSOR OF SURGERY IN THE YORKSHIRE COLLEGE AND EXAMINER IN THE VICTORIA UNIVERSITY.

ON Oct. 25th of last year I had the honour of reading before the Clinical Society of London a paper based on fourteen cases of cholecystotomy. Since that time I have performed the operation nine times without a death, making in all twenty-three cases. In my former paper I gave brief histories of five cases operated upon on the strength of symptoms alone. I have now to add to that series two more cases, notes of which I now give.

Mr. P. B——, aged twenty-nine, residing at Wyke, near Bradford, was sent to see me by my friend Dr. Dearden early in June of last year, when he gave the following history:—He had been quite well up to twelve months ago, when he was seized whilst at work with a sudden attack of severe pain on the right side of the abdomen just below the ribs, which compelled him to return home. The attack lasted for several hours. No jaundice followed, and he was able to return to his duties in a day or two. Ever since that time he had been subject to similar attacks, but on no occasion had he been jaundiced, and he had never noticed any swelling in the region of the liver. The attacks did not recur periodically, he having had once an interval of a month without an attack, whilst on other occasions he would have several in a week. On several occasions the spasms had come on when he was in bed. The attack which he had just previously to admission, lasted six hours. At no time had the motions been clay coloured or the urine specially dark. He was admitted to the infirmary on June 6th, in order that he might be watched for a time, but beyond having several attacks of pain of a similar character no physical signs were noticed. On June 19th cholecystotomy was performed. The gall-bladder was found to be small, and lying well under cover of the liver. One gall-stone was found loose in the gall-bladder, and five others were removed from the cystic duct by means of forceps within, aided by fingers on the outside of the duct. The gall-bladder was so far from the surface that the lower edge of the incision could not be brought to the parietal peritoneum, hence the omentum was made use of to shut out the general peritoneal cavity. This was effected by bringing up the right border of the omentum, stitching it to the incision in the gall-bladder and then to the parietal peritoneum. A drainage-tube was inserted into the gall-bladder, and bile commenced to flow as soon as the operation had been completed. On June 25th the drainage-tube and sutures were removed. On July 4th the discharge had diminished considerably. On the 12th the wound had almost healed, and on the 26th it had perfectly closed. The patient was seen in September, when he was looking and feeling perfectly well, and said that he had not had an attack of pain since the operation.

Mr. R——, aged fifty, was sent to see me by my friend, Dr. Britton of Harrogate, in April of last year. He gave the history of having been perfectly well up to June, 1889, when he had a severe attack of pain in the region of the

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liver, which lasted for several days, but which was not followed by jaundice. He had no further attack until November, and between November and Christmas he had five similar seizures. Between January and his seeing me in April he had had seven attacks, only once having been slightly jaundiced, the yellowness of the eyes then only lasting three days. Having very little doubt that the attacks were due to gall-stones, we had the motions carefully examined, and on May 5th, although there had been two attacks since Mr. R—— saw me in April, no gall-stone had been found, although carefully searched for. It was thought that during the attacks of pain a swelling had been noticed on the right side of the abdomen, but this point was not very definite, and when I saw Mr. R—— there was an entire absence of physical signs. Cholecystotomy was recommended and performed on May 6th, when one gall-stone, the size of a cherry, without any facets, was removed from the gall-bladder. Bile flowed at once, and the drainage-tube was removed on the third day, the stitches being taken out on the eighth. At the end of a fortnight the wound had quite healed, and Mr. R—— returned to his home at the end of three weeks. He has remained quite well since, and is now in perfect health. The interest in this case lies in the fact that all the symptoms were dependent on the one calculus.

Besides these cases which I have operated on, I have seen a considerable number of patients whose symptoms were similar to the above, and where I made a diagnosis of cholelithiasis and recommended operation; and I believe that by far the greater number of patients who are suffering from repeated attacks of so called spasms are in reality suffering from gall-stones, and can therefore be relieved if their symptoms are so severe as to require active interference. It must always be borne in mind that unless the gall-stones are small and can be passed, they tend to increase in size and number, and may ultimately lead to most serious complications, among which may be mentioned: (1) Exhaustion from repeated attacks of pain, (2) fatal collapse from acute agony (I have known in one case death to ensue from pain alone, as proved by post-mortem examination); (3) fatal jaundice, (4) dropsy of the gall-bladder, (5) empyema of the gall-bladder, (6) abscess of liver, (7) local peritonitis, (8) perforation of the gall-bladder or ducts, causing abscess, peritonitis, septicæmia, intestinal obstruction, or hæmorrhage. Bearing in mind these dangers of cholelithiasis, and knowing with what little risk the operation of cholecystotomy can be performed if done carefully and with due precautions, I have no hesitation in recommending operation whenever there are repeated attacks of biliary colic apparently due to gall-stones, which do not yield to a definite course, not necessarily very prolonged, of medical treatment.

Leeds.

A CASE OF
ANEURYSM OF THE EXTERNAL ILIAC ARTERY CURED BY COMPRESSION.

BY HORATIO P. SYMONDS,
SURGEON TO THE RADCLIFFE INFIRMARY, OXFORD.

G. S——, aged forty-eight, a sawyer, was admitted to the Radcliffe Infirmary, Oxford, on July 2nd, 1890. The history was that on Feb. 26th, 1890, he felt a sudden cramp in his left leg, after which it became perfectly cold, and felt as if it had been frozen. His power of moving it was also impaired, and since then he has been unable to work. He has, however, been able to move about, but has suffered from great pain in the limb, especially in the sole of the foot, and at times in the region of the left Poupart's ligament. About three weeks before admission, while the patient was passing his hand over this region, he felt a pulsating swelling, and, failing to find anything corresponding on the right side, he came to the infirmary, where he was admitted, as above stated. On examination, there was observed just above the left Poupart's ligament a marked prominence, with a heaving expansile pulsation. A similar pulsation was also plainly seen continued from the swelling down the thigh as far as the apex of Scarpa's triangle. On palpation a round, smooth swelling about the size of a hen's egg was felt, apparently well defined above, but below somewhat fusiform, and passing into the commencement of the femoral artery. It exhibited uniform expansion, and over it a well-marked systolic bruit was audible. The pulse at the ankle on both sides was very weak, but the left was decidedly feebler. With regard to the heart, there was no visible cardiac impulse in the front of the chest, the apex beat could not be localised, and the cardiac dulness was masked by emphysema of the lungs. The heart sounds were feeble, but no murmur existed. The pulse was 74, slightly irregular, and of low tension. There was marked pulsation visible in the brachial arteries at the bend of the elbows and in the radials at the wrists. The vessels rolled under the fingers like cords. There was no history of syphilis.

After consultation it was determined to apply compression to the common iliac artery with a view to curing the aneurysm. On July 22nd accordingly, at 10.35 A.M., the patient being put under the influence of bichloride of methylene, given from a Junker's inhaler, a Lister's abdominal tourniquet was applied on a line with the highest points of the iliac crests and a little to the left of the middle line. On tightening it up the aneurysm ceased to pulsate, though pulsation continued in the right limb. Pressure was kept up till 5 P.M., when the tourniquet was slackened for a few seconds; but as pulsation slightly returned in the aneurysm, it was again tightened. At 7 P.M. pressure was again gradually taken off by loosening the screw of the tourniquet by a quarter of a turn every fifteen minutes till 10.15 P.M., when the instrument was entirely removed, the aneurysm showing no sign of pulsation, and being hard and firm to the touch. A sixth of a grain of hydro-chlorate of morphine was given hypodermically and the methylene discontinued. The patient slept till 2.30 A.M., when he became very violent and restless. There was no return of pulsation in the tumour. On July 25th there were some symptoms of peritonitis and enteritis. On the 26th some swelling of the left parotid was observed, which next day had increased to the size of a pigeon's egg, and on the 28th there was a similar but smaller swelling of the right parotid. The urine contained a small trace of albumen. The temperature, which had hitherto been normal, rose to 100·8°, but again fell on the following day to 99·2°, the left parotid swelling being slightly larger and more inflamed, but the right smaller. The tumour in the groin was smaller and harder. On Aug. 1st the left parotid was still inflamed and swollen, but there was no fluctuation. The swelling on the right side had subsided. On the 3rd the left parotid was much more swollen and inflamed, and there was distinct fluctuation. On the 4th the evening temperature was 101·6°, and the following day the left parotid was incised under ether and a quantity of thick pus situated deeply in the gland evacuated. On the 6th it was found that the tourniquet had caused a slough of the skin at the point of application. From this time the patient went on well. On Sept. 1st he sat up in bed for the first time. On the 7th he got up for four hours, and next day was taken out into the garden. On the 20th he walked a few steps. By Oct. 24th he could walk about the garden. After being up for six or eight hours he had slight œdema of the left leg. On Oct. 30th he was improving in every respect.

With regard to the treatment of this case, what chiefly led to compression being adopted was that the statistics of the results of this method were much better than that by ligature of the common iliac. The only objection that could be urged against it was that prolonged unsuccessful compression sometimes appears to make less favourable the prognosis of a subsequent operation for ligature. The statistics of the result of ligature of the common iliac, as given by Erichsen, show that the earlier cases were singularly successful. Later, however, the cases collected by Stephen Smith show only eight recoveries out of thirty-two operations, and in Kümmell's table forty-one are recorded to have died against fourteen who recovered. The chief causes of death appear to be exhaustion and hæmorrhage.

A most interesting point in the case was the occurrence after the operation of inflammation and suppuration of the parotid gland. The occurrence of such as a sequela or concomitant of injury or disease of the abdomen or pelvis is well recognised. Erichsen[1] says: "Inflammation of the parotid gland, frequently terminating in suppuration, has long been known to be a not uncommon complication of

[1] Surgery, 9th edit. vol. ii, p. 586.

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injuries of the abdomen and pelvis, and has usually been regarded as pyæmic. Stephen Paget has, however, shown by a careful analysis of 101 such cases that this explanation is not altogether satisfactory. Of the 101 such cases, 10 followed injuries or diseases of the urinary tract; 18 injuries or diseases of the alimentary tract; 23 injuries or inflammation of the abdominal wall, peritoneum, and pelvic cellular tissue; 50 injuries, diseases, or operation on the generative organs; 27 of these being operations on the ovaries. After a very prolonged search Stephen Paget succeeded in finding only 13 cases of secondary parotitis arising from operations or injuries of other parts of the body, and in all of these it merely formed a part of general pyæmia. In the histories of the 101 cases the presence of septicæmia or pyæmia is mentioned in only 14, and in 7 only of the fatal cases were secondary centres of suppuration found elsewhere. The inflammation of the parotid commenced at very varying periods after the operation or injury of which it formed a complication. In 78 cases in which the fact was definitely recorded suppuration occurred in 45, the remainder undergoing resolution; as a rule, the parotitis was not accompanied by very severe fever, and rigors were very rare. Of the 101, 37 died, 13 from septicæmia or by pyæmia, and the rest from various causes not directly connected with the parotitis."

Mîlonas, at a meeting of the St. Petersburg Medical Society last year,[2] related an interesting case of swelling of the parotid gland occurring in a nervous and debilitated patient a few hours after it had become necessary to catheterise him while suffering from a prostatic abscess. In about a week, when it became necessary to empty the bladder, this was rapidly followed by the development of a suppurative parotitis of the other side. During the discussion which followed this communication, Balinsky related three cases of reflex parotitis which had occurred in his own practice, the patients being women who had undergone some operation for the relief of general troubles. Hilton Fagge[3] suggests, only, however, to dismiss the opinion as not having sufficient foundation, that this "metastatic" parotitis is perhaps, after all, due to dryness of the buccal mucous membrane leading to an obstruction of Steno's duct, with decomposition of the retained salivary secretion. He states that the prognosis is better if it occurs late as a secondary affection in any disease; if early, grave. The theories as to the cause of this curious condition are: First, that it is pyæmic. In the present case we may admit that, probably from the injury inflicted by the tourniquet, peritonitis was set up, and thus an opportunity was given for septic material to enter the circulation; but here, as in the records quoted above, we miss the general pyæmia which we should expect to follow such an occurrence. The other theory is that the parotitis is secondary to some disturbance in the innervation of the gland. In connexion with the above patient it was suggested by some who saw him that this might be due to the prolonged inhalation of bichloride of methylene. If this theory were correct, we should expect to get parotitis in the condition known as xerostomia, a complication which does not appear to be recorded. Looking at the records of cases that have been given, and considering the fact that there seems to be some special connexion between injuries and diseases of the abdominal cavity and inflammations of the parotid, it seems probable, seeing that in this case there was undoubtedly pressure on the nerves of the abdomen, that the parotitis from which the patient suffered was due to an affection of the still hypothetical connexions between the sympathetic ganglia and the parotid secretions.

Oxford.

[2] Médit. Pribav. R'mors. Sboz, April, 1889.
[3] Medicine, vol. ii., p. 305.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The medical report of this institution for the year 1890 shows there were during the year 2386 in-patients, of which 501 were cases of rheumatism complicated with heart disease, 68 of diseases of the nervous system, 41 of the respiratory system, 5 of the circulatory system, 23 of the digestive system, and 221 of general diseases, which comprised anæmia, debility, erythema nodosum, eczema, psoriasis, Bright's disease, diabetes, blood-poisoning, cancer, spinal disease, morbus coxæ, old injuries, and uterine and ovarian disease, besides 14 accidents.

REMARKS ON THE ADMINISTRATION OF ANÆSTHETICS IN ORAL AND NASAL SURGERY.

BY FREDERIC HEWITT, M.A., M.D.CANTAB.,
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THE following remarks are not intended to apply to such brief operations as may be performed under nitrous oxide, but to those necessitating an anæsthesia of longer duration. The administration of the anæsthetic for operations within the upper air passages often requires considerable forethought and judgment; and it is therefore hoped that a few practical suggestions may not be without interest.

1. *Choice of anæsthetics.*—Putting exceptional cases aside, it is best to place the patient well under ether, and to keep up the anæsthesia, if necessary, with chloroform, great care being taken not to substitute the latter for the former anæsthetic till the patient commences to show signs of emerging from the ether narcosis. By administering nitrous oxide, or a small quantity of the A.C.E. mixture, before ether, the disagreeable effects of the latter anæsthetic may be obviated. Ether has many advantages in these cases. Firstly, it is possible to charge up the patient, so to speak, with such a quantity of ether that for many operations no more of this or of any other anæsthetic is necessary. Secondly, there is as a rule no objection to the etherised patient being well propped up, or even in the sitting posture should the operator desire it. Thirdly, should any difficulties in respiration (dependent upon the presence of morbid growths &c. within the nose or mouth) arise during the administration of ether, there is not that liability to circulatory depression which undoubtedly exists during the use of chloroform under similar circumstances. Should the anæsthesia from the dose of ether be of insufficient duration for the performance of the operation, unconsciousness should be maintained by small quantities of chloroform, given with the precaution already referred to.

2. *Position of the patient.*—This should primarily depend upon the nature of the operation and the convenience of the operator. Very often, however, the arrangement of the patient is left to the anæthetist, the operator having no special wish in the matter. Under these circumstances the administrator of the anæsthetic should place the patient in that position which is most favourable for the escape of blood. Apart from the inconvenience caused by the presence of blood during these operations, the patient may be saved much after discomfort from nausea or vomiting if a little care be taken to prevent blood from being swallowed. When very little hæmorrhage is expected, the position of the patient becomes a matter of small moment, but it is not so under opposite conditions. When considerable hæmorrhage is anticipated one of two positions should be chosen if circumstances permit: (1) The etherised patient should be slowly raised into the sitting posture, and his head and shoulders thrown well forwards; or (2) he should lie upon his side with one arm under him, and his head being near the edge of the table his face should be directed downwards; the mouth being well opened by some form of gag in either case. The former position, originally suggested, I believe, by Mr. Braine, is an excellent one for scraping away post-nasal adenoids; it should only be adopted, however, under ether—not under chloroform. The latter position may with advantage be chosen for such cases as the removal of nasal or naso-pharyngeal polypi.

3. *Points to be observed in administering the anæsthetic.*—Should there be complete or nearly complete nasal obstruction, it is a good plan to place a small mouth gag between the teeth before commencing the administration. Partial nasal occlusion is liable to become complete during anæsthesia by reason of increased vascularity of parts. If this simple precaution be not adopted, it may become necessary to forcibly open the mouth during the administration—a procedure sometimes attended by difficulty, more especially in vigorous subjects and in those with accurately meeting teeth. When respiration prior to the administration is in any way embarrassed, either from the presence of morbid growths or other causes, the anæsthetic should be given very cautiously and the breathing watched. I have lately

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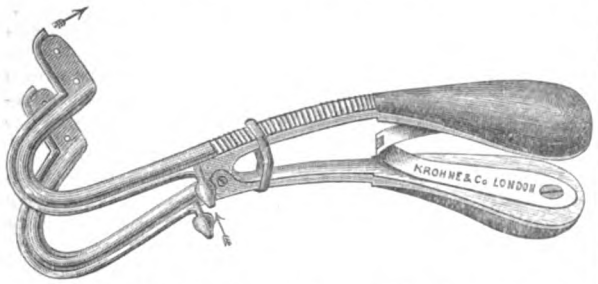
brought before the Royal Medical and Chirurgical Society many facts in connexion with this branch of the subject, and shall therefore refrain from any further remarks here.

4. *Points to be observed during the performance of the operation* —When the required degree of narcosis has been reached, the mouth should be well opened by some form of gag. The one which I find best suited for general use is here figured. It is a modified Mason's gag, possessing two



small tubes for the transmission of chloroform vapour to the back of the mouth. The rubber exit tube of Junker's chloroform apparatus is attached to the bulbous extremity of one of the mouth-tubes shown in the engraving. Chloroform vapour may thus be made to pass in the direction of the arrows. It will generally be found advisable to attach the indiarubber tube of Junker's apparatus to that arm of the gag which comes in contact with the upper teeth. The mouth-tubes of the gag are bent slightly backwards at their non-bulbous ends, in order to throw the vapour to the back of the mouth. The gag shown has arms sufficiently long to keep the mouth of an edentulous patient well open, and the clip arrangement for keeping the arms apart is superior to the ordinary screw, as it is simpler to manage, and takes but a fraction of a second to adjust.[1] The gag can, of course, be used as an ordinary mouth gag—i.e., without being attached to a chloroform inhaler.

In cases in which there is very free hæmorrhage, it is best not to maintain very deep anæsthesia, the abolition of corneal reflex not being necessary as a general rule. In very delicate operations, however, as well as in those in which the bleeding is slight, deep anæsthesia should be kept up throughout the operation.

George-street, Hanover-square, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF MYXŒDEMA.

BY A. M. STALKER, M.D.,
PHYSICIAN TO THE DUNDEE ROYAL INFIRMARY.

THE following case of myxœdema seems worthy of being placed on record.

Mrs. C——, married, forty years of age, is the eldest of a family of nine, all of whom are healthy. She is the mother of four children, whose ages run from seventeen to eight, and all of whom appear in sound health. No miscarriages. The husband is alive, and appears strong and active. She has lived during the greater part of her life in the country. Has had poor health during the last fifteen years. About that time the sight of the left eye began to fail, with severe headaches and pain in the affected eye. The failure passed into complete blindness five years ago. Two years before that the sight of the right eye gave way with similar symptoms, and this, too, has resulted in all but complete blindness About four or five years ago, perhaps longer (it is always difficult to be sure of the time within a year or two of the commencement of a myxœdema), swelling began about the face and limbs, with change of voice and growing irritability of temper. Since then the general strength has become more enfeebled, though the loss of sight is still her chief complaint. From the commencement of the eye trouble she has taken large quantities of iodide of potassium. At present (October, 1889) her condition is as follows:—She has myxœdematous facies; teeth good; hair thin and wiry; skin dry, her stockings sometimes being emptied in the evening of quite a quantity of branny scales; hearing good; eye symptoms peculiar. In the left eye iris is grey and blurred, adherent all round; pupil about 2 mm. in breadth; fundus cannot be illuminated; no vision in this eye. In the right eye iris slightly blurred, adherent at one side; pupil about 4 mm., and can be dilated with atropine to 6 mm.; good view of the fundus; disc is dead bluish-white with large posterior staphyloma surrounding it on all sides, on an average double its own breadth; vessels normal; at extreme periphery large patches of black pigment; in the middle distance similar smaller patches, situated in the midst of brilliantly white patches of choroidal atrophy; only vision possible is that she can discern the position of the window in the room, or of the lamp in the evening The other symptoms present nothing novel. She is subject from time to time to hæmorrhages from the bowel, probably from the rectum. The mental condition is fair; querulous and garrulous, but no illusions or suspicions. Disturbing dreams, but no morbid terrors.

The interest of this case lies in its associations, first, with chronic irido-choroiditis, and, secondly, with the long-continued use of iodide of potassium. With regard to the former very little can be added by way of remark to the mere fact of the association. It is tolerably certain that there is no syphilitic taint in the case, and apart from syphilis, the relations of irido-choroiditis are little known and ill defined. The fact of the long use of iodide of potassium, on the other hand, gives rise for rather more speculation. Mr. Hutchinson in his "Archives of Surgery" (vol. i., p. 142) dwells for a moment on this as a possible factor in a case of acromegaly, but does not press it. There is one consideration, however, which may specially justify the observation in a case of myxœdema. The use of iodine in the treatment of true goitre is always mentioned in the books, though the proof of its efficacy turns out on inquiry to be very doubtful. But a tolerably large body of testimony is given to the benefits of inunction with biniodide of mercury ointment in simple bronchocele; and the "discutient" effect of this, taken along with the general consensus that iodine in some form is beneficial in all enlargements of the thyroid, is a clear enough indication of an effect of the drug on one or other of the elements of the gland. And it is precisely in such a disease as the form of irido-choroiditis described above that we may hope to see what, if any, are the results of continued saturation of the system with iodine. The ophthalmic surgeon is confessedly at a loss what to do apart from the use of iodide of potassium, and even when there is no hope of checking the disease the treatment is pursued through long years with the vague expectation that its course is, at any rate, being slowed. In a case treated in this way the occurrence of symptoms indicating atrophy of the thyroid is worth noting.

Dundee.

FOREIGN BODY LODGED IN THE ORBIT FOR FORTY-SIX YEARS; REMOVAL.

BY C. HIGGENS, F.R.C.S.

MR. H——, aged fifty-two, consulted me on Aug. 20th, 1890, for ulcer of the cornea of the left eye. I found that the ulcer was due to exposure caused by retraction of the upper eyelid, which was firmly fixed by a puckered cicatrix to the roof of the orbit some distance behind its margin. Bad smelling discharge escaped from a sinus near the centre of the cicatrix. A probe passed through the sinus came in contact with a rugged surface. I noticed a scar at the outer margin of the orbit, and on inquiring about it Mr. H—— casually remarked that it was made by his falling on a knife when six years of age. The blade of the knife—or the knife, as he described it—was never seen afterwards, but the wound healed without giving him any trouble. He, however, admitted that there had been discharge for many

[1] Messrs. Krohne and Sesemann of Duke-street, Manchester-square, are the makers of the gag.

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years, about which he had not troubled himself. I told him that I believed the knife-blade was still in the orbit, and arranged to make an exploration. On the following day I cut down through the cicatrix and after some difficulty removed a piece of much-corroded metal, evidently the remains of a piece of the knife-blade, $\frac{9}{16}$ in. in length, $\frac{7}{16}$ in. in breadth at its wider end, and $\frac{3}{16}$ in. at its narrower extremity. It had evidently been fixed partly in the orbit and partly in the frontal sinus. I cleared out a quantity of rust and pieces of rough bone, closed the wound, leaving a drainage-tube at either end, and united the margins of the eyelids. The patient had no bad symptom; at the end of a fortnight the wound was soundly healed and there was no discharge.

Brook-street, W.

TREATMENT OF ENURESIS.

BY W. E. STEAVENSON, M.D. CANTAB., M.R.C.P.,
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THE numerous questions which have recently been addressed to THE LANCET on this question, and the annotation which appeared in the issue of November 22nd (p. 1111), have induced me to again bring before the profession the undoubted benefit which is derived from the treatment of enuresis by electricity. I wrote a short paper on Troublesome Frequency of Micturition[1] as far back as 1883, and I have had no reason to alter the opinions there expressed. I agree with the opinion of Dr. Kupke of Posen, mentioned in the annotation above referred to, that the cause of enuresis is, among others, due to "diminished activity of the vesico-spinal centre in the lumbar part of the cord, or partial anæsthesia of the sensory nerves of the bladder, both of these conditions preventing prompt information being conveyed to the cortex of the cerebrum when the bladder is becoming full." Cases of incontinence of urine from different causes are frequently referred to me for electrical treatment, and the greater number of them have been cured. Nine cases are mentioned in the St. Bartholomew's Hospital Reports for 1883, pp. 245, 246; and thirty-one cases in the Reports for 1886, p. 85. The affection is by no means confined to children. It is a frequent complaint in young women, and in married women who have received some injury during parturition. Some cases have been due to pressure on the neck of the bladder during pregnancy, especially when associated with anteflexion of the uterus; others to dilatation of the urethra for exploration of the bladder. Several patients were unable to retain their urine when in the erect position or when making the slightest exertion, such as going up stairs, lifting weights, and even when laughing or crying. Some are similarly affected when riding on horseback. I do not remember any of these cases which have failed to be cured by electricity. I am not including the cases of old women in whom violent bronchitic cough is so often accompanied by an escape of urine, although these would also probably improve.

The reason why this class of case can be so successfully treated by galvanism is in my opinion due to the fact that the whole of the lower nervous supply of the bladder and sphincter vesicæ can be so easily included in the circuit. My method of treatment is not exactly the same as that followed by Guyon and Unverricht, described in the annotation alluded to above. It is seldom that I have to pass an electrode into the urethra; and it seems to me that failure will often ensue if the second electrode is "moved from place to place over the pubes." The tendency of all electrical currents is to take the shortest route possible to complete the circuit, always of course choosing the road offering the least resistance. If one electrode is placed on the lower dorsal spine and the other above the pubes, the sphincter vesicæ is almost completely without the circuit, and then receives very little direct influence. In cases where there is weakness of the sphincter, unless an electrode is placed in the urethra itself, the most advantageous position for the second electrode is the perineum. It is seldom that I use the interrupted current, although it is strongly recommended by Erb. My usual plan is to place a pad connected with the negative pole of a continuous current battery over the lower dorsal region of the spinal column, and a small button electrode on the perineum. I advise that the electrode connected with the negative pole should be the fixed one, because of the sensitiveness of the parts to which the second electrode has to be applied, and the small space, and therefore the difficulty experienced in moving the electrode about. In all cases a very weak current is used, and therefore the fixed negative electrode, being of wide surface, does not painfully affect the back; whereas, if the current were reversed and the button electrode in the perineum made negative, a weaker current still would have to be used to enable the patient to bear it. Therefore, in these cases we get the greater advantage by placing the electrodes as I have mentioned. In the treatment of atony of the blader, incontinence of urine, or undue frequency of micturition, I usually employ the current for eight or ten minutes every day or every other day; the great majority of cases only requiring about eight or ten applications. In some cases when galvanism fails the interrupted current may be employed with success. It is then best to place an electrode in the urethra.

Mansfield-street, W.

[1] Brit. Med. Jour., Jan. 6th, 1883, p. 9.

TRAUMATIC ENCEPHALO-MENINGOCELE.

BY HARRY BURTON, M.R.C.S., L.R.C.P. IREL, &c.

ON Aug. 7th I was sent for hurriedly to see A. H——, aged eight, who had been knocked down by a swing boat. The following were her injuries: Compound fracture of frontal bone, about two inches above the centre of the right orbit, with contusions over the occipital bone of the same side. There was a clean-cut wound over the side of the fracture, one inch and a half long. The fracture was circular, but not depressed. It appeared that the edge of the swing boat knocked her down, causing the fracture, and the contusion was caused by the head striking a peg in the ground. As the girl was conscious on my arrival, and recovering nicely from the shock, and as there were no symptoms of compression, I simply sutured the wound and dressed it with salicylic wool. The wound healed by first intention, after which a peculiar train of symptoms developed. The skin began gradually to bulge over the fracture, and a tumour formed, pulsating and semi-translucent. This increased in size until it became as large as a walnut, the integuments gradually thinning over it, but remaining intact. By exerting pressure upon it it gradually disappeared, and a circular opening about the size of a two-shilling-piece could be felt in the bone, corresponding to the situation of the fracture. The child suffered from convulsions and strabismus, and no pressure could be borne without a convulsion occurring. I aspirated, but only succeeded in drawing off a small quantity (about two drachms) of cerebro-spinal fluid. I found some cerebral substance on the needle, thus showing that brain was protruding. Strange to say, the girl improved after the aspirating, and Mr. Wright of Manchester having seen her and again advised pressure, it was applied very gradually, with success, the tumour gradually disappearing and the hole in the bone becoming partially filled with fibrous tissue, until now, with the exception of slight weakness of vision and slight failure of power of the left arm, the girl is enjoying good health and attending school regularly. She wears a silver plate over the site of injury as a precaution. Abscesses formed over the occipital region; they were laid open and necrosed bone gouged away, Mr. Jenkinson of Marple Bridge kindly giving chloroform on three occasions. During the healing of these great difficulty was experienced in keeping down the large flabby granulations which grew so luxuriantly.

This case appears to be unique. It was certainly not the hernia cerebri of books, as there was no open wound, the skin having healed, and, although much thinned, remaining sound. It also differs entirely from the traumatic meningocele described by Mr. Clement Lucas and Mr. Golding Bird.[1] The only way to account for it is that the fractured bone, becoming necrosed, must have been absorbed, and the membrane and brain substance were protruded through the opening. I may state that the face and

[1] Guy's Hospital Reports for 1876, 1878, 1881, 1884, and 1889.

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left upper extremity were chiefly affected by the convulsions, showing that the inflammatory processes must have involved their cortical centres.

Marple.

EXTRA-PERITONEAL HÆMORRHAGE DURING PREGNANCY; CÆSAREAN SECTION; DEATH.

By SIDNEY A. BONTOR, M.D., B.S.

A SHORT time since I was called at 10 A.M. to K. L——, the wife of a labourer. She was a tall and ill-fed woman, aged forty-three, and eight months pregnant with her ninth child. I was told that she had been quite well the previous day, but had felt some abdominal pain during the night, that this had passed off towards morning, that she had prepared and partaken of breakfast, and was attending to her domestic duties as usual, when she was seized with a sudden and very violent pain in the right side, causing her to scream out and almost fall down. She was assisted up to the bedroom, and I was sent for. I found her blanched, with cold and clammy skin and almost imperceptible pulse. She was quickly undressed and put into bed. On examination a well-marked resistance was felt in the right iliac region quite distinct from the uterus, while feeble contraction of this organ could be felt; the abdominal walls, except in the region indicated, were not at all tense, and manipulation of the abdomen did not produce pain; per vaginam, there was bulging of the posterior cul-de-sac, and the cervix was high up and soft, but not dilated. I concluded that perforation either of intestine or of a vessel had taken place, that what chance there was of saving the patient's life was offered by immediate abdominal section, and that should this be unsuccessful in respect of the woman, at all events there was considerable hope of saving the child. I therefore had preparations made for the operation, and in the meantime called in my friends Drs. Mackay and Penny; they agreed as to the necessity for the operation, and very kindly assisted me with it. An exploratory incision was first made, but no blood or fæcal matter was found in the peritoneal cavity, and the peritoneum appeared natural. The incision was therefore extended, when the right broad ligament was seen to be filled with blood-clot. The woman was sinking rapidly, so we abandoned the hope of saving her, and decided to remove the child, which, however, on removal we found to be already dead. Unfortunately in opening the uterus I came upon the placenta, and the hæmorrhage which ensued, though but slight, was sufficient to carry off the patient. An examination of the abdominal cavity through the wound showed that extensive hæmorrhage had taken place outside the peritoneum, and had spread from the under surface of the liver to the pelvis, forming collections about the kidney and in the cavity of the pelvis, and distending the right broad ligament, while it had separated the peritoneum from the cæcum and ascending colon. The source of the hæmorrhage could not be found, and, as far as we could trace, the vessels and viscera were natural, with the exception that in the anterior wall of the uterus there was a small cancerous nodule about the size of a hazel nut. There were no varicose veins either of the legs or in the broad ligament. Permission for a necropsy was unfortunately not obtained. Notwithstanding the unfavourable result, the case appears to be of interest, not on account of anything exceptional in the operation, but from the large amount of hæmorrhage and from its sudden appearance in a woman whose health up to the occurrence had shown no unusual change. In view of the cancerous nodule found in the uterus, it is possible that a growth which we were unable to make out had eroded one of the vessels. The death of the child was probably due to the sudden diminution of the blood-supply to the uterine sinuses, for it was well formed and had apparently been dead but a very short time.

Great Berkhamsted.

WATER-SUPPLY, ROTHERHAM.—It has been found necessary to curtail the night water service, partly in consequence of a deficiency during the past month, amounting to nearly 41,000,000 gallons in the Ulley Reservoir, Rotherham, together with the waste, which has been very large from letting the water run from household sinks and taps throughout the night to obviate the freezing of the pipes.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

A CASE OF OPHTHALMOPLEGIA EXTERNA AND INTERNA; REMARKS.

(Under the care of Dr. FERRIER.)

DURING the last few years much has been added to our knowledge of the various affections which are manifested in the eyes of patients suffering from locomotor ataxy. In this case a condition of paralysis of the extrinsic and intrinsic muscles of the eyes was found with optic atrophy in a man not yet presenting the characteristic ataxic gait. Dr. Berger[1] has recently written on the visual disturbances in tabes dorsalis, and given an analysis of 109 cases. He says that the cases occurring in the very young and in the very old are exempt from grave ocular complications, and that in those with a history of syphilis the disease begins with cerebral symptoms. Optic atrophy usually began in the ataxic stage, and was more frequent in the cases with paralysis of the ocular muscles. Paralysis of these muscles existed in 38 per cent., about equally divided between the syphilitic and those in whom no evidence of the disease could be found. Dillman, in an inaugural dissertation,[2] says that among 100 cases of tabes paralysis of the ocular muscles was present in 41, and optic atrophy in 42. There was a preceding syphilitic history in 68 cases. Dr. Howard[3] has recorded a case of ophthalmoplegia externa and interna associated with tabes dorsalis, bulbar paralysis, and loss of vision and hearing. We refer our readers to Dr. Ferrier's remarks on the case. For the following report we are indebted to Dr. G. Francis Ewens, medical registrar.

G. T——, aged forty-three, was admitted into King's College Hospital under the care of Dr. Ferrier on Oct. 9th, 1890. He has been for the last twenty years a Covent-garden porter, and was for five years previously to that a soldier. He is married, and has had two healthy children. His father and mother were both healthy, and died, one at ninety and the other at sixty years of age. There is no history of insanity or any nervous disease in his family, but two out of his three sisters died of phthisis. The patient, when a boy, suffered from severe headaches, but since that time has had no illness whatsoever, except about twenty-four years ago, when he contracted syphilis. He has never been intemperate. Six months before his admission to hospital (May, 1890), when feeling quite well, and walking in the market with a load on his head, he suddenly felt sick and vomited, and was obliged to go home to bed, remaining there three days. Several times since he has had similar sudden attacks of vomiting, lasting about the same time, accompanied with intense epigastric pain of a griping character, shooting pains down both legs, constipation, and a burning pain during defecation. For about the last six months he had also suffered from diplopia and occasional dizziness, both of which he now complains of constantly, together with an inability to raise the eyelids. He has also during the same time been subject to sudden attacks of shooting pains, very acute and intensely painful, down both legs, usually worse at any changes of the weather; but he has never had any difficulty in walking at any time, or perceiving the ground with his feet, nor has he had any trouble with his bladder or rectum. When examined, the patient presented the appearance of a fairly well nourished man, not anæmic; complaining of sudden attacks of very severe vomiting coming on at variable intervals; of constant sense of constriction, "as though ropes were tied round" his trunk from axillæ to umbilicus. This feeling is much aggravated during the attacks of vomiting, and is then accompanied by intense epigastric pain, con-

[1] Archives of Ophthalmology, vol. xix., No. 4. Sajous, vol. iv., B. 131. [2] Leipsic, 1889.

[3] Internat. Journal of the Medical Sciences, p. 238, 1889. See also Galezowsky, Archives of Ophthalmology, Sept. 1889. Parinaud: Recueil d'Ophthalmologie Oct. 1889.

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stipation, and pain in the rectum during defecation. He has no headaches, and has never had any convulsions. There is ptosis of both eyelids, most marked on the left side. Both pupils are very large, the right more so than the left; neither react to light, accommodation, or cutaneous stimulation. The eyes are slightly divergent, and cannot be moved in any direction whatsoever, except slightly downwards and outwards. Both optic discs are in a condition of grey atrophy. The sight is defective, especially for near objects. There is no facial palsy or weakness of the muscles of mastication, the movements of the tongue and palate are normal, and speech and swallowing are perfect, as are also all movements of the arms, hands, fingers, thighs, legs, feet, and toes. He can perceive and accurately localise the slightest touch on the face or any part of the limbs and trunk. He can perceive a painful impression and hot and cold, and knows with eyes closed the position in which any of his limbs may be placed. The knee-jerks are both present, though not always easy to demonstrate, being only obtainable while the patient strained. All the superficial reflexes are present and normal. There is great wasting of the muscles of the legs, as also of the palmar interossei, and to a less extent of the thenar and hypothenar eminences; but they all react to a faradaic current and normally to galvanism. The heart and lungs are normal, and the urine is 1015 specific gravity, and contains no albumen or sugar. He walks steadily, but has some difficulty in maintaining his equilibrium when keeping to one straight line or standing with the eyes closed. While in the hospital he has had two severe attacks of vomiting, with intense epigastric pain and constriction, causing him to groan so loudly and continuously as to require his removal from the general ward to prevent his disturbing the other patients. The first of these attacks began on Nov. 4th and lasted six days, during which time subcutaneous injections of morphia had to be frequently administered. At the end of this time the crise gastrique had quite subsided, and the patient again felt comparatively well, and was able to resume his usual place in the ward. Another attack of a similar nature occurred on Dec. 3rd, which lasted five days.

Remarks by Dr. FERRIER. — In a clinical lecture on this case I remarked on the common association of ophthalmoplegia with other affections of the nervous system, particularly with tabes, and occasionally with muscular atrophy more or less general. The present case is an example of almost complete ophthalmoplegia externa and interna, the only ocular movement persisting being a slight downward and outward movement of the eyeballs. Under ordinary conditions, except for this movement, the eyeballs are absolutely motionless, and the eyelids are incapable of being raised. It was observed, however, during the second crise gastrique which the patient had in the hospital, that he became able to raise the right eyelid and fully expose the eyeball. This, however, was only transitory, and the ptosis returned when the attack subsided. The case is in all probability due to degeneration affecting the nuclei of the ocular muscles, and not peripheral lesion, under which condition similar symptoms may arise. Associated with this there were clear indications of tabes. The patient is not obviously ataxic, nor are the knee-jerks abolished, but the grey atrophy of the optic discs, the absolute immobility of the pupils, the lightning pains, epigastric constriction, and the crises gastriques are all symptoms characteristic of tabes. And the probability is, as in a recent case reported by Peterson (*Neurologisches Centralblatt*, Oct. 1st, 1890), that the degeneration will advance to well-marked ataxy. In this case also there are indications of degenerative changes in the nuclei of the spinal nerves similar to those of the ocular nerves, as shown by the extensive wasting of the intrinsic muscles of the hands, and those of the lower extremities, particularly of the legs. The etiological factor in this, as in most cases of the kind, is undoubtedly specific disease.

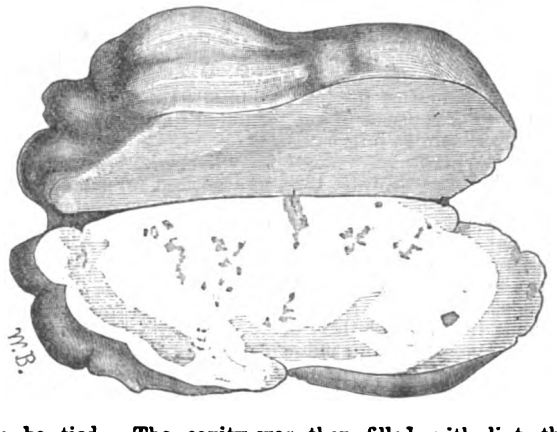
ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF TUMOUR OF THE PALATE; OPERATION; REMARKS.

(Under the care of Mr. PAGE.)

ADENOMATA of the palate are not growths frequently met with in surgical practice—indeed, in 1886, Mr. Hutchinson[1] remarked on bringing forward a case that up to that time the Pathological Transactions did not appear to contain any reference to adenomata of the palate. Since then several examples have been brought before that Society or reported elsewhere. This case is an example of that form of growth situated, as they appear most frequently to be, on the left of the middle line, encapsuled, without ulceration of the covering mucous membrane, and of slow growth. For the report of this case we are indebted to Mr. T. M. Kempster, house surgeon.

M. H——, a puddler, aged forty years, was admitted, under the care of Mr. Page, on Dec. 16th, 1889, complaining of difficulty in breathing, more particularly at night, and of inconvenience in swallowing. His symptoms had existed for two years, but it was only three weeks before admission that he became aware they were due to a growth in the mouth. Upon examination, the isthmus faucium was seen to be occupied by a tumour the size of a hen's egg, springing from the left side of the throat. It was firm, regular, and fixed. The finger could be passed readily round it on the right side, but its deep connexions could not be defined. The mucous membrane was stretched over it and thinned, but there was no sign of ulceration. No enlarged glands could be felt. On Dec. 20th, the patient having been placed under chloroform, laryngotomy was performed and the throat plugged with sponge so as to prevent blood finding its way into the air passages. The mouth was kept open with a gag and an incision made through the mucous membrane over the centre of the tumour. The growth was readily enucleated from the submucous tissue in which it was situated with the finger. Free general oozing from the bed of the tumour followed, but no vessel required



to be tied. The cavity was then filled with lint, the tube removed from the larynx and the sponge from the throat. At night the lint was removed, and in fourteen days the patient was discharged cured. The engraving, from a drawing kindly made by Dr. Baigent, is a good representation of the naked-eye appearance of the growth. Microscopically, spindle cells were found sparsely distributed among tissue closely resembling glandular tissue. On Oct. 20th, 1890, the patient presented himself, and there was no return of the growth.

Remarks by Mr. PAGE. — In the St. Bartholomew's Hospital report for the year 1886, a number of cases similar to the above have been tabulated by Mr. S. Paget under the head of Adenomata, which he tells us, though historically suspicious, are clinically "innocent as the babe unborn." The subsequent history, so far as it goes, tends to confirm Mr. Paget's observation that the growths do not recur.

[1] Path. Soc. Trans., 1886, p. 492.

KASR-EL AINI HOSPITAL, CAIRO.

LIGATURE OF THE ABDOMINAL AORTA FOR RUPTURED ANEURYSM OF THAT VESSEL; DEATH.

(Under the care of Mr. H. MILTON.)

THIS case is a most important contribution to our literature on the ligature of large arteries in their continuity, making only the eleventh instance on record of the application of a ligature to the aorta, and the first occasion on which the artery has been ligatured for aneurysm involving only the vessel itself. The methods which may be em-

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ployed are the transperitoneal and the post-peritoneal, and it will be obvious that in this instance the encroachment of the aneurysmal tumour to the left prevented the employment of the latter, and, further, the fact that escape of blood was rapidly taking place from the ruptured sac into the cellular tissue around made the selection of the quicker method of operating imperative. The patient was not under observation for a long time before the sac ruptured, but the diagnosis had been made, and evidently the condition carefully considered, for Mr. Milton has given us a plan of treatment which he had proposed to try had no untoward symptoms developed, and which could only be carried out where there is a sufficient length of vessel above and not involved in the aneurysm. The plan suggested is a bold one, and worthy of careful consideration should a similar case present itself for treatment. There are, however, many objections which may be urged against it, and which will present themselves to the minds of those reading the case. Should any surgeon after due consideration carry out the plan suggested—that of temporary compression against the spine—probably kangaroo tendon, which would not require to be removed had the purpose been fulfilled for which it was introduced, would ahswer best, for drainage-tube would be difficult to extract. That the operation of ligature of the abdominal aorta is a most formidable one there is no doubt, but that it is necessarily a fatal operation is hardly proved by the evidence before us. True, all the cases on record died after the operation, and, with one exception, within a few hours. Monteiro's[1] patient, however, lived for ten days and died from secondary hæmorrhage; but when we recollect that the case occurred in 1842, was treated by the long silk ligature, and that although the method was the post-peritoneal one suppuration followed, we cannot compare the conditions with those which would obtain now were this vessel ligatured. Abdominal aneurysm[2] is a very fatal disease, and although other kinds of treatment have been employed sometimes with success, and few cases admit of ligature, we hardly think that the possibility of the successful application of the hidden absorbent ligature should be forgotten.

An Egyptian, aged about forty-five, who was admitted to the hospital in July, 1890, had noticed for some sixteen months a pulsating tumour in his abdomen, accompanied by severe paroxysmal pain. He had had syphilis, but had received no injury in the region of the tumour. Slightly to the left of the middle line and a little above the umbilicus was a tumour the size of an orange, pulsating and expanding with each heart beat. There was a slight bruit, and the tumour increased slightly in size when the aorta below it was compressed. The pulsation in the two femorals was equal. He showed old syphilitic scars, and his radial arteries were a little rigid. His lungs, heart, and urine were all normal. The patient was very anxious to have something done for him, and it was decided to attempt an operation as follows:—To incise the abdominal walls for about five inches in the middle of the linea alba, to expose and incise the peritoneum covering the aorta one inch above the aneurysm, to separate the aorta from the vein, and then to pass a blunt director close on either side of the vertebræ, and to force it gradually backwards through the tissues until its point could be cut down on in the back, then to make a similar passage on the other side; then to pass a small drainage-tube along the two channels made by the director, forming a loop across the aorta, the two ends of the tube presenting in the back on either side of the vertebral column—the tube being in position to close the peritoneum over it with catgut stitches, and finally to completely close the abdominal incision. The idea was to leave the patient a few days, and then to compress the aorta against the vertebral column by traction on the two ends of the drainage-tube. The amount of pressure to be applied and the period of its application were to be regulated by the effect produced on the patient.

On Thursday morning (July 3rd), however, before any treatment had been commenced, the patient awoke with a severe pain in his left side, and when seen somewhat less than an hour later, it was evident that the aneurysm had ruptured. The rounded tumour which had formerly existed could no longer be differentiated, but formed part of a pulsating mass extending from the umbilicus to the lateral limit of the abdomen, filling up the whole left hypochondriac region. The patient was watched for a few minutes, during which the pulsating tumour increased slightly, the patient showing the usual signs of severe hæmorrhage. Abdominal section was at once performed. An incision five inches long was made in the linea alba, its centre being a little above the umbilicus. The omentum and intestines were pushed aside, and the right side of the aneurysm exposed. A small incision was made in the peritoneum covering the aneurysm, and a finger passed into this easily made its way under the peritoneum, and guided by the aneurysm to the aorta readily recognisable by its size and its pulsation. It was at once compressed, and, the compression being maintained, it was isolated for about one inch above the aneurysm, the exposed portion feeling quite healthy. An aneurysm needle was passed round the aorta without difficulty about eight lines from the origin of the aneurysm and the vessel tied with thick silk. The peritoneum was dry sponged and the wound closed in the usual way without drainage. As the whole of the effused blood was found to be behind the peritoneum, it was left untouched. The time occupied by the operation from the first incision to the completion of the dressing was twelve minutes. Pulsation ceased immediately after ligature in the aneurysm, in the effused blood, and in both femorals. The patient was kept going during the operation with ether and brandy. He rallied about an hour later, and was kept alive with some difficulty for just twenty-four hours, and then died of anæmia and shock. He complained of intense pain and tingling in both legs until death, which occurred somewhat suddenly. He passed 13 oz. of urine quite free from albumen or blood.

Post mortem the aneurysm was found to be purely of the aorta, its lower limit about three-quarters of an inch above the bifurcation and its upper limit one inch and a half below the renal arteries, both of which were well above the point of ligature. The aneurysm presented a small rupture just at the left edge of its under surface, and from this point very nearly 4 lb. of blood had been poured out behind the peritoneum, entirely obliterating the left renal fossa. All the organs were anæmic, but otherwise healthy. The kidneys showed no signs of change whatever.

[1] Rev. Méd.-Chir. de Paris, 1852.

[2] The cases in which ligature of the aorta has been employed have been mostly of iliac and inguinal aneurysm; once for hæmorrhage after gunshot, once for hæmorrhage after nephrectomy.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Media for Cultivation of Tubercle Bacillus.—Chylous Ascites.—Pelvic Hydatid Obstructing Ureters.—Acute Verrucose Aortitis.—Dermal Cysts.

AN ordinary meeting of this Society was held on Jan. 6th, the President, Dr. Dickinson, being in the chair.

Sir HUGH BEEVOR read a note on Media for Cultivation of the Tubercle Bacillus. The results he had obtained showed how diverse might be the media that could be employed, and how wide the variations of temperature in which the bacilli would grow. His observations on potato cultivations agreed with those of other observers—that the growth was very slow, there being from twenty days to a month before the first sign of growth appeared. It was stated that cultivations on the potato for three generations did not diminish the virulence of the organism. He found that the bacilli grew in broth to which glycerine had been added at a temperature lower than they did on potato or in glycerine agar-agar, and he showed tubes which had been kept at a temperature not exceeding 60° F. Bacilli cultivated in glycerine agar-agar to which corrosive sublimate in the proportion of 1 in 200,000 had been added were hindered slightly in their growth. This proportion of perchloride when compared with the average body weight of a man equalled from five to six grains. The demonstration of the wide range of temperature at which the organisms would grow was interesting in suggesting that their habitat was probably wider than had been supposed.—Dr. CROOKSHANK said that the paper had involved a very great amount of labour, the growths being very slow and requiring constant watching. The results of inoculation of animals with these subcultures when published would prove of great interest.

Dr. FRED. J. SMITH read notes of a case of Chylous Ascites in a woman aged sixty-seven. She had suffered

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from dysmenorrhœa all her life and occasionally with dyspeptic symptoms. The final illness began in 1889 with similar dyspeptic trouble, culminating in ascites in July, 1890. Masses of cancer were thought to be present during life, both abdominal and pelvic. The necropsy revealed primary growths in both broad ligaments, chronic peritonitis, with small nodules of new growth. The liver was much displaced, its capsule thickened, and two large stones blocked the cystic duct. The thoracic duct was perfectly healthy. Dr. Smith was inclined to attribute death to a simple, not a malignant, chronic peritonitis, basing his belief on—(1) the comparative numerical deficiency of neoplastic nodules; (2) the verified presence of a simple irritant; (3) the long duration of the case.—Mr. SPENCER inquired if the fæces were examined for fat, and if the intestinal wall had been stained with osmic acid. — Dr. MAGUIRE said that a considerable proportion of cases of chylous ascites had been associated with carcinoma of the peritoneum, and dilated lymph vessels had been demonstrated near cancer nodules. Two distinct varieties had been described, and in one of these the milkiness of the fluid appeared to be due to the cellular elements derived from breaking down malignant growth. He had known of an instance in which a rupture of the receptaculum chyli had been found post mortem.—The PRESIDENT asked if the molecular basis of chyle was found in the fluid. He supposed that the condition was due to obstruction to the lacteals in the mesentery or in its neighbourhood.—Dr. SMITH, in reply, said that under the microscope there was seen finely divided fat, with a few leucocytes. The fæces had not been examined, and there was no suspicion of filaria as a cause.

Mr. HURRY FENWICK detailed the history of a Large Hydatid Cyst of the Bladder. The patient, aged twenty-five, had been treated for six months for persistent headache, occasional morning vomiting, and increasing emaciation. Six days before his death great irritability of the bladder, culminating in suppression of urine, supervened. A large, tense, semi-fluctuant tumour was discovered on rectal examination, filling the entire true pelvis. It was separated from the prostate by a narrow interval, but it had pressed the vesiculæ seminales and vasa deferentia backwards. The bladder had been dislocated upwards and to the right, and a catheter could be passed after a slight hitch at the prostate, but the bladder was found empty. It was obvious that both ureters had been strangled at the brim of the true pelvis by the tumour. In order to temporarily relieve the obstructive suppression, he aspirated the cyst per rectum and drew off some ounces of hydatid fluid. The ureters immediately emptied their accumulated contents, for two ounces of urine were drawn off at once by catheter and the patient passed thirty ounces voluntarily during the next day. It was then arranged to attack the cyst supra-pubically, but a few hours before the proposed operation the patient fell back in bed, and died of suppression of urine. Post mortem a very large monolocular hydatid cyst was found blocking up the pelvis and nipping the ureters against the pelvic brim. Both ureters and the renal pelves were greatly distended and the kidneys much destroyed by backward pressure. No other hydatids were found. The brain was normal. Many such cases existed in the literature since 1787. Most of the cysts were situated under the peritoneum at the back or base of the bladder. Practically the cases might be divided into those cysts which were placed low down (basal), and caused retention by direct pressure upon the prostate, and into those which were situated higher up on the posterior wall (parietal), and evoked but few urinary symptoms until dangerous renal changes had ensued from backward pressure upon one or both ureters. The former variety were perhaps more successfully treated, for they attracted notice before great damage was done. Rectal aspiration was the usual treatment.

Dr. ROBERT MAGUIRE showed a specimen of Acute Verrucose and Ulcerative Aortitis, with the formation of an acute aneurysm. The patient was in St. Mary's Hospital for four months, and during life presented a systolic murmur at both the apex and base of the heart, and a soft diastolic murmur at the base. He had frequent rigors, with very irregular temperature. The splenic dulness was increased, but the spleen could not be felt. After death there was found ulcerative endocarditis of the auricular surface of the mitral valve, and on the ventricular surface slight recent ulcerations. The aortic valves were thickened, but showed no recent changes. At the junction of the ascending and transverse portions of the arch of the aorta there was a loculated dilatation of the vessel, with thin fibrous walls, and containing no fibrinous deposit. On the edges of the dilatation and of the loculi were large fibrinous vegetations, in which, on microscopic examination, there were found numerous streptococci. The spleen was enlarged, and contained a pale but not softened infarct. The case was looked upon as one of malignant endocarditis, in which the morbific matter had established itself in the aorta, and had caused verrucose and ulcerative aortitis with the formation of an acute aneurysm. He did not believe that the condition was caused by the organisms found in the vegetations, for so many different varieties were present.—Mr. SHATTOCK thought that, in his views as to causation, the author was at variance with the majority of observers. The disease usually originated in patches of chronic inflammation, and was due to a secondary infection of them.—Dr. SMITH asked if it were considered that the cardiac vegetations seen in chorea were due to micro-organisms. In deaths from many acute diseases he had seen small vegetations on the cardiac valves.—Dr. CROOKSHANK thought there was a great deal pointing to the fact that these micro-organisms were epiphytic. By what means did they gain access to the circulation.—Dr. HALE WHITE said that the ratio of ulcerative endocarditis to chronic lesion on the pulmonary side of the heart was very much greater than it was on the aortic side, and this fact seemed to him very significant in connexion with the presumed parasitic origin of the disease.—Dr. MAGUIRE, in reply, said that in the case related there was old mischief in both mitral and aortic valves. Though the starting point was usually in an old patch, many of the secondary lesions appeared to attack healthy lining membrane.

Mr. E C. STABB showed two specimens of Dermal Cysts. The first came from a blacksmith aged thirty. He punctured his finger with a rusty nail, and the cyst which formed was tapped but refilled. It was then removed, together with the adherent skin, and was found to be composed entirely of squamous epithelium. The second occurred in a carman aged twenty. Nine months previously he had sustained a lacerated wound of the finger, which healed readily. Four months later a swelling formed, and this on removal presented microscopical appearances similar to the one above described. It was interesting to note that they both followed punctured wounds, which drove the epithelium into the deeper structures.

The following card specimens were shown:—

Mr. H. B. ROBINSON: (1) Webbed Fingers and Toes; (2) Cystic Disease of Testicle; (3) Columnar-celled Carcinoma of Small Intestine.

Mr. W. G. SPENCER: (1) Lympho-sarcoma in Dog surrounding Trachea and Bronchi; (2) Lympho-sarcoma in Dog surrounding Aorta; (3) Leucocythæmia in Cat.

Dr. G. GULLIVER: Acute Endocarditis of the Right Side, with Pulmonary Embolism.

EPIDEMIOLOGICAL SOCIETY.

The Cause of Enteric Fever in India.

A MEETING of this Society was held on Dec. 17th, 1890, Jos. Ewart, M.D., F.R.C.P., President, in the chair.

The Secretary read a communication from Brigade-Surgeon H. SKEY MUIR, M.D., on the Cause of Enteric Fever in India, in which he took exception to certain allegations made by Surgeon-Major J. Pringle, M.D. respecting the sanitary conditions of the hill station of Chakrata in a paper on the same subject read before the Society in May last. He denied that the place was "cold and bleak," that "it had nothing to recommend it except a magnificent water-supply 1000 feet above it," and that the authorities "had neglected to avail themselves of this," having recourse, instead, to tanks inevitably exposed to pollution. He gave a table showing the mean and absolute maxima and minima of temperature for five years, from which it appeared that the extreme range was between 23° in February and 88° in June, with a mean temperature of 60° in the summer and 40° in the winter half of each year, and a rainfall of from 50 to 80 inches annually. Very few men were, however, stationed there in the cold season. The "magnificent water-supply" from the Deobund had, he stated, been in use since 1870, though until 1887, when iron pipes were laid, it had been brought to the barracks in open

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channels. The spring below the barracks, which Dr. Pringle had denounced, was only used occasionally in hot weather, and never during the monsoons. He denied that the outbreak of enteric fever in 1888 could have had any connexion with the water-supply, since the pipes had been laid in the previous year and the water contained only 1·8 grain of chlorine in the gallon and no ammonia or nitrates, and he argued that the disease occurring exclusively among new-comers within a fortnight of their arrival must have been contracted on the march through the plains. He gave a graphic description of the roadside wells from the railway station at Sanaranpore and of the river, from one or other of which the troops obtained their supplies on the march of seventy-seven miles, as well as of the camping grounds, entirely in agreement with Dr. Pringle's account and familiar to all Anglo-Indians, and, though not absolutely exonerating the water-supply at Kailana as he did that of Deobund, ascribed the annual occurrence of some ten to twenty cases in nearly every instance to infection contracted on the way to the station. — Dr. PRINGLE, in reply, entirely concurred with Dr. Muir in his condemnation of the filthy sources to which soldiers were compelled to have recourse on the march, which he had vainly urged the authorities to protect from contamination; but with regard to Chakrata itself, he said that the open conduits consisted of two planks sunk obliquely in the ground along a mule path, and were exposed to every kind of pollution. He was pleased to learn that pipes had now been substituted, but the outbreak to which he had referred as originating in the station was that of 1883 (the date 1888 in the abstract which appeared in the *British Medical Journal* being a printer's error). He knew that at that time the tank alluded to was in constant requisition, and he had urged in vain the utilisation of the rain water from the galvanised iron roofs. Dr. Muir's temperature tables fully justified his condemnation of the climate, so did the telling admission that the scarcity of wood for fuel necessitated the abandonment of the station in the cold season, the very time when such sanatoria were most useful. Its position, also, N. and S., was bad, exposing it to the direct influence of the hot winds from the plains, and the cold from the snow-capped mountains, whereas an E. and W. aspect afforded shelter from these extremes while giving the full benefit of the wind currents.—Sir JOSEPH FAYRER maintained that too much stress was laid on a supposed specific cause of enteric fever, believing that other influences akin to those concerned in the production of malarial fevers should be taken into account.—Sir W. MOORE held that the specific germ was a pure assumption, and that enteric fever was multiform, indefinite, and due to a variety of causes.—The PRESIDENT argued that the pathological identity of the disease, as shown, especially by post-mortem examination, throughout the world disproved a multiplicity of causes, that the bacillary theory was proved by an overwhelming mass of evidence, that the diversity in the non-essential phenomena was explained by individual peculiarities of age, constitution, &c., and that all alleged factors other than the specific cause were but predisposing influences rendering the individual more susceptible to infection.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Habitual Abortion.

AT an ordinary meeting held on Jan. 2nd, T. Gunton Alderton, Esq., President, in the chair, Dr. LEITH NAPIER read a paper on the Treatment of Habitual Abortion. The term "habitual abortion" being limited to a recurrence of abortion three or more times, Dr. Napier discussed in an exhaustive manner the various methods of treatment, classifying them under four headings: (1) Rest or exercise, insisting on the necessity of absolute rest for at least six days in the month; (2) local cure of uterine disease, chronic endometritis being regarded as the chief cause of abortion, in that retroflexion and other displacements, with atony of the mucous membrane, leucorrhœa, &c., were regarded as resulting from chronic uterine inflammations or congestions; (3) constitutional treatment; and (4) drug treatment. The value of local treatment was strongly urged, and in estimating the comparative utility of drugs the prolonged exhibition of mercury, even in cases of a non-specific nature, was extolled above all other therapy; while as a uterine sedative viburnum was preferred to any other drug by the author of the paper, in whose practice 77 per cent. of habitual aborters had borne living children after treatment by local methods and drugs.—A discussion ensued in which Dr. HANDFIELD JONES thought that too great stress had been laid by Dr. Napier on local treatment. He regarded heart disease as the primary cause of chronic uterine disease and retroflexion, and pointed out that the commonest epoch for abortion was that at which the gravid uterus was striving to rise out of the pelvis, cardiac disease generally causing abortion between the fourth and fifth month, failure of the left ventricle leading to uterine stasis, congestion, and petechial hæmorrhages.—Dr. NAPIER replied.

The General Secretary, in the absence of the author, read Dr. Macnaughton Jones's paper, entitled "A Plea for the Obstetric Art," and the meeting adjourned.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of this Society was held on Dec. 12th, Mr. H. E. Armstrong, President, in the chair.

The consideration of the sanitary legislation of the past session was resumed with the Infectious Diseases (Prevention) Act. Section 4 was severely criticised, Dr. WILLOUGHBY deprecating the repeated introduction of the limiting phrase "within the district," one effect of which was that a dealer prohibited from selling his milk in one town was at liberty to send it to another, which in most cases would be London.—Dr. NEWSHOLME objected to the production of proof of disease having been actually caused by the milk being required as a condition of putting in force the provisions of the clause, which was thus deprived of all value as a *preventive* measure—e.g., when scarlatina or other fever was as yet present at the dairy only.—Dr. SYKES expressed his belief that the sources whence a retail dealer obtained his milk afforded far more important information than could be derived from a list of his customers.—Mr. BLYTH deplored the delay necessarily following from the procedure enjoined by this clause, and Mr. ARMSTRONG, having never had any difficulty with the evidence furnished by the list of cases notified in inducing the dealer to state the sources of his milk and in stopping the supply at once, was convinced that this section would only serve to interpose impediments in the way of his action in the future. On Section 5 Mr. LOVETT stated that the delay apprehended by some was obviated in his district by his having received a general authority from his Board to act at any time without a previous order. No charge was made for disinfection, except when the occupier, to avoid publicity, desired it to be carried out after dark. The general feeling was that no disinfection should, or indeed could, be deemed effective unless performed by, or strictly in accordance with the instructions of, the sanitary authority. Section 8 was considered unsatisfactory, no instructions being given as to the mode of enforcing it, especially since, as Dr. Willoughby remarked, deaths were rarely registered within the specified period. Section 15 gave rise to a lively discussion as to the best manner of providing for an obvious want, the extent and nature of the accommodation required in different communities, and the necessity for disinfecting the clothing of the individuals temporarily unhoused.—Dr. NEWSHOLME said that at Brighton they hired empty houses for a few days, the Corporation providing furniture, bedding, &c.; and Dr. YARROW that in St. Luke's a house had been taken and fitted up as a permanent refuge, one of the *employés* of the vestry being appointed caretaker. Several cases were mentioned in illustration of the urgent need for such provision, among them one of a woman with her child, who had conveyed the infection of scarlatina to the family of a friend at whose house they had passed the night while their own was being disinfected. The Public Health (Amendment) Act elicited unqualified approval except as to its permissive character, and a resolution was carried unanimously that Mr. Ritchie be requested to obtain the compulsory extension of Part III. to London, or to incorporate its provisions into his Metropolis Management Bill, referred to in the speech from the throne.

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CLINICAL SOCIETY OF MANCHESTER.

The Treatment of Tuberculosis by Koch's Method.

AN ordinary meeting was held on Dec. 23rd, 1890, Dr. Braddon, President, in the chair.

Dr. JUDSON S. BURY opened the discussion, and gave a detailed account of the method from personal observation during a recent visit to Berlin. Dr. Bury strongly advised the use of very small quantities of liquid in commencing treatment.

Dr. GUMPERT remarked upon the extraordinary power of selection of tuberculous material displayed by the liquid, and pointed out the immense benefit which would be obtained by the early use of the remedy in doubtful cases, before the disease had progressed too far for treatment to eradicate it. From observation made in Berlin Dr. Gumpert urged the importance of using small injections to commence with, increasing gradually until the exact quantity required to produce the desired local change had been determined. A dose of one milligramme or even less was sufficient at first. With half a milligramme distinct reaction had been obtained. Dr. Gumpert afterwards showed a patient of Mr. Southam's in whom he had injected three milligrammes each time on December 8th, 12th, and 18th. The patient, a lad of sixteen years of age, had numerous (over thirty) patches of lupus in the face, on the neck, the back, and the legs. He had had a tuberculous affection of the left knee in early childhood, which had produced total stiffness of the joint thirteen years ago. The reaction after this comparatively small dose had been very severe headache, pain in the chest, and very severe pain in the strumous knee; rigor about nine hours after the first injection, but not after the others; high temperature—104·4°, 104·2°, and 104·6° respectively; repeated vomiting fourteen, fifteen, sixteen, and seventeen hours after the first injection, but not after the others. The stiff knee became slightly movable in the evening of Dec. 9th, and could be bent to an angle of about 120° on the following day. It became painful and stiff again some hours after the second and third injections, and more movable after the disappearance of the reaction, and can now be bent without the slightest pain to a right angle. The lupoid patches were all markedly improved.

Dr. COLIN CAMPBELL (Saddleworth), after thanking the Society for their kind invitation to be present, said he regretted that his observations of the results of Koch's treatment did not enable him to agree with the very favourable opinions expressed by Dr. Bury and Dr. Gumpert. They spoke of "cures" as if they were undoubted facts. He had grave doubts about these cures, and a consideration of the theory advanced to explain the working of the new remedy did not diminish these doubts. He had seen a great number of cases in Berlin, and carefully noted a few in each class. The cases of glandular enlargement were certainly not benefited. Scrofulous joints appeared to be improved, but as much improvement often took place from rest alone; and as regards lupus, he saw only one case in which a cure was claimed, and he thought Dr. Sutcliffe could give them later news about that one case. The other cures he noticed were also observed sixteen days later by Dr. Sutcliffe who still reported "no improvement." Where then were the "cures"? He had several patients anxious to try the treatment; but on the evidence before him, and his own observations, he was unable conscientiously to recommend it otherwise than as an experiment.

Dr. SUTCLIFFE (Stalybridge), from personal observation of cases, thought that the time had not yet arrived for formulating any definite rules as to the best method of using the liquid or the results of its action. Probably the best way to treat phthisis would be by small doses injected at intervals of a fortnight spread over a long period of time, and conjoined with all hygienic, tonic, and climatic treatment available. He showed an asbestos syringe largely used in Berlin in preference to the one used by Dr. Koch.

Dr. BRIERLEY deprecated following a "method" and using a preparation the composition of which was not known to the profession, and was of opinion that English practitioners would be chary about putting this sensational treatment of tuberculosis into practice. Since the method was purely experimental at present, he thought the treatment should be carried out only in hospitals, where the patients could be constantly under the immediate care of skilled workers.

Dr. SIMPSON, though disliking the secrecy, at present perhaps unavoidable, of Koch's preparation, considered that we should not be justified in passing it by. Its use required great caution, and its curative value was not as yet firmly established. In many advanced cases, or where pulmonary tubercle was extensively distributed, it was contraindicated, and could only be used with the utmost possible caution in any threatening of meningeal tubercle. Then, too, there was some evidence that it might set up activity in some cases where tubercle might have remained. This raises the question, What becomes of the bacilli? They do not share, it seems, in the death of the tuberculous tissue. Are they in some cases, by the absorption of this, simply set free with their active properties unimpaired?

Dr. Braddon and others also addressed the meeting.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING was held on Dec. 18th, the President, Mr. W. Dale James, in the chair.

Typhoid Fever.—Dr. DYSON showed the ileum from a case of typhoid fever. The patient was a girl aged seventeen. She died on the forty-seventh day of the disease of exhaustion and hypostatic pneumonia. She had been ill fourteen days before admission to the infirmary, and suffered throughout from vomiting and gastric irritability. In the early part of the case the vomiting was largely biliary; hence great difficulty was experienced in feeding the patient and in the administration of antipyretics. The ulceration of the bowel was extensive; some of the ulcers were cicatrising, others appeared recent, and several were deep, the floor of the ulcer being formed by the serous coat of the bowel.—Mr. T. Robinson, Dr. Burgess, Mr. A. Jackson, Mr. Baldwin, Dr. Martin, Mr. Garrard, Dr. Mathews, and Mr. B. Walker joined in the discussion.

Miners' Nystagmus.—Mr. SNELL introduced a patient suffering from miners' nystagmus. He said that an impression was current, particularly among the miners themselves, that the use of safety lamps was the cause of this affection. A case like the one introduced was in direct opposition to such an opinion. The patient had worked with safety lamps for fourteen years, and experienced no discomfort with his eyes. For the last three years and a half he had, however, been working entirely with naked lights—candles,—and it was during the last year or so only that his symptoms had developed and necessitated his leaving his work. It was a very well marked case of nystagmus. Mr. Snell remarked that he had seen several other cases occurring in men using naked lights. Fewer men, however, worked with naked lights than with the safety lamp; hence the cases of nystagmus met with were most frequently in those employing the safety lamps. Mr. Snell said, after an experience of several hundred cases, that the affection was occasioned by the position a proportion of coal getters were compelled to assume at their work. He had expressed these views in a paper before the Ophthalmological Society (Transactions, 1884) and elsewhere. The position (head and eyes obliquely upwards) was assumed chiefly by men engaged in "holing." The patient introduced was a "holer," both when using safety lamps and later when employing candles.—Remarks were made by Mr. Goodall and Mr. Boynton Lee.

Mr. B. WALKER read the notes of a Cerebral Case. The patient, a woman aged sixty-three, had a fit of apoplexy, resulting in right hemiplegia, six years ago. The leg, as usual, recovered more rapidly and completely than the arm, the latter shaking so when she attempted to lift anything that it became practically useless. On Nov. 4th last she had a second apoplectic seizure, remaining unconscious for forty-eight hours. After sinapisms had been applied to the lower extremities and a blister to the back of the neck, consciousness gradually returned, and the first thing the patient did was to lift a cup of water to her lips with the hand which had been so long disabled, and the power of using the arm had continued. Mr. B. Walker spoke in defence of the old-fashioned practice of counter-irritation, and even bleeding in some cases of cerebral apoplexy.—Mr. James, Dr. Martin, Dr. Dyson, Mr. JACKSON, Mr. W. F. Favell, Dr. Mathews, Mr. E. Barber, and Dr. Sidney Roberts spoke.

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Reviews and Notices of Books.

Transactions of the Medical and Physical Society of Bombay. No. 12, New Series. Published at the Education Society's Press, Byculla. 1890.

IN this volume a most interesting record is given of work brought forward at the meeting of the Society by its members. Amongst the most interesting of these is a paper by Dr. H. Vandyke Carter, principal and professor of medicine in the Grant Medical College, entitled "A Brief Description of Micro-organisms present in the Blood of Ague Patients." Dr. Carter, whose elaborate researches on the spirillum of relapsing fever marked him out as one who would act the part of a strictly impartial observer, arrives independently at the conclusion that it is impossible to cast doubt on the accuracy of Laveran's observations on the so-called hæmatozoa of ague. He confirms Osler's additional evidence, and gives drawings and descriptions of the organisms which should prove of considerable value, although he appears to have missed the peculiar radiate arrangement that has more recently been observed in the breaking up corpuscles. After careful examination of Lewis' hæmatozoon of the Indian rat and Steel's organism found in "Surra" disease, he recognises between them and the ague organisms of man an analogy, as far, at any rate, as the monad character of the organism is concerned. One curious feature observed by Dr. Carter, and one well worthy of careful consideration in connexion with the relation of the organism to disease, is that there appears to be no definite relationship between certain symptoms of malaria and the actual presence of the blood organism. He says, for instance, "I find that the more persistent phenomenon is the presence of the blood organism, whilst the febrile state may be only occasional; indeed, fever seemed unfavourable to abundance of the monad; and I have ascertained that it may be checked (by quinine) without at once entailing the disappearance of the parasite." Another interesting observation he has made, one that appears to have a considerable bearing on the phagocyte theory, and which may be brought up as evidence against the strict accuracy of Metchnikoff's theory, is that the organism during two stages of its existence—the pigmented spheroids and the flagellate forms—might be devoured by "coarse-grained leucocytes wandering in the liquor sanguinis; these marauding phagocytes always, however, sparing the crescents, whose persistence might, perhaps, serve to account for subsequent febrile relapses." Although so much has been written on the subject of phagocytes, and it has been so frequently discussed at recent congresses it does not appear that Metchnikoff's theory is yet fully understood by those who have used it to explain certain phenomena in disease, and certainly the arguments put forward by some more recent writers do not strengthen Metchnikoff's main contention that phagocytes are able to remove living organisms. Dr. Carter's observations are certainly not in accordance with the views held by the strict disciples of Metchnikoff. Although he mentions the phagocyte theory, and speaks of it as explaining the above features noted by him, those who read what Dr. Carter has written will be inclined to agree that, however highly the function of scavenging is developed by the phagocytes, their power of devouring living foreign protoplasm is surrounded by very distinct limitations. Dr. Carter considers that the peculiar conditions of melanæmia and urobilinuria, when the result of ague, are due, not so much to changes in the liver, but to changes in the spleen, which, in certain cases observed, was far more seriously implicated than the liver itself, and he says: "Doubtless, hepatic derangement ensues on the malarial infection, yet secondarily, I should say to the splenic; and I would connect, in this instance, at least (mentioning a case), the state of the urine with that of the blood." This record of the occurrence of Laveran's ague organisms is interesting as being the first that has come from India, and as opening up a new field of scientific investigation for British workers, which has hitherto been left almost entirely to the French, the Italians, and the Germans, and we hope that under Dr. Carter's careful direction his British assistants and Indian pupils may corroborate and extend the series of observations that he has commenced. In the meantime Dr. Carter promises further contributions on the pathology of ague and on the therapeutics of quinine in a paper to be published in the Scientific Memoirs (Official), vol. iii., Calcutta.

Another paper by Balchanora Krishna, L.M. & S., which will be read with interest at the present juncture, deals with Leprosy in Bombay in its Medical and State Aspects. It appears to have been brought forward specially to answer some of the questions raised by the Draft Leper Bill. Mr. Krishna contends, in opposition to the assumption of the Bill, that every case of leprosy is not contagious, the non-tuberculated or anæsthetic form which is most prevalent in India being seldom contagious, except, perhaps, during the ulcerating stages. He considers that, although leprosy is prevalent throughout India, it is impossible to obtain satisfactory statistics to show whether the disease is increasing or on the decline. That it is endemic he does not doubt, and also that it may be transmitted hereditarily. He does not agree with Mr. Hutchinson in his theory of a "peculiar specific poison" in fish, nor does he allow that the disease is communicable by aerial infection. He insists on the extreme difficulty of diagnosis during the early stages of the disease, and shows that even qualified medical men are apt to make mistakes unless they have had a wide experience in the treatment of leprosy; the powers suggested to be given to medical men in general under the Bill are, he thinks, too extensive. Whilst holding that certain clauses in the Bill are really the result of a scare, that they are ill considered and ill timed, he maintains that if these be deleted it would "be a desirable measure, in so far that when it becomes an Act it will serve pre-eminently to calm the public mind, which has been excited to the highest pitch, because it will be the means of removing vagrant lepers from the public gaze; but whether it will serve to stamp out the disease I am not sure." As to the question of asylums, he considers that they are unnecessary, except for those poor and diseased wretches covered with innumerable and loathsome ulcers and otherwise disabled, whose sufferings might indeed be greatly alleviated by care, protection, and food; but otherwise an equally strong cause might, he thinks, be made out for the construction of asylums for phthisical and syphilitic patients.

Mr. Krishna's paper is well timed, and will be extremely valuable if it will only enable people to think of "leprosy" without being panic-stricken. It is only one of several diseases the very names of which strike terror in the hearts of those who hear them. In this country, at any rate, it must be admitted, such terror lives on the reputation of the disease and not on any actual danger that there is of contagion or infection. In India, and in other countries where the disease is still endemic, it is now recognised that we must look to well-considered sanitary measures for any improvement in the nature and course of the disease, and as this fact is accepted, and as hygienic precautions are taken to prevent the spread of the disease, leprosy, like cholera, will become more and more restricted in its sphere of operations.

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Influenza or Epidemic Catarrhal Fever. An Historical Survey of Past Epidemics in Great Britain. Being a New and Revised Edition of "Annals of Influenza," by Theophilus Thompson, M.D., F.R.C.P., F.R.S. By E. SYMES THOMPSON, M.D., F.R.C.P. 8vo, pp. 490. London: Percival and Co. 1890.

THE recent epidemic of influenza has shown the great value of the "Annals" compiled for the Sydenham Society by the late Dr. Theophilus Thompson. In looking through those records from 1510 to 1837 we see the likeness of the various outbreaks of the last four hundred years. Of these the five that have occurred during the present century, and the ten in the last, are illustrated by our greatest medical writers, while those of 1658 and of 1675 are treated of by Willis and by Sydenham.

The republication of so important a work, beyond the limits of the Society's volume, is well deserved. The care and industry of its compilation are everywhere conspicuous: the views of each author are clearly set forth within quotation marks, and the editor's observations, distinguished in the original by brackets, but now unmarked, have a value of their own; the revision by the author's son, Dr. Symes Thompson, has been well and ably carried out; the present volume, in shape, size, and typography, is very like the original; it is handy and well printed, and the pages very closely correspond. The omission of some meteorological details has been judiciously managed, so that no important part of the old records is wanting. The new matter, including Dr. Peacock's account of the 1847 epidemic, is a worthy continuation of the "Annals"; that on the recent epidemic by the present editor is of great interest, but, though extending to seventy pages, necessarily falls short of its object. This may be noticed further on. The assumption of the two parts of author and of editor are difficult to sustain, and must be regarded separately in any review. The editorial part is on the whole well done, but some details of it have to be questioned. Would it not have been well for the new editor to have used brackets when additions of his own are inserted in the work? And some note of alteration should appear where alterations are made in the text, and such should be very restricted. In the preface, why retain the paragraph on Sir George Baker and omit that referring to the great writers from Huxham to Heberden? The last part of the original preface rightly gives place to notices of the 1847 and 1889 epidemics, but why not in their order of sequence? The introduction has more than a page of new matter, replacing much of the original that need not have been omitted, with nothing to indicate the extent or limit of the change. If in the concluding part it is allowable to substitute "micro-organism" for "some virus" introduced into the system, we might surely have had "typhus," near the beginning, replaced by "typhoid or enteric fever," the substitution in both cases preferably being made by added words in brackets. Other modifications of the vigorous original are less defensible, such as "coincide" for "combine" in the very true observation that influenza modifies any pre-existing disease with which it may combine; this would not be true of any coincident disease, and if coincident how can either be pre-existent? Two lines are added to the same paragraph not closely pertinent, and without any remark it is impossible to distinguish the son's from the father's work. As to traits of authorship, a family tendency is observable. The plea for including vague possibilities, well urged in the original, is too much adopted in the sequel, where ozone, cosmic dust, and Chinese inundations have more than their full share of notice. Siberia is referred to as a source of influenza, and cholera (p. 415) as a concomitant. The coexistence of disease among animals is not very critically treated. The summary of this last epidemic is very imperfect, not only as to extension but as to symptoms. Coryza, in some degree nearly always present, is given as "generally absent"; rel[illegible]es are omitted, though at p. 449 "many," and at p. 453 '[illegible] per cent.," are reported; rashes, mostly exceptional, and very seldom with any desquamation, are said to be of "frequent occurrence"; while any lessened prevalence of the epidemic in London coincident with "or after strong gales" is not evident in the preceding account. Some statement as to the large amount of original matter added by the new editor should in our opinion have been inserted in the title page, which otherwise might have been retained in its original form, and not have been so altered as to displace "Annals" from the heading or leading feature of the title.

The Medical Student's Manual of Chemistry. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Physics in the University of New York, Professor of Chemistry and Toxicology in the University of Vermont, &c. Third Edition. New York: William Wood & Co.

THE new edition of this work has been carefully revised and, to a great extent, rewritten. It is an excellent textbook for diligent medical students—those who wish to acquire a real sound knowledge of chemistry,—as well as for medical practitioners. It is lucid in style, contains a great amount of matter in a small space, and is disfigured by few inaccuracies. Chemical and physical theories as well as facts receive fair recognition, and although the applications of chemistry to physiology, medicine, and toxicology are systematically kept in the foreground, the science of chemistry is presented as a whole without regard to mere utility or the exigencies of an examination. The book is divided into three parts, the first devoted to general Chemistry and Chemical Physics, the second to Special Chemistry, and the third to Chemical Technics. The applications of physics to chemistry are of such great and increasing value that they require more space than the thirty pages here allotted to them, and it would have been well if they had been discussed at greater length, even at the cost of subsequent curtailment. The accounts of spectroscopy, polarimetry, and galvanic electricity are well written, and give good general ideas in regard to those powerful aids to research; but they are too short to afford sufficient guidance for practical work. Raoult's law of freezing points is described, though somewhat imperfectly; but we find no allusion to thermal or refractive equivalents or to the molecular volume of liquids. The omission of thermal chemistry is peculiarly unfortunate, as it is more than ever essentia to physiology.

In the second or descriptive part of the book more than half the space is devoted to the chemistry of carbon compounds—that is, to what is commonly called organic chemistry. Throughout this part the matter is well selected and well arranged, and the physician not less than the student will find in it much that will be of practical use to him. In addition to the ordinary toxicological and physiological methods, many suggestions, evidently founded on personal experience, are scattered through the pages. As examples we may quote the remarks on the physiological action of copper compounds (p. 214), on the ptomaines (p. 455), and on the precautions to be taken by the physician in cases of suspected poisoning (p. 130). The account of "laboratory technics," to use the author's phrase, in Part 3 may be described as neither very bad nor remarkably good. Here and elsewhere unnecessary confusion is introduced by the use of diagrams in which the illustrative letters do not correspond to the descriptions in the text. The diagrams themselves are not of a high order of merit.

For the peculiar and irritating nomenclature adopted in this edition Dr. Witthaus cannot be held responsible. A committee of the chemical section of the American Association for the Advancement of Science has decided that in

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future chlorine shall be written and pronounced chlorin, a chloride a chlorid, and so on. Alterations of nomenclature always involve inconvenience, and are only justified when they present some substantial advantage. We do not think that anything is gained by calling an old friend "iodid of potassium," and object altogether to the change. We neither can nor will describe the chief alkaloid of cinchona as quinin with the second vowel short; in short, there is really no possible reason for doing so.

Annual Report on Metcorological Observations in the Straits Settlements for the Year 1889. By MAX. F. SIMON, Acting Principal Civil Medical Officer, Straits Settlements.

THIS bulky Blue-book gives a very full and exhaustive record of the meteorological features of the principal places in the Straits Settlements—viz., Singapore, Malacca, Penang, and Province Wellesley. The results are interesting, as the localities mentioned all lie very near the Equator. So we may take the figures given as constituting one type of the equatorial climate. The several localities all lie very near the sea level—thus the site of the observations was ten feet above sea level at Singapore, twenty feet at Penang, twelve feet at Malacca, and forty-three feet at Province Wellesley. The first table gives the atmospheric pressure, which at Singapore showed a maximum of 30·075 inches, a minimum of 29·740, and a mean annual range of 29·891. This shows that the pressure was remarkably equable. At Malacca and Province Wellesley the equability was even greater, while at Penang it was somewhat less, than at Singapore. The next table gives the temperature. The highest recorded at Singapore was 93·8°, the lowest 68·7°, the mean was 81·4°, and the average range of the thermometer for the year was 13·4°. These are shade temperatures. The figures for Malacca are almost identical with those for Singapore, while Penang showed a maximum of 95·5°, a minimum of 70·0°, a mean of 82·2°, and a range of 13·6°. Province Wellesley showed somewhat less equability, as might be expected from the slightly greater elevation. The maximum there was 96·0°, the minimum 69·0°, the mean 82·3°, and the range 16·0°. Further evidence of the equable warmth of the climate is afforded by the figures showing the temperature of nocturnal radiation on grass. These show that the lowest point touched at any season was 65·4° on Jan. 4th at Singapore, 69·0° at Malacca on April 22nd, 64·0° on March 1st at Penang, and 67·5° on Feb. 28th at Province Wellesley.

The relative humidity table brings out some figures for which we were hardly prepared. The maxima are what might have been expected in a warm marine locality near the Equator. These are for Singapore 98, and 100 for the remaining three localities. The minima, however, are somewhat surprising. These were for Singapore 56, Malacca 76, Penang 48, Province Wellesley 47. We were by no means prepared to find them so low. As the means for the year are somewhat high—viz., 81 at Singapore, 89 at Malacca, 76 at Penang, and 86 at Province Wellesley—probably the minima refer to some brief period during the prevalence of dry continental winds.

Very full information is given regarding the prevailing winds. We learn that north-east winds predominated during the months of January, February, and March. In April the directions were principally south-south-west, north-west, and south-west, the last continuing steadily till July. From August to November, variable in south-east, south-south-west, west-south-west, and west prevailed. In December, north-east winds set in, with heavy gusts, interrupted by gusts from the north-west towards the close of the day. The mean velocity of the winds in 1889 was 143 miles, and the greatest velocity was 235 on May 28th. In general, the winds in the localities under consideration are from the north-east during the winter, with clear, dry weather, and from the south-west during the summer, with rainy weather. The rainfall is everywhere heavy, but varies much according to season. Thus at Singapore 84·13 inches of rain fell upon 174 days. The maximum monthly fall was in November—viz., 18·24 inches; and the minimum monthly fall in March—viz., 1·20 inches. The greatest fall in twenty-four hours was 5·90 inches, a large amount. At Malacca the mean fall was 87·67 inches, but at one of the localities of observation in this district there was a fall of 144·23 inches. In this same spot the fall for October was no less than 42·50 inches. In Penang the mean fall of several localities was 110·02 inches. The greatest monthly fall was in October—viz., 22·04 inches, and the least in February—viz., 0·52 inch. In Province Wellesley the mean fall of several localities was 94·01 inches, the maximum monthly fall was in November—viz., 18·75 inches, and the minimum in February—viz., 1·42 inches.

Taking the climate of the Straits Settlements as a whole it will be seen that it is hot and equable, that the rainfall is large and at some seasons excessive, and that the prevailing winds follow the general laws which obtain in the regions of the monsoons. The localities under consideration are not of any importance from the point of view of the therapeutic bearings of climatology, as invalids are very unlikely to resort to them; but Singapore and some of the other places mentioned are so important from a commercial, and to some extent also from a military, point of view, that the figures educed will be found interesting. Such climates as those here described are necessarily trying to the Anglo-Saxon, and are probably incompatible with the thorough vigour and fertility of our race. They seem to exercise their inimical influence most in the early years of life. In the case of adults there is always room for speculation how far the injury to health which a residence in the tropics frequently entails is due to some essential feature of the climate, and how far to the persistence under changed conditions in the dietary and general habits of life suitable to Great Britain. There can be no doubt that many of the diseases which prevail among our countrymen in India and elsewhere in the tropics are of dietetic origin, and that an approximation to the national habits of the native population would rob many of these diseases of much of their virulence. On the other hand, we can never shake off our racial peculiarities, and the attempt to make the Anglo-Saxon eat the same food and lead the same life as the Hindoo or the Malay would certainly end in disaster. The most we can do is to effect a reasonable compromise between our racial tendencies and the necessities of climate.

New Inventions.

BATH LIFT FOR THE PARALYSED AND HELPLESS AND FOR PROLONGED IMMERSION.

THIS bath lift, to which I would call the attention of the profession, was designed with a double object—(1) to prevent those accidents which from time to time occur during the bathing of the paralysed and otherwise helpless, and make the bathing of the most helpless patient by a single nurse at once possible and safe; and (2) with a view to the better carrying out of prolonged immersion—a mode of treatment frequently resorted to at present in various diseased conditions. The accompanying diagram gives a very good idea of the apparatus. It consists of a light, rigid frame supporting a strong net, and raised at the end to form a pillow. This net can be elevated to the level

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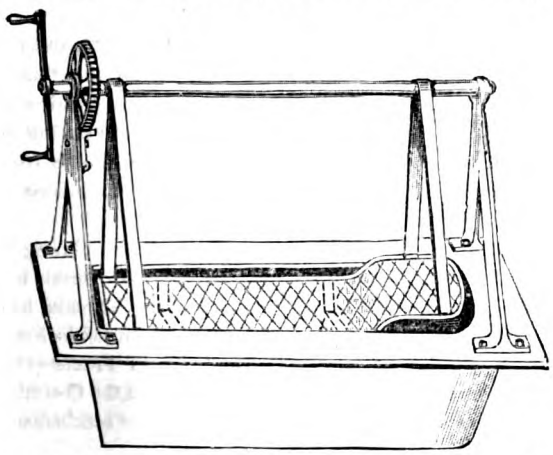
of the top of the bath and lowered at will by means of the handles attached to the revolving bar. A rack-and-pinion arrangement makes it impossible for the net to "go down with a run," and the bent crossbars (shown through the net in the engraving) keep the net three inches from the bottom of the bath tub when at its lowest. In use, when the patient is brought alongside the bath, the net is raised, the patient comfortably placed thereon, and gently lowered into the water prepared for him beneath. Bathing over, the net is raised again to the level of the top of the bath, the patient rubbed dry, and prepared for bed. Nurses and others who have single-handed attempted to lift a helpless person from the bottom of a bath will be able to appreciate the usefulness of this contrivance. The advantages of the lift in cases of pro-



longed immersion are many, not the least of which is that the patient is supported in mid-water, his weight being equally distributed, and no portion of his body being allowed to come in contact with the bottom of the tub. Should the patient be delirious or maniacal, the limbs can easily be secured to the net, and all dangerous struggling is obviated. There is sufficient space between the edge of the net and the side of the bath to prevent injury to the fingers should the bather grasp the rods. The apparatus can be made to fit any size or shape of bath, and can be fixed to an ordinary bath in a few minutes. It is also to be noticed that the net and revolving bar can be removed in a moment, so that in a private house the bath may not be monoplised by the invalid. The machine should, I think, prove of great value both in the private house and in the public institution. It is manufactured by Mr. J. Ward, 246, Tottenham-court-road, London, W.

S. A. K. STRAHAN, M.D.

COTTON-WOOL HOLDER FOR THE APPLICATION OF LACTIC ACID TO THE LARYNX.

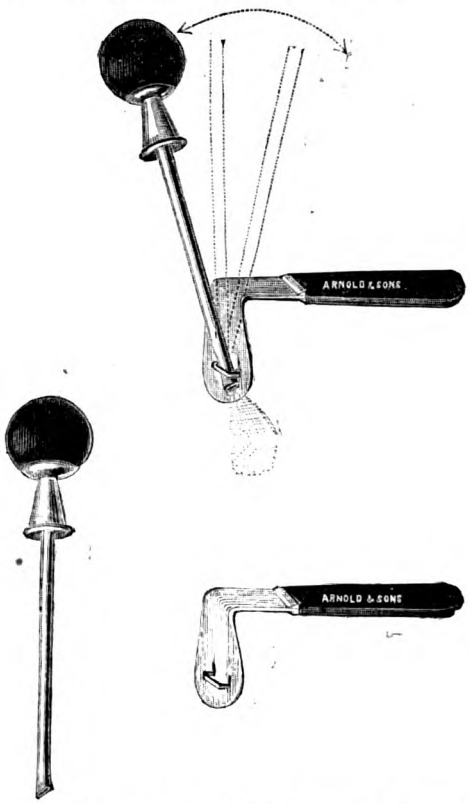
THIS holder is very similar to the ordinary laryngeal probe. The end (*a*) is screw shaped, and made of silver. The stem is rather thick, so that it does not easily bend. The handle (*c*) is made of wood, and can be screwed off, so that we can thoroughly disinfect the stem in boiling water or some strong antiseptic. The whole of the holder can also be made of aluminium. The advantages of this holder

are—(1) that the cotton-wool can be screwed on and off very easily; (2) that we can regulate the thickness and length of the cotton-wool to suit each individual case (we can thus carefully localise the application of the acid, and also get at those diseased parts which lie in the vertical plane); (3) that we can easily disinfect the holder; and (4) that it is very simple and cheap. The ordinary camel's-hair brush is much too large and the stem too flexible, so that the application of the acid cannot be properly localised or energetically enough carried out. The cotton-wool holder of Heryng has the great disadvantage that part of the cotton-wool is covered by the metal sheath, so that we cannot easily get at those parts which lie in the vertical plane. It is also often very difficult to remove the cotton-wool from the loop after use. The holder is made by Messrs. Down Brothers, St. Thomas's-street, London.

ADOLF BRONNER, M.D.,
Bradford. Surgeon to the Bradford Eye and Ear Hospital.

AN IMPROVED INSUFFLATOR WITH ADJUSTABLE TONGUE DEPRESSOR.

THE original insufflator of Dr. Osborne has two great disadvantages: one, that the powder has to be blown into the patient's mouth by the operator—an unpleasant and in certain cases (e.g., diphtheria) a risky thing to do. The improved Osborne insufflator, introduced to the profession by Mr. Alexander Duke, does away with this danger and unpleasantness by replacing the use of the operator's mouth by an indiarubber ball. But in both of these the left hand of the operator, whilst holding such instrument, gets into the line of vision; so, at my suggestion, Messrs. Arnold and Sons, of West Smithfield, have made for me the insufflator which is depicted in the engraving, and which,



by a species of evolution which it has gone through, is, I think, as perfect as such an instrument can possibly be. The tongue-depressing part is separate from the insufflator proper, which runs through a metal loop or bridge on the upper surface of the depressor, and, there being plenty of "play," by the slightest movement of the hand the powder can be ejected to all points of the fauces. Moreover, the handle of the depressor, which is of roughened ebony, being made at right angles, not only is more handy to hold, but—and this is its especial advantage—the left hand is well out of the line of vision. Again, the tongue-depressor can be used as a separate instrument for ordinary inspection of the fauces.

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THE LANCET.

LONDON: SATURDAY, JANUARY 10, 1891.

THE third report of the Royal Commission on Vaccination is in one sense the most important that has been issued as yet, for it contains the evidence of three witnesses, who have been selected by the party opposed to vaccination to set out their case from different points of view. The subject necessarily involves a number of questions which can only be satisfactorily dealt with by men of scientific training; and when the veteran scientist, Dr. ALFRED RUSSEL WALLACE, D.C.L., F.R.S., was openly enlisted into the ranks of the anti-vaccinationists, an immense gain to that cause from the scientific point of view was held to have been achieved. Naturally Dr. WALLACE was chosen as a leading exponent of the views held by his colleagues; and, having regard to his position, it must be evident that his evidence was looked upon as likely to influence a number of less scientific people. Dr. WALLACE occupied four entire sittings of the Commission in setting out his views, which were enforced by an abundance of diagrams and tables which have been reproduced in an appendix.

The first point which the witness brought forward had to do with the small-pox mortality of London during the period 1780–1883. During this century it was admitted that there had been much diminution in the rate of mortality from small-pox; but it was contended that this diminution could not in the earlier half of the period have been due to vaccination, because it was too great to be thus explained. This subject was discussed at great length, but when it is remembered that there were no accurate statistics either as to the population of London or as to deaths—burials alone being recorded, and the causes of death being often set down by ignorant women "searchers,"—such ancient history can hardly be regarded as having much bearing on the results of the administration of the Vaccination Acts in the present day. Indeed, were it not for that which later on followed in his evidence, we should have thought that Dr. WALLACE would have been the last witness who would have founded an argument on such imperfect data.

The next point was that, a "very general vaccination" being in operation from 1822 onwards, there had been no diminution of small-pox down to 1883; and apparently this view was largely based on the occurrence during this period of the small-pox epidemic of 1838 and that of 1871. Dr. WALLACE altogether ignores the fact that the neglect of "general vaccination" was such that as late as 1871 it was found necessary to pass an Act setting in operation a new machinery for the enforcement of the law in this respect. He declined, when asked, to consider the influence of the increased amount of registration of death and of accuracy in recording its causes which set in in 1838, when the Registration Act first came into operation; and he certainly failed to take sufficient account of the fact that his own diagram shows an immense reduction in the amount of London small-pox in the second as compared with the first half of the century to which his remarks relate.

Next followed evidence as to Sweden, Austria, and Prussia; and when Dr. WALLACE was asked why he had failed to continue his table of small-pox statistics for the latter country beyond 1873, and this in face of the influence of the well-known compulsory law of 1874, he, professing to speak as an exponent of the subject of vaccination, made the astounding statement that though he "had heard of that law" he had not seen "any evidence" that it had made "any important difference." Naturally Lord HERSCHELL, as Chairman, seemed anxious to get on to the "next point," and this point deserves the serious consideration of those who are induced to accept statements relating to vaccination merely on the ground that they emanate from an authority who happens to have acquired eminence in some entirely different branch of science.

In laying before the Commission the evidence relating to that which Dr. WALLACE described as his "most important" diagram—a diagram which, we may explain, has appended to it no less than fifteen closely-printed foolscap pages of statistics relating to small-pox in France—the witness was careful in a long proem to lecture the Commission on the vital importance of arriving at true conclusions, and the need, in seeking after causes, to have experiments that shall be strictly comparative. TYNDALL and his researches were appealed to in this connexion, the experiments of DARWIN upon the fertility of seeds were recalled, and it was urged that accuracy of the same sort, and an absolute test and determination of a kindred character, were necessary to true knowledge on the point under consideration. "Fortunately," said Dr. WALLACE, "we have an approximation to that condition of things in France"; and then followed an exposition of an enormous mass of detailed statistics prepared by his own hand. The Commission appears to have been much impressed with the voluminous evidence brought before them, and which at first sight almost seemed to imply that, under some peculiar idiosyncrasies attaching to the French race, vaccination bore no such relation to small-pox death as it is known to bear in this country. But at the next sitting the Commission had had time to examine both the statistics and the sources whence they were derived, and the result was to show that Dr. WALLACE'S theory was based upon a series of blunders that one would hardly have expected from a school-boy. The statistics as to one French department were recorded twice over. The detailed figures in this case of repetition were with one or two obvious errors alike, and yet a difference of some 3000 was made in adding up the data. Oddly enough, Dr. WALLACE was not even aware that he had dealt with the same department twice over, although the two columns stand side by side in his tables. It was next pointed out to the witness that for the department of Sarthe he had entered that there were no small-pox deaths during a long series of years, whereas in the single town of Le Mans in that department no less than 1179 such deaths had been recorded in two out of the years in question. As to this, Dr. WALLACE had no answer; but it subsequently turned out that wherever,

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owing to the difficulties attendant on the Franco-German War, no official returns could be obtained, and a blank was left, Dr. WALLACE had taken upon himself to make an entry to the effect that no deaths had occurred, and this for the very years when small-pox was most fatally prevalent. Again and again was the witness taxed with inaccuracies of this and an allied sort, and the feelings which were elicited by the fact of his having submitted such evidence to the Commission may be judged of by Lord HERSCHELL'S retort on one occasion, to the effect that "one does not accept statistics blindfold"; by Sir WILLIAM SAVORY'S question, Whether the witness would like his table to go forth as worthy of his "scientific reputation," and by a string of questions put by Sir GUYER HUNTER, ending in a demand whether Dr. WALLACE regarded the data which he had brought before the Commission as "having the accuracy of a DARWIN or a TYNDALL." Happily, after some hours of discussion, Dr. WALLACE was constrained to admit that "the whole thing is valueless," and he even refused to respond to Dr. COLLINS' suggestion that some remnant of good might yet have been found in his tables.

In the main Dr. WALLACE'S evidence was statistical; but when modern statistics were submitted to him, showing the enormous diminution of small-pox in children—that is to say, in the years immediately following vaccination,—he declined to go into the matter on the ground that it involved a question of "medical statistics"; and when it was urged that the fact was one of prime importance, his answer was: "I have nothing to do with either disputing or affirming it." On another occasion, when urged to explain further what he meant by declaring that the comparison between the vaccinated and unvaccinated mortality "in official and medical statistics must be rejected," he stated that on "great points" like that "other gentlemen" would be called. As yet, however, these other gentlemen have not turned up to give the needed explanation.

Although we have at some length dealt with Dr. WALLACE'S evidence, we would urge all who are interested in the question to read it for themselves. Its significance is immense. Modern statistics emanating from our own country, and which can be at once verified, were avoided, whilst returns for a past century and for distant places, the verification of which is well-nigh impossible, were set out instead, the story being preceded by a glowing account as to their scientific accuracy and importance, which the result showed to be altogether unwarranted. The truth is that in one sense we feel some sympathy for Dr. WALLACE. He surely must have been primed by persons of no standing, who were either ignorant or unworthy of credence, and he has suffered the consequences. His own statistics—which he stated he had prepared himself, and had indeed gone over "all of them twice"—he is of course responsible for; and with regard to them we cannot but feel that if this is all that science can do for the anti-vaccinationists the scientific value of the operation stands more than ever confirmed.

NOWHERE have the reports from Berlin excited a deeper and more painful interest than at the various sanatoria devoted to the treatment of phthisis. Climatic change, coupled with tonic and hygienic measures, has hitherto been our mainstay in the treatment of pulmonary phthisis; but it cannot be denied that the results thus obtained, though occasionally brilliant, are more frequently partial and palliative than curative, and always require much time and patience. It is only natural that patients should look with eagerness to a new line of treatment, which would seem to offer a short cut to that goal of recovery to which, even under the most favourable circumstances, they were hitherto travelling only by tedious and interrupted stages. Hence the flight to Berlin, of which the results cannot fail to be in many cases disappointing, if not disastrous. We propose to consider the points which should be weighed most carefully before exchanging the brilliant atmosphere of the higher Alps or the sunlit shores of the Mediterranean for the raw air of the German capital in midwinter. We do so entirely without attempting rashly to prejudge the value of the treatment of Professor KOCH, and while adhering to the view frequently expressed in these columns that the facts already elicited give solid grounds for hoping that a genuine advance in therapeutics has been achieved.

In the first place, the painful fact should be realised that no good authority has hitherto held out any confident hope that the new method of treatment will be available for advanced cases of pulmonary tuberculosis. At the various sanatoria a very large proportion of cases are far gone in the disease, with the lungs extensively infiltrated and with excavation going on. Whatever future investigation may establish, all the evidence at present at our disposal tends to show that the injection of the KOCH liquid in such cases is both excessively dangerous and almost certainly futile. The reaction set up seems most severe, and the risks of rendering necrotic large portions of pulmonary tissue would seem so great that it is still a question whether the application of the treatment to such cases is justifiable at all. We fear the subject of advanced pulmonary tuberculosis will be compelled to realise the bitter truth that the new hope which has been diffused through the world is not for him. He will do well, at least for a little longer, "to bear the ills he has" rather than "fly to those he knows not of." In many cases such patients have, perhaps after many failures, found the climate most suitable to their condition, where they may

"Draw in easier breath from larger air,"

and where, if complete recovery be beyond their hope, they may at least look for a lengthened span of days free from serious suffering. It is impossible to contemplate the spectacle of hosts of such patients hastening pell-mell to the bleak plains of northern Germany without the saddening thought that even the greatest boons conferred on suffering humanity bring some counterbalancing evils in their train. For such evils we do not hold Professor KOCH responsible. His own words have been most careful and guarded, and altogether worthy of his unique scientific reputation; but much has been written, especially in the lay press, which has already been disproved, and random assertions have been made which can only result in disaster to the classes whom it is sought to benefit. This is probably the first occasion in the history of medicine of the merits of a great discovery being

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submitted not to experts but *urbi et orbi*, and the spectacle suggests that the old ways of professional reticence and cautious progress were better than the new.

The case of patients in the early stage of the malady is different from the one we have been considering. For them a great hope has arisen, and if they snatch at it too hastily and greedily no one need wonder at what is altogether natural. But such patients, now comfortably established at Davos, St. Moritz, Cannes, San Remo, Arcachon, Palermo, Malaga, Algiers, Egypt, Madeira, and a host of other such resorts, should consider, first, whether such a journey as that contemplated to Berlin can be undertaken by them without the most serious risks; and secondly, whether they are likely to lose much by submitting to the delay which may ensue before the remedy can be made available for them in their present quarters. As regards the first point, the change from Davos, San Remo, or Algiers to Berlin must be regarded as full of danger, even if the journey itself be left out of account. As regards the second, the patients whose case we are now discussing are in many instances making progress in their present chosen resort, and a delay of a few weeks or months is not likely to be seriously hurtful.

There is one motive for repairing to Berlin, the force of which we would not attempt to minimise—viz., the desire to be under the care either of the illustrious discoverer himself or of some of his trained assistants. This is quite natural, but we may well pause to reflect that the treatment is quite new, even in the place of its birth, that the most distinguished observers in Berlin are only feeling their way to a secure doctrine on the subject, and further that in a very short time the experiments now proceeding in Vienna, Paris, London, Glasgow, and elsewhere will have created an independent mass of evidence available to everyone. Science knows nothing of monopoly, but even the apparent monopoly which circumstances have temporarily created in Berlin can only, we sincerely trust, be of very brief duration.

THE question as to whether the addition of preservative agents to foods constitutes adulteration within the meaning of the Act was discussed in two interesting papers read at a recent meeting of the Society of Public Analysts. It appears that a milk-seller was summoned not long since before one of the metropolitan police magistrates for selling milk partly deprived of its cream, and which contained boracic acid, described in the summons as a poisonous ingredient. In one of the papers referred to, Mr. HEHNER stated that so far as he was aware this was the first case under the Sale of Food Acts in which the use of a food preservative is condemned as an adulteration. Conviction, however, was obtained mainly on the evidence of the abstraction of 30 per cent. of the original fat, although the Bench severely reprimanded the defendant concerning the addition of boracic acid. From the fact that not only milk, but other foods, as butter, cream, fish, meat, and meat preparations prepared for the exclusive use of the invalid, are frequently preserved by the addition of boric acid or borax, this question becomes one of considerable importance. The addition of other antiseptics to various articles of diet is also well known. Such are, for example, salicylic acid, sulphurous acid, bisulphites, and benzoic acid or benzoates, which, according to Mr. HEHNER, are gradually taking the place of salicylic acid. In analyses of food, too, made from time to time by THE LANCET, attention has been directed more than once to the presence of salicylic acid, boracic acid, and borax in milk as well as in many prepared foods. From investigations which have been made it is found that 1 gramme of boracic acid per litre of milk retards the coagulation (when the temperature throughout is 15° C.) for from twenty-four to thirty-six hours; 0·5 gramme for only twenty-one hours; whilst at 35° C. this quantity is without effect, and 1 gramme retards the coagulation under these conditions for ten hours. It would be necessary, then, to employ not less than 1 gramme of the acid per litre of milk. Mr. HEHNER finds that in the case of butter a mixture of boracic acid and borax is mostly used. One sample contained, for example, 0·41 per cent. boracic acid and 0·55 per cent. borax. Stress is laid upon the fact that in almost every country in the world, with the exception of England, which was the first to frame food laws, this question has been taken up and the use of antiseptics in food prohibited. France was the pioneer in this direction. The beer imported into that country from Germany was found to contain almost invariably salicylic acid, and the French brewers, in their own interests, of course started action. The Paris Court of Appeal decided that salicylic acid was to be regarded as an adulterant, and to the prejudice of the purchaser—a decision which was based on the report of a Commission of the Académie de Médecine of Paris, appointed to inquire into the action of salicylic acid in food. The commission reported that the use of this antiseptic in food had in many instances been known to produce serious effects, and that small but continued doses were likely to result in grave gastric and hepatic disturbances. In 1888 all addition of salicylic acid to food was prohibited by the Dutch Government, and the Italian Government, in 1887, forbade its addition to wine, and regarded it as an adulteration. The Spanish Government prohibited the use of antiseptics in wine, and the Austrians also regarded salicylic acid in the light of an adulterant. This general prohibition of the use of salicylic acid in particular gave rise to the employment of other substances. In France benzoates were chiefly used, and in Germany sulphites and borates.

Mr. CASSAL read at the same meeting a not less interesting paper on the adulteration of food with boracic acid. Both authors were of the opinion, it is evident, that the addition of a preservative to food constituted an adulteration within the meaning of the Act. If this be so, then a tremendous subject for the consideration of public analysts and medical authorities is opened up. The question will depend largely upon medical opinion as regards the nature of the action of antiseptics (such as have been alluded to) when taken internally. There appears to be little known about the action of boracic acid and borates on the human economy. It has generally been considered the mildest and most harmless of antiseptics. In large doses boracic acid is a gastro-intestinal irritant, and the action of borax is described as being similar. The dose, according to the Pharmacopœia, is from five to thirty grains. The properties of salicylic acid and its sodium salt are,

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of course, better known. In the stomach it behaves as a local irritant, causing heat, pain, nausea, and vomiting, unless taken in moderate quantity and well diluted. But then it has been quite recently shown that salicylic acid, according as it was natural or artificial, exhibited different properties, and attention has been called to the fact that injurious physiological action has followed the use of the artificial variety, which commonly contains cresotic acid, and to this substance the injurious effects were attributed. There can be no doubt that the presence of an antiseptic in food would prove injurious to many persons; but, on the other hand, few object to the addition of a minute amount of preservative to cream, butter, and milk, for instance, which are, especially in hot weather, so liable to become unpleasant and objectionable by reason of putrefactive change. The question is an important one, and calls for immediate investigation. The consensus of medical opinion must be gained, and when it has been definitely decided that the addition of antiseptics to foods (added with the avowed object of preserving them) is injurious to health in general, then it will be the duty of analysts to report accordingly, so that the proper authorities may take the necessary proceedings against the vendor of the article. Meanwhile, it is desirable that analysts should not omit to report in their certificates the presence of any preservative which may have been added to any article of food examined.

"CHARITY," says a great authority, "never faileth," and it never will. Even the criticism of this last decade of a critical century, which is meant to chasten and guide it, and which occasionally seems to chill it, only changes its methods and its objects. Last year we had to report an apparent falling off in the great gifts of the charitably disposed. Thus, in 1888 the total of London donations and bequests, according to an article in our contemporary the *Charity Record*, was £840,000. In the year 1889 this total fell to £330,000. This was a fall in one year of £510,000. But in the following year—i.e., 1890—the pendulum of charity swings up again to £769,000, or £439,000 more than in the previous year. There are, so to speak, accidental reasons for this variation, but of late years the searching light of criticism has been very great, and has successfully shown that while there is no excess of kindness on the part of the strong to the weak, there is carelessness of administration which discredits even charity, and which hinders its gifts from attaining still larger dimensions than they have ever reached. There have been some very noticeable individual gifts in the past year, as our contemporary points out. Thus Mr. PETER REID gave £100,000 to found a convalescent hospital. Mr. B. E. FLETCHER offered to build a convalescent home for the patients of the Norfolk and Norwich Hospital, and to endow it with £100 a year, to which offer the Earl of Leicester added a promise of an endowment of £15,000, with a further £5000 should it be needed *to render the home independent of subscriptions*. Mr. R. CADBURY presented to the people of Birmingham Mosely Hall, together with twenty acres of land and a sum of money, equal in all to £30,000, to be used as a convalescent home. Mr. W. H. BARRY'S legacy of £60,000 to the Great Ormond-street Hospital for Sick Children, besides a further £5000 for the new wing, were announced early in the year. In France, M. PARENT DE ROSON left £70,000 for the Paris poor. Prince DORIA left £120,000 for various philanthropic institutions. The Presbyterian charities of Canada and Victoria benefited to the extent of £102,669 and £150,000 respectively by the wills of the late Miss NICHOLLS and Mr. J. THOMPSON. The Emperor of Austria and the Archdukes gave £180,000 to the sufferers from the terrible floods. General SALIVERSTOFF left £119,047 to be used for charitable purposes. It is desirable for our British philanthropists to note that they are well rivalled in our colonies and in continental countries. It must not be supposed that in noticing these large sums we either forget or disparage the smaller contributions, often much more meritorious, from less wealthy givers. Mr. W. F. HOWE, the editor of the "Classified Directory to the Metropolitan Charities," reckons roughly that these institutions have had in the last year an income of nearly five millions, or £4,918,652. The following are the rough estimates of the income of the medical charities: For incurables, £62,045; for general hospitals, £337,251; consumption hospitals, £61,258; ophthalmic hospitals, £9845; orthopædic hospitals, £4963; skin hospitals, £5498; hospitals for women and children, £61,805; lying-in hospitals, £10,538; miscellaneous special hospitals, £107,112; general dispensaries, £28,453; provident dispensaries, £9063; for surgical appliance institutions, £26,968; convalescent institutions, £58,355; and nursing institutions, £11,685.

We have said enough to show that charity is not failing. It need not stop at its present figures, and it would not if the administrators would be a little more confidential with each other, and cultivate more discrimination as to those whom they relieve. Such sums as we have mentioned are a mere drop in the bucket of wealth of a country which pays income tax on over £500,000,000 a year. Once assure the rich that their gifts are needed, and that they are used, not to degrade, but to elevate those who are helped, and we should not see rich people waiting for others to give, but out of their own piles building hospitals and convalescent homes, and making them therewith *independent of subscriptions*, as our italics show the Earl of Leicester wishes the Norfolk Home to be. There is a parsimoniousness and a paltriness about the gifts of some rich men—not to say women—which are best rebuked by the munificence of others.

A WRITER in the *Westminster Review*, somewhat fond of paradox, has put forward what will strike most of his readers as being a very fanciful proposal for improving the conditions under which nurses can be trained for their work. According to his view nursing is "a privileged profession, since a large proportion of those who annually seek admission to the ranks of probationers are refused for the reason that the hospitals to which they apply have fewer vacancies than applications. His assertion is that, on the one hand, there is an unsatisfied demand for trained nurses, and, on the other hand, a large supply of untrained material is offered at the doors of the training institutions; but that the facilities which these latter afford are insufficient to convert the raw material into the finished product in quantity equal to the demand for it. There is, no doubt, some ground for both

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the propositions on which this statement mainly rests—that is to say, the supply of volunteers is at the present moment ample, and the demand for trained nurses is brisk; but we greatly doubt whether either of these facts is capable of wearing precisely the aspect which is necessary for the purpose to which the writer would apply them. He proposes to organise the nursing services of our hospitals upon the footing of medical schools, and thinks that if this were done the women who have under the existing arrangement been turned from the hospital doors as superfluous would return as paying probationers, and find room in that capacity where, when they offered themselves as stipendiaries, they were crowded out.

Stated in this bare form, the proposal does not appear promising, and we do not find much to recommend it, even in the arguments put forward in the pages of the *Westminster Review*. Indeed, when carefully considered, the contention of its advocate turns rather to its disadvantage than otherwise. The argument on which he chiefly relies is that since the students for other professions, and notably for the medical profession, are trained at their own expense in self-supporting schools, "if 'nursing' is really worthy of the name 'profession,' there can be nothing very harsh or unreasonable in making its members conform to the general customs and methods adopted by the other professions." A very striking illustration this of the tyranny of mere words, for the only thing which gives to this sentence even the semblance of argument is the fact that nursing is styled a "profession." The term is strictly appropriate, but that is only because it is a term of large significance and comprehends many widely different vocations. To say generally that "other professions" than nursing adopt the academic mode of training is not only incorrect but wildly so. In what are known as the liberal professions it is so, but it is by no means the case with the minor professions as a whole. Accountants, for example, form a large and influential profession, but they receive their professional training not in self-supporting schools, but in offices as stipendiary clerks. *Mutatis mutandis* the same thing might be said of the non-commissioned officers of the army and navy who are trained by service in the ranks. In fact every craft must adopt the form of apprenticeship which is best adapted to the circumstances in which it has to be carried on. Bearing this in mind anyone would come to the conclusion, we think, that the probationer system is the only practicable way of training nurses. Their hours of study cannot be arranged to meet the convenience of the student nor are their studies for the most part of the kind that can be pursued in the class-room and the theatre. On the contrary, they must learn their craft by practising it, and it would be a height of unreason if anyone should propose to assimilate the mode of conducting a nurse's studies to that which has proved eminently successful with medical students.

A profound difference at this point implies a difference all along the line. It is not reasonable to expect that the routine work of a nursing department can be done by amateurs; and certainly such attempts as have from time to time been made to effect such an arrangement have not worked out so as to encourage their repetition. Even if women were forthcoming who could and would devote their time to this occupation free of charge to the institutions which they served, the arrangement would be an inequitable one. But what reason is there to suppose that it is even practicable? The writer argues, that because 1650 women applied last year for 150 vacancies in one of the London hospitals, the vacancies having occurred in a staff of salaried probationers, therefore plenty of women would be forthcoming to provide a staff of paying volunteers. The inference seems to us inverted. All analogy goes to show that the 1650 women who applied for salaried posts would not have volunteered for unremunerated service, and we should have thought that so far as the reviewer's figures had any bearing at all upon his proposal they tended to prove it impracticable. From our point of view this is the one merit in a scheme which, if practicable, would be very likely to be tried, and if tried could hardly fail of doing mischief.

Annotations.

"Ne quid nimis."

DEATHS UNDER CHLOROFORM.

IN recording more deaths from this anæsthetic we must repeat what we have before urged: that more systematic accounts of such occurrences should be given. The lay press, to which we owe most of our information, cannot, for obvious reasons, be expected to give scientific statements as to such fatalities. Coroners are not always, unfortunately, possessed of the special medico-legal knowledge requisite for putting the necessary questions, and it is neither likely nor indeed desirable that reporters for the lay press should be entrusted with systematic statements concerning the facts of the case. It seems to us most important that in every instance cases of death occurring under anæsthetics should be reported in the medical journals, and that there should be stated: (1) The standing and special experience of the chloroformist, the amount of the anæsthetic given, the method adopted, the time required to effect anæsthesia, the amount of struggling; whether heart or respiration failed first; some particulars as to the patient's previous history, whether, for example, he was addicted to habits of intemperance; whether he suffered from any general disease—e.g., such as causes lardaceous change, syphilis, tuberculosis; whether evidence of cardiac or arterial degeneration existed. Under the head of "post-mortem appearances" it seems to us far more important to have lucid statements as to whether the signs of death from asphyxia or from primary cardiac syncope were perceptible, than whether, for example, cardiac valvular disease was met with; while renal and arterial disease, fatty and atheromatous changes, should in every case be noted. Of the deaths recently reported it will not be necessary to detail all. St. Mary's Hospital lost a patient named Amos Wilkins whose finger was to be amputated. The anæsthetic employed was stated to be a mixture of ether and chloroform, and was given by one of the resident medical officers; death occurred while the operation was proceeding. Further, neither the method employed nor the precise cause of death is given, but we gather from the verdict, "Death from syncope," that it was due to heart failure. Another death is noticed which occurred at the Wolverhampton General Hospital. The patient, a healthy lad aged nineteen, was placed under chloroform preliminary

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to an operation for removal of necrosed bone from his leg. The patient appears from the evidence at the inquest to have entertained a dread of the anæsthetic, and to have been permitted to select chloroform in place of the ether with which presumably the anæsthesia was being commenced. Dr. McMunn, who made the necropsy, suggested struggling may have occurred, the strain of which might have prejudicially affected the heart. Anyway, after anæsthesia was produced, and as the operation was being commenced, the patient became pallid and the heart's action could not be felt. Prompt measures succeeded so far that slight cardiac and respiratory restoration occurred, only to be completely stopped after three or four minutes, and this in spite of forty minutes' artificial respiration. After a careful post-mortem examination Dr. McMunn stated that in his opinion death had resulted from syncope produced by the action of chloroform vapour upon the heart. The Guest Hospital, Dudley, was the scene of a fatal chloroform case. The patient, aged forty-six, was to have an operation performed on his arm. The anæsthesia, it was stated, was produced in seven minutes, one drachm of chloroform being used. The operation was then commenced, but in two minutes had to be stopped, as the heart's action and respiration were found to have ceased. The breathing, it is mentioned, became stertorous; but what was the cause of this, whether mechanical or whether due to an accumulation of chloroform in the circulation, is not explained. Dr. Higgs, writing to a local paper, expressly denies that an over-dose of chloroform was given, or that any reflection could be cast upon the chloroformist. The post-mortem examination gave no evidence of organic disease.

METHYLENE BLUE AS AN ANODYNE.

IT seems not improbable that a "cellular" theory of therapeutics may arise which will certainly open new fields for investigation. The researches of Professor Ehrlich into the action of methylene blue as a staining reagent for the central nervous system are well known. He has proved that this stain has a peculiarly selective action on the axis cylinders of motor and sensory nerves. Together with Dr. Lippmann, Professor Ehrlich has been led by his previous investigations to try experiments with methylene blue on living animals, with the result that these observers have found that this dye possesses analgesic properties of some considerable power. Their results are published in the *Deutsche Medicinische Wochenschrift*, No. 23, 1890. For their researches they used a preparation of methylene blue which was chemically pure and quite free from chloride of zinc. A 2 per cent. solution of the drug was taken, and injected hypodermically in doses ranging not higher than 0·05 cc. It was also given in gelatine capsules, containing a finely powdered preparation in doses of 0·1 to 0·5 grm., the maximum daily dose being 1 grm. Given in this way it produced better results than when administered hypodermically. The injections were painless and produced no local results beyond some slight swelling at the point of puncture. No bad symptoms were produced. The appetite, digestion, pulse, and general strength underwent no change; vomiting occurred in two cases only. The methylene blue was absorbed very quickly; a quarter of an hour after the smallest doses (subcutaneous or by mouth) were administered the urine became a bright green, after two hours dark green, and after four hours dark blue. The urine at no time contained any albumen or other pathological constituent. In the saliva a bluish tinge was noticed, and the same appeared also in the fæces; there were no changes of colour in the mucous membranes or conjunctivæ. In certain forms of painful local affections the therapeutical results were remarkable; the drug acted as an anodyne in all neurotic processes and rheumatic affections of the muscles, joints, and tendons. The action of the drug commenced about two hours after it had been administered. Its effects were gradual, but after some time pain was greatly lessened or entirely abolished. Its action was purely analgesic, having no effect on the actual inflammatory processes. The drug did not seem to lose its effect by repeated doses—that is to say, the patient did not become intolerant to it. It had no antipyretic properties; it was found useful in angiopastic migraine. As regards a comparison between it and other anodynes, no definite conclusions have yet been arrived at. Compared with antipyrin it has the advantages of smaller doses, painless injections, and cheapness. Owing to the time which elapses before its action manifests itself it might probably be used with advantage in combination with other drugs—as, for instance, with morphia—so as to prolong the time of freedom from pain.

THE KOCH LIQUID IN SWITZERLAND.

AT Zürich on the 22nd ult., at a meeting of the Medico-Chirurgical Association, Professor Eichhorst read a paper on his experiences of "Kochin," which he injected in twenty-five cases occurring in the medical wards. No appreciable result followed these injections, and the professor, after a full account of the circumstances in which each injection was indicated and practised, declined to commit himself to any definite or final opinion as to the remedy. He was followed by Professor Krönlein, who had injected the "Kochin" in upwards of forty-five surgical cases. According to him, the results were favourable, and the local reaction answered expectations to the full, placing the diagnostic value of "Kochin" in the clearest light so far as surgery is concerned. Professor Krönlein did not aim at any specific cure by his injections, but yet in eight of the patients the improvement was incontestibly marked. On the whole, the profession in Switzerland seems to share the opinion just pronounced on Koch's treatment by the well-known bacteriologist, Dr. Prior, who has injected the liquid in more than one hundred cases: "The remedy, in the patients for whom it is indicated, has its effect in every seat of the special malady, and contributes an unmistakable diagnostic test in tuberculosis. Its effect in all such cases is a healing one, whether the malady be internal or external; but it is only in the commencing stage that a complete cure by it can be hoped for. In cerebral tuberculosis the swelling it induces causes death."

THE EFFECT OF AGE ON THE ABSORPTION OF DRUGS.

DR. YATSUTY, having been struck by a remark of Professor Manassein on the influence of age on the rapidity of absorption of drugs, selected this subject for his M.D. thesis, which has just been published. His experiments were conducted in the Zhitomir Municipal Hospital, of which he is medical officer, and were made on healthy male subjects of from eight to over eighty years of age, the drugs experimented with being iodide of potassium and salicylate of soda. The dose was made to depend upon the body weight, a grain being allowed for each 10 kilogrammes. Thus a boy weighing 25 kilogrammes was given 2½ grains of iodide of potassium or salicylate of soda as the case might be, a man weighing 55 kilogrammes being given a 5½ grain dose. The drug was administered in a gelatine capsule, and the urine examined every three minutes in the case of both salts. With the iodide the saliva was also examined every two minutes. This was not done in the case of the salicylate, as in no case was any evidence of salicylic acid detected in the saliva. Dr.

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Yatsuty gives a tabular view of the experiments, the general result being that the younger the subject the more rapidly had absorption, as evidenced by testing the secretions, occurred. Thus a boy of nine, weighing 25 kilogrammes, taking a dose of 2½ grains of iodide of potassium generally gave the reaction in the urine in nineteen minutes; a man of thirty-six, weighing 66 kilogrammes, and taking a dose of 6½ grains, showed no reaction in the urine until thirty-one minutes had elapsed; and a man of seventy-six, of about the same weight, and taking the same dose, showed no reaction in the urine for thirty-seven minutes. Salicylate was absorbed in boys and young men in about fifteen minutes, while in middle-aged men it required about twenty minutes, and in old men about twenty-five minutes. There were some exceptional cases. Thus, some lads of eighteen showed no iodide in the urine until thirty-one minutes; one man of seventy-seven showed it in twenty-eight minutes; so that, although the average rapidity of absorption distinctly diminishes as age advances, it is not possible to say with certainty that a particular individual will absorb one of the drugs mentioned more rapidly than another who is a great deal older.

THE SUSPENSION TREATMENT IN WARSAW.

Dr. AVROKRATOFF, who has tried the suspension treatment on a number of cases of various descriptions in the Warsaw Military Hospital, is by no means inclined to endorse the opinions of those enthusiasts who would have us believe that by this method serious organic disease of the spinal cord, which has hitherto been considered as beyond the reach of treatment, has become curable; but he is not, on the other hand, desirous of denying any usefulness to the method. Of six cases of locomotor ataxy five were in no way improved; but the sixth presented a very marked improvement after suspension had been practised thirty-five times. In contrast to this it was found that functional disorder was affected much more commonly. Thus, all the patients, six in number, who were suffering from neurasthenia present a decided improvement both in their mental and in their general condition after ten suspensions. He is disposed to attribute the good effects of suspension, when they occur, largely to the psychological influence exerted on the patient, a dynamic change being produced on the nervous system. Besides which, the novelty of the process and the exaggerated reports that patients are sure to have heard about the wonderful efficacy of the new method in cases that have hitherto been considered incurable cannot be without effect on the patients who furnish subjects for the suspension treatment. A real physical effect is probably produced on the respiration and circulation; but Dr. Avrokratoff does not think that there is as yet evidence to warrant us in saying that it extends to the spinal cord.

MULTIPLE NEURITIS AFTER INFLUENZA.

THE sequelæ of influenza which have been observed and described are numerous and varied, and a fresh contribution is made to those by H. Westphal in a recent number of the *Petersburger Med. Wochenschr.* The author describes two cases of typical multiple neuritis, of which the first symptoms were manifested in one case seven days after the commencement of the illness, and in the other, eight days. The first patient was a man of twenty-nine, who had first a feeling of coldness and numbness in the fingers and toes, and subsequently weakness of the limbs with difficulty of swallowing, abolition of the knee-jerk and of the triceps-jerk, retention of the abdominal, the cremasteric, and plantar reflexes. There was also slight paralysis of the right side of the face. Under treatment with valerianate of zinc, bathing, and faradisation, the symptoms gradually disappeared, but the knee-jerk remained absent for several months. The second case was also that of a young man. The symptoms in this patient were more severe, and were ushered in by an attack of urticaria. In the course of a few weeks there were general muscular weakness, paralysis of one side of the face and paresis of the other, difficulty in swallowing, and abolition of the knee-jerk. There was also wasting of muscles, both in the upper and lower extremities, and the reaction of degeneration was present, preceded, however, by an increased electrical irritability. There was also ain on pressure over affected nerve-trunks and muscles. There was no impairment of sensibility, and there was rapid improvement after a few weeks, accompanied by signs of considerable vaso-motor disturbance.

GROWING KNOWLEDGE.

THE editor of the *Educational Times* has been insisting in a recent article upon the importance, as he puts it, of "growing knowledge" in the minds of children. The lesson is one which teachers as a body are, perhaps, slow to learn, but it has certainly obtained a considerable amount of recognition in recent times. But, that notwithstanding, the parable of the *Educational Times*, is always seasonable. It is there pointed out that knowledge must be apprehended, appropriated, and assimilated by the mind very much as the elements of vegetable tissue are apprehended, appropriated, and assimilated by a plant. There is a sense in which every student may adopt the aphorism maliciously attributed to the "Master of Baliol College," that

"What I don't know isn't knowledge."

The binomial theory is useful information for anybody, and indispensable knowledge to the mathematician, but to such as have but little mathematical faculty it is information, and nothing more. So with Greek syntax or Latin composition. To the classic they are elements of knowledge, to the pedant mere shreds of information which never germinate in his mind, and are incapable of ever becoming fused into a coherent habit or scheme of thought. In the acquisition of such indigestible materials there is much pain and very little profit, and it cannot, therefore, be too often or too forcibly brought to the minds of teachers that their true function is not to fill a vacant mind, but to preside over the birth and development of nascent faculties. If the faculties are supplied with suitable pabulum they will spontaneously exercise themselves upon it. The wise teacher is he who happily discerns what faculties are dominant in his pupil, and what treatment is best adapted to stimulate and develop them. This view of a teacher's work receives, we believe, a much more general and effective recognition at the present than at any former period, and we are glad to find it from time to time put prominently forward in the accredited organs of the teaching profession.

TYPHOID IN TUSCANY.

AN Italian correspondent writes under date the 5th inst.:—"Typhoid, closely resembling that which had prevailed in so severe a form during the last four months in Pisa, began to be reported in Florence about the 15th ult., and the municipal authorities lost no time in minimising the conditions of its spread. Every case was vigilantly noted and announced, with the result that from the 15th ult. to the 2nd inst, in a population of about 200,000, resident and migratory, 764 cases in all were reported, with a mortality of 7 per cent. Within the last forty-eight hours there has been a steady decrease in the numbers attacked, and of these, since the first appearance of the malady, few, if any, have occurred among the English-speaking colony. Certainly, no death from typhoid in the latter section of

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the Florentine population has yet been announced. On the whole the sanitary condition of Florence has been better this year than last, and better last year again than during its predecessor. The alarm sounded since the 15th ult. has had the salutary effect of putting the more enlightened part of the population, including the foreign community, on its guard, and, the water-supply having been suspected, the precaution of boiling it (and boiling it thoroughly) before use has been taken in private houses, as well as in the numerous hotels and pensions. To such and similar measures must be ascribed the fact that at no time since Dec. 15th has the malady attained anything like the proportions it assumed in Pisa; and, indeed, as already stated, the number of cases within the last twenty-four hours has been less than during the same period immediately preceding. The fact that other communes in Tuscany, and other towns in those communes, have been visited by typhoid as well as Florence, seems to dispose of the supposition that the water-supply of the latter city is exceptionally tainted. No doubt it is not in every quarter above suspicion, and there is far too extensive a use of well-water instead of the 'acqua potabile.' Even this latter has been said to have become contaminated by sewage, and the municipality is at present investigating whether and to what extent the report is well founded. But the travelling public need be under no apprehension of visiting Florence, the local sanitary authorities having taken every precaution to minimise the conditions favourable to typhoid, and especially to suspend the supply of water from any source which is not above suspicion."

SIR WALTER FOSTER.

SIR WALTER FOSTER has resigned the physicianship of the General Hospital at Birmingham, after twenty-two years' service. He previously had been physician for eight years to the Queen's Hospital. The occasion called forth an illuminated address from the committee containing every expression of respect and gratitude, as well as hope for the continuance of Sir Walter's "honourable and useful career." Sir Walter, on receiving the deputation to present the address, assured them it was painful to him to leave the duties of the hospital, but that he did so to give other men the opportunities and advantages he had enjoyed. The motive is a good one, and the action worthy of imitation. Sir Walter has many other outlets for an energy that is still unabated. He is lured to other than professional fields of labour. But he is a good physician, and we still venture to hope that in the study and practice of medicine he will find recreation and even rest for himself, as well as time to promote the interests and the efficiency of the profession.

MUSCULAR ATROPHY AND ARTHRITIS.

THE existence of muscular atrophy in connexion with joint changes is familiar to all, and the explanation of its occurrence which is usually offered is that it is dependent in the first place on the suspension of physiological activity necessitated by the diseased condition, and in the second place on neuritis following the affection of the joint. The close interconnexion of nerves and joints is manifested under various conditions—in none more graphically than in the class of cases to which Weir-Mitchell has drawn attention, those, namely, in which joint changes follow on the direct injury to nerves. Raymond (*Revue de Méd*, No. 5, 1890) has recently made experimental researches with a view to elucidating the pathology of the condition. He calls attention to the conditions usually found after injury to a joint—viz., functional weakness of the limb, increased superficial and deep reflexes, muscular twitchings, a raised irritability to faradaic stimulation, disturbances of sensibility, and, most important of all, muscular atrophy, related especially to changes in the interfibrillary substance of muscle. He found experimentally that this atrophy did not take place when the posterior roots of the cord were divided or destroyed. He found also that the physiological defect in the lateral columns in newly born animals and division of one of those tracts in full-grown animals favoured the progress of atrophy in the limb a joint of which had been injured; while hemisection of the cord in a case in which a symmetrical joint injury was inflicted favoured atrophy on the side on which the hemisection had been performed. No anatomical change was discovered in the anterior horns of the cord or in peripheral nerves; so that the results of the researches of this author seem to point to a reflex trophic condition as the cause of the atrophy in this class of cases. It remains to be seen whether future experiment and clinical observation will confirm this view.

TREATMENT OF ERYSIPELAS.

AN elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighbourhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment as compared with ordinary methods are embodied in several instructive tables. From these it appears that while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5·6 days.

EARLY MARRIAGES IN INDIA.

THE Government of India has decided to legislate on the subject of the age of consent by a simple amendment to the penal code, substituting the age of twelve for that of ten. It has been wisely determined to couple the announcement with the assurance that no interference with social or religious customs affecting early marriage is contemplated, a course which it may be hoped will satisfy those who saw in the suggested reform a covert attack on ancient customs.

POISONING BY BROMIDE OF ETHYLENE.

A CURIOUS, but unfortunately fatal, mistake of a chemist has occurred in Poland, in consequence of an order for bromide of ethyl, which was required by a surgeon for use as an anæsthetic. This substance has been, as is pretty well known, a good deal used by dentists and surgeons in Switzerland and Germany instead of ether or chloroform, especially for small operations, and it has generally proved fairly satisfactory. In the case in point the operation proposed was external urethrotomy in a strong young man, for whom bromide of ethyl seemed to the operator to be peculiarly suitable. The chemist, however, sent a bottle of bromide of ethylene, a very different substance, but the mistake was not recognised, and so the patient was made to inhale some ten drachms of it. No anæsthesia

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was produced. At night uncontrollable vomiting came on, and there was suppression of urine. The next day the vomiting continued, in spite of every remedy that could be thought of until the patient died. No urine was passed, and the bladder was quite empty. At the post-mortem examination hyperæmia of the meninges of the brain and of the lungs, spleen, and kidneys was found. The liver was much enlarged, and was of a dirty yellow colour, the cells were affected by granular degeneration, and the viscera smelt strongly of the garlic-like odour of bromide of ethylene. The puzzle is, how a pharmacist came to have such a substance as bromide of ethylene. Had the name suggested by Merck—æther bromatus—been employed, there could not well have been any mistake; but *æthyl* might perhaps, if badly written, be confused with *æthylen*.

THE INSUFFICIENT RECORDS OF THE OUT-PATIENT DEPARTMENT.

AN inquest has been necessitated at Hanley by Mr. G. S. Hatton, assistant surgeon of the North Staffordshire Infirmary, refusing to give a certificate of the death of a child on Dec. 24th, which he believed he had not seen since Nov. 18th, though the mother gave evidence that she had taken the child to the Infirmary on Dec. 16th, and seen the junior resident surgeon. The coroner complained of the effect of the refusal necessitating an inquest and delaying the funeral a week. The jury called the attention of the Infirmary Committee to the insufficient records of the visits of out-patients, and as to their identity, and they considered that in the case of death there should be some record of the disease when last seen by the surgeon, and also that the latter should give a certificate when applied to. This is a most doubtful recommendation. The jury would have done better to condemn the out-patient system as inapplicable to serious cases with fatal tendencies, and calculated to cover neglect of all sorts.

DISEASED PRIZE CATTLE.

THE annual exhibition of prize cattle, which is now held at the Agricultural Hall, would seem to have reached perfection, in the sense of demonstrating the best methods of breeding and feeding cattle, sheep, and pigs to the maximum of fatness, at the earliest age for obesity. The mountains of fat recently exhibited were, as Dominie Sampson would have said, "prodigious!" But the production of quality, no less than quantity, in a given time, for the speedy return of capital to the owners, should be the true aim of a system which has for its object the rearing of animals of the highest nutritive value as human food. For this purpose the Smithfield Cattle Club was instituted in the year 1798—nearly 100 years ago. It will be in the recollection of our senior readers that in 1857, or after more than fifty years' trial of the system which had been pursued, the question was first subjected to the test of scientific investigation by Mr. Gant, whose post-mortem examination of the animals then exhibited disclosed the diseased state of nearly all the vital organs in the specimens which had been reared in the school of over-feeding, had graduated, and taken the highest honours. In them the heart especially had undergone either true fatty degeneration or excessive fatty infiltration, and the circulation of the blood, therefore, was so feeble as would soon have caused the death of the prize beast—Devon, Hereford, or Shorthorn,—whose vast bulk delighted the eyes of its bucolic admirers, and attracted the *poking* curiosity of the public. Sheep were even more diseased than their fellow-sufferers, and in a few days replenished the wasteful grease-pot. Pigs had borne the experiment of over-fattening better than either their bovine or ovine friends, but they lay dying of asphyxia. The results of Mr. Gant's observations were republished in nearly all the London and provincial newspapers, and THE LANCET prominently drew attention to the subject. Subsequently these investigations appeared in the form of a "New Inquiry" by the author, fully illustrated by coloured lithographs and woodcuts of microscopic drawings (John Churchill). For some years afterwards fat diminished, and flesh came on, with of course a due proportion of the former texture, as showing the character of the breed. But the recent show was probably more notable for the pathology than the physiology of its exhibits, and an after-death examination would have revealed some unpalatable dietetic truths. The monster beast of all, who carried the palm, was too weak to stand, and having been removed from the scene of its temporary triumph, lay down in piteous appeal to future breeders, feeders, judges, and exhibitors of cattle.

SANITATION IN AUSTRIA.

THE provincial sanitary authorities in Austria would seem, judging from recent revelations in the Reichstrath, to be even more remiss than the authorities in most parts of this country in carrying out their duties. With us the authorities in health resorts, generally at least, make some show of zeal regarding the sanitation of their districts, but some of the more important health resorts in Austria, such as the neighbourhood of Salzburg and Styria, are shown by statistics to be anything but healthy. It is said that more than 100,000 persons die in a year in Austria from preventable diseases. It is proposed by the Government to appoint inspecting officers to visit the provinces and urge or compel the local sanitary bodies to exert themselves.

EARLY SPONTANEOUS RUPTURE OF THE UTERUS.

A CASE of rupture of the uterus is reported from Mexico by Dr. Eduardo F. Plá in the *Crónica Médico-Quirúrgica*, which is in several respects almost unique. The patient was a married woman of twenty-one years of age, who had had only one previous pregnancy, which terminated satisfactorily five years before, since which time she had had no illness. A medical man was summoned hastily, as she had been suffering intense pain, and had suddenly become cold and collapsed. When he arrived she was dead. The official post-mortem examination was entrusted to Dr. Plá, who, after noting the absence of any marks of violence, opened the abdominal cavity, and found a quantity of blood and coagula, also the amnion containing a four months' fœtus, with umbilical cord and placenta. This had escaped by an irregular rent across the fundus of the uterus three inches in length. There were coagula in the cavity of the uterus, but no pus or evidence of inflammation in the pelvic organs. The uterine wall was found to be extremely thin in the neighbourhood of the rupture—under two millimetres,—though in other parts it was as much as eighteen millimetres in thickness. A microscopical examination, which was made by Dr. San Martin, showed that in the region of the rupture the muscular coat was practically absent, being represented by a very few attenuated fibres; the mucous coat, too, was absent, being replaced by fibrous tissue without glands and with scarcely any vessels. Altogether the appearance was that of a cicatrix, but no history of any injury or disease could be obtained. The placenta was perfectly normal. Charpentier mentions eight cases of uterine rupture at or before the end of the fourth month of pregnancy, and Dr. Plá mentions two cases cited by Burns in addition; these ten being all that he could find in literature. In most of these cases the patient was much older and had had difficult previous

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labours, and, again, the seat of the rupture was much less commonly the fundus than the lower segment. In the present case, being over the insertion of the placenta, the hæmorrhage was great, and so led to the immediate fatal termination, whereas several of the other cases died later from peritonitis, and in one, that recorded by Dr. Drake, the fœtus ultimately made its way out through an abscess in the umbilical region.

ALCOHOL AND DIGESTION.

FROM experiments made on himself by Dr. Eichenberg some further knowledge of the effect of alcohol on digestion is obtained which contrasts strongly with the teetotal lecturer's experiment showing how digestion in a glass vessel is retarded by alcohol. Dr. Eichenberg found that a small dose of strong alcohol—e.g., brandy—shortens the time that food in general, whether animal or vegetable or a mixture, remains in the stomach by more than half an hour. A similar but not quite so marked an effect is produced by a dose of dilute hydrochloric acid or mustard. Pepper and condurango diminish the time the food remains in the stomach by about a quarter of an hour. Beer and an infusion of rhubarb had no effect.

COMPRESSION MYELITIS.

IN a series of experiments on dogs Rosenbach and Ascherbach (Virchow's *Arch.*, cxxii., Heft 1) observed the changes in the spinal cord subsequent to compression by small silver balls and rods. The symptoms developed were weakness of both extremities, greater on the side of operation, spastic or ataxic gait, increased reflexes, and delayed sensibility to pain in both extremities. The operations were carried out on the lower dorsal and upper lumbar divisions of the cord; accordingly the extremities affected were the hind legs. Pathological changes were confined to the point of compression or its immediate vicinity, except in cases in which the animal lived more than a month, in which case ascending and descending degenerations were found to be present. The cases roughly divided themselves into two classes. In one the chief changes were in the white matter, consisting of destruction and disappearance of the axis cylinders chiefly, the grey matter showing infiltration of its network and degenerative changes in the large cells. In the second class there were few, if any, changes in the white matter, but in the grey matter there was an exudation, and around it cracks and holes, apparently the result of the absorption of the network. Alteration of the neuroglia and of the connective tissue elements was observed apparently as a secondary effect of irritation by the products of the destructive process.

HOSPITAL REFORM AND PROVIDENT DISPENSARIES.

THE evidence before the Birmingham Hospital Reform Committee was closed early in December. One of the last witnesses examined was the Rev. Joseph Wood, who eulogised the Leicester Provident Dispensary. In Leicester only one in twelve of the population became out-patients, whereas in Birmingham one in three did so. There were 35,000 members in the Provident Dispensary of Leicester, and only fifteen were reported unfit by the medical men. There were twenty medical men, and the average amount received by them for this enormous quantity of work was £150 each. We regret that Mr. Wood did not express any dissatisfaction with the inadequate and paltry subscription of the members—1*d.* per week for the father and 1*d.* more for the mother and all children under fourteen. The reverend gentleman advocated the withdrawal of the whole of the Hospital Saturday Fund of Birmingham from the hospitals and the establishment with it of provident dispensaries, on the ground that working men feel that they had a claim to medical relief. This is a bold proposal, and one not very complimentary to working men. The Hospital Saturday movement was distinctly meant to give working men the opportunity of contributing to hospitals. Even if their out-patient department were completely abolished, as Mr. Wood advises, hospitals would still be entitled to the liberal subscriptions of the working classes, who principally benefit by them. We shall refuse to believe that any great number of working men take the mercenary view that in a contribution to the Hospital Saturday Fund they are paying for ordinary medical attendance. Mr. G. Franklin of Leicester said there were many members of the Dispensary who had no right to be such on social grounds. He thought a larger weekly payment could be made, and that 1½*d.* could be afforded as well as 1*d.*

ADVICE TO HUNTING MEN.

DURING the past five weeks the continued frost has rendered hunting impossible, to the intense disappointment of all men given to the chase of the fox, stag, or hare. The owners of beagles may have had a run in the snow more for exercise than for sport; but hounds, horses, and men must have sadly lost condition and put on useless flesh in the place of muscle, for there is no exercise that will give the same condition as actual hunting. Besides, many men past middle life are able to bear long-continued exercise in the saddle without fatigue who could not possibly undergo other exercises which would place them in the same hard condition and good health as does actual hunting. Younger men may skate and undergo other athletic practices which replace their accustomed horse exercise, but the older man's heart and respiratory powers, and often stiffened joints, exclude him from this advantage. What is he to do? We fear there is but one alternative for him when he cannot hunt, and that is to take physic, or, in suitable cases, the occasional use of the Turkish bath. A well-known titular member of the profession, whose name we need not mention, after a life-long experience of practice among hunting men, arrived at this conclusion, and we believe it to be a right one. "Nimrod," in his famous book on the conditioning of hunters, came to the same conclusion in reference to the horse; indeed, he goes further, and states that the best condition can only be obtained by giving the animal an alterative dose of medicine every month or six weeks to carry off the humours which are apt to result from the high feeding necessary to condition. The same conclusions may be arrived at in the case of the rider. The old practice of giving a blue pill and black draught was not wrong in principle, though it was probably too indiscriminately resorted to. Improved methods and more refined medicine have naturally come into use with the advance of our knowledge of drugs; but the principles to be kept in mind remained the same. The liver should be acted on, the intestines stimulated, and the accumulated humours purged from the blood. A combination of hepatic stimulants and saline aperients, proportioned in activity to the requirements of the individual, taken once or even twice a week, will be found to check grossness, and fit a man to resume the saddle—when weather permits—with lessened inconvenience and an alacrity for the sport which he would not otherwise experience.

BOARD SCHOOLS AND FILTERS.

HOSTILE critics of School-Board expenditure could hardly be expected to pass over in silence the statement of surcharges lately brought forward in the half-yearly audit of the Tottenham school accounts. These amounted

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to the sum of £17 18*s.* 6*d.* for various scientific instruments, such as a cyclostole, hectograph, microscope, &c., besides £53 expended on filters. The payments, though supported by several ratepayers, and, as far as related to the purchase of filters, by a medical member, were vigorously opposed by the official auditor. The dispute as regards instruments, which must be considered as luxuries of education, may best be left in the hands of those immediately interested. A more vital significance attaches to the arrangements for ensuring a pure-water supply. The necessity for filtration, however, is a matter still open to discussion, and this fact was illustrated in the case quoted by a considerable divergence of opinion. Analyses by Dr. Frankland were stated to have shown the excellent quality of the Tottenham drinking water. Assuming that this statement is correct, it is obviously impossible to maintain the existence of any real necessity for filtration (though its advantage is no less obvious), provided that due care be observed in regularly cleansing any cisterns connected with the water-supply of the school. The argument that the school children use unfiltered water in their homes is of little value, since the hygiene of a public institution can allow no standard but that of purity. It is for the local authorities, therefore, to decide how far Dr. Frankland's observations are still justified and whether they have been modified by any unhealthy conditions connected with the school itself. The proved existence of any impurity or seriously qualifying circumstance would necessarily call either for its immediate removal or for the introduction of a filter which, whatever its kind or its cost, must suffice for its intended purpose.

FATAL STOVE FIRES.

THE French authorities cannot be blamed for the accidents which have recently occurred in consequence of the use of stoves. Early this winter the walls of Paris were posted with official bills, issued by Government, warning the population against the danger that might result in the use of stoves for warming purposes. Many of these stoves, if kept in perfect order, are not dangerous; but they get out of order, and then give off so large a quantity of oxide of carbon that fatal results ensue. This week three lives have been lost in Paris in consequence of the use of such stoves in sleeping apartments. Last year eight seamstresses fainted while employed in a workshop in consequence of the fumes escaping from the stove that warmed the room. Yet fuel, too dear in London, is so much dearer in Paris that it is not surprising so many stoves are used. They ensure a more complete combustion of the fuel, and give much more heat than an open grate. It is not surprising, therefore, that accidents have happened during so severe a winter as the present; but these calamities point to the necessity of further practical progress in the science of warming and ventilating.

LONGEVITY IN THE SOCIETY OF FRIENDS.

THE Society of Friends in the United Kingdom have recently issued their annual obituary of members, and the report includes a table showing the mortality statistics of the Society during the last three years, which contains some figures which are not without interest, although they cannot be accepted as satisfactory evidence of the longevity of members of that Society, if that term is used in its correct sense—namely, the mean duration of life. The report states that the number of members of the Society is about 15,500, and as the deaths in the three years averaged 256 per annum, the mean annual death-rate may be calculated to have been 16·5 per 1000. Bearing in mind the strong evidence that is supplied by the figures of the high mean age of the members, this mean death-rate may be accepted as proof that the health condition of the Society is eminently satisfactory. It may be noted that 480, or 61 per cent., of the 769 deaths in the three years were of persons aged upwards of sixty years, and although this remarkable fact, without information of the proportional age-distribution of the living members of the Society, gives no clue to the mean duration of life among Quakers, it affords conclusive evidence that the death-rate at all ages of the members is remarkably low. Accurate and complete mortality statistics of the Society of Friends would possess much statistical value, and it is to be wished that it might be found possible another year to supplement the information now given concerning the ages of deceased members, by a statement of the numbers of the members living in each of the same age-periods. Taken as an abstract fact it is certainly remarkable that only fifteen deaths of children aged under five years occurred during the year 1888–89 among the 15,500 members of the Society of Friends. From a statistical point of view, however, it is essential to know whether this is due to the fact that the rate of mortality among the young children of Quakers is so abnormally low, or to the more probable fact that the members of the Society of Friends include a very abnormally small proportion of young children.

THE REPEAL OF THE MUZZLING ORDER.

NOW that the dog-muzzling order has been withdrawn, opinions respecting the necessity for maintaining this effectual preventive measure appear to be as much divided as ever. During the period of nearly two years within which the use of the muzzle has been compulsory the annual number of reported cases of hydrophobia among dogs in the metropolis has fallen from 400 to *nil*. The last quarter of 1890 was entirely free, but in that preceding there were eight cases. The fact of immunity during three months is, in our opinion, hardly sufficient to justify the total discontinuance of a well-proved preventive method. It were no excess of precaution to have allowed another quarter to elapse in order to provide against the conveyance of the disease by dogs coming from the provincial districts. It should not be forgotten, however, that one, if not the principal, advantage obtained by muzzling—namely, the discovery and removal of ownerless curs, the class of dogs most usually affected by rabies—is provided for under the new regulation, which abandons the muzzle only to substitute the labelled collar. Time only can show whether this change, which is a concession to the urgent protests of dog owners, will equally suffice for the intended purpose. Meanwhile, we shall await the issue with interest and hope, but not without a certain misgiving.

STREET MAN-TRAPS.

THE ordinary traffic of the streets is surely associated with dangers enough without the addition of such as result from careless mismanagement of the very roadway itself. Yet these are not wanting. We do not refer merely to any risk of the season such as that occasioned by non-clearance of snow-laden thoroughfares, but to a cause of mischief ever latent and even more hazardous—namely, the trap-door which ought to cover the entrance to the cellarage of many warehouses, but which is too often left agape, with no sufficient barrier or voice of warning to turn the steps of any unwary foot passenger. Such neglect is highly culpable, even in broad daylight, but the degree of blame as well as the possibility of most serious injury are immensely increased by such perilous conditions as are added by the twilight of evening or the too common incident of a London fog. Mere business caution should remember, if humanity be forgetful, that the injured wayfarer who may suffer by such neglect has a

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claim to compensation for the damage done to him, and business prudence alone might suggest the wisdom of carefully closing such man-traps whenever they are not under the actual supervision of *employés*. Almost identical in character with this form of street danger is that arising from the half-open coal-cellar plate, which may be occasionally noticed in front of private dwellings. This is understood to be kept fastened at all times except during the actual delivery of coal. It is liable to be opened nevertheless by heedless domestics as a ready means of obtaining light in the cellar. Need we remind householders that the near prospect of a bruised or broken limb which consequently menaces every casual visitor is not justified by any assumed necessity for sunlight underground.

THE LANCET RELIEF FUND.

IN consequence of a communication from the Secretary of the General Post Office, it appears we are not permitted to publish the "application form" of THE LANCET Relief Fund as a "supplement." It will therefore be found in our "General Advertiser" columns. It may, however, be easily removed, and can be filled up and forwarded to the Hon. Secretary, Thomas Wakley, jun., THE LANCET Office, Strand, London.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—Dr. Karl Hoor, regimental surgeon, has qualified as *privat-docent* in Ophthalmology.

Dorpat.—Dr. Fürstner has resigned the professorship of Mental Pathology, and Dr. Kraepelin has been appointed in his place.

Munich.—Dr. Karl Seitz has taken charge of the University Policlinic for Children's Diseases.

St. Petersburg (*Military Medical Academy*).—Dr. Lipski has qualified as *privat-docent* in Medicine.

Vienna.—Dr. Egon von Braun-Fernwald has qualified as *privat-docent* in Midwifery and Gynæcology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. K. L. Sirski, Ordinator of the Tiflis Military Hospital, and formerly assistant in Professor Polotebnoff's dermatological clinic in St. Petersburg. He had been offered the professorship of dermatology in Tomsk, but as he suffered from phthisis he felt unable to accept it, preferring to remain in the far warmer climate of Tiflis.—Dr. Albitski, Assistant in the Military Medical Laboratory for the Caucasus.

WE are asked to state that, by permission of the managing committee of the two Colleges, the lectures which Mr. Hutchinson will give in connexion with the post-graduate course will be delivered in the new premises of the Examination Hall. The first lecture will be on Tuesday next, the 13th, at 5 o'clock, and its subject on "The Nature of Lupus with special reference to its Connexion with Tuberculosis." All members of the profession will be admitted on presenting their cards. Succeeding lectures will be on Tuesdays, at 5 P.M. The entrance to the theatre is in Savoy-street.

PROFESSOR VIRCHOW, lately elected by acclamation an honorary member of the Regia Accademia Medica di Roma, has just acknowledged the compliment paid to him in a letter to the president, Dr. Guido Baccelli—"I am proud and happy to find myself so united by a new tie to Italy—proud to be affiliated in Rome to a body so learned and so distinguished, happy to feel myself among new friends."

DR. LORICA has been commissioned by the Department of Public Health at Rome to go to Tuscany, armed with special powers as "medico provinciale," to draw up a report on the sanitary condition of the province. The typhoid epidemic at Pisa, now transferred to Florence and its environs, invests Dr. Lorica's mission with more than ordinary importance.

WE are asked to state that it is proposed to send to a convalescent home three of the patients now undergoing treatment by Professor Koch's method in Dr. Heron's wards in the City of London Hospital for Diseases of the Chest, Victoria Park, E., and that these patients may be seen at the hospital by medical men on Monday and Tuesday, between 3.30 and 4 o'clock P.M.

AT the Medical Society on Monday next Dr. William Duncan will read a paper on Chronic Disease of the Uterine Appendages, with short notes of thirty consecutive cases treated by Abdominal Section. It is expected that Sir Spencer Wells, Drs. Playfair, Priestley, and Cullingworth, Messrs. Lawson Tait, Meredith, Doran, and others, will take part in the discussion.

WE regret to have to announce the death, on the 4th inst., of Mr. Edward Bellamy, F.R.C.S., senior surgeon of Charing-cross Hospital, at the age of forty-eight. We shall, in our next issue, give a sketch of the life and professional career of the deceased surgeon.

PROFESSOR PFUHL, Professor Koch's son-in-law, is to have charge of the new institute for experimental medicine in St. Petersburg.

DEMONSTRATIONS OF DR. KOCH'S TREATMENT IN LONDON.

PROGRESS OF THE CASES.

(*Continued from p. 1110, vol. ii. 1890.*)

City of London Hospital for Diseases of the Chest.

DR. HERON continues to attend with the utmost enthusiasm to those patients undergoing Koch's treatment in this hospital, and it is most satisfactory to record that in the large number of cases which have been treated by him not one has ever given him cause for alarm on account of the treatment. On the other hand, several of the patients have improved to such an extent as to be able to be removed to a convalescent home, and Dr. Heron thinks in a few weeks any assurance office would accept them as first-class lives. Dr. Wethered expressed his conviction that this treatment completely changed the feelings with which the practitioner now approached this malady, and shed a very distinct ray of hope over what had formerly been regarded, even by the most skilful, as a condition in which

"Hope never comes which comes to all."

The three cases alluded to (Nos. 1, 2, and 7) will be submitted on Monday and Tuesday, between 3.30 and 4 o'clock P.M., in the hospital to any medical men who may wish to see the progress which has been attained during the treatment.

CASE 1.—G. M——. This patient, on admission, suffered from a cough, which was very severe, but which has now entirely stopped. Dr. Heron thinks if the fluid can relieve symptoms to that extent, its utility and power are sufficiently proved. From the 21st ult. the patient showed no reaction until a dose of 0·06 was administered, and even then it was very slight. The dose was therefore increased rapidly until the regulation standard of a decigramme was reached, beyond which it was not deemed advisable to proceed. He has injected several doses of a decigramme without any reaction whatever being produced. On the right side the physical signs are completely cleared, and on the left side the crepitations have greatly diminished, and the breath sounds

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formerly rhonchial have now become harsh. He has gained 6lb. in weight since the treatment began.

CASE 2.—A. D——. This patient has now fewer moist crepitations. He had lost weight to the extent of a stone. Since the treatment began he has gained 10½ lb., of which 5lb. were gained during the last ten days. The patient is to be removed to a convalescent home on Monday.

CASE 3.—B W—— has been under treatment for four weeks, and is now taking decigramme doses. The case illustrates what has been noticed in several instances, that in tubercular disease accompanied by any other specific disorder the reaction is so extremely slight that it is scarcely possible to be certain that there has been any reaction at all. This patient has had very low temperatures, reaching to 96·4°, 96°, and 98°, all of which were checked by Drs. Scott and Adamson by a test thermometer. On the administration of the remedy the temperature rose to 102·2°.

CASES 4 and 5.—L. F—— and E. R——. The lupus cases continue to show marked improvement.

CASE 6.—H. D——, aged fourteen. This patient has had an attack of pleurisy, which came on on Dec. 18th with distinct signs of septic inflammation of the left base. Injections were stopped on Dec. 16th and were not resumed until the 30th, exactly a fortnight, when a small dose of 0·003 was given. No reaction is manifest, although 0·01 is now administered. In ordinary cases of phthisis attacks of pleurisy frequently occur, and Dr. Wethered has found tubercle bacilli in the clear serous effusions in phthisical cases which afterwards disappeared without any treatment. A case of this kind was communicated by Dr. Douglas Powell in a paper entitled "Tubercle Bacilli of the Serous Membranes," read at the Leeds Congress.

CASE 7.—H. B——. This patient has now received thirty-one injections, and is regarded as one of the most successful cases which have been treated in this hospital. She has been subjected to the full dose of a decigramme without any further effect, and the physical signs have considerably improved.

N.B.—We have to express our thanks to Dr. Scott and Dr. Adamson for the assistance they have so kindly given to our representative from time to time in rendering these reports as accurate as possible.

KING'S COLLEGE HOSPITAL.

Dr. Watson Cheyne has resumed the charge of these patients along with his house surgeon, Mr. R. T. Hewlett, to whom we are indebted for much assistance in preparing the following notes of the cases.

CASE 1.—E C——. Since our last notice this patient has been injected five times without any reaction, and the wound now resembles a slowly healing sinus. One decigramme of the fluid has now been administered, and the patient has apparently ceased to react. No bare bone can now be felt. There does not now seem to be any disease in the part.

CASE 2.—H. F—— reacts but slightly to the fluid, and the lupus patches in the axilla look very much improved, although the patch on the leg is not so satisfactory.

CASE 3.—R. F——, aged thirty. This case of enlarged glands has now received six injections, after the last two of which there has been no reaction. All observers agree that the glands have diminished much in size. Mr. Cheyne will go on for some time longer with the fluid, before considering whether he will remove the glands by surgical procedure or allow them to be absorbed. Some of them are now quite separate and distinct, and appear as though they could be easily shelled out.

CASE 4.—W. R——. Strumous disease of the left knee-joint. Has had injections of a dose of 0·012, and there is practically no reaction. The leg can now be flexed without any pain, and the measurement of the joint has diminished by nearly an inch.

CASE 5.—J. H——. A case of hip-joint disease. At first very little movement could be obtained without moving the pelvis, and no rotation or adduction was possible. Now both these movements are very apparent, and no case of this disease treated in the ordinary way by rest and Thomas's splint could show so much improvement. The patient failed to react to the last two injections. The case is considered to show one of the best results yet obtained in King's College.

CASE 6.—M. G——. Disease of the left elbow-joint. The reactions in this case continue to be very slight, both locally and generally. There does not seem to be much improvement in the mobility of the joints, probably from the existence of adhesions. The outline of the joint is becoming more defined.

CASES 7, 10, and 11.—These lupus cases are showing a rate of improvement equivalent to that usually observed in such cases

CASE 8.—F. G——. Strumous disease of the right elbow-joint. This patient has had five injections, and 0·01 has now been reached. There is a very slight general reaction, and the power of pronation and supination is much improved. The size of the joint has diminished by nearly half an inch.

CASE 9.—C. K——. Strumous dactylitis of the ring finger. In this case a sinus in the buttock had existed for years, and it entirely healed up about ten days after the treatment was commenced. Since our last report six injections have been administered, but they have produced but slight reactions.

CASE 11.—N. L——. This patient has now gone for a holiday, promising to return to undergo the treatment in a month. There is a marked improvement in her condition.

CASE 12.—The case of anæsthetic leprosy. Much smaller doses are being given, which continue to produce the feeling of suffocation so marked in some of the reactions. Leprosy cases frequently have a laryngeal infiltration which gives rise to this feeling. She expresses herself as feeling much better since the treatment began, and is well satisfied to continue it. The patient seems to have lost a good deal of the melancholy expression she formerly wore.

CASE 13.—W. P——, aged thirty-two, suffering from disease of the knee-joint, which has lasted for four years, has been under this treatment, and has received twelve injections. The last injection was of the strength of 0·02. The knee is now the same size as the sound one, and very little seems to be amiss with it.

CASE 14.—S W——, suffering from a large lumbar and iliac abscess, which was opened about two months ago. On admission, two large sinuses remained open behind and one in front. He has received eleven injections, and is now being given 0·01. They produced considerable reaction, and all the sinuses healed up within ten days of the commencement of the treatment.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-BRIDGE-ROAD.

CASE 1.—M. L——, twenty-two years of age. Lupus of nose (under the care of Dr. Sunderland). Duration about five years. Has been scraped twelve times. Family history good. Admitted on Dec. 11th, with well-marked lupus of nose, affecting the whole of the right ala, part of which is destroyed. Nine injections have been given, beginning with 0·002 and increasing to 0·012. The lupoid patch now presents a shrivelled appearance; the area covered by scales is smaller; the right nostril which was formerly obstructed is now perfectly free, and healthy-looking skin has appeared at the margin of the right ala and left side of nose, where lupoid tissue previously existed. The throat is now healthy in appearance. The patient is much pleased with her improved appearance. A point of interest is the development of granulations on the palate and fauces which has been noticed by foreign observers, and which possibly indicates early disease of these parts.

CASE 2.—A. D——, thirty years of age; phthisis of left apex. Admitted on Dec. 10th. Nine injections were given, beginning with 0·001 (after which distinct reaction occurred), increasing to 0·01. No change in physical signs until after third injection of 0·004, when crepitations appeared at left base; and expectoration, which had diminished since admission, increased again to two ounces, and showed a few bacilli of normal appearance, others headed, and numerous granule-like bodies staining like bacilli. Night sweats have been absent since the commencement of the treatment, with less anæmia, cough, and expectoration. The patient expresses herself as feeling stronger and better, but has lost up to the present 12lb. in weight. No changes noticed in the urine throughout.

CASE 3.—H. S——, aged six years and a half; tubercular glands of neck (under the care of Dr. Sunderland). On admission there were large masses of glands extending like a collar on both sides of the neck from ear to ear, in several places ulcerating and covered with adherent scabs; these were also enlarged. The first injection of ½ mm. was followed by serous exudation from beneath the scabs and injection

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of the scars left by the former operation. After the fourth injection of 4 mm. marked swelling of the glands, hyperæmia of the palate, and exudation from beneath the scabs occurred, with marked constitutional disturbance. The scabs were thrown off, leaving moist weakly-granulating surfaces. After each subsequent injection the glands became smaller, and are now not more than one quarter of the size they were on admission.

CASE 4.—P. W——, aged four; adenoids of pharynx (under care of Dr. Sunderland); admitted Nov. 14th, 1890. As a theory has been advanced that adenoids are of tubercular origin, this case was injected. He received seven injections, reaching to 0·008. There was marked hyperæmia and swelling of fauces and palate, and a halo of congestion appeared around each adenoid growth after each injection, but they have remained apparently unaffected. There have been very little signs of constitutional disturbance, and the highest temperature was 99·8°.

CASE 5.—K. G——, aged six. Old excision of hip, with sinuses (under care of Mr. Jacobson). Admitted in 1887, when diseased bone was removed from the tarsus with successful result. While in hospital disease of the hip developed on the same side, for which excision was performed in October last. Six injections were given, the first on Dec. 16th. Well-marked reaction followed each, with increased discharge and swelling around the hip after the first three injections, but subsequently the discharge diminished, the wound healed, and the sinus is gradually closing up and the discharge from it is very slight.

CASE 6.—E. M——, aged five. Early catarrhal phthisis (under care of Dr. Sunderland). Cough, hæmoptysis, and wasting for some months only. A thin child (weight, 2st. 3½lb.), with flattening at right apex, deficient movement, impaired resonance and crepitations, and tubular breathing posteriorly. Five injections were given, the first on Dec. 22nd. Very little reaction followed (highest temperature, 100·2°). No evidences of any local action in lungs; the signs at the right apex have gradually cleared up, and there is now nothing abnormal to be heard in the lungs, although flattening and impaired movement continue on the right side of the chest. Unfortunately no expectoration could be obtained, so that bacilli were not detected. The temperature still continues slightly raised and irregular. There has been a gain of 2 lb. in weight. The subsequent history of this case will be of great interest, and the injections have now been discontinued.

CASE 8.—A. K——, aged ten; tubercular peritonitis (under the care of Dr. Haig); admitted Nov. 1st, 1890. Well-marked nodular band passing across abdomen, owing to extensive abdominal disease. Three very small injections have been given, beginning with half a milligramme, but distinct reactions have been obtained, with increased swelling of the abdomen and marked peristalsis and distension of the intestines.

KIDDERMINSTER HOSPITALS.

Five cases have been injected at the Kidderminster Infirmary and Children's Hospital, and six at the Kidderminster Workhouse Infirmary, and, so far as can be judged in a week, with satisfactory results.

ROYAL NATIONAL HOSPITAL, VENTNOR.

Ten carefully selected patients were inoculated at the Royal National Hospital with Koch's fluid. The cases were very carefully diagnosed, and the lesions graphically delineated on outlined figures. Sphygmographic tracings have been taken at the extreme of reaction, and in the interval, affording very interesting results. The parallel tracings of pulse, breathing, and temperature in red, blue, and black inks have been taken every three hours.

KOCH'S METHOD IN THE PROVINCES.

We learn from the *Bradford Observer* that immediately after his return from Berlin with a supply of Koch's liquid Dr. Hime of Bradford offered to Dr. Proctor, medical officer to the union workhouse of that town, the free use of his supply for any suitable pauper cases. This very generous offer will no doubt be largely availed of. Dr. Hime is also treating cases at the Infirmary and Children's Hospital and other poor people in the town. His results up to the present have been thoroughly typical of the results obtained in Berlin.

A small quantity of Dr. Koch's lymph is being sent this week to Madeira by the Cape mail steamer *Roslin Castle*.

HEALTH OF THE IMPERIAL NAVY OF JAPAN.

THE average strength of the Imperial Navy of Japan in 1889 was 8954; the cases of disease and injury amounted to 3621, of which 1038 were treated in and 2583 out of hospital; the number constantly under treatment was 120·36 in-patients and 171·47 out-patients, making a total of 291·83; there were 52 deaths, and 49 men were invalided. These numbers give the proportion of 404 cases, 5·81 deaths, 5·47 discharges by invaliding, and 32·59 constantly non-effective per 1000 of mean strength. The cases and mean sick were slightly higher, but the deaths and invaliding lower, than in the preceding year. Of the deaths 9 were by accidents and violence, including one by a fall from aloft, 3 by drowning, and 5 by suicide, and 43 were by disease. The only epidemic disease which prevailed was rötheln, which broke out on Jan. 31st on board the *Kaimon* in the harbour of Yokosuka. It spread to other ships and to the barracks, and did not cease till June 6th. There were 174 cases treated, all of which recovered; 106 of them occurred in March, 33 in April, and 24 in February. Venereal diseases were the cause of the greatest amount of sickness. Mr. Takaki, in his report, says there were 772 cases and 4 invalided, but the tables show 709 cases of syphilis, 421 of gonorrhœa, 2 of stricture, and 80 of orchitis; if the latter were gonorrhœal, it would give a total of 1212 cases, or one-third of the whole number included in the returns, and a proportion of 135 per 1000 of the strength. There were 27 cases of enteric fever, with 8 deaths, the former being higher and the latter lower than in the preceding year. Diseases of the lungs were the most fatal class, having caused 16 deaths, of which 8 were from phthisis, 1 hæmoptysis, 4 pneumonia, and 3 pleuritis. There were 3 cases of kakké (beri-beri), but it is stated that 2 of them, of which one died, "occurred after the men had run away from the navy." The judicious changes in the dietary effected by Mr. Takaki in 1884, with subsequent modifications, seem to have been effectual in getting rid of a disease which was previously a source of much sickness and mortality. It was not found necessary to make any important change in the food of the men during the year. No information is given in the report as to the number of recruits for the navy who were rejected as unfit for service.

SOCIETY FOR THE STUDY OF INEBRIETY.

A MEETING of this Society was held on the 6th inst., in the rooms of the Medical Society of London, the President, Dr. Norman Kerr, in the chair.

Dr. Crespi (Wimborne) said that though he at one time regarded drunkenness as a purely moral vice, he was now satisfied that, in a later stage at least, it was a disease. Confirmed intemperance was a disease, and it was imperative that there should be changes in the law to empower any relative to obtain a compulsory order to seclude the inebriate in a home for special treatment. There should also be provision for the poor in institutions conducted by County Councils, and paid for out of the rates.

Dr. T. L. Wright (Bellefontaine, Ohio), in an elaborate paper on the Psychology and Responsibility of Drunkenness, discussed the nature and relations of alcoholic intoxication. 1. If insanity was mental aberration consequent on a cause beyond volitional control, then a person drunk on alcohol is, during the drunken fit, truly insane. The laws claim that the drunkard is a voluntary madman. This is incorrect. The inebriate does not voluntarily renounce control. On the contrary, he believes he can control his actions, while he cannot. Though he does not know it, alcohol paralyses inhibition. 2. Alcohol assails every element of human character, every organ and portion of human structure. Alcohol acts as an anæsthetic, and the various alterations in the eye, the features, the gait, and the flow of ideas and talk are not symptoms of increased but of decreased intelligence and control. The perception and the senses are clouded. There are distorted and debased sensations. The insane have similar perversions. 3. In drunkenness there are also instability of movement and incoördina-

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tion of function, leading to mental confusion, maniacal tumult, and incoherence of thought. The unity of purpose is destroyed. In most cases of crime under alcohol there has been no criminal intent.

CHRISTMAS AT THE LONDON HOSPITALS.

IN addition to those mentioned in our last issue, the following notices of Christmas festivities have been received:—

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

Through the kindness of several friends the patients at this hospital passed an exceptionally happy Christmas. After an excellent dinner, various games were indulged in, and all enjoyed a homelike evening. Two bagatelle-boards, recently obtained through the liberality of friends, also provided sources of amusement.

ROYAL FREE HOSPITAL.

The students of the London School of Medicine for Women gave an entertainment to the nurses and patients of the Royal Free Hospital on Dec. 18th, 1890. A stage with proscenium and footlights was erected in the large lecture-room, and an excellent performance, consisting partly of tableaux and partly of songs and amusing recitations, was given. Whilst these performances were going on, "Father Christmas," with eight attendants, visited each of the wards and sang carols and distributed sweets for the benefit of the patients unable to be moved downstairs.

GUY'S HOSPITAL.

At Guy's Hospital the wards were gaily decorated with evergreens and Chinese lanterns, and the patients were regaled with roast beef and plum pudding, to which a bountiful dessert was contributed by the students. A band of negro melodists, mainly students, visited the wards during the day and afforded infinite amusement to the patients. There were several Christmas trees, and a supply of articles of clothing were distributed among the children and the more needy of the patients.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, BLOOMSBURY.

An entertainment and Christmas tree distribution took place at this hospital on Jan. 2nd, the patients enjoying a very pleasant evening.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bradford Urban District.—Estimating the population of this Yorkshire borough at 235,056, Dr. Jas. MacLintock puts the birth-rate for 1889 at 26·6 and the death-rate at 19·1 per 1000; and, after discussing the incidence of the deaths in age, sex, and locality, he points out that, compared with the mean for preceding years, the amount of death from zymotic causes was very excessive; measles, whooping-cough, and diarrhœa taking precedence in this respect. It is curious that, whilst diphtheria is so largely taking hold of our urban areas, Bradford remains practically free from this invasion, and only 39 cases were reported under the Notification Act last year. As to enteric fever, this disease, as usual, selected houses and localities having sanitary defects involving nuisance from excreta; and in one special neighbourhood, the condition of which is described as deplorable, scarcely a house had its drains disconnected, the sewer was unventilated, the yards were foul, the privies and ashpits dirty, and houses were built back-to-back. Naturally, Dr. MacLintock was not surprised at the outbreak of enteric fever; but some surprise may be expressed as to the existence of a series of conditions which seem almost contrived to invite a filth disease. A good deal of attention is given in the report to the subject of destructors and to the question of their causing nuisance; but since arrangements were made for the erection of two more of these structures, with a view of reducing the necessity for the dangerous "tipping" still in progress, we may assume that the sanitary department of the borough is satisfied that such appliances can be managed without nuisance. Unfortunately, lead-poisoning still goes on in the borough, and the cause of it remains unsolved. It is to be hoped that the inquiry now set on foot by the Local Government Board into this matter will clear up the difficulties by which it is surrounded. A large amount of current sanitary work is in progress in the borough, and a detailed account of it is embodied in the report.

Bradford Isolation Hospital.—A separate report is issued as to this institution by Mr. Herbert Humphreys, the resident medical superintendent. The hospital has undergone a number of structural improvements, and it is now one of the most complete in the kingdom. The number of patients admitted during 1889 was 490. Of these, 357 were cases of scarlet fever, and 102 cases of enteric fever. Amongst the tables appended to the report is one showing the percentage of deaths per admissions during a term of years from each of the diseases received into the hospital. The varying mortality in scarlatina is striking, and we trust the table will be annually kept up, and a mean drawn of the results shown. So also, more letterpress in amplification of the numerous diagrams would add to the usefulness of the report.

Worcestershire County Area.—Mr. Fosbroke, the county medical officer of health, has recently issued a volume, in which he deals, by way of digest, with the various local health reports, and his perusal of these reports has evidently led to the gathering of a conference of Worcestershire health officers, at which he communicated his views as to the desirability of carrying out the health work of the county and of reporting on certain definite lines. He especially advocated some uniformity in the preparation of annual reports, although he admitted that it would be inexpedient to frame all such reports precisely on the same model. Some attempt at uniformity has been already aimed at in the instructions of the Local Government Board, and, whilst we can conceive that the matter may with some advantage be extended somewhat further, we can also readily understand that uniformity may be carried too far, and that the mere need for making a summary of such reports would not justify a change that would hamper the individuality of the reporter. There are certain tables and statistical returns that should be made on the same lines, if only for purposes of comparison, and we do not imagine, from the nature of Mr. Fosbroke's own reports in the past, that uniformity is likely to be pressed by him beyond bounds that are reasonable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6328 births and 5343 deaths were registered during the week ending Jan. 3rd. The annual rate of mortality in these towns, which had increased from 21·3 to 27·8 per 1000 in the preceding three weeks, further rose last week to 28·7. The rate was 29·7 in London and 27·9 in the twenty-seven provincial towns. During the thirteen weeks of the quarter ending on 26th ultimo the death-rate in the twenty-eight towns averaged 21·6 per 1000, and exceeded by 0·6 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 16·2 in Leicester, 17·1 in Bradford, 19·6 in Derby, and 20·2 in Hull; the highest rates were 33·1 in Salford, 33·5 in Liverpool, 36·7 in Manchester, and 43·6 in Preston. The deaths referred to the principal zymotic diseases, which had been 511 and 472 in the preceding two weeks, were last week 476; they included 191 from measles, 106 from whooping-cough, 51 from diarrhœa, 49 from scarlet fever, 40 from "fever" (principally enteric), 39 from diphtheria, and not one from small-pox. The lowest death-rates from these diseases were recorded in Portsmouth, Hull, Wolverhampton, and Derby; the highest in Oldham, Salford, Bolton, and Preston. The greatest mortality from measles occurred in Salford, Bristol, Oldham, Preston, and Bolton; from whooping-cough in Newcastle-upon-Tyne, Sheffield, Birmingham, Preston, and Salford; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the twenty-eight towns. The 39 deaths from diphtheria included 25 in London,

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3 in Manchester, 2 in Oldham, and 2 in Leeds. No death from small-pox was registered in any of the twenty-eight towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1593, against numbers declining from 2122 to 1685 on the preceding eight Saturdays; the patients admitted during the week were 107, against 125, 108, and 78 in the previous three weeks. The deaths referred to the respiratory organs in London, which had increased in the preceding five weeks from 375 to 806, further rose last week to 927, and exceeded the corrected average by 427. The causes of 156, or 3·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Derby, and Oldham. The largest proportions of uncertified deaths were recorded in Brighton, Sheffield, Preston, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 20·1 to 24·6 per 1000 in the preceding three weeks, further rose to 24·8 during the week ending Jan. 3rd, but was 3·9 per 1000 below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·6 in Leith and 17·8 in Greenock to 29·5 in Paisley and 30·2 in Glasgow. The 643 deaths in the eight Scotch towns showed an increase of 6 upon the number in the preceding week, and included 22 which were referred to whooping-cough, 14 to "fever," 12 to measles, 7 to diarrhœa, 6 to diphtheria, 4 to scarlet fever, and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against numbers increasing from 46 to 70 in the preceding three weeks. These 65 deaths were equal to an annual rate of 2·5 per 1000, which was slightly below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 12 and 22 in the preceding two weeks, were again 22 last week, of which 14 occurred in Glasgow and 5 in Edinburgh. The deaths referred to different forms of "fever," which had increased in the previous three weeks from 2 to 7, further rose last week to 14, and included 7 in Edinburgh, 4 in Glasgow, and 2 in Dundee. The 12 fatal cases of measles showed a decline of 7 from the number in the preceding week; 6 occurred in Glasgow and 4 in Greenock. The deaths from diphtheria, which had risen from 6 to 9 in the previous three weeks, declined again to 6 last week, and included 4 in Glasgow. Of the 4 fatal cases of scarlet fever 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had increased in the preceding three weeks from 137 to 182, further rose last week to 191, but were 14 below the number in the corresponding week of last year. The causes of 60, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had risen from 25·6 to 31·3 per 1000 in the preceding three weeks, further increased to 40·6 during the week ending Jan. 3rd, a higher rate than in any week since February last. During the thirteen weeks of the quarter ending on the 27th ult., the death-rate in the city averaged 24·3 per 1000, the rate for the same period being 20·6 in London and 18·6 in Edinburgh. The 275 deaths in Dublin showed an increase of 63 upon the number in the preceding week, and included 7 which were referred to different forms of "fever," 2 to measles, 2 to whooping-cough, and not one either to small-pox, scarlet fever, diphtheria, or diarrhœa. Thus the deaths from the principal zymotic diseases, which had been 9 and 11 in the preceding two weeks, were again 11 last week; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 2·4 in London and 2·9 in Edinburgh. The deaths referred to "fever," which had been 4 and 6 in the preceding two weeks, further rose last week to 7. The 2 fatal cases of measles were the first recorded in the city since the beginning of October. The 2 deaths from whooping-cough showed a decline of 2 from the number in the previous week. The 275 deaths in the city included 44 of infants under one year of age, and 74 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon the numbers recorded in recent weeks. Six inquest cases and 7 deaths from violence were registered; and 77, or more than a fourth, of the deaths occurred in public institutions. The causes of 27, or nearly 10 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

MILK IN CONNEXION WITH SEPTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—A letter appears in your issue of Jan. 3rd under the above title, and signed by Dr. F. P. Atkinson, in which the age of the patients attacked is suggested as a test whether an epidemic be due to infected milk or to other causes. Dr. Atkinson says that, "if by far the larger proportion of individuals attacked be children, it would be only natural to suppose that the milk was in some way or other the cause, inasmuch as children are by far the larger milk drinkers. If, on the other hand, grown-up people furnish the larger number of victims, it is not unlikely defective drainage is the cause." He illustrates his proposition from two outbreaks of diphtheria, and in all probability he was correct in his conclusions in regard to these instances. I would, however, desire to point out that the test does not hold good in regard to typhoid fever, where it will be found that young adults are affected to far the greatest extent. This has been my experience in two considerable epidemics I have recently had the opportunity of investigating. In fact, the average age of the patients corresponded with the average age of those attacked by typhoid from all causes as given in Murchison's book.

In an epidemic of scarlet fever traced to milk recently a large number of adults were attacked in proportion to children. In this instance the adults partook of the poison in the form of cream in tea, a mode of administration which seems in certain cases to increase the virulence of the poison. I know of several outbreaks both of typhoid and scarlet fever traced to milk where the milk has been taken only in tea or coffee, and has produced severe attacks of the disease. The conditions which influence the incidence as to age, of infectious disease due to contaminated milk, appear to be: (1) The age of greatest prevalence of the particular disease—e.g., scarlet fever, typhoid fever, diphtheria; (2) the quantity of milk consumed; (3) the form in which it is taken; (4) the health of the person at the time.

In conclusion, let me mention that in Edinburgh, as no doubt also in many other places, our notification forms include both the age and sex of the person attacked, and this information is given in every instance.

I am, Sirs, yours faithfully,

HARVEY LITTLEJOHN, M.B., B.Sc.

Health Office, Edinburgh.

To the Editors of THE LANCET.

SIRS,—The point raised by Dr. F. P. Atkinson, under the above heading, in your issue of Jan. 3rd, is of very considerable practical importance. He says he has always been sceptical as to the value of boiling milk in order to destroy "germs," and he adduces certain arguments evidently intended to enforce this doubt on his part. But I would submit that his data, as given in his letter, are but of little value. His letter relates to "septic disease"; one of his two recorded illustrations has to do with "diphtheria"; and as regards the other, the nature of the disease is not specified, but it savours rather of enteric fever. And then, to add to the confusion, he writes to Mr. Watson Cheyne to know how far the boiling of milk suffices to destroy "all existing germs"; and this is capped by a statement of the opinion which was held by that expert at a date when he worked with "these things."

May I venture to ask what "things" and what diseases are in question? The point is of the more importance because Dr. Atkinson lays down the general rule that if the incidence of "infectious disease" is mainly on children, it

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will only be natural to suppose that milk is "in some way or other the cause," but that the reverse is probably the case if grown-up people furnish the larger number of victims. The adoption of a gratuitous assumption of the above sort may well have made Dr. Atkinson sceptical. The specific diseases with which milk is best known to have causal relation are scarlet fever, diphtheria, and enteric fever. The two former are essentially diseases of childhood, the latter is more especially a disease of young adults. Acting on the rule laid down, diphtheria and scarlet fever occurrences would as such raise suspicion of milk infection, whilst occurrences of enteric fever would have just the opposite effect. But, whilst awaiting further information on the points raised in Dr. Atkinson's letter, may I venture to question whether Mr. Watson Cheyne's answer related to the specific organisms of either of these diseases; and until we learn that I am wrong in this surmise may I be allowed to state that my experience is entirely in accord with that of "the authorities" referred to by Dr. Atkinson. In short, as a matter of practice, it is well known amongst investigators of infectious diseases that persons who use nothing but cooked milk do very largely escape from attacks of the three diseases named during epidemics in which members of the same households who use uncooked milk are specially attacked by them.—I am, Sirs, yours faithfully,

Jan. 1891. PUBLIC HEALTH.

MALARIA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 13th Brigade Surgeon G. Yeates Hunter mentions heat and malaria as the two great depressants of the nervous system in tropical climates, and these depressing influences are regarded as intensified by the injudicious use of quinine. There are, however, other agencies especially affecting the European in a tropical climate. These are the extreme liability to chill arising from the skin being debilitated by excessive action resulting from heat; the prevalence of a scorbutic taint which may be latent, or only evidenced by conditions not always appreciated as scorbutic; disturbed sleep from very many causes; and not infrequently a syphilitic taint. Continued heat, however, is the most important factor. Even in a temperate climate, a season of extraordinary heat causes loss of appetite and debility by its depressant effect on the nervous system. But the heat of a tropical climate acts still more injuriously. As a consequence the introduction of oxygen into the lungs is lessened in several ways, while the excretion of carbonic acid is diminished, and hepatic engorgement is favoured. Neither with a smaller quantity of urine is so much effete matter passed with that fluid. All this leads to blood deterioration. Dr. Forbes Watson, of the Bombay Army, some thirty-five years back demonstrated that the red blood globules of the European in India (especially during the season of rain moisture and heat) become smaller, lose their smooth appearance, and are studded with refracting granules, which were regarded as of a fatty nature. Had Dr. Watson possessed more modern instruments, it does not appear improbable that we would then have had a description of those changes which have been since noted to occur in connexion with the so-called bacillus malariæ. But continued high temperature, moisture, and other depressing influences incidental to residence in the tropics are quite sufficient to induce that anæmia from which so many suffer in a hot climate (and which is usually termed "malarious cachexia") without malaria. With regard to quinine, I long since wrote that it does not deserve the praise which has been accorded to it, and that a very short experience in the tropics will show that quinine is not the panacea which text-books make it. Paroxysmal fevers often terminate in restored health; hence many things have been credited with antiperiodic powers because fevers have ceased after their use. Amongst such agents are nicotine and charcoal, arsenic and cobwebs, opium and nitrate of potash, fuming nitric acid, strychnine and neem bark, carbolic acid and barbery, hyposulphites and black pepper, alcohol and coffee, also water labeled *peroxide of hydrogen*. As many have written enthusiastically of quinine, so Hare forty years ago wrote of mercury: "No doubt that if not calomel, certainly salivation is an antidote to malarial fevers. The instant a patient's mouth is sore the fever leaves him; from that moment the disease vanishes as if charmed the change is as if from life to death." I have seen patients recover as rapidly and well without quinine as with it, either because there was not any quinine to give them, or because they declined to take European medicine. It has been advanced that the diminution of the death ratio from fevers in India is to be attributed to the extended use of quinine. But, as a matter of fact, the death-rate from all Indian diseases has diminished, as I think, chiefly from better sanitation, from better personal hygiene, and from the abandonment of the spoliative treatment of former times. I have met many native *hakeems* in the East, and most have no confidence in quinine. They assert it "drives the fever inwards" And I think Brigade Surgeon Hunter is quite correct when he observes that "if fever is kept in abeyance [by quinine] a highly irritable condition of the nervous system is established." For instance, a person suffers from irregular or masked ague which he cannot shake off, accompanied by anomalous nervous symptoms. On inquiry it will be found that he has taken large quantities of quinine, which, although credited with the power of curing fevers, is nevertheless capable of exciting a febrile condition. Such a patient will not recover until quinine is discarded, and probably not until Carlsbad salts or some other similar medicine has been prescribed. Then lemon juice may be often taken with advantage. Waring long since remarked that "quinine is inadequate to eradicate malarious poison when it has become engrained, as it were, in the system; it appears probable that its continued use exercises an injurious influence on the brain and nervous system." I will not enter on the *quæstio vexata* of the action of quinine further than by remarking that a sufficient dose will generally lower the temperature, and sometimes delay or even prevent an ague fit. This, however, is rarely accomplished without toxic effects of quinine being manifested, which have often appeared to me to counterpoise the advantage. Sir Samuel Baker wrote of his travels in Africa that when he arrived at a place where he could procure sweet potato whisky, "Every day I drank hot toddy I became strong, and from that time the fever left me," quinine having failed. Both alcohol and opium have been regarded as antiperiodics, and I certainly have known expected paroxysms escape by taking a strong glass of brandy-and-water on the first symptom presenting. It is, however, more with regard to the prolonged use of quinine that I write in support of Brigade Surgeon Hunter's views. He has great confidence in kreat, or chiretta, as a substitute for quinine, and many Indian *hakeems* use this agent in preference to quinine. Years back I often used in dispensary practice, as I think both with economy and advantage to the patients, a tincture of kreat made by macerating 24 oz. of kreat in the same quantity of alcohol, and administering in doses of two or three drachms. I am, Sirs, yours obediently,

W. J. MOORE,

Jan., 1891. Surgeon-General.

"MIDWIVES' REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—After reading Dr. Atthill's letter I have come to the conclusion that he has not seen a copy of the Amended Midwives' Bill, but that he has contented himself with collecting from the medical press the opinions of others and presenting them to us in the uninviting form of a *réchauffé* dish. I have been led to believe this because he says the "title" of the Bill indicates that its framers think "registration" all that is needed. Now, the title is described in the first clause as follows:—"This Act may, for all purposes, be cited as the Midwives Act." This is a comprehensive title, and includes education, examination, certification, and registration. These are only means to an end, and that end is lost sight of by many—viz., the prevention of women calling themselves midwives who are not competent to act as such. Dr. Atthill proposes that an Act should be passed to encourage the education of midwives and enforce their examination, but he says nothing about granting certificates or registering them. Examination is of little use unless the person passing it can prove the possession of it by certificate, and the certificate is of no value to one who holds it if others can declare they have it and there is no register to refer to for proof against them. Dr. Atthill is satisfied with "Home Rule" in Ireland as far as midwives are concerned, and kindly wishes to help us with the management of ours. The King and Queen's College of Physicians of Ireland obtained a charter in 1673, enabling

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them to examine and license midwives, and punish all who practised without a licence. Midwives have certainly received more attention and been better educated in the sister isle. "As a rule," Dr. Atthill says, "they are efficient and well conducted." He, however, thinks the English midwives we propose to educate and register will not be so satisfactory, for he says "a good many will be guilty, or at least be accused of being guilty of drunkenness, incompetence, infamous or disgraceful conduct, &c." Let us hope this fear is groundless. Some of the objections which Dr. Atthill mentions have already received attention, and will be remedied after the Bill has been read a second time; but a number of them are due to incomplete knowledge or misapprehension of the intention and powers of the Bill. These will most certainly disappear with further enlightenment.

I am, Sirs, yours faithfully,

Upper Wimpole-street, Jan. 1891. JAMES H. AVELING.

To the Editors of THE LANCET.

SIRS,—Every member of our profession will cordially agree with the first part of your leading article on the above subject, but with the sentence, "We are not prepared to say that the State should refuse all recognition of midwives," objections begin. Indeed, the tenour of the first part of the article is contradictory to the latter. Everyone is agreed that the lying-in woman should have the best available attendance—viz., the registered medical practitioner. The difficulty is as to the means which will ensure this desirable end. This difficulty will surely not be met by providing a second-rate uneducated class to compete with him on terms which make competition impossible on his part. Now the difficulty that has arisen in connexion with this Bill is due to the method of its introducers and backers. It is almost incredible that certain members of our profession should have allied themselves with a body like the Midwives' Institute to legislate for us in this matter, instead of taking their own profession into their confidence and ascertaining in a reasonable way first whether legislative steps were necessary or desirable. The course adopted demonstrates clearly the necessity of the better representation of the views of the profession at large, and a representative body to give expression to those views. At present the only views which have a ready expression are those of cliques and corporations, which are not representative. Now, Sirs, I am entirely opposed to legislation on this subject, and I do not agree with the statement that we cannot permanently avert it. We can, if we are sufficiently of one mind in the matter. The reasons of my opposition are: First, no one has made out any case in favour of the necessity of legislation. Dr. Aveling, at the British Gynæcological Society, based his case on figures and facts which were clearly shown to be erroneous, and I have been at present unable to find anyone who can produce either figures or facts upon which to base the plea. My second reason is that it is impossible to provide any legal machinery to prevent the enfranchised class outstepping the limits of its province, and, at any rate, there are no provisions in the Bill at present before us which are sufficient. I will simply, by the way, remind you what has happened in the case of the pharmaceutical chemist. My third reason is, that the establishment of a second grade of practitioners will be detrimental to the science and the profession, and the first part of your article clearly points in this direction. The old apothecary class was, I presume, done away with, because it was found unsatisfactory. It appears to me that it is for the authors and backers of the Bill to show that legislation is necessary, and that what they propose to do is adequate to produce the desired result and is for the benefit of the science of midwifery. Until they can bring sufficient evidence to prove these points the Bill must be opposed to the bitter end.

I am, Sirs, yours faithfully,

Hatfield, Dec. 13th, 1890. LOVELL DRAGE.

ON THE TREATMENT OF CANCER BY THE INJECTION OF ACETIC ACID.

To the Editors of THE LANCET.

SIRS,—It is several years since I first injected acetic acid into cancerous glands. One of the first cases occurred at St. George's Hospital. Some months after amputating a scirrhous breast, the patient presented herself with enlarged axillary glands. In consultation, it was advised that they should be extirpated. I proposed, however, to inject them with acetic acid, and, with the consent of my colleagues, this was done. On the following Wednesday she again presented herself, when it was found that the enlarged glands had disappeared, and that the axilla was in a perfectly normal condition, there being no trace of enlarged glands, either superficial or deep. This patient returned several times to the hospital, but I never saw any further appearance of disease, and, so far as I know, she remained perfectly well. Also, having removed a cancerous breast, assisted by Mr. Pick, Mr. Cæsar Hawkins being present, the enlarged axillary glands were injected, and the result was equally satisfactory as in the former case. I have frequently since employed these injections, and with varying results; but lately I have used them to the breast itself. In a case now under my care the breast has resumed its normal character except that it has become smaller, and seems yet to be undergoing atrophy. With your permission I will send you detailed reports of some of these cases.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Dec. 16th, 1890. B. E. BRODHURST.

RESULTS OF COMPULSORY NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—With your kind permission I should like to make a few remarks on two contributions which have recently appeared in THE LANCET—namely, the letter of Dr. Russell, medical officer of health of Glasgow (Nov. 29th, p. 1188), and the annotation on Dr. Cameron's report to the Corporation of Leeds (Dec. 20th, p. 1345). In both pre-notification and post-notification figures are contrasted, and we are left to infer that notification is triumphantly vindicated.

In the case of Glasgow eighteen weeks only of each of two years are taken, and reference is made to but one disease—scarlet fever—with the following result:

	Cases.			Deaths.		
	Hosp.	Home.	Total.	Hosp.	Home.	Total.
18 weeks, 1880 ..	416 ..	829 ..	1245 ..	52 ..	161 ..	213
18 weeks, 1890 ..	697 ..	434 ..	1131 ..	24 ..	15 ..	39

It is difficult to determine what this table was intended to establish, except that more cases have been removed to hospital in 1890, that the death-rate per case treated in hospital is lower, and that the epidemic has not been nearly so severe as in 1880 (that is, of not nearly so virulent a type). Of those taken to hospital, 1 in 8 died in 1880; but in 1890, during a similar period, only 1 in 29. The figures in 1880, though probably reliable as regards the deaths at home, are misleading as regards the number of cases. But it is an interesting fact that in 1890 the proportion of deaths to cases is the same at hospital as at home: in both 1 in 29. So much for sanitation at Glasgow.

Coming now to Dr. Cameron's report, I see that he selected eight large boroughs with an aggregate population of 1,293,305 in 1881, but the average density is not before me. The mean annual death-rate from the four notifiable diseases—viz, small-pox, scarlet fever, diphtheria, and "fever"—was 2·1 per 1000 living before notification and 0·8 after. This represents an annual saving of life per 1000 of 1·3. But it is a singular fact that in Liverpool, Birmingham, Bristol, and Wolverhampton even more was effected without notification. The aggregate population of these four towns in 1881 was 1,239,872, and their average density 57·3 persons to an acre. In the period 1871–76 their average death-rate from the diseases above named was 2·64 per 1000 (or 0·5 above that of Dr. Cameron's eight towns in the pre-notification period); whereas for 1881–86 it was reduced to 1·01, and in 1887 to 0·82. The saving of life indicated between 1871–76 and 1881–86 was 1·53 per 1000 annually, and, if we take 1887 alone, it reached 1·82. Taking everything into consideration, Leeds and Brighton may well pause before incurring the expense of the Notification Act. Doncaster and other wary towns have decided to do as they have done, and calmly await the promised proof of the efficacy of the much-belauded system, a proof which certainly seems long in coming.

I am, Sirs, yours faithfully,

Kingston-on-Thames, Dec. 22nd, 1890. D. BIDDLE.

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URTICARIA DUE TO PRIMULA OBCONICA.

To the Editors of THE LANCET.

SIRS,—Three cases of urticaria, one followed by erysipelas, occurred in my practice last year, all undoubtedly due to the handling of primula obconica. In all three cases the usual characteristic symptoms of urticaria were present—violent irritation, followed by appearance and disappearance of wheals and erythematous rash, going on in one case to severe erysipelas of the face, necessitating the usual treatment. The patients were ladies who, with their brothers, had started a market gardening business in this county, and were all (with two other sisters and the brothers, who did not suffer), constantly handling this useful but obnoxious plant. I quite failed to discover the cause of the complaint, until my attention was called to similar cases occurring in America, and recorded in a gardening paper. I was unable to discover what part of the plant was the irritant, but suspected the very numerous stiff hairs with which the leaves and stems of the plant are covered. I always found that when any of the patients left home for a few days they quickly got well, and the disease returned on rehandling the flower. As soon as I had read of the cases that occurred in America the primula obconica was banished, and neither it nor the urticaria has been seen since in my patients' house. The mother of the two younger patients, who were under twenty-five, was middle-aged. The late correspondence on the subject of eczema caused by primula obconica escaped my observation, though I see THE LANCET every week, and I was only inclined to offer for publication my cases after reading Dr. Burd's (Shrewsbury) remarks in your last number and the appearance of his case of eczema due to handling of the leaves of the Virginian creeper.

I am, Sirs, yours faithfully,

Pantyrodin, Llandebie, Jan. 6th, 1891. GERALD SOUTHERN.

SOUTH AFRICA AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—During the past eighteen months or more an unusually large number of phthisical patients have been induced to visit South Africa in search of its reputed health-restoring influences, and perhaps it is not out of season now to observe that the effect upon those who elected to try this inland high (4500 feet) and dry (?) district has not been by any means encouraging, a large percentage dying during the first year or so after landing in this colony, the cause of death being chiefly due to the exhausting influence of repeated and severe attacks of hæmoptysis. Few seemed equal to the vicissitudes of the climate, but one might add here such non-climatic, injurious, preventable influences as bad housing, a defective and sameness of diet, unskilled nursing, absence of paternal care (nostalgia), the want of inclination or ability for taking plenty of out-door exercise, absence of invalid appliances, continued detention in ill-ventilated rooms, with terribly defective or indeed total absence of proper sanitary conveniences. Again, there may be undue excitement, indulging in late hours, kept up frequently by incessant and untimely visits of curiosity seekers, anxious to see newcomers from the mother country. These attentions flatter the invalid to renewed exertion, to produce the impression "Oh, I'm not so ill," &c. Whatever the cause or causes, the result is not encouraging. Again, I have witnessed the most distressing anxiety and depression caused by the knowledge of the funds being well-nigh exhausted, with no prospect of replenishment—a condition enough to worry the strongest. It seems to me that some young patients arrive from "home" with the idea that they have but to step upon African soil and to sniff the air to effect a perfect cure, when they will be able to support themselves. Alas! when these false hopes or ideas die out, life as a rule dies out also. It should be clearly understood by invalids that South Africa is probably one of the most expensive health resorts, with no *quid pro quo* in the shape of comforts, &c. It might be well to note also that one influence this climate appears at first to exert upon sufferers in the second or third stage of this disease is that of a marked feeling of benefit. Such patients, as a rule, speedily succumb. There seems to be no intermediate influence, and those in an early stage of the disease, if they can only battle through the first eighteen months or so, generally experience permanent benefit. The rule seems to be to improve quickly or die quickly. This fact considerably increases the responsibility of selecting the right cases. It should also be remembered that during the changes of seasons the temperature may vary from much below freezing-point up to 92°, 100°, to even 120° F. in the shade, and that within twenty-four hours it may be necessary to change thin for thick clothing, or *vice versâ*, more than once. The altitudes range from 15 ft. to over 6000 ft. above sea level. We have also hot, dry, stifling, and hot, moist, relaxing winds, with dust storms and fly pests thrown in as a change—in other words, we experience the extremes of heat, cold, draught and moisture and their consequences; still, we are frequently indulged with delightfully cool morning and evening breezes during the hot seasons, with a cool, refreshing shower of rain occasionally. There are some excellent cases of recovery, following actively various callings; but these cases do not include the kind which have arrived during the past year or more—most of the recovered cases I refer to came out at the earliest stage of the disease,—backed up with sufficient means to pilot them over at least the first twelve months without causing anxiety on this score. I learn that some derive most benefit by travelling about in suitable ox waggons, as I have so frequently advocated—this nomadic life is very pleasant when properly conducted—mixed with a little shooting and fishing, and not a bit more expensive than most of our hotels. There is one advantage South Africa possesses as a health resort over most others—i.e., those who recover and elect to become colonists can do so, for, as a rule, suitable employment can be obtained in the neighbourhood where they have derived the most benefit, instead of being obliged to return to the land which may have given birth to their ailment. This appears to me to be a boon which should not be overlooked when advising invalids.—I am, Sirs, yours truly,

S. CARTWRIGHT REED, M.D., F.R.C.P. Edin.

Herschel, Cape Colony, November, 1890.

SECRET REMEDIES.

To the Editors of THE LANCET.

SIRS,—Now that the first excitement over Dr. Koch's fluid has to some extent passed away, I have heard various opinions expressed as to the visits to Berlin by so many leading physicians and surgeons to obtain samples of and use a fluid of whose composition they are still kept ignorant. As a junior practitioner I have to ask if it be wise or even in accordance with the regulations of University degrees and the diplomas of the various Colleges, that British medical men should thus take upon themselves the responsibility of using on their patients a remedy which has certainly proved fatal in a certain number of cases. Why has not Dr. Koch put his discovery on the same footing as all true and great discoveries for the benefit of humanity have been put from the very beginning? Why does he still retain the secret remedy in his own hands, receiving Government grants and making many of his own and our practitioners come dangerously near recommending, if not actually using, a secret remedy which, if associated with the name of a less celebrated man, would most assuredly be openly called a quack one? No doubt the widespread and popular interest has had a great deal to do with the precipitancy; but this should not overcome the good sense of the medical profession. Already in Austria, and also in some parts of Prussia, stringent regulations are being made, which clearly show how rapidly the treatment is turning into the too long list of empirical specialties. No one wishes to depreciate Dr. Koch's work, which only great patience, skill, and perseverance could have overcome; but it will be his own fault if a reaction takes place which will relegate his fluid and treatment to the limbo of empiricism. May not this be avoided by a full and free explanation of the composition of and the *rationale* of the treatment by his fluid, and, if necessary, a complete cessation of its limited distribution to general practitioners in his own or any other country until such time as a sufficient number of cases of indubitable cure or improvement has been reported? Doubtless it may be argued that it is only by extensive trials that trustworthy statistics can be compiled, and rightly so, if all those who use this lymph knew what it is and the *rationale* of its

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action. Nothing will bring it more rapidly into disrepute as a legitimate therapeutic agent than the fact that all who have used it, or intend to use it, are kept ignorant of its composition. It follows, therefore, that, until such disclosure be made, Dr. Koch's liquid runs the serious risk of being classed as illegitimate. May I ask if any of the universities or colleges has sanctioned the use of this secret remedy by individual graduates and diplomats, who have had it supplied to them and have used it, and also if they have been guilty of any infringement of their qualification as practitioners? Perhaps the universities and colleges may answer this through the columns of your old-established journal.—I am, Sirs, yours truly,

J. CHRISTIAN SIMPSON, M.B. Edin.

DISINFECTION IN LONDON.

To the Editors of THE LANCET.

SIRS,—In the report of THE LANCET Special Sanitary Commission upon this subject, it is stated that "the district of St. Pancras has built itself a steam pressure stove which is a copy of the stove employed by Mr. Lacy, who formerly did all their disinfecting work." The high pressure steam stove in use in St. Pancras is the Nottingham patent steam disinfector, and was erected by Messrs. Goddard, Massey, and Warner of Nottingham. It came specially under my notice in a paper read in April, 1889, before the Society of Medical Officers of Health by Dr. Tomkins of Leicester. It is constructed on a principle similar to that introduced by Professor G. van Overbeck de Meyer of Utrecht. The Sanitary Committee of the St. Pancras Vestry visited the Fever Hospital at Hornsey and there saw the chamber in practical working. The St. Pancras machine, like each of its predecessors, had suggested improvements of detail introduced during construction. It was erected in the months of September and October, 1889, displacing a hot, dry-air chamber, and came into use concurrently with the Infectious Disease Notification Act. During these two months Mr. Lacy disinfected the bedding, clothing, &c., the parochial officers doing the fumigation &c. The cost of disinfecting the bedding &c. during this period nearly equalled the cost of the new chamber. These are the facts concerning St. Pancras.

I am, Sirs, yours obediently,

JOHN F. J. SYKES,
Medical Officer of Health.

Vestry Hall, Pancras-road, Jan. 6th, 1891.

P.S.—As to the methods pursued in St. Pancras, I beg herewith to enclose you copies of my Annual Report for 1889, and would refer you to pages 18–20.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Workmen's Dwellings in Newcastle.

CANON FRANKLIN, who has given much attention to the housing of the working classes in Newcastle, in a speech in the Central Hall last Saturday gave some of his experiences in this city, which are not a little startling. He stated that there were four miles of underground dwellings in Newcastle, places where the light never came in except filtered through a dark medium, and with dripping walls. Such tenants saw nothing but misery in their houses, and could not afford to live upstairs. He believed houses were dearer in Newcastle than anywhere else. To be near their work men must live in hovels underground, breathing a damp atmosphere, or pay a higher rent than they could afford, and were thus, he believed, often driven into the public-house for comfort. He also mentioned the fact that lately more than 1000 people were driven out of one street to make room for post-office and other extensions. Canon Franklin in this matter has taken up a great and important matter, and it is to be hoped he will continue to direct public attention to it, so as to move our rather inert and dilatory municipal authorities. He has likewise very opportunely shown that a long-wished-for Act of Parliament comes into force this week, which if acted upon must have before long a beneficial effect. It provides that any four ratepayers may sign a requisition calling on the medical officer of health to visit any property they consider unfit for habitation. The medical officer must then visit and report. If he considers the houses unfit for habitation, the corporation is bound to close them, and before closing them it must provide suitable dwellings for the dispossessed tenants. He suggests that a small association of independent citizens might be formed into a vigilance committee to look after the insanitary dwellings of the poor.

Sunderland.

The sanitary state of Sunderland is not at present good, as evidenced by the death-rate of last week—viz., 32·5 per 1000. This, I believe, is the highest rate of the past year, and exceeds the birth-rate. It is to be hoped that this state of things is exceptional, and depends upon the climatic changes we are experiencing in the north now in common with the other parts of England. Mr. T. W. Backhouse has forwarded a cheque for £200 in aid of the building for the Sunderland Eye Infirmary. Mr. Arthur Backhouse has sent a cheque for a similar amount, and £100 has been contributed by the Wearmouth Coal Company. The secretary of the Sunderland Infirmary has also received £500 from Mr. Arthur Backhouse in aid of that institution.

A Consumption Hospital for Newcastle.

Mr. Arthur T. Wear, of this city, and one of the honorary medical officers of the Chest Hospital, has written a letter to the *Newcastle Journal*, pointing out the need for a properly equipped consumption hospital for Newcastle. He cites the death tables, which indicate that in the year 1889 the deaths from consumption in this city, out of a total from all causes of 4033, were 387, and also that the industries of the district and its geographical situation favour consumption and all pulmonary affections. Mr. Wear has done good service in drawing the attention of our citizens to this acknowledged want, which, if once properly taken in hand, could be soon supplied, and the present prosperous times are most opportune. I believe that the working classes of Newcastle—I mean, of course, the artisans—could easily build and support such a hospital, but it will require time and work before they see its necessity.

South Shields.

I regret to notice the death from typhoid fever, after a very brief illness, of Mr. T. M. Hall, the secretary of the Ingham Infirmary at South Shields. Mr. Hall was a son of the late Mr. J. L. Hall, J.P., and at the time of his death was only thirty years of age. He was much respected by the profession at South Shields and deeply regretted by all.

It is reported that there is another extensive outbreak of typhoid fever at Stockton, and that the distribution of the cases points to a common cause.

Newcastle-on-Tyne, Jan. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Health of Edinburgh during 1890.

THE mortality of Edinburgh last year was 4990, making the death-rate 18·4 per 1000. Of the total deaths, 1880 were under five years, and 1237 above sixty years of age; of these, 243 were above eighty, 26 above ninety, and 1 above a hundred years. Diseases of the chest caused 1660 deaths, and zymotic diseases 695, of which 44 were due to typhoid, 85 to diphtheria, 46 to scarlatina, 241 to measles, 243 to whooping-cough, and 35 to erysipelas. The intimations for the year numbered 6825, and included 6 cases of typhus fever, 500 of typhoid, 361 of diphtheria, 1197 of scarlatina, and 4761 of measles. In the City Hospital 1578 cases had been treated. There were 7177 births registered during the year.

The Edinburgh Public Health Committee and the Koch System.

A little time ago the committee of the Victoria Dispensary made an application to the Public Health Committee to have some beds set aside in the City Hospital for the reception of cases of phthisis to be treated with Koch's liquid. The committee resolved to recommend the magistrates and Town Council to decline to receive such cases. They will certainly have the support of the profession here in this decision.

Edinburgh University Returns for 1890.

During the past year the total number of matriculated

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students was 3503, as against 3160 in 1880 and 1768 in 1870. Of the total number, 1979 were in the faculty of medicine; of these, 814 belong to Scotland, 687 to England and Wales, 58 to Ireland, 99 to India, and 270 to various British colonies. In the same faculty 54 candidates received the degree of M.D., and 219 the conjoint degrees of M.B., C.M. The annual value of medical scholarships and bursaries amounts to £2560.

Annual Report of the Edinburgh Royal Infirmary.

The annual meeting of the contributors to the Royal Infirmary was held on Monday, and had submitted to it the annual report. From this report it appears that between October, 1889, and October, 1890, the total number of in-patients was 8695. Of these, 3648 were dismissed cured, 3121 relieved, 685 dismissed on other grounds, while 634 died in the hospital. Of the cases brought to a termination 3619 were medical, and 4478 were surgical cases. The average daily number of patients in the hospital was 645, the greatest number at any one time being 699. The percentage of deaths was 7·0, and, deducting cases which died within forty-eight hours after admission, it was only 5·3. The ordinary income was £31,552 6*s.* 9*d.*, and the expenditure £37,945 15*s.* Legacies and donations of £100 and upwards amounted to £12,993 1*s.* 3*d.* This report completed the first decade of the New Infirmary, and during that time the medical cases had increased by 67 per cent., and the surgical by over 88 per cent. It was further intimated that an increase in the accommodation at the Convalescent Hospital was under consideration and was much needed.

Health of Edinburgh.

The mortality last week was 112, and the death-rate 21 per 1000. Diseases of the chest caused 50 deaths, and zymotic diseases 15, of which 7 were due to typhoid fever and 5 to whooping-cough. The intimations for the week comprised 31 cases of typhoid, 23 of scarlatina, 5 of diphtheria, and 7 of measles.

Illness of Surgeon-General Fasson.

Surgeon-General Fasson, the superintendent of the Royal Infirmary, is so seriously ill that the annual gathering of nurses and other entertainments which take place at this season have been postponed. Last year they experienced a similar disappointment by the illness of the matron.

Edinburgh, Jan, 6th.

ABERDEEN.

Royal Infirmary Hospital Sunday.

The 4th inst. was Hospital Sunday for the Royal Infirmary, and the collections already intimated show that the total amount will at least equal that of last year. An abstract of the number of patients received into and dismissed from the Royal Infirmary was annexed to a letter sent by the directors to the different churches to show that the "institution deserves in fullest measure the support of the public." The abstract shows that on Jan. 1st, 1890, there were 155 patients in the hospital, and that during the year, up to Dec. 21st, 2015 were admitted, 955 were cured, 631 were improved, 269 were dismissed at desire or as unfit, and 148 died. On Dec. 21st there were 167 patients in the hospital. In their special appeal the directors state that the ordinary income will fall considerably short of the expenditure, a circumstance arising almost entirely from additional cost under the heads of medical and surgical requirements, and increased outlay in connexion with laundry work. The church collections for 1890 amounted to £1640.

Health of the City.

The following cases of zymotic diseases were notified last week to the medical officer of health: Measles, 7; scarlet fever, 17; and diphtheria, 1.

Is Cheese Meat?

Last week the sanitary inspector petitioned the magistrates to grant an order to have forty-seven cheeses destroyed which he considered unfit for human food. The agent for the owner of the cheeses objected to the petition being granted because cheese was not included in the section of the Public Health Act under which the petition was made. After an adjournment, the magistrates decided that "the objection was well founded." "The 26th section of the Public Health Act, under which the petition is brought, mentions specifically," they said, "the various articles which, if unfit for human food, may be seized by the sanitary inspector. Amongst these cheese is not mentioned, and although it was maintained that, having regard to and intention of the Act, such an article of food as cheese might fairly be held to be included under the term of 'meat,' we do not see our way to give effect to that contention. We accordingly sustain the objection and dismiss the petition."

Jan. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Public Health of Belfast.

MR. CONWAY SCOTT, C.E., the executive sanitary officer for the city of Belfast, has prepared a very interesting and able report on the question of the removal of refuse matter from the dwellings in the city. After pointing out that Belfast has a population of nearly 250,000, with 48,000 dwelling-houses, besides workshops, warerooms, factories, and mills, he shows that at present each house has an ashpit in the yard in which usually more than a ton of refuse matter can be held. When it is full the pit is cleansed and its contents removed on payment of 1*s.* per load. In cases of sickness and poverty no charge is made. The objections to this plan are: First, that the pit is not cleansed until it gets full, and in this way a pollution of the atmosphere takes place in the vicinity of the dwelling; secondly, to save the cost of removal tenants in small houses throw the contents of the ashpit into the adjoining passage, lane, or street (a most objectionable practice); and, thirdly, as the floor of the pit is rarely concreted, liquid matter percolates the subsoil with offensive material. Starting with the maxim that in sanitary matters "prompt filth removal" is of primary importance, Mr. Scott points out what has been done in Rochdale, Edinburgh, and Birmingham, and states that his opinion, after fifteen years' careful study of the subject, is that the system of disposal which he would recommend for Belfast is the railway system, which can be utilised to transfer the filth of a city, from where it is a nuisance and a danger, to the country, where it is a source of prosperity. He recommends that four small experimental districts be formed, and that during next year a daily or weekly removal of filth be carried out in each by the city scavengers, and that the refuse matter be removed to the nearest railway depôt, and thence to the country. (During the past year 10,000 tons of city manure were sent to the farmers in the country by rail, and the demand exceeds the supply.) At the end of the year the sanitary condition of those districts, with their death-rate, can be compared with other parts of Belfast, and the practical details of the system of filth removal best suited to Belfast can be gradually fixed and the cost ascertained.

Officer of Health for Belfast.

I understand that the Local Government Board have approved of the appointment of Dr. Whittaker as medical superintendent officer of health for the city of Belfast.

The Belfast School and the Royal University.

Owing to the death of Dr. Anthony Corley of Dublin, a surgical Fellowship in the Royal University becomes vacant, and for the post Dr. John Walton Browne, senior surgeon to the Royal Hospital and to the Belfast Ophthalmic Hospital, is a candidate. The Belfast students have sent a memorial to the University urging that Dr. Browne should be appointed, on the grounds that, while the Belfast School of Medicine contributes nearly 50 per cent. of the candidates for the M.B. of the Royal University, there is only one examiner from that school at this examination.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Experimental Researches on Cow-pox Vaccination in the Calf.

MM. Straus, Chambon, and Ménard reported to the Académie des Sciences on Dec. 22nd, 1890, the results of the experiments conducted by them for the past two years on the above subject. They find that the inoculation of cow-pox lymph into the cornea provokes, in six or seven

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days, keratitis, characterised by opacity of the cornea, intense congestion of the conjunctiva, photophobia, and lacrymation, the operation conferring immunity, but not so rapidly as in subcutaneous inoculation. The same operation practised on a calf previously rendered immune by subcutaneous inoculation leaves the cornea unaffected. Inoculation into the anterior chamber is as surely, and almost as rapidly, protective as the ordinary subdermic operation, a considerable degree of inflammation of the cornea and iris being excited. The intra-venous transfusion of even a feeble quantity of vaccine confers complete immunity without producing either local or general disturbance. The same immunity was conferred on a calf into whose veins the blood of another calf presenting the characteristic eruption of cow-pox at its height had been injected. The weight of blood transfused, however, must not be less than from 4 to 6 kilogrammes. The transfusion of 5½ kilogrammes of the blood of a calf previously protected by vaccination, and weighing 148 kilogrammes, failed to protect an animal of the same species, thus proving the interesting fact that the transfusion of nearly the whole of the blood of a protected animal is inefficacious as a prophylactic measure. Finally, cow-pox vaccine mixed with an equal volume of sterilised bouillon, and then filtered, proved to be worthless as a protective agent.

Therapeusis of Benzo-phenoneid.

M. Galezowski read, on the 27th ult., to the Société de Biologie, a communication on the application in ophthalmology of this new bactericide, discovered by him and M. Petit. They have succeeded in producing, by the decomposition of an aniline dye, a definite compound (tetramethyl-diapsido-benzo-phenoid), which they propose to call by the less formidable name of benzo-phenoneid. This product is endowed with the same powerful microbicide properties as pyoktanin, whose chemical composition is unknown. Soluble in 100 parts of water, the solution, further diluted a hundred-fold, is neither caustic nor irritant. Applied locally, it has proved very efficacious in causing the rapid and painless cicatrisation of ulcers of the cornea which had resisted all other methods of treatment. It has given also good results in purulent keratitis and chronic phlyctenular ophthalmia.

Deaths of Dr. Baillarger and M. E. Richard.

An eminent alienist, whose name must be familiar to all students of mental medicine, has just been removed by death in the person of M. Baillarger. M. Emile Richard, who died of broncho-pneumonia on the 27th ult., aged forty-seven, was better known as a militant politician than as a practitioner. He occupied at his death the onerous and important post of President of the Paris Municipal Council, and was also the political editor of the daily paper *La Cité*. He recently presented to the body over whose deliberations he presided a somewhat elaborate report, subsequently published in volume form, on prostitution.

Retirement of Paris Hospital Physicians.

The following eminent Médecins des Hôpitaux de Paris, having attained the age of sixty-five—the limit prescribed for compulsory retirement—are this year, with two exceptions, relegated to honorary functions: MM. Charcot, Potain, Mesnet, Vidal, Laboulbène, and Féréol. The exceptions are Professors Charcot and Potain, who, in virtue of their position as clinical professors of the faculty, are exempted from the application of the above rule until they reach the age of seventy. Even then M. Charcot, who adds to his numerous honours that of being a Member of the Institute, will be at liberty to retain his post at the Salpêtrière for a further period of five years—i.e., until 1900. The numerous admirers of this famous pioneer in the scientific study of diseases of the nervous system will rejoice to learn that the regulation affecting less known colleagues will not, for some considerable time, debar him from continuing the researches which have shed such lustre both on himself and on the school of neurology, the creation of which is largely due to his genius and initiative.

Koch's Liquid.

Your readers will have gathered from these pages that French physicians find it difficult to become reconciled to the secrecy observed concerning the composition of Koch's liquid. M. Léon Petit (Soc. de Méd. Pratique, Dec. 18th, 1890) formulates an opinion that the appearance of the liquid as a therapeutic agent has been premature, and he considers that its employment should, for the present, be confined to the laboratory. Assisted by MM. Cérémonie and Gautrelet, he has subjected Koch's fluid to analysis and found that the active principle is an amine. These observers have succeeded in reconstituting, synthetically, a substance—christened patriotically by them *la lymphe Française*—which presents the same organoleptic, physical, and chemical properties as the German liquid. The composition of this indigenous product will be divulged as soon as the results of inoculatory experiments now proceeding on sound and tuberculous animals of divers species have been verified.

Animal v. Human Lymph.

In reply to the question propounded by the Board of Health of the Department of the Seine by the Prefect of that territorial division as to the advisability of substituting animal for human lymph in vaccination, Dr. Lancereaux, specially deputed to report on the subject, pronounces decidedly in favour of the animal product, and recommends the discontinuance of human lymph. The reasons adduced in support of this conclusion are the immunity from risks of communicating syphilis, erysipelas, lymphangitis, &c., and the greater facility of procuring the calf lymph in a pure state, the source being picked animals placed under the most favourable hygienic conditions. M. Lancereaux attributes to the general employment of calf lymph the increasing favour with which the practice of vaccination, and especially revaccination, is regarded in France.

Paris, Jan. 6th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Ferdinand Cohn and Robert Koch.

AT a time when all the world is talking or has just been talking about Robert Koch, the following word portrait of him by a distinguished man of science who has known him for many years is likely to interest many. It is from the January number of the *Deutsche Revue*, and its author is the famous botanist, Professor Ferdinand Cohn, of Breslau. "When I made Koch's acquaintance," he writes, "he was already the great investigator whom all the world now knows and admires. On the 22nd of April, 1875, I received a letter from the district physician, Dr. Robert Koch, of Wollstein, in the district of Bomst, in the grand-duchy of Posen, asking whether I would allow him to visit me in Breslau, and perform before my eyes the chief experiments relating to anthrax and its characteristic bacilli, the history of the development of which he believed he had now discovered after prolonged investigations, and with it the etiology of that destructive disease. I had been myself engaged for years past with bacteriological investigations, and had consequently often received announcements from dilettanti of their alleged discoveries in that field, which was then being cultivated with but little precision; the expectations, therefore, which that letter from an utterly unknown physician in a Polish country town inspired in me, were of the smallest. I of course wrote, however, that I should be very glad if Herr Koch would visit me and show me his things ("seine Sachen"). Koch came to my institute on April 30th, and I can truly boast that in the first hour of our intercourse I recognised in him an unequalled master of scientific investigation; his method, proceeding with rigid consistency from step to step, the elegance and certainty of his experiments, the classic clearness of his statements, were all as perfect in his first, then just completed, work on anthrax as in all his later researches. For Koch's works are distinguished from those of most investigators by the circumstance that he does not publish them till they are finished to the last point. Others cart up stones to be used in the building up of science, or draw a new plan or add a new wing, a new storey, a new roof, but they finish only the brickwork, and leave it to others to complete the building and make it habitable. Koch, on the other hand, does not let his scientific fabrics leave his hands till he has made them completely fit in all their details as well as in the main for the use of others, who have then nothing more to do than to add this or the other little furnishing. All Koch's works have been so complete in form and contents that nothing remained for those that followed but to confirm them, for it was not possible to add

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anything essential. Such were the first work of 1875 on anthrax, that on wound infection, the numerous treatises in the communications of the Imperial Office of Health, the magnificent researches on the tubercle and cholera bacilli, and such beyond doubt his latest discovery will prove. On his first visit in May, 1875, Koch stayed only a short time in Breslau, and I availed myself of the opportunity to make my Breslau colleagues personally acquainted with him and his researches. I then remained for years in occasional correspondence with him. His letters generally filled several sheets. He repeated his visits to Breslau too; and when the place of a medical expert in the law-courts there fell vacant in the summer of 1879, we succeeded in getting him appointed to it, with the prospect of an extraordinary professorship in the University. But already in January, 1879, the medical faculty of the University of Berlin had of its own accord proposed to the Minister Koch's appointment to an extraordinary professorship, and the establishment of an institute for him. Some papers say that Koch wished to establish himself as a private lecturer in Breslau, but was refused permission. That is utterly untrue. The proposal of the Breslau faculty had been made without Koch's knowledge. His work as a medical expert in the law courts could not satisfy him either scientifically or pecuniarily, and he returned after a few months to Wollstein, where his place as district physician had been kept open for him. That he did not remain there long, but was called to the newly founded Imperial Office of Health in Berlin in 1880, did great honour to the German Government, and was of great advantage to science—nay, to all mankind. But if you ask me for reminiscences of conversation with Koch, I can only say that in personal intercourse Koch makes the same overpowering impression as in his writings by the clearness, depth, and novelty of his thoughts, only that this impression is greatly enhanced by the simplicity and amiability of his manners, the look of his deep-set eyes, his fine smile, and the euphony of his voice. In conversation with Koch one is often positively dazzled by occasional remarks or short questions, indicating still unknown researches that he has been working at for years, and revealing new scientific horizons. But of details of the conversations which I and my then assistant, Dr. Eidam, had with Koch, and which sometimes lasted deep into the night, I have no remembrance."

Professor Martius.

Dr. Friedrich Martius, private lecturer in the University of Berlin, has been summoned to Rostock as an extraordinary professor. Dr. Martius studied in Berlin, and graduated here in 1874 with a treatise "on prophylactic tracheotomy in the field." After his graduation he served as a surgeon in the army. In the beginning of the eighties he came as staff-surgeon to the Friedrich Wilhelm Institute here for the training of army surgeons, and was at the same time appointed one of the Charité physicians. He was also for some time assistant in Professor Gerhardt's clinic. His last post was that of a physician in the railway regiment. Dr. Martius' scientific studies have been directed mainly to diseases of the nerves and of the heart. He has made discoveries concerning the motion of the heart and heart beat by means of the so-called "marking method" devised by him. His writings on tetanus, tabes dorsalis, electric diagnosis, and the direction of the fibres in the central nervous system are of special importance. He is in his forty-first year.

Berlin, Jan. 6th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Chemical Analysis of Koch's Liquid.

A SECOND chemical examination of Koch's remedy has been carried out here at a private laboratory. The results obtained by the first analysis, and reported to THE LANCET some weeks ago, have been confirmed thereby. It may only be added that the liquid was found to contain 50·11 per cent. of water. When the liquid is treated with nitric acid at ordinary temperature no change is to be observed, but if boiled with nitric acid a light greenish-yellow colour appears, and by adding a few drops of ammonia this solution assumes a beautiful golden-yellow colour, which, spectroscopically examined, then exhibits an absorption band between *b* and F (at the limit of the green and violet field), while the original solution of the lymph, when treated with ammonia alone, does not yield such a reaction. When Koch's lymph is treated with an aqueous solution of tannic acid the albumins are perfectly precipitated. The white, voluminous precipitate formed in this way is perfectly soluble in hot water, and precipitates again by cooling. It dissolves also in a solution of common salt. When the precipitate obtained by tannic acid is treated with a few drops of diluted potassic hydrate it disappears, and the solution thus formed assumes a yellowish-brown colour, which becomes gradually reddish-brown by the contact with air. This brown solution, examined spectroscopically, exhibits also an absorption band between *b* and F, which is extremely similar to the spectrum of urobilin. By elementary analysis the quantity of carbon was determined to be 35·19 per cent., the quantity of water 7·02 per cent., and the nitrogen, determined by Dumas' method, amounted to 5·90 per cent. The quantity of the lymph being too small, it was impossible to separate the different albumins, but the chemists believe that the active principle belongs to the class of toxalbumins.

Koch's Treatment.

The progress of the cases of lupus towards recovery recorded in my former letters to THE LANCET was observed also during the last week here. At Schroetter's clinic the cases of tuberculous laryngeal affections which have been treated by Koch's lymph for some weeks have shown no sign of any improvement, and in one of them tracheotomy had to be performed on account of the severity of the reaction. In the majority of the cases of pulmonary phthisis I have seen here under treatment, a considerable loss of bodily weight, amounting even to four kilogrammes in the course of two weeks and a half, could be stated. My attention has also been drawn to the fact that, besides the other changes produced in the tuberculous tissues by the injections, the frequent occurrence of some micro-organisms has been observed, the nature of which is to be studied here now, as they are said to differ from the other micro-organisms observed in inflammatory processes and from the tubercle bacillus. According to a communication made before the Prague Medical Society by Professor Chiari, who made the post-mortem examination of three cases treated by the lymph, the pathological changes produced by the injections consist chiefly of hyperæmia, with hæmorrhages, leucocytic infiltration, and fibrinous exudation. A peculiar distribution of the tubercle bacilli has also been observed by Professor Chiari, as the bacilli were to be found in greater abundance in the lumen of the bronchi in the cases of pulmonary phthisis and on the bases of the ulcers in the cases of intestinal tuberculosis.

Vienna, Jan. 5th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Execution by Electricity.

THE report of Dr. MacDonald, a State Commissioner, on the execution of William Kemmler by electricity is the first authentic and full official account of that transaction which has been given to the public. From this report it is shown that the apparatus consisted of a stationary engine, an alternating current dynamo and excitor, a Carder's voltmeter, with extra resistance coil, calibrated for a range of from 30 to 2000 volts; an ammeter for alternating currents from 0·10 to 3·00 ampères, a Wheatstone bridge, rheostat, bell signals, and necessary switches; a death chair, with adjustable head-rest, binding straps, and two adjustable electrodes. The instant the circuit was closed the body was thrown into a state of marked rigidity, every fibre of the entire muscular system being apparently in that fixed, rigid condition resembling tonic spasm; motion and consciousness were absolutely suspended, and remained so while electrical contact continued. At the end of seventeen seconds Kemmler was pronounced dead and the circuit was broken. The condition of rigidity instantly ceased, and was succeeded by complete muscular relaxation. Superficial discolourations resembling post-mortem changes appeared on the surface of exposed portions of the body, especially the face. The body remained motionless and apparently lifeless for half a minute, when there was a series of slight spasmodic movements of the chest, with the flow of mucus from the mouth. Though there was no

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evidence of a return of consciousness or sensation, yet, lest life was not wholly extinct beyond resuscitation, the current was reapplied and continued seventy seconds, when smoke was seen to issue from the spinal electrode, due to scorching of the edge of the sponge, from which the moisture had been evaporated; there was also some burning of the body under the electrodes. The necropsy, made in three hours, exhibited few important changes. The burned integument on the back showed the spinal muscles underneath to be cooked like overdone beef throughout their entire thickness. The commissioner regards this method of execution as a complete success, and advises certain modifications of the law in order to perfect the system. Public opinion, however, is by no means so decidedly in favour of the new method. On the contrary, the shock which the first accounts of the execution gave still influences the masses, and it will require many really successful executions by this means to create a favourable public sentiment.

Death of the Surgeon-General.

The sudden death of Surgeon-General Baxter removes from official circles at Washington a man who has for many years been one of the most prominent candidates for that office. For a quarter of a century he has aspired to that position, and on several occasions the coveted prize has seemed within his grasp, when by some singular chance it has eluded him. Once he saw his nomination made out in the Executive Office, and he thereupon went to the Senate to receive the congratulations of his numerous senatorial friends. But when the nomination was announced he was amazed to find that he had been superseded. At length success crowned his efforts, and a few months since he received the appointment. He expressed himself as intensely gratified, having attained the object of his life-long ambition. He had scarcely composed himself in his official chair when he was stricken with cerebral hæmorrhage, and died after three days' illness. Dr. Baxter was a man of indomitable energy and perseverance, and won praise from his superiors in whatever position he was placed. His death gives rise to the usual scramble of candidates for the office, and it is impossible to predict who will win the nomination.

Koch's Remedy.

The profession and public are just now greatly excited over the trials of Koch's liquid at the several hospitals. There has been much rivalry in obtaining the first supply of the liquid, but a neighbouring city, New Haven, proved to be the successful applicant. Several packages have now been received in this city, and the practice is being carried out with great skill and care in four or five hospitals. The results thus far are the same as have been reported from Berlin. In due time full reports will be made by the several operators.

Bone Transplantation.

A novel method of transplanting bone is in progress in the Charity Hospital. The patient is a boy who has lost by necrosis a certain portion of a long bone. To supply the deficiency a dog has been encased in a plaster-of-Paris dressing, except his head and urinary and fæcal outlets; a dissection of one leg has been made so as to expose the bone, the foot has been amputated, and the bone placed in the already prepared vacant space in the boy's limb, the dog lying by his side. The progress of the case is said to be favourable.

New York, Dec. 16th.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon James Mackay, 6th (Fifeshire) Volunteer Battalion, the Black Watch (Royal Highlanders), to be Surgeon, ranking as Captain (dated Jan. 7th, 1891).

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Staff Surgeon Edward Ferguson to the *Forward* (dated Sept. 30th, 1890). Surgeons: George Edwards to the *Duke of Wellington*, additional; Richard F. Bate to the *Pembroke*, additional; H. W. Finlayson to the *Britannia*, for temporary service; Richd. C. Munday to the *Impregnable*, additional; Edwd. C. Cridland, Frank Bradshaw, and Mathew J. O'Regan to the *Vivid*, additional (all dated Jan. 6th, 1891); and Edwd. T. Cook to the *Speedwell* (dated Jan. 2nd, 1891).

VOLUNTEER CORPS. — *Artillery:* 3rd Kent (Royal Arsenal): Surgeon S. Davies, M.B., from the Volunteer Medical Staff Corps (Woolwich Division), to be Acting Surgeon (dated Jan. 7th, 1891).—1st Forfarshire: John Frederick Sturrock, M.B., to be Acting Surgeon (dated Jan. 7th, 1891). — 1st Essex (Eastern Division, Royal Artillery): Surgeon-Major (ranking as Lieutenant-Colonel) J. B. Kennedy resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Jan. 3rd, 1891).—9th Lancashire: Acting Surgeon A. Jones to be Acting Surgeon (dated Jan. 1st, 1891), and will be considered to have received a commission of the same rank and date as that previously held by him in the 3rd Lancashire Artillery Volunteers.—19th Middlesex: Acting Surgeon W. C Adams resigns his appointment (dated Jan. 7th, 1891).—2nd Volunteer Battalion, the Gloucestershire Regiment: William More Hope, Gent., to be Acting Surgeon, (dated Jan. 7th, 1891).—1st Surrey (South London): Acting Surgeon S. G. Milner retires on account of ill-health (dated Jan 7th, 1891).—1st Cadet Battalion, the King's (Liverpool Regiment): William Evans, Gent., to be Acting Surgeon (dated Jan. 7th, 1891).—*Infantry:* Dover Brigade: Surgeon and Surgeon-Major C. F. Lewis, 2nd Volunteer Battalion, the Royal Sussex Regiment, to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Jan. 7th, 1891). Harwich Brigade: Surgeon and Surgeon-Major G. S. Elliston, 1st Volunteer Battalion, the Suffolk Regiment, to be Brigade Surgeon, ranking as Lieutenant-Colonel, (dated Jan. 7th, 1891). — *Royal Engineers* (Submarine Miners): The Mersey Division: Richard Williams, Gent., to be Acting Surgeon (dated Jan. 3rd, 1891).—1st Lanarkshire: Fredk. Vasey Adams, Gent., to be Acting Surgeon (dated Jan. 3rd, 1891). — 2nd Volunteer Battalion, the Gloucestershire Regiment: Acting Surgeon A. F. Turner resigns his appointment (dated Jan. 3rd, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Maidstone Division: Charles Pye Oliver, M.B., to be Acting Surgeon (dated Jan. 3rd, 1891).

Obituary.

JOHN MARSHALL, F.R.S., F.R.C.S., LL.D., M.D., &c.

BY the death of Professor Marshall we have lost one of the ablest of British surgeons, one of our keenest scientific intellects, and one who stood high as a medical politician. John Marshall was born seventy-two years ago in the small cathedral city of Ely, where his father, William Marshall, was in practice as a solicitor. He and his two brothers were all of them men of mark in their respective professions. The eldest, William, succeeded to his father's practice, and also served as coroner of Ely. He was a man of very remarkable ability, but in the quiet sphere in which his life was passed lacked opportunity to display it to the full. He was an admirable naturalist, and, in particular, we may mention that he it was who first traced out the life history of the American pond weed, which suddenly made its appearance in this country and blocked up ponds, canals, and rivers; and he showed that it had been introduced into our waters from across the Atlantic. The youngest brother, Charles, also a very clever man, was for many years vicar of Harpurhey, near Manchester. John was sent to school at Hingham in Norfolk, and subsequently was apprenticed to Dr. Wales of Wisbech. In connexion with this, it is of interest to note that Mr. Marshall's recollection of these apprenticeship days was not such as to induce him to support the movement to reintroduce the system. From Wisbech he came up to University College, London, when about twenty-one years of age, and passed through his classes there with considerable distinction. In the hospital he served as house surgeon to Liston and subsequently acted as his private assistant. On leaving the hospital he started in practice at 8, Crescent-place, Mornington-crescent, as a general practitioner, and while there was appointed assistant surgeon to University College Hospital. Subsequently he moved to George-street, Hanover-square, and then to Savile-row, where he lived until he quite recently retired to Cheyne-walk, Chelsea. He married in 1855, and leaves a widow, two daughters, and a son.

Mr. Marshall was always a very busy man, and his activities extended over a remarkably wide range—literary, scientific, and educational—and a brief notice of the many directions in which his energies found an outlet will be the best testi-

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mony both to his brilliant powers and the great use he made of them. In University College he was curator of the Anatomical Museum for three years, demonstrator of anatomy for two years, demonstrator of practical surgery for eight years, holding the first class of the kind in London; then demonstrator of operative surgery, and finally, professor of surgery for sixteen years. In the hospital he served as assistant surgeon for fifteen years, was then surgeon, and finally consulting surgeon. His appointment on the surgical staff was strongly urged by Dr. Sharpey, with whom he was a great favourite. He was also surgeon, and then consulting surgeon, to the Hospital for Consumption, Brompton.

Mr. Marshall was an excellent anatomist and had great aptitude for teaching anatomy, and throughout his professional life took the keenest interest in this subject. He took part in the preparation of the early editions of Quain's Anatomy, for twenty years he was lecturer on anatomy as applied to art in the Government schools, first at Marlborough House, then at South Kensington, and in this class he showed that it was practicable to lecture on this subject to mixed classes of men and women without giving offence. He was also professor of anatomy in the Royal Academy of Arts for the last sixteen years, and here he instituted the practice in the Academy of admitting lady students to the lectures. His energy was characteristically shown by his doubling the number of lectures in this course. Physiology claimed almost as large a share of his time and interest as anatomy. For four years he was Fullerian Professor of Physiology at the Royal Institution, and for two years he lectured on physiology to ladies and lady teachers at University College; this, again, was the first course of the kind given in London. In 1867 he published the "Outlines of Physiology, Human and Comparative." This is now out of print, but, although an excellent text-book, was not so popular as to justify the issue of a further edition. To assist his work among art students he prepared and published life-size diagrams, ten in the physiological series, and seven in the anatomical. These have been very popular; their accuracy and completeness leave nothing to be desired, and show the care with which they were designed. He also published "Anatomy for Artists," and a paper on "Proportions of the Human Body.' At the College of Surgeons Mr. Marshall had a long career of usefulness. He obtained the Fellowship in 1845. He was a member of the Board of Examiners in Anatomy for seven years, and of the Court of Examiners in Surgery for another seven years, and on his resignation of the chair of surgery he was appointed Emeritus professor. He was three times elected a member of the Council of the College, and served the office of President of the College in 1883. He it was who introduced and established an examination at the end of the first year of the medical student's curriculum. He also took a leading part in bringing about the Conjoint Scheme of Examinations by the College of Physicians and the College of Surgeons, and he championed this scheme at the General Medical Council. He moreover devoted a good deal of attention to the finances of the College of Surgeons and rendered great assistance in this way; indeed, it was largely owing to his efforts that the cost of the diploma was reduced. He was one of the Committee of Management of the Conjoint Examining Board of London, and for a time was its chairman.

At the University of London he was Examiner in Surgery for three years; he took a leading part in the movement to found a teaching university for London, and was chairman of the Executive Committee of the Association appointed for this end. Twice he served on the Council of the Royal Society. He was President of the Royal Medical and Chirurgical Society for two years, and in this position rendered most valuable services by reviving the Society and infusing new life into it. For eight years Mr. Marshall was the representative of the College of Surgeons on the General Medical Council, and the best evidence of the great value of the services he rendered there is that when Sir H. Acland resigned the presidency of this body Mr. Marshall was at once chosen to succeed him. The Council was remarkably unanimous in the election of Mr. Marshall. This was on May 10th, 1887. The term of election was five years. The choice of the Council was fully vindicated, for Mr. Marshall discharged the duties in a way to uphold the honour of the chair, which had previously been filled by Sir Benjamin Brodie, Mr. Joseph Henry Green, Sir George Burrows, Sir George (then Dr.) Paget, and Sir Henry Acland. His impartiality was never questioned, his courtesy never failed, and his administrative faculty was great. His own associations were with the corporations of the profession, but the direct representatives will gladly testify that he welcomed them as cordially and as courteously as the representatives of the most ancient institutions. His addresses to the Council at the beginning of sessions were always clear and helpful to the members, and he showed an interest in each subject of debate that was remarkable. His unexpected death will nowhere be more regretted than in the Medical Council, and it will not be easy to fill his place.

Foremost amongst Marshall's scientific writings must be named his paper in the Philosophical Transactions, on the "Development of the Great Veins, including an account of the remains of the primitive vessels and of a 'vestigial fold' not previously described." This was the outcome of entirely original work, and was an admirable study in embryology and morphology. Equally valuable was his paper on the "Brain of a Bushwoman and on Two Idiot Brains." In the former part of this paper he mapped out the convolutions of the brain, and was a pioneer in that field of research which has yielded such a rich harvest in cerebral localisation. His descriptions of the idiot brains are some of the very best extant.

In his Bradshaw lecture on Nerve-stretching he attempted to elucidate the *rationale* of this mode of treatment, and it was in connexion with this, and as a result of investigations undertaken at his instigation, that Mr. Horsley discovered the nervi nervorum. In his Morton lecture on Cancer in 1889 he suggested that the cause of cancer might lie in a loss of nervous control over cell growth. His Hunterian oration at the College of Surgeons was a very eloquent tribute in honour of the founder of the great museum. He was the first in this country to suggest and apply the galvanic cautery in surgery; he also introduced the operation of excision of varicose veins, and drew attention to the value of the oleates as external applications. Turning now to quite another class of study, it is interesting to recall the fact that he it was who, in a joint report with the Rev. Mr. Whitehead on the outbreak of cholera in Broad-street, St. James's, in 1854, showed the influence of water in diffusing disease. Whether we regard the mere intrinsic value of this report—the care with which it was prepared and the soundness of the conclusions drawn—or the great importance of the fact it first revealed, we must regard this as a truly splendid piece of work. At this time (1854) Mr. Marshall also contributed to a report of the College of Physicians a letter on the microscopical appearances of cholera evacuations, and the appearances he describes are of especial interest in connexion with Koch's discovery of the comma bacillus.

The construction of hospitals was a matter in which Mr. Marshall took great interest, and he suggested the construction of circular wards. He advocated his views with great ingenuity and zeal, and they have been adopted in several instances—viz., at Greenwich, Hampstead, Burnley, Hastings, Liverpool, and the Central Northern Hospital, London. The results have gone far to justify the hopes expressed by Mr. Marshall, and there can be no doubt that his suggestion is one of value.

Such is a brief outline of Mr. Marshall's public work; but it leaves much to be said of the man himself. When only a student at University College he was distinguished for "a remarkable clearness of perception and a grasp of mind, and steady, persevering industry," and his mind was well stored by extensive reading, not only in matters directly connected with his profession, but in general literature, and especially in subjects connected with art, history, and points of antiquarian interest. His contemporaries speak of him as modest and retiring, and "in tone, manner, and conversation he was the perfect gentleman." These characteristics remained with him to the last. He possessed a keen scientific intellect, that took a special delight in tracing effects to their causes; and with this he combined a wide range of view, so that every fresh problem was studied from many sides, and regarded in a broad and independent spirit. This habit of mind and his sagacious insight made him a tower of strength on a committee.

But his grasp of details was as striking as his scientific insight, and when we can add that with these he combined great industry, it is clear that in him was the stuff of which the great men of science are made. He had a great power of work, his days were to the last always full, and certainly it was true of him that whatever his hands found to do he

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did with his might. As a surgeon his chief characteristic was that he was scientific, and that too at a time when the claims of surgery to rank as a science were far less established than they are to-day. His practice was founded on a minute knowledge of anatomy and sound physiology, backed up by a thorough acquaintance with pathology. Without brilliancy as an operator, he was, what is better, successful, and when required was bold, even to daring. Ever on the alert to improve surgical therapeutics, he welcomed the early development of the antiseptic treatment, the scientific basis of which made it specially attractive to him. He at once put it into practice, and, at a time when the majority of London surgeons were throwing doubts on the antiseptic system, Mr. Marshall was painstakingly investigating the subject and carefully testing it, and he was one of the first in London cordially to support Mr. Lister's views. It is right to mention also that he exhibited unfailing courtesy to his house surgeons and dressers, and to all the students of the hospital; while his kindness and gentleness to his patients were no less marked. As a lecturer he excelled by his enthusiasm, by his faculty of clear description, and by his tact in arranging and in limiting his discourses. It was, perhaps, in his lectures on anatomy that he specially shone, and he took the keenest delight in extending a knowledge of anatomy to artists and others outside the profession. Of his work at the Royal Academy Sir F. Leighton says: "I cannot tell you more than you already know of his great abilities as a lecturer, of his firm grasp of facts, of his facile gift of luminous exposition, of his power of kindling in others the interest he felt himself in the fascinating study of anatomy. I can only, therefore, say that his general kindness and unfailing zeal, even under bodily difficulties, drew our students to him, and that in his loss they regret a valued friend as well as a stimulating teacher." His appointment at the Academy was a peculiarly happy one, for he was profoundly penetrated with a love of art and of everything beautiful, and from early life was a discriminating art critic. His work at the College of Surgeons and on the General Medical Council shows him to have been gifted with admirable business faculties, and to have been one who brought to the questions of medical politics the same scientific insight (and foresight), earnestness of purpose, industry, and singleness of aim that animated him in other branches of his work. For ourselves, we feel especially indebted to Mr. Marshall for his services in connexion with the establishment of THE LANCET Relief Fund. When the question was first mooted, he at once said that he personally would do all he could to carry out our views, that he would propose at the General Medical Council that its members should consent to their President becoming one of the Almoners of the Fund, and we know with what care and anxiety he performed the duties connected with the post of Almoner.

His old pupils will not need to be reminded of his striking face, and especially of his keen dark-brown eyes of remarkable lustre, which once seen were not likely ever to be forgotten. Quite lately advancing age and his many labours left their mark in a slight stoop and a slower step; but it is pleasant to know that to the end of life he possessed all his faculties unimpaired, and that his interest in life and keen industry were never for a moment slackened. His fatal illness—bronchitis with albuminuria—lasted but a few days. He was buried at Ely on Tuesday last. On closing this imperfect and unworthy notice of Mr. Marshall we must again pay a tribute of affection and honour to so kind a man, so true a friend, so keen a thinker, so accurate and industrious an observer, so enthusiastic and cultured a teacher. His work was great and will be permanent, and if we cannot all rival him in his brilliant powers and noble use of them, we can honour and cherish his memory and find in it an inspiration.

ROBERT GEE, M.D. HEID., M.R.C.P. LOND., OF LIVERPOOL.

THE deceased, who was in his seventy-second year, was a native of Denbigh, and received his medical education in University College, London, Edinburgh, Paris, and Heidelberg. He settled down in Liverpool rather more than forty years ago, having graduated and obtained the old double qualification of M.R.C.S. Eng. and L.S.A. in 1842. Subsequently in 1859 he became a Member of the Royal College of Physicians of London. He became one of the resident surgeons of the Liverpool Workhouse soon after going to Liverpool, and his connexion with that institution continued until severed by his death, he becoming visiting physician and consulting physician, which office he held to the last. He was also consulting physician to the Hospital for Infectious Diseases and to the Hospital for Consumption and Diseases of the Chest. For many years he was connected with the school of medicine as lecturer on pathology and diseases of children, and enjoyed a considerable private practice. Dr. Gee was always extremely popular, both with his professional brethren and the public, and on the death in 1867 of Mr. Philip Finch Curry, then coroner for the city, a meeting was held in the medical institution to promote his candidature for the vacant office, which, however, was not successful. Some years ago he was appointed a Justice of the Peace for the city, and took his place on the bench regularly when his turn came. By his connexion with the workhouse, which is one of the largest in the kingdom, the deceased had experience of epidemics of cholera, typhus, relapsing fever, scarlatina, diphtheria, and measles. His contributions to medical literature were not very numerous, but he enjoyed a fair share of consulting practice in those diseases of which he had so large an experience. He was a prominent figure among the Calvinist Methodists, of which body he was a member and, later on, a deacon. He took also a prominent part in politics, having been for eighteen years the Liberal chairman for Abercromby Ward. On his retirement from that position Mrs. Gee was presented with her husband's portrait painted by Mr. R. E. Morrison. Dr. Gee possessed a very kind, genial manner, and his loss will be much felt. His funeral took place at Oswestry Cemetery on the 5th inst., in the presence of a large number of relatives and friends. Appropriate references to the deceased were made at the Police-court, Liverpool, by Mr. Raffles, the stipendiary magistrate, and by Mr. Clarke Aspinall, the coroner. On Sunday the chaplain of the workhouse, the Rev. E. Smith, alluded in touching and appropriate language to one who had been for so many years professionally connected with the institution.

ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council, held on the 8th inst., the minutes of the Ordinary Council on Dec. 11th were read and confirmed.

The Secretary reported the death, on the 1st inst., of Mr. John Marshall, F.R.S., past President, Member of Council, and Member of the Court of Examiners of the College, and Representative of the College on the General Medical Council, and a vote of condolence with Mrs. Marshall and family was unanimously passed. The President stated that the office of Representative of the College on the General Medical Council would be filled up at a future meeting of the Council, of which due notice would be given.

The minutes of the Museum Committee on the 2nd inst. were read as the report from that committee.

The minutes of the Library Committee on the 5th inst., as the report from that committee, were read, and it was agreed that, as recommended by the committee, the library in future be open to readers on each week-day, except Saturday, between the hours of 11 A.M. and 7 P.M. during ten months of the year, but that during August the library be closed at 6 P.M., and be closed as usual during September.

The President reported on behalf of himself and the vice-presidents that the Bradshaw Lecture had been duly and properly delivered by Sir T. Spencer Wells, Bart., and the best thanks of the Council were given to him for his lecture, and he was requested to publish the same.

A letter of the 11th ult. from the Honorary Secretaries of the International Congress of Hygiene and Demography was read, stating that the Congress will open on Aug. 10th in London, and expressing the hope that the Council would make a contribution to the funds of the Congress. To this the Council replied that there were no funds at the disposal of the Council for such purpose.

A letter of the 12th ult., from Mr. W. O. Reader, was read, requesting the Council to make a subscription towards defraying the expenses incurred by his Committee in opposing the Betterment Clauses of the Strand Improvement Bill, and the Council voted the sum of £10 towards the expenses.

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A letter was read from the honorary surgical secretary of the Medical Society of London, requesting by direction of the Council of that Society that the Council of the College would consent to nominate the president of the College for the time being to serve on a committee of seven Members for the adjudication of the Fothergillian Medal and Prize. To this the Council replied that they regretted their inability to do so.

Permission was given to Dr. Anderson Stuart, who applied on behalf of the University of Sydney, N.S.W., to have casts taken of the busts of Sir Astley Cooper and John Abernethy on the usual conditions.

A letter was read from Dr. R. R. Rentoul requesting the Council to petition the Government against the Midwives' Registration Bill. This letter was referred to the Presidents and Vice-Presidents for their consideration.

It was moved by Sir W. Savory, on behalf of Mr. Hulke, and seconded by Mr. B. Hill: "That it is desirable that the present form of report presented to the Fellows and Members of the College be modified, and that a committee be appointed to consider what, if any, modifications appear desirable, and to report upon these or any other matters connected with the report." A committee, consisting of Sir W. Savory and Messrs. Hulke and Hill, was appointed to consider the subject.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent B S (Honours) Examination:—

First Class.—Edward Victor Hugo (Gold Medal), St. Bartholomew's Hospital; W. H. Evans, M.D., B.Sc., University College.

Second Class.—Thomas James Dyall, St. Bartholomew's Hospital, and Arnold William W. Lea, Owens College and Manchester Royal Infirmary (equal); Frederick William Hall, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following candidates, who presented themselves at the Third Examination for Medical and Surgical degrees, were approved:—

Part I.—Ds. Abram, Cai.; Ds. Addison, Cai.; Ds. Anderson, Cai.; Ds. Bindloss, Joh.; Ds. G. Calthrop, Cai.; Ds. Carling, Joh.; Carling; Ds. Craig, Cai.; Ds. Crosby, Cai.; Ds. Crump, Emman.; Ds. Dorman, Clare; Mag. Dumbleton, Pet.; Ds. Eccles, Down.; Ds. Felce, Jesus; Ds. Fisher, Cai.; Ds. Fisher, H. Cav.; Ds. Fooks, Jesus; Ds. A. H. Godson, Joh.; Ds. Gornall, Cath.; W. Hawker, Trin. H.; Ds. Haydon, Cai.; Ds. Horne, Clare; Ds. Hulbert, Trin.; Ds. Kellock, Emman.; Ds. Latter, Pemb.; Ds. R. Langdon-Down, Trin.; Ds. S. Lewis, Joh.; Ds. Pridham, Cai.; Ds. Roberts, H. Cav.; Ds. Rowland, Cai.; Mag. Samways, Joh.; Ds. Savory, H. Cav.; Shaw, Jesus; Ds. Surridge, Cai.; Mag. A. H. Thompson, Trin.; Ds. Turner, Trin.; Ds. G. Wilkinson (jun.), Emman.; Ds. Wood, Christ's; Wrench, H. Cav.

Part II.—Ds. Batten, Trin.; Ds. Belben, Christ's; Ds. Blaker, H. Cav.; Buss, Sid.; Mag. Connolly, Cai.; Ds. Cordeux, Cai.; Ds. Fosbery; Ds. Gillett, Sid.; Ds. Grabham, Joh.; Ds. Greaves, Cai.; Mag. W. S. Griffith, Trin. H.; Ds. Hale, King's; Ds. Hardwicke; Ds. S. N. Harrison, Trin.; Ds. Haydon, Cai.; Ds. Kellett, Joh.; Ds. Kellock, Emman.; Ds. Knox, H. Cav.; Ds. C. H. Leaf, Trin.; Ds. Martley, Trin.; Ds. Metcalfe, Trin.; Ds. Miller, Queens'; Ds. E. J. D. Mitchell, Cai.; Molson, Emman.; Ds. Molteno, Clare; Ds. Newman, Cai.; Mag. Panting, King's; Ds. E. S. Peck, Christ's; Pinder, Queens'; Ds. Pope, H. Cav.; Ds. Rolfe, Clare; Mag. Samways, Joh.; Ds. W. W. Simmons, Joh.; Ds. H. E. Smith, Cai.; Ds. Sutton, Clare; Ds. Thomas, Jesus; Ds. Usher, Cai.; Ds. Waggett, Pemb.; Ds. Wellford, Trin.; Mag. C. P. White, Clare; Ds. G. Wilkinson (jun.), Emman.; Ds. W. Winslow, Cai.; Ds. Wright, Joh.; Mag. Wyman, Trin.

MEDICAL MAGISTRATES.—The names of Mr. H. Dobie, M.B. Edin., M.R.C.S., and Henry Stolterfoth, M.A. Cantab., M.D. Edin., have been added to the Commission of the Peace for the city of Chester.

BRITISH NURSES' ASSOCIATION.—H.R.H. the Princess Christian will to-day (Friday) be presented by Sir William Savory, Bart., with the first copy of the first Register of Trained Nurses.

PRESENTATION.—On Wednesday, the 7th inst., Mr. E. Claude Kingsford, L.R.C.P.Lond., M.R.C.S., senior house surgeon, Bolton Infirmary, was presented by the resident officers and nursing staff with a handsome gold watch, suitably inscribed, as a mark of their esteem of, and regret at his resignation after three years, and of gratitude for his kindness.—Dr. Geo. H. Temple, of the Provident Dispensary in connexion with the hospital at Weston-super-Mare, has been presented with a handsome marble timepiece, the spontaneous gift of his patients, in recognition of his kindness and attention to them during his appointment as medical officer to the dispensary.

THE KOCH TREATMENT IN LEPROSY.—The condition of the three lepers recently inoculated at Madrid with Dr. Koch's liquid in the Hospital of St. Jean de Dieu is stated to be satisfactory.

OPEN SPACES.—The Earl of Meath has received the promise of £1000 towards the cost of laying out Victoria Park Cemetery as an open space, provided that the balance of £1300 is forthcoming within the current month, in order that work may be found for the unemployed.

LITERARY INTELLIGENCE.—Swan Sonnenschein and Co. announce the early publication of a new and enlarged edition of Mr. Alfred Haviland's book entitled "The Geographical Distribution of Heart Disease and Dropsy, Cancer in Females, and Phthisis in Females in England and Wales." The work will be illustrated by maps.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The following were successful at the examination for the certificate in Psychological Medicine, held at Bethlem Hospital on Dec. 18th, 1890:—Frederick W. Pilkington, L.R.C.P., M.R.C.S; Robert Hitchings, L.R.C.P., M.R.C.S.; James G. Soutar, M.B., C.M.; Jane B. Henderson, L.R.C.P., L.R.C.S.; Robert S. Black, M.A., M.B., C.M.; John A. Hicks, jun., L.R.C.P., M.R.C.S.

POLLUTION OF RIVERS, WEST SURREY.—The Surrey County Council has arranged for a conference at Newington on the 16th inst. to consider the desirability of formulating a comprehensive scheme for the disposal of the sewage of the towns and districts in the valley of the river Wey. The sanitary authorities in West Surrey interested in the question of the contamination of the Wey have been invited to send representatives.

ALLEGED BABY FARMING.—At Lambeth Police-court on the 2nd inst. a woman was charged with having under her custody and control two boys and four girls, and with having wilfully neglected them. The case had come under the notice of the Society for the Prevention of Cruelty to Children. Dr. Reid of Walworth-road reported that he found all the children in an emaciated condition, and that they appeared to have been grossly neglected. The accused was remanded.

HONOUR TO A MEDICAL STUDENT.—Mr. Cuthbert Rutherford was entertained at a banquet by the citizens of Bedlington, Northumberland, on Monday last, which was presided over by Mr. James Trotter, and was there publicly presented with several cases of medical instruments as a token of the earnestness and ability he had displayed on behalf of many public interests connected with the neighbourhood. In presenting the gift the chairman said that they could not but highly appreciate the keen interest taken by Mr. Rutherford in the education of the people in scientific truth, and admire the uncompromising opposition he offered to complacent orthodoxy wherever it was to be found. Mr. Rutherford has almost completed his curriculum at the Royal Infirmary Medical School, Glasgow, and the public presentation will, no doubt, be much appreciated by his fellow-students.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 6th, 1891.

Hospital.	Beds occupied						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	263	48	1	62	5	379	442
North-Western Hospital	298	34	..	9	1	342	442
Western ,,	145	16	..	20	1	182	262
South-Western ,,	196	9	..	1	..	206	240
South-Eastern ,,	231	23	..	50	1	305	464
Northern ,,	319	22	..	14	..	355	490
Gore Farm ,,	105	..	..	..	..	105	300
Totals	1557	152	1	156	8	1874	2720

SMALL-POX.—*Atlas* hospital ship, 1.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNINGSON, BUSHELL, M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health for the Cambridge Urban District.

BRERETON, JAS. B., L.K.Q.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health for the Gildersome Urban District.

CRESSY, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Warsop Urban Sanitary District of the Mansfield Union.

CROMPTON, A., M.R.C.S., has been appointed Medical Officer for the Benington District of the Boston Union.

CUNNINGHAM, JOHN, M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Royal Burgh of Sanquhar, Dumfriesshire, N.B.

DELAHUNT, JAMES J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of the Ballinasloe District, County Galway.

DRAKE, T. G., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Thornton Urban Sanitary Authority of the North Bierley Union, vice Rawson, deceased.

EDWARDS, B. E. J., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Southowram Urban Sanitary District of the Halifax Union.

GILPIN, F., M.R.C.S., has been appointed Medical Officer of Health for the Rural and Urban Districts of Stratford-on-Avon, Evesham, and Alcester, vice Fosbroke.

GODFREY, G. P., L.R.C.P., L.R.C.S. Edin., has been appointed Visiting House Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GOSSAGE, A. M., B.A. Oxon., M.R.C.S., L.R.C.P., has been appointed Resident Obstetric Assistant to the Westminster Hospital.

HERRICK, ROBT. W., M.B., B.Ch. Dub., has been appointed Assistant Honorary Surgeon to the Throat and Ear Hospital, Nottingham.

JAMES, G. B., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to Westminster Hospital.

JOHNSTONE, J., L.D.S.R.C.S. Edin., has been appointed Honorary Dental Surgeon to the Throat and Ear Hospital, Nottingham.

KITCHING, J. L. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Mildenhall District of the Mildenhall Union.

KNIGHTS, JAS. W., F.C.S., has been reappointed Public Analyst for Cambridge.

LUNN, P. T., L.S.A., has been appointed Medical Officer of Health for the Launceston Urban Sanitary District of the Launceston Union, vice Brooke.

MUIL, WILLIAM, M.D. Aberd., has been appointed Medical Officer for the Workhouse of the Kirkby Moorside Union.

ODELL, ROBT., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third and Fourth Districts of the Hertford Union, vice T. Odell, resigned.

PENBERTHY, WM., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Central London Sick Asylum District.

PICKWORTH, A. J., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Lakenheath District of the Mildenhall Union.

SHARMAN, ERIC H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Westminster Hospital.

SHARMAN, MARK, M.B., C.M. Glasg., M.R.C.S., has been appointed Medical Officer for Rickmansworth.

SMITH, J. H., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Crumpsall (Manchester) Workhouse, vice Fryer, resigned.

SPENCER, WALTER, L.R.C.P., L.R.C.S., has been appointed Medical Officer of Health for the Borough of East Retford, vice William Pritchard, M.D., resigned.

STOKES, J., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the First District of the Ecclesall Bierlow Union, vice Willington, resigned.

STORRS, A., M.D. McGill, Canada, M.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Southport District of the Ormskirk Union.

THOMPSON, E. J., M.R.C.S., has been reappointed Medical Officer for the Twycross District of the Market Bosworth Union.

WILLIS, JULIAN, M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer to the West Middlesex Waterworks Company, vice W. T. Wyatt, resigned.

WOODHAMS, JOHN A., M.R.C.S., has been appointed Medical Officer of Health for the Rye Urban Sanitary District of the Rye Union, vice Vidler.

WOOD, H. B., M.D. St. And., M.R.C.S., has been reappointed Medical Officer for the Frittenden District of the Cranbrook Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CARLISLE DISPENSARY.—House Surgeon. Salary £130 per annum, with apartments, not board. (Apply to the Honorary Secretary, 14, Bank-street, Carlisle.)

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant for one year. Terms £50 for the first year, and, if reappointed, £70 for the second year, with board, lodging, and washing.

COUNTIES OF STIRLING AND DUMBARTON.—Medical Officer to act for the two counties and their districts. Salary £500 a year, with necessary travelling expenses, to be regulated by the County Councils. (Apply to Mr. Welsh, County Clerk, Stirling, or Mr. Babtie County Clerk, Dumbarton.)

COUNTY BOROUGH OF ST. HELENS.—Assistant to the Medical Officer. Salary £200 per annum. (Apply to the Town Clerk, Town Hall, St. Helens.)

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer. Salary at the rate of £450 a year. Expenses will be paid as they may be vouched and passed. (Apply to the County Clerk, County Buildings, Ayr.)

COUNTY OF DUMFRIES.—Medical Officer for the County. Salary £300 per annum. He will receive the outlays necessarily incurred in the discharge of his duties. (Apply to Mr. Robson, County Clerk, Dumfries.)

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. House Physicians.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE INFIRMARY.—Senior House Surgeon. Salary £60 per annum, rising to £70, with board and residence.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.

LANCASHIRE COUNTY ASYLUM, Rainham, near Liverpool.—Pathological Assistant Medical Officer. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, E.—Dental Surgeon.

PARISHES OF KIRKBEAN AND COLVEND AND SOUTHWICK.—Medical Officer. Salary £50, together with dwelling-house free. (Apply to Mr. James McLelland, Inspector of Poor, Colvend-by-Dalbeattie.)

STOCKPORT INFIRMARY.—Qualified Assistant to the House Surgeon for six months, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

MILLS.—On Dec. 16th, at Meerut, N.W.P., India, the wife of B. Langley Mills, F.R.C.S., Army Medical Staff, of a son.

MOORE.—On Dec. 3rd, at Stony Hill, St. Andrew, Jamaica, the wife of York T. G. Moore, L.R.C.P. Ed., M.R.C.S., of a son.

PENNY.—On Jan. 3rd, at Morton House, Halliford-street, N., the wife of William Lowry Penny, M.D. Cantab., M.R.C.S.E., of a son.

MARRIAGES.

DAWSON—SCOTT.—On Jan. 1st, at Redcar, by the Rev. James Wallace, M.A., Alfred Stanhope Dawson, L.R.C.P. & L.R.C.S. Edin., of Castlegate House, Cockermouth, to Helen Paton Scott, eldest daughter of Andrew Scott, of Coatham, Yorkshire.

FOX—HAY-NEWTON.—On Jan. 1st, at St. Barnabas, Pimlico, by the Rev. Alfred Fox, brother of the bridegroom, Thomas Colcott Fox, B.A. Cantab., M.B. Lond., M.R.C.P., of 14, Harley-street, to Ida Mary, youngest daughter of the late J. S. Hay-Newton, Esq., of Newton Hall, Haddington, N.B.

JACKSON—BENNETT.—On Jan. 1st, at St. Stephen's, Clapham-park, by the Rev. M. O. Fitzmaurice, Basil Frederic Forrester Jackson, M.R.C.S.E., L.R.C.P., son of the late Geo. Frederick Jackson, Esq., solicitor, of Plymouth, to Kate, only daughter of the late William Bennett, Member of the Institute of Painters in Water Colours, of Clapham-park.

LENOX-CONYNGHAM—BRADSHAW.—On Nov. 15th, at Christ Church, Rawal Pindi, Punjab, by the Rev. A. Spens, Chaplain of Rawal Pindi, assisted by the Rev. C. Gillmore, Chaplain of Karachi, Gerald Ponsonby, Royal Engineers, fifth son of Colonel Sir William F. Lenox-Conyngham, K.C.B., of Spring Hill, co. Derry, Ireland, to Elsie Margaret, eldest daughter of Deputy Surgeon-General A. F. Bradshaw, Army Medical Staff.

LIPSCOMB—HANDY.—On Nov. 24th, at Chertsey, by the Rev. Canon Pattenden, A. A. Lipscomb, M.R.C.S., son of the late J. K. Lipscomb, M.R.C.S., Alresford, Hants, to Mary, daughter of John Handy, of Shipton, Gloucestershire.

DEATHS.

ANDERSON.—On Jan. 3rd, at Leamington-road Villas, Westbourne-park W., James Anderson, M.D., Retired Inspector-General of Hospitals, Calcutta, in his 79th year.

BELLAMY.—On Jan. 4th, at Wimpole-street, Cavendish-square, Edward Bellamy, F.R.C.S., aged 48.

BURT.—On Dec. 31st, at his residence, The Roses, Warren-road, Bexley-heath, Kent, John J. K. Burt, aged 84.

CRAWFORD.—On Jan. 4th, at Drayton-green-road, Ealing, Dr. Cooper Hayes Crawford, Surgeon-Major North Stafford Militia, aged 63.

DUNCAN.—On Jan. 4th, Bartholomew Arcedeckne Duncan, M.D., M.R.C.P., of 29, Wimpole-street, aged 62.

MARSHALL.—On Jan. 1st, at Belle Vue House, Cheyne-walk, Professor John Marshall, F.R.S., President of the General Medical Council, aged 72.

MOORE.—On Jan. 3rd, at Roseneath, West Kirby, Dr. Moore, late Canning-street, Liverpool, aged 77.

RUGG.—On Jan. 2nd, at 1, Grove-road, St. John's-wood, Henry Hodson Rugg, M.R.C.S., in his 79th year.

STRANGE.—On Jan. 5th, at Worcester, William Strange, M.D., L.R.C.P. Edin., aged 75.

TAYLOR.—On Dec. 29th, at Sutton Coldfield, Thos. Taylor, F.R.C.S. Eng., aged 96.

THOMAS.—On Jan. 6th, at Great George-street, Liverpool, Hugh Owen Thomas, M.D. St. Louis, M.R.C.S., aged 57.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, January 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: External Examination of the Eye.—London Throat Hospital, Gt. Portland-street: 8 P.M., Mr. W. R. H. Stewart: The Examination of Ear Cases.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Annual General Meeting. Election of Officers. Casual Communications by Messrs. S. J. Hutchinson, C. Robbins, C. F. Rilot, W. H. Woodruff, F. J. Colyer, Browne Mason, Storer Bennett, and others. Valedictory Address by the President.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. William Duncan: Chronic Disease of the Uterine Appendages, with Short Notes of Thirty Consecutive Cases treated by Abdominal Section.—Mr. Alban Doran: The Treatment of Chronic Disease of the Uterine Appendages.

Tuesday, January 13.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Hypochondriasis and Melancholia.—Examination Hall: Mr. Hutchinson on the Nature of Lupus in special reference to its connexion with Tuberculosis.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. R. Clement Lucas: On a case of Nephro-lithotomy (following Nephrectomy) for Total Suppression of Urine lasting five days; complete recovery and good health five years after the operation.—Mr. Rickman J. Godlee: Removal of large Calculi, first from one kidney and afterwards from the other; death from Hæmorrhage after the second operation.

Wednesday, January 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: The Treatment of Cough.

HUNTERIAN SOCIETY.—8 P.M. Mr. Symonds: Three cases of Hydronephrosis, and their treatment.—Dr. E. G. Gilbert: Some Remarks on Colds.—Dr. G. N. Pitt: Tubercular Lesions in Alcoholics.

SOCIETY OF ARTS.—8 P.M. Mr. J. F. Green: Steam Lifeboats.

Thursday, January 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY OF LONDON.—Address by the retiring President, Mr. T. Bryant.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Howard Tooth: The Anatomy of the Spinal Cord.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. Voelcker: Demonstration of Pathological Specimens.—London Throat Hospital, Great Portland-street: 8 P.M., Dr. Ed. Law: The Examination of the Throat and Nose.

Friday, January 16.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: The Treatment of Hæmoptysis.

Saturday, January 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: Erythema and Allied Affections.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 8th, 1891.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan.	2	30·22	S.E.	31	..	..	35	29	..	Foggy
,,	3	30·27	S.E.	31	..	..	40	29	..	Foggy
,,	4	30·07	W.	39	38	..	40	31	·11	Cloudy
,,	5	30·17	N.W.	32	..	53	38	31	..	Cloudy
,,	6	30·37	N.	28	..	42	33	27	..	Cloudy
,,	7	30·29	N.	28	..	46	34	27	..	Cloudy
,,	8	30·04	N.W.	31	..	36	33	27	·08	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—The question of the qualified assistant and the unqualified assistant, or, in other words, the dispenser who poses as a medical practitioner, I think does not receive anything like a due amount of attention from the profession generally. We hear much about the "hard times" we are having; but do we hear enough about the causes which produce these results? I maintain that the unqualified assistant is largely responsible for the low opinion which is beginning to be held by the public in some quarters of those on whom devolves the duty of upholding the dignity of our calling; for (I speak from hearsay) is it not hinted at that he is frequently to be found in the bar parlour of his district, the centre of an admiring throng, who like to talk to the "doctor"? And who scans with so critical an eye the failings of other practitioners, who, forsooth, think that they "know their work" because they happen to have a diploma or so? Then his record of midwifery cases always going on towards four figures; his easy method of performing version, and the dexterity with which he handles the forceps, would, I fear, arouse the envy of some of our leading obstetricians, if they had the advantage of his acquaintance. Again, without the unqualified assistant the sixpenny dispensary would not pay so well; for the young qualified man, possibly through mistaken pride, is not eager to assist in these enterprises, most of which require the aid of one or more assistants, as is obvious when one considers the amount of work which would be required in order to make even a moderate income. The writer knows of an instance where, in a mining

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district, an average of from twenty to thirty visits a day was kept up by an unqualified man who managed a branch (chiefly club) practice, and who had sole charge of the consulting-room each evening. I have reason to know positively of this, because I attempted to oppose the man in question, but was ignominiously defeated by him, he being my senior in years, and possessing that bland and persuasive manner which so easily enables a man to hold his own if he has an introduction, simply because it is not guessed at that he is anything other than that which he represents himself to be. At all events, the result is that, in spite of an appeal to the Medical Council, I remain,

January, 1891. A QUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—It is indeed time the cause of the poor overworked unqualified assistant was taken up. No wonder medical men find it a difficulty to obtain the services of qualified assistants. They will not work for next to nothing, as the unqualified man of to-day does. No wonder, then, that unqualified men never qualify or do any good. I will endeavour to give you briefly an account of my experiences as an unqualified assistant. I have been in the noble position for ten years. It has been hard work, and night work, too, £25 a year, and, worst of all, no time for any kind of study. I am a registered medical student, licentiate in midwifery, and assistant of Apothecaries' Hall, Dublin. Your readers will say, "How did you get time to go to Dublin for the six months' practice for the Coombe, &c. Did your employer give you a holiday"? No. I had to leave my employer each time I wanted to work for examination. My experience is this: the more you serve your principal, the longer you remain unqualified. If you are taken ill whilst in the employment of a medical man, out you go. Medical men never consider the unqualified assistant is the mainstay of the practice. After a ten years' life of this kind, one finds he is getting less active, and consequently is discharged for being lazy, and then nothing more is heard. Perhaps the poor honest assistant dies in the workhouse. The sooner something is done to help us the better. I see the servants' cause is being taken up. If unqualified men were allowed in for the respective examinations on producing certificates of ten years' practice, they would be able to share the practice of the many grasping, ungrateful principals. I am, Sirs, yours obediently,

January, 1891. E. POOLEY, L.M.Ch. Dub.

To the Editors of THE LANCET.

SIRS,—"G. P.," in a letter published in your last issue, brings forward a very important matter—viz., the employment of unqualified assistants, and the failure of the General Medical Council in laying down some law on the subject. I quite agree with your correspondent on this point, and suggest that the following be the law:—"Every medical practitioner to display, either on his door-plate or in a conspicuous place in his waiting-room, the names and qualifications of himself and all his assistants. If anyone of the above be unqualified, he should have 'unqualified to practise medicine, surgery, midwifery' (any or all, as the case may be) in bold type after his name." The practice at present is for the practitioner to hold out his unqualified assistant as qualified, and always speak of and to him as "doctor." This is nothing short of a fraud on the public and obtaining money under false pretences. This disgrace and scandal to the profession should not be allowed to continue. I have no objection to the employment of unqualified men if patients knew them to be such. Every coroner will bear me out in the statement that a frequent complaint of surviving relatives is: "Dr. ——'s assistant attended the deceased. We believed him to be a doctor, and only now find that he is not."

I am, Sirs, yours truly,

Nov. 5th, 1890. X. Y. Z.

MEDICAL ADVERTISING BY MEN OF MANY TITLES.

THE following is a striking illustration of the fact that many and even respectable titles do not always hinder a medical man from pushing practice by advertising. The physician and surgeon, it will be seen, boasts of no less than seventeen letters of title.

> The National Dispensary, conducted by Dr. R. H. Foot (A.B., M.B., M.D., L.R.C.S.I., L.M.C.R.S.I.), physician and surgeon, who resides on the premises. Dispensary Patients—Hours of attendance: Mornings, 9 to 11; Evenings, 6 to 8. Sundays, 11 to 12 A.M., and 7 to 8 P.M. Advice and Medicine for one week, 1*s.* If Visited at their own Homes, 8*s.* per week. Midwifery from 10*s.* 6*d.* At home to Private Patients until 12 A.M. and after 6 P.M. Removed from 10, Whimple-street to 29, Flora-street, Plymouth.

Public Vaccinator.—The Sanitary Council of Paris, in view of the outbreak of small-pox in the south, have issued a code of instructions to be hung up in dispensaries and other public places. Vaccination and revaccination are chiefly relied upon as a means of combating the disease, but isolation and disinfection are not overlooked.

Assistant.—Our correspondent should consult his solicitor. We presume damages and costs would be consequential, and possibly there might be an injunction from the High Court, to be followed by imprisonment in case of disobedience.

S. C. has not enclosed his card.

THE ODDFELLOWS OF SANDBACH.

THE *Nantwich Guardian* reports the proceedings at the annual dinner of the Loyal Faithful Lodge of Sandbach. The chairman very properly magnified the Order, and said that it had 700,000 members, and that it and similar societies had done more for England than Free Trade. In response to the toast of his health, Dr. Rice expressed satisfaction with a recent change in the medical arrangements by which three medical officers had been appointed to the lodge, so as to give the members a choice. This seems to us an example that may well be followed by large friendly societies. Dr. Rice finished his speech by a remark in more doubtful taste—viz., by expressing his readiness to attend "any number of members connected with any society in Sandbach for the ordinary club pay." In the light of his previous remarks we can believe that this was said in a somewhat playful spirit; but there was an air of business about his words which might take effect on the patients of other medical men.

Mr. William Wallace.—The date of the death of Mr. Peter Marshall, F.R.C.S., was March 12th, 1877, and an obituary notice of that gentleman will be found in THE LANCET of April 7th of that year.

Tyro will find all the information he needs in our last Students' Number, published September 6th, 1890.

Mr. Chittenden (Gravesend).—Dr. Fothergill died in the summer of 1888.

STAMMERING.

To the Editors of THE LANCET.

SIRS,—A gentleman asked in a recent issue of THE LANCET for help in the treatment of stammering. The chief points are: (1) Seek for peripheric points of irritation and remove them, defective teeth, adenoids, polypes, hypertrophied tonsils, worms, phimotic adhesions, &c.; (2) forbid the nervines; (3) educate the breathing; (4) teach the subject to completely compose a sentence before commencing; (5) after taking a long breath, close the mouth, press the tongue up to the palate, throw open the mouth widely, and quickly close the lips again; (6) if the lower jaw cannot be protruded, electrify the internal pterygoid muscles; (7) practise in French, as it is a language demanding great lip play, very defective in most cases. If this gentleman would pay me a visit any morning I shall be most pleased to practically demonstrate all these manœuvres in a friendly way.

I am, Sirs, yours faithfully,

EDWARD BLAKE, M.D.

Berkeley Mansions, Hyde-park, Dec. 15th, 1890.

A NEW VENETIAN BLIND.

MR. FREDERICK ENGELBACH, L.R.C.P., of Moreton-Hampstead, Devon, has invented an improvement of the Venetian blind, by which the webbing, ladders, and supports are replaced by chains and wire transverse supports hooked into the chains. The blind thus constructed is much more free from dirt than when webbing is used, and the damage from which the webbing suffers owing to exposure to the sun is avoided. Mr. Engelbach's blind is therefore more cleanly, more durable, and is, moreover, more elegant in appearance, and is especially well adapted for public institutions, where it is important that labour should be saved.

Sanitarian.—The matter has not escaped our attention, but there are some points which require elucidation.

G. P. is referred to THE LANCET of last week, on page 68 of which he will find an answer to his question.

Mr. G. A. Wright.—The paper has been received, and is marked for insertion.

Students should represent his case to the Secretary of the College.

General Practitioner should send us the original card.

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I think it probable that the outbreak of influenza which has afflicted the world in 1890 will be traced in all its curious wanderings by those whose duty it is to compile a careful record. May I, then, contribute the following item?

I have a letter to-day from Consul John Buchanan, C.M.G., who lives on Mount Zomba, upon the Shiré Highlands of Central Africa—our new Protectorate. He writes on Oct. 11th—about the hottest time of year—that he has had a very severe attack of influenza combined with fever. "Central Africa is," he says, "about the last place on earth where one would expect to meet with influenza, but it has been a most severe epidemic here. A good many people have died, both young and old. Most of the Europeans at Blantyre have had it in a less or more severe form." I am, Sirs, yours faithfully,

Twywell Rectory, Dec. 30th, 1890. HORACE WALLER, F.R.G.S.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

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London Post-graduate Course:

ON THE

NATURE OF LUPUS,

WITH ESPECIAL REFERENCE TO ITS RELATION TO TUBERCULOSIS.

Delivered at the Examination Hall, Jan. 13th,

BY JONATHAN HUTCHINSON, F.R.S., LL.D.

GENTLEMEN,—It has long been the hope of some of us that diseases of the skin may some time take their true place in medical studies as affording better opportunities than any other department of pathology for the elucidation of the laws of morbid action. Respecting lupus in particular, I have myself always held that it affords facilities better than those offered by any other disease for examination of the conditions which are known as scrofula, and for ascertaining the relations of these one to another, and, above all, to what we now recognise specifically as tuberculosis. Recent histological discoveries have done much to confirm this opinion, and to show that an accurate and detailed knowledge of the remarkable group of maladies known as lupus is of very great importance, not only to the clinical observer but to the experimental pathologist also. Dr. Koch's discovery of a specific form of vegetable organism as the attendant of all that we recognise as specific tuberculosis, and the agent by which it can be artificially produced, has been followed after a few years' interval by another of scarcely less importance from the same fertile brain. Dr. Koch has now given us a fluid possessing beyond all doubt most remarkable powers, and respecting which it was claimed at first that it attacked tuberculous tissue only. Almost from the beginning lupus came to the front as the malady in which, above all others, the virtues of this remarkable detector and destroyer of tubercle could be demonstrated. It was alleged at first that, given a case of true lupus, the injection of Koch's fluid would cause the patches to inflame, and subsequently to cicatrise and disappear. Although this assertion has possibly not been fully confirmed either on its positive or negative side, although we are obliged to suspect that the fluid may cause high temperatures in some cases in which probably the lupus process is not bacillary, and that in others in which it probably is so it may fail to cure, still in the main the original statement holds its ground. On all hands we have confirmation of it in a general way, with, as has been said, certain exceptions. You will see that this remarkable discovery opens up two different lines of investigation, both of them of surpassing interest. In the first place, as practical surgeons we have to ascertain how far it can be made to supersede the old, and more or less clumsy, methods of local treatment; and next as pathologists, making some pretence of zeal for the scientific aspects of our subject, we hope to gain from it much help in determining the real nature of the maladies in question. Is lupus in its common and well-known type always a specifically tubercular disease (i.e., bacillary in origin)? and, next, are the various associated affections which differ more or less from common lupus really cognate with it?

I purpose, gentlemen, to leave to the last of the three lectures, which, with your permission, I intend to devote to lupus, all clinical discussion of the principles and details of its treatment. In to-day's lecture I have to ask your attention to certain general considerations as to the real nature of the lupus process, and in next week's lecture I shall return to this topic, with the intention of giving you more detail as to the various forms of disease which ought in my opinion to be included in the lupus family. It is perhaps scarcely necessary to say that I shall approach the subject almost solely from the side of clinical observation. I shall have but little to tell you from my own knowledge as to histology, and nothing as to experiment; not that I entertain in the slightest degree disrespect for these directions of research, but simply that my own line of work has taken me elsewhere. I may confess, moreover, that it appears to me to be not unimportant that on this and many other questions the clinical evidence should be fully stated, quite apart from any theories as to pathological laws which may have taken possession of our minds. The clinical, the histological, and the experimental investigator need not always be one and the same person, but by honest and detailed work each may help the labours of the other. Before we proceed to undertake an examination as to the nature of lupus, permit me to say that much of what I shall have to bring before you I have already said and published three years ago in my Harveian Lectures. Of these lectures the present may be considered as a sort of revised edition.

Foremost amongst the questions as to the doctrinal pathology of lupus is that as to whether the typical form of lupus vulgaris is always of bacillary origin. In respect to this two possibilities must always be kept clearly before our minds. It may be that the lupus process is always due to the implantation of the parasite bacillus in the tissues; or, secondly, it may be that the process takes its origin as a variety of inflammation, and is induced by any one of many local causes of irritation and nutritional change. This latter theory by no means wholly excludes the influence of the parasite, for it is easily conceivable that a certain condition of local irritation may be the almost necessary precursor of the implantation of the parasite. It may do for the tissues what the farmer does for his field when he ploughs and manures it preparatory to sowing seed. It is, perhaps, better that I should be candid at the outset, and admit that the attitude assumed by my own mind, as a consequence of long familiarity with the facts in reference to lupus, is a belief that this latter hypothesis expresses the truth. It seems to me highly improbable that all true lupus is the result of contagion, and much more likely that it usually begins in inflammatory action made peculiar by the special proclivities of the individual.

If anyone has come here with the belief formulated that there is a disease which to the exclusion of all others deserves the name of lupus, and that it needs only skill in diagnosis to separate it from all resemblances, let me beg of him to lay it aside. Only those of narrow experience or of narrow habits of thought can entertain such an idea for a moment. No symptom, and no set of symptoms, will enable anyone to recognise with certainty all cases of lupus, and to pronounce with confidence what shall and what shall not take rank under that name. The explanation is simply that the diseases which have been classed under it are not well specialised. We can all of us recognise well-marked examples, but by the side of these there are many which are ill marked, and in which the disease, as it were, shades off into other conditions. I am aware that this statement may seem strange to some, and that not a few will be inclined to assert that if there is any disease which can be readily and confidently diagnosed, it is this same lupus. I trust, however, before I have finished to convince all that it is often quite impossible to diagnose between scrofulous ulcers and lupus, and between ulcerating chilblains and lupus—to say nothing of the rare forms known as acne-lupus, sebaceous lupus, and the not infrequent cases in which it cannot be said with certainty whether the case should count as lupus erythematosus or vulgaris. In proof of what I have said, I make my appeal first to observation of the cases themselves, and, secondly, to the recorded statements of authorities and the names which have been applied to published portraits. On the other hand, it is not so difficult to define what is meant by the lupous process. Whenever a chronic inflammation of skin or mucous membrane not due to syphilis shows a persisting tendency to spread at its edges, to produce satellites near to it, and to leave a condition of scar behind it, such a process is for me one of lupus. In a few cases the production of satellites may be omitted and the patch may remain absolutely single, but its infective edge and the resultant scar are essential. No form of lupus is without them, although it must perhaps be admitted that in a few the demonstration of the scar may be difficult. There is another condition which, when present, is to trained minds definitely diagnostic of lupus. I refer to the presence beneath a thinned layer of epidermis of a deposit or growth a semi-translucent granulation material, often in considerable thickness.

I find that I am credited by some authors with the introduction of the term "apple-jelly deposit" to this growth. I am by no means certain that I was really the first to apply it, but suspect rather that I borrowed it from some forgotten source. It is, however, very appropriate,

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and will probably hold its ground. This apple-jelly is, when present, definitely diagnostic of common lupus, but unfortunately is not to be recognised in a large number of cases. It is only when the disease is quiet and free from inflammation. On some parts, as, for instance, on the hands and the feet, it is scarcely ever seen, for the products of inflammation almost invariably conceal it. It is, I believe, in this growth that the bacilli when demonstrable are present. Although as a rule the apple-jelly characterises common lupus, and may possibly be held to imply the presence of bacilli, yet on a small scale I have often seen it in some of the thicker discs of a lupus which certainly belonged to the category of erythematosus. Several other minor and less characteristic features of the lupus process may be mentioned which are of some use in making a diagnosis. If the surface does not ulcerate, it is usually seen to be covered with flakes of adherent epidermis, which are white and papery, but yet do not fall off as do the scales of psoriasis. If the patch is ulcerated, but the inflammation yet only moderate, a bed of firm granulating masses is formed, between the small polypoid growths of which the dried crust, partly epidermic, dips by numerous processes. If this crust be torn away, the process always lacerates the papillæ and causes bleeding. Hence a diagnostic rule of our forefathers that a lupus crust could not be detached without causing hæmorrhage. The special parts which are affected in lupus afford some help in diagnosis, for the disease is much more prone to attack some than others. The end of the nose perhaps takes precedence of all others, and next to it the cheeks. Lupus is not uncommon on the limbs, but very rare on the trunk. When it occurs on the hands and the feet, which is far from common, it assumes, as has been said, peculiar conditions. You will understand that all which I have just said applies only to common lupus. I am for the present leaving the other forms aside. I may add further as to common lupus that, although it is often multiple, and may in some instances cover the head and limbs, and even to some extent the trunk, yet that its patches are never arranged with any approach to exact symmetry.

The older surgeons had only common lupus. Fifty years ago lupus erythematosus had not been observed, and at a much later period than that it was by some called an "erythematous scrofulide," whilst lupus sebaceus was named seborrhœa sicca or acne sebacea. Our forefathers had, however, many adjectives which they applied to different conditions which occurred to common lupus. If the nose were affected and its tip and alæ destroyed, the term "exedens" was applied. If the patches were free from ulceration and covered with papery scales, it was spoken of as "lupus exfoliativus." If the patches spread more rapidly and extensively than usual, the term "serpiginosus" was used; but a strong objection may be made to this, because, as already seen, it is of the very essence of all lupus to be serpiginous. It would not be lupus of any kind if it did not show this quality. The designation "lupus hypertrophicus" was employed for those cases in which a large amount of solid œdema was present. It was but seldom applied excepting to cases in which the upper lip was the part affected; but, as may be demonstrated from the plates of it which have been published, it was sometimes given to cases which did not specially deserve it. There was also a lupus vorax; but this was not a true lupus, but in some cases a rodent cancer and in others a syphilitic phagedæna. We may conveniently put aside most of these terms, or at any rate we must recognise that they do not denote varieties of lupus, but rather local and often temporary conditions of one and the same disease. Different cases of common lupus differ one from the other chiefly with reference to the degree and amount of inflammation and ulceration consequent upon it present. These, again, are much influenced by the part affected. Thus in the hands and feet and on the nose—parts very liable to feel exposure to cold—inflammation and ulceration are likely to occur, whilst they are rare on those more advantageously placed as regards the circulation and the protection of the dress. If we were to divide lupus cases into two groups, taking for our guide in the separation the presence or absence of inflammation, we should find that the state of the health, and especially the vigour of the circulation, had much to do with it. We have seen that the part affected is important, and it may be added, season also exercises much influence. In many subjects of lupus the patches inflame and ulcerate in winter and heal in summer.

The statements which have been made have been intended to introduce more definitely the discussion of the question as to how far clinical evidence supports the hypothesis that lupus vulgaris is of bacillary origin.

In reference to this a few other general statements remain to be made. (Lupus) vulgaris is not a disease which attacks infants or young children. In exceptional cases it may occur even to the youngest, but commonly it waits until childhood is well advanced, or even until the period of puberty is passed. It is said by some never to begin in old age, but this is a mistake. We often see it begin at or after middle life, and in a few instances its subjects are advanced in years. When the latter is the case, it displays somewhat peculiar features, and may probably be ranked with that group of maladies to which Sir James Paget has given the name "senile scrofula." Although in many cases it is multiple in its manifestations in the skin, several, or perhaps very many, patches being produced, there is, with the fewest possible exceptions, no tendency to infect other parts. The lymphatic glands do not suffer, nor do the lungs, the bones, the joints, or the intestines ever become affected. Nothing is less common than to see a lupus patient pass into phthisis. Thus we may believe that the infective material, be it what it may, is one which finds a suitable home only in cutaneous or mucous structures. If it be a bacillus, it is a selective one, and it keeps to the tissue in which it had its first development.

The most typical forms of common lupus are often coincident with good health on the part of the patient, and the absence of any family history of tendency to tuberculosis. Of course, there are many exceptions to these statements, but all observers agree that they express the general truth. If, indeed, it were asked whether the clinical evidence more favoured the belief of the alliance of lupus with tuberculosis or with cancer, I am inclined to think that the reply would have to express hesitation. Tuberculosis and the cancerous process have hitherto been held to observe towards each other something of a position of antagonism. Those who are liable to the one are not prone to the other, and the two are but very rarely found together. Almost all who have written on lupus have, however, been struck by the fact that parts affected by it not very infrequently take on cancerous growth. The evidence on this point has recently been collected by Dr. Baylis of Tubingen, who from his own experience has collected no fewer than four cases. I doubt much if many observers could collect from their own observations as many as four cases of lupus in which the patients had subsequently succumbed to any form of internal tuberculosis.

In making these remarks I am far from wishing to ignore either the general impressions or the collected facts which favour the belief that there is some bond of connexion between tubercular affections and lupus. What I contend for is that it is far less close than is generally believed. The impressions which most of us have, I expect, formed on this subject go far ahead of any proof of a statistical kind which we could supply. If I may be permitted to anticipate a little what I shall have to say in my next lecture, I may here mention the unexpected fact that statistical results are different in respect to lupus erythematosus. In this latter no observer has, I believe, succeeded in detecting the bacillus, yet it is far more frequently in close association with tuberculous conditions than is lupus vulgaris. Some light may perhaps be obtained for the elucidation of this difficult question by observation of the very earliest stages of lupus. We are so accustomed to see this chronic malady after it has been long existent, and when its peculiarities are well declared, that very little has been done in the attempt to describe, still less to depict, its initial conditions. I much suspect that if we knew them we should have to acknowledge that they are often such as cannot be recognised as lupus at all. The disease may, and often does, originate in a condition of chronic or recurrent congestion and swelling not in the first instance to be distinguished from a chilblain. Or it may start from what looked like tuberous acne at the end of the nose, or from patches in the middle of the cheek, which had been often congested in the act of blushing or in the flush which attends indigestion. Slight injuries, insect stings, bruises, burns, &c., may become its starting point. In almost all cases something not distinguishable from a chronic papular inflammation is, I believe, the earliest local condition which is observed. The apple jelly may form before the disease is far advanced, but it is never present at the very first. Nor do we ever see anything in

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the least resembling a tuberculous ulcer. The early stage is in many cases insidious and prolonged, but it is not so in all. In some a tendency to rather rapid infective spreading is early manifested, and while it is so the conditions produced resemble rather those of common inflammation than anything which could be recognised as specifically lupus.

Let me here invite your consideration to a very curious fact in the history of common lupus. It is that after the disease has well declared itself we have little or no cause for anxiety as to infection spreading in distant parts. Satellite manifestations will, of course, appear, but no one fears for his patient with lupus of the face that unless it is promptly cured it may cause other patches to appear on the limbs or body. It is quite different in the case of lupus erythematosus, in which reproduction on distant parts may be observed at any stage. When lupus vulgaris is multiple, when it occurs in many separate patches scattered over the limbs and body, I believe that the history invariably is that the dissemination occurred in the very earliest stage. Later on there comes rather a tendency to diminish multiplicity than to increase it. I am fortunate in being able to bring before you a very conclusive instance in proof of this, and to illustrate it by portraits showing the disease at different stages. I will show you the latest portrait first. You will see that it exhibits many large patches of what has been called "lupus non-exedens" or "lupus exfoliativus" on the face, neck, and limbs of a boy of almost eight. The disease is well characterised; the areas involved show a thin scar over the greater part of their surfaces, but at their borders is a tuberculated margin with small formations of apple jelly and a tendency to superficial ulceration and the formation of a dirty pus crust. Although so numerous the patches are not arranged with symmetry. The boy is in good health; he has no signs of scrofula other than his lupus, and there is not the least reason to suspect syphilis. Now, when this boy was first brought to me, three years before the portrait which I have shown you was taken and one year after the commencement of his malady, the nature of the disease as lupus was by no means declared. He was covered with ulcerations which resembled a mild rupia, and with pustules and chronic lichen-papules. No one (and he had been seen by several authorities) had suggested that the disease was lupus. It had begun by an inflamed patch on one arm, and from this the others had by a process apparently of general blood infection been developed. During the next six months the pustules, lichenoid papules, &c., disappeared, and with them some of the smaller ulcers; but the larger of the latter, losing their inflammatory conditions, settled down into patches of lupus, aggressive at the edges, but incapable of distant infection. You will see, by comparing the drawings, that, although the patches have much increased in size, no new ones have been produced during the last three or four years. I have not had the opportunity of observing any other case of multiple lupus in its earliest stage, but of many others which I have seen I can assert this, that in none was there in the later stages any tendency to increase in the multiplicity of distant manifestations.

I do not know whether any argument against the bacillary origin of common lupus will be admitted to be legitimately based on the acknowledged fact that syphilis can simulate it. The fact itself is illustrated in everyday practice, and those who wish to refresh their memories have only to glance over the series of portraits which I exhibit. The portrait which one authority publishes as lupus another takes to resemble syphilis, and all will agree that respecting many nothing but the history could decide the question. Who has not met with cases in practice in which, even with the aid of a carefully obtained history, he has felt in doubt whether the malady should be named "serpiginous syphilis" or "superficial lupus"? The argument which I base on this fact is that, since syphilis in its tertiary stage (as syphilitic lupus) is only a chronic infective inflammation deriving peculiarity from the specific antecedents of the patient, and having nothing whatever to do with tuberculosis or bacilli, it is reasonable to suspect that lupus itself, which so exactly resembles it, may in turn be a process of chronic inflammation made peculiar by the vital proclivities of the patient. I may add that syphilis can imitate, not alone common lupus, but in turn most of its various forms.

Let us next ask whether there are, apart from the affections known under the name of "lupus," any diseases of the skin which are supposed to be in association with, first scrofula, and secondly specific tuberculosis? The reply, as regards scrofula, must be that in connexion with suppurative disease of the lymphatic glands, and sometimes with suppuration of cellular tissue only the skin is often and extensively involved, and that in such cases it does not as a rule assume the conditions known as "lupus." These affections are those which are responsible for the ugly seamy scars which disfigure the necks of those who have suffered from "scrofula" in childhood. They are totally distinct from lupus in most instances, although in a few the two are seen together. The scrofulous ulcers usually begin under the skin and involve the latter secondarily, whereas lupus is a disease of the skin itself primarily, and only secondarily affects the subcutaneous cellular tissue. Now on the hypothesis that lupus is a tubercular disease—i.e., bacillary in origin—it is certainly extraordinary that in gland-struma the skin does not assume a lupus state, nor conversely do the glands suffer in lupus. If I say anything as to a true tuberculosis of skin as distinct from both lupus and scrofulous ulceration, I shall have to borrow from the observations of others; I have no facts of my own. Authors, especially of the French school, have, however, described certain rare conditions of primary ulceration of the skin itself which they have deemed tuberculous. Such ulcers have occurred in the subjects of true tubercle, and by the microscope giant cells and other elements supposed to be diagnostic of tubercle have been found in them. Respecting the occurrence in the mucous membranes of tubercular ulceration and of lupus as quite distinct things easily diagnosed the one from the other, there can be no manner of doubt. Tubercular ulcers in the larynx, for instance, are frequent, and they are very different from lupus of the same part. They appear to result from direct infection by the secretions. In the mouth, on the tongue, gums, and cheeks, we occasionally, though very rarely, see true tubercular ulceration, and it presents appearances and runs a course wholly divergent from those of lupus. Such affections are usually rapid in their progress, whereas lupus is very slow. I do not think that I have ever seen such conditions excepting in association with tubercular disease of the viscera.

I must mention briefly in connexion with possible forms of tuberculosis of the skin the affection described by Hebra as "lichen scrofulosorum," and that known as lupus verrucosus, or "tuberculosis verrucosa cutis."[1] There is no doubt that children affected by scrofula are liable, as Hebra stated, to present a condition of general and very chronic enlargement of the hair-follicles over the abdomen and sides of the chest. I am not aware that any histologist has succeeded in demonstrating tubercular elements in these papules of lichen scrofulosorum. That they are scrofulous in their nature I do not doubt. They are distinct from lupus, but by far the best marked example of the disease which I have seen occurred in a child who was at the same time the subject both of pulmonary phthisis and lupus. I may acknowledge that I cannot distinguish lupus verrucosus from lupus necrogenica, or necrogenic warts, nor in some cases from common lupus affecting the extremities. The microscopic proof that these forms of disease are attended by giant cells and sometimes by bacilli must be held to be complete. That they occur to persons not otherwise scrofulous is admitted by all, and further, that they do not lead to infective tuberculisation of other parts or organs. They are often much under the influence of the general health, and most emphatically so under that of warmth. All exposure of the affected parts to cold makes them worse, and as a rule systematic and efficient protection cures them.

Thus, gentlemen, I have endeavoured to bring in review before you the principal facts which from the clinical standpoint appear likely to help us to answer the question whether lupus vulgaris should be regarded as tuberculosis of the skin. We have seen that there is no evidence that it ever begins from the implantation of tuberculous matter, that it is only exceptionally associated with tubercle in the viscera, and that it never causes infective gland disease. We have also seen that there are other affections of the skin which do not resemble it which are much more closely associated with tubercle and with scrofula. We have seen also that its remarkable preference for certain regions and parts seems to imply that the influence of cold is by far the most common of its exciting causes. I may own that the sum of the evidence

[1] Riehl and Paltauf.

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seems to me much in favour of the belief that lupus is a specialised form of chronic inflammation rather than the result of infection. In suggesting this I am well aware that it is merely a negative conclusion which is liable to be overthrown at any time by the accumulation of positive evidence. It may be that in the future the presence of bacilli in lupus-products may be demonstrated in earlier stages, and much more constantly than has yet been the case. The results of Koch's injection treatment may possibly force us to believe that there is something about lupus which connects it far more closely with tuberculosis than I have admitted. I prefer for the present to say nothing about the results of that treatment already obtained; I shall leave that for our last lecture. In our next I shall submit for your consideration in some little detail the facts which connect different forms of lupus, one with another, and include even certain forms of disease of the skin which have not as yet been acknowledged as lupus at all. My argument from these facts in reference to our present question will be that, seeing that a considerable group of maladies are inseparably associated together in the lupus family, it is probable that one and all should be regarded as forms of chronic infective inflammation deriving their peculiarities from the proclivities of the individual attacked and not from specific elements of contagion.

An Address
ON THE
TREATMENT OF INTERNAL INTESTINAL STRANGULATION AND OBSTRUCTION.

Delivered on retiring from the chair of the Harveian Society, Jan. 15th, 1891.

BY THOMAS BRYANT, F.R.C.S. ENG.,
PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

GENTLEMEN,—In vacating the chair in which by your kindness I was placed a year ago, and in resigning the duties of an office which by your courtesy has been rendered both profitable and pleasurable, allow me to assure you that I have cordially appreciated the honour you conferred upon me, and thank you for the pleasant and friendly way in which you have supported me during the past year. To show my gratitude for past favours, I propose therefore to anticipate another, and to tax your kindness once again; whilst in returning to the subject of my Harveian Lectures of 1884, I place before you some few practical remarks on the treatment of internal strangulation and obstruction. To make matters clear, I shall consider the subject from a clinical point of view, and with this purpose divide my cases into three main groups. The first includes examples of what are usually called, but as I hold wrongly called, cases of acute obstruction. The second, cases of chronic colonic or rectal obstruction, and of acute symptoms grafted upon the chronic. The third, cases which cannot well be placed in either of the two former groups, and the nature of which is obscure. To the last group my remarks will chiefly be directed after a brief consideration of the two former groups.

It may be within the recollection of some members of this Society that in the year 1884, when discharging the duties of your Harveian lecturer, I pointed out the expediency of separating cases of acute intestinal strangulation from those of obstruction: "Since in examples of intestinal strangulation, obstruction is only one of its symptoms, but neither the cause of danger nor of death; whereas in cases of intestinal obstruction, the obstruction is the prominent and dangerous feature, and from it, or it chiefly, the consecutive changes which lead to death are brought about." I dwelt likewise upon the mechanism of strangulation, and illustrated from the familiar example of a strangulated external hernia the changes which the bowel undergoes when strangulated within the abdomen, in either the shape of an internal hernia, volvulus, constricting band of any kind, or acute intussusception. I showed, moreover, how in all these conditions the pathological changes are identical; that in all there is more or less sudden or complete interference with the venous circulation of the part, and that this, if not relieved, will of necessity end in complete blood stasis, and, as a consequence, "static gangrene" and death of the part strangulated; death under these circumstances taking place from these pathological causes, and not from obstruction. I showed also how this point was well illustrated by the not unfamiliar fact met with after the reduction of a strangulated hernia, when all the acute symptoms of strangulation subside, but obstruction from paralysis of the strangulated segment of bowel remains for days, and at times for weeks—I have known it do so for three weeks—without giving rise to one bad symptom.

When, therefore, we are called to a case of what you may be disposed to consider as one of acute obstruction, but to which I would prefer to consider as one of acute strangulation—and it matters not whether it be one of internal hernia, volvulus, strangulation by a band or acute intussusception—we should mentally see either the gradually increasing venous congestion of the strangulated part or its rapid congestion; and we should picture to our minds the venous blood congestion passing on to a more or less rapid complete blood stasis; when we cannot be too alive to the fact that death of the strangulated bowel, if not of the patient, is not far distant. This condition of mind helps our practice. It does not conduce to help the practitioner to depend upon a surgery of hope, based upon the administration of drugs which mask symptoms, but do nothing towards the relief of the mechanical conditions upon which the symptoms depend; but it encourages him to act with foresight and decision, as he would do in an example of external strangulated hernia, and to deal with his case of internal strangulation by the only means that can save life, and that is, by laparotomy.

In the case of a patient suffering with symptoms of strangulated bowel—that is, a sudden abdominal pain, accompanied or soon followed by vomiting of a gushing and persistent character,—if this patient be the subject of an old hernia, the rule of surgical practice is to explore the hernia, whether or not it presents the local features of strangulation. Should nothing be found in the hernial swelling to explain symptoms, the surgeon then explores the neck of the hernial sac, and on this exploration yielding no result, he is often and should always be led to explore the abdominal cavity.

In the case of a patient suffering with symptoms of strangulated bowel, but without any external hernia, I hold that a like rule of practice should be followed; and that on the diagnosis of a bowel strangulation being made, the surgeon should at once proceed to explore the abdomen, first, to find out the exact cause of the strangulation, and, secondly, to relieve it. It is true that failure often follows the attempt, but it is equally true that success is more likely to attend an early effort than it can be expected to follow a late one; and under all circumstances it should be remembered that where success ensues, it means that a life has been saved which under other circumstances would to a certainty have been lost. I would, however, like to remind you that as in practice we meet with cases of irreducible hernia in a condition of obstruction as well as of strangulation, and that these conditions are indicated by general symptoms which vary only in degree of intensity, so we must expect to meet with cases of internal hernia or their equivalents under precisely similar circumstances, and that these different conditions will be indicated by different symptoms. Indeed, it is important to remember that an internal hernia, like an external one, may be either obstructed or strangulated. I would point out also that even in cases of external and internal strangulation there are degrees of strangulation. In one case it may be so sudden and complete as in a few hours to bring about blood stasis in the portion of bowel which is implicated; whereas in another the strangulation is more slowly brought about, and two or three or more days may be passed before the strangulated intestine undergoes any serious organic changes. Between these two extremes there are also many degrees.

With a due recognition of these facts, we can therefore fully understand how it is that in practice symptoms of bowel obstruction and of strangulation, whether within the abdomen or within an external hernia, are found to vary. We comprehend how it is that in the most acute cases, besides the sudden onset of the symptoms, accompanied with vomiting of a persistent and gushing character, we meet with early collapse and speedy death; and how it is where the process of strangulation is less complete and

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more gradual, the general symptoms are less severe, the vomiting less marked and persistent, and the collapse more or less absent until the close of the case. I have known a case of scrotal hernia of the congenital variety, in a young man aged twenty-six, terminate in gangrene of the whole strangulated bowel in twenty-four hours, and I have known a coil of bowel in a young woman about the same age, which had become strangulated by a peritoneal band clipping the coil at the brim of the pelvis, become gangrenous in the same period, in both these cases operative interference having proved futile because undertaken too late, relatively to the amount of changes which had taken place in the strangulated tissues. A portion of bowel acutely strangulated within the abdomen is no more likely to relieve itself by natural processes than is a strangulated coil in an external hernia, and although we know that in very exceptional cases such a happy result may take place, no thoughtful surgeon would on that account delay surgical assistance in the one case more than in the other; whereas a loop of bowel, when only nipped by a band or partially strangulated, like an obstructed hernia passing on to strangulation, may suffer but little from some hours' delay, or may even find an escape by natural processes when well aided by art.

In the most severe example of acute strangulated hernia even the taxis may be injurious, and nothing but operative interference can be considered to be good surgery. In the more slowly developing examples the taxis is the right treatment, opium and local cold may be justifiable measures, and operative delay not open to censure. By a like argument, in an acute internal strangulation nothing but laparotomy ought to be entertained; whereas in the more slowly developing cases a few hours may be spent in verifying diagnosis and in the employment of measures which may tend towards good. Laparotomy should therefore always be undertaken as soon as the diagnosis of acute intestinal strangulation is made, and there need be no delay for the formation of a specific diagnosis of its cause. In the less severe cases, where the symptoms are those of obstruction, and where the diagnosis may not be clear, the lapse of a few hours may be justifiable. The treatment of these cases during the period of delay will be considered under our third heading.

The *second group* of cases, or that which includes examples of chronic obstruction of the rectum or colon from cancerous, syphilitic, tubercular or simple ulceration, need not detain us long. Practitioners who are in the habit of making rectal examinations in all patients who complain of bowel troubles soon recognise these chronic affections; and if the histories of the cases which present symptoms of an acute nature are carefully gone into, the difficulties of diagnosis are not as a rule insuperable. The digital discovery of growth or ulceration when the disease is low down, and the ballooning of the rectum when it is higher up, afford with the history of the case and other symptoms ample evidence upon which a working diagnosis can be made in the majority of cases; and when the diagnosis has been made, the line of treatment to be followed is neither uncertain nor complicated, since it can be summed up in the use of laxatives to ward off symptoms of obstruction, and a well regulated diet, with colotomy (lumbar if possible) as soon at least as the first symptoms of impending blockage appear; and in time to anticipate those further changes in the bowel above the seat of obstruction upon which the mortality of all cases of obstruction, as well as so many of colotomy, so much depends. When acute symptoms have been grafted upon the chronic, some difficulties in diagnosis may be experienced; but such cases rarely if ever simulate those of internal strangulation, and under such circumstances some delay for purposes of investigation can generally be sanctioned, as long as a line of expectant treatment such as I am now about to consider, and which is not calculated to do harm, is steadily pursued.

The *third group* of cases must now occupy our attention, and it includes all cases which cannot be well placed in either of the two former groups, and in which therefore the diagnosis of the cause is in a manner obscure. It includes also for treatment certain examples of the two former groups. The group comprises, therefore, for purposes of treatment, examples of the first group in which operative delay is justifiable from doubtful diagnosis, or necessary from want of consent or other cause; cases of the second group in which acute symptoms have been grafted on to the chronic; cases of faecal impaction of the caecum or colon (I exclude rectum as this condition is so readily detected); cases due to some local peritonitis, the result of injury, or the extension of inflammation from a pelvic or other organ; also cases of chronic intussusception or of early stricture; cases in which the diagnosis of internal strangulation is not sufficiently clear, or of colonic obstruction from stricture sufficiently evident, and yet in which symptoms of obstruction are markedly present—that is to say, abdominal pain exists in various degrees, and more or less abdominal tenderness and distension. Peristalsis may or may not be visible—if very visible it suggests chronicity. Vomiting may be present or persistent, and this is aggravated by food. Constipation, more or less complete or prolonged, may coexist, and a repeated examination of the rectum fails to give any evidence of local disease. How is such a case to be treated? Are purgatives of steadily increasing power to be regularly administered? Are enemata of gradually increasing quantities and strength to be consecutively employed? Is our old friend the long tube to be called into requisition, and are we still to delude ourselves that by means of it the sigmoid flexure may be washed out? Is the patient, when under an anæsthetic to be inverted, succussed, and his abdomen manipulated by abdominal taxis for thirty or forty-five minutes with the hope that some good may come from it? For my own part, I say away with all these measures as a routine practice. In some few cases they may be applicable, but in most they are surely full of grave danger. When the diagnosis of the case is that of colonic obstruction from faecal impaction, purgatives and enemata may possibly be right in the minds of some; I am disposed to think otherwise. Where the obstruction is probably due to organic stricture, purgatives and enemata are unquestionably wrong.

In most cases of obstruction, and in examples of uncertain strangulation, an enema at the early period of the case to clear out the lower bowel, and to facilitate a rectal examination, is of advantage, but the employment of the long tube is under all circumstances a delusion, a danger, and unnecessary; for when the surgeon wishes to wash out the colon or to fill it, this is best done by using the enema syringe or a long rubber tube and funnel, with the pelvis of the patient well raised on a high pillow, in order to make the injected fluid pass into the bowel by its own gravity. It is true that when purgatives are given in cases of internal strangulation, as in those of hernia, nature herself expels them by vomiting, and in this way the harm they may do is much diminished. But why give them? Is not the bowel above the seat of obstruction in every case of intestinal strangulation, as well as of obstruction, already goaded enough, and is it not full to overflowing with liquid faeces? Is not also this liquid motion ready to flush the lower bowel as soon as the mechanical cause of obstruction is removed? So far as purgatives and aperients are concerned, they can therefore do nothing but harm. As to abdominal taxis, succussion, and inversion, I am at a loss to know what to say, since these measures have a powerful supporter in the distinguished surgeon who advocates their use as a routine practice, and who tells us that it is hardly likely to be prejudicial to any case. I shudder, however, to think of the harm these measures are calculated to produce in all cases of internal strangulation, and believe it cannot be less than forcible taxis is known to bring about in the treatment of an external strangulated hernia.

I am, however, sure that, in a modified form, abdominal kneading is in certain cases of value; indeed, I have employed it with success; in the same way as it is useful in cases of large obstructed, but not strangulated, hernia. Thus, in cases of obstructed bowel from some mechanical cause, such as a band, when symptoms are not severe; in cases of faecal, caecal, or colonic obstruction; in cases of obstruction due to matting together of the intestine from some antecedent peritoneal inflammation the practice may be of use. In any case of acute trouble in which bowel strangulation is suspected the practice must be full of danger, and should be condemned. In these cases an exploratory abdominal incision is far less likely to do harm, and is far more likely to do good if undertaken in time. Under these circumstances I would wish to replace these unscientific, if not dangerous, routine practices by another, which has some reasonable arguments in its favour, and not the least of which is its success.

I propose to illustrate this method by briefly quoting three fairly typical cases, and I choose them because they have all passed under my care during the last year, in an

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excellent home for middle-class patients with which I am now associated at Wandsworth Common, known as Bolingbroke House.

CASE 1.—Mrs. R——, a lady aged sixty, spare but healthy, who for years had at times experienced trouble with her bowels, necessitating the frequent recourse to medicine, came under my care with a distended, tender, and tympanitic abdomen, showing central coils of intestine in a marked manner, frequent vomiting of a bilious character (aggravated by food), and complete constipation of ten days' standing. Pulse normal, but feeble. Temperature subnormal. Urine scanty. A rectal examination gave no evidence of local trouble. The case was supposed to be one of stricture of the large bowel high up. Not feeling sufficiently sure of this diagnosis, I determined to wait before proceeding to operate, and ordered her to have her abdomen covered with a mixture of one drachm of the extract of belladonna and an ounce of glycerine, and to be fed by a 4-oz. nutrient enema, alternating with a nutrient meat suppository every four hours, and a teaspoonful of warm water by the mouth every half hour. Relief to pain and alleviation of all her symptoms soon followed this treatment, and on the fourth day—that is, on the fourteenth of her symptoms—some flatus passed. On the sixth day of treatment, or sixteenth of obstruction, some feculent matter of a grey colour came away. On the seventh day, after a small glycerine enema, a moderate motion was discharged, when food by the mouth was recommenced, and in another two weeks the symptoms had disappeared and the bowels gradually recovered their normal action.

CASE 2.—J. G——, a man aged thirty-two, came under my notice with abdominal symptoms suggesting the thought that he had an intussusception. He had been ill four days and had been constipated for a week. Three days before I saw him he took a dose of castor oil which caused vomiting, and this was soon followed by straining and the passage of blood and mucus from the bowel, but no fæces. Since then he had had abdominal pain of a somewhat paroxysmal character. When seen his abdomen was slightly distended and tender on the right side. No lump could be felt; nothing was to be felt on examination per anum. I ordered him to be kept warm in bed and to lie still. He was not to take any food by the mouth, only a teaspoonful of water every half hour, but to be fed by nutrient enemata (four ounce) alternating with a meat suppository every three hours. The first enema to have twenty drops of laudanum in it. During the next twenty-four hours he passed blood and mucus seven times, accompanied with tenesmus but no fæces. The enemata were continued, but each one was to contain twenty drops of laudanum. On the fourth day of treatment, but the eleventh of obstruction, a liquid motion with flatus was passed, with relief; on the fifth day the same relief; on the tenth day some solid motion came away, but with a blood-clot, and in three weeks his abdominal symptoms had disappeared. I cannot but think that if any of the lines of routine treatment to which I have alluded had been applied to this case that a different result would have taken place. As it was, I left nature alone and simply kept the machinery of life going by rectal alimentation, and checked peristalsis by opium.

CASE 3.—Anne B——, aged nineteen, who for some weeks had suffered from difficulty in obtaining relief from her bowels, after seven days' complete obstruction, was seized with abdominal pain, distension, and tenderness, with vomiting. These symptoms continued and increased in severity for four days, when she came under my care. Her abdomen was then very tense and tender. Nothing could be made out by palpation. She vomited everything she took, and even without food. Nothing had passed the anus for eleven days, not even flatus. There was no abnormal temperature and nothing could be felt in the rectum. I ordered her the belladonna external application, as in the first case, and a nutrient 4-oz. enema of milk and egg, alternating with a meat suppository every three hours, and a teaspoonful of fluid by the mouth every half hour to relieve thirst. On the second day the symptoms were improved, the abdomen was less tense and painful, and vomiting had ceased. On the fourth day of treatment, or fifteenth of obstruction, she was still better, consequently a few ounces of thin broth were allowed. On the fifth day of treatment and sixteenth day of obstruction the bowels acted, and continued to do so, when an enema was given to clear out the rectum of the solid motion which had passed down, and a rapid recovery ensued.

The results that followed the treatment which these cases illustrate were satisfactory, and I am induced to think they were better than any that would have followed the use of powerful purgatives, large enemata, or the abdominal taxis. The treatment, moreover, was simple, and, though expectant, it did no harm. Of such treatment we may reasonably say that it gives time in the only class of cases to which it is applicable—viz., those of a not urgent but doubtful nature—for the case to develop, and the surgeon to frame a more exact diagnosis; whilst it leaves nature every chance of making right, where this is possible, what may have been wrong in the abdominal machinery. Should the symptoms in any given instance fail to be speedily relieved by this treatment, more active measures can be resorted to as soon as a clearer working diagnosis has been made.

In some cases opium may be more freely given than these three cases indicate; but I hold that where belladonna as an external application arrests peristalsis and soothes pain opium is not needed. In many cases it is, however, most valuable; the form I like best is either the solid opium or the bimeconate of morphia. It should, however, always be given with caution. I prefer to employ it with belladonna as a suppository made with gelatine—half a grain of the extract of belladonna and half a grain or more of solid opium. Warm fomentations to a swollen abdomen often give comfort; when employed they should be placed over the glycerine and belladonna application already mentioned. In a case of obstructed bowel from a supposed band with mild symptoms I have known relief to follow the elevation of the pelvis on a firm pillow, so as to allow gravity to act towards the thorax; and I believe that with this treatment, combined with starvation and the use of belladonna and opium, I have had cases of natural recovery. I claim no novelty in the treatment I am advocating. I only want to enforce its value, and should indeed be pleased to know that it had superseded the routine practices to which I have drawn attention, and which have for too long occupied the field. The principle upon which it is based was first recommended by Sydenham; it was reintroduced by Brinton, and more recently enforced by Thomas, with some modifications. It may be summed up as follows. The recumbent position with elevation of the pelvis, abstention from all food by the mouth, rectal alimentation, the external use of belladonna and glycerine, and the administration of belladonna and opium to check peristalsis and soothe pain.

ON THE ACTION OF KOCH'S REMEDY UPON INTERNAL ORGANS IN TUBERCULOSIS.[1]

BY PROFESSOR R. VIRCHOW.

LIMITING his remarks to facts determined by anatomical investigation, Professor Virchow said that from the time at which the practice commenced until the end of December he had examined post mortem twenty-one cases in which during life injections of Koch's fluid had been practised, and to these might be added some six or seven more examined during the present year. [A large number also have been examined by his assistants in other hospitals and elsewhere, and had yielded important facts.]

There is an obvious difference between those cases in which the changes taking place in superficial parts can be observed clinically, and those where the internal organs are affected to an extent difficult to estimate by the most careful clinical investigation; and it is of interest to contrast the latter with the former. Of the twenty-one cases referred to, sixteen were cases of phthisis in the limited sense—i.e., in which the lungs were especially involved. The remaining five cases comprised: (1) A well-marked case of tuberculosis of bones and joints; (2) a case presenting the rare concurrence of cancer of the pancreas with small smooth-walled cavities in lung and apical induration; (3) an empyema in a puerperal case, which would probably have proved fatal apart from the injections; (4) pernicious anæmia, with very limited old lesions in lungs and tuberculous pleurisy; and (5) a case of arachnitis tuberculosa. In the remaining sixteen, strictly pulmonary cases, all showed more or less extensive phthisical ulceration.

[1] Abstract of remarks made during the debate on Dr. B. Fraenkel's paper at the Berlin Medical Society, Jan. 7th, 1891. (From full text given in the "Berliner Klinische Wochenschrift," No. 2, 1891.

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Reserving for another opportunity a detailed statement of these cases, Professor Virchow proceeded to make some general remarks on the experience derived from them. Just as observation of external parts had shown that the remedy acts as a severe irritant, exciting redness and swelling, so the same effects had been well seen in the internal parts. He showed a preparation from a case of arachnitis tuberculosa in Henoch's clinic, in which there were also some old caseo-pneumonic areas in the lungs (the probable focus of the meningeal metastasis), together with recent inflammatory changes. After four injections, amounting in all to two milligrammes, the last being sixteen hours before death, the patient (a boy two years and a half old) died. Professor Virchow did not remember ever having seen so "colossal" a hyperæmia of the pia mater, and even of the brain itself. The pia matral vessels were extremely distended, and the brain tissue of a dull reddish tint. In this, the only case of the kind in the series, he personally examined the tubercles in the arachnoid, but could detect no degenerative changes in them; they were well formed and of the ordinary character. Similar conditions of acute hyperæmia and swelling were also to be found in other internal organs. They had often noted an unusual deep injection of the granulation layers of old pulmonary cavities; sometimes a hæmorrhagic infiltration of the walls, or evidence of recent hæmorrhage into the cavity. In a man thirty years of age, with an old rectal fistula and numerous tubercular ulcers in the colon, death followed upon hæmoptysis from an old ulcerating focus; he had been injected seven times, the last occasion when the hæmorrhage set in, being thirteen days before his death. But these visible changes were not confined to such marked hyperæmic swellings, which obviously might be very transient, for there was not the least doubt that *actual inflammation*, with *active proliferation*, occurred to a considerable extent. This is well shown at the margins of ulcers and in the neighbouring lymphatic glands, especially the bronchial and mesenteric. The glands were most markedly swollen, that form of medullary swelling peculiar to acute irritation, and due to a rapid proliferation of the cells within the gland. This change is often associated with obvious leucocytosis, which may be assisted by the infiltration of white blood-corpuscles around the tubercle. Sometimes these inflammatory swellings are dangerous. Thus in the larynx, although the ulcers may become healthier, the neighbouring tissue enormously swells, and may produce a critical degree of stenosis. Sometimes the change may assume a phlegmonous type, comparable to what is seen in œdema of the glottis and retro-pharyngeal abscess, as illustrated in a case seen this month (January). No doubt it is difficult to assert that any such inflammation is due to the injections, for there is no criterion for any differentiation; nor was he prepared to say precisely how this kind of inflammation may be recognised and distinguished from other inflammatory lesions arising in the course of phthisis. But in the lungs certainly there are lesions which are exceptionally peculiar.

Among the fatal cases of ulcerative phthisis the great majority showed widespread changes of recent date, mostly in the lungs, but also associated with pleurisy of very severe type, simple and tubercular, hæmorrhagic and not rarely bilateral. The lung changes may be separated into two seemingly very different categories. The one corresponds to what is styled "caseous pneumonia," or anatomically, "caseous hepatisation." It might be thought very doubtful whether this change was in any way connected with the injections. Professor Virchow would himself have doubted this were it not that some of the cases showed it in a special degree, and he exhibited a portion of lung which had undergone caseous hepatisation to an extent the like of which he had not seen for years. The lungs were large, their lower lobes, especially the right, as voluminous as in ordinary hepatisation; but the foci were so thickly massed as to leave hardly any parenchyma between them. It was like a piece of black sausage richly laden with fat. The non-caseous parts were blackish and sharply demarcated from the caseous. The man was thirty-three years old; he had had six injections, the last four weeks before death, and the injections were suspended because of supervention of continued fever and infiltration of the lower lobes. This infiltration started just after the injections, for previously there were only signs of induration at one apex, where was afterwards found an old indurated focus. In other cases, also, the condition of the lungs similarly differed from what is usually seen in phthisis; in five of the cases there were more or less large masses of caseous hepatisation, but not approaching the extent of the case related.

Another change, which is certainly inflammatory, is of a more diffuse character, although again not absolutely distinctive. The types of pneumonia liable to arise in the course of phthisis may be placed in three different categories. There are the caseous, the ordinary fibrinous, and the *catarrhal*, so-called smooth pneumonias—marked essentially by cell accumulations in the alveoli. One may see all these forms in a case of phthisis, but in not one of the injected cases was simple fibrinous pneumonia present.[2] In fact, the "injection pneumonia" resembles the catarrhal type, but with certain differences. Catarrhal pneumonia, as ordinarily met with in phthisis, exhibits a moderately fluid collection in the alveoli, which can only be slightly expressed from them. Sometimes the contents are much more watery, like brine, and it was this which led Laennec to speak of gelatinous infiltration preceding tubercular infiltration. But the product in these cases is not gelatinous; it is rather watery and turbid; it might be called cloudy infiltration, and calls to mind a *phlegmonous* condition. In some parts it is more opaque; in parts it has a superficial likeness to caseation, but without its dry character, and there is no difficulty in distinguishing the two. The catarrhal phlegmonous condition is softer, moister, and laxer, as in a specimen shown, where around large ulcerating cavities in the apex of lower lobes were caseous masses and catarrhal inflammation. Two other specimens also showed caseous and catarrhal hepatisation, which condition occurred in seven out of the sixteen cases examined last year. A further point of difference from ordinary catarrhal hepatisation consists in the occasional occurrence of areas of softening in the midst of the hepatised foci, producing rapid excavation; for instance, in the middle of the lower lobe, just as in gangrenous broncho-pneumonia. This result seems to point to the operation of a stronger irritant than that which is usually regarded as the cause of catarrhal pneumonia. Professor Virchow is of opinion that, in some of these cases at least, the inflammatory processes are analogous to those excited in the external parts after injection, which vary in intensity with the individual and the special features of the case.

Another phenomenon has been noted which requires confirmation by thorough clinical observation; it is the outbreak of *recent tubercles* in these patients. He could only speak with much reserve on this point, since we have no fixed data as to the duration of small tubercles—i.e., the *submiliary form*—and cannot judge positively as to their age. Generally they are regarded as being of recent formation. Clinical observation in certain cases has shown an eruption of tubercles on the laryngeal mucous membrane after injection. Small tubercles have become almost suddenly visible in places which appeared to be perfectly free from them, and they have rapidly given rise to fresh ulcers. It is asserted that this shows the tubercles to have existed prior to the injection, but that they have not been visible. They have been attacked and destroyed by the remedy, and thereby changed into ulcers. Professor Virchow was unable to controvert this statement as regards the recorded cases, but in his own examination of those parts, which he has always regarded as most suitable for the observation of these recent formations—viz., serous membranes—has revealed *the eruption of very recent tubercles under conditions which render it very unlikely that these were of old date*. This is especially seen in the pleura, pericardium, and peritoneum. He has never been able to confirm the notion that the tubercles were strongly attacked by the remedy and mortified, for in all these cases the submiliary tubercles in question were quite intact, even following injections made some weeks previously. Hence he is the more inclined to the notion that their eruption first took place *after* the injection.

Owing to the great difficulty in discriminating precisely these very fine forms of tubercle in the lungs themselves, he would speak only of regions, such as the mucous membrane of the larynx, where miliary tubercles first appeared after injection, or where after more prolonged injections quite recent tubercles have been seen in the membrane. He showed an intestine—procured this month—in which there was a very recent submiliary eruption in the vicinity of old ulcers; the patient, a man forty-one years old, also had recent tubercles in the pericardium.

[2] Semi-fibrinous hepatisation occurred associated with other changed

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In endeavouring to explain these fresh eruptions he remarked that if one admits that every tubercle is due to bacilli, the study of such remote parts as the pericardium deserves special attention. In another case the epicardium had at one spot, not in contact with the affected part of the lung, a small group of four such miliary tubercles surrounded by marked hyperæmia. There seemed no other explanation than that their germs had come there by metastasis; and why, he asks, should not the metastatic transference of liberated bacilli be deemed a source of more generalised infection? For Professor Koch states that the bacilli resist the action of the remedy, nor indeed are they destroyed, and therefore the possibility must be recognised that the softening process excited by the remedy makes the degenerative products more fluid and more liable to be carried away to create foci elsewhere. This idea is not far fetched, and is linked with another—viz., the infiltration, under the treatment, of a whole lower lobe into foci of caseous hepatisation, suggesting that material set free from the upper lobe by the destructive processes, and not coughed up, has been sucked into the lung and has excited a kind of caseous "Shluck-pneumonia."

Professor Virchow said he felt bound to express these ideas in order to unite with them the warning that still greater caution should be used in operating on cases where the patient has not the strength or the habit of completely coughing up the softened material, and where there is great possibility of the conveyance of this material to other parts of the lung to excite therein fresh foci. Another point on which Professor Koch lays stress as the main effect of his remedy is the destructive process itself. There is no doubt that such an action does take place in many parts; but it is not quite clear why this mortification does not always occur, as, for instance, in the cases of submiliary tubercles referred to. Professor Virchow admitted—as had been described by some earlier observers—in tubercular pleurisy, for instance, that, especially when the tubercles increased in size, they assume an unusually cloudy, yellowish aspect, and show definite microscopic changes. But at other times, even when injections are continued to the day before death, this change does not occur. Large tubercles may even appear very resistant. They had lately a very remarkable case of a boy three years of age, with tuberculosis of the vertebræ and long bones, and where large tubercles were found in the brain. The injections had reached 0·012 gr. It was a surgical case, in which spinal caries with psoas abscess and much disease of the joints and bones of the lower limbs existed. At the necropsy there were as many as seven so-called "solitary tubercles"—i.e., large caseous masses—in the brain and cerebellum; but neither in them nor in their vicinity were any marked changes to be seen. There were a few spots of softening, but not of special import, and certainly none of the nodules showed any marked destruction.

Professor Virchow next drew attention to the conditions observed in cases of phthisis, in *ulcers of the intestine* and in the *ulcers of the respiratory organs, especially in the lungs.* As regards the intestine, there could be no question as to the occurrence of mortifying processes similar to those observed in lupus, especially in the older ulcers of wide extent and thickened margins, where there is much fresh submiliary eruption to be seen together with extreme mortification. He showed the specimen from the case which also had pericardial tubercle, in which the destruction of the intestinal ulcer had invaded the serous coat. Had the man survived two days longer perforation must have occurred. This was so in another case lately related by Professor B. Fraenkel where death occurred from perforation. Although such mortification and perforation do take place in tubercular ulceration, yet it was remarkable to have two such instances within two months of severe cases where the mortifying process was in rapid progress. The same is true of ulcers in the organs of respiration, in which very rapid destruction takes place, and the unusually large size of the detached masses must obviate the possibility of their being expectorated, and thereby favour their retention and aspiration with its consequences. Professor Virchow showed also a specimen of very severe laryngeal tuberculosis (from the same case as the pericardial and intestinal specimens referred to) in which twenty injections had been practised, the last on the day preceding death. The specimen showed a recent eruption involving the whole extent of the larynx, of most exceptional severity. Another preparation showed recent caseous hepatisation, from a case in which six injections were made, the last four days before death; another where three injections, the last one week and a half before death, and in which cheesy foci and tracts of diffuse inflammation were present; and lastly a preparation obtained that morning showing a spreading abscess in the lung starting from bronchiectasis in the lower lobe.

ON CHRONIC DISEASE OF THE UTERINE APPENDAGES;

WITH SHORT NOTES OF THIRTY CONSECUTIVE CASES TREATED BY ABDOMINAL SECTION.[1]

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BEFORE entering on the systematic consideration of the various diseases, I propose to relate briefly the notes of one or two cases out of the thirty on which I performed abdominal section, seven of these being in private and twenty-three in hospital practice. For convenience of reference I have arranged all the cases in a tabular form.

CASE 6. *Small suppurating and adherent dermoid tumour of right ovary.*—Mrs. S——, aged twenty-six (an Australian lady), was sent to me by Dr. Cory of Guildford for chronic pelvic pain and dysmenorrhœa. The patient is a tall, thin, and delicate-looking woman. The catamenia began at sixteen, were regular and normal until four years previously, when she began to suffer pelvic pain, especially on the right side, and radiating through to the back; this pain has decidedly increased since her marriage two years ago; she has not been pregnant, and latterly there has been much dyspareunia. On examination nothing is felt abnormal in the lower abdomen. Per vaginam the uterus is not enlarged, but is pushed somewhat to the left side by a rounded, tender, somewhat elastic, and fixed tumour, about the size of an orange, in the right posterior quarter of the pelvis. This was diagnosed as an enlarged ovary, and the patient was kept in bed for two months. Hot iodine douches were used night and morning. Blisters were applied over the right ovarian region, and small doses of corrosive sublimate with iodide of potassium given thrice daily. No improvement resulting, abdominal section was performed, when the tumour proved to be a suppurating dermoid, with universal adhesions, so that its removal was exceedingly difficult. During the operation some of the purulent contents escaped into the pelvic cavity, and there was oozing from the torn adhesions. The pelvic cavity was flushed with a hot 5 per cent. boracic solution and a glass drainage-tube inserted. The tube was removed in thirty-six hours. The patient progressed satisfactorily until a week after the operation, when a small hæmatocele occurred where the tumour had been. This made the patient's recovery tedious, but I saw her a year after the operation, when she expressed herself as feeling perfectly well in every respect, and she is putting on flesh. At the time of the operation the left tube and ovary had a few adhesions binding them down, but otherwise they appeared healthy; so the adhesions were divided, and the appendage left intact.

CASE 24. *Pelvic peritonitis; right hydro-salpinx, left ovary and tube matted together; cure.*—Mrs. H——, aged twenty-seven, married three years; has never been pregnant. Catamenia commenced at fifteen, always more or less painful, worse since marriage. In 1888 she was operated on in Australia for the cure of the dysmenorrhœa, which she was told was due to her womb being bent. She was ill after the operation from "inflammation." On coming to England in 1889 she consulted me. I found "uterus normal in position, but its mobility is impaired. In the left posterior quarter of the pelvis the ovary and tube feel matted together and enlarged; in the right quarter is a cystic swelling which feels like a dilated tube." On Dec. 7th, 1889, I performed abdominal section, and found the left appendages universally adherent, with much thickening of the tube from chronic salpingitis. The right tube was dilated into a thin-walled cyst, and contained four ounces and a half of serous fluid; there was

[1] Read at a meeting of the Medical Society of London.

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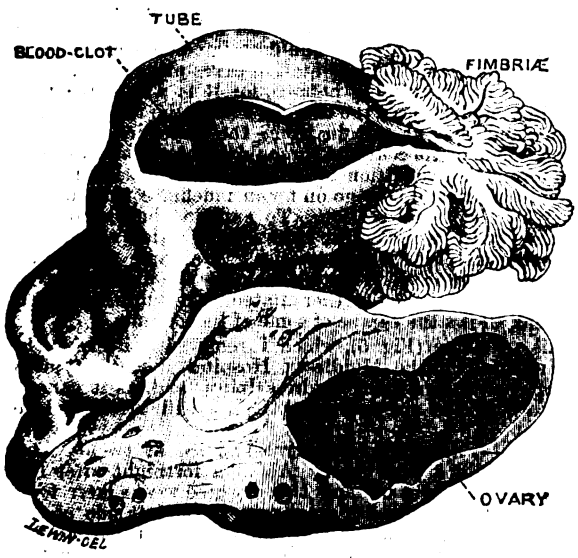
rather free oozing from the torn adhesions, but it was soon controlled by sponges. The patient's subsequent history is very interesting. Two hours after the operation sickness commenced, and continued, despite all treatment, with great frequency for six days, during which time the patient vomited 103 times. Thirty-six hours after the operation the retching was so severe that the wound was partly torn open and secondary hæmorrhage ensued. Harelip pins were used to give greater support. From the third to the sixth day the vomit was black. On the seventh day an enema of fifteen ounces of olive oil was given, as well as a dose of white mixture every two hours by the mouth. These acted freely, and from that date all sickness disappeared. The patient was up on a couch on the nineteenth day. Since then she has been to Australia and back, and now (January, 1891) she is perfectly well, and enjoys violent exercise on horseback.

The next two cases are very interesting, inasmuch as they presented symptoms and physical signs of tubal gestation. Both are young married ladies, living close to one another in Hertfordshire, and were under observation and treatment at the same time.

CASE 26. *Left hæmato-salpinx, with apoplexy of ovary.*—Mrs. E——, aged twenty, married six months. She was regular for three periods after marriage; she then saw nothing for seven weeks, and had morning sickness, with pains in the breasts and lower part of the back. At the end of the seven weeks she was seized with severe pains in the left side of the abdomen and in the back, accompanied by hæmorrhage. A clot was passed, but this was not shown to her medical attendant, Dr. Ambler of Hemel Hempstead. Under treatment and rest the loss diminished for a time, but the pain still remained. The hæmorrhage again increased, so Dr. Ambler asked me to see her. I found on examination the uterus somewhat enlarged, the os uteri admitting the finger tip. In the region of the left Fallopian tube, and extending somewhat behind the uterus, was a tense, elongated cystic swelling, apparently about the size of a sausage. The sound was not passed. I diagnosed a tubal pregnancy, and, in view of its possible rupture at any moment, recommended that abdominal section should be done without delay. I operated next morning, and without much difficulty removed the specimen I now hand round. The ovary is much enlarged, and on section is seen to be filled with blood; the Fallopian tube is distended to the size of a banana, and it also is full of blood, partly fluid, partly clotted. (Fig. 1.) The patient

FIG. 1.



CASE 26: Hæmato-salpinx and apoplexy of ovary.—Tube distended with blood and blood-clot. Ovary enlarged. Hæmorrhage into (probably) a greatly distended Graafian follicle.

made an uninterrupted recovery, and is now (January, 1891) in perfect health.

CASE 27. *Double tubercular pyo-salpinx, with tubercular disease of both ovaries and apoplexy of left ovary.*—Mrs. M——, aged twenty-two, married two years and a half; never pregnant. The family history is good, except that one maternal uncle died of phthisis. Previous history good. Catamenia began at fifteen, regular every four weeks, and lasting one week; but ever since the onset of the periods there has been pain in the left ovarian region. Since marriage the dysmenorrhœa has been much worse, and clots have been passed. On June 9th, 1890, she consulted her medical attendant, Dr. Russell Steele of Hemel Hempstead, as the pain was so severe. She then had amenorrhœa for six weeks with some morning sickness, and thought she was getting stouter. On making a vaginal examination, Dr. Steele felt an irregularly shaped mass, very tender to the touch, to the left side of, and slightly behind, the uterus. Bimanually little could be made out, owing to the thickness of the abdominal parietes. Rest in bed with sedatives was ordered. Fourteen days later Dr. Steele was suddenly summoned to see the patient, and on arrival was informed that she had been to the watercloset, and was there suddenly seized with the most excruciating pain in the lower abdomen. "Something" passed from her into the pan of the closet during the pain, but, unfortunately, it was not kept. Dr. Steele found the patient faint and collapsed, but after administering stimulants and a hypodermic injection of ether she quickly rallied. When I saw the patient, in consultation with Dr. Steele, the condition was just as described above, and I concurred in his opinion that most likely it was a ruptured extra-uterine gestation; but as I thought it had ruptured between the layers of the broad ligament, I recommended strict confinement to bed and watching the progress. As a week later she seemed getting worse, pain more severe, pulse feebler, I performed abdominal section, with the help of Dr. Steele and Mr. Battle. On opening the abdomen the peritoneum was seen to be studded with rice-like bodies. The left broad ligament was apparently distended by a tense, bluish, elastic swelling, but after tearing down many adhesions (a process which took more than an hour) the swelling proved to be a distended Fallopian tube and enlarged ovary matted together. These were removed after transfixing the broad ligament in the usual way. The appendages on the right side were removed in the same manner after breaking down many adhesions. A drainage-tube was inserted and the wound treated in the ordinary way. On examining the parts removed (see Figs. 2 and 3) the left Fallopian tube was distended with thick inspissated pus to the size of a sausage. The left ovary was as large as a small Tangerine orange, cystic, and with hæmorrhagic extravasation into it. The right tube was about as thick as a man's thumb, and contained the same kind of cheesy pus as the left. The right ovary was double the normal size, and was studded with collections of pus the size of peas. The patient made a rapid and complete recovery, and is now putting on flesh and feeling well.

The next case is instructive and interesting, as the pedicle ligature slipped soon after completion of the operation. Hæmorrhage (which was not diagnosed) took place, and death followed two days later.

CASE 29.—Mrs. J—— was admitted to hospital complaining of dysmenorrhœa, pains in the back and the left side, leucorrhœa, and general ill-health. Married thirteen years; has had three children. On admission the uterus was retroverted, and not easily replaced; there were thickening and tenderness in the region of both broad ligaments. She was treated for several weeks with hot douches, glycerine tampons, blisters, and aperients. When readmitted two months later the patient was no better, so abdominal section was performed. The ovaries and tubes were adherent in the pelvis; they were removed and the pedicles were treated in the ordinary way. Half an hour after the operation the patient was very collapsed; pulse feeble, regular (70); unconscious; no distension of abdomen. Temperature 96·4°. Hot blankets were applied, ether injected, and as she seemed to rally I was not sent for. An hour and a half after the operation reaction had well set in; lips good colour; pulse strong and full (80). A morphia suppository of a quarter of a grain was given. I saw the patient three hours and a half after operation. She appeared quite satisfactory, no signs whatever to indicate internal hæmorrhage. The next day she seemed comfortable; the temperature was 100°. Slight tenderness of abdomen; no distension; resonant all over; no sickness. Towards evening the temperature went up to 102·4°, and next day (the second after the operation) the patient was evidently worse; pulse rapid, weak (136); abdominal pain, tenderness, and distension. Diagnosing peritonitis, I reopened the abdomen to wash out the cavity, and was horrified to find it full of

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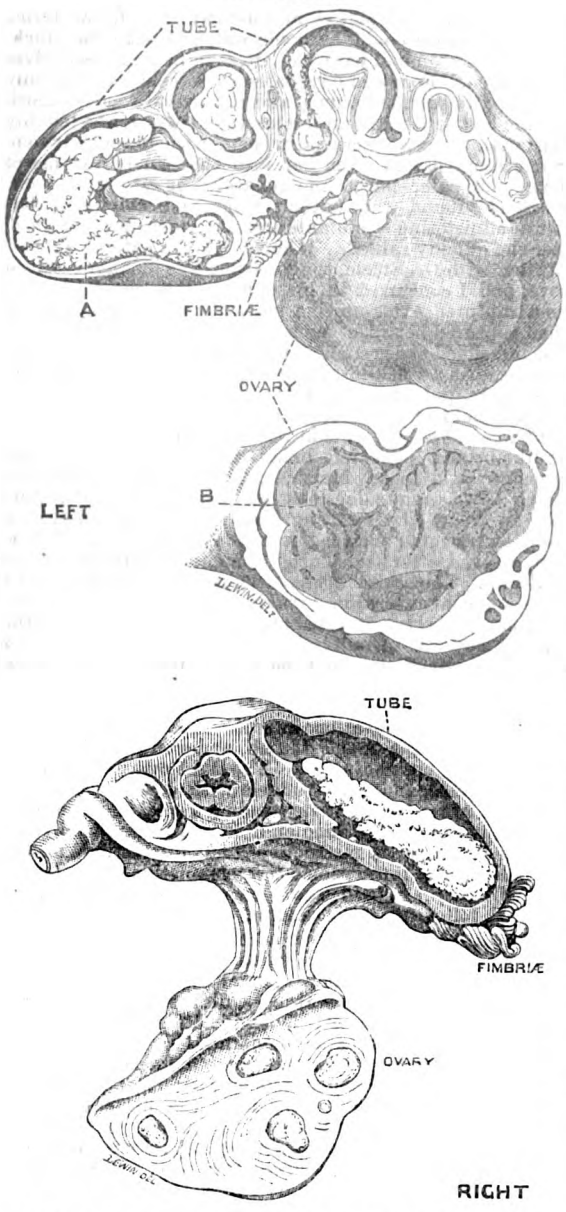
blood; the broad ligament was rapidly seized, the blood and clots cleared out, pedicle securely retied, abdominal cavity irrigated, a drainage-tube inserted, and the wound quickly reclosed. In spite of all efforts at stimulation the patient never rallied, but died six hours after.

Let us now consider, *seriatim*, the different diseases of the uterine appendages included under the title of this paper. It is obviously unnecessary to touch upon large tumours which rise up out of the pelvic cavity, as nowadays almost everyone agrees that their proper treatment is by abdominal section. Such, however, is unfortunately not the case with diseases which give rise either to small pelvic tumours or to none at all, but which often entail intense suffering, which are sometimes overlooked (either accidentally or designedly), and about the treatment of which there is (unluckily for the sufferer) a great diversity of opinion.

FIGS. 2 & 3.



CASE 27: Left ovary and tube.—*Ovary* enlarged, adherent to tube, and full of blood (B). *Tube* distended with inspissated tubercular pus (A).

CASE 27: Right ovary and tube.—*Ovary* twice normal size, containing deposits of cheesy pus. *Tube* distended with a like deposit.

Chronic salpingitis is in the majority of cases due to extension of catarrhal or purulent endometritis; sometimes, however, it is doubtless secondary to a pelvic peritonitis. Each Fallopian tube consists, as is well known, from without inwards, of peritoneum, circular and longitudinal muscular fibres, with a mucous membrane, which is lined by a layer of columnar ciliated epithelium, and thrown into numerous longitudinal folds or plicæ. Glands have been described as present, but there is a complete absence of them. Probably the folded appearance of the mucous membrane led to the error. The changes which take place in the tubes when subject to chronic inflammation are well shown in this drawing (Fig. 4) taken from the beautiful plates of Wyder of Berlin. The mucous and muscular layers are hypertrophied. The folds of the mucous membrane do not show the normal complicated appearance. Single papillary elevations are seen separated from one another by gland-like invaginations of the mucous membrane, some shallow, some deep. The papillæ are completely bared of epithelium, but it may still be seen in the recesses between the folds. On the surface of the mucous membrane is a zone of closely packed round cells like granulation tissue, whilst beneath this the deeper portion of the mucous membrane is specially characterised by the presence of a large number of spindle cells. Thick-walled vessels are present in great numbers in the wall of the tube. I believe a salpingitis may exist like this for an indefinite period, the fluid exuded gradually making its way through the patent uterine end into the uterine cavity, but what happens far more often is this: the inflammation extends to the fimbriated end; a little of the fluid escapes into the peritoneal cavity and sets up a pelvic peritonitis of varying degrees of severity, according to the virulence of the exudation; then the ostium gets closed up by adhesions, and the tube becomes transformed into a shut sac by the uterine end also becoming closed. The further changes in the tube depend on the character of the primary inflammation. If it be catarrhal or due to extension of a peritonitis, then serous fluid collects in the tube, the coats of which get gradually thinned out, and finally we have a hydro-salpinx with a very thin transparent cyst wall. When the inflammation has been purulent (as in extension upwards of a gonorrhœa), then the same changes take place, with the important difference that the cyst contents consist of pus forming a pyo-salpinx. In other cases the capillaries of the diseased mucous membrane become engorged with blood, then some of them rupture and blood gets extravasated into the tube, forming a hæmato-salpinx. This condition is shown in some of the specimens on the table, and the microscopical appearances are well illustrated in this drawing of Wyder (Fig. 4).

I said just now that as a result of salpingitis and pelvic peritonitis both the uterine and fimbriated ends of the tube become closed, and then dilatation takes place; this, however, does not invariably happen, for it is a positive fact that in some instances the uterine end of the tube remains patent, and that at certain times the distended tube discharges some of its contents through the uterus and vagina. This interesting condition is known as intermitting hydro- or pyo-salpinx, and may go on for an indefinite time unless cured by abdominal section. To explain the phenomena we have only to remember that dilated tubes sometimes undergo axial rotation in precisely the same manner as ovarian tumours; this rotation occludes the uterine end of the tube, which, when further dilated, partly unwinds itself and thus allows the escape of some of its contents.

This specimen (Fig. 5), which I removed quite recently from a patient in the Middlesex Hospital, is such a typical example of intermitting hydro-salpinx, and, as it cannot fail to convince the most sceptical, I will briefly relate the case.

M. A——, aged thirty-six, was married at twenty, and had one child a year later. About a fortnight after her confinement she got up, and two or three weeks later took cold, and was seized with great pain in the left side of the lower abdomen, for which she had to lay up three weeks. Nine months afterwards she began to have a white discharge between the periods, and this continued. In March, 1888, she began to have a profuse watery discharge from the vagina at intervals on walking any distance, and she also had much pain in the back. This intermittent watery discharge continued until her admission to Prudhoe ward on April 10th, 1889. On examination, my note was: "Left ovary and tube enlarged to the size of a small orange, and displaced below and behind the uterus. The

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THIRTY CONSECUTIVE CASES OF ABDOMINAL SECTION FOR CHRONIC DISEASE OF THE UTERINE APPENDAGES (ONE FATAL FROM HÆMORRHAGE).

No.	Name.	Age.	State.	Symptoms.	Duration.	Physical signs.	Where operated on.	Parts removed.	Result.	Remarks.
1	A. L.	20	Single.	Great dysmenorrhœa; painful defecation.	7 years.	Elastic tumour, size of orange, left side of pelvis.	Waterloo-road Hospital.	Left hydro-salpinx; both ovaries enlarged; cystic.	Recov.	Perfect health two years later.
2	Mrs. H.	30	Marr.	Constant backache; pelvic pain.	6 ,,	Two elastic, tender, fixed tumours in pelvis.	Middlesex Hospital.	Double hydro-salpinx; both ovaries cystic.	,,	Ditto.
3	Mrs. L.	32	,,	Menorrhagia; constant pelvic pain.	4 ,,	Retroflexed fixed uterus; distended left tube.	Private.	Left pyo-salpinx; right salpingitis; ovaries cystic.	,,	Universal adhesions; operation very difficult; ultimate result excellent.
4	Mrs. W.	25	,,	Left ovarian pain; constant backache.	5 ,,	Uterus, ovaries, tubes, fixed posteriorly.	Middlesex Hospital.	Left salpingitis and ovaritis.	,,	Right appendage not removed.
5	F. B.	24	Single.	Left ovarian pain; great dysmenorrhœa.	6 ,,	Elastic tumour, size of orange, on left side.	Ditto.	Left ovarian cyst; left salpingitis.	,,	Right appendage separated from adhesions and left.
6	Mrs. S.	25	Marr.	Chronic severe pelvic pain.	4 ,,	Elastic tumour to right of uterus, size of orange.	Private.	Suppurating dermoid of right ovary.	,,	Tumour universally adherent; ultimate result perfect.
7	Mrs. P.	21	,,	Dysmenorrhœa; dyspareunia; menorrhagia.	18 mnths.	Sausage-shaped tumour on right; left tube thickened.	Private.	Right hydro-salpinx; left ovaritis and salpingitis.	,,	Ditto. Ditto.
8	J. T.	26	Single.	Menorrhagia; dysmenorrhœa; leucorrhœa.	5 years.	Uterus retroverted; both ovaries large; prolapsed.	Middlesex Hospital.	Both ovaries large; left pyo-salpinx; right hæmato-salpinx.	,,	Dense adhesions; perfect health resulted.
9	Mrs. H.	27	Marr.	Constant pelvic pain; dyspareunia.	17 mnths.	Cystic swelling on right; left appendage enlarged.	Private.	Right hydro-salpinx; left salpingitis and ovaritis.	,,	Universal adhesions; present health perfect.
10	Mrs. B.	34	Widow	Menorrhagia; right pelvic pain.	18 ,,	Uterus retroverted; prolapsed, thickened, and fixed appendages.	Middlesex Hospital.	Both ovaries atrophied; tubes much thickened.	,,	Appendages matted together; suppurating parotid bubo; present health moderate.
11	A. J.	22	Single.	Severe pelvic pain.	4 years.	Tumour on left; right ovary atrophied.	Ditto.	Ditto.	,,	Suppuration in abdominal wall; retarded convalescence.
12	Mrs. A.	35	Marr.	Left pelvic pain; yellow discharge.	2 ,,	Uterus retroverted; ender swelling to left	Ditto.	Left appendage matted; much diseased.	,,	Ditto.
13	Mrs. V.	33	,,	Severe dysmenorrhœa and menorrhagia.	10 ,,	Ditto.	Ditto.	Large fibro-cystic left ovary; left hydro-salpinx.	,,	Ultimate result good.
14	Mrs. D.	30	,,	Chronic pelvic pain; offensive yellow discharge.	7 ,,	Elastic tumour big as fist on left side.	Ditto.	Left ovary and tube matted together; right ditto.	,,	Ditto.
15	Mrs. A. E.	22	,,	Menorrhagia; severe dysmenorrhœa.	1 year.	Irregular swelling on right.	Waterloo-road Hospital.	Right hydro-salpinx; left salpingitis and ovaritis.	,,	Ditto.
16	Miss F.	22	Single.	Intense pelvic pain and dysmenorrhœa.	2 years.	Both appendages prolapsed, enlarged, and fixed.	Private.	Ovaries and tubes enlarged and matted together.	,,	Cause: pelvic peritonitis following chill; present health excellent.
17	Mrs. M.	37	Marr.	Pelvic pain; dysmenorrhœa; leucorrhœa.	1 year.	Round tumour, size of orange, anteriorly.	Middlesex Hospital.	Ovarian tumour full of blood; twisted pedicle.	,,	Three tight twists held fast by adhesions.
18	C. R.	26	Single.	Constant left pelvic pain.	19 mnths.	Prolapsed; enlarged ovaries.	Ditto.	Fibro-cystic ovaries size of horse-chestnuts.	,,	Ultimate recovery good.
19	Mrs. M. P.	44	Marr.	Severe pelvic pain; leucorrhœa.	5 years.	Uterus retroflexed; appendages prolapsed; enlarged.	Ditto.	Both tubes distended; adherent to ovaries.	,,	Ditto.
20	R. B.	31	Single.	Menorrhagia; dysmenorrhœa; leucorrhœa.	3 ,,	Enlarged, prolapsed ovaries.	Ditto.	Ovaries large, fibrous, cystic; tubes normal.	,,	Present health excellent.
21	A. S.	23	Single, primip.	Constant pelvic pain; yellow discharge.	2 ,,	Uterus retroflexed; fixed; appendages fixed.	Ditto.	Nothing removed.	,,	See note below. *
22	Mrs. S.	35	Marr.	Left pelvic pain; dysmenorrhœa.	15 mnths.	Uterus retroflexed; fixed; appendages enlarged; prolapsed.	Ditto.	Both ovaries cirrhotic; both tubes dilated.	,,	Dense universal adhesions; fixed uterus replaced; ultimate result good.
23	E. B.	20	Single.	Chronic pelvic pain; menorrhagia.	4 years.	Right ovary atrophied; tender; general pelvic tenderness.	Ditto.	Both ovaries ill-developed; very small.	,,	Uterus ill-developed; present health satisfactory.
24	Mrs. H.	25	Marr.	Left pelvic pain; constant discharge.	4 ,,	Ovaries and tubes fixed in pelvis.	Ditto.	Ovaries and tubes matted together.	,,	Present health excellent; constipation only trouble.
25	Mrs. W.	27	,,	Menorrhagia; dysmenorrhœa.	1 year.	Uterus fixed; broad ligaments thickened.	Waterloo-road Hospital.	Left ovary apoplectic; double hydro-salpinx.	,,	Present health good.
26	Mrs. E.	20	,,	Menorrhagia; severe backache.	1 mnth.	Tense swelling to left of uterus.	Private.	Large apoplectic ovary; left hæmato-salpinx.	,,	All signs and symptoms of tubal gestation; now quite well.
27	Mrs. M.	22	,,	Severe pelvic pain; collapse.	5 weeks.	Tumour filling left side of pelvis.	Private.	Large apoplectic left ovary; double pyo-salpinx.	,,	
28	Mrs. H.	20	,,	Menorrhagia; dysmenorrhœa.	13 mnths.	Ovaries and tubes enlarged; fixed in pelvis.	Waterloo-road Hospital.	Chronic ovaritis and salpingitis; appendages adherent.	,,	Universal adhesions; operation very difficult.
29	Mrs. J.	31	,,	Dysmenorrhœa; leucorrhœa.	2 years.	Uterus retroverted; broad ligaments thickened.	Middlesex Hospital.	Chronic ovaritis and salpingitis; appendages adherent.	Death.	Right pedicle ligature slipped; extensive hæmorrhage.
30	Mrs. S.	37	,,	Pelvic pain; menorrhagia; dysmenorrhœa.	6 mnths.	Cystic swelling.	Waterloo-road Hospital.	Double hæmato-salpinx; right ovary apoplectic; left ovary cirrhotic.	Recov.	Present health good.

* Case 21 was operated on twice; first time, the appendages were so firmly adherent and the abdominal parietes several inches thick, that it seemed impossible to remove the disease. Troublesome suppuration in abdominal wall retarded convalescence. Four months later patient returned, begging that something more should be done to relieve her pain. On again opening the abdomen, the omentum and intestines were so matted to the parietes that I was compelled to desist. Patient went out a month later *in statu quo*.

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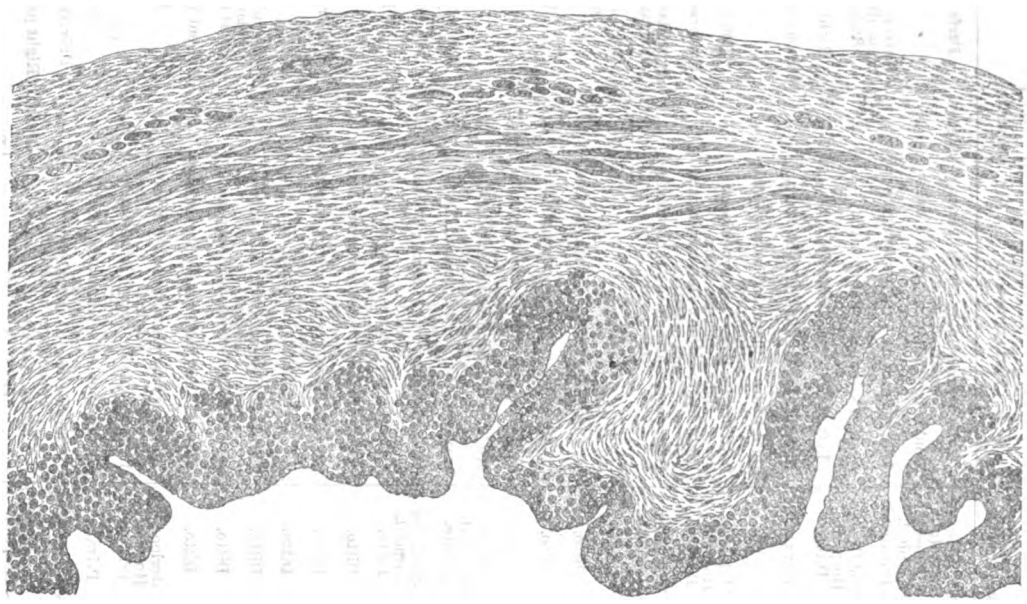
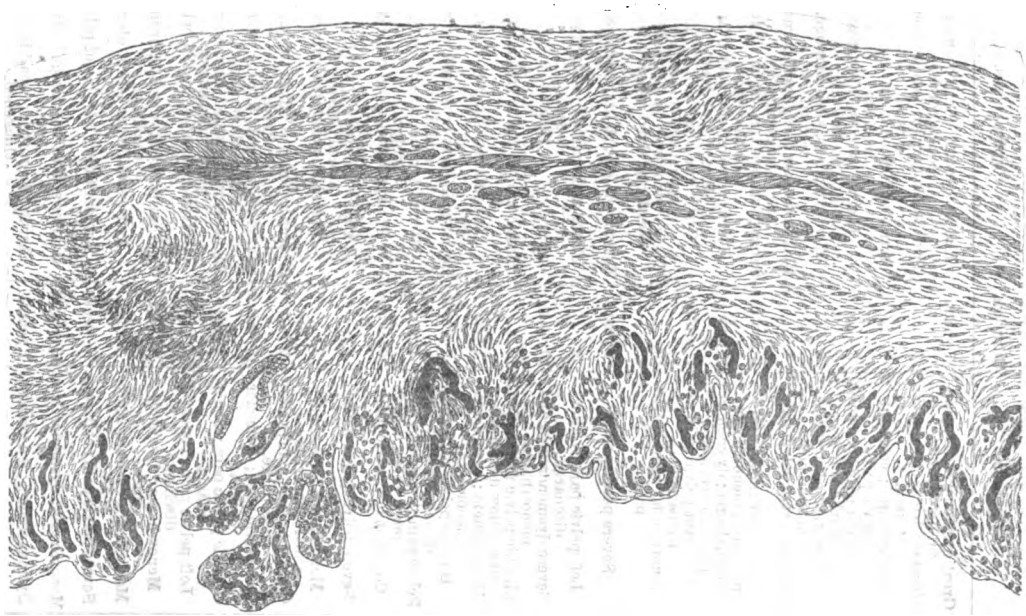
right tube can be felt thickened and displaced downwards. The uterus is normal." I ordered hot vaginal douches night and morning, followed by glycerine tampons; also a mixture of quinine, iron, and sulphate of magnesia. Nine days after admission a watery discharge commenced, and went on for a week, at the end of which time the swelling in the left posterior quarter of the pelvis was found to be much diminished in size; three weeks later she was discharged convalescent. On Oct. 20th, 1890 (seventeen months after), she came again complaining of much pain in the back, left side of the abdomen, and left leg, with profuse gushes of watery fluid. On examination I then found a large cystic swelling filling up the left side of the pelvis. When the patient was admitted to the hospital three days later the swelling was considerably reduced in size, and she said that she had had a large gush the previous day. On performing abdominal section I removed the hydro-salpinx now shown. There were no adhesions. I tied the tube close up to the uterus, and on cutting it across the contained fluid began to flow out, showing that the tube was patent right up to the uterus, and doubtless the uterine portion was so like-wise. The right tube and ovary were found to be diseased, and were therefore removed. The patient's convalescence was retarded by some troublesome suppuration in the abdominal wall, which latter was thickly loaded with fat. Another condition, which has been erroneously thought to be the explanation of these cases of intermitting hydro- or pyo-salpinx, is that in which a dilated tube becomes adherent to

FIG 4.

A



B



A, Section of Fallopian tube in case of pyo-salpinx (Wyder).—Mucous and muscular coats hypertrophied; ciliated epithelium lost, except in depressions between papillæ; superficial layer of mucosa replaced by round cell granulation tissue; deep layer made up of spindle-celled tissue. B, Section of Fallopian tube in case of hæmato-salpinx (Wyder). Loss of epithelium, except in the depressions between the papillæ; round-celled tissue not so well marked as in A. Rich network of capillaries engorged with blood, and extending close up to the surface of the mucosa. Extravasations of blood at different parts.

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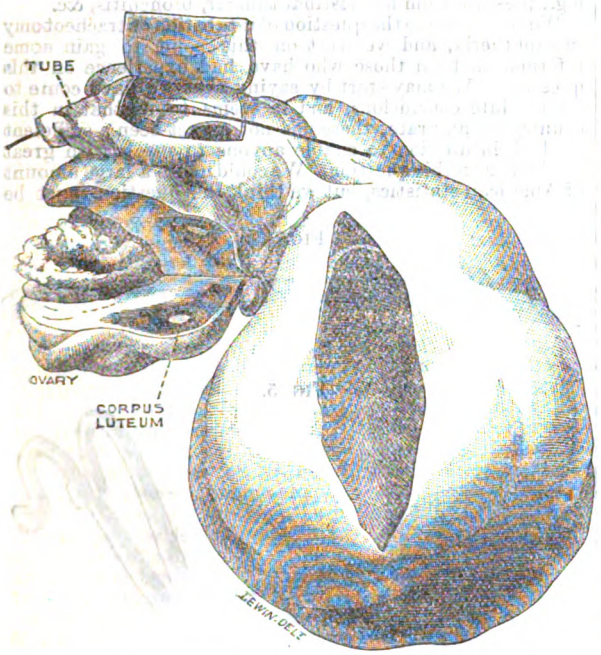
the bottom of Douglas's pouch, and thus discharges its contents into the vagina, rectum, or bladder. A most interesting case of this kind I saw some years ago in consultation with my brother, Dr. P. T. Duncan. The patient, a widow, was seized periodically with attacks of pelvic inflammation, followed by a profuse discharge of pus per vaginam. On examining the lower abdomen, I found on either side, rising up above Poupart's ligament, a tense elastic swelling, that on the right being mobile, but that on

FIG. 5.



Intermitting hydro-salpinx: Left Fallopian tube and ovary.—*Tube* greatly distended and coats thinned; abdominal ostium closed; uterine end (through which bristle is passed) patent. *Ovary* enlarged, adherent to tube. It contains a corpus luteum and a blood-clot.

the left was fixed, and it was noted that the left tumour diminished in size coincidently with the discharge of pus. Little could be made out on vaginal examination, owing to the pelvic inflammation. I diagnosed double pyo-salpinx, the left tube being adherent and forming a fistulous communication with the vagina. She refused to run the risk of operation, and I do not know what has become of her.

(*To be concluded.*)

ON THE

STENOSIS OF THE TRACHEA AND LARYNX WHICH OCCASIONALLY FOLLOWS THE USE OF A TRACHEOTOMY TUBE;

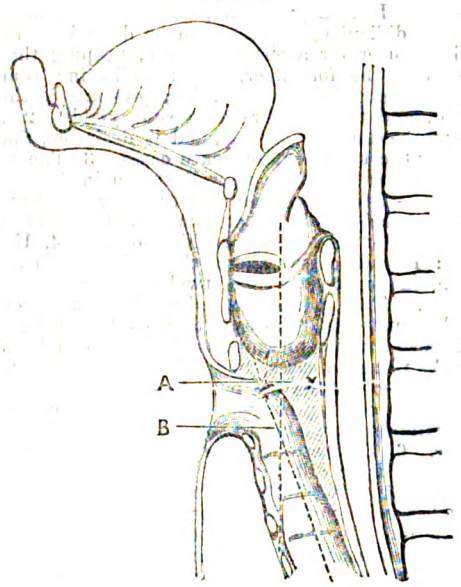
WITH REMARKS ON THE PRESENT POSITION OF INTUBATION.

BY BERNARD PITTS, M.C. CANTAB., F.R.C.S. ENG.,
AND
WILLIAM F. BROOK, F.R.C.S. ENG.

(*Concluded from page 78.*)

CASE 4.—Arthur P——, aged nine, was admitted on July 12th, 1885, to the West London Hospital, with dyspnœa necessitating tracheotomy. He remained in the hospital till Feb. 18th, 1886, when he was discharged, wearing a silver tracheotomy tube, all attempts to dispense with the tube having failed. In June, 1886, he was admitted to the Great Ormond-street Hospital, under the care of Mr. Marsh. For six weeks frequent attempts were made to remove the tube, but it always had to be replaced, and he was discharged and told to come again in a year's time. He was readmitted to the Great Ormond-street Hospital, under the care of Mr. Morgan, in November, 1889, and we are indebted to that gentleman for permission to include the case in this series. — Dec. 1st: Mr. Brook tried to intubate, but failed to pass even the smallest sized tube.—10th: Mr. Brook examined under an anæsthetic, and, after enlarging the wound, found that the trachea just above the level of the tracheotomy tube was obstructed by a collar of cicatricial tissue, forming a web, with an aperture towards the right side of the mid-line. After dilating the aperture with probes and catheters, an intubation tube was passed by the mouth; the end appeared opposite the wound, but projected forwards and against the lower border of the tracheal wound. The tube was therefore removed, and the tracheotomy one replaced.—14th: Under chloroform Mr. Morgan divided the collar vertically with scissors in two or three places, after which a large intubation tube was passed.—Jan. 11th, 1890: It has

FIG. 3.



been found impossible for the boy to retain the intubation tube for any prolonged period, the point of the tube getting pushed against the anterior wall of the trachea. The wound was therefore enlarged, and Mr. Morgan dissected away a considerable portion of the collar of fibrous tissue. Intubation was carried out at intervals by Mr. Brook during the rest of January and February, but not much progress was made.—March 1st: Mr. Morgan again enlarged the tracheal wound, and more completely removed the remnants of cicatricial tissue. After this the wound was allowed to close, and intubation went on more satisfactorily. On May 8th the boy was sent home on account of an epidemic of measles. He returned in five days, and was intubated for six hours. He came up once a week for intubation during the next two months, and afterwards at intervals of three weeks.—Nov. 23rd: Still some stridor on exertion. Sleeps well. No loud breathing. Can phonate with an effort. The largest tube can be easily passed, but there is still some slight obstruction.

Remarks.—The tracheotomy tube in this case had been worn over five years continuously. The diaphragm-like web was of much the same character as in the first case narrated, except that it did not extend so high into the larynx, and that the lumen was much smaller. Like the first case, too, the necessity for complete removal of all cicatricial tissue is shown before satisfactory progress can be made with intubation. The case will probably require further intubation, and, owing to his age, with a larger sized tube than has yet been employed. It is interesting to note that, after a period of five years' inability to talk, he now, at the age of nine, articulates like a child of three.

General remarks on the cases.—It may be again stated without much fear of contradiction that when ordinary means have been used to leave out the tracheotomy tube, intubation by O'Dwyer's method should be at once given a trial, and that if difficulty arises, or no definite improve-

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ment speedily ensues, then a thorough exploration of the parts should be made, cicatricial tissue should be freely and completely removed, and then intubation again be tried without allowing time for recontraction. The advantages of O'Dwyer's method over any other form of dilatation are so obvious, and the risks in such chronic cases are so small, that if this form of intubation were only applicable to such cases we would still owe a debt of gratitude to O'Dwyer for placing this means of treatment at our disposal. It may be in place here to draw attention to a few special points in the intubation for chronic stenosis. 1. As regards the force required in introducing the tube: In dealing with acute inflammation any attempt to use force would be likely to end in disaster, but in these stricture cases a certain amount of force is absolutely necessary, and if used in the right direction can be safely employed. It is often necessary to press continuously the point of the tube against the contraction, and so there may be a danger of causing asphyxia. It is a practical point of some moment to get over this difficulty, and this can be done by withdrawing the introducer for a short distance, keeping the tube in place with the forefinger, and so allowing some slight passage of air through the tube; pressure is then again applied, and the stricture as a rule yields. 2. A much larger tube can be tolerated, and is desirable, than is laid down for the treatment of acute cases. 3. The time that the tube may be left in is well shown in the cases. The boy H—— frequently wore his tube for a fortnight, and on two occasions did so at home without the slightest discomfort or any alarm to his parents. 4. Use of the string: In all cases where the tube was expected to remain in for more than twelve hours the string was removed. This plan was adopted at the request of the older patients, who said they could eat better without it, also that its presence made them cough. 5. Feeding: As in acute cases, immediately after the first commencement of intubation pulp food was found to be the best, fluids causing cough. After a short experience all these children were able to take ordinary diet without any trouble. 6. Extraction of the tube with the extractor is always the most difficult part of the operation, and it certainly is so in these cases, owing to the unusual length of the tubes employed. This special difficulty is caused by the length of the tube, *plus* the length of the beak of the extractor being greater than the distance between the cords and the hard palate, against which the angle of the extractor will thus impinge before the point of the tube is out of the larynx. This difficulty was overcome by having a shorter beaked extractor made, and by pushing the point of the extractor as far as possible into the tube before attempting to remove the tube.

Remarks on the instruments used.—The following slight modifications in the intubation instruments have been made by Messrs. Weiss at the suggestion of Mr. Brook:—The introducer (Fig. 4) used is the same as altered by Mr. Staveley, the only difference being that the tube is held on by a string passing over a button at the angle instead of a ring. The introduction of the tube was found to be easier with this than with O'Dwyer's introducer, and its advantages over the latter complicated instrument as regards cleanliness and cheapness are obvious. The extractor (Fig. 5) shown is much shorter in the beak than O'Dwyer's, for reasons already stated, but was quite long enough for use in diphtheritic or any other cases under twelve years of age. The special form of gag was found very useful, it was easy to introduce, and inasmuch as the flat handles lay in close contact with the face over the left malar bone and temple, the hand of the assistant which held the head on that side, having the gag beneath it, effectually retained the latter in position. The plug used for keeping the tracheotomy wound open is shown in the diagram; it is made of vulcanite with a rubber collar.

We conclude this paper with a few remarks on the present position of intubation.

A. It is obvious that intubation is unsuitable for the following class of cases: (1) Obstruction caused by presence of foreign body, (2) active ulceration (syphilitic or tubercular) of larynx, (3) new growths, especially malignant ones, (4) obstruction due to alteration in shape or position of trachea caused by goitre or other tumour of neck, (5) obstruction by post-pharyngeal or other abscess of neck.

B. Cases where intubation seems to be directly indicated: (1) Simple cicatricial stenosis, such as in the cases described or resulting from old syphilitic disease, (2) scald of larynx, (3) œdema of larynx, (4) acute laryngitis, and (5) for sudden spasm of glottis, such as may sometimes arise during the course of operations under anæsthetics provided the instruments be at hand; in fact, in all cases where the trouble is likely to be of only short duration, and where there is no evidence of associated chronic ulceration of the larynx. It may also be employed as a means of diagnosis when it is uncertain whether the dyspnœa arises from obstruction in the upper air passage, or to some condition out of reach—e.g., pressure from mediastinal tumour, bronchitis, &c.

We now come to the question of intubation or tracheotomy in diphtheria, and we trust on this point to gain some information from those who have had experience on this question. We may start by saying that we have come to no absolute conclusions, and it seems to us that in this country, at any rate, there has not as yet been a sufficient trial of intubation to enable anyone to speak with great confidence on this question. We could quote a large amount of American statistics, but we think the question must be

FIG. 4.

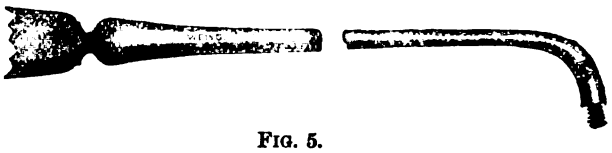


FIG. 5.

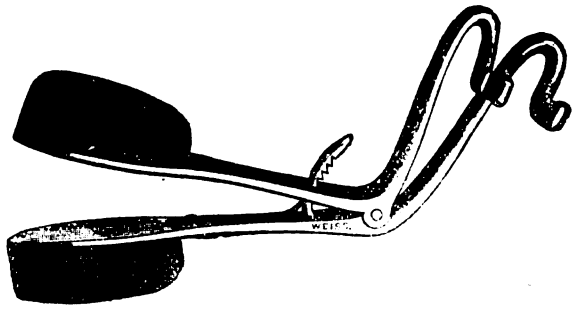
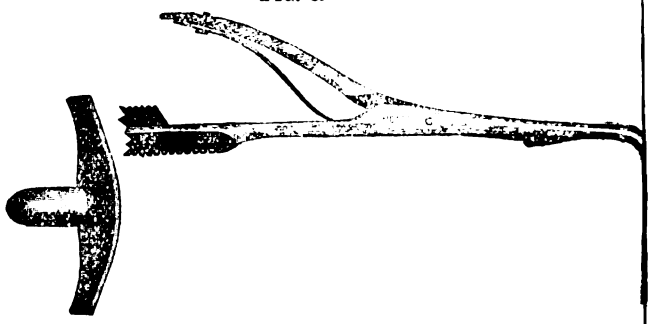


FIG. 6.



settled by the success which attends the treatment of the disease as possibly modified by climate and conditions of life in this country. No short experience of intubation can be of much value in determining this question. We all know how in some epidemics a very varying degree of success has attended tracheotomy. At times there is a uniformly raised percentage of recoveries all round, at others most of the cases die; and even at the same period one hospital may be showing a comparatively large percentage of recoveries, whilst others are losing almost all their cases, and this may depend on the severity of the disease and the condition of the patients brought to the particular hospital, and also upon whether tracheotomy is done early or only *in extremis*. All this applies equally to the treatment by intubation, and as intubation has as yet been so little practised in this country, probably the operators have much experience to gain in the necessary manipulations and in the after-management of the cases.

We give the statistics of the results of intubation in diphtheria from three hospitals, and we hope that others will be forthcoming. Victoria Hospital for Children: Sixteen in-

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tubated, seven cured (no second tracheotomies); nine deaths (three second tracheotomies, all fatal); percentage of recovery, 43. We have given these results first, for we believe that Mr. Staveley, formerly house surgeon there, was the first to give intubation in diphtheria a systematic trial in London, and he has already published a most excellent account of his experience. At St. Thomas's Hospital, up to the present time, thirty cases have been intubated for diphtheria; of these eight had subsequent tracheotomy, four recovering. Of the twenty-two cases where intubation alone was employed eight recovered. This is a percentage of 40 on the whole number intubated. At Great Ormond-street Hospital eleven cases were intubated by the house physician, with one recovery. It is only fair to add that, owing to the unfortunate early mortality, intubation was reserved for those cases which were least likely to recover, and tracheotomy practised for the more favourable ones. We may mention here that Cheatham of Louisville has recorded thirty-two cases with ten recoveries, and of the first fifteen of these only one recovered. All will allow that the results obtained at the Victoria Hospital and St. Thomas's Hospital are far more favourable than those usual after tracheotomy, since 25 per cent. recoveries after tracheotomy may be considered good, and we may safely argue that in the face of these results we are bound to give treatment by intubation a most serious consideration and an exhaustive trial.

The following may be mentioned briefly as some of the advantages gained by intubation:—1. The friends are not frightened by the idea of an operation, and their consent is not so necessary as for tracheotomy. 2. Intubation does not require any anæsthetic, and this we consider a most important point; for often the necessary giving of an anæsthetic in cases of tracheotomy is a direct cause of death, and always of much anxiety. 3. The operation may be undertaken at a much earlier period than is usually considered justifiable for tracheotomy, and can be far more easily performed without skilled assistance. 4. The avoidance of the hæmorrhage and other dangers attendant on tracheotomy, and the avoidance of a fresh wound, which may become infected. 5. The air before entering the lungs is warmed and filtered by passing through the natural passages, instead of entering straight through the opened trachea. 6. The question of the advantage of being able to do without a skilled nurse is a debatable one. If all goes well, her presence is not so necessary as in tracheotomy. If the tube gets blocked it is always coughed out, and generally urgent symptoms do not return for a period of an hour or longer. But, on the other hand, if difficulty of breathing arise at once, the skilled nurse is helpless, and the child must die unless the medical man is promptly on the spot. This is a danger which must be well considered before doing intubation in private practice.

We will now briefly refer to a few of the arguments against intubation in diphtheria:—1. It does not give that complete rest to the larynx that is obtained by tracheotomy. 2. If there is much membrane in the trachea it cannot be cleared out by forceps in the way that is most desirable after opening the trachea. It is, however, astonishing what large quantities of membrane may be coughed up by the child through an intubation tube or after its expulsion. Though the lumen of the tube is small, it is straight, and does not get foul as a tracheotomy tube does, since it is kept constantly warm and moist. 3. The presence of a tube fixed tightly in an inflamed passage may of course, in such a disease as diphtheria, aggravate the local mischief or produce ulceration at any of its points of contact; and physicians who examine the fatal cases in the post-mortem room may well draw unfavourable conclusions. Fortunately such ulceration is not of very frequent occurrence, but certain cases of ulceration produced by the tube have come under our notice, more particularly amongst the fatal cases that have occurred at St. Thomas's Hospital. In a case at one of the London fever hospitals this ulceration went on to necrosis of the cartilages, and the tube, having lost its support, dropped into the trachea. We have also heard of one case in a provincial town where, although recovery took place (after subsequent tracheotomy), permanent occlusion of the larynx resulted, no doubt from ulceration caused by the use of the tube. Among the ten fatal cases which occurred at Great Ormond-street there was only the slightest abrasion of the mucous membrane in three or four cases, and definite ulceration in none. We understand also that this has been the experience in the post-mortem observations at the Victoria Hospital, Chelsea. A recent preparation of the larynx and lung is here shown, taken from a child aged three years and a half, who was admitted into St. Thomas's Hospital under Dr. Ord three months ago with diphtheria. Intubation was performed and the tube worn for four days, and the child apparently recovered, but continued to expectorate small quantities of offensive matter, and died at the end of the three months from symptoms of gangrene of the lung. The larynx is healthy, but the trachea shows a healed ulcer about the size of a threepenny piece, with evidence of destruction of cartilage beneath. The lung shows several large patches of well-marked gangrene, and it is fair to assume that this was occasioned by the ulcer, which corresponds to the position of the end of the intubation tube. 4. The frequently mentioned objection, and one which is especially in the thoughts of a beginner at intubation, is that of the possibility of detaching membrane and pushing it before the tube, and so making an obstructive flap. This may occur, but we believe from published accounts it is very uncommon, and no one should do intubation without being prepared to proceed to tracheotomy if required. Possibly, as experience in the operation of intubation is at present very limited, by a better selection of cases and of tubes of a proper size, and by the improvements which are constantly being made in the shape of the instruments by the inventor, many of these objections may in time be lessened.

It seems to us, with our present limited knowledge, that (1) tracheotomy is advisable in those cases where there is evidence of great malignancy, or of a tendency to great extension of membrane; (2) that intubation should be employed in cases which present themselves with dyspnœa as the most marked symptom of the disease, that it should be performed at an early period, and that should there be necessity for retaining the tube for a lengthened period, or evidence of any direct irritation set up by it, then tracheotomy should be substituted, and we may here remark that tracheotomy is rendered safer and easier of performance when an intubation tube is *in situ*.

A CASE OF

EPILEPSY FOLLOWING ON A DEPRESSED FRACTURE PRODUCED BY FORCEPS AT BIRTH AFTER AN INTERVAL OF FOURTEEN YEARS;

REMOVAL OF DEPRESSED BONE WITH VERY CONSIDERABLE BENEFIT.

BY W. ARBUTHNOT LANE, M.S., F.R.C.S.,

ASSISTANT SURGEON, GUY'S HOSPITAL, AND THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

A. A——, aged sixteen years, was sent to me at Guy's Hospital by Dr. Garbutt on March 6th, 1890, with a view to some operative interference. There was no epilepsy or insanity in the family. The child was delivered with instruments with much difficulty. After he was born a deep depression was noticed on the right side of the skull, and the skin over the depression was very sore and bruised. His relatives state that the depression was relatively much more marked when he was an infant than it was on his admission, allowing for the growth of his hair, and that a few months after he was born the deformity had become much less conspicuous. His friends and relations do not appear to have noticed anything unusual about the boy till he was fourteen, when on March 5th, 1888, while sitting at breakfast, he, without any warning, fell off his chair in a fit, and was unconscious for an hour. He was put to bed, and three hours later he had another fit, preceded by a well-marked aura. He was unconscious for less than an hour. These attacks were followed by great weakness and depression, which confined him to his bed for a fortnight The third fit occurred six months afterwards, on April 17th. This was preceded by a short but distinct aura. The fourth fit took place while he was in bed on the morning of May 4th. It was preceded by a long, continued aura, accompanied by preliminary twitching of the foot. During the fit he could hear people talking, and understood what they said. He

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was, however, unable to answer their questions. Three weeks later he had a fifth fit. This lasted twenty minutes, during the whole of which he was quite unconscious. This was followed by many fits, varying in severity and separated by very variable intervals of time. The worst attack he had occurred while out walking six months ago, without any warning whatever. From 1.30 to 9 o'clock he was quite unconscious, and after recovering consciousness he suffered from severe frontal headache, sickness, and weakness for three or four days. After this he had at varying intervals several mild attacks, during all of which he was conscious.

A fortnight ago ten severe attacks occurred in the one night while he was in bed. He was semi-conscious during the fits, becoming quite conscious in the intervals. He had three attacks after these two, coming on at the same hour in the day. Before these the usual aura and twitchings were felt; he was conscious throughout. When about to have a fit the boy notices a twitching at the junction of the middle and lower thirds of the leg on its outer aspect, his foot and knee then jerk in a similar manner, which, he says, resembles ankle-clonus and knee-jerk. A pain then runs up the outer side of the leg and thigh, through the left side of the trunk into the left arm, from that into the left side of the face, and if the fit is a severe one it extends into the right arm. The twitching in the leg extends up the thigh into the left arm or left side of the face. If a severe fit, it extends to the other side of the body, and when it does so the lad loses consciousness. After the fit he feels ill and fit for nothing, and suffers from severe headache in the forehead and pain in and about the depressed area. For several days after the fit he is unable to walk properly owing to the weakness in the left leg, and in the same manner the left arm is so unsteady and irregular in its movements that he is unable to use it usefully. This, together with the pain in the head and a dull, stupid feeling, have prevented him following any occupation.

Condition on admission (March 6th, 1890).—He was a dark-complexioned, pale lad, whose speech was not affected, and who appeared to have moderate memory and mental power. On the right side of his head there was a groove about three inches and a quarter long, extending from an inch behind the coronal suture to about the same distance in front of the lambdoid suture. Its anterior extremity was placed vertically above the external meatus, and its lower limit reached to just below the temporal ridge. From this it extended downwards and backwards towards the external occipital protuberance. The floor of the depression did not appear to be more than a quarter of an inch below the general level of the scalp. The left arm was weaker than the right, its grasp being about two-thirds that of the right. The several manipulative movements of the left hand and fingers were performed with distinct clumsiness. This was most marked in the case of rapid movements. The movements of the right arm and hand were quite normal. The measurements of the circumference of the right arm and forearm each exceeded that of the left by a quarter of an inch. Besides this variation in circumference, there was a distinct difference in the firmness of the flexor supinator muscles in particular. There was no difference in the measurements or in the feel of the muscles of the leg. The patient states that he had never the same confidence in his left leg that he had in the right one, apart from the great weakness which was present in it for several days after a fit. By simply raising the left foot to a right angle, a very rapid clonus could be obtained. It could be stopped by the patient. By using more force a clonus could be produced in the right ankle. It was, however, of short duration—about twenty seconds,—and was not so quick as that on the left side. The knee reflexes were very much exaggerated. This was more marked on the left side, where a patellar clonus could be readily obtained. The plantar reflexes were very much exaggerated, especially on the left side. This was also the case with the abdominal reflexes, except the cremasteric, which were very slightly marked. This exaggeration on the left side was very conspicuous.

There was apparently nothing abnormal about the reflexes of the arms, nor was there any wasting or asymmetry of any portion of the facial muscles. The optic discs were both normal, and the pupils reacted readily to light and accommodation. There was no evidence of congenital syphilis. On March 9th the exaggeration in the reflexes, though very marked, was not quite so excessive as it was when the boy was admitted. Dr. Laureston Shaw kindly saw the case with me, and after carefully examining him he confirmed me in my opinion as to the probable advantages that would follow removal of the depressed area of bone. On March 10th, the depressed area of bone having been exposed throughout its whole extent, it was seen to be abnormally vascular. By means of a gouge and a pair of Hoffman's forceps the bone which formed the floor of the depression, together with a portion of the surrounding margin of bone, were removed. The bone forming the depression was very thin and vascular, scarcely measuring a sixteenth of an inch; while the bone about the depression was of normal thickness. It seemed that the floor of the depression was not concave on its inner surface, but that it was flatter than normal, and therefore apparently encroached a very little upon the area of the intra-cranial cavity. The dura mater was quite normal in appearance, as also was the subjacent brain. The bone bled very freely, and on that account it was necessary to use a drainage-tube for twenty-four hours. The wound healed by primary union. On March 20th he had three fits, which he stated were less severe than before the operation. They were not followed by the same stupid feeling and by the headache and pain which before unfitted him for any occupation. On April 9th, after a long exciting day, he had a series of fits and was unconscious for several hours. Since that date he has had fits at intervals of a month. They are slight and cause him little inconvenience. He and his friends express themselves as much pleased with the results of the operation. I may say that since the operation he has quite lost the unsteadiness and clonus in his left leg, which gave him so much trouble, and the capacity of rapid movement of the fingers of the left hand has improved very considerably. The difference in the measurements of the forearms is also very much less than it was. He never suffers from headache nor has he any pain about the depressed area. He has also become much sharper and brighter, and can follow an occupation. I am in hopes that the fits, which are now comparatively slight and infrequent, may cease shortly.

St. Thomas's-street, S.E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

UNUSUAL CASES.

By HENRY LEE,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

CASE 1.—During the last autumn I saw a lady at Constance who, ten years previously, had been frightfully burnt through the upsetting of a lamp. Among other injuries received the skin of nearly the whole front of the left leg had been destroyed. A large raw surface was left, which did not heal. After a time several skin grafts were tried. The majority of these failed, but at the time I saw this patient one of them had grown so as to unite the opposite edges of the natural skin. This was situated directly in front of the leg, and was the size of the palm of a child's hand. It was thick, and apparently well nourished, but rather paler than the natural skin. The point of interest in this case was that this skin graft, which did such good service, was apparently devoid of sensation. A prick with a needle could not be felt. The fact is thus demonstrated that animal tissues may live and grow independently of ordinary sensation, and of nervous supply. In the lower forms of animal life the nervous system is very simple, and is analogous to the sympathetic system in man. Structures supplied by the ganglionic system in man have not the sensation of the skin, or what is usually known as ordinary feeling. Nitric acid may be applied to the mucous membrane of the bowel without giving pain. We may therefore believe that lobsters, crabs, and oysters, being protected from injury in other ways, have not ordinary sensation such as is conveyed to our minds by impressions on the skin. In the above recorded case, from the tension

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of the skin and from want of use, the left leg appeared to be about what might be supposed to be half its natural circumference. By the contraction in the process of cicatrisation and by the assistance of smaller skin grafts, at the end of ten years the wound had entirely healed with the exception of two or three small fissures; these remained with rounded, thickened, and indurated edges. The right leg, which had been less severely injured, was also much diminished in size.

CASE 2.—A patient being treated for ascites in one of the medical wards of St. George's Hospital had an umbilical hernia. This when distended was the size of a small orange. The hernia was easily reduced and the sac left empty. Three hare-lip needles were introduced through the neck of the sac and a figure-of-8 ligature applied loosely over the extremities of each. After two or three days the needles were removed, and firm adhesion at the neck of the sac appeared to have taken place. The skin which had covered it became shrivelled, of dusky brown colour, and remained the size of a small nut. So far as could be known there was no return of the hernia. A drawing of the parts by Dr. Westmacott as they were left after the operation is preserved.

CASE 3.—A gentleman had been treated for some two years and a half for dysentery. As there was some irritation about the rectum, I examined it. A bone, which subsequently proved to be a fish-bone, about two inches and a half long, was found to be impacted across the bowel about two inches from its orifice. By means of a long pair of forceps one end of the bone was got into a speculum. The bone was then withdrawn without difficulty. The symptoms from which this patient had so long suffered immediately ceased.

PASTEUR'S PREVENTIVE TREATMENT FOR HYDROPHOBIA.

BY HY. TOMKINS, M.D., B.SC.,
MEDICAL OFFICER OF HEALTH, LEICESTER.

PERHAPS one of the most reasonable objections made to the treatment by Pasteur of persons bitten by rabid animals, or rather, one may say, to the results recorded by him of such treatment, has been the fact that in a considerable number of the cases treated, evidence that the animal by which the patient had been bitten was actually and undoubtedly rabid is not forthcoming, and opponents have not been slow to urge that it is highly probable in many instances patients have undergone treatment when the dog which had inflicted the bite was quite healthy, or, at least, not suffering from rabies. In the following record of three cases treated at the Pasteur Institute last year it is placed beyond all doubt that the animal, at the time of inflicting the injuries, was suffering from rabies. On Jan. 8th, 1890, a stray dog came into the borough of Leicester from the adjoining suburbs and on its way bit two school children, a boy and a girl, on the face and hands, the wounds upon each of the children's faces being of a very extensive, lacerated character. This occurred outside the borough boundaries, and almost at the same time it bit also a small terrier dog. Continuing its course into the town it bit a young man severely on the hand, and shortly after this it was killed. The patients were seen by medical men and the wounds cauterised, but not until after the lapse of some little time; in one case nearly an hour elapsed. I saw all the patients on the following day, and, with the assistance of Mr. Fraser, the veterinary inspector to the corporation, made a post-mortem examination of the dog. The pathological appearances to the naked eye were practically *nil*, but the stomach contained some pieces of straw and other débris. The cord and medulla were removed. On Saturday, the 11th, I took the three patients to Paris (taking with me the cord removed from the dog), and on Sunday morning they were seen by M. Pasteur, and treatment commenced in the usual manner. From the cord several rabbits were inoculated, and before the end of a week these succumbed to what M. Pasteur declared to be rabies. The man was kept under treatment fourteen days, but the two children, owing to the severity of the wounds, were kept for twenty-five days before being sent home. The small terrier bitten by the dog was kept by me under close observation shut up, away from all other animals, and on the fifteenth day from being bitten it began to show signs of indisposition (having in the interval been apparently in good health), which soon declared itself as undoubtedly rabies, and the animal succumbed on the third day from the first onset of the symptoms. Being kept secluded and alone, it showed but few signs of excitement, but crawled about, refusing to eat or respond when called to, paralysis of the lower jaw and hind limbs soon supervening. It should be noted that the wound on its hind leg was but a small one, not larger than a threepenny-piece, and at the time of its death was healed.

Here, then, we have indisputable evidence that the animal which bit these three patients was suffering from rabies, and the probabilities are, seeing how easily the second dog was infected, that at least one or other of the three would have developed symptoms of hydrophobia if the treatment for prevention had not been adopted. As more than twelve months have now elapsed since the occurrence, and all of them remain in good health, we may conclude they have now quite escaped from any untoward consequences.

Leicester.

NOTE ON TRAUMATIC CEPHALHYDROCELE.

BY R. CLEMENT LUCAS, B.S., F.R.C.S.,
SURGEON TO GUY'S HOSPITAL, AND TO THE EVELINA HOSPITAL FOR CHILDREN.

IN THE LANCET of January 10th, under the title of "Traumatic Encephalo-meningocele," an interesting case is reported by Mr. H. Burton of a child who, after a severe injury to the head, developed a pulsating tumour of the scalp containing cerebro-spinal fluid. The writer, in his remarks, states that "it differs entirely from the traumatic meningocele described by Mr. Clement Lucas and Mr. Golding-Bird." So far from this being the case, it is precisely of the kind which falls within that category; and had the writer found the opportunity of referring to the original papers, I think he could not have failed to be struck with the resemblance. The only difference, indeed, lies in the fact that in his case the fracture was in the first place compound; but the primary union of the wound which took place allowed the fluid to accumulate beneath the scalp as if that covering had not been torn. Little was known of these rare and interesting tumours till the publication of my first case with a drawing in the Guy's Reports of 1876, and the pathological conditions requisite for the production of the tumour were not understood. Subsequent years placed two post-mortem examinations within my reach, which are related in the volumes of the Guy's Hospital Reports for 1878 and 1884, and I was able to show that these subcutaneous fluid tumours communicated directly with the ventricles of the brain, and I further ventured the statement, based upon the study of these and other cases, that they could only be developed in childhood. Mr. Golding-Bird, in reporting a case in the Guy's Hospital Reports for 1889, gives his own experience in support of my contention. Another very remarkable circumstance which often happens in these cases is a rapid absorption of the bone in the neighbourhood of the fracture, and as a consequence a permanent pulsating mass with heaped up and everted edges of bone may in some cases remain. Such conditions were found in cases reported by Mr. T. Smith, Mr. Godlee, and Mr. Silcock. The escape of the fluid from the ventricular cavity is apparently secondary, to an increased secretion resulting from inflammation of its lining membrane and absorption of the damaged brain tissue along the track of the injury, for the fluid is seldom noticed till some days after the accident. The term traumatic cephalhydrocele would seem preferable to traumatic encephalo-meningocele or meningocele, as the meninges and the brain are both perforated, and do not cover the cyst. As regards treatment, I am convinced that the less done in the way of active interference the better. Aspiration may be used for diagnostic purposes, but can be of little service to the patient, for the fluid invariably re-collects. Pressure during the inflammatory stage may lead to grave symptoms, as in the case detailed. The surgeon should bear in mind the very serious laceration that has taken place in the brain substance, and should ensure absolute quiet and brain rest for a lengthened period. In the

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later stages gentle pressure may be of service in preventing a permanent bulge; but I am inclined to think the cases which result in chronic tumours are those in which the serious nature of the injury was not in the first instance understood.

Finsbury-square.

ECZEMA CAUSED BY VIRGINIAN CREEPER.

BY W. STUART PALM, M.B., M.C., M.R.C.S.

THE publication by Dr. Burd of a case of eczema caused by contact with the leaves of the above plant recalled to my mind a similar case. A lady patient's maid had been gathering and arranging the leaves of Virginian creeper, and the next day acute papular eczema appeared, first on her hands and then on her whole face and neck, where it produced intense heat and irritation, and œdema of the eyelids. Under treatment the attack subsided in a few days. I was much puzzled to find the cause. The patient had never had a similar attack before, and it was only on close questioning that I elicited the fact that she had been touching the leaves of this plant, and could assign no other cause for it. I was very sceptical as to this alleged cause until the summer after, when the butler in the same house had a similar though slighter attack of eczema after gathering the leaves of the same plant for the table.

Largo, Fife.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF RUPTURE OF THE LARGE INTESTINE WITHOUT EXTERNAL WOUND; ABDOMINAL SECTION; REMARKS.

(Under the care of Mr. CROFT.)

THERE are few injuries to any region of the body which prove, in proportion to their number, so fatal in their results as contusions of the abdomen attended with rupture of the intestine without wound of the abdominal wall. To the eye there may be in the early stage nothing more than a bruise of the part struck, and the shock which attends such injury may not be sufficient to prevent the patient from going a long distance before the inevitable septic peritonitis supervenes. As we have already observed,[1] we doubt if there is anyone of large experience in surgery who cannot from his own practice cite striking examples of the misleading appearance of harmlessness these lesions often present. As these lesions are so extremely fatal, the very difficulty of diagnosis imposes the duty upon the surgeon of clearing up the doubt and of determining with certainty whether or not they are present. This is the first point that needs to be made plain. To wait until the diagnosis is certain is to miss the golden opportunity for treatment and to allow the onset of septic peritonitis to rob the patient of nearly every chance of life. Mr. Croft, who has had unusual success in the treatment of these intra-peritoneal ruptures of the intestine, having had partial success in one case,[2] in which the patient died after secondary resection of artificial anus four weeks after the original injury, and another case in which a brilliant success was reached[3] by immediate resection and suture, the only one on record, gave as his reasons for attempting an immediate radical cure in these cases:[4] 1. That existing peritonitis, although septic, might be abolished, and the parts might be rendered aseptic. 2. That existing peritonitis did not essentially prevent union of the peritoneal surfaces, for experience had now amply shown that these soiled parts might be purified and rendered fit for union. 3. That the empty and paralysed state of the recently ruptured and contused bowel (small intestine) was favourable for the *technique* of the operation. 4. It saves the patient from the consequences of an almost uncontrollable anus in the small intestine. 5. It also saves him from the very serious risks of a second long and dangerous operation. As our readers will remember, Mr. Croft's successful case, on which these remarks were founded, was treated by resection of the injured part. Since then another case of similar injury has been treated by Mr. Watson Cheyne,[5] who operated about twenty hours after the accident on a patient aged eighteen, and sutured a rupture in the jejunum. The youth died nine hours later. Here the edges of the wound are described as gangrenous when they were examined post mortem. The case which we give below is only the sixteenth of the kind on record in which a surgeon has performed abdominal section for rupture of the intestine, and the only one in which ruptured large intestine was discovered. The advantage of operation where no rupture was found is shown by a case under the care of Dr. King,[6] who operated on a boy aged twelve, who, after a kick in the abdomen from a horse, developed symptoms of acute septic peritonitis. On the third day—that of the operation—there was a sudden fall of temperature to 97°, the pulse was 140, the abdomen enormously distended, tympanitic above and dull below the umbilicus. He looked pinched, pale, and anxious, and was tossing and moaning in bed. Acute peritonitis, with contused omentum and intestine, was found, and after cleansing the peritoneal cavity and drainage, ultimate recovery ensued. There was no doubt in the minds of those who saw the patient that he would have soon died without the operation, which was undertaken with but little hope of success.

E. J——, aged twenty-three, was admitted on the afternoon of New Year's Day into the Edward ward of St. Thomas's Hospital in a state of modified collapse, about an hour and a half after having been severely kicked in the abdomen by a horse. He was in a state highly unfavourable for recovery from any serious injury. After a search for work for a fortnight, he had at last, when in a half-starved condition, obtained "a job" at a tramcar station. At 4.30 P.M. on Jan. 1st he was kicked in the abdomen by a horse. The blow knocked him down, and he was unconscious for a few seconds. He was picked up in a state of collapse, with cold sweat, dyspnœa, and pain in the left side. He recovered to some extent from that condition, and was sent in a cab to the hospital.

On admission, he was found to be still suffering from shock. His pulse was feeble at 80, his breathing was gasping at 40. The abdominal wall was rigid and very tender to the touch, and the skin on the left side of the umbilicus showed a small mark like a subcutaneous bruise. There was no movement of the diaphragm. He kept his thighs drawn up. The pain on pressure was chiefly on the left side and about the level of the umbilicus. He was still pale to the lips, the skin was cold and clammy, and his temperature was 97·4°. A catheter was passed and drew off about two ounces of normal urine. He vomited a short time after admission about two drachms of brownish fluid free from blood or odour. The treatment consisted of sedatives internally and externally. At midnight the temperature was 98·4° and pulse 100. At 4 o'clock the following morning (Jan. 2nd) the temperature had risen to 101° and the pulse was 110, and the tongue had become dry and coated. After 5 A.M. a messenger was sent to Mr. Croft, who reached the hospital at 6.45 A.M. On examination of the patient, he decided to explore the abdominal cavity immediately. The patient at that time manifested well-marked symptoms of acute septic peritonitis. The incision was made so that the umbilicus formed its centre. When the peritoneal cavity was opened it was found to contain a large quantity of turbid fluid with a few soft clots of lymph. The omentum between the colon and the stomach was found severely ecchymosed, and on turning up this structure a rent was discovered on the transverse colon. The edges of the rupture were ragged and fæcal. The opening was about three-quarters of an inch in diameter and situated on prominent surface of bowel. The surrounding peritoneum was torn and stripped up. It was remarkable that the fluid exudation was not very obviously stinking, and that very little feculent matter clung about the rupture. The omentum had been torn through near the colon, so as to leave a

[1] THE LANCET, vol. i. 1887, p. 937.
[2] Ibid., p. 537.
[3] Ibid., vol. i. 1890, p. 650.
[4] Ibid.
[5] Brit. Med. Jour., vol. i. 1890, p. 789.
[6] Med. News, Philadelphia, 1890, lvi., p. 227.

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fringe which could be conveniently made to cover over the bowel when the suturing had been completed. The edges and area of the rupture were purified, and then the rent was sutured up with eight Lembert sutures of fine silk, so that the line of sutures ran somewhat obliquely along the length of the bowel. A second row of five sutures was added, to ensure perfect coaptation and closure; and, lastly, the fringe of omentum above-mentioned was sutured, so that it quite covered over the part of the colon just operated upon. A laceration of the peritoneum was closed by three sutures. The peritoneal cavity was carefully irrigated with warm boracic solution and then sponged clean and dry. The parietal wound was closed and dressed in the usual manner. The spray was not used. The operation lasted one hour and a half. The patient was very ill during this time, and required first a hypodermic injection of brandy and then of ether. He was cyanotic and his breathing was gasping. Soon after he had been put back in bed another injection of brandy was required. Later an enema of brandy was given, but, in spite of all attempts to revive him, he sank at 6.20 P.M., or about nine hours after operation.

At the necropsy a few ounces of blood-stained fluid were found in the peritoneal cavity. No other intestinal lesion was discovered. The portion of injured and sutured bowel was removed, and the suturing tested by injections of water and air. It bore both tests, and "resisted a much greater pressure than it would ever be subjected to in life." The liver exhibited slight subcapsular hæmorrhage on the upper surface near its free edge. There was slight subperitoneal bleeding around the upper end of the left kidney. The lungs were intensely congested and œdematous, especially on their upper lobes. This was probably the result of long anæsthetisation.

Remarks.—Had this young man been in an ordinary condition of health, Mr. Croft believes that he would have made a good recovery. The lesion on the intestine had been effectually closed, and the peritoneal cavity had so far as the eye could see been sufficiently purified. The cold and starvation which the poor fellow had suffered during the preceding week had rendered him incapable of combating such a sequence of events as shock, rupture of intestine, peritonitis, and the long operation with anæsthesia. The two cases of Mr. Croft's, already reported in this journal, were pointed to by him as indicating the propriety of early exploratory operation in similar injuries to the abdomen. This case particularly emphasises the value of the measure. A surgeon would have been justified, had he made an exploratory incision on the admission of the patient into the hospital. As the lesion had occurred to the large intestine, feeding by the mouth might have been commenced at a relatively early period—indeed, at once. Would it have been better to have made an artificial anus in this case? Emphatically no. The purification of the peritoneum and the suturing of the intestine to the parietal wound would have occupied nearly as long as the proceeding adopted by Mr. Croft.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

MALFORMED ANUS AND LOWER BOWEL; RIGHT INGUINAL COLOTOMY; PLASTIC OPERATION ON ANUS; CURE.

(Under the care of Mr. SWAIN.)

SUCH a condition as that described below as a cause of chronic obstruction of the bowels at the age of this patient is almost, if not quite, unknown, for as a rule patients the subjects of these malformations undergo operation in early infancy. Of the varieties of malformation of the rectum, as classified by most standard writers on the diseases of this region, this is an example of the sixth—namely, that in which the bowel ends in the bladder, urethra, or vagina, and the anus is absent. Of these modes of termination, that in the vagina is the most common, and Kelsey[1] says that in females the opening is seldom if ever into the bladder, but is sometimes into the urethra. The treatment of this case was very successful. It will be noted that the plastic operation resembles that performed by Rizzoli, who makes an incision backwards from the vaginal anus towards the coccyx, not opening the rectum, then carefully dissects out the end of the rectum and its orifice, transplants it to the perineum, and repairs the vagina and perineum in front of it by deep sutures. For the following notes we are indebted to Mr. W. Gifford Nash, house surgeon.

M. J——, aged six, was admitted to hospital on Nov. 20th, 1889. Her mother stated that she was born with a small misplaced anus, from which a slight fæcal discharge was constantly oozing. For several years she has had a swollen abdomen, and has suffered agonising pain in it. She also has frequently had feverish attacks.

On admission the patient was a large, pale-faced, emaciated child, with a swollen abdomen. The rectum opened by a small orifice on the posterior wall of the vagina, just within the sphincter vaginæ. The opening barely admitted the tip of the little finger, and from it a fæcal discharge was constantly oozing. There was a large swelling in the abdomen, extending up out of the pelvis into the hypogastrium, and thence upwards along the right side of the spine to the right hypochondriac region, from which it passed to the left across the epigastrium to the left hypochondrium, where it ended. It was largest at its lowest part, and gradually tapered off as it ascended. It was hard, but could be indented by the fingers. There was no accumulation in the normal position of the descending colon. Castor oil was given three times a day, and the bowels were considerably relieved. On several occasions before the bowel was opened the temperature ran up to 103°, 104°, or 105°.

Jan. 10th, 1890.—An incision was made in the left loin as for colotomy, but the colon could not be reached. The peritoneum was opened, and the abdomen explored, but the colon could not be found. The peritoneum was stitched up again, and the wound closed.

Feb. 6th.—The abdomen has become much more distended by fæcal accumulation.

7th.—An oblique incision was made in the right iliac region parallel to Poupart's ligament. The peritoneal cavity was opened, and the omentum presented. The enormously distended and hypertrophied large intestine was felt extending downwards into the pelvis and upwards towards the liver. It lay rather to the right of the spine. The edges of the peritoneum were sutured to the edges of the skin; then the peritoneal and muscular coats of the bowel were sutured to the abdominal wall. The intestine was not opened.

15th.—The bowel was opened and the stitches removed.

After this for weeks there was an enormous evacuation of fæcal matter. The fæces were washed out daily from the colotomy wound by a catheter passed through the anal aperture. Much of the fæcal matter was so hard that it had to be removed under anæsthetics by scoop and fingers. The catheter could be passed in at the anal aperture, and out through the colotomy wound, four inches from entrance to exit.

April 10th.—She was sent to the convalescent home for change of air to pick up strength for further operation. She was readmitted on April 30th very much improved in health by her stay at the Saltash Convalescent Home. There was a large, hard fæcal accumulation below the inguinal opening, which showed a tendency to close.

May 8th.—Methylene was given and the fæcal mass broken down by the fingers introduced one at the groin and the other at the anus.

11th.—Since the bowel was cleared out the child has had an attack of peritonitis.

13th.—Rapidly improving.

24th.—Methylene was given, and the rectum dissected off the posterior vaginal wall for over two inches. An incision was made in the perineum from the back of the vagina to near the coccyx. The anus was then stitched as far back as possible, and a new perineum made between the anus and the vagina. Considerable traction was required to drag the rectum down to the level of the skin of the perineum.

June 3rd.—There is fair union of the opposing surfaces of the new perineum.

20th.—The index finger is passed daily into the anus.

July 1st.—The bowels act partly through the anus. The motions are kept loose by castor oil, and the lower bowel is washed out daily by introducing the irrigating tube at the anus or the colotomy opening.

22nd.—The inguinal wound is a mere pinhole. The fæces are passed by the natural way with the help of a daily enema.

Aug. 2nd.—Child discharged.

Oct. 15th.—The child has grown quite strong and fat. Her mother says that the bowels act nearly every day,

[1] Diseases of the Rectum and Anus.

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and only occasionally require opening medicine or injections. She has complete control, except after a dose of castor oil, when there is slight staining of the diaper. There is no discharge from the vagina, and no trouble with micturition. There is no collection of fæces felt on palpating the abdomen. The inguinal colotomy wound is quite healed, and at its site there is a little tendency to hernia. The index finger passes easily into the rectum. Just inside the vaginal orifice is a small fistulous opening into the rectum. There is a small perineum between the vagina and the anus.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Nephro-lithotomy for Total Suppression of Urine.—Hæmorrhage after Nephro-lithotomy.

AN ordinary meeting of this Society was held on Jan. 13th, the President, Mr. Timothy Holmes, in the chair.

Mr. CLEMENT LUCAS read a paper on a case of Nephro-lithotomy (following nephrectomy) for Total Suppression of Urine lasting five days, with complete recovery and good health five years after the operation. This case was mentioned by the editors of the medical journals at the date of the operation, in 1885, as a case of exceptional interest, but the details of the case have never been before published, nor has the patient, or her kidney, or the stone which caused suppression, ever been exhibited before. The author had delayed publishing it because those to whom he mentioned it, whilst applauding the attempt to save a life on the extreme verge of dissolution, threw the coldest doubt upon the patient's future, maintaining that even if she recovered from the immediate effects her life must be a short and painful one; that the one remaining kidney, having been opened and drained, would rapidly degenerate, or another stone would quickly form and bring about a final catastrophe. After the lapse of five years the author thought he might be acquitted of any attempt to claim an incomplete success. The patient was still living and enjoying the best of health, and a freedom from pain, discomfort, and hæmaturia, which, for seventeen years before her right kidney was removed, were almost constantly present. The operation for total suppression of urine was one that the author had long considered justifiable, and he had on more than one occasion previously publicly advocated its performance. The patient had been under the care of Mr. F. D. Atkins of Sutton, Surrey, to whom much credit was due, both for the original diagnosis and for the promptitude with which he acted when total suppression occurred. F. F——, aged thirty-seven, was first admitted into Guy's Hospital on June 22nd, 1885. There was a strong family history of consumption. For seventeen years she had suffered from hæmaturia at intervals, and for nine or ten years this had been accompanied with pain on the right side of the abdomen, and for seven years a tumour diagnosed as a floating kidney had been felt on this side. On July 14th the right kidney was removed by lumbar incision. It was a mere shell containing masses of stone, and weighing 21 oz. The wound healed completely, and she left the hospital convalescent on Aug. 10th, just within a month of the operation. All went well for three months. She had returned to her household duties, was free from pain and hæmaturia, and much satisfied with the result of the operation. On Sunday morning, Oct. 24th, 1885, she was suddenly seized, between seven and eight o'clock, with most violent and agonising pain in her back and left loin. The pain passed through the loin to the front of the abdomen and groin. About eight o'clock she passed a little urine, but from that time all secretion stopped. Vomiting commenced about half-past eight on the same morning, and was continued at intervals and whenever anything was taken. Mr. Atkins was called to see her and found the bladder empty. Vomiting and anuria continued throughout Sunday, Monday, and Tuesday. On Tuesday Mr. Lucas met Mr. Atkins in consultation, and advised operation. The symptoms continued without cessation on Wednesday, when she was brought to London, but Mr. Lucas's medical colleagues still advised him to postpone operation till a further trial had been given to diuretics, and in deference to their opinion he waited another day. On the afternoon of Thursday, the fifth day of anuria, the patient became drowsy and weaker, so that it was difficult to rouse her to obtains answers to questions. Her pulse was weak, her temperature 99°, and she had become less sensitive to pain, and indifferent to what was passing around. Ether was given, and Mr. Lucas cut down on her remaining kidney and discovered a conical stone acting as a ball-valve to the top of the ureter. The stone was rather more than three-quarters of an inch in length and from three-eighths to five-eighths in diameter. Urine began to drop away out of the wound as soon as the pelvis of the kidney was opened, but the pelvis was not found much dilated. The patient recovered well from the anæsthetic, and was sick once only after the operation. For twelve days all urine was passed by the wound in the loin. Then an ounce and a half was passed with great pain from the bladder, and the quantity gradually increased. After the nineteenth day all the urine was passed naturally. The wound ran an aseptic course, and the patient's temperature scarcely rose above normal. Healing was complete ten weeks after the operation. During the last five years she has been employed in household duties, and has enjoyed good health. The patient was exhibited, together with her right kidney, which was excised, and the stone removed from the left kidney for total suppression of urine.

Mr. RICKMAN J. GODLEE related a case of Removal of Large Calculi, first from one kidney and afterwards from the other, in which death occurred from hæmorrhage after the second operation. The patient was a gentleman aged thirty-seven, who first complained of renal symptoms in 1886. In the autumn of 1888 a diagnosis of left renal calculus and left pyelitis was made, but mischief on the right side was suspected also. In November, 1888, a large quantity of stone—uric acid and phosphatic—was removed from the left kidney. The patient made a rapid recovery, but the closure of the wound was not permanent, and after several febrile attacks it was found best for the patient to wear a plug permanently in the fistula, to prevent periodical accumulations of pus and urine in the kidney. At one time the ureter became completely blocked, and an operation was undertaken to remove a stone which was supposed to be obstructing it. None was found, but the ureter became again patent after the operation, and the state of the kidney very much improved. The patient now became convinced that he had stone in the right kidney. The risks of an operation were explained, but he was recommended to submit to it, and on Nov. 19th, 1890, large masses of uric acid stone were removed. No bleeding followed the first incision into the kidney, but the laceration that was caused by the removal of the stones gave rise to very free venous hæmorrhage, which was easily controlled by pressure. At the completion of the operation there was little or no bleeding, but it was thought safer to plug the pelvis of the kidney. The patient remained in fair condition for an hour and a half after the operation, and then suddenly died, as the result of fresh hæmorrhage from the kidney. The rarity of the accident was dwelt upon, and attempts were made to suggest means of combating it if it arose.

Mr. GODLEE read a letter from Mr. Mayo Robson of Leeds, mentioning that, in a case of nephro-lithotomy which he had operated upon three years ago, he had made a small incision into the renal substance, which was followed by violent hæmorrhage. This, for a time, he was unable to restrain by ordinary means, and finally he had to excise the patient's kidney in order to save his life. The source of the hæmorrhage was an abnormal vein in the capsule, which had been wounded. He said that he knew of another case in which violent hæmorrhage had followed the same operation. As it appeared to cease, however, the wound was closed in the usual way, but it recurred the next day, and in this case, too, it had become necessary to excise the kidney, but with a fatal result.

Mr. ARBUTHNOT LANE mentioned a case in which there had been severe hæmorrhage after an incision into the kidney which he had been enabled to control by sutures passed through the kidney substance.

Dr. G. HARLEY congratulated Mr. Lucas upon the brilliant result which he had obtained. In doing so, however, he was bound to state that it reflected upon medicine, for if physicians had diagnosed and treated the case in proper time, there would be none of these calculi for surgeons to remove. The difficulty lay in the diagnosis. When renal calculi were small, and there was no hæmorrhage and very little pus, the cases were very apt and very frequently were

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mistaken for something else. He showed a calculus from a patient who had been seven years under treatment for lumbago, who all the time had calculus in the kidney, though this was never so much as suspected. He handed round twelve specimens of small renal calculi which would be instructive both to surgeons and physicians. His object was to show that the formation of renal calculus was not due merely to local causes, but that there was a predisposing condition. He had been enabled in some cases to trace this family predisposition for three generations, but beyond that it was usually difficult to get. He also exhibited specimens to demonstrate that the danger to life was not commensurate with the size of the stone. Calculi were often passed by babies unnoticed. He brought three further calculi to show the dangers of treatment by acid or alkaline medication, and a group of specimens were shown to illustrate the fact that stones might go on being passed for years without giving rise to any discomfort.

Mr. TURNER mentioned a case of Double Pyo-nephrosis upon which he had operated. The patient was a woman who was admitted to St. George's Hospital with two large renal swellings, anuria, vomiting, and great prostration. There was a well-marked history of renal calculus, and Dr. Whipham had asked him to relieve the suppression of urine. He had obtained permission to cut down upon both kidneys, and he began with the right. He found it full of malodorous pus, with calculous formations weighing an ounce. The same condition was found on the other side. The woman recovered very well indeed from the immediate effects of the operation, and lived for thirteen days. She eventually died, not from suppression of urine, but from asthenia. He thought that this was the only case on record in which both kidneys had been cut down upon at the same time at one sitting. The eventual result of operative interference must be dependent upon the condition of the kidneys at the time of the operation, and he attributed Mr. Lucas's success to the operation having been performed before any purulent collection had formed in the organ. In the post-mortem records of St. George's Hospital for twenty-one years past he had found mention of forty-three cases of renal calculus. Of these, nineteen were cases of multiple stones, the number in one case reaching twenty-six. Both sides were affected in nine instances only. Of these, two had been operated upon for calculous suppression of urine. Of the one-sided cases the calculus was on the right side in seventeen and on the left in fifteen. Pyo-nephrosis was present in twelve cases. In nine the ureter was completely blocked, and in eight of these the obstruction was at the renal end. In one case the stone was 5in. in length. With regard to the condition of the unaffected kidney in those cases in which only one side was calculous, it was granular and cystic in nine, lardaceous in two. There only remained eight cases in which the other kidney was either healthy, hypertrophied, or normal. The two points to be considered in the prognosis after operations upon the kidney were: (1) The local condition as to the presence of pus; and (2) the condition of the other organ. He thought that in a very large proportion of the cases the other kidney, if not actually calculous, would be found granular or undergoing some other form of degeneration.

Mr. T. SMITH observed that the most perplexing diagnosis for the surgeon to make was between renal calculus and tuberculosis of the pelvis of the kidney, and he asked Dr. Harley how he arrived at the differential diagnosis. He asked Mr. Godlee what part of the kidney had been incised, and as to the dressing that was employed when the urticarial rash had followed. He remarked that he had known this to happen when iodoform dressings were used. He mentioned a patient of his own who had suffered severely from symptoms of calculus in one kidney, attended with much discharge of pus, in which he had preferred to remove the kidney forthwith with a very successful result. He thought that in many of these cases in which there was pyelitis and general damage there would be less risk in removing the kidney as a whole than in attempting to remove the stone only.

Dr. HARLEY, in reply to Mr. Smith, said that he had not alluded to the tuberculous or strumous kidney among those the conditions which it was possible to distinguish from calculus, and he admitted that he knew of no means of so doing.

The PRESIDENT, after thanking the authors for their valuable communications, said that he did not think that the discussion had turned quite sufficiently upon the treatment of the hæmorrhage; whether it was better to suppress it by removing the kidney altogether or to leave the wound open, and trust to its arrest either spontaneously or by treatment. That was an interesting question, and so was the source of the hæmorrhage in these cases. Lastly, how best to open the kidney when it was necessary to explore it more freely. As the experience of surgeons in these cases increased these moot points would doubtless be cleared up.

Mr. LUCAS, in reply, said that Mr. Turner's statistics were very interesting, as showing how often renal calculus was one-sided. His reference to the greater gravity of cases in which there was suppuration was borne out by experience. He agreed with Mr. Smith that the kidneys might be degenerated as the result of calculus, and he was sure that some cases had been sacrificed to the kidney having been left. He thought that Dr. Harley was a little sanguine as to the future of the treatment of these cases, but he would be glad to think that the time was coming when renal surgery would be no more. He hoped, however, that Dr. Harley would not keep his patients under treatment as long as in Mr. Godlee's case, for he attributed Mr. Godlee's want of success to the case having been allowed to go on too long. He referred to the difficulty which there always is in distinguishing between strumous kidney and calculus, but suggested that the best thing the physician could do in cases of doubt was to call in a surgeon to cut down and examine the kidney, a procedure which was not attended by any appreciable amount of risk to the patient.

Mr. GODLEE, in reply, said the question of plugging the wound was one of very great importance in these operations. Although the hæmorrhage after incision into the kidney was free, it nearly always stopped after a little pressure by the finger. He thought that Mr. Lane's suggestion to suture the kidney was a good one, and he regretted that it had not occurred to him at the time of the occurrence. He agreed that people often went about with enormous stones without inconvenience, and he gave an instance of this. He thought that it could not but be better for the patient for the kidneys to be operated upon separately. He explained that he had cut into the outer part of the kidney as he had always done, except when he suspected a small stone in some other situation. It facilitated the examination of the whole of the kidney, and the only difficulty was if the kidney were small. He did not remember what dressing had been employed in the case in which the urticarial rash had followed. It was probably either carbolic lint or boracic acid gauze. Moreover the rash was not confined to the neighbourhood of the dressing, but was general all over the body. It was quite out of the question to remove the kidney at the first operation, because there was a strong suspicion that the opposite kidney was damaged. It was a less formidable operation, too, removing the stone than removing the kidney; so that he would in any case remove the stone first, and then later on, if necessary, he would take the kidney away.

MEDICAL SOCIETY OF LONDON.

Chronic Disease of the Uterine Appendages.

AN ordinary meeting of this Society was held on Jan. 12th, the President, Mr. Knowsley Thornton, in the chair.

Since the last meeting three of the Fellows have died—Mr. Bellamy, surgeon to Charing-cross Hospital; Dr. Arcedeckne Duncan; and Dr. Gulliver, assistant physician to St. Thomas's and the London Fever Hospitals. Dr. Gulliver died after an illness of only a few days, and his personal qualities and intellectual attainments rendered it likely that he would have attained a most distinguished position in the profession of medicine.

Dr. WILLIAM DUNCAN read a paper on Chronic Disease of the Uterine Appendages, with short notes of thirty consecutive cases treated by abdominal section. It appears in another part of our present issue.

Mr. ALBAN DORAN read a paper on the Treatment of Chronic Disease of the Uterine Appendages, which was designed as a brief review of the whole subject. He stated that statistics and clinical records were alike out of place. An operation like salpingostomy could not as yet be advocated or deprecated by statistics, since it had only been performed by two operators. Treatment by rest, most efficacious in many cases, was yet more difficult to illustrate by statistical records, which were serviceable...

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enough in the case of a widely performed operation like oöphorectomy. The different remedial measures more or less in vogue were rest, electricity, massage, curetting of the uterus, Emmet's operation, catheterism of the tubes, vaginal puncture of cystic tubes, and abdominal section, which included oöphorectomy, drainage of a hydro-salpinx, breaking down of adhesions and drainage, simple opening of the peritoneum, and plastic operations on the tube (salpingostomy). The author insisted that rest must be intelligently carried out, and showed that some therapeutic agents were not free from danger. The advantages of electricity and massage were problematical. Curetting of the uterus, efficacious no doubt in some forms of endometritis, was objectionable in disease of the appendages. It was based upon the doubtful theory that the disorder in question was caused by the extension of endometritis into the tubes; moreover, it often made the patient worse. Emmet's operation was based on yet more uncertain doctrines. Vaginal puncture of the tube was admitted to be dangerous and unsatisfactory by Leopold and Reverdin, who had advocated it. Oöphorectomy was then discussed. In many cases it cured the patient, but there were several objections to the operation, which were noted. A hydro-salpinx was often best treated by incision and drainage. A part of the tubal wall and its capsule should be trimmed away, in order to avoid all chance of closure and refilling This and all other "incomplete" operations had advantages over oöphorectomy. No unhealthy ligatured stump was left behind, and there was no danger of the serious nerve symptoms which occasionally followed the more complete operation. When the ovaries and tubes were found to be relatively free from disease, whilst pelvic adhesions were abundant, it was best to leave the ovaries and tubes alone and to break down the pelvic adhesions. The abdominal cavity should be well flushed with hot water, and a drainage-tube passed into Douglas's pouch. It must not be forgotten that these cases were not so often reported as oöphorectomies. Operators were apt to look upon incomplete proceedings as failures, even when the patient was cured. Simple incision through the abdominal walls sometimes cured all the symptoms, especially when local chronic peritonitis existed. Salpingostomy had been practised by Martin and Skutsch. It consisted in the formation of an artificial tubal ostium by a plastic operation. Perhaps it was an operation of the future, but it had as yet been but seldom performed. In conclusion, Mr. Doran expressed his belief that oöphorectomy was an operation to be avoided whenever possible; yet cases where it was necessary existed amongst women of all classes

The PRESIDENT asked Dr. Duncan if the table represented the whole of his practice.—Dr. DUNCAN replied that it included his last thirty cases up to the date of writing the paper.

Professor SINCLAIR, of Manchester, referring to the subject of causation, said that since there had been a diminution of puerperal sepsis there had been a decline in the amount of tubal disease. Gonorrhœa was no doubt a fertile cause of salpingitis and ovaritis. He confirmed the statement that a dangerous amount of injudicious gynæcological treatment was prevalent, and he quoted cases which illustrated the disastrous results of such treatment. The possibility of intermittent hydronephrosis had been called in question, but he had met with instances of it. It was a bad practice to use a stem pessary where previous uterine disease existed, but in cases of ill-developed uterus where the symptoms were aggravated by marriage its judicious employment was followed by good results. He had performed operations on the tubes for the last ten years, and the proceeding was difficult and dangerous. The admirable results which had been attained should not be used as a ground for any practitioner to undertake the removal of adherent tubes. A guarded prognosis should in all cases be given. The Staffordshire knot ought to become obsolete, for it was not to be trusted. He thoroughly believed in flushing the peritoneum, and had seen nothing but advantage accrue from it.

The PRESIDENT referred to the remarks in his introductory address condemnatory of the treatment of these cases by inexperienced practitioners, and stated that one of the prominent abdominal surgeons in the United States had recently published a paper on this subject denouncing it in the strongest terms.

The debate was then adjourned to the next ordinary meeting.

OBSTETRICAL SOCIETY OF LONDON.

Removal of the Uterine Appendages in cases of Functional Neurosis.

A MEETING of this Society was held on Jan. 7th, A. L. Galabin, M.D., F.R.C.P., President, in the chair.

Dr. PLAYFAIR read a paper on the Removal of the Uterine Appendages in cases of Functional Neurosis. Cases that had come under the author's observation were detailed: 1. A case of neurosis treated by removal of the appendages, without benefit, subsequently cured by systematic treatment. 2. A similar case in which the operation was recommended, and about to be performed, when the patient refused her consent, likewise cured by systematic treatment. 3. A case of neurosis, in which there was distinct evidence of structural disease of the appendages. In this instance the neurotic symptoms were first dealt with, in the hope that the patient would be sufficiently bettered to avoid the necessity of operation. 4. The subject of hystero-epilepsy and mania treated by removal of the uterine appendages was considered, and an illustrative case given. The general conclusions arrived at are: 1. That the removal of the appendages is not a legitimate procedure in cases of purely functional neurosis. 2. That when marked structural disease of the appendages co-exists with severe neurotic conditions the latter should be treated in the first instance in the hope that operation may be avoided. 3. That in hystero-epilepsy and hystero-mania the results of operation have been so unsatisfactory that it is a procedure of very doubtful expediency and not to be recommended.

Sir SPENCER WELLS referred to a pamphlet by Dr. Ross of Toronto, on the Failure of the Removal of the Tubes and Ovaries to relieve symptoms. He says: "To operate on organs not diseased for the relief of indefinable pain symptoms, hysterical symptoms, cataleptic symptoms, epileptic symptoms, is, to my mind, unjustifiable. A craze seems to have taken hold of the profession. The axiom seems to have become, if a woman has indefinite pains and local symptoms take out her ovaries. This axiom requires a radical change." Dr. Ross went on to say: "I have seen these unjustifiable operations done both in Europe and America ..... many cases in which ovaries and tubes are removed to relieve certain nervous symptoms remain unrelieved. ..... Many cases I hear of as cures are not cures. ..... From our many failures to remove nervous diseases, as hysteria and epilepsy, by castration, we can see that the ovaries play but a part in their causation, and I believe that we might as well hope for relief of these diseases by enucleation of both eyes as by removal of both ovaries, or both tubes, or both tubes and ovaries, or even tubes, ovaries, and uterus." Dr. Ross related a case where he removed the ovaries in 1886. In 1888 he was able to report that his patient had been in splendid health ever since the operation, but in 1890 had to say her mental condition is not what it was before. She seems lazy, indolent, and fat, and is not the bright little woman she was before the operation, even when she had her aches and pains. Sexual intercourse is only indulged in as a marital duty. It gives neither pain nor pleasure. Then, Dr. Ross proceeded, "many deaths from these operations have been recorded. ..... A girl's prospect of marriage, maternity, and a happy life are blasted for ever by such a procedure." He then referred to a case where a lady of his acquaintance was operated on at Birmingham, and her case was brought before the Gynæcological Society in December, 1888, very soon after the operation, as a practical cure. He (Sir Spencer Wells) had seen that lady to-day. She had never been well since the operation, but very much worse than before, and her case, instead of being a cure, was a deplorable and disastrous failure. He had seen other cases almost as discreditable, and he fully concurred in all that Dr. Playfair and Dr. Ross had said against unnecessary and unjustifiable mutilation for transitory disease.

Dr. PRIESTLEY referred to the debate on the subject at the International Medical Congress held in Copenhagen six years ago. The preponderance of the best opinion was adverse to operation. His own experience was not favourable to it. It was not free from danger, and was not easy. Nor did it cure, proving that severe ovarian pain without disease is but the expression of a general neurosis. The proposal to remove the uterine appendages arose really

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from mistaken diagnosis, and was comparable to treating as the real ailment the pain in the knee associated with hip-joint disease in children, or the pain in the calf of the leg so often experienced by women who are the subjects of phlegmasia dolens. It was well known that neurotic cases often got better spontaneously. Alteration of surroundings, an engagement to marry, or other occurrence, was sufficient. Dr. Priestley said that neuralgia of the testicle was not treated by castration, therefore why was castration performed in women? He referred to the remark of the late Dr. Matthews Duncan about the dangerous precedent of allowing a patient to decide upon an operation. He contended that these cases were best treated by medical and moral treatment as recommended by Dr. Weir Mitchell. He would lay it down as a rule that the appendages should only be removed when there was distinct local disease ascertainable by examination, and he would put still some further limit to this, for it was well known that both ovaries and tubes might be considerably enlarged and yet return to their natural size without operation. In those formidable diseases mania and epilepsy he did not venture to give an opinion.

Dr. GERVIS said he agreed with the first and third conclusions of Dr. Playfair, but in the second he should be influenced by the interpretation to be put on the word "marked." If it signified organically and permanently affected, then he failed to see any object in hesitating at operation unless the local conditions gave rise to no symptoms of importance; but if it meant only a condition which came within the limits of what was curable, then certainly systematic treatment should be tried before any idea of operation was entertained. He believed systematic treatment, combined with massage, was often of real value, not only in curing the general neurotic condition, but the local malady.

Dr. HORROCKS said it was necessary to remember that a functional neurosis was a complaint without an organic lesion to account for the symptoms. It was always difficult to prove a universal negative. Hence, when a woman complained of pain in the ovarian region, it was not easy to say that she had no disease in the pelvis to account for such pain. If no disease could be found, and yet the patient complained persistently of pain and distress which remained unrelieved by systematic treatment, it became a question whether it was not justifiable to open the abdomen and examine the pelvic viscera, with the object of discovering if possible the source of the pain, and removing it; in such a case, if the ovaries and tubes were found to be healthy, ought they not to be dropped back into the pelvis and left alone? He mentioned a case now in Guy's Hospital, under his own care, which had been treated twelve months without benefit. She was waiting to have abdominal section performed to relieve her ovarian pain, although on careful examination no disease could be found in the pelvis. He did not think that healthy ovaries and tubes should be removed in cases of true functional neurosis.

Mr. ALBAN DORAN said there was a great difference between the removal of the appendages for disease and their removal for a neurosis. In the first case, even when the patient might have recovered without operation, structures absolutely diseased were removed, the ligatured pedicles remaining as relatively small sources of irritation. In removal of the appendages for neurosis, structures only assumedly morbid were cut away, whilst the ligatured pedicles remained as definite sources of irritation in these neurotic patients. Some believed the induction of the menopause cured the neurosis; but the menopause was always more or less of a shock, and a premature menopause was a still greater shock.

Dr. HEYWOOD SMITH said that in his experience many cases had been entirely relieved from intense neurosis of the ovaries by their removal. He mentioned a case of intermittent melancholia cured by removal of the uterine appendages. One ovary was beginning to undergo cystic degeneration.

Dr. HAYES thought neurotic symptoms were not usually present where there was disease of the appendages, and even if they were present they were not relieved by removing the diseased appendages. When these organs were diseased they should be removed for other reasons. He was led to believe that patients often submitted to these operations in order to escape from the inconveniences of menstruation and child-bearing.

Dr. PLAYFAIR, in reply, said Dr. Heywood Smith had misunderstood him. His paper was not written with the view of opposing operations in suitable cases of structural disease, which he himself constantly practised, but to show its inefficiency in cases of purely functional nervous breakdown. He could only repeat his conviction that these cases had generally nothing to do with the reproductive organs. In mixed cases operation should follow, not precede, the attempt to cure the neurotic symptoms.

The following specimens were exhibited:—

Dr. PHILLIPS: Genital Organs from a fatal case of Purpura Hæmorrhagica.

Dr. DAKIN: Tubercular Uterus and Appendages.

Dr. HAYES: (1) Distended Fallopian Tubes; (2) Fibroid Polypi.

HARVEIAN SOCIETY.

Some cases of Phthisis treated on Dr. Koch's Method.

A MEETING of this Society was held on Thursday, Jan. 8th, Mr. Thomas Bryant, President, in the chair.

Dr. J. EDWARD SQUIRE, in a paper on the injection method, said the success of Dr. Koch's researches in the laboratory justified the use of the fluid he had prepared in cases of human tuberculosis. The fluid has a selective affinity for the pathological products of a specific inflammatiou, itself a product, as is stated, of the micro-organism associated with this special disease. It is five or six years since Dr. Wooldridge, from a pure culture of the bacillus anthracis in a liquid proteid material, separated the bacillus by filtration, and found that inoculation of this fluid in animals was protective against the anthrax virus. Encouraged by the success, he had commenced similar researches on the tubercular bacillus, which were interrupted by his untimely death. The effect of the remedy on the bacilli may be that they are shrivelling from inanition, and so die and are cast out. Dr. Squire defined active tuberculous tissue as tissue in a condition of inflammation produced by the specific irritation of the products of the vital activity of a colony of tubercle bacilli. Dr. Koch's liquid was believed to contain as its active principle these products of the bacilli, and though not sufficiently powerful to set up a specific inflammatory action in healthy tissues, it was sufficient, when added to the actively inflamed (tuberculous) tissues, so to increase the morbid changes in them that death of the part resulted from the intensity of the inflammation (i.e., by sloughing). Dr. Squire's remarks were illustrated by eight cases under treatment, all of whom were so far benefited. Seven are of phthisis, one a child with lupus under Dr. Barlow's care in the Hospital for Sick Children. In all these cases marked reaction followed. A tolerance is soon established, and the reaction becomes less after repetition even with increased doses. The dose must be in proportion to the amount of active tubercle diagnosed rather than to the age of the patient. Children are given a smaller dose to begin with than young adults with limited or recent tubercular deposit, as they are more easily depressed, and in some children a weak and very frequent pulse follows; in others the reaction is not such as to interfere with their sleep at night. There was marked difference in this to the effect of chemical drugs. The site of the tubercular deposit was of importance, as a degree of local disturbance in the skin around lupus could be tolerated that would be very dangerous in the larynx or the brain. As to dosage, instead of beginning with the largest dose that could safely be borne, equally good results might probably be obtained by using a minimum dose at first and increasing it gradually. In two of Dr. Squire's lung cases the large dose of one centigramme was first used; in these a severe reaction occurred. After repeated smaller doses the patients now bear the large dose without any trouble. The same results were obtained by gradually increasing the dose. The reaction was in most cases marked by a rise of temperature. In a few cases a fall to below the normal for a time was occasioned; the pulse, at first full and soft, became quick and weak; arterial tension was diminished, as was shown by its being easily compressible. Various rashes and slight jaundice had been observed, and in one of Dr. Squire's cases double vision occurred during the reaction. The effect on the lungs affected by tubercle was manifested by increased rapidity of breathing, pain over the seat of deposit, increased cough, and marked stethoscopic signs. The signs were suggestive of a localised pneumonia. As bearing out the contention that only tubercular material is

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affected by the remedy, Dr. Squire mentioned two cases where the inflamed area produced by blisters showed no change after injection, whilst a lupus patch in close proximity became red and swollen. Fresh air, good food, and cod-liver oil were important aids to the treatment by Dr. Koch's liquid which should not be neglected. In conclusion, Dr. Squire again emphasised the necessity for a careful selection of cases, and competent supervision of patients throughout the treatment, and especially during reactions. The remedy might be discredited by its indiscriminate or incautious use before there had been time to determine its value in appropriate cases.

Mr. D'ARCY POWER said that he had seen one of the lupus cases mentioned by Dr. Squire after the third injection of six milligrammes. He was quite appalled by the severity of the reaction and by the amount of collapse which was produced. He thought that if this case was to be in any way taken as a type of what usually occurred, the very greatest care should be exercised in the selection of suitable patients, and injections should only be given when very skilled nursing could be obtained.

Mr. NOBLE SMITH had watched Mr. Watson Cheyne's cases with great interest, and thought that he had witnessed a marked improvement after injections in cases of tubercular disease of the hip and elbow.

Dr. WATERHOUSE narrated a case of a lady with advanced phthisis, whose life, he thought, had been undoubtedly prolonged by Koch's treatment as it was carried out by Mr. Watson Cheyne. After the injections the temperature decreased, there were no night sweats or diarrhœa, and the bacilli disappeared from the sputa, though she still coughed up much lung tissue. A herpetic eruption appeared over one trochanter, however, apparently as a result of the treatment, for it was not a bedsore.

Dr. O'CONNOR, in watching cases which had been injected, was struck by the effect which appeared to be produced upon the mucous membranes of the body. He asked Dr. Squire whether in his patients the treatment had produced any symptoms of pneumonia.

Mr. EDMUND OWEN was present at the meeting solely that he might express his thanks to Dr. Edward Squire for the kindness, care, and discretion with which he had carried out the injection treatment upon the patients at the Children's Hospital. On the inauguration of the treatment Mr. Owen had stated that his mind was quite open upon the subject of Koch's remedy. It was still open—wide open. He would briefly say that, as regards the children who were injected, their tubercular joints had undergone no more improvement than might have reasonably been anticipated from treatment in hospital upon the old lines—that is, with rest in bed and fixation of the limb. There was one child with tubercular ophthalmia, tubercular dermatitis of the lip, and tubercular disease of the knee. The eye got worse under the injections, the lip got better, and the knee swelled a little. It was customary, however, for tubercular dermatitis to improve under ordinary treatment. As regards the knee, when the local excitement subsided the chronic affection seemed to be unaltered. During the progress of the injections, in a case of tubercular disease of the hip-joint, an anomalous rash appeared upon the child's body. It was shown as a case of "Koch eruption," and as such was regarded with considerable interest. In due course, however, several other children in the ward broke out in unmistakable measles, on which the real nature of the first eruption was manifested. Had they been ignorant of the fact that Koch's treatment was occasionally associated with a morbilliform eruption the ward would not be—as was now unfortunately the case—in quarantine. Probably this evening's meeting was the first occasion of an able and scientific paper on a medical subject being illustrated by a quotation from the *Morning Post*. He did not blame the author of the essay for making the quotation, but he could not refrain from expressing his regret that members of the profession had so widely used the public press for purposes of advertisement. There seemed to be a desire to struggle into the heaven of notoriety by the aid of Professor Koch's coat-tails.

Mr. MORTIMER said that as registrar to the Hospital for Sick Children in Great Ormond-street he had carefully watched the cases which had been injected by Dr. Squire. He believed that if the treatment was to be of service acute and not chronic cases should be selected.

Surgeon W. A. MORRIS said that during his stay in Berlin he endeavoured to see all he possibly could of this treatment. By the courtesy of Professor Ewald he visited his cases as well as those under the care of Professor Bergmann, and though the selective action of the drug was very apparent in lupus; he did not see a single case where there was a distinctly favourable result.

Dr. SQUIRE briefly replied.

Reviews and Notices of Books.

A Descriptive Catalogue of the Pathological Museum of the London Hospital. London: Taylor and Francis. 1890.

A Descriptive Catalogue of the Pathological Collection in the Museum of St. Thomas's Hospital, London. Second Edition. By SAMUEL G. SHATTOCK. Part I. London: Adlard and Son. 1890.

Descriptive Catalogue of the Specimens illustrating Medical Pathology in the Museum of University College, London. By CHARLES STONHAM, F.R.C.S. At the Office of the College. 1890.

THE educational value of a well-arranged museum is universally admitted, and there are no subjects in the domain of science to which this method of objective instruction cannot be applied. In pathology there is in the association with every hospital of importance a collection of specimens which in the aggregate is of enormous extent, and is significant of the ardour with which the subject is studied. In London especially there are pathological museums, under the charge of skilled experts, which abound in carefully prepared specimens illustrative of the common as well as the rare types of disease. For no museum worthy of the name should be a mere collection of curiosities; its contents should embrace the whole field of the subject it is intended to illustrate, and the individual specimens should be so prepared as to tell their own tale. It is obvious too that a good catalogue is indispensable to a museum; and we note with satisfaction that of late years so many of the London hospitals have followed the example set by the older institutions, and issued such works from the press. The advantage to the student is very great, whilst to the investigator it is no less valuable; and it may be noted that, since the plan pursued is mainly the same at all the hospitals, there is great facility given for the comparison of specimens and the collation of facts of morbid anatomy.

The catalogue of the London Hospital Museum forms a handsome volume of about 630 pages. The preparations are continuously numbered, a plan which is decidedly the best, and is now generally adopted; the descriptions are careful and accurate, often with instructive clinical details of the case yielding the specimen. The general editing and much of the compilation are due to Dr. F. C. Turner, Mr. F. S. Eve, and Mr. T. H. Openshaw, the curator of the museum; but the coöperation of several of the members of the hospital staff has been obtained in particular sections. A feature of the collection is the series of 200 specimens illustrating general pathology, containing selected specimens to stand as typical examples of hypertrophy, atrophy, degeneration, injury and repair, necrosis and gangrene, inflammation and its results, specific diseases, and morbid growths. Of the rest of the collection it is difficult to select specimens from series so well stocked, but we may indicate a few of special interest. No. 206 is a specimen of an old separation of the odontoid with a false joint between it and the axis; and No. 207 an example of dislocation of atlas and odontoid, in which the subject survived for three weeks. Nos. 215 and 216 show fibrous and osseous union of fractured vertebræ. The collection is particularly rich in fractures of all kinds; and in the section of joint disease we notice an excellent series of chronic rheumatoid

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arthritis. Historical interest attaches to a specimen of hydatid in the left parietal lobe of the brain (838)—a case recorded by Dr. Abercrombie. Among cerebral new growths may be observed two of the pituitary body (857, 858) and one of the pineal body (859). The conditions of acute poliomyelitis and syringomyelia are illustrated. There are excellent series of diseases of the eye and ear; but that of the teeth consists of a single specimen (an odontome). The series of gastric ulcer is extensive; there is one specimen showing gastro-colic fistula (1105) and one of perforation of the stomach "from without" (1107). There is a specimen of ulceration of the stomach in typhoid fever (1113), and such rare neoplasms of this organ as lipoma (1116), fibroma (1117), and sarcoma (1118, 1119), and a curious example of cystic growth in the pyloric region (1139). In the museum of the hospital to which the late Mr. Curling was attached it is not surprising to find some specimens illustrative of duodenal ulceration following burns or scalds. Typhoid, tubercular, and dysenteric ulceration is abundantly exemplified. No. 1269 shows congenital absence of the rectum. The subject of hernia seems well shown, including two specimens of Littre's or Richter's hernia. There are two specimens of pylephlebitis (1359, 1360), one of actinomycosis (1365), and another of atrophy of the pancreas in diabetes. The series of diseases of the heart and bloodvessels are abundantly stocked, and so are those of the lungs. We note many specimens of new growths of the supra-renal bodies and a rich collection of tubercular and syphilitic disease of the testis. There are four specimens of malformed uterus—viz., one of uterus unicornis, one of uterus bicornis, and two of uterus didelphys; whilst there is a large number of pelvic deformities amongst malformations. The collection numbers 2433 specimens. Casts, models, urinary calculi (179 in all, which have been analysed by Mr. F. J. Page, B.Sc., and Mr. Openshaw), ciliary and other calculi, and a series of plates of diseases of the skin (arranged by Dr. Stephen Mackenzie) are also comprised in the museum, which is thus seen to be extremely well equipped.

St. Thomas's Hospital Museum has long possessed (since 1859) an excellent printed catalogue; but the lapse of time, which brings with it so many changes in pathology as in every other progressive science, has necessitated the preparation of a new edition, which has doubtless also been called for by the growth of the collection. The energetic and able curator, Mr. S. G. Shattock, has thrown himself heartily into the work; and this, the first instalment, promises well for the whole. This Part I. comprises as many as 742 specimens, covering the comparatively limited field of injuries and diseases of muscles, tendons, synovial sheaths and bursæ, cartilages, bones, joints, and the jaws. A novel feature is the prefixing to each series a normal preparation of the structure to which the morbid specimens belong. The catalogue appears to have had much pains bestowed upon it, and the collection contains some unique preparations. There is a most valuable series of gunshot fractures (78 to 112), mostly contributed by Sir W. MacCormac from the Franco-German War. An instructive series is that of specimens showing the "ideal process" of repair of fracture of bones and "deviations from the ideal process of repair" (55 to 72). The series of fractures of the skull and spine are extensive, and one notes with interest several examples of fracture of long bones presented by Sir Astley Cooper. Rickets and osteo-malacia are well illustrated, as also are the subjects of caries and necrosis, and of tumours of bone, the last classified according to their histological structure. The collection is rendered very complete by the inclusion of specimens of parasitic disease of bone—namely, hydatid, actinomycosis, and Madura foot. Amongst joint diseases, the museum is very rich in specimens of tubercular arthritis, and also in osteo-arthritis, the latter including some preparations from cases of tabes dorsalis presented by M. Charcot, who also gave to the museum (825 A) a life-size wax model of a woman the subject of tabetic arthropathy, which was exhibited by him at the International Congress in London in 1881.

The third catalogue on the above list is that which deals with the medical part of the pathological series in University College Museum, the surgical having been issued a few years previously. The present volume is mainly the work of Mr. Stonham, but its preparation has been shared in by Drs. Barlow, H. Sainsbury, and A. Money. The chief point of difference between it and the preceding lies in the introduction of succinct descriptions of the morbid anatomy of the textures and organs, which are illustrated by the specimens that follow. This must be of especial value to the student. But considerable care has also been taken to render wider service, in the clinical facts given of several of the cases from which the specimens have been derived. Amongst the specimens illustrating intestinal disease we note one showing the follicular hypertrophy met with in Addison's disease (3070), a considerable series of dysenteric and typhoid intestines, and some from cases of cholera. There are some interesting specimens of rupture of the heart—viz., three of the left ventricle, and two of the right ventricle—one of the latter, as well as one of rupture of the left auricular appendix, being traumatic in origin. Specimens illustrative of pleurisy and empyema are included, and the subject of phthisis is fairly well illustrated — although here, as in many museums, the illustrations are not so abundant as the number and variety of cases dying in hospitals might be thought capable of affording. There is a particularly good collection of morbid growths of the lungs and pleura. Amongst the specimens of Addison's disease is a remarkable one of atrophy (with gumma) of the supra-renal bodies. The collection also contains a good series of specimens of thrombosis of cerebral vessels, and of tumours of the brain and membranes.

OUR LIBRARY TABLE.

Physiological Quantities or Constants. By V. H. WYATT WINGRAVE, M.R.C.S. London: Henry Kimpton. 1890.—"A list of quantities," as the compiler of this *brochure* remarks, "has formed an important feature in the note-book of every student of physiology." Such a compilation is necessarily of great use both to the practitioner and student. This little work is conveniently arranged, and the statements are very accurate. One of its chief advantages is that it is so easy of reference, the heads under which the various subjects are placed being concise and methodical. The object of the compiler has been to facilitate work—to refresh and stimulate the memory by associating ascertained facts with ideas through frequent repetition. This has been most ably and completely carried out, with the result that the student will find placed in a small and compact volume all the physiological quantities, which otherwise he has to search for in various text-books on the subject.

Bibliographie Française de l'Art Dentaire. Par Le Docteur TH. DAVID. Paris: Germer-Baillière et Cie.—This work is a catalogue of the manuals, *brochures*, and casual papers read at congresses and societies on dental subjects, and extends back as far as the commencement of the present century. In the first section the matter is arranged under the names of the authors, and, considering that there are 289 pages, in each of which there are on an

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average ten subjects, it is surprising that so large a field of literature should be but little known to the students of dentistry, with the exception of the works of Magitot and those of the compiler. The second section consists of a well worked-out subject index.

My Friends at Sant'Ampelio. By J. A. GOODCHILD. London: Kegan Paul, Trench, Trübner, and Co. 1890.—Encouraged by the cordial reception awarded to a previous book, entitled "Chats at Sant'Ampelio," the author has reprinted it, together with a new second part of somewhat greater length; this is termed "The Sage of Sant'Ampelio, and it is of a much graver cast than its companion. To disarm criticism, a sage is defined as "*one who has found the equilibrium of life.*" Many of those who formerly took part in the entertaining and fascinating chats pass in and out of the life of the second part, but the real backbone of it is the sage himself, who in quiet and courteous manner corrects so many of the vague aspirations and statements of those about him. The sage, of course, has a history, which has to be unfolded by degrees to account for the curious calm of his equilibrium; but the charm of the book lies, not in simple narrative, but in the stimulating power it possesses. No one can read the chapter upon the College of St. Sophia without feeling grateful to the author for presenting, in an allegorical form, so useful a help to those perplexed by the supposed difficulties of harmonising revealed religion with the progress of science. The serious nature of many of the topics touched upon in this second part does not preclude interest, or even an occasional light-hearted witticism. Verses of some merit are scattered through the volume. The book is thoroughly healthy and vigorous in tone, and should be the more warmly welcomed by our readers, since it comes from the pen of a medical man.

Dictionary of National Biography. Vol. XXV. (Harris-Henry I.). London: Smith, Elder, and Co.—The instalments of this stupendous work continue to be issued at the usual intervals. The twenty-fifth volume has now been reached, which, however, only brings the work up to the middle of the letter H. A great drawback to the work as one of reference arises from the fact that the index gives as a rule no clue to distinguish professionally the large groups of individuals bearing the same surname. For example, in the present issue there are forty-nine individuals described bearing the name of "Harris," and thirty with the name of Harrison, without means of distinguishing the particular avocation of the respective owners of those names. A biographical description of William Harvey, discoverer of the circulation of the blood, forms one of the most fascinating articles in this volume, and the short account of Dr. William Hawes, the founder of the Humane Society, is of scarcely less interest. Dr. Thomas Haweis, Dr. John Hawkins, of Jesuitical renown, are also mentioned. The Irish representatives of medical work are Sir John Hayes, who was in 1791 appointed physician extraordinary to the Prince of Wales; Thomas Healde, a famous Harveian orator; Richard Helsam, a medical man mentioned by Swift in 1733 as "the most eminent physician in this city and kingdom"; and, finally, Dr. John Hennen, whose statue, erected in honour of his heroism as an army officer, graces the fortress of Gibraltar, where it was placed by public subscription. Other professions are, however, in this particular volume much more largely represented. The work fully maintains the expectations it excited on the publication of the first volume.

Blackie's Modern Cyclopædia of Universal Information. London, Glasgow, Edinburgh, and Dublin: Blackie and Son.—This handy book of reference on all subjects and for all readers has now with the eighth volume reached its conclusion, and it need scarcely be said cannot fail to prove a most convenient work of reference. It is comprehensive in scope, moderate in size, beautifully printed, and illustrated with much skill. It contains articles on all imaginable subjects, amounting in number to nearly 28,000. The scientific articles are as a rule carefully written by experts in the various branches of science dealt with in the work. In respect of scope, utility, and convenience, this Cyclopædia will favourably compare with similar works of much greater bulk and pretensions, and will doubtless on that account be correspondingly appreciated by the numerous class of readers and writers whose labours it will serve materially to minimise.

Symptomologie und Histologie der Hautkrankheiten. Von H. LELOIR und E. VIDAL. Part I. Translated into German by EDUARD SCHIFF. Hamburg and Leipzig: Leopold Voss. 1890.—This important work is here presented in German in exactly the same style as the French original, and Dr. Schiff's well-known reputation as a dermatologist and his knowledge of the French language are a sufficient guarantee that the book loses nothing by its presentation in a German dress.

WE have received *Sell's Dictionary of the World's Press* (Henry Sell, 107, Fleet-st., E.C.), which is quite as interesting and instructive as heretofore, including as it does articles by G. A. Sala and other well-known writers. Although the work is primarily of value to the advertiser, it contains much that may also be found of interest by the general reader.

New Invention.

NEW HOT-WATER BOTTLE.

SPECIMENS of a useful modification of the ordinary hot-water bottle have been submitted to us, which are worthy of commendation. They are made of tin or copper, covered with indiarubber, and of a size and shape to render them fitted for application to any part of the body, to which they may be attached by means of tapes passing through loops fixed to the bottle. The vessels are supplied on one side with a raised border, to admit of the insertion of a pad of spongio-piline or a poultice, the warmth of which is maintained by the hot water within. The convenience and utility of such an apparatus as that above described must be apparent, especially to those whose duties lie in the sick room. They are manufactured by Mr. C. W. Shepherd, Brook-street, Ilkley.

THE SHIRLEY CHILDREN'S HOSPITAL.—The sixth annual report of this institution shows that twenty-four surgical and thirty-one medical cases were treated as in-patients, of whom thirty-six were discharged cured, nine greatly improved, two died, and seven remained in the hospital. Since July last there have been thirty-four patients and over 300 out-patients attended.

ROYAL HOSPITAL FOR INCURABLES, PUTNEY.—The annual meeting of the subscribers and election of inmates to this institution was held at the Cannon-street Hotel recently. Mr. J. D. Allcroft presided. The report, which was adopted, stated that the receipts from ordinary sources had been fairly maintained, while the legacies had been exceptionally large by the payment under the will of the late Mr. John Chapman of £13,300. £8000 had been invested, and £6000 placed on deposit. Under these circumstances, the board had raised the number of inmates to be elected from thirty to thirty-five. The inmates at the end of the year numbered 231, and the pensioners 588, making a total of 768 beneficiaries.

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THE LANCET.

LONDON: SATURDAY, JANUARY 17, 1891.

THE important statements made by Professor VIRCHOW at the meeting of the Berlin Medical Society on the 7th inst.—a full abstract of which we publish elsewhere—mark a distinct period in the history of the employment of the anti-tuberculous fluid discovered by Professor KOCH. Hitherto investigations have been mainly clinical, and the few cases in which the results of post-mortem examination have been published have not permitted of any definite deduction as to the action of the remedy upon internal organs. Professor VIRCHOW now brings forward his experience based upon an examination in the Pathological Institute of twenty-one cases which have proved fatal during or after the treatment. Coming from so high an authority, his statements will have the greatest weight, and they must be carefully analysed, in order, if possible, to determine whether the treatment of internal tuberculosis by this method is strictly chargeable with increasing the liability to a fatal termination; and, if so, what are the circumstances which should favour or interfere with so disastrous an issue. It is imperative that the question should be fairly faced and impartially handled; otherwise there may be witnessed as great a revulsion against the use of the "remedy" as there has been of indiscriminate enthusiasm at its first adoption.

In the first place, it must be pointed out that Professor VIRCHOW'S results confirm in a striking manner the accuracy of the original statement of Professor KOCH. With certain exceptions as regards miliary tubercle and "solitary" tubercle of the brain, to which he afterwards referred, Professor VIRCHOW admitted that the "remedy" acts in a remarkably selective way upon tuberculous tissue, leading to its rapid necrosis, preceded and accompanied by inflammatory hyperæmia and exudation. That which is so strikingly shown in the local reaction produced by the injections in cases of lupus and articular tubercle does undoubtedly occur in the deeper parts of the body. Some of these changes have been so marked as to astonish even one of the wide pathological experience of Professor VIRCHOW. Naturally, but little opportunity is afforded of observing the hyperæmic swelling after death, owing partly to the time that has generally elapsed between the discontinuance of the injections and death, and partly to the transient character of the phenomenon. We mostly judge post mortem of hyperæmia by its effects, but occasionally the vascular engorgement and distension are so marked as to leave no doubt of its presence. Professor VIRCHOW was struck by the extremely congested state of the cerebral membranes and brain substance in the fatal case of tubercular meningitis that had been treated by the injections; and he has noted also undue vascularity and even hæmorrhagic infiltration in the walls of phthisical cavities, or actual hæmorrhage into the cavity itself. Less equivocal evidence of the specific power of the fluid may, however, be found in the very marked indications of inflammatory action around ulcerated areas and in the contiguous lymphatic glands. The degree of inflammatory "reaction" is sometimes such as to merit the term "phlegmonous," and it is associated with distinct leucocytosis. These anatomical descriptions tally precisely with the conditions observed in skin and mucous membranes during life, and the liability to grave laryngeal complication from the use of the remedy in tubercular disease of that organ was early pointed out.

The greatest interest attaches to Professor VIRCHOW'S statements concerning the condition of the lungs in cases of phthisis treated by the injections. This is a matter which from the first has riveted attention, and fears were early expressed on all sides lest in dealing with so complex a structure as the lung the reactive changes might lead to grave symptoms or possibly to extension of the disease. It is notorious that our methods of physical diagnosis, however carefully applied, are not of such exactitude or nicety as to inform us of the precise changes that are going on in the lungs; and, indeed, that they are sometimes liable to lead to erroneous conclusions concerning the actual comparative extent of excavation and consolidation. Surprise is excited, in reading the records of some of the cases of phthisis treated by KOCH'S method, at the scanty amount of evidence of a local reaction in the affected lung as contrasted with that observed in other regions. But there have not been wanting cases in which not only has no good resulted from the treatment, but in which physical examination has pointed to a distinct advance of the disease. Professor VIRCHOW'S careful study of the lesions met with post mortem throws much light upon such cases. He finds a remarkable tendency to an undue extension of caseous and of catarrhal pneumonia. One case exhibited most extensive tracts of "caseous hepatisation" in the lower lobes, although when the treatment commenced there were only signs of limited induration at one apex, and several other cases showed similar changes to a less marked extent. The type of "catarrhal" pneumonia, which also extensively prevailed in some cases, was notable for the fluidity of the alveolar contents, differing in this respect from what is usually observed in phthisis, and for being more widely diffused throughout the lung. Ordinary croupous pneumonia did not occur, at least in a simple form. These pneumonic changes are indeed part of the natural history of phthisis, and it might be contended that the injections had nothing to do with their production, such peculiarities as were noted by Professor VIRCHOW being not so specifically distinct as to base thereon an affirmation of any relationship to the treatment. Nevertheless, there is nothing improbable in the views enunciated by that eminent pathologist. The "remedy," which acts by causing disintegration of tuberculous tissue, may conceivably set free so much material which cannot be got rid of in the ordinary way; and the infection of the lower lobes, although paralleled in many cases of phthisis apart from any use of the "remedy," is, under these circumstances, most likely (indeed we might say "most certain") to supervene. It will be difficult to explain away these facts, which empha-

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sise the necessity for careful selection of cases submitted to treatment.

There remains, however, another, and even graver, danger in the use of the remedy, the possibility of which has been suggested since the time of Professor KOCH'S declaration that the bacilli themselves are unaffected by the action of the remedy. We mean the risk of disturbing a localised tubercular focus, and setting free the virus to disseminate tubercle in other parts. There is no mistaking Professor VIRCHOW'S opinion on this head. He adduces evidence of quite recent miliary tuberculosis in serous membranes and elsewhere in cases treated by the injections to show that such dissemination may have arisen from the disturbance of old foci. He seems to consider that the appearance of fresh tubercles on the larynx or other mucous surface is not due, as suggested, to the diagnostic powers of the remedy, but to its having initiated fresh infection. Some of the examples he cites—e.g., of recent tubercles in the serous surface opposite to intestinal ulcers—are less convincing than others, since they are among the ordinary concomitants of the local process; but pericardial tubercle is rare enough, and its existence in two cases is a curious coincidence, if nothing more. The risks of intestinal perforation from rapid necrotic action in tubercular ulcers must also be borne in mind.

It is, of course, possible to assert that the important facts adduced by Professor VIRCHOW have no relation to the injections of KOCH'S remedy, since they are in harmony with the known progress of the disease. But when we remember that this fluid has been shown to have such powerful disintegrating action upon tuberculous tissues in other parts of the body, and also that such action in the lungs would explain the appearances detailed by Professor VIRCHOW, it seems almost idle to dismiss the notion that the lesions are consequent on the remedy. Does it therefore follow that the remedy is useless, and should forthwith be discarded? Surely not, for it confirms its power for good as well as for evil, whilst it emphasises the need for the greatest circumspection in its use, in selection of individual cases based not only upon the stage of the disease, but also on the general strength of the patient. It suggests too the inadvisability of using it in chronic and quiescent cases on the one hand, and in the actively progressive on the other. Altogether it tends to limit very much its applicability to pulmonary phthisis. But we are not prepared to say, from the evidence so far offered, that it will have to pass into the limbo of other less worthy "cures of consumption."

Since the above was written we learn that Professor VIRCHOW continued his statement at the meeting of the Society on the 14th, and that in the debate which followed Drs. A. FRAENKEL and BAGINSKY related cases in which the disease extended whilst under the treatment, thus confirming Professor VIRCHOW'S statement. However, Dr. GUTTMANN was able to adduce other instances in which the improvement was so marked as to leave no doubt of the efficacy of the remedy in some cases. Professor VIRCHOW, in closing the discussion, remarked that he did not question its powers, but only desired to warn against its indiscriminate employment. We note too with satisfaction that the "secret" of the nature of the remedy has at length been divulged. Thus, then, we may look forward with increased hope for the future of the remedy, in ampler knowledge of its nature, and of its effects on the human body; and believe that, although its scope may be more limited than has been imagined, it will be of the greatest service in the treatment of tubercular diseases, when applied under suitable conditions in carefully selected cases.

IN our annual bills of mortality respiratory diseases occupy one of the most prominent places. If we take the Registrar-General's returns for England and Wales for the ten years 1871–80, we find that the deaths from all causes amounted to 21·27 per 1000, and that of this mortality 2·12 was attributable to phthisis, and 3·76 to other diseases of the respiratory organs. It would thus appear that maladies of the pulmonary organs carry off from a third to a fourth of our population. The proportion of deaths from this cause is, as might have been anticipated, higher in the large cities than in the country districts. Thus in London, during the period already mentioned, the mortality from phthisis was 2·51 per 1000, and from other respiratory diseases 4·60 per 1000. As compared with the previous decade (1861–70), the deaths from phthisis in England and Wales showed a notable decline—viz., 359 per 1,000,000 persons living; but, on the other hand, there was an increased mortality of 896 per 1,000,000 from other respiratory diseases. An analysis of the rates of mortality at the various ages would seem to show that this difference is not to be accounted for on the supposition of the transference of deaths from one heading to the other, as at first sight might be suspected, but that the decline in one case and the increase in the other are real and *bonâ fide*.

Of the various diseases included under the heading of respiratory diseases our information is the most complete regarding pneumonia. According to HIRSCH, the deaths from this affection in London during a period of eight years amounted to 1·7 per 1000 living. The average for the British Islands, as for the other countries of the colder and the temperate latitudes of Europe, is probably about 1·5 per 1000. Bronchitis is responsible for the major part of the balance of the mortality from respiratory diseases, being especially fatal at the extremes of life, and when assuming the capillary form. The mortality from pleurisy and from the minor respiratory diseases is relatively small.

It is highly interesting to compare, so far as the very imperfect statistical data at our command will permit, the comparative mortality of the British Islands and other countries from respiratory disease. The widespread idea that diseases of the respiratory organs are peculiarly frequent and fatal in this country, is no doubt, on the whole, correct, but probably our liability in this regard is somewhat less decided than is generally believed. As regards phthisis we have ample data. Our mortality of 2·12 per 1000 from this cause may be compared with that of Norway, 2·21 per 1000; that of Sweden, 3·3 per 1000; that of Belgium, 3·3 per 1000; or that of Switzerland, 1·86 per 1000. These figures, which we take from HIRSCH, are approximate only, and a considerable variation may be observed according to the period selected for examination, but they bring out clearly the fact that there is nothing exceptional in the

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mortality from phthisis in the British Islands. The high rate for Belgium and the low rate for Switzerland are most probably accounted for by the density of population in the former country and its sparseness in the latter. Nor is our mortality from pneumonia exceptionally high. The rate for London (1·7 per 1000) is exceeded by that of Paris, 2·5 per 1000; that of Brussels, 2·2 per 1000; and that of Hamburg, 2·1 per 1000. On the other hand, Christiania, Berlin, Geneva, and Boston show rates varying from 1·3 to 1·5 per 1000. It is rather to those respiratory diseases in the causation of which exposure and chill play a prominent part, and especially to bronchitis, that we must look to account for our somewhat heavy comparative mortality from this group of affections. This leads us to glance at the etiological relations of respiratory diseases—a large subject to which it would not be possible to do justice in a few words. As regards phthisis, there can be no doubt that the most potent factor in its causation is overcrowding and the consequent breathing of vitiated air. The various trades, such as knife-grinding, earthenware manufacture, cotton and woollen works, printing, &c., which claim the heaviest mortality from this cause, have all this point in common—viz., that they are pursued under mal-hygienic conditions. Other causes, especially mal-nutrition, and any condition of general lowered vitality, serve to swell the mortality from phthisis.

The etiology of pneumonia is a much more difficult question, and has been the subject of much controversy. Different authorities make very different estimates of the proportion of cases that may be fairly attributed to chill. ZIEMSSEN estimated that of 186 cases only 10 were due to this cause, whereas other authorities place the proportion as high as a fourth, or even higher. There can be little doubt, however, that the great majority of cases of pneumonia are not attributable to atmospheric causes. Latitude and locality seem to have a very slight influence in the causation of pneumonia; but, on the other hand, the influence of season is very decided. Two-thirds of the cases occurring in Europe are found to arise during the months from December to May, and only one-third during the other half of the year. The opinion that pneumonia is not a simple inflammation, but a specific febrile disease, probably of parasitic origin, has steadily gained ground within the last few years, although the results of bacteriological research in this matter have been conflicting and inconclusive. If this view be correct, we must assume that the cold and variable weather of spring, which has undoubtedly great influence, acts rather as a predisposing condition than as the actual cause.

We are not in much doubt regarding the causation of bronchitis. In this case the influence of temperature and moisture is undoubtedly the chief factor, although many constitutional states operate as powerful predisposing causes. Bronchitis increases in frequency from the equator to the poles, and attains its maximum in climates characterised by frequent and sudden oscillations in temperature and hygrometric condition. Hence the British Islands suffer in a notable degree. Exposure and chill probably play a considerable part in the causation of pleurisy also, although this has been denied. The view widely held, especially upon the Continent, that pleurisy is always due to a specific cause, such as rheumatism, tubercle, or pyæmia, and that exposure is not of itself sufficient to excite the disease, does not seem a tenable position.

Speaking generally regarding the British Islands, we may say that of those respiratory diseases traceable to cold and exposure we have a heavy proportion in our midst; that to an affection like pneumonia, whose etiological relations are still undetermined, we have no special proclivity; and that, while the amount of phthisis existing amongst us is extremely large, it does not exceed that found among other dense populations, and that its prevalence is in close connexion with the habits, occupations, and mode of life of the people.

There are few more important questions than the preventive treatment of respiratory disorders. Much has already been done in this department, and much more may yet be accomplished. As regards phthisis, our information is most encouraging. According to HIRSCH, the mortality from this cause was 3·0 per 1000 during the years 1848–55, 2·5 per 1000 during 1859–69, and 2·2 per 1000 during 1872–76. This decline, which is corroborated from other sources of information, is exceedingly satisfactory, and represents the results of much intelligent work in medical and sanitary science. As regards the measures for the prevention of phthisis, the first place must be assigned to the improvement in the hygienic condition of the dwelling-houses and worksheps of the labouring classes. Perfect cleanliness, sufficient cubic space per individual, adequate ventilation, proper drainage, and in general the conditions of a healthy home, are of prime importance in this matter. Considerable weight must also be attached to the provision of a more wholesome and generous dietary for the poorer classes. The general dissemination of knowledge regarding the dietetic values of the various food-stuffs, and a lessened consumption of tea, alcohol, and other stimulants, might be expected to have a favourable influence. The drainage of wet soils has been shown to diminish the phthisis rate. The prevention of the sale of the flesh of tuberculous animals is an obvious precaution, to which in this country we have been too long strangely blind.

As regards the prevention of pneumonia, it cannot be said that much has been done, or that the requisite measures are very clear. The disease seems often to attack the typically healthy, so that we cannot feel sure that a generally improved condition of the public health would do much to lessen its frequency amongst us. The influence of cold and exposure is doubtful, but in view of the decided influence of season we cannot afford to ignore atmospheric causes. Some cases probably arise by contagion, and we can be on our guard regarding this possibility, and take measures accordingly.

As regards those cases of bronchitis and pleurisy fairly attributable to chill, no doubt much might be done to diminish their number. Attention to clothing, habits, diet, &c., will be here the chief indications. Many lives are annually lost among infants and young children by the neglect to provide them with proper woollen clothing for all parts of the body, and by the thoughtless exposure of them to vicissitudes of weather, under the erroneous idea that by such means the constitution may be "hardened."

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In the case of the aged, we should forewarn them that inflammatory affections of the respiratory organs are among the accidents especially to be dreaded, and that the obvious precautionary measures, however irksome, must be submitted to. By such means, simple as they are, there is no doubt the amount of respiratory disease might be very largely diminished, and the general average of the public health materially raised. Respiratory disease is not only a heavy item in our general mortality, but it is an indirect source of much impaired health and diminished usefulness. Hence efforts put forth to lessen its frequency amongst us cannot be too earnest or too unceasing.

FEW diseases of the skin have excited so much interest and attention as lupus vulgaris and the affections cognate to it either in name or nature. At the present moment this interest has been intensified, because the influence of KOCH'S fluid upon tissues affected with tubercle bacilli was in this disease exhibited most remarkably, and the phenomena could be most easily observed. The effect of KOCH'S fluid upon it has been regarded as a conclusive proof, from the clinical side, of the bacillary origin of lupus vulgaris, which KOCH himself had already demonstrated on the microscopical side, though the bacilli were so few and far between as to leave many observers of large experience still unconvinced. It is not, therefore, to be wondered that Mr. HUTCHINSON should have taken this subject for a series of post-graduate lectures, and should tread again the path which his footsteps have so often traversed, each time trying to do something to smooth the way for other travellers; and it is not without interest for us to learn what effect the new light on the subject has upon the mind of so able and experienced an observer.

The lecture before us shows that Mr. HUTCHINSON still considers common lupus "as a variety of inflammation induced by any one of many local causes of irritation and inflammation," the peculiarity of the inflammation being due to the special proclivities of the individual, the parasite being at most a secondary phenomenon; but it is not easy to gather to what extent he ascribes a modifying influence to the presence of the bacilli. That this influence is not a very strong one in his view may be inferred from this observation: "If, indeed, it were asked whether the clinical evidence more favoured the belief of the alliance of lupus with tuberculosis or with cancer, I am inclined to think that the reply would have to express hesitation." A little further on he says that parts affected by lupus not infrequently take on cancerous growth, and he quotes Dr. BAYHA of Tubingen, who had met with four cases of such a combination in his own practice, and then says: "I doubt much if many observers could collect from their own observations as many as four cases of lupus in which the patients had subsequently succumbed to any form of internal tuberculosis." These are strong statements to make, and coming from so careful an observer cannot fail to attract much attention. It is to be hoped, therefore, that in one of the lectures which are to follow he will give us his own experience as to the number of cases in which he has observed cancer associated with lupus. The number of cases on record is certainly not very great, and there is a remarkable paucity of cases in English literature, most of them being reported from France or Germany. With regard to the association of lupus and phthisis, BESNIER observed it eight times in thirty-eight cases of lupus—i. e., over 20 per cent. No doubt further observations are desirable on this point, but we must look for them amongst physicians who see much of phthisis, rather than from dermatologists, as when phthisis has set in the lupus becomes a matter of secondary importance. Even as regards the family history, Mr. HUTCHINSON tells us that statistical proofs fall far short of our general impressions as to frequency of the connexion, but that it is otherwise as regards lupus erythematosus; but on this head he promises us further information. Statistics which are to upset so completely the general opinion held on this subject will be awaited with interest. It is clear, therefore, that Mr. HUTCHINSON'S views are not yet materially altered by any facts furnished by the effect of KOCH'S injection, though he admits that further knowledge of it may compel such an alteration. He concludes his lecture by saying that, seeing that a considerable group of maladies are inseparably "associated together in the lupus family, it is probable that one and all should be regarded as forms of chronic infective inflammation deriving their peculiarities from the proclivities of the individual attacked and not from specific elements of contagion."

Whether we agree with Mr. HUTCHINSON or not, it is instructive to note that there are still two sides to the question, and although the influence of KOCH'S fluid lends a strong support to the bacillary theory, our experience of it is at present far too limited to found any pathologically strong argument upon it. Already we hear of other diseases, such as leprosy, showing decided reactions after injections, and KOCH himself is of opinion that it is not so much a bacillus destroyer as a destroyer of certain ill-formed tissues in which the bacillus resides, and if other similar tissues, due to the action of other bacilli, break down after injections of the fluid, its diagnostic value is *pro tanto* diminished, and we shall still have to discuss the origin and nature of lupus on the other and older grounds. Many of the moot points might be cleared up by collective investigation. If, for example, each of the members of the Dermatological Society would carefully inquire into the family history and note the complications of every case of lupus vulgaris and erythematosus which came before them and contribute them to either the secretaries or anyone appointed by the Society, a sufficient number of cases to afford really reliable data would soon be collected. Common as lupus is supposed to be, its frequency is overrated on account of the chronicity of the disease and the way in which patients wander from one hospital to another. Some means, therefore, to prevent the record of a case several times over would have to be adopted. Again, the registrars of consumption hospitals might be applied to, to furnish the cases of phthisis and lupus which have occurred during, say, ten years; and, conversely, they might well inquire whether in any of the relatives of phthisical patients cases of lupus or other form of local disease of supposed tubercular origin existed. In-

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vestigations on these and similar lines would settle this much-vexed question in a way that would be found impossible by any individual observer.

SOME of our contemporaries who claim to represent "charity" are making themselves peculiar by writing very uncharitably of one or more of London hospitals. Surely in its Christmas number the *Charity Record* could have done something more helpful to the cause of hospitals than raking up charges which are still *sub judice* against such institutions as the "London Hospital." But the staple food provided for the readers of the "*Charity Record* Christmas Appeal Supplement" is a leading article on the alleged faults of administration of the London Hospital, especially with reference to its treatment of nurses; and, secondly, an article with the sensational and threefold heading: "*The Scandal of Guy's Hospital: Meant for the Masses—Used for the Classes. An Appeal to Mr. Gladstone.*" The chief basis of these articles is the evidence taken before the Lords' Committee. This evidence was taken six months since. It is still under the consideration of the Lords' Committee. And Christmas is a season for being

> "To their faults a little blind,
> And to their virtues very kind."

We are by no means wishing to say that there should be no criticism of hospitals. We shall show our contemporary immediately that we largely share his objections to the administration of Guy's Hospital. But we maintain that such criticisms are queer material out of which to make up Christmas appeals, and that the more kindly way, as well as the more just, would have been to accentuate the enormous amount of good done by these institutions, while urging that there were flaws and faults in their administration. Our contemporary makes much of the scandal of an alleged assault at the London Hospital, apparently by a runaway student, on one of the female patients. He might have enlarged on the statement of Mr. BUXTON, the chairman, that every assistance was being given to the police in their investigations. He might also have found place in his reflections for that statement of Dr. STEELE in regard to such offences at Guy's Hospital, that such a charge against a student had never occurred. We never hesitate to criticise the discipline or administration of hospitals, but we place their virtues in the forefront, and on the strength of this feel the freer to point out their faults.

The great faults which our contemporary finds with Guy's—and that in his Christmas appeal—that whereas GUY intended his hospital "to entertain 400 *poor* persons or upwards labouring under any distempers, infirmities, or disorders thought capable of relief by physic or surgery," payment is now exacted of the out-patients, and that some in-patients pay as much as £3 3*s*., and there are never fewer than from twenty to thirty beds whose occupants pay £3 3*s*. *a week*; that in the admission even of out-patients poverty is never inquired for; and, thirdly, that the hospital is "run" largely in the interest of the medical school, students, and teachers; that £1026 are paid by lady nurse pupils; and that £10,000 or £12,000 are divided among the medical staff. This is, of course, a very one-sided statement. Whatever compensation the staff of Guy's Hospital get for their teaching work we may be sure they earn, and are well deserving of. No hospital has conferred more benefits on the public and on the poor by its medical teaching than Guy's Hospital. The petty charges to patients, giving them a feeling that they are paying for their advice and medicines, and thus bringing the great hospital into competition with the struggling practitioners of the neighbourhood, is fair subject of severe complaint. Exception, too, may justly be taken to the selection of a number of cases without any reference to the poverty of the patient, and at the discretion of a medical student. That 3000 midwifery cases a year should be attended *gratuitously*, of which Dr. STEELE admitted that many could pay a modest fee to a neighbouring practitioner, is a matter obviously open to criticism. The scale of the out-patient department is seen in its proportions, as in other hospitals, to be careless and demoralising. Finally, the expropriation of wards meant for the poor for people that can pay at the rate of 60 guineas, or even 180 guineas, a year is a violent distortion of the charity. We denounce these arrangements as much as our contemporary does, and shall continue to do so until they are altered and abandoned. And especially we shall continue to condemn the blind and deaf treatment of all complaints from the outside, even from those who, like ourselves, realise that a hospital, well used, and not abused, is the highest and noblest form of charity. These faults—we will even say these vices—of hospitals are so glaring that, save from the point of view of one or two "interests," they cannot be defended, and can scarcely survive the investigations of the Lords' Committee. But let us be careful how, in exposing the faults of hospitals, we damage the charity which should sustain them for their high uses—and sustain them generously; and let us not pick out one or two hospitals as if they were greater sinners than the rest. If Guy's Hospital has too large an out-patient department, St. Bartholomew's Hospital has one three times as large—150,000! If the London Hospital has been somewhat niggardly in its provision of nurses and for nurses, it has had much excuse for being so, in the enormous responsibilities of its committee and in the scant provision by the public for its wants. It has had to do the work of St. Bartholomew's Hospital and of Guy's Hospital, and, moreover, without their splendid properties. Let those who are so ready to blame the committee take some blame to themselves for not sending more generous subscriptions and immediately give this form to their criticism. Finally, let the authorities of hospitals take warning in time, and eliminate from their work all abuses, and especially those appertaining to the Out-patient Department.

Annotations.

"Ne quid nimis."

THE COLLEGE OF SURGEONS' LIBRARY.

As we stated in our issue of last week, it has been decided by the Council of the Royal College of Surgeons to keep the library open until 7 P.M. in the future. This resolution was arrived at after a consideration of a report by the librarian on the evening of opening the library. This report was briefly as follows:—"In compliance with the resolution of council the library has been open to readers during the year

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1890 on each week-day, except Saturday, from 11 A.M. to 8 P.M., with the exception of the months of August and September; during August the library was closed at 6 P.M., and was shut altogether in September. In the past year the library was open on 274 days; the number of readers for that period was 10,040, or an average of over 36 for each day, including Saturdays. The library was open on 214 evenings. At 6 P.M. (the old time for closing) 1813 readers were at work and 402 entered after that hour; this gives a total of 2215 evening readers, or an average of just over 10 each time the library was open. No note was taken of readers in at 7 P.M. during the early part of the year, but they have been carefully registered since March 12th; after that date the library was open at 7 on 164 evenings, and the total number of readers then present was 543, or an average of about three each evening. Very few visitors have remained until 8 P.M." To those of our readers who only remember this library under its old conditions, the change indicated by the above extract will come as a surprise. Those going to read at the College library may be certain of a comfortable well-warmed and well-lighted room, and the help of the librarian, Mr. James B. Bailey, or his assistants, should it be required. To Mr. Bailey's suggestions many of the improvements are due, and to his tact and management we owe the present state of efficiency of what is rapidly becoming the model library of London.

HISTOLOGICAL CHANGES IN THE TISSUES AFTER INJECTIONS OF KOCH'S FLUID.

ALTHOUGH many papers have already appeared upon the clinical aspect of Koch's treatment of tuberculosis, very little is as yet known of the changes which take place in the affected tissues. Dr. Browicz of Korakow has made some investigations in regard to this point, and his results are published in the *Centralblatt für die Medicinischen Wissenschaften*, 1891, No. 1. The first case examined was that of a girl aged eight, suffering from caries of the left metacarpus and elbow. There were some fistulous openings leading to the dead bone, which discharged a small quantity of thin pus. The edges of the sinuses were pale. Six milligrammes of the liquid were given, with the result that there was a well-marked reaction, with local pain, and considerable redness and swelling around the neighbourhood of the sinuses; brownish crusts soon commenced to form. Sixteen hours after the injection a small piece of tissue was removed from the circumference of one of the sinuses and submitted to careful microscopical examination. It was first placed in alcohol, when a small piece of the scab floated off; under the microscope this exhibited epithelial scales and numerous leucocytes. Sections cut from the original specimen showed the following characteristics. The epidermal layer contained numerous leucocytes, which were partially distributed between the epidermal cells and were partially collected in groups, these being largest in the most superficial layers. On the surface these gave the appearance of small vesicles. In many places they had given way, and the contents had escaped; in other places the cells of the epidermis had been detached and heaped together, enclosing leucocytes in their interstices. In such situations the epidermis presented very much the same appearances as in a small-pox vesicle. The capillaries were also crowded with leucocytes. In the deeper layers of the skin a copious infiltration of small round cells was again to be seen, sometimes so thick as to almost hide the tubercular nature of the disease. Here and there the tissue had broken down, so that small abscesses were formed. Numerous small hæmorrhagic patches were noticed, the structure of the tissue being quite obscured. Specimens taken from another patient presented similar appearances, and the same have been described by Israel and Kromeyer. Dr. Browicz draws the following conclusions:—1. That the changes occurring in tuberculous tissues after an injection of Koch's liquid are different from the necroses which usually accompany them. 2. That a specific form of inflammation is induced. 3. That this may assume a hæmorrhagic form. 4. That, finally, the inflammation results in the destruction of the tuberculous tissue, and that this result is due to a distinct chemical action. Dr. Browicz considers that the tubercle bacilli may either be carried away by the exudation which is poured out, or else, if the disease is deeply seated, there is great danger of the organism being carried by the blood stream to healthy tissues, so setting up local or general tuberculosis.

THE HAMBURG HOSPITALS.

A VOLUMINOUS report of the Hamburg Hospitals for the year 1889 has recently been published, which, from the minute statistics and the numerous monographs on important subjects included in it, is a very valuable work. It is a good deal larger than the annual report of any of our London hospitals, but then it deals, not with one establishment alone, but with the whole hospital system of a great city. This comprises four distinct hospitals:—1. The old general hospital, originally built about 1820, and containing at the present time 110 wards and 1409 beds. 2. The new general hospital in Eppendorf, a suburb between three and four miles from the centre of the city. This splendid building, which was only opened in 1889, is on the pavilion system, there being no less than seventy-three one-storeyed buildings, all separated from one another, and containing 224 wards with 1340 beds. 3. The seaman's hospital, near the St. Paul's landing stage, with sixty beds. 4. The Friedrichsberg lunatic asylum, accommodating 1282 insane patients. The first of the reports is by Dr. Schultz on the enteric fever cases in 1886 and 1887, amounting to 3686. The number of these cases in the hospitals is always greatest in winter and spring; indeed, the variations according to the months of the year were almost exactly the same as those recorded by Murchison in the statistics of the London Fever Hospital. There is an instructive section on the immunity conferred by enteric fever against a subsequent attack, with regard to which the Hamburg experience seems to have been pretty similar to that of Freundlich, Goth, and others—that is to say, 2·4 per cent. of the patients contracted the disease a second time, and one man certainly had it three times, and probably even four times. The time intervening between the first and second attacks was very various, in a few cases being as little as nine months and in two about forty years. The mortality in 1886 was 11·5 per cent. and in 1887 only 6·8 per cent.

SANITARY MATTERS IN BUENOS AYRES.

THE council or consultative committee of the public medical service of Buenos Ayres has commenced a monthly periodical in which will be recorded a large amount of information which comes under the notice of the medical and sanitary officials, and which has hitherto been, as a rule, lost to the scientific world in general, even Argentine medical men being, as is remarked in the introduction, much better acquainted with the medical climatology of Europe than with that of their own country. In the first number of the *Anales*, just received, there is a paper by Dr. Castaño on the Treatment of Syphilis in the Hospital of San Roque, from which we learn that, instead of following the plan now so much in favour in some continental syphilitic clinics of injecting mercurials subcutaneously, he prefers to bring the system under the influence of the drug by administering pills. The pill he most approves is composed of protiodide of mercury $\frac{1}{3}$ gr., iodoform $\frac{1}{2}$ gr., crystallised sulphate of iron $\frac{1}{2}$ gr., extract of opium $\frac{1}{12}$ gr., made

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up with extract of gentian. Two of these are given daily, and of 600 cases so treated scarcely any instances of salivation occurred. An improvement was always evident after a week, and in a month all external manifestations of the disease had generally disappeared. In grave cases, with rupia or ecthyma, and where there are large ulcerated surfaces, a similar pill with double the quantity of green iodide and of iodoform is prescribed. Mercurial inunctions are only ordered in cerebral forms. As adjuncts to mercurial treatment Turkish baths are ordered. Dr. Castaño remarks that he has had several opportunities of observing cases where patients who had contracted the disease in warm climates, and had while there only presented slight symptoms, on coming into a colder place, such as Buenos Ayres, immediately experienced a serious aggravation. From another paper in the same number of the journal we learn that in the previous month (October, 1890) no less than fifty-two women were inscribed on the prostitutes' register, and that more than 5000 inspections had been made, with the result that sixty-four women had been found diseased, and sent by the authorities of what is euphemistically styled "the Sanitary Dispensary" to the sifilocomio, or lock hospital. It is sad to think that, in a city whose population is under half a million, girls are passing the line officially drawn round those who make vice a profession at the rate of about twelve a week. In connexion with this it is noteworthy that the officials of the National Vigilance Society have for some time been aware that a very large trade is being carried on in European girls for the purposes of prostitution in Buenos Ayres. Great legal difficulties have been found in checking this, though something has been done in the way of warning innocent girls decoyed across the Atlantic by false pretences, and means are taken where possible to save them from the terrible form of white slavery for which they are intended.

AN UNEXPECTED CAUSE OF PUERPERAL FEVER.

PROFESSOR PARAMUCHI has reported a case of puerperal fever in which a very unexpected cause was brought to light—that is to say, the putrid remains of a tapeworm in the uterus. No untoward symptoms seem to have occurred until the tenth day after delivery, when the patient became feverish and prostrate, and lost her appetite. The lochial secretion was very foul. Large doses of quinine were ordered, but no effect was produced on the temperature, which the next day was 104·2°. The uterus was consequently washed out, two catheters being used for the purpose, as a regular uterine instrument was not at hand. The outlet catheter, after discharging some very fetid fluid, was choked up by what was found to be a putrid tapeworm. This was of course removed and sublimate irrigations given, and the symptoms soon disappeared. Regarding the question of how the tapeworm came to be in the uterus, inquiries elicited the fact that a few days before her confinement the patient had been suffering from dysenteric symptoms, and, in view of her condition, had not taken any medicine. It is probable that the worm managed to migrate after delivery from the rectum to the vagina, and that there it died and became putrid.

METROPOLITAN ASYLUMS BOARD.

THE returns submitted to the Metropolitan Asylums Board on Saturday last afford satisfactory evidence of the continued decrease of infectious fevers in the metropolis. In the fortnight ended Jan. 3rd there were 405 cases of scarlet fever notified, being a decrease of 123 upon the numbers of the preceding return, and 190 cases of diphtheria, being a reduction of 77. The admissions of fever patients into the Board's hospital were 249, or 6 under the preceding fortnight; and the number under treatment on the night of Jan. 8th was 1837, including the convalescents in the Northern and Gore Farm Hospitals. Of the total cases, 1528 were scarlet fever, being 145 under the preceding return, and there were 151 cases of diphtheria, being a reduction of 1 only. There were beds ready for 818 patients, 617 being for scarlet fever. In consequence of the satisfactory reduction in the admissions and in the number of cases under treatment, it was decided to discontinue sending convalescents to the Gore Farm Hospital. One case of small-pox was admitted into the South-Eastern Hospital and transferred from it to the Small-pox Hospital ships at Darenth.

A SCARLATINOID RASH AFTER A SMALL DOSE OF QUININE.

PROFESSOR GLAX of Abbazia, writing in the *Medicinisch-Chirurgische Rundschau*, reports a case of scarlatiniform eruption following not on large doses of quinine, which is not a very exceptional occurrence, but upon a small dose, one grain and a half, combined with three grains of caffeine prescribed for migraine. This combination had been taken night and morning by the patient, who was an otherwise healthy middle-aged woman, for some days with great benefit, when one morning, as the medicine had been forgotten before, she took it immediately after breakfast, which consisted of a cup of tea and some melon. Ten minutes afterwards a severe attack of vomiting came on, and she had a rigor and a rise of temperature, the whole surface of the skin being covered with a scarlatinoid eruption; the throat too was very red and swallowing painful; some of the joints were painful to the touch, and the patient had all the appearance of one with scarlatinoid rheumatic fever (polyarthritis scarlatinosa). In a few hours the whole of the symptoms disappeared. Caffeine is generally considered an antidote to quinine, and as the same powder had been taken with impunity for some days previously the affection could hardly have been due entirely to it. The same may be said of the melon, which had also been taken for breakfast the previous days.

OPERATION FOR GRAVES' DISEASE.

DR. LENCKE of Hamburg, in the last number of the *Deutsche Med. Wochenschr.*, discusses the subject of exophthalmic goitre with special reference to its treatment. He claims that as the treatment of this condition by medicine is remarkable for nothing so much as its inefficacy, if the surgeon can offer even a chance of relief his interference is justifiable, and he relates two cases in which surgical interference seems to have had the best results. The first patient was a lad of seventeen, who had the classical symptoms of the disease—rapid heart, palpitation, prominence of the eyes, and goitre. He came under treatment on account of a sudden access of the swelling, which by the pressure it exerted produced great distress with extreme cyanosis. The heart was rapid and irregular, no rest or sleep could be obtained, and the patient was in imminent danger of asphyxia. Tracheotomy was performed, and a week later one-half of the tumour was extirpated. The operation was accompanied by much hæmorrhage, which, however, stopped spontaneously, and recovery was uninterrupted. The symptoms rapidly vanished, the exophthalmos disappearing, and the heart becoming quiet and regular in action. The improvement was maintained until the time at which the paper was written. Operation was undertaken in the second case, which had long been under observation, because of the good result in the first. The patient in this case was older, the symptoms were similar, and the operation was the same The improvement was also very marked, and the patient

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four months ago was able to resume his occupation. It is yet too early to estimate the full value of the procedure adopted, as regards cure of the disease; but if relief can be afforded in other cases as great as was apparently obtained in those just related, a strong case will have been made out for the surgical treatment of this distressing malady.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

THE Special Committee of the Senate of the University of London were engaged on Wednesday, the 14th inst., on the consideration of their latest scheme, which will include representatives of the provincial colleges on the Senate and in the Faculties. The Councils of University and King's Colleges will, we understand, wait until the details of the new scheme are before them, and will then determine how far these will affect their position in the reconstituted University. The new scheme will also be laid before the Royal Colleges after it has been passed by the Senate.

MODEL BY-LAWS UNDER THE PUBLIC HEALTH ACT, 1890.

MESSRS. KNIGHT AND CO., the well-known publishers of Local Government literature, and whose Annotated Model By-laws on a number of subjects affecting public health already constitute a standard work for sanitary authorities and their officers, have wasted no time in the issue of such by-laws as can be made under the Public Health Act of last session. Indeed, they are in advance of the Local Government Board themselves, who have not yet published any model code relating to these matters. In one sense the help thus afforded to sanitary authorities will be considerable, for some definite idea is given as to the methods by which the several matters can be properly regulated. But, on the other hand, it will have to be remembered that, unlike the other model by-laws, they are not yet supported by precedent, and they may not all stand the test of official criticism at Whitehall. Some of the matters to which the new codes relate have a direct and important bearing on health, and they are such as must soon come under the cognisance of authorities and their officers. Thus, certain by-laws may now be made as to streets and buildings which were formerly not possible, the height of rooms may be regulated, scavenging arrangements may be better controlled, and the flushing of closets may be more effectually enforced. As a skeleton guide for carrying into effect these and other provisions the new issue will be of material value.

THE NAILS IN NEURITIS.

MODIFICATIONS of the normal appearance of the nails are present under various morbid conditions. Often a serious illness leaves its mark in a peculiar modification of nail growth, apparently corresponding to the period during which the disease exerted its most powerful effect. This peculiarity is usually manifested as a band, varying in length with the duration of the illness, in which the normal appearance and colour of the nails are changed. Such a condition is seen during fevers and after injuries of nerves. A more general modification of the appearance of the nails occurs also in such conditions as those of Raynaud's disease—a disease in which, whatever the ultimate explanation of its phenomena may be, there are evidences of profound trophic disturbance. In such a disease as multiple neuritis changes in the nails were to be expected, and in the *Neurolog. Centralbl.*, No. 24, 1890, Bielschowsky describes such a case recently under his observation, in which nail changes were a marked feature. The case was one characterised by the usual signs and symptoms of peripheral neuritis—viz., weakness, wasting, tenderness of nerve trunks, and absence of reflexes, with changes in the electrical reactions. The change which is described occurred in the finger-nails only, the toe-nails being unaffected, although the neuritis was present in the lower limbs. There were observed at first small white points in all the finger-nails. These occurred simultaneously, and gradually extended both in length and breadth, until a white band over a millimetre in breadth was formed, dividing the normal substance above from that below. As the nails gradually grew those bands were pushed to the periphery, and were finally removed and examined with the microscope. Examination seemed to show that the discoloration was due to the presence of air, and that the condition was thus similar to what is found in hair which has become grey or white.

CHOLERA IN TRIPOLI.

DR. F. J. MACKINNON of Beyrout writes under date, Dec. 31st, 1890: "According to official information 168 deaths from cholera occurred in Tripoli from Dec. 8th to Dec. 21st. The attack now seems to be dying out, no new attack having taken place within the last twenty-four hours. The latest information states that the disease has now broken out at Nebk, sixteen hours due north of Damascus."

THE REGISTRATION OF TRAINED NURSES.

THE simple but important ceremony which took place last week in the rooms of the Royal Medical and Chirurgical Society, and which is reported in another column, marks a new departure which is of the highest interest to medical men not only in this country but throughout the civilised world. Every year the value of skilled nursing in the treatment of disease becomes more universally recognised, and every year larger numbers of educated gentlewomen are adopting the calling, and pursuing it as earnestly as their brothers study and work at medicine, law, or divinity. It has consequently become increasingly essential that nurses should be organised and controlled by some professional authority. Our readers are aware that from the inception of the British Nurses' Association we have strongly supported and advocated its proposal to institute a register of trained nurses, upon which only the names of those who had obtained a thorough hospital training could be placed, and from which the names of any who proved themselves untrustworthy could be removed; because it is unhappily notorious that until now any woman, even if "destitute of knowledge or of character, or of both, has been able, if she so pleased, to term herself a trained nurse, and to obtain work in that capacity." On the other hand, instances are unfortunately not few where women holding the certificates of leading hospitals have been convicted of crime; and yet, owing to the absence of any body responsible for their control, have had no difficulty in obtaining work upon emergence from prison. The British Nurses' Association, founded just three years ago, immediately obtained the invaluable assistance of Her Royal Highness Princess Christian as its president, and at once commenced to organise nurses, and to inquire as to the best methods of carrying out its scheme of registration. In spite of difficulties and opposition, the Association, and especially its chief workers, have steadfastly pursued their way, and now have successfully commenced the system by the publication of the first Annual Register of Trained Nurses. It contains the names of more than 1700 women, the great majority of whom have evidently undergone a thorough hospital training. We venture to congratulate her Royal Highness Princess Christian on this eminently useful work in which she has taken so large a share, and which will always be

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connected with her name. The advantage to the public at large and to the sick, of the richer classes in particular, of thus being able to discover easily and with certainty whether their attendant is a trained nurse or not, will be great. But to a medical man such knowledge of a new worker, obtained perhaps from a strange institution, will be invaluable. And for the first time too he will be able to report a nurse who has proved herself to be entirely untrustworthy to a tribunal as impartial as powerful to protect the public against such women by removing their names from the register. We would call the attention of our readers throughout the country to this register, and for their own sakes and that of their patients ask them to accord it their cordial support. If every medical man would purchase a copy of the register, and only employ nurses who were registered, who therefore were attested as efficient and under complete professional control, nearly all the nursing difficulties which have occurred in the past would be rendered impossible in the future.

AUDITORY CENTRE.

IN the *Journal of Anatomy and Physiology* an interesting case in connexion with the localisation of the centre for hearing is somewhat briefly reported by Dr. Ferguson of Toronto. The patient had suffered for eight years from chronic inflammation affecting the right ear. This resulted in deafness on this side for sounds conducted through the air, but perosseous conduction, although considerably impaired, was still present. Two years ago the patient began to suffer from what are described as symptoms of a tumour of the right temporo-sphenoidal region, among which were subjective auditory sensations referred to the left side. The hearing on this side became gradually impaired, and during the last six months of his life there was complete deafness affecting both sides, although he continued to have subjective auditory sensations referred to the left ear. The necropsy revealed, as was expected, a large tumour involving the right temporo-sphenoidal lobe, the superior convolution being completely destroyed, while the second was also affected. The case is an extremely important one, confirming as it does the results arrived at by experiments on monkeys, and it is to be hoped that an account of it will be forthcoming which will go a little more into details than does that to which reference has been made.

AN ATTEMPT ON THE DIGNITY OF THE PROFESSION.

A LAY contemporary has circulated amongst the medical men in London a "card" intimating that it has instituted a series of special articles entitled "Medicoes under the Microscope," with the idea that "the effect will be that of a guide to the leading medical men of the metropolis which will steer the 'neophyte' clear of incompetent or semi-incompetent men" into the consulting-room of those men whom the very much inexperienced journal is delighted to honour. "Physicians, surgeons, specialists, and general practitioners will be noted in their correct order." The first on the card is Sir Andrew Clark, President of the Royal College of Physicians. Some time ago a "lady" consulted Sir Andrew Clark with reference to some medical ailment, and, being about to leave, gave him a fee with the intimation that he might hear something of that interview on a future occasion. Some time afterwards one of the "cards" in question reached him, and we have authority for saying that within an hour of its receipt the matter had been referred to his solicitor. Counsel's opinion was taken, and the editor of the journal was desired to refrain from publishing any such article. The editor, however, declined absolutely to accede to the request, and stated that the matter was ready for the press, and would forthwith be published. Leaving for a moment the strictly legal aspects of the case, we would advise those of our readers who have received copies of the "card" in question to send without delay to the editor a registered letter absolutely forbidding the insertion of any article whatever referring to them, seeing that such publications, containing as they do most erroneous and ridiculous statements, are calculated to do immense harm. Here is one illustration of our contemporary's incapacity for seriously judging of either medical men or medical matters: "In his younger days at the London Hospital it used to be a reproach that Andrew Clark was never to be met with in the post-mortem room, that he never verified his diagnosis. Time taught the cavillers that it was unnecessary—he never made a mistake." We need hardly remind our readers that Sir Andrew Clark was for thirteen years pathologist at the London Hospital! This is only the commencement of the series, and we earnestly trust that, the matter having been brought under the notice of those responsible for the conduct of the journal in question, they will see the propriety, notwithstanding their announcement, of refraining from publishing any more records of this nature. We know that such effusions are extremely distasteful to all medical men concerned, and to the younger members of the profession it is possible much harm may be wrought by persisting in their publication.

IODINE INJECTIONS IN TUBERCULOSIS.

Drs. Heneage Gibbes of Michigan and E. L. Shirley of Detroit, who hold to the old doctrine that pulmonary phthisis is distinct from tuberculosis, or rather that many cases of phthisis are non-tubercular (*Amer. Jour. Med. Sci.*, 1890), have been making experiments upon the best means for depriving phthisical sputa of their infectivity (*Med. News*, Dec. 27). Chlorine was an agent which, mixed with sputum, rendered it harmless when inoculated in the guinea-pig; but its therapeutic use was out of the question. They then found that iodine and iodide of potassium in solution with glycerine and water could, when injected into guinea-pigs, protect them from inoculation; and that the same property was possessed by the chloride of gold and sodium. They have applied this treatment to the human subject, using $\frac{1}{12}$ gr. of iodine with $\frac{1}{30}$ gr. to $\frac{1}{60}$ gr. of the gold and sodium salt as a hypodermic injection; or commencing with the iodine alone (slightly increasing the dose) and substituting for it the gold and sodium salt if not well borne. About twenty-five cases of phthisis have been so treated, the results being such as to encourage their further use of the plan; but we prefer to await fuller details before judging the value of the treatment.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

A LETTER from Mr. James Chatham, an actuary having many qualifications for the exercise of his profession, gives the results of what has evidently been a very painstaking inquiry into the death-rate of medical practitioners, with the view of showing that the profession is not entitled to claim reduced premium rates from life offices on the ground of exceptionally favourable mortality. Our correspondent is no doubt correct as to the figures which he gives, and which we are quite prepared to accept on his authority. But he is mistaken in supposing that they will appear very startling to our readers. It is perfectly well understood by medical practitioners that their vocation is one that promotes the health of the community at the expense of their own, and we

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thought that this had been quite clearly expressed in the editorial comments which prefaced our Life Assurance Supplement on Nov. 15th last. We then wrote: "Speaking generally, it may be said that the broad result of the communications which we have received is to show that Life Offices, for the most part, are not prepared to concede reduced rates to medical men. In this we readily acquiesce. Some of our correspondents have insisted upon the arduous and risky nature of a medical practitioner's duties. We are by no means desirous to shut our eyes to the fact. We think that it would be very unwise on the part of any Life Assurance Office to assume that medical men may be expected to enjoy a lighter mortality rate than that which befals the average policyholder." Mr. Chatham's researches do not seem to have carried him much beyond this point. He does, indeed, refine to the extent of proving that the lives of medical practitioners are worse than those of a more or less selected body of men like the persons assured in Life Offices, to an extent represented by an addition of one-half of one per centum to the annual premium. But then Mr. Chatham's material seems to have been somewhat casually collected, for we observe that the greatest deviation from the normal standard that he sets up occurs among "physicians &c." of the tender age of twenty years. Of course, these young gentlemen may have been excellent substitutes for medical practitioners, but there is a statutable difficulty in the way of their recognition as being of that body while still under age. Mr. Chatham's figures would have been more impressive if they had not betrayed at this point the inclusion among his data of facts which cannot possibly have any bearing on the mortality of medical practitioners.

"TRAUMATIC NEUROSES."

THIS is a convenient term, but, like other terms which are convenient, it is apt to include far too much. In this country the most important traumatic neurosis which is met with is no doubt the so-called "railway spine," and it may be that cases placed in this category are as varied as those which Hoffmann (*Berlin. Klin. Woch.*, No. 29) found among a series of twenty-four cases of "traumatic neurosis." Of those twenty-four ten were found to have undoubted signs of organic mischief; in six the symptoms were partly the result of exaggeration and partly of simulation; in eight there was malingering, proved to be so after careful observation for several weeks. The author protests against the use of the term for such varied conditions, pointing out that in a so-called traumatic neurosis we may have to deal with organic nerve injury, with hysteria, the result of injury, with shock to the cerebro-spinal system, with neurasthenia, or even with a true psychosis.

THE HEALTH OF SOUTHEND.

DR. THRESH has submitted his report on the serious prevalence of enteric fever in Southend to the Local Board of that town; and he has arrived at the conclusion that the disease has not been brought about by any accidental contamination either of water or of milk, but that it is due to the defective and inadequate system of sewers of the town. The immediate effect of such a conclusion as this should be the employment of an engineering expert to prepare an exhaustive report on all the details of the existing system in so far as structural points are concerned, and we somewhat regret to observe a tendency towards piecemeal work instead of much more comprehensive action. Already it has been decided, first, to go to work at one end of the defective system by altering the outfalls; and, secondly, to do some work along the mains by increasing the amount of ventilation. Another step has been taken which we hardly like to criticise, and yet is one which, if carried out now, is almost certain to be upset when the immediate panic is over. It is the appointment of a medical officer of health for Southend who shall devote his whole time to his duties, and who shall receive £300 a year. As to this, we would observe that the annual remuneration offered ought to be regarded as insufficient to cover the services of a professional man who gives his whole time to the authority, and who is competent to perform properly the technical duties of a health officer. Then, again, Southend had in 1881 less than 8000 resident population, and though it is crowded by visitors during a brief space in the summer, yet we hardly see how a medical officer of health could, when once Southend has put itself in order, occupy his whole time in dealing with such a town, unless indeed he were expected to do work which should not attach to his office. If Southend would join an Essex combination a first-class officer could probably be obtained on a permanent footing.

THE ROYAL COMMISSION ON TUBERCULOSIS.

THIS Commission has been meeting regularly during the last few months, and much evidence from experts and clinical physicians bearing on the matters referred has been collected. It has now been decided to pursue the inquiry in a different direction by a careful examination into the various systems of meat and milk inspection abroad, by the collection of statistics bearing on the subject, and probably by the initiation of further researches of an experimental nature, to settle some of the doubtful points concerning the degree of infectivity of the products of tuberculous animals.

TYPHOID FEVER IN FLORENCE.

AN Italian correspondent writes:—"The decrease in the daily number of cases progresses steadily, while the incidence of the fever is confined almost entirely to the Italian population, and in that to the less favoured class. On the 10th inst. official returns were issued up to the 8th inst., the mean number on the 5th inst. being 49 per diem, and on the 8th 33 per diem. So that, if in the first twenty-one days of the epidemic the mean of the cases reported was as 1 to every 4000 of the inhabitants, the mean has now fallen to 1 in every 6000. Notwithstanding this progressive decrease, the sanitary authorities have provided for every possible contingency, leaving open for the reception of cases of typhoid fever those wards in the hospital hitherto occupied by chronic or incurable patients, for whose accommodation certain pavilions of the old Manicomio of Bonifazio have been set apart. Concurrently with these measures, preventive precautions have been energetically adopted, and the Amministrazione Comunale, commencing from to-day (12th inst.), will distribute to every applicant a sufficient quantity of the *acqua potabile* boiled. Stations for the serving out of this drinking water have already been established in every quarter of the town, while official directions for boiling and filtering the water, with appliances for the process, are also available for all who wish the same. The distribution of *acqua potabile* from the tainted source has been absolutely closed, and if typhoid fever continue to declare itself its origin must be different from that to which it has hitherto been officially traced. In schools for Italian children, in barracks for soldiers, and among domestic servants—among those classes of the community which, *more Italico*, are huddled together in confined spaces, where the want of fuel and heating is made up for by closeness of contact and exclusion of fresh air—it is in these that the greatest number of cases has occurred. Among the English-speaking residents hardly a single case—certainly not a single death—has been reported. Nor is there the slightest

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care sufficient to deter new comers. On the contrary, the hotels and pensions are adding to their inmates in such numbers as to give promise of as crowded and as brilliant a season as has lately been known in the City of Flowers."

THE LATE PROFESSOR MARSHALL.

At the monthly meeting on Monday last of the Council of the Sanitary Assurance Association, 5, Argyll-place, Regent-street, W., Sir Joseph Fayrer, M.D., F.R.S., the President, in the chair, a vote of condolence and sympathy was passed on the death of Professor John Marshall, F.R.S., a member of the Honorary Council. It may be here mentioned that to the honours stated in our last as having been gained by Professor Marshall should be added the honorary degree of M.D. of Trinity College, Dublin, and that of Master of Surgery of the Royal University.

TIPPLING IN THE CITY.

THE *City Press* of Jan. 3rd says that the pernicious habit of tippling seems on the increase in the City. Our contemporary says that at all hours of the day, at frequent intervals, young and middle-aged men of splendid physique, strong mental capacity, and sound judgment on all points but one—viz., the habit engendered by falsely called hospitality of drinking at odd hours—are to be observed passing in and out of the City public-houses and wine stores. This is a most disappointing and distressing statement. We should have hesitated to repeat it, or aid its circulation, had it appeared in any journal less likely to be correctly informed of what goes on in the City. Rather we should have said that City men were alive to the advance of science and common sense, which alike dictate that tippling is disastrous to both health and business. We were aware, of course, that there were soakers in the City—men saturated with alcohol, and even young men—but that such should be on the increase surprises us. Can there not be some City movement, apart from the austerities of teetotalism, to remedy this great evil, and to discourage drinking "whenever a stroke of business" is attempted or done? Such drinking is a veritable delusion, as our contemporary suggests, and all sane men should discountenance it. It is thought that some who would not think of such practices for themselves connive at them in their agents on business grounds. There is little distinction in morals between a drinker and one who allows another to drink for the good of his business.

THE DISCONTINUANCE OF MUZZLING.

A SIGNIFICANT protest against the withdrawal of the muzzling order has just been issued by the Society for the Prevention of Hydrophobia. It expresses at once briefly and very plainly the reasons which had invested the now obsolete and naturally somewhat odious regulation with the sanction of popular tolerance, and had enlisted the support of many gentlemen of known intelligence whose names it bears. It reminds us that both in 1886 and 1890 the use of the muzzle was followed by the apparently complete suppression of rabies. Freedom from this restraint during the intervening period was associated with a marked recurrence of the disease, and it is to be feared that 1891 will witness a similar return. We are also reminded that collar registration, as practised on the Continent and at Bradford, has proved an ineffectual safeguard. Its future success among ourselves is therefore at best doubtful. Secondary advantages attained by the muzzle, such as the prevention of dog fights and indiscriminate feeding, have not been forgotten in the circular above mentioned. We must admit that our own sympathies are with the framers of this memorial. A period of three or four months' immunity within the metropolis is certainly inadequate as an assurance that hydrophobia has been exterminated. Yet the last quarter of the past year can alone show this happy condition—a direct result in all natural probability of the muzzling order. During the last quarter of 1890, eleven cases were reported in the provinces. We must therefore express our own regret that this useful measure has been so early dispensed with, and join the Society in advising that it be resumed for a further period, and be made general in its application. Mr. Chaplin objects to this latter proposal on the following grounds. He maintains that it would not suffice to guarantee protection unless the importation of suspected dogs were prohibited, and also that the more limited system has thus far worked successfully. His argument, however, only suggests the still greater success to be expected from a general order, which would virtually constitute a form of quarantine.

DEATH OF DR. GEORGE GULLIVER.

WE regret to announce the decease of Mr. George Gulliver, M.A., M.B. Oxford, F.R.C.P., who died of acute pneumonia on Sunday last at his residence, 16, Welbeck-street, Cavendish-square. He was senior assistant physician, lecturer on comparative anatomy, and demonstrator of morbid anatomy at St. Thomas's Hospital, and physician to the London Fever Hospital. He was the only son of the late George Gulliver, F.R.S., the well-known naturalist, who was professor of anatomy and physiology at the Royal College of Surgeons, and surgeon to the Horse Guards. A fuller account of the late Dr. Gulliver's medical career will be given in our next issue.

FROZEN WATER-PIPES.

THOSE householders who aspire to the luxury of a hot and cold water system have during the recent severe frosts had to undergo in many instances a series of severe shocks to their nervous system through the repeated scares caused by frozen pipes. The principles of sanitary engineering, as applied to the domestic water system in our houses, are either so imperfectly understood or the elementary principles of hydrostatics, as applied to our domestic requirements, are so entirely ignored, that even in an ordinary frost considerable inconvenience and danger arise from the almost inevitable frozen pipes. During such prolonged and severe frost as we have recently had this trouble has necessarily been greatly aggravated. Many a household has been suddenly deprived of their water-supply, and have been obliged to borrow or beg even the water for drinking purposes from their more fortunate neighbours. Apart from the inconvenience, the shock to the nervous system of the cook, who has been repeatedly instructed what to do in case the supply to her kitchen boiler should be found, in the early morning, to have been cut off by a frozen supply pipe; the still greater shock to the master and mistress of the household when an earlier tap than usual at their bedroom door rouses them to hear the unwelcome news that there is no hot water and no cold water, and that the cook is so frightened at the noise the pipes are making she does not know what to do. There is actually very grave danger in such defects in our domestic arrangements. The kitchen boiler may actually burst and explode with fatal violence, and such occurrences are matters of actual fact. Yet all this is avoidable by the simple observation of the most elementary principles of sanitary engineering as applied to water-supply. Every workman ought to be educated in these elementary principles, and every master of workmen engaged in business connected with sanitation or water-supply should be held responsible and rendered liable for any damage resulting from defects of workmanship or faulty construction.

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FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The title of Professor has been conferred on Dr. Burchardt, *privat-docent* in Ophthalmology.

Breslau.—Dr. Wernicke has been promoted to the Professorship of Mental Diseases.

Erlangen.—Dr. Joseph von Gerlach is retiring from the active duties of the chair of Anatomy, and Dr. Leo Gerlach has been appointed Professor of Anatomy and Director of the Anatomical Institute.

Halle.—Professor von Mehring of Strasburg has been appointed to the chair of Medicine.

Königsberg.—The chair of Zoology and Comparative Anatomy has been offered to Dr. M. Braun, professor of the same subjects in the University of Rostock.

Lausanne.—The University, which is, in fact, the ancient "Academy" greatly improved, is now in working condition. The medical faculty, which was formerly represented by a few professors, and which was only a section of the faculty of science, has recently been converted into a complete and independent faculty. The total number of professors and lecturers in all the faculties is now sixty-six. The language of all except the law lectures is French.

Leyden.—Dr. Nolen of Rotterdam has been appointed Professor of Internal Pathology and Pharmacodynamics, in succession to Dr. Huet, who has resigned.

Rostock.—Dr. Martius of Berlin has been appointed Professor of Internal Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—M. Pécholier, *professeur agrégé* in the Montpellier Faculty of Medicine; Dr. Gori, *docent* in Military Surgery in the University of Amsterdam; Dr. Grimm of Teplitz, in his seventy-ninth year; Dr. Lucca of Marienbad, in his eighty-ninth year; Dr. Szokalski, formerly Professor of Ophthalmology in Warsaw; Dr. Santiago Lopez, Professor of Medical Pathology in Granada; and Dr. Borelli, Lecturer in the Medical School of Turin and Senator of the Kingdom of Italy.

THE analysis of 167 samples of water collected by the examiners during the past month shows that, excepting two samples, which were recorded as "very slightly turbid," all were found to be clear, bright, and well filtered. The seasonal variation in the composition of the water supplied to the metropolis, for the most part too slight to constitute a variation in character, has, with the coming on of winter, to be looked for and taken note of. As regards the November supply, however, the less favourable meteorological conditions prevailing during the month, including occasional periods of frost, were not found to have any significant effect on the analytical results obtained. Both absolutely, and still more in relation to the season, these results were entirely satisfactory.

AT the celebration of the twenty-fifth anniversary of the foundation of the Society of the Friends of Science in Posen, the Medical Section elected Professor Koch, Sir Joseph Lister, and M. Pasteur honorary members.

THE British Medical Association will meet this year at Bournemouth.

MEASLES AT WORTHING.—Owing to the great prevalence of measles at Worthing, the Town Council, on the recommendation of the medical officer of health, has addressed a communication to the various school managers of the town, requesting them to close their schools for a fortnight.

THE REGISTRAR-GENERAL'S FIFTY-SECOND ANNUAL REPORT.

THE Registrar-General of Births, Marriages, and Deaths in England and Wales has just issued his fifty-second annual report dealing with the vital statistics for the year 1889. Nearly ten years having elapsed since the last census, considerable difficulty inevitably arises in estimating the number of the population on which the rates of births, marriages, and deaths should be calculated. It is well known that it has long been the practice of the Registrar-General's department to assume that the rate of increase which prevailed during the last completed intercensal period has since been maintained, and it has often been pointed out that in so large an area as England and Wales, or even as the metropolis, this method supplies very approximately accurate estimates. It is pointed out in the present report that by adding to the enumerated population in 1881 the excess of births over deaths that occurred between that date and the middle of 1889, the population of England and Wales would become 29,041,753; whereas by the official method the estimate is 29,015,613. In order that this estimate should be correct, it would follow that the balance between immigration and emigration during this period of eight years and a quarter resulted in a loss to the population of only 26,145 persons. Before another annual report of the Registrar-General will be due, the results of the census in April next will be known, and will give a far more assured value to the Registrar-General's figures. In the meantime, however, there is no good ground for suspecting that the rates published in the report now issued are to any serious extent affected by the extent of error in the estimated population adopted as their basis.

The English marriage-rate in 1889 was 14·7 per 1000 of the estimated population. This rate exceeded the low rates in the four preceding years, which ranged between 14·1 and 14·4, but was lower than the rate in 1884, when it was 15·0. The increase in the marriage-rate last year was very slight in London, whilst it was largest in Northumberland, Westmorland, Bedfordshire, and Monmouthshire. Simultaneously with the increase of the marriage-rate last year there was a further increase in the ratio both of exports and of imports (affording evidence of increased employment of labour), and also a further marked decline in the price of wheat, which was considerably lower than in any of the preceding thirty years. The birth-rate in 1889 fell to 30·5 per 1000, and was lower than in any other of the fifty years 1840-89. The English birth-rate reached its maximum (34·6) in 1876, since which it has continuously and steadily declined to the 30·5 in 1889. The local birth-rates ranged in 1889 from 24·7 in Rutlandshire, 24·8 in North Wales, and 25·0 in Sussex, to 33·8 in Staffordshire, 33·9 in Durham, 35·0 in Essex, and 36 8 in Monmouthshire. These wide variations may, however, be partly due to inaccuracy in the estimates of the local populations on which the rates are calculated. The proportion of illegitimacy, whether measured in relation to total births or to population, corresponded with that recorded in the previous year, but with this exception was the lowest on record; 4·6 per cent. of the registered births were recorded as illegitimate.

The registered deaths in 1889 were equal to 17·9 per 1000 of the estimated population, against 17·8 in 1888; the rates in these two years were considerably lower than the rate recorded in any previous year on record. The nearest approach to it was in the immediately preceding year 1887, when the rate was 18·8. The Registrar-General calls especial notice to the remarkable fact that "in each of the nine years of the current decennium (1881–89) the English death-rate has been under 20·0, whereas in no previous year had it ever fallen so low as that point." The county rates ranged from 13·7 and 14·0 in Sussex and Surrey (extra metropolitan) to 20·3 in Monmouthshire, 20·9 in Northumberland, and 21·0 in Lancashire. The death-rate of males was 18·8, and that of females 16·9 per 1000 living of each sex, these rates being respectively 8·3 and 7·7 per cent. below the average rates in the preceding ten years. In equal numbers living of each sex, there were in 1889 1113 deaths of males to 1000 deaths of females, the excess in the rate of male mortality being below the average. The

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death-rates both of males and of females were in 1889 the lowest on record at each age period between five and forty-five years, and although the same cannot be said as regards children under five years, or for persons aged over forty-five years, the rates were at these age periods considerably below the average rates in recent years. The report furnishes some interesting and suggestive statistics bearing upon the relative rates of mortality in subdivisions of the first year of life, to which we shall on occasion refer. We shall also defer to another opportunity notice of that portion of the report dealing with the causes of death in England and Wales in 1889, and more especially of a further interesting contribution to the valuable statistics of cancer mortality which recent annual reports of the Registrar-General have from time to time furnished.

BRITISH NURSES' ASSOCIATION.

ON Friday, the 9th inst., a meeting of the General Council of the British Nurses' Association was held at 20, Hanover-square, under the presidency of H.R.H. Princess Christian.

The report for the past year was submitted by the Secretary, from which it appears that the Association has made considerable progress, the number of trained nurses now on the books being 2919, as against 1679 at the end of the previous year. It was stated that the pensions for nurses which are being established would be called the "Princess Helena pensions for nurses," out of compliment to the Royal patron of the Society. The first Register of trained nurses would be ready for circulation in about a month's time.

Sir WILLIAM SAVORY, the chairman of the Executive Committee, then, addressing the Princess Christian, said: "Your Royal Highness is not only the head of this Association, but you have taken a warm personal interest in the work and given a very large share of thought and care to it. How shall I express the sense of courage and devotion with which your Royal Highness was pleased to come forward and help our Association when it was yet comparatively unknown, and struggling in the face of much active opposition and misrepresentation?" Sir William Savory then presented her Royal Highness with the first copy of the first Register of Trained Nurses.

The Princess CHRISTIAN, in reply, said: Sir William Savory, I am afraid you have said a great deal too much in my praise. I can only say that my whole heart is in this work, and anything I can do to further it will only be my pride and my pleasure.

Sir RICHARD QUAIN moved a resolution thanking her Royal Highness for the great personal interest which she had taken in the Association.

Sir DYCE DUCKWORTH seconded the motion, which was unanimously carried.

A vote of thanks was given to Sir William Savory for his services as Chairman to the Executive Committee, on the motion of Sir E. Sieveking, seconded by the Princess Christian, and the proceedings terminated.

DEMONSTRATIONS OF DR KOCH'S TREATMENT IN LONDON.

PROGRESS OF THE CASES.

(*Continued from p. 105, vol. i. 1891.*)

City of London Hospital for Diseases of the Chest.

IN the previous report it was mentioned that three of the cases now being treated by Dr. Heron at the City of London Hospital for Diseases of the Chest, Victoria-park, were about to leave that hospital and enter a convalescent home. It was stated that Dr. Heron thought that "in a few weeks any assurance office would accept them as first-class lives." These, however, were not his exact words, and convey an erroneous impression. Referring to the case of H. B. (No. 3 below), he said: "This case, as I find it now, is one which, so far as physical signs are concerned, and without reference to any previous history, might very well pass as a first-class life for an insurance office."

Dr. Wethered, who is still investigating the action of the remedy, has asked us to state, with reference to our last report, that he did not mean to imply that phthisis was a disease absolutely irremediable by all known means, but simply that its treatment by Koch's method lent an additional ray of hope to a successful termination of the malady. The cases were shown to a great number of medical men on Monday evening. The following is a complete synopsis of the three cases:—

CASE 1.—G. M——, a naval shipwright aged twenty-three, was admitted to the hospital on Oct. 28th, 1890, with no family history of phthisis. The patient was healthy until five years ago, when he had a fever. Five months ago in Cyprus he had an attack of remittent fever, which invalided him for two months. He was sent to Malta, and there he was discovered to be suffering from phthisis, in consequence of which he was invalided from the service. When admitted to the hospital his cough was very troublesome and his breath short, but night sweats, hæmoptysis, and pains in the chest were absent, and tubercle bacilli were numerous in his sputum. The percussion note over the left front was much impaired, and crepitations were abundant over the upper half of the lung, but more sparse over the lower portion. He has received thirty-eight injections, the last fourteen of which were doses of 0·1 cc.—i. e., 100 milligrammes. Only once, however, had he any reaction from even so large a dose, and that might have occurred in any person whether tubercular or not. The injections have been administered in a portion of skin measuring 5 inches by 4, and there is no tenderness or irritation of any kind over that region. The patient has now greatly improved in appearance, and his sputum has become less purulent. His cough has much improved, but there are occasional paroxysms. His breathing shows marked improvement, and he can walk all the way from the grounds up stairs to the ward without resting. His appetite is very fair. The percussion note over the whole of the left front is markedly impaired. The impairment is especially pronounced over the upper half of the lung. Numerous crepitations are audible in the left front, some of which are distinctly moist in character, while others are dry. No râles are audible over the right lung. He has gained 3 lb. in weight since undergoing the treatment, and he has expressed the opinion that, "so far as he could tell, the treatment has done him more good than the ordinary treatment which he formerly underwent."

CASE 2.—A. D——, a dock labourer forty years of age, was admitted into the hospital on Nov. 27th, 1890. His father and mother died of phthisis. Until four years ago he enjoyed good health, and was then attacked with "winter cough." Twelve months ago his cough became very troublesome and was accompanied by considerable expectoration and pain below the right clavicle. His night sweats have lasted for two months, and he has had slight attacks of hæmoptysis His breathing had been very much impaired for four months before his admission to the hospital, and tubercle bacilli were found in large numbers in his sputa. In front marked impairment is found over the right apex, and numerous moist sounds are to be detected as low as the level of the nipple. The same physical signs can be made out posteriorly. The left lung is resonant throughout, and there were no adventitious sounds. He has undergone the whole course of treatment recommended, and has had eleven decigramme doses without producing any reaction whatever. The twelfth injection produced a reaction, which, however, was said to be purely physiological in its nature. The sputum during the first week measured 2 oz, the second week 1¼ oz, the third week 1 oz., the fourth ½ oz, the fifth ¼ oz., and for the last three or four days it only measured from 2 to 3 drms. Occasional night sweats appeared during the first and second weeks; since then they have been entirely absent. The cough, at first most troublesome, has gradually improved, and there are now many days when the cough is entirely absent. His appetite has been very good for the last four weeks, and he has gained weight to the extent of 10 lb. On Tuesday evening there was found to be practically no alteration in dulness elicited by the percussion note, an observation which would apply to all cases in the hospital with the exception of the one following. On auscultation no signs were found excepting some moist sounds underneath the

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right clavicle on coughing, the rest of the chest being perfectly clear. The breathing was harsh over the whole of the chest, most markedly so on the right side.

CASE 3.—H. B——, a general servant aged twenty-eight, was admitted to the hospital on Oct. 28th, 1890. Her father, mother, and two uncles had died of phthisis. The patient is very anæmic, and has had troublesome cough and night sweats for the last few weeks. There was an attack of hæmoptysis and winter cough about two years ago. Gastric symptoms and vomiting have been present during the last six weeks. Regarding the physical signs on admission, a systolic hæmic murmur was audible. Over the upper portion of the right lung a considerable degree of bronchial breathing could be heard. Posteriorly a few râles could be heard over the supra-scapular region after coughing. Over a considerable area of the left lung crepitations after cough could be made out. Before the injections the sputum was considerable in amount, and of a muco-purulent nature, containing a few bacilli. Atropine was administered to check the night sweats, and the weight of the patient on Nov. 22nd, 1890, was 8 st. Between Dec. 27th, 1890, and Jan. 7th, 1891, the patient has had administered 1100 milligrammes of the fluid. She has taken almost daily doses of a decigramme. On Dec. 10th her weight was 7 st. 12 lb., although meantime her appetite had much improved, and the night sweats had disappeared. The sputum diminished in quantity, and the patient's general condition improved, until, on Dec. 27th, the moist sounds had disappeared from the lungs and the tubercle bacilli from the sputum. The sputum itself had then become almost all mucus, and was very scanty. The weight increased to 8 st. 3 lb., and the catamenia appeared for the first time in six months. On Jan. 12th the cough had almost disappeared, the weight was then 8 st. 4½ lb., and the patient had a good appetite and felt well. Crepitations reappeared over the left front. The signs, however, are apt to change their character from time to time, more especially towards the end of the treatment, when they are becoming fewer in number. Thus, râles may be heard at an examination made within a few hours of the time when they were found to be absent at the same point.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to this Fund was held at 34, Seymour-street, Portman-square, W., the residence of the treasurer, at 4 P.M. on Tuesday, Jan. 13th, when Sir James Paget, Bart., F.R.S., President, occupied the chair. The treasurer's financial statement and the report of the committee were submitted to the meeting. From them it appeared that £1208 18*s.* 6*d.* in subscriptions, and £576 13*s.* 3*d.* in donations, an increase of £33 over the same item last year, together £1785 11*s.* 9*d.*, had been received in the donation departments, and £1768 10*s.* had been voted in grants to 159 applicants. In the annuity department fifteen new annuitants have been elected, making a total of eighty-five. Six of these being medical men have the £20 annuity raised to £26 from the special fund dedicated to that purpose. The eighty-five annuitants absorbed £1617 13*s.* 4*d.* Investments to the amount of £9114 8*s.* 2*d.* have been effected, and the income resulting will afford a means of materially lightening the burden upon the grant department, by allowing for a large increase in the number of annuitants. One bequest alone, that of the late Mr. Chapman, obtained for the Fund by the personal influence of Dr. Cooper Rose, has already produced £12,300; £1000 has been received from the estate of the late Miss Ling, £100 from Mr. C. Pooley of Cheltenham, and £90 from Miss Anne Hadfield Rae. The working expenses have been kept in the same ratio as before to the income and expenditure, the heaviest item being that for the printing and distribution of the report. The committee was then reappointed, and Sir Andrew Clark, Bart., Dr. Cooper Rose, and Mr. Thomas Smith were elected vice-presidents. The officers were re-elected, and votes of thanks given to the auditors, Messrs. Parker Young and Kiallmark, to the treasurer and honorary secretaries, and to the medical press for their valuable services.

A proposal made by Dr. Urquhart, honorary local secretary for Perth, having reference to the place for holding the annual meeting, was considered, but the subscribers present were unable to agree with the proposal. A very cordial vote of thanks to the president, Sir James Paget, for his invaluable services to the Fund, and for his kindness in taking the chair, terminated the proceedings.

The committee wish to bring prominently before the profession the characteristics of the Fund, which, intended for qualified medical men and their families, extends immediate help to applicants properly recommended, without any publicity or canvassing, and is worked upon the most economical principles, all the officers, with the exception of the collector, giving their services gratuitously. Subscriptions may be sent to the treasurer or to the hon. financial secretary, Dr. Sidney Phillips, 62, Upper Berkeley-street, W.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Scarlatina in the Neath Rural District, by Mr. SPEAR. During the first nine months of 1890 there were 181 attacks of scarlatina, with 31 deaths; and of these, 81 and 21 respectively occurred at Coedfranc, where the principal interest of the epidemic centred. The number of cases was ascertained by means of the adoption throughout the year of the system of compulsory notification, and the results indicate how meaningless such adoption is by some authorities. Had the Act been compulsory the attitude to be noticed might have been intelligible; but why sanitary authorities want to preface their inaction by an endeavour to learn facts calling for activity it is difficult to say. Anyhow, this rural sanitary authority required notification from the beginning of 1890; they learned month by month how scarlatina was increasing in their midst, until in July no less than 59 attacks were recorded; they watched the disease on to the end of the year, and here their action practically ended. As Mr. Spear reports, no disinfecting work was adopted that is worthy of the name; no proper means of isolation were carried out; the schools which were adding materially to the diffusion of the disease were not interfered with; in fact, "the notification certificates received were simply filed." This attitude is, however, not special to notification. Thus, when the sanitary circumstances of Coedfranc came to be looked into, they were found to be deplorable. Houses were unfit for habitation by reason of dampness, dilapidation, and want of ventilation; and there was also overcrowding. In one tenement, for example, the storm water welled up through the floor and formed a pool beneath the beds, and here a child had recently died from scarlatina. Mr. Spear seems to have met the authority and to have given them definite advice as to the action needed under three headings; but the result does not as yet look very promising. Under the first two headings the surveyor was instructed to "report," and under the third one the clerk was requested to "report." It is to be hoped that something more than mere reporting will be done, and that the authority will deal with the grave nuisances they have allowed to grow up around them, and will also in the future make some proper effort to control infectious disease when they hear it is prevailing in their midst.

On the Sanitary Condition and Administration of the Pembroke Rural District, by Mr. SPEAR.—This report contains but little that is of interest beyond the confines of the area to which it more directly applies. The visit in question was the third paid by the medical staff of the Local Government Board, and yet we learn that the authority have practically delegated their powers to a sanitary committee which has so limited a sense of its responsibility as only to meet four times a year. Even with special meetings the average only comes up to six annually. Hence one place where the defective sanitary state is made obvious to all by reason of its well-nigh "intolerable stench" is stated to have remained as it is for years; and a detail is given of abounding nuisances of the grosser sort. Speaking of the village of Jamestown, Mr. Spear says that "in its general state of filthiness" and in other allied respects it finds its counterpart in the village

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of St. Florence. And amongst the conclusions at which he arrives is the fundamental one that if the sanitary authority intend to do their duty towards their constituents they must meet sufficiently often to indicate some interest in their work and to supervise the labours of their officers. One of the most unfortunate results of constituting poor-law guardians the sanitary authorities for unions has been the maintained attitude of indifference which some of these bodies show to sanitary as opposed to poor-law work, and this seems to be one of the instances in point.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6247 births and 5394 deaths were registered during the week ending Jan. 10th. The annual rate of mortality in these towns, which had increased from 21·3 to 28·7 per 1000 in the preceding four weeks, declined last week to 28·1. The rate was 29·1 in London and 27·3 in the twenty-seven provincial towns. During last quarter the death-rate in the twenty-eight towns was 22·1 per 1000, and exceeded by 1·1 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 15·7 in Derby, 18·8 in Nottingham, 20·2 in Hull, and 21·2 in Huddersfield; the highest rates were 32·9 in Newcastle-upon-Tyne, 33·9 in Birkenhead, 35·5 in Manchester, and 39·8 in Preston. The deaths referred to the principal zymotic diseases, which had been 472 and 476 in the preceding two weeks, further rose last week to 485; they included 183 from measles, 134 from whooping-cough, 54 from scarlet fever, 46 from diphtheria, 40 from diarrhœa, 28 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Wolverhampton, Derby, Hull, and Cardiff; the highest in Birkenhead, Halifax, Bolton, and Preston. The greatest mortality from measles occurred in Oldham, Huddersfield, Bristol, Birkenhead, Halifax, Preston, and Bolton; from scarlet fever in Plymouth; from whooping-cough in Preston, Halifax, and Norwich; and from "fever" in Halifax. The 46 deaths from diphtheria included 28 in London, 3 in Norwich, and 3 in Manchester. No death from small-pox was registered in any of the twenty-eight towns; one small-pox patient was under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1524, against numbers declining from 2122 to 1593 on the preceding nine Saturdays; the patients admitted during the week were 92, against 78 and 107 in the previous two weeks. The deaths referred to the diseases of the respiratory organs in London, which had increased in the preceding six weeks from 375 to 927, further rose last week to 991, and exceeded the corrected average by 408. The causes of 126, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Wolverhampton, Sunderland, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Sheffield, Liverpool, Leicester, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 20·1 to 24·8 per 1000 in the preceding four weeks, further rose to 28·8 during the week ending Jan. 10th, and was 0·7 per 1000 above the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 19·4 in Dundee and 20·0 in Edinburgh, to 34·7 in Paisley and 39·1 in Glasgow. The 755 deaths in these eight towns showed an increase of 112 upon the number in the preceding week, and included 19 which were referred to whooping-cough, 15 to measles, 13 to diarrhœa, 8 to scarlet fever, 8 to "fever" (principally enteric), 5 to diphtheria, and not one to small-pox. In all, 68 deaths resulted from these principal zymotic diseases, against 70 and 65 in the preceding two weeks. These 68 deaths were equal to an annual rate of 2·6 per 1000, which slightly exceeded the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 22 in each of the preceding two weeks, declined last week to 19, of which 12 occurred in Glasgow and 3 in Edinburgh. The 15 deaths from measles exceeded by 3 the number in the previous week; 8 were recorded in Greenock and 7 in Glasgow. The fatal cases of "fever," which had increased from 6 to 14 in the preceding three weeks, declined last week to 8, of which 3 occurred in Edinburgh and 3 in Leith. The 8 deaths referred to scarlet fever showed an increase of 4 upon the number in the previous week, and included 4 in Glasgow and 2 in Aberdeen. The fatal cases of diphtheria, which had been 9 and 6 in the preceding two weeks, further declined to 5 last week, all of which occurred in Glasgow. The deaths referred to diseases of the respiratory organs in the eight towns, which had increased in the four previous weeks from 137 to 191, further rose to 240 last week, but only slightly exceeded the number in the corresponding week of last year. The causes of 65, or nearly 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding four weeks from 25·6 to 40·6 per 1000, declined again to 36·0 during the week ending Jan. 10th. During last quarter the death-rate in the city was 25·4 per 1000, the rate during the same period being 21·3 in London and 18·8 in Edinburgh. The 244 deaths in Dublin showed a decline of 31 from the unusually high number in the preceding week, and included 6 which were referred to whooping-cough, 4 to "fever," 2 to diphtheria, 2 to diarrhœa, 1 to measles, and not one either to small-pox or scarlet fever. Thus the deaths from the principal zymotic diseases, which had been 11 in each of the previous two weeks, increased to 15 last week; they were equal to an annual rate of 2·2 per 1000, the rate from the same diseases being 2·5 in London and 1·5 in Edinburgh. The deaths referred to whooping-cough, which had been 4 and 2 in the preceding two weeks, rose again to 6 last week, a higher number than in any week since March last. The fatal cases of "fever," which had risen from 4 to 7 in the previous three weeks, declined to 4 last week. The 2 deaths from diphtheria exceeded the number recorded in any recent week. The 244 deaths in the city included 38 of infants under one year of age, and 79 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons showed a further increase upon those recorded in recent weeks. Three inquest cases and 4 deaths from violence were registered; and 66, or more than a fourth, of the deaths occurred in public institutions. The causes of 17, or 7 per cent., of the deaths in the city were not certified.

THE SERVICES.

GREENWICH HOSPITAL PENSION.—The Greenwich Hospital pension of £50 a year, rendered vacant by the death of Deputy-Inspector General William Gunn, M.D., has been awarded to Deputy-Inspector General Henry Piers.

ARMY MEDICAL STAFF.—It has been decided to hold an examination for commissions in the Army Medical Staff in London on Feb. 9th and following days. It is understood that there are twenty commissions to be filled.—Surgeon Vere Edward Hunter has been placed on temporary half pay on account of ill-health (dated Dec. 29th, 1890).

INDIAN MEDICAL SERVICE.—The following Surgeons to be Surgeons-Major on the Bengal Medical Establishment (dated Sept. 30th, 1890):—Terence Humphrys Sweeny; Daniel Francis Barry, M.D.; Geo. Francis Angelo Harris; John Anderson; Charles James Bamber; and Malachi O'Dwyer.—The Queen has approved of the transfer of Surgeon-Major Joseph Blood, Bengal Medical Establishment, to the Half-pay List (dated Dec. 21st, 1890).—The Queen has also approved of the retirement from the Service of the undermentioned Officers:—Brigade Surgeon Benj. Thomas Suffrein, Madras Medical Establishment (dated Oct. 12th, 1890); Surgeon-Major William Duncan, Bengal Medical Establishment (dated Dec. 4th, 1890); Surgeon-Major Edwin Sanders, Bengal Medi[illegible] Establishment (dated Jan. 1st, 1891).

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NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Staff Surgeon Gerard J. Irvine to the *Vivid* (dated Jan. 10th, 1891); Surgeon Phillip N. Randall to the *Warspite* (dated Jan. 10th, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st London (City of London): The following announcement is substituted for that on the same subject which appeared in the *London Gazette* of Oct. 31st, 1890—viz.: Surgeon J. J. A. V. C. Raye resigns his commission.—3rd Lancashire: Edwin Haworth, M.B., to be Acting Surgeon (dated Jan. 10th, 1891).

Correspondence.

"Audi alteram partem."

MILK IN CONNEXION WITH SEPTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—With regard to my letter to Dr. Atkinson, to which "Public Health" referred in your columns last week, I may say that I was not alluding to any specific infective organisms. The question as to the effect of boiling milk containing these organisms can be readily settled, with reference at least to two of them, by making the experiment; the organisms of diphtheria and typhoid fever can be obtained from most bacteriological laboratories. It would be of even greater importance to determine whether tubercle bacilli, when present in milk, can be destroyed by boiling; because it is very probable that, in children at any rate, tubercular disease is frequently induced by the milk from tuberculous cows. It is quite likely that experiments of this kind have already been made, but I do not happen to have read of them.

I am, Sirs, yours faithfully,
W. WATSON CHEYNE.

Welbeck-street, Cavendish-square, W., Jan. 13th, 1891.

To the Editors of THE LANCET.

SIRS,—The character of the second epidemic mentioned in my previous communication ought certainly to have been given. It was one of follicular tonsillitis, and I ought to have stated that my patients (though the epidemic was said to be due to milk) were ordered larger quantities of unboiled milk than usual; and yet, in spite of this, nearly all got well in about three days. The state of health of the population, in my opinion, has more to do with regulating the size and severity of epidemics than anything else, and thus we see the weakly affected first, then those that possess slightly greater power of resistance, whilst the perfectly strong and healthy escape altogether. Children may be said to have less resisting power than adults. Enteric fever may in the ordinary way be said to be more an illness of adult life, because young children do not travel about so much, and are not in consequence exposed to so many fresh zymotic influences. Recent comers into an infected district are most likely, it is said, to take on the disease, and we certainly notice that the visitors to noblemen's mansions that are defective as regards sanitary arrangements are often the chief sufferers. But where enteric fever is caused by contaminated milk the cases, I fancy, would be found to be more numerous in the young than the old, because the glandular system is particularly active in early life, and the intestinal glands are very easily irritated. It is all very well to say that such and such a disease is more common at such and such a period of life; under certain circumstances it may be so, but under others the statement may be entirely wrong. Our knowledge with regard to milk epidemics is even now so very imperfect, and the ages of persons who have suffered from various causes so mixed, that at the present time and for the present purpose they are utterly unreliable. I have known several epidemics in recent years put down as due to milk, while the drainage has been shown to be thoroughly defective. "Public Health" may call in question Mr. Watson Cheyne's statement, but surely, if he doubts it, he ought to bring forward some sort of proof that it is wrong. At any rate, some of our great microscopists should be able to satisfy us upon this point, and put an end to all doubts on the subject.

I am, Sirs, yours obediently,
Surbiton, Jan. 13th, 1891. F. P. ATKINSON.

MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I had hoped that any discussion on so important a subject as the above would have been conducted seriously, and I have read Dr. Aveling's letter with both regret and surprise. He seems to consider it sufficient to meet my criticisms of the Bill by, in the first place, making two assumptions, both of which are absolutely erroneous; secondly, by a statement which is obviously equally incorrect, and concludes with a "hope," which he will find, by reason of the frailty of human nature, never can be realised. Dr. Aveling says I have "not seen the Bill, and have contented myself with collecting the opinions of others." I beg to inform him I have the Bill before me, and that it was sent to me by a member of Parliament immediately on its introduction, that I have read very little of what has been written on the subject, and therefore if I reiterate the opinions of others, it only shows that if those who judge for themselves, as I have done, arrive at the same opinion as to the demerits of the Bill, there must be some good grounds for our objections. That I state mine in an "uninviting" form is a matter of regret to me; it is my misfortune that it should be so, but not my fault. Next Dr. Aveling says I would "enforce their examination [i.e., of midwives], but say nothing about granting certificates or registering them." Had he read my letter with any care, he would have observed that I state "in Ireland" each woman on passing her examination at the end of her term of training is given a certificate," and recommended that this system be introduced into England; and as to "registration," I really thought most of my letter was about it. Finally, Dr. Aveling "hopes" my "fears are groundless" that amongst the many thousands of women whom the Bill proposes to put on the register "a good many will be guilty, or at least be accused, of drunkenness, incompetence, &c." In fact, he appears to infer that the moment a woman is registered she will be freed from the vices and defects which detract from the merits of ordinary mortals, and of which anyone who reads the papers knows that the women at present acting as midwives, and who are all to be registered as soon as the Bill becomes law, seem to have their full share. Among medical practitioners many are annually accused of "drunkenness, incompetence, and disgraceful conduct." Nor are such accusations confined to members of our profession; the Bar, and even the Church, have amongst their members not a few "black sheep." But amongst the 15,000 uneducated women whom the Bill proposes to put on the register Dr. Aveling appears to believe that "the fear" that any such should be found is "groundless."

Dr. Aveling admits that in Ireland "midwives have certainly received more attention and been better educated" than in England, but he appears to be annoyed that one who for forty years has taken an active part in bringing about this desirable state of affairs should "kindly wish to help (Englishmen) with the management" of theirs. I am a registered medical practitioner, and my name appears on the same Register as does Dr. Aveling's, and I refuse to admit that anything touching the welfare of the poor in any portion of the United Kingdom is alien to me; and more, it augurs ill of the spirit in which the Bill is drawn if the authors of it refuse to accept "aid" in this new departure from, or even to listen with patience to the opinion of, those who, whether they are foreigners or only inhabitants of a distant portion of the same kingdom, have experience in the matter equal at least to their own. Unbounded self-confidence has ere this wrecked many a good cause. Dr. Aveling informs us that "some of the objections have already received attention," but no intimation has been given as to what these are; that alterations will be made grudgingly and in consequence of the opinion of others, which I am glad to find must have coincided with my own, is evident; but when we are favoured with the knowledge of what these concessions are, I fear they will be found insufficient to meet the requirements of the case, and I trust that those who are really interested in endeavouring to

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establish a class of properly educated midwives throughout the whole of the United Kingdom, and who are not tied to the opinion that registration alone will affect this, will unite in their efforts to have this Bill remodelled. Remember all that is at stake, that it is the lives of helpless infants and nearly as helpless women whom this Bill proposes to hand over to the tender mercies of uneducated women, protected as they will be by its provisions, except perhaps under extraordinary circumstances, from the fear of any punishment for misconduct.

I am, Sirs, yours faithfully,

LOMBE ATTHILL, M.D.

Merrion-square W., Dublin, Jan. 10th, 1891.

To the Editors of THE LANCET.

SIRS,—As Dr. Drage, notwithstanding the explanation I have given, continues to cast doubt upon the approximate accuracy of the figures I have given in connexion with this subject, will you allow me to ask him which of my figures he thinks incorrect, and what round numbers he would supply in their place? My wish has been to be sufficiently accurate for all practical purposes, and to understate rather than overstate the figures which supported my arguments. If I have failed in my intentions, and have fallen into error, I shall be thankful for corrections, and happy to frankly own my mistakes.

I am, Sirs, yours faithfully,

JAMES H. AVELING.

Upper Wimpole-street, W., Jan. 13th, 1891.

To the Editors of THE LANCET.

SIRS,—Dr. Drage, who wrote to you last week on the subject of the Midwives' Registration Bill, and the desirability of the subject being taken up by the medical profession only, perhaps does not know that ever since the Obstetrical Society drafted a Bill in 1882 the question has been more or less before the profession, but that while the registration of midwives by Act of Parliament has received the approval of such men as Dr. Playfair, Dr. Priestley, Dr. Graily Hewitt, Dr. Robert Barnes, Dr. John Williams, Dr. Galabin, Dr. Cullingworth, and others, the profession has not seen its way to undertake the matter, but has advised the midwives themselves to do so. The midwives were not strong enough till 1890, when, through the initiative of the Midwives' Institute, a Bill was brought into Parliament. We feel that in consequence the subject can never again sink into the same oblivion, or be viewed with such indifference by the public, as has been the case in the past.

I am, Sirs, yours obediently,

M. NICHOL,

Secretary, Midwives' Institute.

Buckingham-street, Strand, Jan. 13th, 1891.

THE INQUEST AT HANLEY.

To the Editors of THE LANCET.

SIRS,—As the recommendation of the coroner's jury at Hanley referred to in your issue of Saturday last will be discussed by the general and medical committee of the infirmary, I do not propose to enter into details; but as your comments on the case may be open to misconception if unexplained, permit me to make the following statements. The child became an out-patient three months before death, and on its prescription paper was written "badly fed," and cod-liver oil mixture was prescribed. This paper was handed to the jury. No disease likely to have caused death on Dec. 24th could have been recorded on this paper, as no evidence of any disease existed. The child improved under treatment, and presented no serious symptoms. It is not our custom to treat serious cases with fatal tendencies as out-patients; they are either taken in or directed to obtain medical attendance at home. I refused to give a certificate of death, as also did Dr. Prendergast of Hanley, who prescribed for the patient a month before death.

I am, Sirs, yours faithfully,

G. STOKES HATTON, M.S.,

Hon. Assistant Surgeon, North Staffordshire Infirmary.

Newcastle, Staffordshire, January, 1891.

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—The recent articles and correspondence in your columns as to insurances on the lives of physicians &c. have induced me to send you some figures relating to the death-rate among that class, which, I think, will be interesting, though perhaps rather startling, to many of your readers. I wished to see whether insurance offices would be justified in granting more favourable terms to physicians than to the general body of assured lives on account of the mortality among them being lower, and I was surprised to find that not only can they not do so, but that they ought in fairness to the other members to charge physicians &c. an extra premium of about 10*s.* per cent. per annum. The basis upon which I have come to this conclusion is as follows. I took the numbers of physicians, surgeons, and general practitioners living at the censuses of 1861, 1871, and 1881, and the numbers dying in 1860–1, 1871, and 1880–2; and I calculated the deaths which might be expected to occur among the numbers living at these various dates according to the Institute of Actuaries' Healthy Males Table—that is to say, the deaths which would have taken place had they been subject to the same mortality as assured lives generally. I found that at each census the actual deaths were considerably in excess of the expected, and were even in excess of the deaths that might be expected according to a mortality table applicable to the general population. Special care was taken with the census of 1881 and the deaths for 1880–2 to ensure accuracy, and great reliance may be put upon the figures for that period; but indeed, they are entirely corroborated by the figures for the other two censuses. Adding the results for the three censuses together, the following table shows the numbers living, the actual deaths, the deaths which might have been expected to occur according to the Institute of Actuaries' table, and the extra premium per cent. per annum which ought to be charged at each group of ages and for life.

Ages.	Numbers living.	Deaths.	Expected deaths.	Difference.	Extra premium.
20	2191	25	14	11	10s. 0d.
25	21,714	288	190	98	9s. 0d.
45	15,612	404	337	67	8s. 7d.
65	4673	453	405	48	20s. 6d.
All ages	44,190	1170	946	224	10s. 2d.

I may mention that I took out the figures for a number of other classes, and I found the results to agree entirely with what might have been anticipated. For instance, the mortality among the clergy was much lower than that among assured lives generally, while the mortality in the civil service was just about the same. The mortality among physicians, however, was worse even than that among coal miners, notwithstanding the unfavourable conditions under which the latter class labour and their liability to accident. Now, a coal miner is charged an extra premium. Why not a physician?—I am, Sirs, your obedient servant,

JAMES CHATHAM,

Fellow of the Institute of Actuaries, Fellow of the Faculty of Actuaries, Prize Essayist (First), Institute of Actuaries, 1890.

Edinburgh, Jan. 10th, 1891.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting, held on the 8th inst., the following list of officers, council, and Microscopical Committee was adopted:—President: W. Mitchell Banks, F.R.C.S. Vice-Presidents: Dame Harrisson, F.R.C.S.E.; D. M. Williams, M.K.Q.C.P.; J. Nelson Cregeen, L.R.C.P.; and F. W. Lowndes, M.R.C.S. Hon. Treasurer: J. W. Warburton, M.D. Hon. General Secretary: E. W. Hope, M.D. Hon. Secretary of Ordinary Meetings: A. Barron, M.B. Hon. Librarian; Peter Davidson, M.B. Council: H. Briggs, F.R.C.S.; William Carter, M.D.; G. G. Hamilton, F.R.C.S. Ed.; A. Samuels, M.D.; J. Wiglesworth, M.D.; T. Bushby, L.R.C.P.; R. Caton, M.D.; Charles Hill, M.D.; J. R. Logan, M.B.; Frank T. Paul, F.R.C.S.; G. G. S. Taylor, M.D.; and Glynn Whittle, M.D. Microscopical Committee: A. Barron, M.B.; T. B. Grimsdale, M.B.; G. G. Hamilton, F.R.C.S. Ed.; F. Johnston, M.B.; F. C. Larkin, F.R.C.S.; J. R. Logan, M.B.; F. T. Paul, F.R.C.S.; and Arthur Wilson, M.R.C.S.

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THE COMPOSITION AND PREPARATION OF PROF. KOCH'S FLUID.

TELEGRAPHING on Thursday morning, our Special Correspondent informs us that Professor Koch has made known, through the *Deutsche Medicinische Wochenschrift*, the method of preparing his anti-tubercular liquid. In the main it appears that the fluid is prepared by making an extract of pure cultivations of the tubercle bacillus by means of a solution (40 to 50 per cent.) of glycerine. The effective agent is insoluble in absolute alcohol, and seems, according to Professor Koch, to be derived from and allied to albuminoid substances; but he states that it is not of the class of tox-albumins. Its action upon tuberculous tissue is due to the power it possesses of converting the living cell-protoplasm into the condition termed by Weigert "coagulation necrosis." From the statement following, it is certain that Professor Koch has succeeded, by a simple method, in extracting the agent which appears to be the cause of the familiar process of tubercular caseation. One cannot but be struck with the simplicity of the process followed, as well as with the scientific acumen with which the investigation has been pursued. That the "remedy" was of the nature of a bacillary product concerned in caseation was suggested in THE LANCET of November 22nd, when it was stated that "in a sense the alleged specific effect of Koch's injection is to hasten the process which is carried on more slowly in the natural way by caseation, sometimes leading to a spontaneous cure." Surprise cannot but be felt that it should have been thought necessary to withhold from the profession for so long a period the statement of the nature of the remedy, which has now been shown to be of so simple a character. The following is a translation of Professor Koch's article:—

Since the publication, two months ago, of the results of my experiments with the new remedy for tuberculosis, many physicians have received the preparation, and have been enabled to make themselves acquainted with its properties through their own experiments. As far as I have been able to see and consider the statements which have been published, and the communications which have been addressed to me by letter, the statements which I have formerly made regarding the fluid have been fully and completely confirmed. There is a general consensus of opinion that the remedy has a specific effect upon tubercular tissues, and is therefore applicable as a very delicate and sure agent for the discovery of latent and doubtful tuberculous processes. As regards also the curative effects of the remedy, most reports agree in stating that, notwithstanding the comparatively short period in which patients have been subjected to the treatment, many of them have shown an improvement more or less pronounced, and in not a few cases it has even been affirmed that a cure has been established. The statement that the remedy is dangerous in advanced cases may at once be conceded. But it is also said that it actually promotes the tubercular process, and its application is therefore injurious. I have myself during the past six weeks had the opportunity of collecting the experience of various physicians concerning the effects of the fluid from a diagnostic and curative point of view. I have also had under my observation in the City and Moabit Hospitals some 150 cases of sufferers from the most varied forms of tuberculosis, and I can say that what I have latterly seen confirms my previous observations, and that I have nothing to modify in what I have previously recorded. So long as it was only a question of proving the accuracy of the results indicated in my former paper, there was no need for anyone to know what the remedy contained or whence it was derived. On the contrary, the subsequent testing would necessarily be the more unbiassed the less people knew of the remedy itself. But now that this confirmatory testing has been sufficiently carried out, and the importance of the remedy sufficiently proved, the next thing to be done is to extend the study of the remedy beyond the area of its present application by seeking to apply the principles underlying the discovery to other diseases. This task demands a full knowledge of the composition of the remedy, and I therefore consider the time has come when that secret should be divulged.

Before I go into the remedy itself, I deem it necessary, for the better understanding of its mode of operation, to state briefly the way by which I arrived at the discovery. If a healthy guinea-pig is inoculated with the pure cultivation of the tubercle bacilli, the inoculation wound is generally closed by a viscid exudation, and at first appears to heal up. In from ten to fourteen days a hard nodule presents itself, and this soon breaks down and forms an ulcerating sore, which becomes deeper and deeper until the death of the animal occurs. On the other hand, if a guinea-pig already suffering from tubercle is inoculated, quite a different condition of things will result. To show this in the best possible manner, animals which have been successfully inoculated from four to six weeks previously are selected. In such animals the exudation at the seat of inoculation assumes the same viscid appearance to begin with, but no nodule forms. On the contrary, the part on the second day becomes hard and assumes a darker colour, which spreads to the neighbouring parts until a diameter of 0·5 cm. to 1·0 cm. is reached. Within a few days the skin at the affected part becomes more obviously necrotic, and then desquamates, leaving a shallow ulcer, which generally heals with rapidity without infecting the neighbouring lymphatic glands.

It thus appears that the effect of injection of tubercle bacilli on the skin is very different in the healthy guinea-pig from that which is produced on one already tubercular. This effect is not limited to living bacilli, for the result is the same when the dead microbes are used, no matter whether—as I ascertained at the commencement of my inquiry—they are killed by exposure to prolonged low or boiling temperature, or by chemical agents In view of the singular nature of these facts, I was led to continue my researches, testing the truth of the facts in all manner of ways, with the further result that I discovered that pure cultivations of tubercle bacilli triturated in water might be injected in large amount under the skin of healthy guinea-pigs without any other effect than the production of localised suppuration.[1]

On the other hand, tuberculous guinea-pigs are killed by the injection of very small quantities of the triturated mixture, death occurring in from six to forty-eight hours, according to the dose. If, however, the dose be not large enough to kill the animal, it may cause extensive necrosis of the skin at and around the seat of inoculation. If more water be added to the mixture, so that this becomes faintly turbid, the inoculated animals survive and soon present marked signs of improvement. If these injections be continued, with one or two days' interval, the ulcer arising from the inoculation diminishes, and ultimately cicatrises, a result which would never otherwise occur, Moreover, the swollen lymphatic glands diminish in size. the nutrition of the animal improves, and the morbid process is arrested, unless it is already too advanced, when the animal dies from exhaustion. In this way a foundation for a method of curing tuberculosis was laid. The application in practice of these dilutions of dead bacilli was, however, discouraged by the fact that the bacilli remain unchanged and unabsorbed at the points of inoculation, giving rise to more or less extensive suppuration. Anything, therefore, that was required to produce a healing effect on the tuberculous process should be a soluble substance, which might to a certain extent be lixiviated by the juices of the body with which they are in contact, thus being in a short period of time taken up into the lymph-stream, whilst the pyogenic element apparently remains in the tubercle bacilli, or else is very slowly dissolved. The problem therefore was to imitate *ex corpore* the process which was going on within the body, and if possible to extract from the tubercle bacilli the curative agent *per se*. Much time and trouble were expended in this endeavour, until I at length succeeded, by using a 40 to 50 per cent. solution of glycerine, in extracting the efficient agent from the tubercle bacilli. I then made further experiments on animals with these fluids, and finally on human beings, and gave samples of them to other physicians to enable them to repeat the experiments.

[1] By such injections suppuration may be produced in the simplest and surest way without the agency of living bacteria.

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The remedy employed in this new treatment of tuberculosis consists, therefore, of a glycerine extract from pure cultivations of the tubercle bacilli. Into this simple extract there must naturally pass from the bacilli, in addition to the effective agent, all other matter that is soluble in 50 per cent. of glycerine, such as certain quantities of mineral salts, colouring matters, and other extractives, some of which can be removed without much difficulty. The agent itself is mainly insoluble in absolute alcohol, and can be precipitated by it in combination with other extractives which are likewise insoluble in that fluid. The colouring matter may also be removed so that the extract may be made to yield a colourless dry material which contains the active principle in a much more concentrated form than the original glycerine solution. It is unnecessary to attempt the purification of the glycerine extract, as the materials so got rid of are inoperative in the human body, and the process, though practicable, would be very costly. As regards the composition of the active principle, it is at present only possible to hazard a guess. It appears to me to be derived from proteid bodies and to be closely allied to them. It does not belong to the group of so-called toxalbumins, because it resists high temperatures and can be readily and rapidly dialysed. The proportion of the substance in the extract is apparently very small. I estimate it at fractions of 1 per cent. Should my view prove correct, we should be in the possession of a material the action of which on organisms attacked with tubercular disease far exceeds the action of any drugs known to us at present.

Regarding the manner in which the specific action of the remedy on the tuberculous tissue is to be understood, various hypotheses may naturally be put forward. Without wishing to affirm that my view affords the best explanation, I represent the process to myself in the following manner: The tubercle bacilli produce, when growing in living tissues, just as artificial cultivations do, certain substances which in various ways unfavourably influence the living elements in their vicinity. Amongst these is a substance which in a certain degree of concentration kills the living protoplasm, and so alters it that it passes into the condition described by Weigert as "coagulation necrosis." In the tissue which has thus become necrotic the bacillus finds such unfavourable conditions of nourishment that it can grow no more, and sometimes ultimately dies. This is how I explain the remarkable phenomenon that, in organs which are newly attacked with tuberculosis, as, for instance, in the spleen and liver of a guinea-pig, which are covered with grey nodules, numbers of bacilli are found, whereas they are rare, or wholly absent, when an enormously enlarged spleen consists almost entirely of a whitish substance in a condition of coagulated necrosis, as is often found in cases of natural death in tuberculous guinea-pigs. The single bacillus cannot, therefore, bring about necrosis at a great distance, for, as soon as the necrosis has attained a certain extension, the growth of the bacillus subsides, and therewith the production of the necrotising substance ceases. There thus occurs a kind of reciprocal compensation, which causes the growth of isolated bacilli to remain so much restricted, as is shown, for instance, in lupus, scrofulous glands, &c. In such a case the necrosis generally extends only to a part of the cell, which then, with further growth, assumes the peculiar form of the giant cell.

Thus, in this interpretation, I follow the first explanation given by Weigert of the production of giant cells. If, now, one were to increase artificially in the vicinity of the bacillus the amount of necrotising substance in the tissue, the necrosis would spread to a greater distance, and thereby the conditions of nourishment for the bacillus would become much more unfavourable than usual. In the first place, the tissue, which had become necrotic over a larger extent, would decay, detach itself, and, where such were possible, carry off the enclosed bacilli and eject them from the body; and, in the second place, the bacilli would be so far disturbed in their growth that they would be killed much more speedily than under ordinary circumstances.

It is just in the calling forth of such changes that the effect of the remedy appears to me to consist. It contains a certain quantity of necrotising substance, a correspondingly large dose of which injures certain tissue elements even in a healthy person, and, perhaps, the white blood-corpuscles or the cells adjacent thereto, and consequently produces fever, and a quite remarkable complication of symptoms. With tuberculous patients, on the other hand, a much smaller quantity suffices to induce at certain places—namely, where the tubercle bacilli are vegetating and have already impregnated the adjacent region with the same necrotising matter—more or less extensive necrosis of the cells, together with the phenomena in the whole organism which result from and are connected with it. In this way, for the present at least, it is possible to explain the specific influence which the remedy, in accurately defined doses, exercises upon the tuberculous tissue, and, further, the possibility of increasing the doses with such remarkable rapidity, and the remedial effects which have been unquestionably produced under not too favourable circumstances.

Regarding the duration of the remedy, Professor Koch observes in a note that, of the consumptive patients who were described by him as temporarily cured, two have been again received into the Moabit Hospital for further observation, that no bacilli have appeared in the sputum for three months past, and that the physical symptoms have also gradually but completely disappeared.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday.

THE second Sunday in the new year has now for twenty-one years been set apart as Hospital Sunday in Liverpool and its suburbs. This twenty-first recurrence, or the coming of age of Hospital Sunday here, as some have called it, though this would be more correctly applied next January, was an event watched with great interest. The local press had called attention to the auspicious event in excellent leading articles which appeared on the previous day. The secretaries and treasurer had made every arrangement for the due advertisement of the approaching Sunday outside every place of worship where a collection was to be made, and for providing the clergy and congregation with sheets giving full details of all the medical charities selected for participation in the fund and their financial condition. The treasurer has already acknowledged receipt of advices to the amount of £3107. This comprises some collections of very great munificence—e.g., that of the Sefton Park Presbyterian Church was £636, and that of the Renshaw-street Unitarian Church £601. Besides these there are five additional instances where the collection exceeded £100.

The Northern Hospital.

This hospital has recently received a very welcome gift in the shape of £100 for the purchase of a library, scientific and recreative, for the nurses. These latter will not have too much leisure for reading, but this will make what little they can have the more welcome. The gift is a most praiseworthy one, and the example well worthy of imitation elsewhere. The donor is Mr. R. C. Kerr of Fall River, Mass., and Glasgow, who has lately married a recent member of the nursing staff of the hospital.

Deaths of Liverpool Medical Practitioners.

The deaths of Dr. Robert Gee and Mr. Hugh Owen Thomas have removed two very prominent members of the profession in this city. They were both men who will be much missed by all who knew them. Dr. Gee's professional brethren were prevented by the distance as well as the inclement weather from following his remains to their last resting place at Wrexham. The funeral of Mr. Thomas was largely attended by professional and lay friends, and was one of the largest funerals which has been seen for a very long time.

Deaths from Chloroform.

The *Liverpool Echo*, in its issue of the 12th inst., refers to the remarks made in THE LANCET some time ago respecting the meagre information given in the reports of inquests where death has resulted from chloroform. It also alludes to the increasing number of deaths from this cause, or, perhaps more correctly, under these circumstances. After quoting *in extenso* the suggestions made in THE LANCET for securing full details of these fatalities in the medical journals, the writer calls upon the city coroner, the county coroner, and the Cheshire coroner, each by name, to please to take notice. It must not be forgotten that these inquiries are of a very painful nature to all concerned, and the wish to spare the feelings of relatives, the administrator of the anæsthetic, and, if it occurred in a hospital, its

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managers, is a laudable one. Nor must the probable effects upon the public be lost sight of. It is in cases like these where a medical assessor to the coroner or medico-legal referee would be of much value.

Liverpool, Jan. 18th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Air Pollution.

THE town gardening section of the Manchester Field Naturalists' Society are attempting to set on foot a most useful movement, having for its object the examination and analysis of the air of Manchester and Salford in relation to its effect upon animals and plant life. The investigations and experiments will involve some considerable outlay, and a sum of at least £200 to commence with, and they ask for help from the public to carry on the work, and it is intended to work in unison and correspondence with a similar society in London having the same objects in view. Whilst these gentlemen are directing their attention to the air we breathe, the County Councils of Lancashire and Cheshire are looking after our streams and rivers, and last week a public inquiry was held before a Local Board inspector asking for powers to unite their forces in dealing with the question of rivers pollution. Surely, with all the activity now displayed by private bodies, municipal corporations, and county councils, an improvement in our physical surroundings should result ere many years pass away.

Infirmary Extension.

The proposal to practically rebuild the present infirmary on an enlarged scale has been under the consideration of the governing body during the past three months, and the outcome of their deliberations as expressed at the last meeting of the Board is that they find there is a pressure upon the present accommodation which at times is difficult to meet; they suggest that the building as it exists should be enlarged to the extent of 120 additional beds, and the opinion of architects is now to be obtained as to the best way in which this can be carried out. If the Board are, however, going to appeal to the general public for funds to carry out this scheme, several points will require a little more light thrown upon them. First, is it desirable to further curtail the open space of the infirmary grounds, already much diminished in area by the erection a few years since of a nurses' home and out-patient department, and thus considerably increasing the aggregation of patients on a limited area? Is the demand from acute cases, or are not the majority of patients requiring admission such as could be with ease and comfort to themselves treated in a suburban hospital with purer air and more space than can possibly be obtained in the centre of this smoky city? Do the patients who cause the pressure belong to the city and district, or do not they come from long distances, even so far as Wales? And seeing how many good local hospitals now exist, is it fair to Manchester to be called upon to provide for such patients? And, lastly, will not the generous benefaction of the Whitworth trustees to establish a large hospital in connexion with Owens College suffice to meet all reasonable requirements for increased hospital accommodation for some years to come, to say nothing of the advantages to the medical school of having a field for clinical work near at hand, and in connexion with their own *alma mater?*

College Extension.

The pressing need for increased room in various departments of the medical school has compelled the college authorities to take steps to enlarge the present buildings, which have already received considerable extension since their first erection in 1873. The new buildings will extend along Coupland, in a line with the present medical school, as far as Lloyd-street, and the departments of physiology and pathology will especially be benefited by the increased rooms and laboratories thus provided. One feature in the plans of the new buildings is the ample window space provided, so that all the light that can be got from our fog-and-smoke-obscured sun shall be obtained.

Poor-law Hospitals.

At both the Manchester and Salford Workhouse hospitals important changes in the medical administration are about being made. At Manchester, Dr. Reynolds, who for some years has been resident medical officer at the Royal Infirmary, has been appointed visiting physician at a salary of £200, to attend the medical cases; whilst Mr. Hardie continues visiting surgeon in charge of the surgical ones. At the Salford Workhouse changes of a similar nature are contemplated, though some little hitch has occurred in the settlement by the demand of the Local Government Board that two medical men should be appointed on the visiting staff instead of one, as proposed by the guardians.

Federation of Sanitary Associations.

One of the pioneers of voluntary sanitary associations was that of Manchester and Salford. Since the increase of these societies in the country has occurred, it has been thought desirable that they should in some way work more in unison. In Manchester this has long been strongly felt, and on Monday last the honorary secretary attended a meeting in London at the Sanitary Institute of Great Britain, when the preliminary steps were taken for bringing about this useful result.

Infanticide.

From time to time some little attention is drawn to the loss of infant life by culpable carelessness. But a short time since the Salford coroner had four cases in one day of infants suffocated by overlaying. The coroner for Manchester has on more than one occasion expressed himself strongly when similar cases have come before him. During last year he held no less than ninety-eight inquests on infants under a year old found dead in bed, and of these sixty-four were insured.

Horse Influenza.

These two weeks past a severe epidemic amongst horses, resembling in some respects influenza, has been rife in Manchester and district, with a considerable mortality therefrom. The disease is sudden and acute in its onset, and frequently proves fatal in twenty-four hours. No true influenza has been prevalent in the human subject, but our local mortality returns have been largely swelled by diseases of the respiratory organs during the recent severe weather.

Death of Mr. E. A. Birch.

Amongst those who have succumbed to diseases of the lungs is, unfortunately, a member of the medical profession well known in Manchester medical circles. Mr. Ed. Arnold Birch, after a short illness from pneumonia, died on Christmas Day. Mr. Birch was a successful student of our medical school a dozen years ago; he held most of the resident appointments at the Royal Infirmary, and since then had been in practice at Longsight. He leaves a widow, but no children.

Manchester, Jan 14th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death of H. B. Brady, LL.D., F.R.S.

I REGRET to announce the death of Dr. H. B. Brady, of the firm of Brady and Martin, of this city, at Bournemouth, on Saturday last, in his fifty-fifth year. Dr. Brady, although not a medical man, was intimately connected with the profession, his father being Mr. Henry Brady of Gateshead, a well-known surgeon in the north of England, and his brother (Dr. George Brady) is in active practice at the present time in Sunderland. Dr. Brady was an expert with the microscope, and his report on Foraminifera dredged by H.M.S. *Challenger* during the years 1873 and 1876, in two quarto volumes, is well known, as likewise his other work in natural history, which resulted in his being elected F.R.S. and receiving the degree of LL.D. from the University of Aberdeen. Dr. Brady, considering his feeble health, as he was a sufferer for most of his life from bronchial asthma, accomplished much work in his special departments. He was compelled to pass most of recent winters in the south of England; but even there the recent severity of the season was too much for him. Dr. Brady was unmarried.

Presentation to Dr. A. C. Munro at South Shields.

Dr. Munro, who has been medical officer of health at South Shields for some years, and has been promoted to a similar office by the County Council of Renfrewshire, has been presented with an address by the members of the South Shields Literary and Scientific Society, together with a handsome and valuable gold watch and chain, and a diamond ring for Mrs. Munro.

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The Health of Hexham.

The health of Hexham would appear to be in a satisfactory condition, as evidenced by the report of the Sanitary Committee, which shows that the death-rate for 1890 was 15·8 per 1000—less even than that of 1889, which was remarkable as the lowest annual death-rate previously recorded at Hexham, thus showing that Hexham had attained to the position of one of the healthiest towns in the kingdom.

The Outbreak of Typhoid Fever at Stockton.

At a special meeting of the Stockton rural authority, Mr. Blandford stated that there had been twenty-six cases of typhoid fever notified since Dec. 20th. Mr. Clegg, in his report to the Stockton urban sanitary authority, thought that the epidemic was practically abating, and that its cause could not be attributable to atmospheric conditions.

Newcastle-on-Tyne, Jan. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Home for Inebriates: Queensberry House and Queensberry Lodge, Edinburgh.

THE annual report of these institutions has just been published. One side of the work done by them is of interest to the profession, and is not generally known. Both institutions are under the same management but occupy separate buildings, and the grounds of each are also strictly separated. They are both in part hospitals or homes for aged or infirm persons, or persons suffering from chronic diseases; but the side to which reference is made here is the function they perform as homes or retreats for intemperate persons of both sexes. Queensberry House was instituted in 1832, and is commonly known in Edinburgh as the House of Refuge. During the past year the report states that 138 persons of intemperate habits have been boarded in the institution by their friends for the purpose of protection and reformation. The directors point out that the importance and value of this department are witnessed to by the number of respectable tradesmen and others who have availed themselves of, and expressed their thankfulness for, the existence of such a place of protection. The rates of board are from 4*s.* 6*d.* to 10*s.* per week. Queensberry Lodge, on the other hand, is a newer institution, having been opened in 1866. It is entirely for ladies whose friends are able to pay from £50 to £100 per annum, and there is accommodation for about thirty ladies at a time. Between 1866 and 1890 661 ladies have been admitted as boarders, and of these there belonged to England 118, Ireland 63, and Scotland 480 The directors say that "the results of treatment, when time has been afforded by a sufficient length of residence, continue to be satisfactory. Information cannot in all cases be obtained as to the benefits derived, but good accounts have been received in regard to a large number of the boarders, particularly those who have resided in the house for a period of four months or longer."

Health of Edinburgh.

Last week the mortality was 104, and the death-rate 20 per 1000. Diseases of the chest caused 50 deaths, and zymotic diseases 7, of which 3 were typhoid and 3 whooping-cough. The intimations for the week were—typhoid, 25; diphtheria, 2; scarlatina, 16; and measles, 9. In Leith the death-rate was 21·3 per 1000.

Meritorious Attendance on the Insane.

On the recommendation of Dr. T. S. Clouston, the Council of the Royal College of Physicians, Edinburgh, has awarded the Morison prizes for meritorious attendance on the insane to Mary Ann Anderson, Midlothian and Peebles Asylum, eleven years' service, and to David Robertson, Murray Royal Asylum, Perth, thirty years' service.

Edinburgh, Jan. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Irish Census.

IN the last census, that of 1881, the population of Ireland was 5,144,983; but it is estimated that the returns this year will show a total of 4,700,000, or a decrease amounting to 444,983.

Royal College of Physicians.

The President entertained the Fellows and some friends to dinner at the College on Monday evening. The guests included his Excellency the Lord Lieutenant, the President of the Royal College of Surgeons, and others.

Poor-law Relief in Ireland.

The return of expenditure on poor relief for the year ending Sept. 29th last has been issued by the Local Government Board. The number of persons who received in-door relief amounted to 333,307, and out-door relief 114,704, or a total of 448,011, at an increased cost of £43,091. The cost of out-door relief was £194,814, and for the support of the blind and deaf-and-dumb institutions and extern hospitals £13,661. The total poor relief expenditure was £860,000, and the expenses under the Medical Charities Act £159,774; while the Public Health Act cost £53,942.

Death of Dr. John A. Byrne, of Dublin.

A couple of weeks since reference was made in these columns to the serious illness of Dr. Byrne, and the anxiety then expressed has proved to have been well-founded, as he succumbed on Tuesday, the 13th inst., at his residence, Merrion-square, North. Dr. Byrne was a Graduate in Arts and Medicine of the Dublin University; Honorary Fellow, San Francisco Obstetrical Society; Professor of Midwifery in the Medical School of the Catholic University; Gynæcological Surgeon to Vincent's Hospital; Examiner in Midwifery, Royal University of Ireland; and formerly examiner in the same subject in the Queen's University in Ireland; physician to Grand Canal-street Dispensary; and ex-assistant master, Rotunda Lying-in Hospital. He was also a Fellow of the Royal Academy of Medicine in Ireland, and an ex-president of the Dublin Obstetrical Society. His contributions to medical literature included "Fatty and Hydatiginous Degeneration of the Placenta"; Rupture of the Vagina during Labour, with Recovery"; "Observations on Puerperal Fever and Puerperal Mortality"; "Bipolar Version and Induction of Premature Labour by Hydrostatic Dilatation," &c. Dr. Byrne was an accomplished obstetric physician, and held a high position in the city in which he practised.

Dr. H. Bayer was entertained at dinner at the Wicklow Hotel last week and presented with a case of surgical instruments, on the occasion of his severing his connexion with the Ardee-street Brewery.

The governors of the House of Industry Hospitals will next week elect an assistant surgeon, who will hold office for three years. Mr. Burgess, ex-assistant surgeon, is, I understand, a candidate.

The widow of Professor Davies, late of the Queen's College, Galway, has been granted an annuity of £100 from the Literary Fund of the Civil List.

Jan. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Pyoktanin in Ocular Affections.

THIS substance, according to M. Galezowsky, gives remarkable results in the treatment of various forms of ocular ulceration. Chronic corneal ulcers especially, which prove rebellious to all other treatment, are quickly arrested in their spreading course and cured in about four weeks by the regular application of a solution freely applied.

Fire at the Pitié Hospital.

This old structure ran some danger of being burnt down last week. Were the possible if not probable consequences not so dreadful, this would, from a sanitary and other points of view, be matter for congratulation, for a more hopelessly ramshackle and altogether antiquated pile serving as a modern home of antiseptic surgery and medicine it would be difficult to imagine. Luckily the fire broke out in a part of the hospital well removed from the wards, and was speedily got under before the patients became aware that anything unusual had happened.

Epidemic of Small-pox.

We do not yet enjoy the blessings of compulsory vaccination to the full in this country. As a result, we are visited from time to time in various parts of the country with terrible outbreaks of this loathsome disease. At a place called Aigues-Mortes, a somewhat suggestive and for once appropriate name, there is a violent epidemic of the disease

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just now. As many as a hundred cases are reported, with several deaths. It is supposed that the pest was imported by a steamer from Spain, which, mixed up with her cargo of wine and oranges, carried an additional cargo of small-pox microbes. The oranges and wine are not said to have been confiscated, but were at once transported further inland, to be there disposed of to a confiding public!

Curious Medico-legal Cases.

In the Parisian suburb of St. Denis there practises a member of the profession who, if in common with the rest of humanity he commits an occasional error of judgment or of prognosis, must at all events be credited with rare single-mindedness of purpose. Our worthy *confrère* was called to see a patient. After the third visit he solemnly informed the friends that the patient's condition was so hopeless that conscientiously he did not feel justified in putting them to the expense of what must henceforth be useless visits. The friends did not insist, but, as might be anticipated, on the exit of the first doctor they sent for another. In the result the patient did not die, but recovered, whereupon our singular *confrère* demanded his fees for the three visits, which the patient and his friends promptly declined to pay. The doctor thereupon had recourse to law. Now, as the amount was not excessive, being only 9 fr. for the three visits, it must be supposed that our *confrère* was only striving to be consistent with his frame of mind by fighting on principle; otherwise we cannot well imagine him playing so closely a game hardly worth the candle. But he gained his point and also recovered his 9 fr., and had, moreover, the satisfaction of hearing an elaborate judgment delivered on his case, and this was no doubt much. Another case was of a somewhat different character. A quack was convicted and heavily fined for illegally practising medicine at Albertville. No sooner did this happen than several of his numerous friends and patients opened a subscription list in a local café, with the view of meeting the fine and legal expenses. The subscription list was, however, seized by the police, and those who had so far subscribed were prosecuted by the State and fined. But the staunch defenders of the quack determined not to let the matter rest here. They appealed to the higher tribunal in Chambéry, where, however, the decision of the lower court was confirmed. This tribunal, in giving judgment, laid it down that the prohibition enjoined by the law against opening a public subscription for the purpose of covering the expenses and fines inflicted by judicial authority and judgment in matters criminal and *correctionnelle* applies to the illegal practice of medicine. The defendants were now further mulcted in the expenses of appeal thus dismissed. Our quack will hardly retire from practice after this manifestation. The proverbial coach and four of O'Connell will carry him through yet.

Survival of Medical Sorcery.

Some time back I gave in these columns some curious examples going to prove that sorcery and other forms of mediæval superstition were by no means extinct in this country yet. Another example of this kind has lately been made public in a small, out of the way country commune named Serralongue. In December last a child was bitten by a dog that was afterwards proved to have been rabid. The father of the child informed the enlightened mayor of this enlightened commune, at the same time summoning, not a doctor, but a sorcerer to treat the disease, in which action the mayor appears to have entirely acquiesced. The treatment consisted, amongst other diabolical details, in shutting the unfortunate child in a darkened chamber for forty days, during which time he was denied meat and water. At the end of this time the child's condition can be better imagined than described. Luckily the police now got wind of the affair, and put a stop to the cruelty practised upon the unfortunate boy. The law is further, I gather, about to shed a little light on these benighted people—none too soon, apparently.

Paris, Jan. 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow's Address.[1]

AMONG last week's publications concerning the application of Koch's remedy Virchow's speech in the Medical Society was unquestionably the most important. Virchow has dissected about twenty corpses of patients who had received injections for a longer or shorter time. He illustrated his lecture by demonstrating a large number of preparations, which were inspected by his hearers with the keenest interest. After the great pathologist had concluded his discourse his audience dispersed, discussing what they had heard with great excitement, and there can be no doubt that this utterance will form an important milestone in the history of the question at issue.

Koch's Treatment of Tuberculosis.

I have received from Dr. M. Cohn the following account of a visit which he paid to the Hospital am Urban, one of the hospitals belonging to the city of Berlin: "The chief physician of the internal department, Professor A. Fraenkel, had the goodness to communicate to me his experience of Koch's remedy, which he has been applying these six weeks past. In order to make his observations and examinations of the excretions, the phenomena in the diseased organs, &c., as careful and frequent as possible, he has treated only forty-two cases, mostly in the first stages of the disease. Patients with extensive cavities and whose strength is far gone have been excluded from the treatment. In some of the incipient cases an improvement of the physical condition (clearing up of dulness, diminution or cessation of rhonchi) was observed, and improvement in general health was apparent. Increase of weight has been but inconsiderable, and very fluctuating. Influence on night sweats or change of the character of the sputum was not observed. The quantity of bacilli in the sputum is very variable; in the beginning of the treatment it is usually greater, but the bacilli afterwards often disappeared for a while, to reappear sooner or later. Three of Fraenkel's patients, who were received into the hospital with incipient infiltration of the apex, have for eight days past ceased to react on the maximal dose of a decigramme, have no longer bacilli in their sputum, and no demonstrable physical phenomena. They are to be dismissed, and will then visit the hospital once every week for some months to have their capacity of reaction tested by an injection. In the advanced cases of tuberculosis of the lungs the objective improvements hitherto obtained have been but small, and spread of the processes in the course of the injections, in one case even the formation of a cavity, has been observed. In two cases of laryngeal tuberculosis but little change could be affirmed; when old infiltrations disappeared, new ones soon appeared at other places. In the case of one female patient with intestinal tuberculosis the evacuations became somewhat less copious, and the quantity of bacilli evacuated considerably increased. With reference to the diagnostic value of the remedy, it deserves to be mentioned that there were indisputably tuberculous patients whose sputum contained innumerable bacilli who never reacted, even when the maximal dose was given. The converse process, on the other hand—namely, reaction in non-tuberculous patients,—was not observed. The lowest dose capable of producing reaction is very different in different persons, and it is not yet known on what circumstances this depends. One thing, however, seems certain—namely, that it does not depend on the extent of the tuberculous affection. The question of the manner in which the nationalisation of Koch's fluid, which Minister von Gossler announced in his well-known speech is to take place, is being thoroughly discussed at present, with the assistance of competent outsiders, in the Prussian Ministries of Finance, and of Religion, Education, and Medical Affairs. It is intended to establish institutions for the production and distribution of the fluid, on the model of the existing establishments for the production of vaccine. As to the manner of the production of the fluid Dr. Bernheim of Würzburg, a former pupil of Koch's, has put forth the following hypothesis. The basis of the fluid, he thinks, is bouillon or horseflesh, which contains more albuminoid substances than any other kind of flesh. In this bouillon a colony of tubercle bacilli is placed, whereby a poisonous substance is developed by fission of the albuminoid bodies. The bacilli die, and the bouillon containing the poison is pressed through coarse porcelain for the inspection of bacilli that may still be present. To this bouillon is again added a colony of bacilli, and this process is repeated four or five times. This highly poisonous bouillon (to which a ½ per cent. solution of carbolic acid is added to prevent putrefaction) is Koch's fluid. Dr. Bernheim supposes that the animal tissue cell affected by the bacilli dies under the influence of the poison, while the still healthy elements of the tissue remain un-

[1] A full abstract of this address will be found in another portion of our present issue.

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affected. The readers of THE LANCET may remember that a committee of eminent medical men was formed here at Leyden's suggestion about the end of last winter for the purpose of founding large sanatoria for patients suffering from pulmonary disease. The operations of this committee were somewhat arrested by the publication of Koch's discovery, as it was not known how the method would have to be applied. Now that it has become clear that the application of the remedy in closed establishments is best, the committee will resume its labours, and will, it is to be hoped, successfully perform its task.

At the Free Association of the Berlin Dermatologists Dr. Rosenthal spoke of his experience of the application of Koch's remedy in cases of lupus. This experience has reference to a number of cases clinically observed for about six weeks, some of which the speaker showed to the meeting. He is of opinion that the diagnostic value of the fluid is beyond all question. The reaction is absolutely characteristic. In all cases a rapid cure began. The ulcerous patches skinned over; the nodules disappeared by resorption or exfoliation; the elephantiastic places began to return to their normal condition. Complete cure has not yet been obtained, but seems to be possible. The duration of the treatment and the amount of the single dose depend on the individuality of the patient. In the discussion which followed Dr. Rosenthal's report, Dr. Lassar remarked that it was unquestionably possible by means of Koch's injections to make lupus nodules disappear, ulcerations skin over, and hypertrophic tracts of skin exfoliate; but that, though the treatment had now lasted a quarter of a year, no cures had been effected, but only ameliorations. The weaker the reaction became as patients got accustomed to the remedy, the more slowly did the improvement progress. Relapse also was not impossible. Dr. Köbner deemed it advisable, in contradiction to Koch, to reduce the initial dose to 0·001, and then discussed the striking rapidity with which patients get accustomed to the remedy. He then mentioned two lupus patients who have been under treatment for almost three months, in whom, notwithstanding strong general reaction at first, the local affection remained unaltered; in both cases the nodes lay in old cicatrised connective tissue. It seemed that a healing process set in only where vessel-bearing connective tissue adapted for inflammation existed round the tubercle. In lupus erythematodes no demonstrably therapeutic influence was perceptible, and in leprosy only general reaction seemed to take place.

Professor Bardeleben and his assistants have reported to the Free Surgical Association on fifty-nine cases of surgical tuberculosis and skin tuberculosis treated by them, and showed a number of the patients. The demonstration favoured the impression that in a number of diseases of the bones and of the joints, especially after operation, the injections really accelerate the healing process; whether the removal of all tuberculous matter from left scars is completely successful is a question which it is well to leave unanswered for the present. As a diagnostic aid also Koch's fluid has proved effective in a number of etiologically doubtful cases. Cases of lupus were also shown in which quite striking ameliorations, and in some places complete healing, had taken place; but on this occasion also, though the treatment had lasted more than three months, no case of complete cure of lupus was shown. In the discussion Dr. James Israel remarked that a case of lupus, treated by him with Koch's fluid, had shown no reaction whatever, though giant cells and bacilli were histologically demonstrated in the diseased tissue. The negotiations with the Government with a view to the nationalisation of the medicament are said to have been interrupted; perhaps the Government has resolved, after all, to await the teaching of further experience before taking upon itself so important an obligation.

Berlin, Jan. 13th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Koch's Treatment of Tuberculosis.

THREE weeks ago Professor Koch was kind enough to send a bottle of his "precious liquid" to each of two friends in Alexandria, and as one of them was at once put at the disposal of Kasr-el-Aini Hospital, some experiments had been made by Messrs. Milton and Sandwith, and by Dr. Hassan Pacha Mahmoud. Up to the present thirteen cases have been injected, including one of lupus, one leper, two of diabetic phthisis, one of bone disease, three glandular cases, and five of pulmonary phthisis. The lupus case is a boy aged ten, with disease of nose, face, and neck, who had been previously scraped five times, and had had several other kinds of treatment; so far he has had seven injections, rising gradually to eight milligrammes; his temperature rose once to 101° F., and though there has as yet been no great typical redness or swelling, the scabs have discharged a little serum, and present a cleaner appearance after being oiled. The leper has been attacked for five years, and seems to be a fair case for trial, his numerous tubercles being in a clean condition. He has only lately been admitted, with a special view to this experiment, and has had two injections, up to five milligrammes, without any result. The first case of diabetic phthisis has very slight lung signs, and absolutely no cough, so that injections increasing to one centigramme have never sent his temperature above 99·6°; but once, after six milligrammes had been reached, the patient had great pain and a glandular swelling at the base of the right posterior triangle of the neck. From its sudden appearance and its complete disappearance the following day it would almost seem as if it were due to some slight reaction among unsuspected tubercular tissues. The second case of diabetic phthisis has incipient but more evident signs, and, though there is considerable cough and expectoration, bacilli have never been discovered in the latter. The man has had four injections, rising to six milligrammes, and, though his temperature twice rose to 102°, it was not by any means a typical reaction. It may in the future be settled what action Koch's fluid has upon the phthisis occurring as a complication in diabetic patients, and similar experiments ought to be able to decide for us what percentage of such cases is at its origin tubercular. The case of tubercular bone disease is in the tibia of a woman upon whom Mr. Milton has already operated. Since Dec. 18th there have been six injections, the strongest being of six milligrammes and the temperature having risen to 102°. This is one of the most satisfactory of the experiments, for the wound is decidedly better, the granulations are healing and are more healthy-looking, and there is less discharge. In a previous letter it was prophesied that this new treatment would prove of great value in the numerous cases of swollen lymphatic glands which enter the hospital for extirpation, and the three cases already injected confirm this view, though it is too early to decide whether anything like a permanent cure can take place. A girl with a chain of glands in both groins and in both sides of the pelvis got a typical reaction for some hours and fever amounting to 104° after an injection of one milligramme. Another girl with similar cervical glands got a temperature of 102° after the first injection of one milligramme. A case of axillary glands already operated upon with a fistulous sinus remaining has had three injections increasing up to four milligrammes with slight fever (100·5°); and as yet no alteration in the fistulous wound. One of the first phthisical cases injected was a woman with incipient signs at one apex and masses of enlarged glands in both axillæ and on both sides of the neck. She had very characteristic reactions, fever to 104·8°, and great swelling and pain for some hours in the previously dormant glands, which now seem less evident after six injections, none stronger than two milligrammes. An Egyptian woman with incipient phthisis has had seven injections, rising to three milligrammes, as the result of which her temperature has twice risen to 102·5°, and her cough has certainly diminished. A negress from the Soudan, with a distinct cavity in one lung and commencing disease in the other, has had three injections, rising to two milligrammes, and the orthodox fever rising to 104·2°. The fourth case of phthisis had before the injections a range of fever from normal in the morning to 101° in the evening. She has had only two injections of one milligramme each. After the first her temperature rose to 104·4°, and after the second to 102·4°. The remaining case is perhaps the most interesting, for the patient had suffered one year from bronchitis, and though bacilli were never detected in his sputa, it was thought that his physical signs at the right apex were suspiciously like phthisis. The first trial of a milligramme and a half produced no result, but after three milligrammes and a half he had for several hours fever of 102°, falling

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again to 98°, and he spent part of the evening groaning with pain, like that of pleurisy, in his right side. Another injection of similar strength produced again fever (102°), and a milder degree of pain in the side, without crepitation and without friction sounds. Since then he has had five milligrammes injected without fever and without pain. This case seems to be illustrative of the diagnostic value of the new discovery. Some experiments are also being made by some of our German, Swiss, and Austrian colleagues upon cases of lupus and of phthisis at the two private hospitals here supported by the European communities.

Professor Koch's Visit.

It is said that Dr. Koch himself is coming to Egypt next month for a holiday, and intends afterwards to proceed to Syria to study the reported cases of cholera there. It will be remembered that he spent some time in Cairo and Alexandria in 1883 during the last epidemic of cholera in Egypt.

Surgical Operations at Kasr-el-Aini.

Surgery continues to be well carried out in the hospital wards, and the number of operations is nearly a hundred a month, besides some fifty eye operations performed by Dr. Scott and his native colleague. Mr. Milton, who does the lion's share of operating, has during the month performed three ovariotomies, amputation at the shoulder, Pirogoff's amputation, five lithotrities, lithotomy, mastoid trephining, ligature of the axillary artery, and operations for abdominal cancer, vesico-vaginal fistula, strangulated hernia, and polypus of uterus. During the same month the native professor of surgery has done four lithotomies, amputation of thigh and of forearm, and several minor operations. A suprapubic lithotomy was lately performed successfully in which the calculus was found to weigh very nearly fourteen ounces. Among other interesting but unsuccessful operations were abdominal section for a ruptured bladder and for a ruptured aneurysm of the abdominal aorta.

Improvements at Kasr-el-Aini.

Little by little English influence is being extended, and the various departments of the hospital are becoming more and more civilised. A steam laundry has been established now six months, and the whole laundry has been placed under European supervision, to the manifest improvement of the clothes washed. The kitchen is still in sad need of reform, but this will be taken in hand directly funds for building permit. It the meantime some medical comforts for the patients are supplied by the English nurses from their private kitchen at the expense of the hospital. The dispensary has lately been placed under a competent German, who is gradually reducing the chaos in which his native predecessor lived and moved. Post-mortem examinations are now regularly made of patients dying in the hospital, and those bodies unclaimed by their friends are previously injected and then utilised for the dissecting-room under the superintendence of Dr. Keatinge.

Cairo, Jan. 5th.

Obituary.

EDWARD BELLAMY, F.R.C.S. ENG.

MR. BELLAMY was born at Blandford St. Mary's, in Dorsetshire, in 1842. His father was rector of that parish, and subsequently of Balham. He was educated at Clapham Grammar School, and at King's College School, and in January, 1859, entered the Applied Science Department in that College. His attention was specially given to mathematics, mechanics, chemistry, and drawing, and in all these subjects he exhibited marked proficiency. At this time he was studying for the competitive entrance examination for the Royal Engineers, but in October, 1860, having determined on a medical career, he exchanged from the Applied Science to the Medical Department. He soon showed himself to be a good anatomist and a most dexterous and rapid dissector, and was successively appointed Prosector and Assistant Demonstrator of Anatomy by the late Professor Partridge. His surgical bias also attracted the especial attention of Sir William Fergusson during his dressership under that distinguished surgeon. In 1863 he became a Member, and in 1867 a Fellow, of the Royal College of Surgeons. Having filled the post of Surgical Registrar at King's College Hospital, Mr. Bellamy accepted the appointment of Demonstrator of Anatomy to the Charing-cross Medical School in 1867, and in 1871 was appointed assistant surgeon to the hospital and teacher of operative surgery. In 1874 he succeeded to the lectureship on anatomy, and in 1878 became full surgeon. In the same year he was elected lecturer in surgery, and this appointment, with the senior surgeoncy of the hospital, he held at the time of his death. He was also elected professor of artistic anatomy at South Kensington on the removal of the late Professor Marshall to the chair at the Royal Academy, and in this post his artistic leanings and capacity had full scope. In 1880 he was elected a Fellow of King's College, and he had been an examiner in anatomy at the Royal College of Surgeons, and in surgery at the University of Durham and at the Victoria University. Mr. Bellamy made many contributions of value to anatomical and surgical literature. His "Students' Guide to Surgical Anatomy" was very attractive, and the illustrations were nearly all drawn on wood from nature by the writer. This book was one of the first of its kind in this country. But the English anatomical student is even more indebted to him for his excellent translation of Braune's Topographical Anatomy, as by this book the relative anatomy of the various structures, as shown by sections of frozen bodies, was for the first time practically placed at the disposal of British students and surgeons. This study, which is now so rapidly being developed, owes its first start in Great Britain to Mr. Bellamy. He also contributed articles to "Quain's Dictionary of Medicine" and "Heath's Dictionary of Practical Surgery," besides many cases of interest to the Transactions of the various medical societies and to our own columns. Mr. Bellamy delighted in his profession; he was a fluent if somewhat discursive lecturer, due perhaps to the example of Professor Partridge, under whom he had studied; a striking, and in many respects original, clinical teacher, beloved by most of his students, to whom he was reciprocally attached, and in whose welfare he always took a keen personal interest; and a brilliant operator. His weakness, perhaps, was the desire to emulate the rapid and decisive style of Sir William Fergusson, and to this he was tempted by his great manipulative skill and readiness of resource. Mr. Bellamy had the strongest sympathies with science, art, and athletics. He was a very fair mathematician, a thoroughly good musician, and his skill in drawing was quite of the first class. Many of his droll sketches and caricatures are treasured by his personal friends, and in rapid anatomical sketching he was probably unrivalled by any contemporary lecturer. He had most excellent artistic taste, and collected many curiosities, especially in old armour. He possessed a striking and handsome presence, was ever kind and genial, and his social qualities and extra-professional knowledge made him always a welcome companion and guest. He was speaking, apparently in the best of health and spirits, to a friend at the Savile Club so late as the afternoon of Friday, the 2nd inst., and on Sunday, the 4th, in spite of every attention from his friends and colleagues, Drs. Green and Bruce, he died of acute pneumonia, at the early age of forty-eight, leaving a wife and several children to mourn his loss. He was interred at Highgate Cemetery on the 8th inst.

HUGH OWEN THOMAS, M.D., M.R.C.S.

A GRIEF so profound and widespread as that which was manifested at Liverpool on the 10th inst., when the remains of Dr. Hugh Owen Thomas were laid to rest, is seldom witnessed. There can be no more eloquent or touching testimony to the worth of a man's character than the tears of the poor among whom he had lived. The toilers at our docks and warehouses are not sensitive beings, and the daily struggle of their lives is too earnest to admit of much display of sentiment. To see thousands of these, then, men as well as women, as anyone might have done in Liverpool on Saturday last, stirred to their very depths by an emotion that found expression in passionate sobs and tears, as they lined the streets or pressed forward to gaze into the open grave, proved that its silent occupant had won his way to their hearts. Dr. Thomas was in every respect a remarkable man. The frail health, often disturbed by acute bodily suffering, with which he entered upon practice some thirty-three years ago, gave

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but little promise of fruitful labour. But his naturally great ability, and the force of a quietly dauntless character enabled him to overcome every obstacle and to win his way to the very front rank in the department of surgery, to which he more especially devoted himself. He metamorphosed the treatment of diseases of the joints, and thousands of sufferers throughout the world are benefiting to-day from the universal adoption by surgeons of "Thomas's splints." But his mind was so active and many-sided that there was no department of his profession on which it did not advantageously exercise itself, and those who were privileged with his friendship—and he was the most approachable and friendly of men—were often astonished at the profundity and originality of his ideas on some of those problems of medicine which his large general practice brought before him. Thus he did more than any other modern medical man to restore, if he did not even originate, a rational treatment of intestinal obstruction; and, curiously, about three months before his death from pleuro-pneumonia on the 5th inst., he was brought into great peril by this very affection, and owed his recovery to the successful application of his own well thought out principles. Epilepsy was also a disease which engaged much of his thoughts, and the success with which he treated many obstinate cases was often a matter of surprise to those who watched them. Probably the true secret of the success of his wonderfully useful and active life lay in the intense interest which he took in every subject which presented itself to him, and in the pleasure which he experienced in viewing it in all sorts of unconventional lights. Thus his profession, instead of wearying, never ceased to delight him, and the greatest distress which he could have experienced would have been forced retirement from it, even for the purpose of a short holiday. Yet his range of interest and reading extended far beyond surgery or medicine. In politics, in history, and in antiquities (especially those of Egypt) he was an enthusiast; while his love of practical mechanics was shown by hours of healthy work passed in his elaborately fitted lathe and machine room, where he constructed many of the ingenious contrivances which he had devised for use in his practice. And his devotion to practice displayed the peculiar loveliness of his most unselfish character, for it was not with a mere sordid desire to accumulate wealth that he laboured as he did. The great majority of the subjects of his unwearying industry were poor people. The rich, of whom many from all parts of the world sought his professional aid, never found their riches a superior passport to his attention. He loved the poor, and without stint, or hope, or expectation of any other reward than the consciousness of having aided them, and apparently without the least idea that he was doing anything unusual, devoted all the resources of his most ingenious and inventive mind to their benefit. One day in every week—the only day, indeed, on which these poorer people could visit him without loss, but the day on which most professional men seek some repose from work—was, during many of its hours, given up exclusively to them. Rough fathers tenderly carrying crippled children and women wheeling home-made perambulators of the strangest type could be seen in crowds at his house every Sunday the whole year through; and none of them went away without attention. But this kind of work did not exhaust his sympathy for them. Strange old crippled men, youths with broken health, and such-like were again and again taken into his lathe room or into some other department of his busy establishment, and either retained there for years and treated with tenderness and affection or provided with places at his solicitation. One final circumstance which helped towards the great results which, in the short life of fifty-five years, he was able to achieve must be noticed. It is the peaceful and loving character of his inner home life. He had no family, but the unwearying and loyal devotion of a wife, who sympathised with him in all his undertakings and shared in his affection for the poor, and the love, almost amounting to veneration, of nephews and nieces and old and attached servants, made this inner home one of the most restful and beautiful places upon earth. It was impossible for anyone to known him intimately without being moved to admiration by the purity and unselfishness of his life, and even the little eccentricities that played over the surface of his character, and which some, who looked no further, thought to constitute it, were of the lovable kind, and served but to bind him more closely to the affection of his friends.

B. ARCEDECKNE DUNCAN, M.D., M.R.C.P.

DR. DUNCAN was born in 1828 in co. Kilkenny. Completing his education at Trinity College, Dublin, he came to London, and established and carried on for many years a large general practice in Gower-street. A steadily increasing practice in the west of London necessitated his removal to Wimpole-street, where in 1881-2 he took the position of a consulting physician on diseases of the heart, a subject which had engaged his attention for some time, and on which he had contributed several papers and essays to the *Medical Annual*. He was also founder of, and for some time physician to, the North-Western Hospital for Diseases of Women and Children. A keen sportsman and crack shot, he was at home by riverside or coverside, and held the challenge cup for two years at the Gun Club. His death occurred on the 4th inst. from septic pneumonia of several weeks' standing.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following candidates passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on the 12th inst.:—

Anatomy and Physiology.—James Prior, Frederick Horseman, Richd. Coates, and Carlton Oldfield, students of Yorkshire College, Leeds; John W. Nayler, Edward Bower, and David W. S. Muir, of Queen's College, Birmingham; John M. Hall and James McConnell, of Queen's College, Belfast; Ernest A. Fraser, of St. Mary's Hospital; Francis J. Sadler, of Oxford University; William Barwise, of Owens' College, Manchester; James F. Rudall, of St. Thomas's Hospital; Percy Armstrong Dykes and Wm. P. Gwynn, of Bristol Medical School; Robert Charles Badham, of Sydney University and London Hospital; John H. Saunders, of Melbourne and Mr. Cooke's School of Anatomy and Physiology; Francis H. Langlands, of Middlesex Hospital; Winslow Anderson, of the University of California.

Anatomy only.—Alfred Herbert Hardcastle, of Yorkshire College, Leeds; John Moses and William S. Newton, of London Hospital; Samuel C. C. Fenwick, of St. Mary's Hospital.

Physiology only.—Tom B. Abbott, of Yorkshire College, Leeds; Fenwick D. M. Williams, of Bristol Medical School; Brian Watts, of Sheffield Medical School; Winthorpe T. Talbot, of Boston University and London Hospital.

Passed on the 13th inst.:—

Anatomy and Physiology.—John B. Winter, of Guy's Hospital; John L. M. Bunch, of University College; James Evans, John Sterry, and John K. K. Benjamin, of St. Bartholomew's Hospital; Percy W. Spaull and Harold Huskinson, of St. Thomas's Hospital; Charles M. Mathew, of St. George's Hospital.

Anatomy only.—Herbert B. Emerson, of Leeds and Mr. Cooke's School of Anatomy and Physiology: John W. Taylor, of Bristol Medical School; George H. Tomlinson, of Queen's College, Birmingham; Reginald Alcock and Herbert C. Renshaw, of Owen's College, Manchester; Francis R. E. Milman and Arthur E. Scott, of Middlesex Hospital; Walter Allingham, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology: James A. Crump, Daniel D. Brown, and Arthur George Ewbank, of St. Bartholomew's Hospital; Frederick A. Stephens, of King's College; Albert E. Couzens and Alfred Hewetson, of St. Mary's Hospital; Henry Shepheard and Guilford Davidson, of St. Thomas's Hospital; E. J. Eedle, of Charing-cross Hospital; Thomas W. Goldney, of Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology; Frank B. Webster, of Owens College, Manchester.

Physiology only.—Percy R. Ash, Arthur Knowles, and William Parkinson, of Yorkshire College, Leeds; Albert Knapman, John Brown and Tom Clegg, of Owens College, Manchester; Thomas P. Stokes, of Sheffield and Mr. Cooke's School of Anatomy and Physiology; Francis B. Cooper, of Sheffield Medical School; Edward G. Walls, of Queen's College, Birmingham; Alfred G. Cooley, of Durham University; Vincent J. Robin, of Adelaide and Mr. Cooke's School of Anatomy and Physiology; John S. Williams, of London Hospital; Charles M. Spain, Herbert S. Taylor, and William E. Kirby, of University College; C. W. Grant-Wilson and John S. Hudson, of St. Thomas's Hospital; Herbert W. Joyce, of King's College and Mr Cooke's School of Anatomy and Physiology; Edward C. Drake, of Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; James Thomas, of St. Bartholomew's Hospital; Frederick H. Dayns, of St. Mary's Hospital; Frederick H R. J. U. Walker, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; Joseph W. Culmer, of Guy's Hospital.

Passed on the 14th inst:

Anatomy and Physiology.—Cecil E. Carpmael, Arthur H. Trevor, and Charles H. Harding, of Guy's Hospital; Herbert J. Finch, of Westminster Hospital; Edward S. Winter, Philip L. G. Skipworth, and Frederick E. A. Webb, of St. Bartholomew's Hospital; Trescillian G. Anderson, of Adelaide and Mr. Cooke's School of Anatomy and Physiology; Francis S. Beachcroft, of Middlesex Hospital; Charles Howard Stewart, of St. Thomas's Hospital; John R. P. Phillips, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Francis R. S. Gaman, of University College Hospital.

Anatomy only.—Lancelot M. Breton and Henry Knight, of St. Thomas's Hospital; Herbert T. Jenkins, of University College;

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William J. Burroughs and Gerard E. Lockyer, of Guy's Hospital; Thomas Smith and Richard Bebb, of London Hospital.
Physiology only.—Samuel R. Wright, of Charing-cross Hospital; Edward S. Chilcott, of St. Mary's Hospital; William S. Mayne, of University College; Frederick E. Feilden, of St. Bartholomew's Hospital; Rupert W. Dillon, of St. Thomas's Hospital.

THE PRESIDENCY OF THE MEDICAL COUNCIL.—We understand that it has been determined to let the appointment of a successor to Mr. Marshall stand over till the statutory meeting of the Council in May.

PHARMACEUTICAL SOCIETY OF IRELAND.—The following have obtained the Licence of the Society:—W. J. Meredith, G. McGuire, E. M. McSwiney, F. J. Miller, T. J. Frazer, R. Lynch, and W. M. Bleakley.

PRESENTATION.—Upon his retirement from the office of senior resident medical officer at the Royal Free Hospital, to take up the post of surgical registrar to St. Thomas's Hospital, Mr. E. C. Stabb was presented by the nurses with a handsome silver cigar case, engraved with his initials, as a token of their esteem and goodwill.

THE "ANIMALS CRUELTY COVER CATCHER."—This humane and ingenious contrivance for catching rabbits &c. will, it is to be hoped, replace the cruel steel trap which has been in general use for some years. The Animals' Institute medal has been awarded to the inventor, Mr. R. Lloyd Price. A specimen may be seen at the Institute, Wilton-place, Belgravia, S.W.

LINCOLN COUNTY HOSPITAL.—The annual meeting of the governors was held on the 9th inst., the Rev. Canon H. W. Hutton occupying the chair. The financial position was satisfactory. The income during the past year had been adequate to meet the expenditure, to discharge the deficit brought forward from the previous year, and to leave a balance in hand of £285. A resolution was adopted expressing regret at the resignation of Mr. T. M. Wilkinson, who for thirteen years had fulfilled assiduously and sucessfully the duties of surgeon.

THE BRITISH HOSPITAL, BUENOS AYRES.—At a special meeting of the board of management, John O'Conor, M.A., M.D. Dub. Univ., surgeon to the West Argentine Company, and late house surgeon to the Royal Portsmouth Hospital, was elected resident medical officer, *vice* Hugh Jamieson, M.D., resigned. There were 130 applicants for the appointment. Dr. O'Conor, after nine months' residence in the Argentine, has passed the three necessary medical examinations in Spanish, in the University of Buenos Ayres, and has been admitted into the "Doctorada" of the Republic.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. R. D. Catchpool of Reading bequeathed £100 each to the Essex and Colchester Hospital and the Essex County Idiot Asylum. Mrs. Emma Holland, late of the Gables, Osborne-road, Windsor, left by her will £100 to the Royal Windsor Infirmary, and £50 to the Royal Hospital for Incurables. The late Mr. George Taylor, of Noel-road, Edgbaston, left legacies of £150 each to the General Hospital and the Queen's Hospital, Birmingham, and £100 each to the Children's Hospital, the Women's Hospital, and the Dental Hospital, Birmingham. The Saddlers' Livery Company has made a grant of 10 guineas to the British Home for Incurables. The Salters' Livery Company has sent a donation of 10 guineas to the Queen Charlotte's Lying-in Hospital, Marylebone-road, London.

UNIVERSITY OF CAMBRIDGE.—A course of instruction in Practical Hygiene at the Chemical Laboratory, to be given by Mr. H. Robinson, M.A., assistant to the Professor of Chemistry, and beginning April 17th, has been announced. It complies with the requirements of the University for candidates seeking the diploma in Public Health. The course will consist of practical instruction in the sanitary examination of water, air, and foods, chemically and microscopically, and in the laws of heat, the principles of pneumatics, hydrostatics and hydraulics, having special regard to the requirements of medical officers of health. It will also include the preparation of different media used in the cultivation of micro-organisms, and their cultivation therein by inoculation from air and water. Short lectures will be given in explanation of the above subjects, and of analytical reports in general relating to water, air, and foods, and the interpretations to be put on them.

METROPOLITAN HOSPITAL SUNDAY FUND.—A donation of £500 has been received from a gentleman who withholds his name from publicity.

SMALL-POX IN GUATEMALA.—Over 20,000 persons are stated to have died from the small-pox epidemic which recently ravaged several cities in the Republic. The disease is now reported to have abated.

HOLMESDALE COTTAGE HOSPITAL.—The seventeenth annual general meeting of the Holmesdale Cottage Hospital was held at the hospital, Sevenoaks, on Dec. 27th, and a very satisfactory report was presented.

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting to be held at 25, Great George-street, on the 21st inst., the following papers will be read:—"Note on a peculiar Development of Cirrus Cloud observed in Southern Switzerland," by Robert H. Scott, M.A., F.R.S. "Some Remarks on Dew," by Col. W. F. Badgley, F.R. Met. Soc. The annual general meeting will be held at the conclusion of the ordinary meeting.

THE SANITARY INSTITUTE.—Donations to the amount of £600 have been made to the institute during the year by the hon. officers and members of the Council, and a considerable portion of this amount has been devoted to rearranging and improving its museum of sanitary appliances and to the preparation and printing of a catalogue. The museum being open free to the public, want of funds has, we are informed, hitherto prevented the Council from undertaking this much needed work.

HOUSING OF THE WORKING CLASSES.—At a meeting of the County Council this week the recommendation of the Committee on the Working-classes Act, 1890, that they should be empowered to enter into a conditional contract on behalf of the Council for the purchase of the freehold of a site at the corner of High-street and Calvert-street, Shoreditch, for a sum not to exceed £3000, was rejected, on the motion of Messrs. Hutton and Marsland. Earl Compton spoke in favour of the Committee's recommendation.

ROYAL INSTITUTION.—Professor Victor Horsley, Fullerian Professor of Physiology, R.I., will on Tuesday next begin a course of nine lectures on "The Structure and Functions of the Nervous System" (part 1, the spinal cord and ganglia). Mr. Hall Caine will on Thursday, Jan. 22nd, give the first of a course of three lectures on "The Little Manx Nation"; and Mr. Martin Conway will on Saturday, Jan. 24th, deliver the first of a course of three lectures on "Pre-Greek Schools of Art." The Friday evening meetings will begin on Jan. 23rd, when Lord Rayleigh will give a discourse on some applications of photography.

THE LIBRARY OF THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The opening of this library was formally declared on Monday, the 5th inst., by Mr. S. H. Swayne, the president for the year. There was an influential attendance of members, and after the president had reviewed the history of medical libraries in Bristol, Mr. Augustin Prichard, Dr. J. G. Swayne, Dr. Shingleton Smith, and Mr. Nelson Dobson spoke on the advantages and possibilities of the library and reading-room that day opened. A good room has been obtained in the club-house of the Literary and Philosophic Club, at 28, Berkeley-square, and all present were emphatic in praise of the accommodation provided. Mr. L. M. Griffiths, the honorary librarian, will be glad to receive communications from any interested in the matter.

THE NATIONAL HEALTH SOCIETY.—Under the auspices of this Society a drawing-room meeting was held on Saturday at the residence of Mrs. Fleming Baxter, Hampstead, Sir Spencer Wells, Bart., presiding, with the object of establishing in Hampstead a class for the hygienic education of women. Dr. A. T. Schofield delivered an interesting address on the importance of a knowledge of the laws of health, and Sir Spencer Wells bore testimony to the valuable work the Society was doing, and attributed the increase of the average duration of life to the instruction now carried on in physiological subjects. The examination for the certificate of the Society will take place on Jan. 20th, at 53, Berners-street, W. This is a special examination for the 500 ladies who have lately attended Dr. Schofield's courses on "Domestic and Personal Hygiene."

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GRESHAM LECTURES.—The lectures to be delivered in Gresham College, on Jan. 20th, and three following days by E. Symes Thompson, M.D., F.R.C.P., will be on the subject of the Preservation of Health.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the Directors of this Fund, held on the 13th instant, T. Russel Pickthorn, Esq., Inspector General, in the chair, the sum of £81 was distributed among the several applicants.

A RURAL NURSING ASSOCIATION, YORKSHIRE.—At a well and influentially attended meeting held on Monday at the Station Hotel, York, Earl Fitzwilliam presiding, it was resolved to establish a Yorkshire county centre of the Rural Nursing Association, to supply trained nurses in the rural districts. A county committee was formed and the officers of the centre were chosen.

HYDROPHOBIA IN CAPE COLONY.—The *Cape Argus*, the leading paper of Cape Colony, reports the following case of death from hydrophobia resulting from the bite of a wild cat, which, being worried by dogs, jumped in at the open window and bit the hand of the lady so firmly that the animal could not be removed until it had been killed. The signs of hydrophobia speedily set in, and the woman died after two days' agony.

ROYAL VICTORIA HOSPITAL, BOURNEMOUTH.—This institution is carrying on a large benevolent work. The annual report, just issued, after alluding to the visit of the Prince of Wales and the opening of the hospital, states that during the past year 2303 cases were treated as in- and out-patients, including 171 minor casualties. The financial statement shows a small deficit of £75 13*s.* 9*d.* due to the treasurer. The sum of £362 10*s.*, received from life governors qualifications, had been by resolution of the committee invested, and of the £215 16*s.* received from the purses on the occasion of the Prince of Wales's visit £158 1*s.* 9*d.* had been added to the endowment fund, and £57 14*s.* 3*d.* carried to the maintenance account.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 13th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	256	46	2	62	4	370	442
North-Western Hospital	275	37	..	10	..	322	443
Western ,,	150	15	..	20	1	186	262
South-Western ,,	185	10	..	2	2	199	340
South-Eastern ,,	224	16	..	48	1	289	462
Northern ,,	307	21	..	11	..	339	490
Gore Farm ,,	89	..	..	..	..	89	300
Totals	1486	145	2	153	8	1794	2729

SMALL-POX.—*Atlas* hospital ship, 1.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JAMES, M.D., F.R.C.S., has been reappointed Medical Officer of the Eastbourne Borough Sanatorium.

BALDWIN, T. A., M.D. Dub., L.R.C.S. Irel., has been appointed temporary Medical Officer for the Parish of Cottingham, Hull.

BARCLAY, J., M.D., C.M. Aberd., has been reappointed Medical Officer to the St. Brandon Lodge of Oddfellows, Banff.

BEALE, PEYTON T. B., F.R.C.S. Eng., has been appointed Surgeon to the Out-patients at the Great Northern Central Hospital.

BELL, T. F. W., M.B., C.M. Aberd., has been appointed Medical Officer for the Nunneys District of the Frome Union.

BENNETT, J. R. A., M.R.C.S., has been appointed Junior Assistant Medical Officer of the Smithdown-road Workhouse, Toxteth.

BETTS, F. B., L.R.C.P., M.R.C.S., late Senior House Surgeon, has been appointed Junior House Physician to the Westminster Hospital.

BRICKWELL, JOHN, M.R.C.S., has been appointed Medical Officer for the Stoke District of the Eton Union.

BROWN, EDWD., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sapperton District of the Cirencester Union, vice Palmer, resigned.

BRUNTON, WALTER REYNER, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Borough of Portsmouth Lunatic Asylum, vice Nathan Raw, resigned.

CANAL, Mr. C. E., has been appointed by the Administrative Council Public Analyst for Parts of Kesteven, Lincolnshire.

CATO, A. M., L.R.C.P., M.R.C.S., has been appointed Senior House Physician to the Westminster Hospital.

CRESSY, GEORGE J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Warsop Urban Sanitary District of the Mansfield Union. (In our announcement last week this appointment should have been "G. J.," as now corrected, instead of "C. J." Cressy.)

DANIEL, T. P., M.R.C.S., has been appointed Medical Officer for the Beaminster District of the Beaminster Union.

DENNING, R. N., M.D. Dub., L.R.C.S. Irel., has been reappointed Medical Officer of Health for the Elland Urban District.

DRAPER, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Assistant Resident Medical Officer of the Smithdown-road Workhouse, Toxteth.

GILPIN, FRANK, M.R.C.S., has been appointed Medical Officer of Health to the Stratford-on-Avon Urban and Rural Authorities. (Not including, as stated in our announcement last week, Evesham and Alcester, the district having been redivided.)

HANDS, ARTHUR, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Cottage Homes of the Wolverhampton Union.

HUNT, J. A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Spondon District of the Shardlow Union.

JENNER, WM., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Baldock Urban District, Herts.

KAUFFMANN, OTTO J., M.D. Lond., M.R.C.P., has been appointed Resident Medical Officer to the Manchester Royal Infirmary.

KNAPP, EDWD. M. M., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Ross Union.

LIMERICK, W. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Waterloo-with-Seaforth and Great Crosby Urban Districts.

PLUMMER, SELBY W., M.B., B.S. Dunelm, has been appointed House Surgeon to the Royal Infirmary, Newcastle-on-Tyne, vice Burdon Cox, resigned.

ROUSE, E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Barnstaple Port Sanitary District of the Barnstaple Union.

SCOTT, R. J. H., F.R.C.S. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Royal United Hospital, Bath.

SKINNER, E. W., M.B., C.M. Edin., has been appointed Medical Officer for the No. 3 District of the Rye Union.

SPENCER, MATHEW H., M.A., M.B., C.M. Camb., has been appointed Resident House Physician to the Seamen's Hospital, Greenwich.

STEPHENSON, P., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Ballyduff Dispensary District.

THOMPSON, C. S., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse of the Bideford Union, vice J. Thompson, resigned.

YOUNG, E. H., M.D. Dur., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for the Okehampton Rural Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRIXTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House Surgeon. Salary £150 per annum, with furnished apartments, attendance, coal, and gas.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238a, Gray's-inn-road, W.C.—House Surgeon.

CHARING-CROSS HOSPITAL, London.—Assistant Surgeon.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant for one year. Terms £50 for the first year, and, if reappointed, £70 for the second year, with board, lodging, and washing.

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, washing, and attendance. (Apply to the Clerk to the Committee, Guildhall, London.)

COUNTY OF DUMFRIES.—Medical Officer for the County. Salary £300 per annum. He will receive the outlays necessarily incurred in the discharge of his duties. (Apply to Mr. Robson, County Clerk, Dumfries.)

COUNTY BOROUGH OF ST. HELENS.—Assistant to the Medical Officer. Salary £200 per annum. (Apply to the Town Clerk, Town Hall, St. Helens.)

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House Surgeon. Salary £40 per annum, with board and lodging, not including alcoholic liquors and aerated waters.

DUNDEE ROYAL LUNATIC ASYLUM, Dundee, N.B.—Resident Clinical Assistant. No salary, but board &c.

DUNDEE ROYAL LUNATIC ASYLUM, Dundee, N.B.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, and washing.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

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INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London.—Visiting Physician.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE INFIRMARY.—Senior House Surgeon. Salary £60 per annum, rising to £70, with board and residence.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.

LANCASHIRE COUNTY ASYLUM, Rainham, near Liverpool.—Pathological Assistant Medical Officer. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, E.—Dental Surgeon.

NEWCASTLE-ON-TYNE DISPENSARY. — Visiting Medical Assistant. Salary £120 per annum.

PARISH OF ST. MATTHEW, Bethnal-green.—Dispenser (non-resident) for the Dispensary at the Guardians' Offices. Salary £130 per annum, rising £10 annually to a maximum of £150. (Apply to the Clerk, Guardians' Offices, Bishop's-road, E.)

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing provided.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House Surgeon. Salary, with board and residence, £70 per annum.

ST. GEORGE'S HOSPITAL.—Lecturer on Midwifery.

ST. LUKE'S HOSPITAL.—Resident Clinical Assistant for six months, with board and residence.

STOCKPORT INFIRMARY.—Qualified Assistant to the House Surgeon for six months, with board and residence.

TURNER'S HOSPITAL, Kirkleatham.—Surgeon. No salary, residence at the Hospital rent free. (Apply to Mr. Rutherford, Kirkleatham, Redcar, Yorkshire.)

Births, Marriages, and Deaths.

BIRTHS.

CHAPMAN.—On Jan. 4th, at Fitzjohn's-avenue, Hampstead, N.W., the wife of Charles W. Chapman, M.D., M.R.C.P.Lond., of a daughter.

DON.—On Jan. 6th, at Canfield-gardens, West Hampstead, the wife of Deputy Surgeon-General W. G. Don, of a son, stillborn.

EMERSON.—On Jan 3rd, at Talgarth-road, London, W., the wife of Surgeon-Major G. A. Emerson, I.M.S., of a son.

FACEY.—On Jan. 11th, at Maldon, the wife of W. E. Facey, M.B., of a daughter.

JESSOP.—On Jan. 7th, at the Red House, Horncastle, the wife of J. W. Jessop, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

MAC DERMOTT.—On Jan. 13th, at Petworth, Sussex, the wife of Ralph Jesse Mac Dermott, B.A., M.B., of a daughter.

MOORE.—On Dec. 3rd, 1890, at Stony Hill, St. Andrew, Jamaica, the wife of York T. G. Moore, L.R.C.P.Ed., M.R.C.S., of a son.

RAKE.—On Jan. 4th, at St. Ives, Fordingbridge, Hants, the wife of Herbert V. Rake, M.R.C.S., of a son.

MARRIAGES.

BENNETT—DOWSE.—On Jan. 14th, at St. Pancras, Frederick Thomas Bennett, M.R.C.S., son of the late Edwin Bennett, M.R.C.S., of Worksop, Notts, to Henrietta Mary Hervey, eldest daughter of Henry Archibald Dowse, of Gordon-square.

BOXALL—WATKINS.—On Jan. 7th, at Christ Church, Albany-street, Frank Boxall, M.R.C.S., of Rudgwick, third son of Frances Boxall, of Horsham, to Mary Gertrude, second surviving daughter of Charles Watkins, of 19, Oakley-square, N.W.

FERNIE—GRAVES.—On Jan. 6th, at St. Andrew's Church, Ashley-place, William Thomas Fernie, M.D., of 51, Seymour-street, Portman-square, to the Hon. Jane Adele, daughter of the third Baron Lord Graves.

MOSSE—BOILEAU.—On Dec. 10th, at St. John's Church, Meerut, Bengal, Surgeon Charles George Drummond Mosse, F.R.C.S.I., M.S., second son of Deputy Surgeon-General Charles Benjamin Mosse, C.B., M.S. (retired), Chief Medical Officer, Colonial Service, Jamaica, to Bertha Lillian, eldest daughter of Brigade-Surgeon John Peter Boileau, B.A., M.S.

NEATBY—FISHER.—On Jan. 7th, at Greenwich, Andrew M. Neatby, L.R.C.P., of Chestnut Lodge, Chingford, to Ada, daughter of W. B. Fisher, of Erfurt Lodge, Greenwich. No cards.

PEARMAN—HOLLISTER-SHORT.—On Jan. 3rd, at All Saints' Church, Fulham, S.W., Horace V. Pearman, M.D., C.M., of Halifax, Nova Scotia, to Elizabeth Kate, daughter of the late William Hollister-Short, of Painswick, Gloucestershire.

ROSS—BROLOCHAN.—On Jan. 8th, at Rosehall Church, Edinburgh, by the Rev. Wm. Morison, assisted by the Rev. T. McEwan, of Hope Park U.P. Church, R. Russell Ross, M.B., C.M., Rio Tinto, Spain, third son of Lt.-Colonel A. A. Ross, formerly 17th Leicestershire Regiment, to Agnes Helen, youngest daughter of Andrew Brolochan, Esq., 5, Spence-street, Edinburgh.

DEATHS.

CRAWFORD.—On Jan. 4th, at Ealing, Cooper Hayes Crawford, M.D. St. And., M.R.C.S., aged 63.

CROSSLEY.—On Jan. 9th, at Scaitcliffe House, Leicester, Charles Richard Crossley, J.P. for town and county of Leicester, M.R.C.S., L.S.A., aged 66.

GULLIVER.—On Jan. 11th, at Welbeck-street, W., George Gulliver, M.A., M.B. Oxon., F.R.C.P., Assistant Physician to St. Thomas's Hospital and Physician to the London Fever Hospital, aged 39.

PENFOLD.—On Jan. 7th, at Rainham, Kent, Henry Penfold, surgeon, in his 60th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, January 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. Wm. Lang: Lacrymal Diseases.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. G. Bailey: Anæsthetics.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. Mackenzie: Anæmia, its Pathology, Symptoms, and Treatment. (Second Lettsomian Lecture.)

Tuesday, January 20.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Hysteria, Delirium, Mania.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, Jermyn-st., S.W.). 7.45 P.M. Inspector-General Robert Lawson: The Operation of the Contagious Diseases Acts, from their Introduction in 1864 to their ultimate Repeal in 1886.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Delépine: Melanotic Sarcomas of the Liver.—Mr. T. F. Chavasse: Diverticulum of the Œsophagus.—Dr. S. Copeman: Hæmato-porphyrin in Urine.—Dr. W. Hunter: Subacute Gastritis.—Dr. S. West: Multiple Tubercular Tumours in Brain and Viscera.—Mr. Stephen Paget: Imperforate Rectum.—Dr. Job Collins: Hypertrophied Kidney.—Dr. Rolleston: Mediastinal Tumour. Card Specimens: Mr. L. A. Dunn: Caries of the Scapula.—Dr. Delépine: Charcot's Crystals and Leprosy.

Wednesday, January 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: Demonstration of Cardiac Cases. Royal London Ophthalmic Hospital, Moorfields; 8 P.M., Mr. J. B. Lawford: Optic Neuritis.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Sir W. Moore: Is Colonisation in Central Africa by Europeans possible?

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Annual Meeting. President's Address. Election of Council and Officers.

Thursday, January 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Beevor: The Anatomy of the Brain.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. Voelcker: Demonstration of Pathological Specimens.—London Throat Hospital, Great Portland-street: 8 P.M., Mr. Geo. Stoker: Neuroses of the Larynx.

ROYAL INSTITUTION.—3 P.M. Mr. Hall Caine: The Little Manx Nation.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Dr. R. T. Smith: Two cases of Tubercular Salpingitis. Introductory Address by the President (Dr. Chapman Grigg).

NEUROLOGICAL SOCIETY OF LONDON (National Hospital, Queen-sq.).—8.30 P.M. Annual Meeting. Election of Officers. Address by the President-elect (Dr. Bristowe) on The Relation of Mind to Brain.

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Friday, January 23.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. M. Bruce: Demonstration of Pulmonary Cases.
CLINICAL SOCIETY OF LONDON.—8 P.M. Living Specimens:—Mr. S. Paget: A case of Acromegaly.—Dr. B. Squire: A case of Lupus which has recovered under treatment. 8.30 P.M. President's Address. Papers:—Dr. Sidney Phillips: Two cases of Typhoid Fever fatal at a late period of the disease without Ulceration of the Intestine.—Mr. C. Mansell Moullin: Three cases of Septicæmia due to Sewer Gas.—Dr. Hale White and Mr. W. A. Lane: A case of Stricture of the Pylorus following upon Hydrochloric Acid Poisoning in which a modified Loreta's operation was performed.
ROYAL INSTITUTION.—9 P.M. Lord Rayleigh: Some Applications of Photography.

Saturday, January 24.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Diseases called Lichen.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. Mr. W. Martin Conway: Pre-Greek Schools of Art.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 15th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 9	29·10	S.	30	..	48	34	29	..	Overcast
10	30·54	S.	22	..	..	34	21	..	Foggy
11	30·67	S.	28	..	..	31	21	..	Foggy
12	30·67	S.W.	28	..	..	44	24	..	Foggy
13	30·64	N.E.	43	42	..	46	28	..	Foggy
14	30·58	N.E.	30	29	58	43	37	..	Cloudy
15	30·51	N.E.	33	..	53	38	32	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

MEDICAL LITERATURE.

IT is interesting to compare the progress of medical science measured by the literature published on the subject last year with that of the previous year. In 1889 about 133 new medical and surgical works emanated from the press, and forty-nine new editions of old or standard works. In 1890 the number ran up to 142 new works, and there were fifty new editions. On the other hand, theological, fictional, and historical literature shows a marked decrease in the number of new volumes published.

Inquirer.—We are not aware of any scientific observations to substantiate the popular idea.

PRACTICE IN THE AUSTRALIAN COLONIES.

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly inform me as to the openings for practice in the Australian colonies? Which is the best colony to go to? And whether a practice could be acquired by purchase, as at home? Also whether the climate would be suitable for a man suffering from chronic laryngeal catarrh and winter cough, without wasting or other symptoms?

I am, Sirs, yours truly,

Jan. 9th, 1891. F. O. G.

PEROXIDE OF HYDROGEN IN DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—It has been stated in a newspaper that a 10 per cent. solution of peroxide of hydrogen injected into animals renders them proo against diphtheria. Whether this be so or not, I am glad attention has been called to the subject. When I was in the United States four years ago an American doctor (whose name I unfortunately cannot remember) told me of the marvellous effect of peroxide of hydrogen used as a throat spray in diphtheria. Since then in two epidemics I have been able to test its value with very satisfactory results, never losing a case. The spray should be used very frequently, and when symptoms of dyspnœa come on the application of the spray will bring away the false membrane in large quantities. In one case the nurse told me the patient became so asphyxiated she thought he would die at once. There was no time to send for me; so she used the spray, which brought away large flakes of false membrane, and the patient was relieved and ultimately recovered. Its action seems to be to seize on the false membrane, quickly detaching its superficial layers. It, of course, has no effect on the healthy membrane. Other remedies should be used at the same time, but the spray cannot be used too often. Half an hour should elapse before painting the throat with any other application.

I am, Sirs, yours obediently,

Tunbridge Wells, Jan. 3rd, 1891. W. STEPHENSON RICHMOND.

A Subscriber for Twenty Years.—Trephining in epilepsy was suggested by a speaker in a discussion which ensued on the reading of a paper by Dr. C. L. Dana at the American Neurological Society a short time ago.

Case.—The offer is not a generous one. But a qualified man managing a branch practice for one unqualified is in such a false position that we see no remedy.

A. B. C. should consult his usual medical attendant. We do not prescribe.

M. is referred to a paragraph on page 68 in THE LANCET of Jan. 3rd last.

INSOMNIA.

To the Editors of THE LANCET.

SIRS,—I am a great sufferer from insomnia. I have tried every conceivable remedy. By medical advice and under careful supervision I have used opium by mouth and by smoking, morphia by hypodermic injection, chloral, bromide of potassium, and coca in every form, without one particle of benefit. If I am not unreasonable, I hope some of the readers of THE LANCET will suggest a remedy for my wearisome complaint. I am sixty-nine years of age, and I enjoy fair health. I eat moderately, particularly of meat. My daily drink consists of two ounces of old whisky, freely diluted. All my functions are regular, and I do not suffer from any feeling of indigestion, flatulence, or palpitation. I get gout once a year, but not severely.

I am, Sirs, yours truly,

J. THOMPSON,

Cheltenham, Jan. 7th, 1891. Surgeon-General, retired.

*** Hyoscine, paraldehyde, or sulphonal might be tried.—ED. L.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—I am surprised on reading THE LANCET of last week to find two qualified medical men ignoring what hundreds of able men have been—that is, unqualified assistants—whilst walking the hospitals. I for one have to thank myself for becoming an unqualified assistant whilst attached to my hospital. I learnt whilst in that capacity many useful things which I could never have attained at the hospital. There are bad men in every rank, both qualified and unqualified, and you will never be able to get rid of them. A friend of mine will publish shortly a pamphlet on the "Usefulness of Unqualified Students to Medical Men." He is F.R.C.S.Edin. and surgeon to a cottage hospital. This pamphlet will set at rest a vexed question.

I am, Sirs, your obedient servant,

Jan. 13th, 1891. JUSTUS (M.B.Edin.).

St. Kitts.—We do not think any risk is likely to arise from contact with paper handled by a person suffering from the ordinary anæsthetic leprosy.

C. A. L.—The custom varies in different places. It is well to ascertain the local etiquette and follow it.

Alumnus.—1. £5.—2. The subject is optional.—3. The question should be referred to the Registrar.

G. S. T.—The matter is under consideration, but is scarcely one of urgency.

N. Y.—Facts are wanted in proof of the hypothesis.

ERRATUM.—In the remarks by Mr. Page appended to the report of the case of tumour of the palate at the Newcastle Royal Infirmary published last week, p. 85, the word "historically" should read *histologically*.

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DENTAL HOSPITAL OF LONDON.

THE advertisement in our issue of Jan. 3rd relating to the Dental Hospital of London should read that five *Assistant* Dental Surgeons are required, and not five "Dental Surgeons," as printed. For corrected advertisement see this week's issue.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bryant, London; Mr. Hutchinson, London; Dr. Horrocks, London; Mr. Watson Cheyne, London; Dr. MacAlister, Cambridge; Messrs. Grace, Bristol; Dr. W. S. Palm, Largo; Mr. Foulerton, Chatham; Messrs. Bailey and Son, London; Mr. E. W. White, Birmingham; Messrs. G. Street and Co., London; Mr. J. P. Gray, Nottingham; Messrs. Burroughs and Wellcome, London; Mr. Piggott, Clare; Messrs. Oppenheimer and Co., London; Mr. J. Chatham, Edinburgh; Messrs. Battle and Co., Paris; Mr. Sleman, London; Dr. Collie, London; Mr. D'Arcy Power, London; Mr. J. H. Potter, Collumpton; Mr. Brown, New York; Mr. W. Jones, Liverpool; Dr. Mackinnon, Tripoli; Mr. E. Du Cane, Hull; Dr. Aveling, London; Mr. Mason, Bow; Messrs. Black and Co., London; Dr. McLauchlan, Edgbaston; Messrs. Longmans and Co., London; Mr. Shawe, Bath; Mr. G. S. Bigg; Mr. Clement Lucas, London; M. Berthier, Paris; Mr. Mosse, London; Dr. W. Carter, Liverpool; Mr. Walker, Surrey; Mrs. Bovill, London; Dr. L. Atthill, Dublin; Rev. Mr. Tooth, Croydon; Mr. Neenes, Hammersmith; Dr. Waldo, Paris; Dr. Greenwell, Finchley-road; Mr. Sisson, Newcastle-on-Tyne; Mr. Neatby, Hampstead; Dr. Rennie, Harrogate; Mr. Cottingham, London; Mr. Dripple, Suffolk; Mr. Byerley, Portsea; Mr. Hawson, Swindon; Mr. Lewis, Rainhill; Mr. Bayes, Wellingborough; Mr. Coghill, Birmingham; Messrs. Richardson and Co., Leicester; Mr. Tippetts, Birmingham; Messrs. W. H. Smith and Son, London; Dr. Barlow; Dr. Mackay, Spain; Mrssrs. Richardson Bros., Liverpool; Mr. Halford, sen., London; Messrs. Horner and Sons, London; Mr. Gravatt; Mr. Greville, Buxham; Messrs. Brown and Son, Douglas; Mr. Powell, Bournemouth; Messrs. Blondeau et Cie., London; Mr. Moreland, London; Mr. Ford; Messrs. Beal and Son, Brighton; Mr. Wright, Thirsk; Mr. W. S. Richmond, Tunbridge Wells; Mr. Holland, London; Dr. Cartwright Reed, Herschel, Cape Colony; Mr. Weatherby, Bath; Mr. Byerley, Portsea; Messrs. W. and C. Davies, London; Mr. Bromgoole, St. Helens; Mr. W. Turner, West Brighton; Mr. Tomlinson, Glasgow; Mr. Wright, Penzance; Mr. E. East, London; Dr. F. P. Atkinson, Surbiton; Dr. T. T. Reynolds, Liverpool; Dr. Garden, Aberdeen; Mr. McAlister, London; Dr. S. Mackenzie, London; Dr. O'Hanlon, Durham; Mr. F. R. Humphreys, London; Mr. J. E. Lane, London; M. Nichol, London; Mr. Thies, London; Dr. Tomkins, Leicester; Mr. Shaw; Dr. Handford, Nottingham; Mr. Krohne, London; Mr. Griffiths, Clifton; Mr. Keyworth, Southport; Mr. Phillip, Newcastle-on-Tyne; Messrs. Hopkinson and Co., Notts; Mr. Hatton, Hanley; Dr. Evans, London; Messrs. Barker and Son, London; Mr. Williams, Machynlleth; Messrs. Griffin and Co., London; Herr Kornfeld, Berlin; Dr. Browne, London; Rev. J. Spittal, Ryde; Dr. Whittle, Belfast; Mr. Roberts, London; Dr. Saul, Lancaster; Mr. Roland, Barcelona; Mr. Hornibrook; Mr. Boulton, Plumstead; Mr. Lewis, London; Alumnus; A Subscriber for Twenty Years; F. O. G.; Devon, London; Secretary, Kent and Canterbury Hospital; A. E. B.; Dowker, London; Secretary, Devon and Exeter Hospital; Delta, London; Dr. G., Kilburn; Secretary, Norfolk and Norwich Hospital; J. H., Scarborough; Imperial Granum Co., New York; Royal Medical Benevolent College, London; Coombs Eureka Co., London; S. S., London; Gynæcologist; Maltine Manufacturing Co., London; B.; M. X., London; Matron, Canterbury; Sleigh, London; W., London; C. A. L.; A. B. C.; G. S. T.; X. Y.; Case; M.; A Reader.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Mitra, Kashmir; Mr. Spurr, Batley; Dr. Power, Cork; Mr. Newsholme, Sheffield; Mr. Welch, Stirling; Mr. Kemp, Castleford; Mr. Owen, Fishguard; Mr. Hankinson, Bournemouth; Rev. Mr. Carr, Snedland; Mr. Neatby, Greenwich; Mr. Orchard, Dublin; Mr. Windle, Halifax; Mr. Tully, Hastings; Dr. Hoffman, Swansea; Mr. Tyte, Minchinhampton; Dr. McCulloch, Guernsey; Mr. Detmold, Bournemouth; Mr. Hugo, Reading; Mr. Mitchell, Taunton; Mr. McEwen, Mossbank, Pooleme; Mr. Chadderton, Haslingden; Messrs. Keene and Ashwell, London; Mr. McLelland, Dalbeattie; Messrs. Aitcheson and Co., Manchester; Mr. Williamson, Lincoln; Messrs. Tayler and Co., London; Dr. Calder, Queensland, N.S.W.; Dr. O'Connor, Buenos Ayres; Mr. Bradburn, Holloway; Mr. Maberley, Ivanhoe; Dr. Evans, Llanerchymedd; Mr. Evans, Radnor; Mr. Jones, London; Mr. Hill, Edinburgh; Rev. Mr. Smith, Ely; Mr. Lucas, Cambridge; Mr. Gabe, Glamorganshire; Dr. Bigg, London; Mr. Joll, Liverpool; Dr. Martin, Walkden; Mr. Lockwood, Allerton; Dr. Mercier, Catford; Mr. Wise, Trowbridge; Dr. Holmes, Southam; Mr. Hinde, Banbury; Mr. Hay, Hull; Mr. Jackson, Leicester; Mr. Saunders, Eton; Mr. Martindale, London; Mr. Tayloe, St. Leonards-on Sea; Messrs. Taplin and Tanner, Winchester; Mrs. Reynolds, Kensington; Mr. Adams, West Malling; Dr. Monckton, Marden; Mr. George, Preston; Mr. Clegg, Windermere; Mr. Loxton, Bristol; Mr. Warner, Sheffield; Mr. Walker, Camberley; Mr. Wright, Lancashire; Mr. Blair, Leeds; Mr. Niven, Oldham; Dr. Windle, Halifax; Mr. Meacham, Manchester; Dr. Kite, Sheffield; Mr. Halford, London; Mr. Miller, Dartmouth; Dr. Owen, Micheldean; Mr. Heywood, Manchester; Messrs. Mottershead and Co., Manchester; Mr. Warburton, Treherbert; R. G. B., London; Malins, London; A. M. D., London; J. F. A., Cheshire; Sanitary Co., London; J. B., London; Mason, London; Hackney Furnishing Co., London; Practitioner, London; Matron, Eastbourne; Bryant Co., Toronto; Beeches, Yorks; Elder, London; A. W., London; T., London; Immediate, London; Medicus, Manchester; Auxilium, London; Moschus, London; Vigo, London; Viola, London; Omega, London; Surgeon, Northwich; Assistant, London; J. C., St. George's-road; Medicus, London; E. C., London; Alpha, London; D. W. Z., Liverpool; Physician, London; Medicus, Sheffield; Alpha, Uptonpark; Gamma, London; T. R., London; Forceps, London; M.B., Southport; Aurelius, London, Fidelis, Essex.

NEWSPAPERS.—*Western Mercury, Newcastle Daily Chronicle, Liverpool Daily Post, South Eastern Gazette, Scotsman, Sydney Daily Telegraph, Reading Mercury, Mining Journal, Leeds Mercury, Weekly Free Press and Aberdeen Herald, The Tocsin, Surrey Advertiser, City Press, Personal Rights Journal, Bristol Mercury, Hertfordshire Mercury, Windsor and Eton Gazette, Sunday Times, Sheffield Daily Telegraph, Metropolitan, Builder, West Middlesex Standard, Law Journal, Spectator, Chemist and Druggist, Colchester Mercury, Banffshire Journal, Architect, Pharmaceutical Journal, Windsor and Eton Express, Cape Argus, Manchester Examiner, Melbourne Argus, Cape Times, The British Weekly, Liverpool Courier, Oldham Weekly Advertiser, Bury Free Press, Newcastle Daily Journal, Le Temps (Paris), Devon Daily Gazette, Durham Chronicle, La Presse Médicale (Bruxelles), &c.*, have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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London Post-graduate Course:

ON THE

NATURE OF LUPUS,

WITH ESPECIAL REFERENCE TO ITS RELATION TO TUBERCULOSIS.

Delivered at the Examination Hall, Jan. 20th,

BY JONATHAN HUTCHINSON, F.R.S., LL.D.

GENTLEMEN,—In our last lecture I did my best to introduce you to a knowledge not so much of lupus as of a lupus family. I denied that there was any one disease which could be detached from all others to which that name was appropriate. Even under the name "lupus vulgaris," and putting aside all the affections known as erythematosus, I tried to show that we have a group of diseases which offer very considerable differences amongst themselves. We considered the cases in which through a long series of years, perhaps a whole life, the disease restricts itself to a single patch, and contrasted them with others in which it spreads in multiple manifestations over face, limbs, and to some extent over the trunk also. The remarkable differences in character and course which are presented when the hands and feet are its seat were pointed out. By the production of numerous portraits I endeavoured to prove that in some cases lupus of the vulgaris form is attended by such an amount of œdematous swelling as to earn the epithet "hypertrophicus," whilst in others it creeps slowly over a large extent of surface, causing no swelling whatever. We discussed also the different conditions under which the disease begins, its preference for special parts, and the probable causes of such preference, and passing from these we made a few general statements as to the connexion or otherwise of the malady with previous disorder of the patient's health. Lastly, certain other affections—lichen scrofulosorum, scrofulous ulcerations, and tuberculous ulcerations—were mentioned as being examples of disease of the skin quite apart from lupus, but in close connexion with the tendency to tubercle. One definite object was kept in view in all that was said. It was to answer the question as to whether lupus could fairly be considered as a term synonymous with tuberculosis of the skin. This question I was inclined, for the present at any rate, to answer in the negative and to allege that all the various lupous affections are examples of a chronic infective inflammation, depending upon the action of irritants, cold, and the like, upon the tissues of individuals of somewhat specialised tendencies as regards their cell nutrition. You will see that the question is, to put it in other words, Is lupus due, directly or solely, to bacillary infection, or is it an example of chronic inflammation occurring in those predisposed to receive the implantation of bacilli, and, it may be, itself much favouring their growth? If I seem to trouble you with much detail, and possibly some iteration on this point, my excuse is ready. The subject is one the import of which extends far beyond its apparent bounds. We are on a battlefield of rival doctrines, and of doctrines too which embrace a very wide pathological domain. We are, indeed, seeking to determine the relationship between scrofulosis and tuberculosis. The latter name we now all of us restrict to conditions characterised by the presence of the tubercle bacillus, and we are investigating the facts as to whether there is or is not a special condition of nutrition, or of general health, which in many instances precedes the introduction of these parasites, and which may, in many others, be itself the efficient cause of many others. If there be such a state, then I think we may conveniently continue to recognise it under the old name of scrofula. It must be remembered that we are as yet only on the threshold of inquiry as to the relations of these minute vegetable forms with the animal organism. Perhaps, after all, when we call them indiscriminately by the name of parasites, we are dealing rather hardly with them. It may be that in some sense, or some form, they are almost constantly present, and need only suitable concomitant conditions to evoke their ascendant activity. Botanists have, I believe, in the case of lichens, devised the term consortism instead of parasitism to denote the inextricable and invariable union of an alga with a fungus which occurs in that class of plants. Let me remind you of the strangely wonderful facts as the possible duration of periods of latency even of the best specialised forms of particulate contagia. In syphilis two months, or nearly, may elapse before the local lesion is produced; in hydrophobia there may be two years or more between the date of the bite and the outbreak of the disease; and in leprosy the patient may have left the place where he acquired the taint and may have lived at home in England for ten years before the first sign of contamination appears. Or, to turn to a vegetable growth of larger size and higher organisation, there are those who believe, in the case of ringworm and alopecia areata, that the fungus which caused the one may, after an apparently perfect cure extending over twenty years, produce the other also. In none of these instances of long latency of a specific parasitic organism is there, I freely admit, much reason to suppose that anything in the state of the general health induces or precipitates the final outbreak, but it may easily be that with some other organisms such changes may be waited for. In this way it would be very easy to construct a plausible theory of the relationship of tubercle to scrofula, and to hold that the one, a constitutional condition wholly independent of the parasite, produces the states which favour the growth of the latter from germs previously present, but wholly latent. That the tubercle bacillus can remain latent for very long, probably for wholly indefinite periods, is almost certain, and it is further quite impossible for anyone to deny that it may perhaps be conveyed from parent to child at the time of conception or during the period of intra-uterine life. Everything favours the belief that the particulate poisons of small-pox and syphilis may be so conveyed.

To return to lupus: I need scarcely again remind you that one of the boons which we hope that we have received at the hands of our Berlin *confrère* is that his discovery has given us a means of ascertaining, respecting any given case of lupus, whether or not the bacillus has been developed in it.

We will now, if you please, proceed with the clinical description of different forms of lupus, and in so doing shall keep constantly in view the question as to how far all varieties of it may be held to prove that those in whom they occur are in a state of health predisposed to the development of the tubercle bacillus. In order that I may make these lectures as useful to you as possible in a practical way and apart from all doctrinal controversy, it will, I think, be convenient that I should take a portrait as illustrating a type-form of each. We will begin with the type which stands at the greatest distance from lupus vulgaris, the most purely erythematous variety of lupus erythematosus. The portrait published by the New Sydenham Society in its "Atlas of Skin Diseases" is the best that I can produce. The subject of the case was John B., a delicate lad of fair complexion, aged sixteen, in whose family there had been no proved occurrence of tuberculosis. His affection had been present nearly a year. As you see, it consisted of dusky red areas, involving the whole of his nose, and in bat's wing or butterfly form the whole of his cheeks also. There was a conspicuous disc in his upper lip and other erythematous patches on his ears and chin. Those on the nose and cheeks were continuous, but those on the ears, lips, and chin were not so. The arrangement was one of precise symmetry. Nowhere was there any crust whatever, and with the single exception of the very characteristic disc on the upper lip was there any appreciable thickening of the affected parts. The affected surfaces were simply red, dry, and slightly rough and desquamating. On minute inspection of the margins of the patches small confluent papules could be distinguished, and in a few places an ill-marked scar. So little were the conditions suggestive of ordinary lupus, or even of some forms of the erythematous type, that several who saw the patient asked, Why not call the disease dry eczema, why lupus at all? In reply to this, its persistence, its arrangement, its spreading qualities, and the production of discs sufficiently characterise it.

When lupus erythematosus spreads to other parts than the face and ears it usually attacks next the hands. I show a portrait of the condition produced on the hands from another patient, for the lad whose face is portrayed did not suffer from them. In this second case the subject was again a very delicate boy, and the disease had as usual begun in the face. I believe that he died of chest mischief not very

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long after the sketch was taken. You will see that the sketch shows dusky erythema of all the fingers and of parts of the hands. It is partly in margined patches and partly diffuse. The disease had been present seven years, and the boy had previously suffered terribly from chilblains. As a rule, lupus erythematosus affects only the exposed parts, and in this conforms to the rule of lupus vulgaris. Not infrequently, however, its patches occur in the scalp, and every now and then we see a crop on the upper part of the chest. In yet more infrequent cases the feet are affected, and last of all it may become diffuse, and travel over the whole body. Sometimes its patches are very large and erythematous only; in others they consist of a number of confluent discs. Unlike what occurs in common lupus, symmetrical arrangement is the rule. There are cases, however, which are not symmetrical, and a few in which the original patch remains for a long time single. It is liable to attacks of febrile exacerbation, often amounting to erysipelas, and after these not infrequently some of its patches disappear. It is made worse by exposure either to cold or heat. Its origin is very frequently in a sort of chilblain on the nose, and I think still more frequently in a sunblain. When once a patch has been produced it is clearly infective, and others are sure to follow. Lupus erythematosus is a far more serious disease than lupus vulgaris. Its subjects are not, as a rule, destined for long life. It reveals delicacy, and is, very often indeed, in association with a strong history of phthisical antecedents in near relatives. Its subjects may die of an attack of erysipelas or of pneumonia, or may pass into extreme debility, with or without tuberculous disease of the lungs. I regard it as far more frequently associated with definite tuberculous tendencies than is lupus vulgaris, and I speak from carefully collated statistics of both. Permit me, however, here to interpolate an addition to what I said in my last lecture on this point, as I fear I may have conveyed an erroneous impression. When I spoke of its being comparatively rare for the subjects of lupus vulgaris to pass into phthisis, I was thinking of my own experience and of that of some of my London friends. I ought to have told you that a different picture has been drawn by several continental authorities. Dr. Block, Dr. Leloir, and others have collected statistics which, on this point, differ very widely from mine, and show that in their experience lupus and tuberculosis of internal viscera are often associated.[1] It is difficult to explain the discrepancy completely, but it may perhaps be due in part to our facts having been collected amongst patients whose social conditions were not similar.

Two or three main features distinguish lupus erythematosus from vulgaris; its symmetry and the absence, which is all but universal, of any tendency to open ulceration, are among the chief. It restricts its action to a large extent to the more superficial layers of the skin, and the scars which it leaves behind it are far less conspicuous than those of its sister malady. Although its tendency to disorganise and leave scars is undoubted, yet in not a few instances it is difficult to demonstrate them. The more simply erythematous the eruption, in any individual case, the less will be the resultant scars; it is chiefly the so-called "discs" which leave them. Lupus erythematosus begins, as a rule, somewhat later in life than vulgaris. Although it has been recognised almost in infancy, it is rare until after puberty, and it may be suspected that the influence of the sexual system upon the forces of the circulation takes some share in its production. It appears to be very closely connected with the liability to chilblains; and in some of the cases, especially in those in which the extremities are affected, a liability to disturbances of the circulation of the same nature as that which occurs in Raynaud's disease is observed. So far as I am aware, no demonstration of tubercular bacilli has ever yet been made in this disease. Sections of the skin show, as a matter of course, great dilatation of bloodvessels, and they also, in many instances, especially where thickened discs have been developed, show a cell infiltration into the spaces of the corium very similar to that seen in vulgaris. It must be remembered in relation to these facts that far fewer opportunities occur for microscopic examination in this malady than in the other.

I do not purpose to trouble you with any detailed grouping of the cases which come under the name of "lupus erythematosus." It must be sufficient to say that no two cases are exactly alike, and that the limits of variability are wide. I will illustrate this pictorially by bringing before you the original portraits of Cazenave, next those of Hebra, and then a number of others by more recent authorities. You will see that the chief differences are as to whether the erythema is attended by thickening in the form of little discs or not, and as to the arrangement of the patches. There is, however, one definite peculiarity in many cases, which is sufficient, I think, to constitute a sort of sub-species. I refer to the implication or otherwise of the sebaceous glands. Let me ask you to contrast for a moment the portrait which I have already shown you with that published by Hebra. The subjects of both are young men, and in both the patches extend in their usual bat's-wing form over nose and cheeks. The local conditions are, however, very different. In mine there is simply a dusky redness, with roughness and slight desquamation. In Hebra's the patches are pitted all over with minute depressions, the orifices of dilated sebaceous glands, and they present, in addition, an innumerable number of black comedones. It is perfectly clear that in Hebra's case the sebaceous glands are very conspicuously, if not primarily, affected; whilst in mine they have wholly escaped. Another portrait of Hebra's stands about half-way between the two. To this variety of lupus we may suitably give the name of "sebaceus," one which has been used by former writers, and which I well remember in my student's days was constantly employed by the late Mr. James Startin. Its conditions are depicted in a portrait in Willis's Atlas, which bears the title "hypertrophia folliculorum," but which shows the face of an adult man whose nose and cheek are roughened over by enlarged and plugged sebaceous glands, arranged in the bat's-wing form. The same statements are true concerning a portrait of Cazenave's under the name of "acne sebacea," in which there is an abruptly margined patch involving the whole of the middle of the nose from root to lip, and which is covered with a dry sebaceous crust. There is another isolated patch near the middle of the cheek. Some of the cases which have been named "seborrhœa sicca," and especially those in which the disease occurs on the face only, and the patches are abruptly margined, belong to this malady. The test questions in diagnosis between seborrhœa and lupus are, Can the patches be easily cured? and Do they leave scars? Although lupus sebaceus is clearly a form of erythematosus rather than of vulgaris, yet in some of its characters it approaches the latter. It is very slow in its advance, has comparatively little of erythematous congestion, often remains for a long time as a single patch, often develops, by the local production of satellites, in an unsymmetrical manner, and shows little or no tendency to become diffuse. In addition to these features we must note that in many cases it develops closely adherent crusts which cannot be removed without bleeding, and beneath which little papillary buds are found. The comparison of skin roughened by lupus erythematosus to a piece of orange-peel is sometimes very apt, and we may note that when in connexion with lupus erythematosus of the most characteristic forms, when symmetrical patches are developed in the concha of the ears, these almost always take the sebaceous character and assume the orange-peel condition.

The next portrait which I have to introduce to you is that of a lad named Philip H——. He was twelve years old when the portrait was taken, and was delicate and liable to a bad cough. He had suffered very much from chilblains, and had the scar of an old scrofulous ulcer under the right side of the jaw. His grandfather had been the subject of psoriasis. I must ask you to look at the portrait of one of his arms, as well as that of his face, for the eruption occurred symmetrically on the upper extremities and face, and presented almost similar characters in both. You will see that his cheek shows numerous little acne-like pustules which occur in groups, and are surrounded by tufts of dilated capillaries. You will observe that the conditions are most severe in the middle of the flush patch, where, as I have already demonstrated in so many cases, lupus is so apt to begin. In this part you will see that there is a certain amount of solid infiltration beneath and around the spots, and that a certain amount of scarring has been left. If we turn to the ear we shall find that almost the whole of it—helix, antihelix, and concha—is congested and covered by numerous very small semi-transparent papules, accompanied with some desquamation. I will not trouble you with a detailed description of the appearances shown on his hand and forearm, but just

[1] These statistics were referred to in my Harveian Lectures.

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ask you to observe that the little papules leave cicatricial pits, and that as regards the parts affected—for instance, the tips of the elbows,—the lesions are located much as in psoriasis. We must remember that his grandfather had had psoriasis. As regards the history of the case, the eruption was said to have begun on his face, hands, and arms during the first years of infancy, when the doctors called it "red gum." In some slight degree it persisted through childhood, being worse, as his mother said, in spring and fall. At the age of ten he was first brought to me, and he remained under my observation occasionally until he was sixteen, when I lost sight of him. I believe I have not told you that there were spots on his lower extremities similar to those on his arms, but less numerous, and a few even on his buttocks. I must add, also, as proving that the disease was not wholly one of sebaceous glands, that red spots would occasionally occur in the palms of his hands. I claim this case, so far as his cheeks and ears are concerned, as an example of lupus, and should give to it on account of its having been preceded by inflammation of sebaceous glands the name of "acne-lupus." You will have noted that it was definitely connected with constitutional delicacy in the direction of scrofula, and also that there was a remarkable tendency to chilblains; nor am I willing to forget that the boy had a possible inheritance of psoriasis. My hypothesis is that the disease was a composite one, and resulted from a partnership of inheritance in the three directions named.

In the group of cases illustrated by the above narrative and portraits, I place the cases of Miss H—— already narrated, and, as a third, that of a Miss S——, whose case I will not trouble you with, but which presented exactly similar features. I have seen also several others, for the most part, however, somewhat less well characterised. Under the name of "acne-lupus" we should have to group certain other rare cases, in which, so far as the face is concerned, the conditions were much like those shown in Philip H——'s portrait, but without the accessory condition of eruption on the extremities. In some of these the condition of lupus growth—i.e., apple-jelly deposit—at the base of the acne pustules was much more definite than in H——'s case. Some of these cases verge towards lupus vulgaris in that the patches remain long local, and show little or no tendency to symmetry; whilst in others, as in the case of the boy H——, they are symmetrical, and seem to form a connecting link between lupus erythematosus and vulgaris.

I have next to ask your attention to a variety of lupus erythematosus which is well illustrated in the portrait which Dr. Stephen Mackenzie has kindly allowed me to copy. He has published it under the name of "lupus psoriasis" in the Transactions of the Clinical Society. You will be struck by the remarkably symmetrical arrangement of the eruption, as shown on the face, chest, upper arms, and forearms. No one will, I think, doubt that the disease is one essentially of lupus erythematosus; but it is remarkable not only on account of parts being affected which very rarely suffer in that disease, but that on the face there is much more tendency to ulcerate, form scabs and leave scars than is usually seen in it.

I take next the portraits of the arms and face of a boy, named Hillier, who when aged nine in March, 1887, was under my care in the London Hospital. He has been subsequently under that of my friend, Mr. Malcolm Morris, but I believe that neither of us has seen him for several years. We should both be very glad to find him again. By the side of the portrait of Hillier's arm I place that of a young lady who has, like him, been under the care successively of several London specialists. I am sure that you will admit that the conditions shown in the two arms illustrate the same disease. I put the cases of the boy Hillier and Miss N—— together, feeling sure that no one will dispute that they are examples of the same disease; and as far as I knew they are the only examples of it as yet published. I possess a third portrait of the forearm of a girl showing almost similar conditions, but my knowledge of the facts of that case are not sufficient to justify its being placed in the same category. In the two cases adduced the disease has run a similar course. Their chief difference has been that in the boy Hillier the face has been attacked, whilst in Miss N—— the arm alone has suffered. In both cases I have had the patient under the observation either of myself or my friends for a long series of years, and am able to state something as to the progress of the malady. The portrait of the boy Hillier was taken in March, 1877, and that of Miss N—— in July, 1882. Both patients are still living and in good general health. In both the disease has made exceedingly slow but gradual advance in some parts. In neither has there been any tendency to ulceration or increase of inflammation, and in both it must be remembered that the tendency to natural increase has been kept back by treatment with caustics.

Have I any right to claim this disease as belonging to the lupus family? To substantiate such a claim I refer you not so much to the arm as to Hillier's face, upon which you will see numerous irregularly-shaped patches spreading serpiginously by a narrow border of minute tubercles, and leaving a thin scar behind them as they advance. Such conditions constitute a lupus process. Were we to exclude these cases from the lupus family, we should certainly have to invent another name for them, for they present no similarity to anything else.

The consideration of the above cases takes me by what is, I think, a quite natural line of connexion to certain others, concerning which there is yet more dispute as to whether they can be claimed as having affinity with lupus. I allude to certain very rare cases in which conditions somewhat resembling those of nævus spread serpiginously during many years. I show you the best portrait I possess illustrating this condition. It is that of the arm of a young lady of title, in whom the condition had been present from early infancy, and had possibly advanced from a congenital port-wine stain. It had ultimately, at the age of fifteen, when the portrait was taken, spread over the upper arm, forearm, and down to the hand. Now, apart from the fact that indefinite spreading is not one of the tendencies of ordinary nævi, I must ask you to notice in the portrait that the conditions, although obviously vascular, are not like those of lupus. You will see that the patches are like little rings or discs, which are often confluent at their edges, and by the enlargement of which the disease advances. It is obviously an infective process with which we have to deal, and the rings are very like those shown in the boy Hillier and others which are often seen as parts of the process of lupus erythematosus. Two cases quite similar to my own have recently been placed on record—one by my friend Dr. Jamieson of Edinburgh, and the other by Dr. Lassar of Berlin. The arm of Dr. Lassar's patient was in every detail exactly like the portrait which I have shown to you; and I am very glad to have Dr. Lassar's support to my diagnosis of lupus, supported as it was by the most important fact that in his case the patient had symmetrical patches on the cheeks. Both in Dr. Jamieson's case and my own the changes were wholly restricted to one limb. Neither in Dr. Jamieson's nor Dr. Lassar's was there any history of congenital nævus, whilst in mine that history was unquestionable.

I trust that I have succeeded by the citation of these cases in proving that a serpiginous and infective process, sometimes resembling nævus, and sometimes in direct association with it, may assume conditions which may compel us to associate it with lupus. In some cases the association seems to be with lupus vulgaris, and in others with lupus erythematosus. This step is for me a most important one, for I wish now to make a yet further one, and to ask you to allow me to bring into the lupus group a form of disease in which part of the changes consist in dilatation of the lymph spaces; whilst others, but less conspicuous ones, involve the bloodvessels. This is the disease, to which I have ventured to give the name "lupus lymphaticus," a name which, allow me to mention, has by no means been accepted by my dermatological *confrères*. This disease is sometimes developed in connexion with congenital nævus or port-wine stain; but in some of its most marked examples there is no such history. Its characters are well marked and very similar in all cases, and that its anatomical features are those of lymphangioma no one, I believe, disputes. It is when we turn from its pathological anatomy to its clinical features that we become, as I think, forced to acknowledge that it is one of the lupus group. Let us note that its alliance is with lupus vulgaris, and not with lupus erythematosus. Its patches, so far as I know, never became symmetrical, nor is it ever generalised. It is a local malady, beginning from some local irritation, and commencing usually in young subjects. It spreads serpiginously, produces satellites abundantly, is attended by more or less of inflammatory action, and is attended by recurrent attacks very like erysipelas. It is curable only by just the treatment one would adopt for lupus—free erasion or destruction by the cautery. Like lupus, it is remarkably

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persistent; and unless the cautery has been very freely used, or often repeated, it quickly springs up again at the margins which have been left. Such is lupus lymphaticus; its clinical features are wholly different from those of any disease hitherto described under its anatomical name lymphangioma, and they correspond very closely with those of lupus vulgaris. I have to add to this sketch of the malady the statement that conditions precisely similar are not very infrequently seen on the tongue. Of this I show you two or three portraits. I have not as yet observed them on any other parts.

A very interesting case has recently been published by Dr. Prince Morrow of New York, with good portraits, to which he gives the name of "tuberculosis papillomatosa cutis." The patient was a young Italian. In 1885 one of his hands was amputated on account of scrofulous disease of the wrist and carpus, and at that time a warty tubercle was observed on his nose. In May, 1887, the disease on the face had advanced, and his condition is shown in the engraving, taken from a photograph, which I place before you. The state in 1888 is exhibited in the coloured portrait. The disease (which, as stated, had begun on the nose) had advanced by infective spreading over the upper lip and over both cheeks, and satellite patches had been produced on the upper eyelids and forehead. The nose had been to some extent destroyed, but a feature upon which Dr. Morrow insists strongly is that no ulceration preceded the papillary formations. The peculiarity of the case consists in the fact that the affected parts were covered all over at an almost uniform level by florid papillomata. These vegetations easily bled, and when exposed to the air the surface smarted much. By microscopic examination Dr. Morrow proved the presence of tubercular elements with a few bacilli in the papillæ themselves. The patient was in fair health and showed no symptoms of internal tuberculosis. Now as to the nature of this case there can be not the slightest hesitation. It was an infective inflammation of the skin of a destructive kind attended in small quantity by tubercular elements. The development to some extent of vascular papillæ is a well-recognised part of the process in most cases of common lupus. The special feature in this case is simply their immense number and their presence in all parts and in all stages. I cannot feel any doubt that the case belongs to the lupus family, although, of course, differing greatly from the ordinary conditions of common lupus. Its name should, I think, be "lupus papillomatosa" of Morrow.

In close juxtaposition with Dr. Morrow's remarkable case I place the disease described by Dr. McCall Anderson of Glasgow under the name of "lupus verrucosus," and close to it comes lupus necrogenicus or verruca necrogenica of Dr. Wilks. These are varieties of the same affection, but occurring in connexion with different exciting causes. They are for the most part peculiar conditions which lupus takes when occurring on the hands or feet. The one is a disease chiefly incident to medical men and post-mortem assistants, and is caused by needle or knife-point pricks received whilst making necropsies. Whether infection by bacilli is necessary, or whether simply irritation by morbid fluid is sufficient, is an open question. I have seen many of them on the hands of surgical friends, and have cured many. They often cause gland abscesses in the axillæ, but these do not, I think, show any specially scrofulous characters. A friend of mine had several of these patches on both hands when a student, and a succession of axillary abscesses in consequence. He cured most of the patches completely by applications of acid nitrate of mercury. The treatment being inconvenient, however, he failed to cure one rather large patch. This patch he has now had *in statu quo* for forty-five years. In winter it always swells and inflames, and sometimes suppurates, but in summer gets nearly well. If covered by plaster it always softens and improves, and it would no doubt have been cured long ago had his vocation permitted of rest to the hand and systematic treatment. Although lupus necrogenicus has been proved in many cases to be tubercular, yet during this very prolonged period no signs of infection have occurred. The condition of the patch has always been a good test of the state of its possessor's health.

The "lupus scléreux" of Vidal is closely connected with the disease just described. It is not connected with any necrogenic poisoning, but then it must be remembered that this history is by no means invariable in the so-called necrogenic lupus. The tuberculosis verrucosa cutis of Riehl and Paltauf is clearly for those who approve the construction of a lupus family one of its members. It occurs on the hands of those who handle animal products, and is characterised by the production of warts without conspicuous ulceration. The absence of the latter has probably much to do with the vigour of health of the patient.

ABSTRACT OF

The Lettsomian Lectures

ON

ANÆMIA, ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London, 1891,

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,

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LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—Before proceeding to describe the symptoms of anæmia, I must briefly remark on one form of secondary anæmia which has important bearings on the pathology of anæmia in general—viz., paroxysmal hæmoglobinuria. To Dr. Copeman[1] we owe some exceedingly valuable observations on the changes in the blood in this remarkable disease. He has shown that in the attacks a loss of from 129,000 to 824,000 red corpuscles per cubic mm. may occur, and even the largest of these numbers was destroyed in a quarter of an hour. At the same time the percentage of hæmoglobin fell from 53 to 49. Equally important changes took place in the arrangement and forms of the corpuscles; rouleaux formation was partially or entirely lost, and poikilocytosis was observed. The fact that such rapid changes may take place in the form of the corpuscles is of extreme importance, and goes to show that the poikilocytosis met with in other forms of anæmia may be due to destructive changes.

The symptoms of anæmia.—Whenever hæmorrhage of more than a trifling extent occurs there must be a reduction in the volume of the blood—oligæmia. The water is soon replaced by the plasma from the lymphatic system, the deficient albumen and salts are supplied by the food, but the globular deficiency, which mainly affects the red corpuscles, remains for a time. The number of red corpuscles continues to fall for some days after the hæmorrhage. In nearly all forms of anæmia oligocythæmia is present. The only form of primary anæmia in which this does not necessarily occur is chlorosis. The greatest reduction occurs in pernicious anæmia, traumatic anæmia, and in some cases of anæmia due to malignant growths. Hayem has recorded a case of puerperal hæmorrhage in which the corpuscles were as low as 850,000 (17 per cent.); Quinquaud, a case of purpura with 740,000; Hérard, one in which they fell to 620,000; and I have published a case of purpura[2] in which there were only 290,000, or 5·8 per cent., the day before death. To what degree may the corpuscles be reduced without death necessarily occurring? I think we may fix 7·5 per cent. as the lowest limit to which the corpuscles may sink without a necessarily fatal result. It is convenient in practice to have a scale of the degrees of anæmia. Anæmia commences at 80 per cent.; it is decided between 65 and 50, grave at 50, very grave at 35, and fatal at 7·5 per cent. I have pointed out[3] that below 50 per cent. there occurs a tendency to hæmorrhage, pyrexia, and other serious consequences of anæmia. Hayem has given a much more exact scale, which takes cognisance of the functional value of the blood and the worth of the individual corpuscles.[4]

The size of the corpuscles.—In anæmia the range is much greater than in health. Microcytes, corpuscles from 2·5 to 4 μ, and megalocytes from 9 to 16 μ are met with in all forms of anæmia, primary and secondary. "Eichorst's

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[1] Trans. Med. Soc., 1889, p. 256, and Practitioner, Sept., 1890, p. 161.
[2] Brit. Med. Jour., vol. ii. 1883.
[3] THE LANCET, vol. ii. 1883, p. 1047. [4] Du Sang, p. 407.

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corpuscles" are microcytes, of deep colour, believed by Eichorst originally to be peculiar to pernicious anæmia, but several observers have shown they are present in other varieties, and may be absent in pernicious anæmia. They are, however, very frequently found in the latter. "Poikilocytis," the name given by Quincke to the variously deformed corpuscles, are found in all forms of anæmia, though more marked in pernicious anæmia than in other varieties; pear-shaped, battledore, rod-shaped, bent, and irregularly-outlined shapes are met with. Nucleated corpuscles are also occasionally found in the blood in anæmia. These alterations in shape show that some change has taken place in the blood, constructive or destructive, but the observations of Boas and Copeman in paroxysmal hæmoglobinuria teach us caution as to the inferences drawn regarding their origin. The colourless corpuscles are not increased in ordinary anæmia except as a premortal phenomenon. The *hæmoglobin* richness was dealt with in my first lecture, and I will here only add that the reduction is sometimes below that of the corpuscles in cases of cancer.

Hæmorrhages.—In anæmia there is a liability to hæmorrhages, external and interstitial. Amongst the former epistaxis, bleeding from the gums, and metrorrhagia are the most common; and amongst the latter hæmorrhages into the retina and skin. Retinal hæmorrhages have not the significance at one time attributed to them, and I have shown that they are dependent on the degree of anæmia, and not on its nature.[5] Corpuscular deficiency has more to do with their occurrence than deficiency in hæmoglobin, hence their frequency in pernicious anæmia.

Circulatory organs.—Anæmia tends to produce dilatation of the heart and gives rise to murmurs heard over the heart and in the veins of the neck. Eichorst has recorded a diastolic murmur in some cases of pernicious anæmia, which Dr. Ernest Sansom[6] and Schrwald have explained as due to the venous hum in the neck being conducted downwards and heard during the diastole. The increased arterial tension described by Broadbent, Sansom, and Bramwell is accounted for by Cohnheim's explanation that anæmia is an exciter of the vaso-motor centre. In extreme degrees of anæmia the artery is exceedingly compressible, and empty between the beats. The œdema of anæmia is chiefly due to the failure of the heart caused by fatty degeneration, but hydræmia and hypalbuminosis must favour its occurrence.

The urine is more fully considered under pernicious anæmia, but in anæmia generally it is pale and wanting in solids. Functional disturbances occur in the alimentary and nervous systems, which are characteristic of anæmia. Pyrexia occurs in all forms of severe anæmia. It is sometimes considerable in pernicious anæmia, but is not wholly wanting in chlorosis.

Chlorosis.—Duncan first pointed out that in chlorosis the essential feature of the disease is the deficiency in the amount of hæmoglobin, and all subsequent workers have confirmed the accuracy of his observations. In some cases, which Laache would call "pseudo-chlorosis," there is no deficiency in the corpuscles; in others which he would call "true chlorosis," the corpuscles as well as the hæmoglobin are deficient, though not to the same degree. The corpuscular worth is reduced to 0·50 or 0·30 as a rule, the normal = 1·0. In severe cases of chlorosis the corpuscles may be reduced to as low as 937,360, 18·7 per cent. (Hayem). What is especially characteristic of the corpuscles besides their deficiency in hæmoglobin is their small size, a great many being between 3 and 6 μ. Poikilocytosis occurs even in cases not severe, as in a drawing exhibited of the blood of a girl, aged eighteen, with 85 per cent. of corpuscles and 35 per cent. of hæmoglobin. Retinal hæmorrhages are not common in chlorosis apart from inflammatory changes, but papillitis and papillo-retinitis are comparatively frequent, especially in hypermetropes. "Febrile chlorosis" only occurs, according to Hayem, when the corpuscular richness, expressed in healthy corpuscles, is below 1½ millions, but slight perturbations of temperature are not uncommon. Constipation is often associated with chlorosis, but the frequency with which constipation occurs in young people who are not anæmic, indicates that its importance as a cause has been over-estimated. Chlorosis is occasionally hereditary, and possibly congenital, and the changes described by Virchow in the heart and bloodvessels point to developmental defects. The character of the blood, its poverty in hæmoglobin, comparative richness in other albuminates, the markedly renovating influence of iron, all indicate a defective hæmogenesis—a "hypoplasia" of the blood as well as of the bloodvessels (Immermann). There is little or no evidence of increased blood destruction. On all these grounds we are justified in regarding chlorosis as due to defective blood formation, often associated with, and possibly in some cases due to, disturbances in the generative system. Most probably both are due to inherited or acquired developmental feebleness of the blood-forming capacity, which, treated promptly and properly in most cases, is of transitory duration, but which, more profound in degree or imperfectly treated, may prove a life-long complaint.

Pernicious anæmia.—First described by Addison in his lectures in 1843, which were published in 1853, the disease was known to few until Gusserow in 1871, and Biermer, who gave it the name of "progressive pernicious anæmia," in 1872, drew attention prominently to the subject. Since then numerous observers have added to our knowledge, amongst whom must be specially mentioned in our own country Pye-Smith, Frederick Taylor, Coupland, and William Hunter. The latter has added more to our knowledge than any other individual worker since Eichorst published his valuable monograph in 1878. The disease begins insidiously with increasing pallor and weakness, without loss of flesh. The specific gravity of the blood is lowered to from 1038 to 1028, its alkalinity is lessened, and the solids of the blood are greatly reduced. Great attention has been devoted to the red corpuscles. Their coheiveness is lessened, so that rouleaux formation is usually absent. The numbers are extraordinarily reduced, so that when the disease is first recognised they are below 50 and often below 30 per cent. (2½ to 1½ millions per cubic mm.). In fatal cases they may sink as low as 378,000 per cubic mm. (Lépine), or 360,000 (Worm-Müller). Quincke has published a case in which they were reduced to 143,000 (2·8 per cent.) without death resulting, but Quincke's numbers read much lower than those of any other observer. It may be stated that in fatal cases the numbers generally sink to 18 or 16 per cent. before death. Poikilocytosis is usually very marked and more extreme than in most other forms of anæmia. As regards their size, few are normal, the majority are larger than natural, whilst in most cases microcytes (Eichorst's corpuscles) are present. Their vulnerability is increased, as shown by the separation of the hæmoglobin from the stroma in some cases (Mackern and Davy, Bramwell), and the readiness with which blood crystals are formed (Bond and Copeman). Their hæmoglobin capacity is in most cases increased, so that the worth of the individual corpuscle is increased. This is neutralised to some extent by the fact that the amount of hæmoglobin being distributed among a smaller number of large corpuscles, must expose a smaller superficies than the same amount distributed among a larger number of small corpuscles. Retinal hæmorrhages are as a rule present, and papillitis occasionally occurs. Petechiæ occur in the skin in some cases, whilst external hæmorrhages, such as epistaxis, bleeding from the gums, and uterine hæmorrhage, frequently are met with. After death hæmorrhages beneath the serous membrane and into the brain and its membranes are not uncommon. The circulatory phenomena of anæmia are pronounced. Pyrexia is present in the majority of cases at some period of the disease, and the temperature may be as high as 104° F., but does not continue long. Some cases are apyrexial throughout.

The urine presents peculiarities which, according to some observers, are of the highest importance with regard to the diagnosis and pathology of the disease. Several observers (Fagge and Pye-Smith, Bristowe, Osler, Eichorst, Hunter, and Mott) have noticed that the urine is sometimes dark in colour, and this has been shown by Hunter[7] to depend on the presence of large quantities of "pathological urobilin," whilst Mott[8] has stated that it may be due to normal urobilin. Dr. Hunter considers that the excretion of large quantities of pathological urobilin is valuable evidence of excessive destruction of blood-corpuscles. He has also found in the urine pigment granules in renal cells and casts, and after death similar pigment granules in the epithelium of the convoluted tubes, which show their blood origin by staining blue with ferrocyanide of potassium and hydrochloric acid. Dr. Hunter finds, too, a remarkable increase in the amount of iron in the urine—a fact which had also

[5] Ophthal. Society's Transactions, vol. iv., p. 182.
[6] Diagnosis of Diseases of the Heart, p. 134.

[7] Observations on the Urine in Pernicious Anæmia, Practitioner, 1889.
[8] THE LANCET, vol. i. 1890, p. 287.

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been observed by Finny from analyses by Professor Reynolds.[9] So many important inferences resting upon the occurrence in this disease of dark-coloured urine containing an excessive amount of normal urobilin or pathological urobilin, I wish to raise the question whether dark urine is present in all cases of pernicious anæmia at some stage. In several of my own, confirmed by post-mortem examination, the urine was never noticed to be dark, being "amber" or "straw-coloured" throughout. Moreover, in several published cases by others the urine was not observed to be dark. Thus it is stated to have been "pale" in a fatal case by Byrom Bramwell and a fatal case by Mott; "very pale" in two cases (one fatal) by Bramwell, and "natural" in four cases (one fatal) by Bramwell and one by Musser. Eichorst found it dark in some cases, but says it is usually of a bright-yellow colour. In Laache's carefully detailed cases the urine was in some instances always pale. It is true that in my own cases observations were not specially directed to this point, but the many observations made are against the dark colour having been overlooked. The same remark applies to those of other observers. The colour of the urine, the nature of its pigments, and the amount of iron it contains are clearly points to which future observers must direct their attention. It is possible that the cases in which the urine is dark may constitute a separate category from those in which this peculiarity is wanting.

Dr. Hunter, struck with the similarity of the hæmolytic process in pernicious anæmia with that induced in animals by the action of toluylene-diamine, more especially from the limitation of its action to the portal blood, was led to the conclusion that the poison causing the blood destruction was of a cadaveric nature, and produced within the gastro-intestinal tract and absorbed thence. Accordingly, he instituted investigations which led to very important and interesting results, and has demonstrated that in a case of pernicious anæmia there was found in the urine a large excess of the aromatic sulphates derived from the proteids of the food. He has, further, been able to obtain from the urine two ptomaines identical with putrescine and cadaverine obtained from putrefying meat, and a third ptomaine which appears to be a special diamine body, distinct from putrescine and cadaverine. Putrescine and cadaverine are not poisonous, but have this special importance, that they are the products of bacterial action, and their presence suggests the possibility of the existence in this disease of other micro-organisms. Some of the symptoms of pernicious anæmia suggest the presence of a poison. Exacerbations in a case of Dr. Hunter's occurred from time to time, characterised by nervous phenomena, pyrexia, intestinal disturbance, and the evidence of increased blood destruction in the increased colour of the urine and the presence of blood pigment granules, dark fæces, and a deepening of the lemon tint generally present. Dr. Hunter, therefore, feels justified in drawing the conclusion that the special factor required to initiate the symptoms peculiar to this form of anæmia is the presence, under certain favourable conditions, of organisms of specific nature within the gastro-intestinal tract. These favourable conditions are such as have been met with in the organic diseases and functional disturbances which have been found in this disease. Dr. Mott does not allow that there is always a relation between the pyrexia, diminution of corpuscles, and the colour of the urine. He writes: "It does not seem to me certain that this theory is proved, for in many diseases in which there is ulceration of the intestines lasting for months or years, and in which the whole contents must swarm with micro-organisms of many kinds, with everything to favour absorption, there is no pernicious anæmia. Constipation and anæmia certainly go together, and by curing the former the latter is much benefited, but in such cases of fæcal poisoning the corpuscles are not broken down, but insufficient colouring matter is made."

The condition of the organs after death in pernicious anæmia indicate the operation of three processes. 1. The effects of the anæmia, in the bloodless condition of all parts, with the exception of the spleen in some cases, and in the fatty degeneration in the heart and bloodvessels. 2. The activity of the cytogenic organs, especially the marrow, which is generally found red and vascular, and containing many developmental forms of red corpuscles, in parts where it is normally yellow and fatty. 3. The evidences of hæmolysis and of efforts for the removal of the broken-down blood-corpuscles: the former shown in the large amount of iron in the liver, and sometimes in the spleen; and the latter in the blood pigment found in the epithelium of the kidneys. Thus the evidence clearly points to blood destruction being the cause of pernicious anæmia in certain cases. The pathology suggested by Dr. Hunter is so complete and coherent, and receives so much support at various points, that I am convinced of its adequacy and accuracy in certain cases. In cases in which the urine is pale throughout, containing no excess of normal urobilin, or pathological urobilin—if such should be proved to exist—some different evidence of blood destruction, or of imperfect blood formation, must be found. Ehrlich[10] remarks, "Degeneration and regeneration course side by side in uncomplicated anæmia: it depends upon the preponderance of one or other process whether this simple anæmia ends in a cure or in the progressive pernicious form."

[9] Brit. Med. Journ., vol. i. 1880, p. 44.

[10] Charité Annalen, 1886

ON CHRONIC DISEASE OF THE UTERINE APPENDAGES;

WITH SHORT NOTES OF THIRTY CONSECUTIVE CASES TREATED BY ABDOMINAL SECTION.

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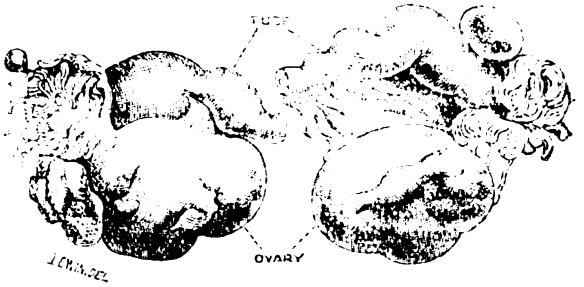
(*Concluded from page 137.*)

PASSING on now to diseases of the ovary, the first and most common is *chronic ovaritis*. This may either be secondary to the acute form, or it may be due to extension of inflammation from the uterus and tube, or as a result of peritonitis and peri-ovaritis. The last is a by no means uncommon cause; the ovary gets bound down by adhesions, which after a time contract and produce a cirrhotic condition (Fig. 6). In other cases the ovary is enlarged, but as

FIG. 6.



Ovaries and tubes matted together by adhesions.—*Ovaries* cirrhotic; coats of tubes thickened from chronic salpingitis.

a result of the chronic inflammation there is an increased development of fibrous tissue in the stroma (Fig. 7), with the formation of small cysts. In either case it is obvious that ovulation can only proceed with great difficulty, and the follicles as they enlarge may be unable to reach the cortex.

Congenitally ill-developed ovaries are not common; when they do occur the uterus is, in my experience, likewise ill-developed. The subjects of this condition may be fine handsome women, but they suffer from dysmenorrhœa, and if married are sterile. This drawing (Fig. 8) shows the condition well. I removed the specimen five years ago from a young woman aged twenty-one, who consulted me for intense dysmenorrhœa. She began to menstruate at seventeen, always lost only very little for two days, but she described the pain she suffered as "fearful agony." It began a week before the period, and reached its acme two days after the period was over. She was a tall, fairly healthy looking, dark girl, apparently not at all neurotic; she lived in the country, and took plenty of exercise in the intervals of the attacks. She has never had any illness beyond the

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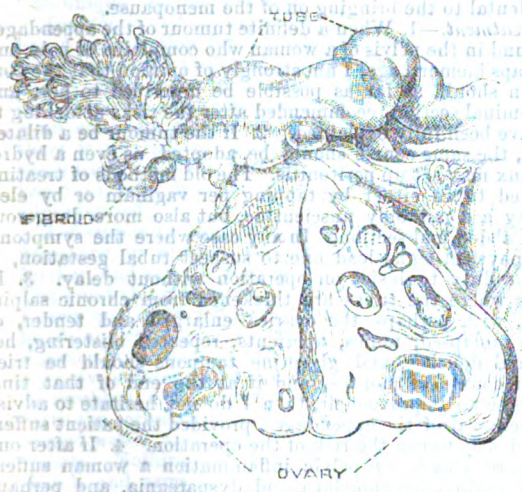
diseases of childhood. On examination (under nitrous oxide) I found the uterus small and acutely anteflexed; the sound entered two inches; nothing else abnormal detected. The ovaries or tubes could not be felt. I recommended that the uterine canal should be dilated, and this I did up to No. 12, Hegar. Subsequently to this the following two periods were less painful, but then all the old trouble returned. After fully explaining the nature of the operation to the parents I performed abdominal section, and removed a pair of small ovaries with the tubes. The

FIG. 7.

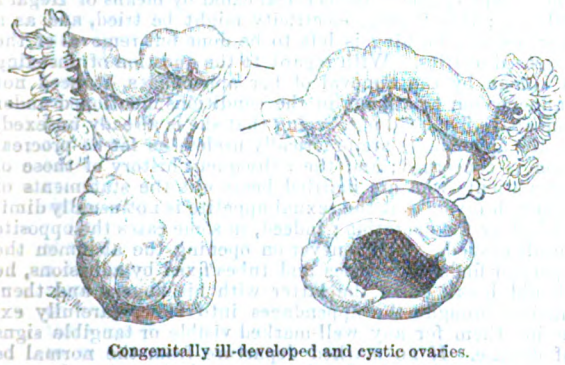


Chronic ovaritis and salpingitis.—Tube thickened; ovary hypertrophied, fibrous, and full of cysts in its interior.

patient recovered without a single bad symptom, and she is now in perfect health.

Yet another case. A few weeks back a lady from Wales was brought to me by her brother-in-law (a medical man). She is thirty-one years of age, has been married ten years, and has never been pregnant. The catamenia began when she was sixteen years old; they have always been very scanty, lasting from one to three days; she has suffered pain both during and between the periods; the pain is such that she has to lead more or less the life of an invalid, and it has increased in severity for the last two years. On examination, the uterus is small and normal in position; the right ovary can be easily palpated, and feels about half the normal size; the most careful examination failed to detect

FIG. 8.



Congenitally ill-developed and cystic ovaries.

the left ovary. In this case I suggested that electricity might be tried for a couple of months with a view of endeavouring to stimulate the ovaries; but if (as was most probable) this failed, then, provided the patient suffered sufficient pain to justify her running the risk, the only course left was removal of the appendages.

When mentioning electricity, I meant its application by the introduction of one pole into the uterine cavity, and placing the other on the abdomen: *not* by using the so-called galvanic stem pessary; for all stem pessaries are fruitful sources of pelvic inflammation, and should only be used on the rarest possible occasions, whilst with regard to this particular variety I think most gynæcologists consider it absolutely worthless as a generator of electricity.

"Apoplexy of the ovary," or, as it might more appropriately be termed, "hæmorrhage into the ovary," is a condition which has been described by various observers, especially by Winckel and Olshausen. Olshausen mentions two varieties: (*a*) hæmorrhage into the stroma, and (*b*) hæmorrhage into the follicles. That the condition cannot be so rare as is usually considered is seen from the fact that it occurred four times in my thirty cases. When an ovary is diseased (as in Case 27, in which it is tubercular) it can be readily understood that extravasation of blood into the stroma might without difficulty take place; that such an extravasation, even though of limited extent, can give rise to great pain, collapse, and fainting was well exemplified in the same case, for on Dr. Steele's arrival he found the patient so collapsed that he had to inject ether. In Case 26 the hæmorrhage apparently took place into an enlarged follicle and was associated with an effusion into the Fallopian tube of the same side. Probably some extraneous cause in this young married lady, such as coitus close upon the onset of the catamenia, induced excessive hyperæmia of the ovary and tube, resulting in hæmorrhage into these organs.

The *symptoms* of diseased appendages are essentially two—viz., pain and menorrhagia. The *pain* is variable: in some cases it may only come on at the periods and then be quite bearable; in others the dysmenorrhœa amounts to intense agony. As a rule, in these cases there is more or less constant pelvic pain, which increases in severity for about ten days or a fortnight before the period comes on, reaching its height at this time, and diminishing after the flow has been fully established. The pain is referred to the side most affected; it is often described by the patient as of a gnawing, tearing character, shooting through to the back, and perhaps down the thigh to the knee. In some instances it has been described to me by patients as feeling "as if someone had seized hold of their insides and was trying to tear them out." In my experience the greatest amount of pain is felt as a rule in those cases where, from extensive pelvic peritonitis, the ovaries and tubes are matted down in the pelvic cavity. In these cases a vaginal examination may reveal nothing beyond some impaired mobility of the uterus with tenderness on pressure. Usually in chronic disease of the appendages there is pain on coitus, and this may be of all degrees of severity; not a few of my patients have told me it was so intense that they have been compelled to lead a single life for months.

The *hæmorrhage* also varies in amount. In most cases the loss at the period is increased; women will say that their periods, instead of lasting four or five days, now go on (perhaps) for a fortnight, that whilst half a dozen diapers used to be sufficient, now they require from eighteen to twenty-four; others will say with regard to their periods that "they are hardly ever free from them." I believe the loss is greatest in cases of chronic ovaritis and salpingitis; but where the tubes are dilated with serum or pus there does not appear to be much alteration in the amount lost. Another symptom to be remembered is, as already mentioned, the occasional discharge "in gushes" of water or matter in those cases of intermitting hydro-salpinx or pyo-salpinx.

The *physical signs* are of the greatest importance. There is a good deal of difference of opinion respecting them; some able observers never, or hardly ever, find diseased tubes and ovaries on examining their patients, whilst others are constantly diagnosing them. In many instances the signs are sufficiently obvious on making an ordinary bimanual examination, whilst in others it is essential to give an anæsthetic and to examine per rectum as well as per vaginam. Can a normal ovary be palpated when in its usual situation? I answer unhesitatingly Yes in the majority of cases where the abdominal walls are thin and lax; not only so, but atrophied or congenitally ill-developed ovaries can be made out, so also can the Fallopian tube, especially near the uterine end. When the tube is thickened from chronic salpingitis and is about as large as one's little finger, it feels not at all unlike a varicocele in the male, giving the same sensation to the finger that a bag with a few worms inside does. Not infrequently the ovaries and thickened tubes are prolapsed into the pouch of Douglas; then their detection is possible even to the *tactus non eruditus*. When enlarged ovaries and tubes are matted together by old pelvic ad-

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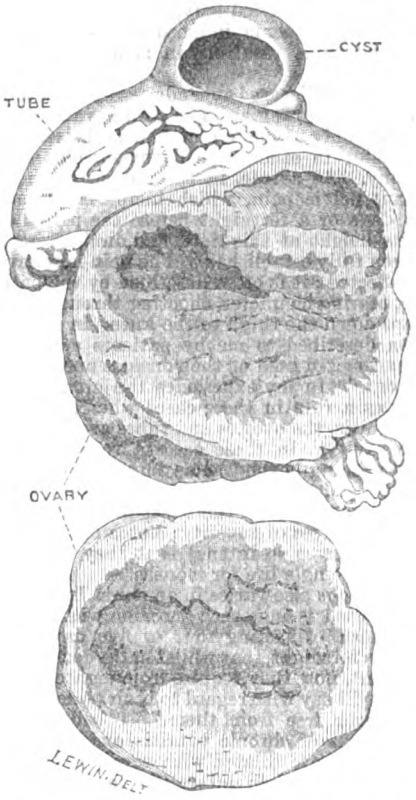
hesions (see Fig. 9), they give rise to a firm roundish or elongated tumour, felt in one or other posterior quarter of the pelvis, and perhaps extending somewhat behind the uterus. It is only within comparatively the last few years that the pathology of these tumours has been rightly understood. In my student days they were almost invariably described as cases of pelvic cellulitis in one or other broad ligament; but since abdominal section has been more frequently performed, it is clearly proved that cellulitis does not exist except as part of a septicæmia or as secondary to a pelvic peritonitis. Those tumours, then, which are detected at one or other side of the uterus, and which do not depress the vaginal roof or materially displace the uterus, are in the vast majority of cases the result of pelvic peritonitis following upon chronic disease of the ovaries and tubes, whereby these organs are matted together and to the different structures in their vicinity, such as broad ligament, uterus, omentum, and intestines. When a hydro-salpinx or pyo-sal-

FIG. 9.



Chronic peritonitis.—Ovary and tube matted together; ovary (shown in section) much enlarged and full of blood; tube dilated.

pinx exists, it feels (in a typical case) an elongated tortuous elastic swelling, extending from the side of the uterus outwards in the broad ligament, and backwards into Douglas's fossa. In many cases, however, the dilated tube is roundish instead of being elongated. This is probably due to adhesions. On the other hand, there may be a large hydro- or pyo-salpinx which the most careful examination under an anæsthetic fails to detect. This is due, I believe, to the fact that the dilatation is not a tense one. In two cases on which I operated for disease on one side, I found in each, after removing the affected parts on that side, a large dilated tube on the other, which had previously escaped detection. When the ovaries and tubes are matted to the pelvis by adhesions, examination per rectum is very important. By this means also we can ascertain whether prolapsed ovaries are free or adherent.

The *prognosis* depends on the conditions present in any individual case. A woman with a pyo-salpinx is in constant danger of its setting up acute and fatal peritonitis; even a hydro-salpinx may do the same, although the risk is much less. In most of the other conditions, whilst they are not necessarily fatal, they as a rule render life one long state of chronic invalidism, accompanied by greater or less suffering, which may certainly be alleviated by medicines, but which, I fear, can usually only be cured by abdominal section. When this operation is resorted to, the prognosis is very good, as seen in the thirty cases recorded, where there was only one death, and this from the distressing accident of slipping of the pedicle ligature and fatal hæmorrhage. The ultimate prognosis as to sound health is also good, but it must not be forgotten that the full benefits of the operation are not usually felt for several months after, as the patients have to pass through the sympathetic disturbances incidental to the bringing on of the menopause.

Treatment.—1. When a definite tumour of the appendages is found in the pelvis of a woman who complains of pain and perhaps hæmorrhage, I am strongly of opinion that the condition should as far as possible be described to her, and abdominal section recommended after the risks attaching to it have been fully explained. 2. If the tumour be a dilated tube, the same course should be adopted, as even a hydro-salpinx may set up peritonitis. The old methods of treating dilated tubes either by tapping per vaginam or by electricity are not only unscientific, but also more dangerous than abdominal section. In any case where the symptoms and physical signs lead one to suspect tubal gestation, it is our duty to insist on operation without delay. 3. In cases where the tubes are thickened from chronic salpingitis, with perhaps the ovaries enlarged and tender, or even prolapsed, tonics, aperients, repeated blistering, hot vaginal douches, and glycerine tampons should be tried for a couple of months, and if at the end of that time there be no improvement, then I do not hesitate to advise the removal of the appendages, provided the patient suffers sufficiently to run the risk of the operation. 4. If after one or more attacks of pelvic inflammation a woman suffers pelvic pain, dysmenorrhœa and dyspareunia, and perhaps menorrhagia, the great likelihood is that careful pelvic examination will detect the ovaries and tubes matted together and to the surrounding structures and the mobility of the uterus impaired, but where probably no definite tumour can be made out. What should be our line of practice in a case of this kind? Are we to pin our faith on Epsom salts, like some do, and when this drug fails to fold our hands, express the deepest sympathy with the sufferer, but on no account suggest any operative interference? Surely, this practice is just as reprehensible as the opposite one, where the appendages have been removed without obvious disease, but for some neuralgic affection. From personal experience of these cases, I know that nothing short of abdominal section will cure, that the operation is usually extremely difficult, and that the ultimate result is correspondingly satisfactory. 5. In cases of congenitally ill-developed ovaries with an acutely anteflexed uterus associated with marked dysmenorrhœa and sterility, I would first under anæsthesia widely dilate the cervical canal by means of Hegar's dilators; this failing, electricity might be tried, and as a last resource nothing is left to be done but removal of the diseased ovaries. With regard to the question of unsexing a woman by the removal of her appendages, it need not influence our treatment in the conditions mentioned under the above five headings, seeing that she is already unsexed, as the appendages are practically useless as far as procreation is concerned; and the subsequent history of those of my patients who are married bears out the statements of other observers that the sexual appetite is not usually diminished by the operation; indeed, in some cases the opposite result ensued. 6. Whenever on opening the abdomen the operator finds the ovaries and tubes fixed by adhesions, he should break down the latter with his fingers, and then, having brought the appendages into view, carefully examine them for any well-marked visible or tangible signs of disease. If no marked departure from the normal be made out, then it is the operator's bounden duty to stay his hand from removing the appendages. I firmly believe that the cause of the patient's symptoms is, in not a few cases, the presence of adhesions, and that when these are broken down it is unnecessary to proceed further; but how many operators have the moral courage to do this? One or two dilated follicles seen on the surface of an ovary are thought sufficient to justify the spaying of the patient. 7. Inasmuch as there is usually an absence of disease of the appendages in cases of ovarian neuralgia occurring in neurotic subjects, any local interference is not only unnecessary, but absolutely unjustifiable, and the same remark applies in

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great measure to cases of hystero-epilepsy and other mental disorders.

It cannot, I think, be too strongly enforced that removal of the appendages for chronic disease is in most cases much more difficult than performing ovariotomy; indeed, in a very small proportion the operation may have to be abandoned, as occurred to me in Case 21. Hence the tyro in abdominal surgery ought not to attempt operating on these cases. Again, it is most essential that the patient and her immediate relatives have the nature of the operation and its risks fully explained to them, as well as the change in life which will be produced by it.

Before concluding, I wish to make a few remarks on the "technique" of the operation.

Anæsthetic.—With regard to this, almost every operator has a predilection for a particular one. Until comparatively recently I preferred my patients to have ether, but now it seems to me that chloroform given either on a piece of lint or by Junker's inhaler is the best, as it produces more complete relaxation of the abdominal parietes and there is no risk of lung complication following. A few years back a patient on whom I performed ovariotomy died two days later from acute bronchitis induced by the ether administered.

Antiseptics in the Listerian sense of the term are unnecessary in abdominal operations; indeed, I would go further, and say that the spray may be positively injurious. The great thing is strict cleanliness. The routine practice I carry out is as follows. Having thoroughly washed my hands and forearms in soap-and-water, using a nail-brush vigorously, I then dip them into a 1 in 2000 solution of corrosive sublimate for one minute. The patient's abdomen is scrubbed with soap-and-water, and afterwards washed with the corrosive solution. The sponges are wrung out of boiled water, and boiled water is poured over the instruments. Nothing else, except that my assistant treats his hands and arms in the same manner as I do. One great element of success in these operations is that, if possible, no fingers but the operator's should be allowed to enter the peritoneal cavity, and on no account whatever should any bystander examine the case or give help until he has rigidly rendered his hands aseptic.

Ligaturing the broad ligament in these cases requires more care than the pedicle in ovariotomy, and I believe it would be safer in all cases to tie it in three portions with strong silk (Chinese twist). The Staffordshire knot seems not to be so safe as the ordinary method of dividing the double ligature and tying in two parts after crossing the threads. A few weeks back I very nearly lost a patient from hæmorrhage after ovariotomy. The pedicle was rather thick and long, and I thought I would show Dr. Noakes of Nice, who was present, the ease with which the Staffordshire knot can be applied. Having removed the tumour, cleansed the peritoneal cavity, and tied all the abdominal sutures but two, I saw a little blood at the bottom of the incision. On separating the edges, sure enough the abdominal cavity was full of blood. I rapidly seized the pedicle, and found the ligature had slipped; so after retying securely, I washed out the peritoneal cavity as quickly as possible with a 5 per cent. boracic acid solution, removing in doing so large clots from near the liver and spleen. Had half a minute more elapsed I should have closed the abdomen, and most likely the hæmorrhage would not have been discovered, as the patient was in a very feeble and collapsed condition all through the operation; as it was, she luckily recovered without a bad symptom.

Drainage.—A good deal of difference of opinion exists on the value or otherwise of drainage. Personally I never use a drainage-tube in simple cases, but where numerous adhesions have been torn through causing free oozing of blood, or where some of the contents of a tumour have escaped into the abdomen, then I insert a glass tube for from thirty-six to forty-eight hours, and with the happiest results. One disadvantage of using the drainage-tube is that that part of the abdominal wall through which it passes seems to unite less firmly than the rest, so that later on the scar has a tendency to give, causing a ventral hernia.

Flushing the peritoneal cavity is, I think, a proceeding of risk; at the same time it is very valuable in cases where pus or other irritating fluid escapes into the cavity. I always use a 5 per cent. boracic solution at a temperature of 100° F. introduced through a large indiarubber tube attached to a douche tin. It is necessary after flushing to use a drainage-tube. The immediate effect on patients varies: some appear stimulated and others markedly depressed, but I know no way of finding out beforehand which will happen in any given case.

The *after-dressing* is important. The abdomen having been thoroughly cleansed with a sublimate solution, I place over the wound a strip of oil silk which has been dipped in the solution; this strip is about an inch and a half wide, and long enough to extend a little way beyond the extremities of the incision. Boracic acid is next dusted over the edges of the silk and over the rest of the abdomen; plenty of sal alembroth or salicylic wool is next laid on, and the whole firmly fixed by wide strips of adhesive plaster, reaching from below the hips up to the epigastrium. It will be noted that nothing but the oil silk touches the wound; this, I find, gives every satisfaction, and when the first dressing is removed on the eighth day it causes no pain to the patient. Formerly, I used to dust iodoform powder over the wound, but it is not free from risk. I had a succession of cases in which troublesome suppuration took place in the abdominal parietes along the tracks of the stitches; this I could not account for nor prevent until I discarded the iodoform, when the succeeding cases progressed in the normal manner. In other cases it produced delirium.

After-treatment.—My plan is the following:—Nothing whatever passes the lips for twenty-four hours; but if the thirst is distressing I have the mouth washed with warm water frequently, and, provided there be no sickness, a teaspoonful of hot water given every two hours. I believe ice is not so good as hot water, and it certainly produces flatulence. In cases where the operation has been very severe, or in elderly women, a nutrient suppository is administered per rectum every four hours. If there be decided pain, a one-third-grain morphia suppository is given and repeated when necessary. Morphia should not be given as a routine practice, and many cases do perfectly well without it; but I think it is distinctly cruel to deny it, as some do, to patients suffering decided pain. After twenty-four hours an ounce of milk-and-soda is given every two hours, increasing gradually, and with some beef-tea the next day. As a rule, a small cup of ordinary tea with milk is longed for by, and most grateful to, the patient. The urine is drawn off every eight hours for a few days, but when patients have a desire to pass it naturally (even two days after the operation) I always allow them to do so. An aperient is given on the seventh day (before the stitches are removed), and the patient gradually takes solid food. She is turned on the side occasionally after the seventh day, and at the end of ten days she is allowed to sit up in bed. So much for ordinary cases. When complications arise, the treatment requires modification. *Vomiting* is the most common, and the ordinary sickness from the anæsthetic is best treated by letting nothing be taken for twenty-four hours. Recently I have adopted (and with distinct success) a plan of Mr. Howse's suggested to me by Dr. Moss, the able resident medical officer at the Royal Hospital for Women and Children. It is to administer per rectum at the termination of the operation an ounce of port wine in an equal quantity of hot water. In some cases there may be severe vomiting, not from any inflammatory condition of the peritoneum, but probably from mere atony of the bowel. If in addition to the vomiting there be flatulent distension of the abdomen, the case simulates closely one of peritonitis, and it is here that an aperient of sulphate of magnesia or soda acts like a charm. One of my patients (Case 9), a thin, neurotic lady, had frequent vomiting for six days after the operation (on four days it was black) which nothing would allay. At last I thought I would give an aperient, but as she was very low I called in consultation an eminent obstetric physician, who did not think it advisable to purge. Next day, however, as she continued getting worse, I gave her a dose of white mixture, and repeated it every two hours until the bowels acted. The effect was marvellous. She was only slightly sick, once after the first dose, and from that time recovered steadily. *Flatulence* is a frequent and often troublesome complication. I make it a routine practice to have a soft indiarubber tube passed into the rectum for several inches at least twice a day, and find it gives relief. In a case of Porro's operation which I performed at the Middlesex Hospital (and reported in THE LANCET, vol. i. 1889, p. 16) there was enormous flatulent distension a few days after the operation, giving rise to all the signs of acute peritonitis, but on passing a long stiff tube into the colon a tremendous escape of flatus put an end to the

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unfavourable symptoms. In slight cases a teaspoonful of brandy in half an ounce of hot water gives much relief. My patients suffer little from flatulence since I have discarded the use of ice. *Peritonitis* is the only other complication about which I shall speak. It may, of course, have existed before the operation, or it may be due to the escape, at the time of operation, of some pus or irritating fluid into the abdominal cavity; but when it sets in after a straightforward case of abdominal section I cannot help thinking that the operator has to reproach himself that the measures he adopted to ensure strict cleanliness were wanting in completeness. Although when once it has set in it need not necessarily be fatal, I believe the best chance is given to the patient by reopening the wound without delay and irrigating the cavity thoroughly with the boracic acid solution and inserting a drainage-tube. The only case in which I did this for acute peritonitis coming on two days after I had performed abdominal section recovered completely, and is now, three years after, perfectly well. Mr. Lawson Tait recommended the use of saline aperients, but I cannot help thinking that even such an experienced and able observer as he may have mistaken flatulent distension and vomiting for peritonitis.

In conclusion, I would remark that simple cases of abdominal section seem to recover equally well if put back immediately after operation into the general ward as when isolated in a special ward for several days.

FRACTURE OF SCAPULA AND FIRST THREE RIBS, WITH RUPTURE OF SUBCLAVIAN ARTERY AND VEIN.

BY SOLOMON C. SMITH, M.D.,
SURGEON TO THE HALIFAX INFIRMARY.

A. L——, aged thirty-five, was brought to the Halifax Infirmary on Nov. 6th, 1890. The only history which could be obtained at the time was that at the quarry at which he worked there had been an accident. A crane had fallen down, and he had been found lying on the ground. He arrived at the infirmary about an hour and a half after the accident, and I saw him half an hour later. He was then profoundly collapsed; the pulse was quick and small; he was conscious, but not easily roused; conjunctival reflex was absent; the right eye was closed, but the left partly open; there was a superficial wound above the right malar bone, and another wound above the occipital protuberance, baring the bone, each being about an inch long. The left arm was cold and white, no pulse being perceptible in either the radial, brachial, or axillary artery on that side; pulsation could, however, be felt in the subclavian. Below the clavicle in the region of the pectoral muscles, and also on the left side of the chest, there was a large, soft, squashy swelling, evidently effused blood, but no bruising of the skin, no tension or pulsation. Above the clavicle and in the axilla there was only very slight swelling. There was no fracture of the clavicle or of the humerus; pressure carefully applied over each rib in succession gave no evidence of fracture and produced no complaint of pain; he did, however, seem to suffer some discomfort in the region of the scapula when the arm was being moved, and he tended to turn over towards the right side, as if to relieve the pressure on the left shoulder. There was a small contusion over the outer end of the posterior border of the acromion process, but no injury to be seen lower down; an irregularity of outline was, however, noticed in the posterior border of the left scapula just below its spine, but pressure there did not rouse the patient to make any complaint; nor was there any bruising of the skin, the blade of the scapula moved freely with its upper part, no movement between them could be perceived, nor could crepitus be elicited. There was a slight abrasion on the outer side of the right knee, and several on the back of the right hand. The diagnosis was made that the last portion of the subclavian or the first portion of the axillary artery had been torn across, that the rupture was complete, and that no more arterial bleeding was going on. It was also thought probable that there was some injury to his brain from the fact that the left pupil was smaller than the right, that the left eye persisted in not closing so completely as its fellow, and that he also seemed to move the right upper lip more than the left when he spoke; the tongue, however, was protruded straight, and the difference between the two sides of the face was but slight. The important point in the diagnosis, so far as regarded possible treatment, rested on the absence of pulsation or even hardness in the bloody swelling, showing that the artery was not only ruptured but plugged.

Under the influence of hot external applications he got warmer, but at the same time became very restless; after a few hours the effused blood showed as an ecchymosis of the skin below the clavicle and on the left side of the chest, but its amount did not seem to have increased. He died about sixteen hours after the injury. At the post-mortem examination, on Nov. 8th, blood was found over the front of the left pectoralis major, having apparently come out of the axilla between the pectoral and deltoid muscles. On dividing and turning back the pectoralis major a large quantity of blood was found, which had evidently come from under the pectoralis minor, and on dividing this muscle a further large effusion was discovered extending from the top of the axilla upwards under the clavicle and far downwards on the side of the chest, but only in very small quantity down the arm, and that only as an infiltration of the sheath of the vessels. The axillary vein was immensely distended, and on the clavicle being removed the subclavian vein was found to be torn across at its outer extremity, the clot within it, as thick as the little finger, being continuous with the large effusion already described; several nerve trunks were also completely torn across, and the artery was found divided opposite the outer edge of the first rib; the outer coat of the artery had not been severed, but lay as a connecting cord between the retracted ends of its inner layers, whose torn extremities were drawn nearly an inch apart, the upper one being filled with firm clot. The first costal cartilage was separated from the sternum, and the first rib was broken about one inch further outwards and again just external to the neck. The two next ribs were broken outside the neck. There was a comminuted and impacted fracture of the scapula, the line of fracture commencing at the posterior border just below the spinous process, running forwards parallel with it for a couple of inches, then, without touching the axillary border, turning round backwards again, and ending at the posterior edge just above the angle. This fractured portion was also comminuted and depressed, thus altering the contour of the posterior border, and was firmly impacted into the base of the spinous process, so that there was no mobility or crepitus between the fragments. The was no fracture of the skull and no hæmorrhage in the dura mater, arachnoid, or brain, but the veins of the pia mater over the posterior lobes on both sides, especially the right, were very full, and seemed in places to have produced ecchymoses.

At the inquest it turned out that the crane which caused the accident was a derrick, and that in falling the heavy chain swung round in a large curve and hit the man in the back as he was running away in a stooping attitude. It is probable that the fracture of the blade of the scapula and the posterior fractures of the ribs were the result of the direct impact of the heavy chain by which the man was felled, that the anterior fracture of the first rib and the separation of the cartilage were indirectly due to the same violence, and that the artery, vein, and nerve were divided by the upward pressure of the loosened rib against the clavicle. The absence of bruising, at the point where the blow took place by which all this damage was done, is a point of very great interest, and at the time led us to think that in falling he must have caught at something and swung by his left hand, and thus by a violent strain ruptured his vessels, but the post-mortem examination and the inquest both negatived this supposition. Perhaps of even greater interest is the fact that, notwithstanding the complete separation of the inner coats of the artery, the outer coat showed no sign of having been distended by effused blood; it lay as a narrow cord in the midst of the venous clot, and it would appear almost certain that the retraction of the inner coats had sufficed to immediately plug the vessel without allowing any blood to escape. Fracture of the first rib is an accident of very great rarity, in consequence, no doubt, of its deep position, protected by the clavicle and scapula with all their attached muscles; but in this case the man by his attitude, as he ran in a crouching position with his arms hanging forwards, removed from the back of the rib the protection of the scapula, and then, as ill luck would have it, the blow fell just on the exposed portion, fracturing the posterior edge of the scapula and crushing in the ribs.

Halifax.

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ON THE CAUSES OF ROTATION OF THE VERTEBRÆ IN SCOLIOSIS.[1]

BY E. MUIRHEAD LITTLE,
SURGEON TO THE NATIONAL ORTHOPÆDIC HOSPITAL.

THE question, What is the cause or what are the causes of rotation of the vertebræ in scoliosis, or so-called lateral curvature of the spine? has always been a troublesome one to answer, and although for many years the subject has been fruitfully studied by orthopædic surgeons both in Europe and America I believe that we may say that the question has never been fully and satisfactorily answered. In all diseases, whether they most concern the physician or the surgeon, it is to the evidence from the dead house that we look to solve the difficult problems that they present, and this is more especially true of diseases involving the skeleton and those in which mechanical problems are the most important. In scoliosis, however, it is very rarely that we have an opportunity of dissecting the subject, for the disease is not a directly fatal one, and most of the few recorded necropsies have been on advanced cases of great deformity, the subjects having died by accident or from some disease long after the beginning of the distortion. These considerations have led me to make some observations on the spine in children and young adults in order to find out under what circumstances if any rotation can occur in the dorsal and lumbar regions of the column.

My first observations were made on the normal spine in the living, in order to ascertain whether rotation normally accompanies lateral flexion. I found that in the erect position, both in children and adults, on extreme voluntary lateral flexion of the spine apparent rotation occurred; but that this appearance of rotation was due to the muscles on the convexity contracting to support the trunk, and that it did not appear when flexion was produced voluntarily or passively in the prone position, although the flexion was such that the spinous processes deviated from the straight line as far as in extreme scoliosis. I next examined the phenomena of lateral flexion in the dead body, in which, however, the natural conditions were so far altered that the sternum and cartilages of the ribs had been removed, together with all the viscera. On forcibly bending the trunk laterally, the body resting on its back, no rotation accompanied the movement, and I then divided the anterior common ligament between each of the vertebræ, and finally also the intervertebral discs and posterior common ligament, without, however, succeeding in producing any evident rotation.

The next experiments were undertaken with a view to determine the effect of vertical pressure on the spinal column in producing flexion and, if possible, rotation. The scarcity of available subjects in London prevented my trying this on the trunk as a whole, and I had to content myself with experiments on the dorsal and lumbar regions of the spine removed from the body *en masse*, with portions of the ribs *in situ*. The subjects were children of from three to seven years of age. The spine was placed on a carpenter's bench, its posterior surface resting as far as regards the dorsal region on the bench, and pressure was applied by means of a powerful wooden screw cramp. A single general curve was the result without rotation. The twelfth dorsal vertebra was then held in the middle line by a cord, and pressure again applied. A double curve was thus produced the radius of which in the dorsal region in one case was only seven centimetres, the transverse processes nearly touching on the concavity. There was no rotation, the line of the spinous processes being as curved as that of the bodies. I now examined the effect of fixing the spinous processes in the middle line by inserting them into a narrow groove in a piece of deal. Pressure was applied until the wood gave way, without producing rotation. Oak was then substituted for deal, and as much force applied as possible, but distinct rotation was not produced. The ends of the ribs were removed, and first the anterior common ligament and afterwards the discs and posterior common ligament and all the tissues between the transverse processes on one side were divided, but the result was still negative. On removing the spine, a very slight twisting effort of the hands was enough to separate it into two or three portions, with separation of the bodies of the vertebræ. The principal obstacles to this rotation appeared to be the articular processes, which obstacle was overcome by the overriding of the superior by the inferior processes of the vertebra next above, with consequent separation of the vertebræ. In the spine with the ligaments intact the greatest twisting force that I could apply with my hands did not produce at most a greater rotation than 25°. It would thus appear that, while a certain limited amount of rotation is possible in the normal spine, it is not a normal accompaniment of flexion, and, indeed, that it is difficult to produce artificially. We know also that in lateral curvature of the spine, resulting from pleuritic adhesions, rotation is absent, as it is also in those temporary curves which occur in those whose lower limbs are of unequal length.

It is surely a fair inference to draw from the foregoing observations that there is some pathological condition present in scoliosis from the first which allows of the gradual production of rotation, and this condition I believe to be a certain tendency of the ligamentous structures to yield, that is generally known as want of tone, and which is evidenced in the flat-foot which so often accompanies it. But this laxity of the fibrous structures is not enough to account for rotation, and I believe that it is to the muscles that we must look for an explanation. On the first occurrence of lateral yielding of the column the erector muscles of the spine are called into play to correct the deformity and maintain the spine in the erect position, and the muscles situated on the convex side of the curve have obviously to perform the greater amount of work. Of these muscles, some, such as the spinalis dorsi, are attached at both ends almost entirely to points in the middle line; these can have little effect in producing rotation, although they may, and do, tend to keep the spinous processes in the straight line. Others, however, and these form a large part of the muscular mass occupying the vertebral groove, are attached at one extremity to the middle line, and at the other to the transverse processes, and the angles of the ribs, running obliquely from one part of the vertebral column to another. Such are the erector spinæ, longissimus dorsi and sacro-lumbalis, multifidus spinæ, semi-spinalis dorsi, and rotatores spinæ.

Now it is obvious that when the muscles of both sides act equally to straighten the spine there is no tendency to produce rotation. When, however, there is a lateral yielding of the spine the muscles on the convexity alone are called into action; and although they tend to straighten the line of spinous processes, they have also a distinct rotatory action, which long exerted on a column whose fibrous tissues are inclined to yield produces a twisting, their action being unbalanced by any muscles on the anterior portion of the spinal column. Absorption of bone takes place where there is constant pressure, and adaptive secondary deformity of the articular processes and bodies follows, while in some cases the transverse processes are bent in towards the middle line. This process, as we see it going on in the living subject, is of course a most gradual one, the change being almost imperceptible from month to month, but that such a force as that exerted by the muscles must tell in time must be admitted. It appears probable that some alteration in the nutrition of the bone occurs in these cases, perhaps such as the "late rickets" described by Macewen, but I am not aware that any direct evidence of this has been produced.

Park-street, Grosvenor-square, W.

[1] Read at the Tenth International Medical Congress, Berlin, 1890.

REMARKS ON VACCINATION, WITH THREE CASES OF ACCIDENTAL VACCINATION.

BY ROBERT STEEL, L.R.C.P. &S. ED., L.F.P.S. GLAS.,
HOUSE SURGEON, ROYAL INFIRMARY, GLASGOW.

AT the present time, when public interest in the success or failure of compulsory vaccination is widespread and is manifested by all classes of the community, and when we have a Royal Commission at present engaged in the determination of the value of vaccination as a national institution, I presume that contributions that throw light on the subject will be welcome.

It is undeniable that since the institution of vaccination, small-pox has practically disappeared in this

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country. That the one is the result of the other is for the most part called in question only by those who lack the requisite knowledge and training to form a just opinion on the subject. If, however, we conclude that the relation between vaccination and the practical elimination of small-pox is a causal relation, vaccination should be thorough; and if it is still to be enforced, stringent rules ought to be laid down to ensure this. Single vaccination is now held by most authorities to be insufficient as a variolous prophylactic. Medical practitioners are far too apt to yield to the feelings of an anxious mother who is most importunate that he will make only one "pock," or, if two are required, that he should make them very small; for unless the practitioner humours the maternal feelings in the matter, he runs a risk of losing his position as family physician. Every practitioner should, in my opinion, be legally required to make three punctures, and forbidden under a penalty to sign any vaccination paper unless three good vaccine vesicles or cicatrices can be shown over the part vaccinated. Until such a standard is made compulsory, we cannot hope to prevent small-pox from stealing into our midst from time to time. The chances of communicating disease by means of the operation have, however, to be considered. This grave circumstance, I regret to say, has unquestionably happened to my certain knowledge even within my own brief experience. Now with so many first-class establishments for the preparation of lymph, there is not much difficulty in procuring pure calf lymph, and if all medical men were to vaccinate direct from the calf or from child to child only when there is undoubted proof of clear family history, disastrous sequences from vaccination would seldom occur. I think if this point were more carefully attended to such diseases as scrofula and syphilis, the diseases most commonly transmitted in this way, would much less frequently be seen as the apparent result of heredity. The following short clinical report and history of three cases of accidental vaccination, which recently came under my notice in the south of England, may be interesting to the profession.

CASE 1.—Mrs. J——, a young married woman about twenty-five years of age, with an infant, which had been vaccinated only ten days previously, sent to consult me regarding a very painful and rapidly swelling condition of the face. On examining the patient I found her suffering from an erysipelatous inflammation of the left cheek, but on inquiring into the case I suspected that it was not a case of true erysipelas. At the left ala of the nose I observed a small red papule, becoming vesicular as it developed, and on the ninth day it was distinctly pustular in appearance. After this the inflammation rapidly subsided, and a scab formed which fell off about the eighteenth day, leaving a very typical vaccination cicatrix.

CASE 2.—Mrs. B——, a married woman aged thirty-five, was believed to be suffering from the "rose" in the face. On examination I found the very same condition as in the former case. The erysipelatous inflammation had commenced on the right cheek and was much more marked. The right eye was already closed and the inflammatory condition had passed over the bridge of the nose and also affected the left side of the face. In this case also there was a distinct red papule at the side of the nose. Having considered the condition in the light of the experience gained from my former case, and from the fact that I had vaccinated her infant only ten days before she complained, I diagnosed the affection as erysipelatous inflammation due to the irritation of vaccine matter accidentally got direct from the child's arm. In both these cases, there was distinct history of a scratch at the side of the nose, and of the mother having fallen asleep with her nose on the vaccinated arm of the child.

CASE 3.—J. W——, aged thirty-nine, a cowman, consulted me. It was a similar malady to the preceding cases, but as he was an unmarried man I had to look for something else than a vaccinated child for the explanation of the condition. On inquiring into the patient's history I found that his daily occupation was to attend the cows at a farm, and that he helped to milk them morning and evening. Having some difficulty in milking some of the cows he observed they were suffering from bladder-like vesicles on their teats, which, after a few days, became pustular, and then formed scabs, which shortly afterwards fell off. At the time he observed the vesicles on the cows' teats, he says he had a small sore at the side of his nose, and as it slightly itched he sometimes rubbed it during the process of milking the cows. A condition very similar to the two previous cases soon appeared on his face. I firmly believe that the cows were suffering at the time from cow-pox, and that this man's case was one of true vaccination directly from the cow-pox. All these patients had previously been unvaccinated, and now I believe they have accidentally got the full protection of vaccination, and thereby most unlikely to ever have an attack of variola. If, however, they should contract the disease, it will be in a highly modified form. The treatment in each case was alike, a saline aperient being given occasionally, and small doses of quinine and iron being given four times daily, and the parts protected from cold.

I hope that the record of these observations will stimulate more eminent men to endeavour that so important a national institution as vaccination shall be put upon a proper basis, to secure protection at least for the innocent and for those who possess too little knowledge to enable them to form a reasonable opinion for themselves on this important subject.

Glasgow.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ATTEMPTED SUICIDE BY MEANS OF OXALIC ACID.

BY R. REGINALD SLEMAN, B.A. CANTAB., L.S.A. LOND.

I WAS recently called to see H. L——, aged sixty, caretaker. On arrival at his house I found him in severe pain and much collapsed; pulse 50, small, and easily compressible; face pallid and anxious; extremities cold. The friends suspected that poison had been swallowed for the purpose of committing suicide, and on taxing him with this he admitted having taken three teaspoonfuls of oxalic acid half an hour previously. I was luckily able to get, within a few minutes, a pint of lime-water, the whole of which the patient was induced to swallow, with the result that there ensued copious vomiting of blood, mucus, and a little food, &c. A further dose of lime-water was administered after the lapse of two hours, and the patient was then put on fluid diet, and opium given internally, as there was constant gastric pain. In the second week after the attempt an attack of vomiting with hæmatemesis set in, which, however, yielded to ice and other astringents. A month later the patient was convalescent.

This case is interesting on account of oxalic acid being rarely used for poisoning purposes, and more rarely still with suicidal intent. When first summoned to the case, the extreme depression of the man's pulse at once showed me the gravity of his condition, and I am of opinion that the prompt action of the lime-water saved his life. An important point in the prognosis was the fact that the poison was not taken on an empty stomach, the patient having breakfasted about an hour previously. The motive for the act could not be discovered. He was in poor health previously to the attempt; but, on the other hand, was in a good position and well to do.

St. Benet's-place, E.C.

DOUBLE PRIMARY AMPUTATION ABOVE MIDDLE OF THIGH.

BY W. A. MACKAY, M.D., F.R.C.S.EDIN.

I DESIRE to place on record the following case as an instance of recovery from a very grave injury.

W. R——, an English sailor, aged twenty-six, was run over by four waggons of a mineral train. The wheels passed obliquely over both legs well above the knees. At 8 P.M. on Oct. 4th, 1889, in the English Hospital, the right leg was amputated just below the trochanter, and the left a little above the middle of the thigh. The circular operation was performed in both instances. I was assisted by my friend and colleague, Dr. Garcia Lopez. The patient was wildly delirious through the night. On

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the following day, at 8 A.M., the temperature was 104·2°; pulse 120. By 12 noon the temperature had fallen to 98·4°; pulse 112. Dry absorbent dressings were employed throughout, and no opium was at any time administered. White of egg and brandy were freely given during the first week.

A slight necrosis of the bone delayed the healing of the left stump. By the end of January both wounds were soundly healed. The above engraving is from a photograph that was taken six months after operation, the patient being then in perfect health.

Huelva.

CASE OF LARGE PULMONARY ABSCESS SURGICALLY TREATED; RECOVERY.[1]

BY FRANCIS W. GREENE, M.B. UNIV. DUB., L.R.C.S.I.

THE patient, a little boy six years old, had pneumonia of the left lung, the whole of which by degrees became hepatised; a crisis occurred, and the temperature remained normal for some time. The posterior portion of the lung partially cleared, and the tubular breathing lessened, but the anterior part remained solid and the respiration tubular in character. In the fourth week hectic set in, the evening temperature rising to 103°, generally normal in the morning. The expectoration gradually became purulent, and moist sounds were audible. In the fifth week he suddenly expectorated about half a pint of pus. For some days he had complained of pain in a spot in the anterior axillary line between the fifth and sixth ribs. There was tenderness on pressure and apparently slight bulging, though the skin was not reddened, with hollow gurgling râles audible over it after the abscess had burst. I diagnosed pulmonary abscess, and determined to explore in this situation. The physical signs for the days immediately preceding the operation were the following. The posterior portion of the chest was dull in patches, with comparatively clear spaces between them; respiratory murmur fair, with increased vocal resonance over the dull parts; coarse moist crepitations throughout. The anterior portion was absolutely dull, which did not alter on changing position; loud tubular breathing audible, and increased vocal resonance. There was no evidence of fluid in the pleura. On June 29th, being the second day after he had expectorated the large quantity of pus, the abscess having filled again, I operated. Under chloroform, and with antiseptic precautions, I pushed a fine trocar and cannula slowly between the ribs, withdrawing the trocar twice to see if pus exuded. At the depth of little over an inch I struck the abscess, the pleural surfaces being adherent; and using the cannula as a guide, I made an incision about an inch and a half long parallel to the ribs; through this I then pushed a trachea director forceps, and opening it the pus flowed freely to the amount of about half a pint. When the abscess was empty air escaped with each expiration, and I then passed a bullet probe directly inwards to the depth of four inches, to measure the length of tube required to drain it. A flanged rubber one of this length was introduced and tied in with tapes round the body. Over the mouth of the tube I applied a dressing of wood-wool wadding covered with waterproof. Next day I found the dressing saturated with pus, but the cough and expectoration had ceased, and that evening the temperature was normal, and remained so. I dressed the wound daily. The discharge rapidly decreased, and finally became mucous in character. I shortened the tube gradually, and removed it on the tenth day, and the incision was closed on the twelfth. The lung quickly cleared, and by the time the tube was removed the percussion sounds were normal. The boy recovered perfectly, and was running about in a fortnight from the time of the operation.

Mallow, co. Cork.

[1] Read before the Cork Medical and Surgical Society, Nov. 26th, 1890

ON HOT WATER FLUSHING OF THE UTERUS AFTER DELIVERY.

BY ALEXANDER DUKE, F.R.C.P.I.,
EX-ASSISTANT MASTER, ROTUNDA HOSPITAL; GYNÆCOLOGIST STEEVENS'S HOSPITAL.

IN every case of labour I now attend I make it a rule to wash out the uterus (at once when the placenta has been expelled either by expression or by the natural efforts) with hot water. The advantages claimed are these: (1) General stimulant to the patient; (2) produces contraction of uterus; (3) removes shreds of membrane, clots, &c.; (4) prevents after pains; and last, but not least, sets the practitioner's mind at rest by ensuring a permanent contraction of the uterus, and the certainty of knowing when the water returns clear of leaving a clean and untainted uterine cavity. The facility with which a uterus can be washed out directly after labour is a strong argument in favour of the proceeding. When attempted forty-eight hours later it will be found much more difficult, and not nearly so effective. In several cases that I observed while assistant physician to the Rotunda Hospital, the rise in temperature suggestive of puerperal fever was found to be entirely due to the retention of a portion of membrane or placenta in utero, as the washing out with hot water proved. Nothing can be more mischievous than the plan adopted (I regret to say by most midwives)—viz., that of "making a rope of the membranes"; and I am sorry to see this has not been condemned by any of the text-books on midwifery or nursing manuals with which I am acquainted. The fact of rotating the placenta when extruded (or partially so) brings on a uterine contraction, and on the membranes being tightly grasped by the os and cervix (though unseen), the twisting is continued till the membranes break off, a portion being left behind, giving rise to after pains, which when not sufficient to expel the offending cause become an undoubted source of danger to the patient by decomposition, as shown by the extreme rise in temperature, rigors, &c. I am so convinced of the value of washing out the uterine cavity with hot water (previously brought to boiling point), that I hope I shall be excused for saying that, in my opinion, it should be made a routine treatment in all cases of labour, whether in hospital or in private practice. The little additional trouble involved by this proceeding will amply repay the practitioner who adopts it, and who will, if wise, not trust it to the hands of the nurse. It is remarkable how suddenly the high temperature falls, and the dangerous symptoms vanish, when a decomposing piece of membrane (often of considerable size) has been washed out. The hastening of involution by the cleansing and stimulating effects of plain hot water is most satisfactory.

Dublin.

LEWES NAVAL PRISON.—The sanitary condition of the Lewes Naval Prison is stated to have become so unsatisfactory that arrangements are being made to transfer the whole establishment to Chatham, and the prison is to be permanently closed.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

NORTH-EASTERN HOSPITAL FOR CHILDREN

SPONTANEOUS DISLOCATION OF THE HIP; REDUCTION; SUPPURATION IN THE JOINT; INCISION; COMPLETE RECOVERY.

(Under the care of Mr. BILTON POLLARD.)

THIS case is an example of the rare condition known as pathological dislocation of the hip-joint, and is very notable for the extremely satisfactory result which followed the treatment. Interesting as the case is from the severity of the early symptoms dependent upon the disease of the humerus, and the fact that the pyæmic condition which was manifested ended in recovery, it is to the complete restoration of function in the hip after the displaced head of the femur had been reduced that we would direct attention. The published cases of "dislocation by distension" of the hip-joint are comparatively few, and have been observed as complications of fevers, especially typhoid, acute rheumatism, pyæmia, after scarlatina; also after effusion in the joint following injury. Many of the so-called spontaneous displacements appear on investigation to have been due to tubercular disease, and some of those recorded in adults read much like the accounts of tabetic arthropathy of the hip; in both of these more or less destruction of the structures entering into the formation of the joint has taken place. To these, which come under the "pseudo-dislocations" of Malgaigne,[1] and the second heading in Billroth's[2] classification—*Destructions luxationen*—we do not now refer, but to those dislocations, without appreciable alteration of the bones from relaxation and distension of the capsule and of the ligaments. As Mr. Morrant Baker[3] writes, "It is not the spontaneous dislocation that is the rarity, but its happening without the occurrence of those ulcerative changes which, in such a large majority of cases, seem to precede of necessity the exit of the head of the bone." We cannot, however, enter upon a full consideration of this subject. In some cases manipulation of the limb was followed by reduction of the displacement and recovery, but these are not numerous. In others the attempt at reduction has failed, the head of the bone has been excised, or the displacement has recurred. Of dislocation occurring during typhoid fever and successfully treated, a case is recorded in "Holmes' System of Surgery,"[4] the bone being reduced six weeks after it was noticed. During scarlatinal dropsy[5] a boy of six manifested signs of disease in the left hip, and reduced dislocation was found; no suppuration ensued, and the joint recovered. A woman[6] of nineteen had spontaneous displacement of the hip which came on five weeks after confinement, and which was successfully treated by manipulation eleven months later. In a case under the care of Dr. Ashmead[7] the dislocation, which was into the foramen ovale, was preceded for three months and a half by symptoms of disease in the hip-joint, and after the femur had been displaced for a month it was reduced, and a perfect result is said to have been obtained. We are indebted for the notes of this case to Dr. Randall, late house surgeon to the hospital.

E. D——, a girl aged six years, was admitted on April 14th, 1890. Four days before admission she was ill, and complained of pain in her right upper arm. The next day she was worse, and during the following night she was very feverish and delirious. No cause could be assigned for the illness.

On admission at 3 P.M., the child looked extremely ill; she had a dusky tint, was very drowsy, and took no notice of anything, and only feebly resisted when her arm was firmly palpated. Her lips were dry and coated with sordes; her tongue was dry, and covered with a thick brown fur. Pulse 142, respiration 44, temperature 104·8° F. The middle portion of the right upper arm was uniformly swollen and indurated, and the skin was slightly red. The shoulder and elbow-joints were not implicated. No swollen or tender spots were found in other parts of the body. Heart showed no signs of disease. Large râles could be heard over both lungs. Urine febrile, but otherwise healthy. At 7 P.M. an incision was made on the outer side of the humerus rather above the middle. No pus was found. The periosteum, which easily stripped off, was raised from the bone all round, but no pus was found. The wound was swabbed out with a 1 in 500 solution of perchloride of mercury, drained, and dressed with sal alembroth gauze and wool. On the following morning the temperature had fallen to 100·8°; the pulse was 142. The general condition was improved, and the child said she was better. On the evening of the second day after admission the temperature had again risen, and stood at 105°. During the next three days the child got worse, her tongue became dry again, and her pulse got weaker. The swelling of the arm increased, extending upwards to the shoulder, and downwards beyond the elbow. The temperature ranged between 103° and 105·4°. On the fifth day after admission an incision was made down to the bone along the posterior border of the deltoid muscle, and half an ounce of pus was evacuated. The abscess cavity was mainly outside the periosteum, but a piece of bone about a quarter of an inch square was found. The wound was mopped out with 1 in 500 solution of perchloride of mercury, drained, and dressed antiseptically. The temperature now fell very gradually, and the child began to look better. On the day after the second operation (the sixth after admission) the child complained of pain in her left hip and thigh. On the seventh day there were distinct signs of inflammation in the joint. The swelling of the upper arm subsided and the child's general condition and appetite improved, though her temperature still reached about 103° in the evening. On the thirteenth day after admission there was no spontaneous complaint of pain in the hip; the joint was still rather stiff, but gentle passive movement was painless. On the twenty-sixth day the first operation wound had healed, but the second was still discharging pus; the temperature now ranged between 98·6° and 101°; the left hip was still swollen, but the position of the bones was normal, and was known to remain so till the twenty-ninth day; during the following night the child was noticed to be uncomfortable, but she made no complaint of pain. On the thirtieth day after admission the left hip presented all the typical signs of dislocation on to the dorsum ilii, and any attempts at movement produced great pain. The dislocation was readily reduced by manipulation whilst the child was under the influence of chloroform, and the limb was secured in its proper position by means of a Liston's long splint. The temperature at once fell a degree lower and gradually reached the normal, at which level it remained from the forty-fifth to the forty-ninth day, and the swelling in the region of the left hip-joint subsided. On the forty-eighth day a little fulness in front of the joint was again noticed, and the temperature began to rise again, ranging in the evening from 100° to 102°. On the sixty-first day after admission the hip-joint was opened by the anterior incision and some pus evacuated. The epiphysis of the head of the femur was not loose, and the cartilage appeared to be healthy. The joint was syringed out with 1 in 500 solution of perchloride of mercury and then with 1 in 3000 solution of the same; the wound was drained with a small tube and dressed with sal alembroth gauze and wool. A Thomas's hip splint was applied. The temperature now fell, but it was not altogether normal until three weeks after the operation. The wound had healed a month later. Four months after admission three small sequestra were removed from the humerus. A fortnight later a soft semifluctuating spot was noticed on the scar of the hip incision. This was opened and scraped. No further operations were required. The child was sent to a convalescent home six months after admission. Both arm and hip were then soundly healed. The child continued to

[1] Traité des Fract. &c., 1855.
[2] V. Pitha and V. Billroth, tome ii., p. 657.
[3] St. Barth. Hosp. Reports, 1874, p. 287.
[4] Vol. ii., p. 866, Mr. Barker.
[5] Mr. Joseph Smith, Brit. Med. Journal, vol. i. 1872, p. 209.
[6] Dr. Thorndike, Boston Med. and Surg. Journal, 1888.
[7] Trans. Coll. Phys. Philadelphia, 1846, vol. i., 265.

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wear a single Thomas's splint for two months longer, and after that time she was allowed to walk without any support. Now, nine months after admission to the hospital, eight months after the spontaneous dislocation of the hip, seven months after the joint was drained, and seven weeks after the splint was left off, the child can walk without any limp. There is no shortening of the affected limb, and the movements at the joint are free in all directions. The only movement which is restricted is flexion, and that can be made through about eighty degrees.

Remarks by Mr. POLLARD.—The case recorded above presents several points of interest. The primary focus of disease was very limited, not more than a quarter-inch square of the surface of the humerus being exposed as the result of the disease, but the child was so ill that for ten days it seemed hardly possible for her to recover. At the first operation the bone was exposed rather below the diseased spot, and the periosteum was raised for about two inches from the entire circumference of the shaft of the humerus, but no pus was found, and no necrosis of the bone took place at this part of the humerus. The left hip was dislocated, owing to softening of the ligaments and acute distension of the capsule with fluid. The exudation at that time was apparently serous, for the fever diminished and the general condition of the child improved after the escape of the fluid from the joint into the peri-articular tissues, at the time when the dislocation occurred. More than a fortnight elapsed between the reduction of the dislocation and the onset of symptoms suggestive of suppuration in the joint. The pus was let out by the anterior incision, and the cavity of the hip-joint was washed out with mercurial lotion. There was no need for the removal of any bone. The recovery of the joint has been so complete that the child walks without the least limp, and the movements are nearly as free as those at the healthy hip. That such a perfect recovery has occurred after suppuration in the hip-joint is due to the fact that the disease was not, as is usually the case, of a tubercular nature. It is well known that the early evacuation of pus from the knee-joint in pyæmic arthritis frequently arrests the destructive changes, and is followed by a perfect recovery of the joint. Such success is more rarely met with when the hip-joint is diseased, as the diagnosis is often not made until irreparable damage has been done. But still, it is desirable that a careful differentiation should be made between pyæmic and tubercular arthritis, for whilst the former may be cured by simple evacuation of the pus, the latter will usually need an extensive removal of the diseased tissues in order to secure a rapid recovery, and even then the function of the joint will be greatly impaired.

BRADFORD INFIRMARY.

A CASE OF ADENOMA OF THE PITUITARY BODY; NECROPSY; REMARKS.

(Under the care of Dr. MAJOR.)

TUMOURS of the pituitary body are rarely met with, and the account of this case will therefore be read with interest. Rokitansky wrote of the diseases of this body under the three headings—(1) anomalies in size, (2) diseases of texture (3) adventitious growths, but the literature on the subject is limited. Dr. Scott Orr wrote a paper in 1852,[1] in which cases were given and reference made to patients described by Dr. Heslop and by the brothers Wenzel. He has also described[2] the history and post-mortem examination of a patient who died from cancer of this part. Dr. Harvey[3] had a patient under his care, suffering from sudden and complete amaurosis, in whom an abscess of the pituitary gland with caries of the temporal bone was seen. Lancereaux[4] found a tumour of the base which had its origin in this gland. Drs. Loeb and Arnold[5] describe and illustrate an adenoma, many of the characters of which resemble the case under the care of Dr. Major. Dr. Gowers[6] writes with regard to tumours of this part: "Tumours of the pituitary body cause usually vague symptoms ....., with very frequent failure of sight, and indications of a lesion of the chiasma are present in many cases. Sometimes, however, the tumour causes very slight symptoms, and may run an almost latent course, and this although the size attained is very considerable." For the notes of this case we are indebted to Mr. James Kerr.

C. S——, aged twenty-five, married. The previous history of the patient was uneventful. She ceased to menstruate in May, 1889. She had "caught cold," and had had intense headache for a week when she became an out-patient in July. She was treated for the headache, with other symptoms described as hysterical, for four months, and she was admitted to the infirmary in October under the care of Dr. Major, her chief complaint being of headache. Her behaviour was irrational and her mental condition flighty, occasionally even maniacal. During November she became apathetic, slept nearly constantly, became dirty in her habits, and, after three or four fits of hysteroid character (eyes turned up, limbs extended, unconscious), she improved, became reasonable, took an interest in things, and began to assist in the ward. The headaches became better, and towards the end of the month she went to a convalescent home. No optic neuritis was noted at any time.

She passed out of sight till the spring of last year, when, on account of headache and various pains, she again became an out-patient. In June some occasional vomiting was complained of; there was no optic neuritis. In July the pains were very bad; purposeless vomiting was present; and about the middle of the month optic neuritis was discovered. On readmission to the infirmary she was fairly nourished, with slight anæmia. She kept quiet and motionless, moaned occasionally with pain, had frequent yawning and shivering attacks, without fever or sensation of cold. The temperature was subnormal; the urine free from sugar, with an occasional trace of albumen. Double optic neuritis, with greatest swelling in right eye, was found; blindness of the right eye first noticed by patient a few days previously, and left temporal hemianopsia; no paralysis or other localising symptom was present. She had delusions, got a little delirious and weaker; became wasted; the limbs flaccid, but not paralysed; passed evacuations unconsciously; had left ptosis for a few hours; and after four or five days passed in a semi-comatose condition became quite unconscious, and died on Sept. 28th.

Necropsy, thirty hours after death.—The cerebral convolutions were somewhat flattened, the ventricles contained an excess of clear fluid, and on examination of the base of the brain a bilobed, flattened tumour about the size of a chestnut was seen projecting in the interpeduncular space, the posterior surface of the optic chiasma was half buried, and the right optic tract was slightly displaced outwards and half buried in the tumour; to the finger it felt cystic, like a distended gall-bladder with gall-stones. The tumour was sessile, had not grown into the ventricles or caused absorption or marked displacement of tissues around it. Microscopically it was made up of thick fibrous trabeculæ carrying large vessels, and covered with flattened endotheloid cells. The alveoli filled with parenchyma made up of large epithelial cells with granular and fatty matter. Compared with sections of normal pituitary body, the details of structure were similar. There was no atrophy of the optic nerves on examining sections.

Remarks by Mr. KERR.—For the first six months the symptoms were hysterical, later they became those of intracranial tumour. Optic neuritis was late in appearing; sometimes it never occurs. Atrophy without neuritis has been noted in cases of acromegaly where there is frequently hypertrophy of the pituitary body, associated with fattening and glycosuria, which last two symptoms are described by authorities as common in cases of pituitary tumour, but were wanting in this case. The tumour is probably an adenoma of the pituitary body.

[1] Edin. Med. and Surg. Journal, vol. lxxvii., p. 251.
[2] Glasgow Med. Journal, 1853, vol. i., p. 417.
[3] Dublin Quarterly Journal of the Med. Sc., 1855.
[4] Bull. Soc. Anat. de Paris, 1859, vol. xxxiv., p. 105.
[5] Arch. für Path. Anat., Berlin, 1878, vol. lvii., p. 172.
[6] Diseases of the Nervous System, vol. ii., p. 481. See also an interesting example found by Professor Cunningham in the dissecting room: Jour. Anat. and Physiol., 1879.

NEW LUNATIC ASYLUM FOR GOVAN.—Ex-provost Dick, the chairman of the Govan District Lunacy Board, on the 13th inst. performed the ceremony of cutting the first sod at Hawkhead, near Paisley, in connexion with the erection of a new asylum for this board. Accommodation will be provided for 400 patients. The estimated cost of the building is £70,000.

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Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Melanotic Sarcoma of Liver.—Diverticulum of Œsophagus.—Hæmatoporphyrin in Urine.—Subacute Gastritis.—Multiple Tubercular Tumours in Brain and Viscera.

AN ordinary meeting of this Society was held on Jan. 20th, the President, Dr. W. H. Dickinson, in the chair.

Dr. DELÉPINE read a paper on a case of Melanotic Sarcoma of the Liver, which had been previously shown as a card specimen. The patient was a man aged sixty-three, who had been feeble and melancholic, and died in an asylum in 1885. His abdomen had been noticed to be enlarged for only a fortnight before his death. He did not complain of pain, but rapidly emaciated and sank. At the necropsy the liver was found to be enormously enlarged, the capsule thickened and increased in several places, penetrating along the capillaries between the hepatic cells. The vessels were much altered, some of them containing large masses of micrococci. The portal and intralobular veins also showed changes, the former having the fibrous tissue surrounding them greatly increased, and the endothelium of the latter having undergone extensive proliferation. Some of the appearances found suggested an explanation for the occurrence of melanuria. The hepatic epithelium was much atrophied, either owing to the flattening of whole sets of lobules at the periphery of large sarcomatous masses, or else due to the intravascular growth of sarcomatous nodules in the same lobule. The growth was of the nature of a fasciculated spindle-celled angio-sarcoma; some of the nodules were entirely or partly pigmented, and it was alveolated, owing to its mode of origin. The following points were of interest: The whole of the liver was involved in changes beginning in the vessels of the nature of proliferative endophlebitis; these changes were limited to the liver; the contents of the vessels were being gradually replaced by an embryonic tissue similar to that from which both the blood and bloodvessels had originated, and which was actively multiplying. The distribution of the growth seemed to indicate clearly that it was started by some irritative process. Dr. Delépine asked whether the melanine or some antecedent of it might not be brought to the tumour by the bloodvessels or lymphatics, and whether, when not utilised in the usual way, it might not become precipitated. The changes which occurred in the urine in cases of melanuria showed that it was only after the urine had become oxidised that it assumed its dark colour, and possibly a similar process occurred in the tissues.—Dr. PENROSE referred to a card specimen of melanotic sarcoma he was showing that was taken from a woman aged forty-four, who was much emaciated and who had been ill for eighteen months. The urine had been repeatedly examined and was discovered to be occasionally dark in colour and to contain uro-melanin. At the necropsy the melanotic tumour in the liver was found to be of a sarcomatous nature, and the only other growths were tiny spots on each side of the ventricular septum of the heart.—Mr. ROGER WILLIAMS inquired if the rectum had been examined for a primary growth.—Dr. HALE WHITE said that in all the cases he had found on record of primary melanotic growth death had ensued in four months. Dr. Penrose's cases seemed to be exceptional in the long duration of the symptoms. The eye as well as the rectum should be carefully examined for primary growth.—Dr. CAYLEY referred to a case recorded in the Transactions of melanotic hepatic tumour in which ten years before death one of the patient's eyes had been removed for a melanotic growth. This showed how long a time might elapse before the development of a secondary deposit.—Dr. DELÉPINE, in reply, said that he was informed that other growths were looked for in every part of the body with a negative result, and there had been no history of a primary growth. The tumour appeared to grow very rapidly during the fortnight before death, and all its characters were those of a primary growth.

Mr. T. F. CHAVASSE showed a specimen of Diverticulum of the Œsophagus from a male patient, much emaciated, aged forty-nine, on whom gastrostomy was performed at the General Hospital, Birmingham, in July, 1890, as an attempt to avert starvation. He gave a history of dysphagia extending over a period of ten years, death taking place two days after the completion of the operation from pneumonia and exhaustion. The necropsy revealed a posterior diverticulum four inches deep from the level of the arytenoid cartilages, three inches and a half broad, and two inches and a half thick, with a mouth one inch in diameter and a capacity of six ounces. The walls of the sac were as thick as those of the œsophagus, and lined throughout with mucous membrane. When filled with fluid the opening in the œsophagus was firmly closed by the pressure of the distended sac. There was no malignant growth present. It was pointed out that the absence of muscular tissue, except at the mouth of the sac, supported the contention of Zenker and von Ziemssen that these posterior diverticula were primarily due to the effects of pressure, and not to a congenital defect, as held by some authorities. The various lesions giving rise to such diverticula and the rarity of the condition were discussed. Reference was made to the ages and modes of death in the cases recorded.

Dr. S. M. COPEMAN showed specimens of Urine containing Hæmatoporphyrin from two cases under the care of Dr. Ranking, one of which died, while the other had recovered. Reference was also made to two other cases recently published in which the symptoms were similar and the pigment, although its true nature was not at the time determined, was apparently identical. All four patients were highly neurotic women of middle age, who had suffered from habitual constipation, sleeplessness, and abdominal pain, although no organic mischief could be detected. Great prostration, and sometimes apparent inability to move the limbs, was accompanied by the excretion of small quantities of urine only, which had a dark purple-red colour, but contained neither hæmoglobin, bile pigment, albumen, or sugar. Finally, three of the four patients died, collapsed and comatose, within a week of the appearance of severe symptoms. The absence of blood from the specimens of urine was determined by the spectroscope, which showed a four-banded spectrum, at first sight not unlike methæmoglobin, but which underwent no change on the addition of reducing agents such as ammonium sulphide. Measurements of the wave-lengths of the absorption bands showed that the pigment was hæmatoporphyrin. The use of simple chemical tests, such as the guaiacum test, gave no reaction; while boiling, the use of nitric acid, and saturation with magnesium sulphate also gave no result, showing that proteids were absent. Strong sulphuric acid brought about a change in colour of the fluid, while the spectroscope showed that the pigment had become converted into acid hæmatoporphyrin. Maps were shown of the spectra yielded by the fluid both before and after the addition of sulphuric acid. The addition of zinc and ammonia gave no distinct fluorescence, thus proving the absence of urobilin. With the same reagents the band at F did not shift, so that the pigment had not reached the stage of urohæmatoporphyrin. The bands of the unaltered fluid did not, however, exactly correspond to those usually assigned to hæmatoporphyrin, as far as could be judged by comparing spectra of alcoholic and aqueous solutions of the respective pigments, that present in the urine having probably undergone a slightly less degree of metabolism. It might, however, fairly be called neutral hæmatoporphyrin. All the specimens of urine had a peculiar smell resembling acetone, and did not undergo putrefactive change for months. The suggestion was made that the disease from which the patients had suffered was allied to pernicious anæmia, in which also a considerable excess of pigment, apparently derived from abnormal hæmolysis, is present in the urine. The obstinate constipation, which was a marked symptom in all the cases, might have led to the absorption of poisonous products from the intestine, in which case the blood destruction would be likely to take place in the portal system—a theory supported by the absence of proteids in the urine such as are found together with the pigment after a paroxysm of hæmoglobinuria.—The PRESIDENT said that the disease bore some points of resemblance to ordinary hæmoglobinuria. He wondered what local influence could cause this rare disease to attack two persons in the same house. He inquired if there were any discolouration of the skin or any suspicion of malaria.—Dr. HUNTER said that the observations as to acidity of urine and resistance to putrefaction suggested alliance with pernicious anæmia rather than with paroxysmal hæmoglobinuria. That two of the patients came from the same house suggested some form of

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poisoning. The liver was no doubt the chief seat of the changes which led to the formation of pigment in the urine, though muscular and other tissue might occasionally serve as a source.—Mr. E. WILLETT asked if the iron-containing waters of Tunbridge Wells had anything to do with the cause in these cases.—Dr. BERNARD O'CONNOR said it would be interesting to hear the opinions of those who had had experience of poisoning by coal-gas.—Dr. COPEMAN, in reply, said that there was no discolouration of the skin and no history of malarial poisoning. The two patients who were in the same house were in a private hospital, and there was no suspicion of poisoning by food or by coal-gas. The resistance of the urine to putrefaction was very marked. Hæmoglobin or methæmoglobin always had some proteid attached to it; but that was not the case in the present instance, or in cases of pernicious anæmia. In these patients obstinate constipation was a marked symptom, and therefore there was a possibility of self-intoxication. Hæmatoporphyrin was iron-free hæmatin, and therefore its appearance was probably not caused by ferruginous waters.

Dr. WILLIAM HUNTER then described a case of Subacute Gastritis, occurring in a man aged fifty-nine, who during the last three years of his life presented all the features of pernicious anæmia. Throughout the entire course of his illness there were none of the usual symptoms of dyspepsia, the only sign pointing dubiously in this direction being a raw and tender condition of the tongue from time to time, the surface of both tongue and fauces presenting angry red patches, sometimes going on to vesicle formation. Shortly before death these subsided, leaving the tongue pale and flabby, its mucous membrane presenting a smooth and atrophied appearance. The necropsy revealed characteristic changes in the liver, spleen, and kidneys connected with excessive destruction of blood. The stomach showed no obvious morbid appearances to the naked eye except that it was very thin. Microscopically, there were found localised in patches at the cardiac end of the stomach changes both in the mucous and submucous coats. The changes were partly of simple atrophic and partly of subacute inflammatory character; in the former case the tubes being fewer in number and replaced by fibrous tissue, while in the latter the tubules were also reduced to a state of atrophy by the pressure of active proliferating connective tissue cells, by which they were closely surrounded. Around these inflammatory foci the capillaries were greatly distended. The submucous coat was in parts greatly thickened, especially in those parts opposite to the inflammatory areas in the mucous membrane. The vascular changes involved not only the arteries and veins, but extended also to the arterioles and capillaries, and the walls of the vessels were greatly thickened and infiltrated with active cells, the thickening being at parts almost so great as to lead to occlusion. These changes in the submucous coat were also continued to the cardiac end of the stomach; in the pyloric region the changes were of the more chronic character usually found in persons dying after the age of fifty, the thickening of the coats of the vessels and the slight increase in connective tissue being unaccompanied by any active proliferation of cells. The appearances were demonstrated by a series of microscopical specimens, showing the changes around the gastric follicles and in the vessel walls. The case raised the question as to the nature and causation of certain forms of gastritis, which ran their course unattended by any special gastric symptoms, and it also suggested an inquiry into the relation between the gastric changes and hæmolytic changes in the blood, which constituted the distinguishing pathological feature of the pernicious anæmia with which they were not infrequently associated. The factors which brought about the simple atrophy of the tubes, which was common in people dying above the ages of forty-five or fifty, were the same as operated at this period of life to induce similar changes in other organs—namely, diminished blood-supply and impoverishment of blood. In the present case the extreme poverty of the blood and the marked thickening of the vessel walls might both be looked on as factors in causing a certain degree of atrophy. But the chief change was the subacute inflammatory process which was present in both the mucous and submucous coats. The lesion in these two coats did not appear to him to stand to each other in the relation of cause and effect, but both seemed to be the result of some special inflammatory process localised in certain portions of the mucous membrane. Certain of the veins and lymphatics in the inflamed area were filled with large numbers of bacilli, which stained readily; while the numerous bacilli and bacteria on the surface of the mucous membrane, where putrefaction had already set in, failed to do so. Evidence of mycotic infection had been found in a few other cases, and these suggested the possible relationship between organised infection and certain subacute processes in the stomach which ran their course, as in the present case, without any of the usual symptoms of stomach disease. The relation between the gastric and the hæmolytic changes, no less than the nature of the former, was also a matter of pathological importance, and in this connexion he mentioned that he had isolated from the urine during life certain products of bacterial activity not usually found in the urine either in health or in most diseases. Two of these he had identified as well-known putrefactive alkaloids—cadaverine and putrescine, and the third also was, like these, a diamine body, but distinct from them. He was inclined to connect the destructive changes in the blood with the absorption and presence of these bodies, and these in turn with the inflammatory changes in the gastric walls.—Dr. N. MOORE remarked that the lymphatic glands near the stomach were said to have been enlarged, and asked if the rectum had been examined, or any other starting point for malignant disease looked for.—Dr. HUNTER, in reply, said he had found no cancer anywhere, and if he had it would not have accounted for the pernicious anæmia any more than the gastritis did.

Dr. SAMUEL WEST then described a case of Chronic General Nodular Tuberculosis, there being multiple tubercular tumours in the brain, pleuræ, peritoneum, and other organs. The patient, a male aged fourteen, was admitted for headache and optic neuritis, and the diagnosis of cerebral tumour, probably tubercular. He had been ailing for a year, but had no definite symptoms until one month before his admission. He then had headache and vomiting, and in a few days his eyesight began to fail. The patient was delicate and anæmic, but except for a few enlarged glands in the neck, axillæ, and groins, presented no abnormality except double optic neuritis. The patient died five months after admission—i.e., six months after the first definite symptoms. Nothing occurred except gradual failure of strength. Headache was frequently complained of, and was often severe, and vomiting occurred occasionally. Three or four fits occurred at irregular intervals of slight intensity. They were never severe, and threw no light on the case. At the post-mortem examination caseous nodules, varying in size from a pea to a nut, were found in many parts of the body on the parietal and visceral layers of the pleuræ and peritoneum. The lungs were studded with small nodules. The bronchial glands were as large as Tangerine oranges, and very hard. On the peritoneum the nodules were found on the intestines, on the stomach, and on the capsule of the liver and spleen, but did not involve the deeper structures. The mesenteric glands were enlarged. Ulcers existed in the intestines of the ordinary tubercular character, but were peculiar in having no secondary tubercular nodules on the peritoneal surface corresponding with them. One small gland had formed a communication with the intestine, and was discharging into it. The kidneys were studded with nodules, but the capsules were free. The swelling in the left wrist was filled with caseous substance. In the brain there were twelve tumours of varying size, nearly all in the white matter and in all parts of it; one only reached the surface. The left optic thalamus seemed to be entirely converted into a tubercular mass. The cerebellum contained nodules in both lateral lobes, and a large one in the middle lobe. The disease might be called chronic general nodular tuberculosis; it was rare in man, though resembling what was common in some animals. Clinically it was of interest on account of the entire absence of symptoms until six months before death, and they were then limited to those general ones of cerebral tumour, which did not suffice to suggest this position of the lesion.

The following card specimens were exhibited:—

Mr. L. A. DUNN: Caries of the Scapula.

Dr. DELÉPINE: Charcot's Crystals.

Dr. F. PENROSE: Melanotic Growth in Liver.

Dr. ROLLESTON: (1) Communication between Ventricles of Heart; (2) Aneurysm bursting into Left Bronchus.

Dr. J. GALLOWAY: Aneurysm of the Superior Mesenteric Artery with Hæmorrhage into the Mesentery and Peritoneal Cavity.

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CLINICAL SOCIETY OF LONDON.

Annual Meeting.—Intussusception with Volvulus.—Acute Intussusception.

THE annual meeting of this Society was held on Jan. 9th, the President, Mr. Christopher Heath, being in the chair.

Dr. WHIPHAM and Mr. G. R. TURNER communicated a paper on a case of Intussusception, with Volvulus of the Small Intestine in two places. The patient was a cook aged twenty-nine, who was admitted into St. George's Hospital, under the care of Dr. Whipham, on Jan. 29th, 1890. She had suffered many years from "indigestion." Three weeks before admission she suffered from influenza, and soon after the onset of the disease experienced sudden acute pain at the umbilicus for about ten minutes; uncontrollable vomiting followed this. The attack passed off, and it was not until Jan. 28th, during the act of defecation, she again felt intense umbilical and lumbar pain. There was a doubtful history of blood in the motions. She vomited and had hiccough. The symptoms were somewhat relieved by morphine before admission. Catamenia irregular. On admission, she was restless with an abdominal aspect, distended abdomen, quick pulse, pelvic tumour. An enema brought away some foul smelling blood-stained fæcal matter. Abdominal section was performed by Mr. Turner. The pelvic tumour proved to be the uterus enlarged to the size of third month of pregnancy. Volvulus of the small intestine in two places was found, at the lower place (the upper ileum) of one coil of bowel round another, and higher up a twist of the jejunum on its mesenteric axis. These were unravelled, and then in the right hypogastric region an intussusception involving the jejunum (some five feet from the pylorus) was discovered. There was no difficulty in relieving this, but the intussusception, though not entirely lustreless, was deeply congested and on the verge of gangrene. The question of excision of this portion of the intestine was considered, but the state of the patient was evidently such as to forbid the attempt. The peritoneum was flushed and drained by one of Keith's tubes, the wound being united in the usual way. The patient had no further vomiting, but died some twenty-four hours after the operation. Post-mortem examination showed the intussusception to have been caused by a polypoid growth of the small intestine, all causes of the obstruction had been removed by the operation. The uterus was filled with blood-clot, and was about the size of third month of pregnancy; there was a true corpus luteum in the right ovary. It was suggested that the volvulus was secondary to the intussusception. Some remarks were made as to the diagnosis and rarity of the case, and as to the necessity in cases of obstruction requiring abdominal section for the operator to be quite certain that all the possible causes of obstruction have been removed. In this case there were no less than three, and in many there were more than one.

Mr. LOCKWOOD read a paper on a case of Acute Intussusception in a child four year old, in which resection was performed, and death resulted from shock twenty hours after operation. The patient, who was a strong and healthy female, four years of age, had been seized with purging and vomiting five days previously, but no blood or slime was passed with the motions. The sickness continued, and the abdomen became distended, but nevertheless a tumour about three inches long could be felt in the right iliac fossa. An intussusception was diagnosed, and the abdomen opened by an incision in the right linea semilunaris, with the faint hope of being able to withdraw the invaginated bowel. There was slight peritonitis, and the invaginated bowel, which was part of the ileum, was firmly adherent to its ensheathing intestine (which was also ileum), and the peritoneum split at every attempt at withdrawal. It was therefore decided to resect the intussusception, and with this end in view the peritoneal sac in the neighbourhood of the wound was washed with sponges, and the intestines above and below the diseased part controlled with an elastic band. The intussusception and a wedge of mesentery were removed, and after the distended intestines had been emptied of flatus and fæces, suturing was done by the Czerny-Lembert method. The abdomen was closed after being irrigated with hot water, but this increased the shock instead of diminishing it. There was exhaustion before the operation, and considerable collapse after it was finished, and from the latter the child never rallied, and died twenty hours after the operation. The examination showed that the lumen of the bowel was quite pervious, and that the line of sutures was secure. In commenting upon this case, the fatal result was attributed mainly to the time occupied in the operation. The resection of a portion of mesentery had much to do with this, as it caused troublesome bleeding and seemed unnecessary. The emptying of the distended bowel was of great importance, both as an aid to the performance of the operation, and as adding to the subsequent security of the stitches and relief from obstruction. The literature of the subject seemed to show that out of fifteen cases of resection of intussusceptions three had recovered. However, a distinction should be made between acute and chronic cases. Finally, the desirability of adopting other methods of operating with a view of saving time and diminishing shock were alluded to.—Dr. ORMSBY of Dublin related a case of obstruction of the bowels which came under his notice in August, 1889. It was that of a woman aged thirty-five, who had been recently confined. Some peritonitis had followed, together with intestinal obstruction, the bowels being confined for forty days. Abdominal section was performed, multiple punctures being made to let out flatus. A band of lymph was found, stretching from the broad ligament of the uterus across the descending colon. This was broken down, and the patient made a good recovery.—Mr. HARRISON CRIPPS said the treatment Mr. Lockwood had adopted gave the patient the best chance of recovery. He referred to a case of intussusception in which the ileo-cæcal valve protruded through the anus. Abdominal section was performed, and he reduced almost the whole of the gut by pushing it up from below by pinching the large intestine between the finger and thumb; this was preferable to pulling on the gut from above. If he could not have returned it thus he would have made an artificial anus just above the ileo-cæcal valve. He had seen a case of intussusception in which the gut protruded through the anus, and was cut off inch by inch. The child made a good recovery, but died later from another affection. At the necropsy it was found that the whole of the large gut had been passed per anum.—Mr. HOWSE said that in those cases in which the ileo-cæcal valve protruded from the anus adhesion usually took place about the valve, and this rendered reduction difficult. He therefore advocated cutting away the ileo-cæcal valve, sewing the cut edges of the gut, and then reducing the rest with the help of an abdominal section. He had found puncturing the intestine to allow of the escape of flatus to be an unsafe proceeding, as thin feculent matter was apt to ooze from the pricks, and the puncture did not admit of easy suture.—Mr. PARKER, in a case of abdominal section, said he got rid of the gas by passing a soft tube per anum and emptying the intestine by manipulation. He had recently seen a child aged eighteen months, in whom an acute intussusception had become grafted upon a chronic one. At the operation he was unable to completely reduce the gut, but the child recovered and he afterwards watched the gradual absorption of the lump in the abdomen.—Dr. WHIPHAM said that great care was necessary in administering opium in these cases. It was proper to give it in the early stages, but later, when constipation was established, and vomiting had occurred, it should be cautiously administered or withheld altogether. It tended to mask symptoms, to obscure diagnosis, and to lead to a deceptive calm, encouraging delay in operation.—Mr. BARKER alluded to a method of treating those cases where the intussusception could not be reduced. A longitudinal incision should be made through the intussuscipiens, and then the inner intussuscepted part should be cut away, the original incision being closed with sutures. The natural process of cure was thus imitated, but he had not had an opportunity of trying it. In one case where the gut was largely distended he incised it with a knife, let out gas and fæces, and afterwards stitched it up.—Dr. KINGSTON FOWLER referred to the case of a youth aged twenty, who had been in St. George's Hospital, where some glands in the neck affected with melanotic sarcoma had been removed. He came later into Middlesex Hospital, complaining of pain and abdominal distension, and complete obstruction developed. On consultation, an abdominal section was recommended, but this the patient objected to. A few days later he passed a mass of intussuscepted bowel, the seat of an annular growth of melanotic sarcoma. Most surgeons would admit that the results of operation in many forms of obstruction were not all that could be hoped for, and when physicians could remember cases that were relieved naturally at the last moment, this made them delay sometimes before transferring the

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patient to their surgical colleagues. With regard to intussusception, however, physicians certainly ought not to be reproached with tardiness in calling in surgical aid, for in this class of cases it was commonly done quite early.—Mr. LOCKWOOD, in reply, could not believe that the making an artificial anus above the intussuscepted gut was a good measure, for in nine recorded cases it had been followed by a fatal result, and a fæcal fistula in the small intestine was very distressing. The objection to Mr. Barker's proposition was that the gut was probably not in a sufficiently sound state to bear the suturing of the longitudinal incision. He preferred an incision to a puncture in letting out flatus.

The members then proceeded to the business of the annual meeting. The Secretary read the report of the Council, which showed that the membership and finances were in a very satisfactory condition. The customary votes of thanks to the retiring officers having been passed, the following officers were declared duly elected for the ensuing year:—President: Sir Dyce Duckworth, M.D., LL.D. Vice-Presidents: Drs. Charlton Bastian and Alfred B. Duffin; Messrs. H. G. Howse, M.S., Henry Gawen Sutton, Berkeley Hill, and Septimus Sibley. Treasurer: Dr. William Miller Ord. Council: Drs. John Abercrombie, Thomas Barlow, Charles E. Beevor, Robert L. Bowles, Thomas Churton, E. Diver, Donald William Charles Hood, Percy Kidd, Arthur Edwin Temple Longhurst, Thomas John Maclagan, William Pasteur, and P. H. Pye-Smith; Messrs. W. H. A. Jacobson, William Anderson, Anthony A. Bowlby, George Buckston Browne, John R. Lunn, Malcolm Morris, Robert William Parker, and J. Knowsley Thornton. Hon. Secretaries: Dr. David White Finlay and Mr. William Henry Bennett.

HARVEIAN SOCIETY.

Annual Meeting and Conversazione.

THE annual meeting of this Society was held on Thursday, January 14th, at the Stafford Rooms, Tichborne-street, Edgware-road. A ballot was taken for the election of officers for the ensuing year, and the following gentlemen were declared by the President, upon the report of the scrutineers (Messrs. Sedgwick and Sidney Phillips), to have been unanimously elected:—President: Mr. Henry Cripps Lawrence. Vice-Presidents: Dr. M. Handfield-Jones, Mr. J. E. Lane, Mr. C. B. Lockwood, Dr. Stephen Mackenzie. Treasurer: Mr. Malcolm Morris. Hon Secretaries: Mr. D'Arcy Power, Dr. G. William Hill. Council: Mr. Thomas Bryant, Mr. Watson Cheyne, Mr. G. P. Field, Dr. J. F. Goodhart, Mr. C. D. Bowditch Hale, Dr. Wm. Winslow Hall, Mr. W. H. A. Jacobson, Dr. Robert Maguire, Mr. Herbert W. Page, Dr. Sidney Phillips, Dr. Marmaduke Prickett, Dr. C. Theodore Williams.

The outgoing President, Mr. Thomas Bryant, then gave his address on the treatment of Internal Intestinal Strangulation and Obstruction. This address was published in our issue of last week.—Dr. Maguire, the senior secretary, read the annual report, which indicated that the financial condition of the Society was prosperous, and that a large amount of good work had been done during the preceding year.—Mr. Thomas Bryant then left the chair, and inducted the newly-elected President, Mr. Cripps Lawrence. A vote of thanks to the retiring President was proposed by Dr. Morton, and seconded by Dr. Wall; and a similar vote to the retiring Vice-Presidents and members of Council was proposed by Surgeon-General Harris, and seconded by Dr. Carson Smyth. — Mr. Eastes regretted that Mr. Field felt himself obliged to resign the office of Treasurer, which he had held for several years, and Dr. Blenkinsop seconded the motion that the best thanks of the Society be tendered to Mr. Field for the services which he had rendered in the capacity of Treasurer.—Dr. Beale proposed, and Mr. Malcolm Morris seconded, a vote of thanks to the Secretaries.—After the business of the evening had been concluded, the Society entertained a large number of its members and their friends at a smoking concert.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING was held on Jan. 8th, David Drummond, M.D., President, in the chair.

Dr. LIMONT demonstrated Dr. Russell's alleged characteristic organism of cancer, and expressed his belief that the bodies shown were not fungi. With this opinion the members taking part in the discussion coincided.

Dr. MURPHY, according to notice given, proposed the resolution: "The members of the Northumberland and Durham Medical Society deeply regret that a report of a portion of the transactions of last meeting has been communicated to the Newcastle daily papers, and they trust that this expression of their disapproval of such proceeding will prevent its repetition." Seconded by Dr. Anderson (Seaton Delaval), and carried *nem. con.*

Cases.—Dr. ADAMSON showed a lad, who, he believed, had recovered from tubercular meningitis.—Dr. LIMONT showed two boys suffering from lupus, whom Mr. Page had treated for a month by Koch's fluid. The usual reactions had followed injection, and the boys were considerably improved. Dr. Limont said scraping would have given a better result, in less time and with less discomfort to the patient; the permanency of cure effected by Koch's treatment had yet to be proved.—Dr. C. L. LIGHTFOOT showed a girl whom he treated for lupus of the nose three years ago by free scraping, followed by the application of equal parts of lactic acid and kaolin; the wound healed in a week, and had remained so ever since.—Dr. ANGUS showed a woman aged fifty, on whom Dr. Arnison had operated for fæcal fistula resulting from a Littre's hernia, which had become gangrenous and formed an abscess. The opening, which was in the small intestine, was closed by Lembert's sutures, and the patient made a good recovery and now suffered no trouble of any kind.—Dr. MURPHY showed a man aged forty-five on whom he had performed cholecystotomy.—Dr. HUME showed a man on whom he had successfully operated for relapsing typhlitis.

Specimens.—Dr. A. E. MORISON showed a Gangrenous Penis. The patient, aged sixty-six, had been laid up for two weeks with subacute bronchitis, and had noticed pain in micturition for a few days before the penis became black and swollen; half an inch of penis was left. The patient had previously lost both legs from gangrene after exposure at sea.—Dr. A. E. MORISON showed a Pelvis removed from a woman who had died of pelvic hæmatocele. The patient was aged twenty-five, and was still suckling her last child, aged fourteen months. She died with typhoid symptoms. The specimen showed left pyo-salpinx and a hæmato-salpinx as large as the fist on the right side, with a ring-like swelling passing round the rectum.—Dr. MORISON also showed a Rectum Excised for Cancer; before excising he performed inguinal colotomy. The patient now had gained two stones in weight, and the inguinal opening formed a very satisfactory anus.—Mr. MORGAN showed a Varix of the Saphena which was attended by pain, vomiting, and fever, and somewhat resembled a femoral hernia. He tied both ends and excised, and the patient made a rapid recovery.—Mr. RUTHERFORD MORISON showed the temperature chart of a case of Ovariotomy. The patient was aged seventy, and no rise of temperature followed the operation. Mr. Morison also showed a specimen of old-standing Fracture of the Radius in its upper part.—Dr. SQUANCE showed a specimen of Malignant Disease of the Œsophagus and Stomach. The patient, a man aged seventy, was found to have one obstruction six inches and another fifteen inches from the teeth. First stage of gastrostomy was performed, but the patient died suddenly thirty hours later. Post mortem two patches of scirrhus were found in the sites diagnosed.—Dr. HUME showed a Tibia operated on in 1883 for ununited fracture. The patient lately came to Dr. Hume, and as the leg had become useless through deformity it was amputated. A section showed the ivory pegs lying in the bone unchanged.—The PRESIDENT showed a number of specimens and drawings illustrating varieties of Cirrhosis of the Liver, and drew attention especially to an example of acute cirrhosis with jaundice, the result of alcohol.

Reviews and Notices of Books.

Foods and Dietaries: a Manual of Clinical Dietetics. By R. W. BURNET, M.D., M.R.C.P.L, Physician to the Great Northern Central Hospital. London: Chas. Griffin and Co. 1890.

THE subject of food and diet has of late years received increasing attention from the profession, and many excellent books have been written thereon. The works of Parkes, of Sir William Roberts, of Sir Henry Thompson, and of

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Dr. Burney Yeo are in point, and one and all deserve the attention of practitioners. The book before us is in the same line, but professes to treat only of diet in disease or, in other words, to be a manual of clinical dietetics. It is impossible, of course, to write such a book without introducing a large amount of physiological matter touching food and its uses. But still, Dr. Burnet adheres pretty closely to his text; and under the head of each principal class of disease gives the reader not only the general principles on which the patient's dietary should be constructed, but details as to the time and materials of individual meals. He also adds an appendix with useful recipes. Some medical men of high therapeutic reputation are known to have good judgment in regard to the best modes of cooking food. Others are rather deficient in this kind of knowledge, and to such, as well as to all who have much cooking for invalids to do, Dr. Burnet's book will be of great use. It will be found all the more valuable by busy men in that it does not go too deeply into debated questions of the physiology of alimentation, but deals with broad and accepted views.

There are large classes of disease which, if not caused solely by errors of diet, have a principal cause in such errors, and can only be removed by an intelligent apprehension of their relation to such. Gout, scurvy, rickets, and alcoholism are instances in point, and they are all treated with admirable sense and judgment by Dr. Burnet. He shows a desire to allow as much range and variety as possible, and occasionally he seems to us to go to the verge of concession—as, for example, where, while discussing wines and malt liquors for gouty patients (p. 86), he adds that in some cases "where a very small amount of meat is eaten a little malt liquor seems to be taken with impunity." The careful study of such books as this will very much help the practitioner in the treatment of cases, and powerfully aid the action of remedies. It is possible, of course, to be too punctilious in prescribing diet and to make the patient so in regard to his food. This extreme must be avoided, but hitherto the common error has lain in too much laxness of directions on the part of physicians. The very diathesis of the race has come to be affected by popular and deeply rooted errors which it will take many years of enlightened practice to correct. Such books as this are a contribution towards this correction.

The Throat and Nose and their Diseases. By LENNOX BROWNE, F.R.C.S. Edin. Third Edition. London: Baillière, Tindall, and Cox. 1890.

IN reviewing a book which has reached its third edition, it is incumbent upon us to take note mainly of those points which are new, and the alterations that have been made. In this volume a large space is devoted to diseases of the nose, a subject which in former editions had escaped the notice it deserved. Consequently our remarks will apply in the first place to the matter contained in the latter portion of the volume. Here it would seem that the substance consists mainly of a compilation from the innumerable writings on the subject that have recently appeared. So far the work is deserving of little but praise, except that the reader may doubt whether due discrimination has been used. Observations less worthy of general acceptance have in some cases more space assigned to them than others of greater clinical value. Such points are conspicuous in the author's treatment of nervous reflexes—e.g., in "the bond of union which exists between the various erectile structures of the body" (p. 539 *et seq.*) We find also statements offered as matter of fact when at best they can be but theoretical surmises. For instance, we are told that congestion and hypertrophy of the erectile tissue may culminate in atrophy of both membrane and bone (p. 541)—an opinion which, although frequently accepted, has, we believe, never been substantiated by competent clinicians or pathologists. We think that a little more attention might have been paid to pathological facts, and a smaller portion of the work devoted to quotations from more or less worthy writers. Occasionally, however, Mr. Browne advances views, as the result of his own clinical experience, adverse to those of established authorities. Witness, for instance, his remarks on the cure of asthma by the removal of co-existent nasal polypi (p. 549). In his conclusions we believe that most practical, as distinguished from theoretical, rhinologists will concur. The descriptive portions of the work are fairly good, though the classification of nasal diseases leaves much to be desired. The methods of treatment advocated are generally such as have found favour with specialists, though, considering the fact that the book is ostensibly written for the information of the general practitioner, intelligible particulars are often conspicuous by their absence. Thus, in *rhinitis caseosa*, we are instructed to "curette the sphenoid and ethmoid cells," although we are informed neither of the manner in which these cavities should be reached nor of the certain risks attending such a procedure. The only instruments for treating bony or cartilaginous septal excrescences advocated are Curtis's nasal trephines. Of these, however, there is neither description nor illustration, while no mention is made of the motive power. Bosworth's saws, which need but comparatively little experience for their safe and successful use, are not mentioned, while the difficulties in the after-treatment of such operations are ignored. In some respects the author's experience would appear to have been somewhat limited. On page 599 he says: "In five years I have only seen two cases which could be described as caries of the ethmoid bone which were not either syphilitic or malignant." While he further adds, somewhat recklessly: "I find that my experience is in accord with that of every otologist and rhinologist of note." Here, we think, he is probably misled in his desire to discountenance the bogus "necrosing ethmoiditis," for surely many cases of bone-disease occur, associated with suppuration, which are not syphilitic. Actual necrosis of the ethmoid is occasionally encountered as the consequence of simple inflammation. We also question whether Mr. Browne's explanation of the so-called cleavage of the middle turbinated is sufficient. As we have already remarked, the arrangement and classification of nose diseases are somewhat haphazard. Thus rhinoscleroma follows hypertrophic rhinitis, preceding atrophic; while the latter includes lupus, leprosy, and tuberculosis. Concerning tuberculosis, the only remark made is that it does not call for special comment. Why not? We should have imagined that it was at least as important to English readers as rhinoscleroma, of which no case has probably ever originated in this country. The account given of polypus is very meagre, while we do not consider that the question of antral disease is quite fairly stated when we are informed that suppuration in this cavity is, "as a rule, unconnected with any ulceration or inflammation of the rhinal mucous membrane of the affected side" (p. 614). The question is still *sub judice*. Yet in view of the expressed opinions of such authorities as Krause, Ziem, Zuckerkandl, Hartman, MacDonald, Bronner, and others, the alternative view should be stated. Mr. Browne, moreover, tells us that next in frequency to diseased teeth, as causes of antral disease, are undoubtedly intra-antral polypi. Of this condition he claims to have seen two cases, though he affords us no indications as to how the condition may be diagnosed. We do not quite agree with him as to the very limited applicability of Voltolini's method of illumination of the antrum, and are of opinion that some account should have been given of this help to diagnosis. There is some

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confusion in the directions for "catheterisation of the infundibulum under the anterior extremity of the middle turbinated body at a point in front of the hiatus semilunaris" (p. 617). Examination of a skull will show that the infundibulum makes its exit at the upper point of the hiatus, and is distant from the anterior extremity of the middle turbinated at least half an inch. Upon anatomical and clinical grounds we doubt the possibility of passing a catheter into the frontal sinus unless the infundibulum be broken away.

Our remarks upon the other portions of the book must necessarily be brief. We are glad to find the author almost admitting his error in former editions in attributing the possibility of benign laryngeal growths becoming malignant as a result of operative interference. In the face of Dr. Semon's valuable statistics such an admission was inevitable. In connexion with this subject we regret to find Mr. Browne still adhering to the rules laid down by himself in 1875 for intra-laryngeal operation. He tells us that attempts at the removal of laryngeal growths intra-laryngeally are not infrequently attended with fatal results! that "the cardinal law that an extra-laryngeal method ought never to be adopted unless there be danger to life from suffocation or dysphagia should be applied with equal force to intra-laryngeal operations' (p. 457)! We are the more surprised at the reiteration of these opinions in view of the enormously increased facilities afforded by the use of cocaine. His directions for applying the latter would prove, we believe, inadequate in the hands of most operators. Although the author is usually very tenacious of his opinions, in justice it must be admitted that he sometimes modifies his earlier views with advantage. For instance, he now admits that it is "probable" (*sic*) that diphtheria germs are the true "element of contagium" and not "a ptomaine," as "was put forward as a tenable hypothesis in the last edition of this work" (p. 335).

The book is certainly not without merit, and, in spite of defects of style and the want of careful revision of the proof sheets, will be useful as a guide to the treatment of the diseases with which it deals. A word of praise must be accorded the publisher for the elegant dress in which the work is presented.

The Student's Chemistry. Vols. I. and II. Poona: Printed at the Orphanage Press. 1890.

THE author of this work makes such honest admissions in his preface as to relieve the critic of much of his task. He modestly abstains from subscribing his name, and on the title-page quotes Sir G. C. Lewis to the effect that "the author may have deemed it prudent to withhold his name from the public," and then cites George Eliot's utterance that "private criticism has more chance of being faithful than public." Following the preface is a complete list of the authorities quoted. The list embraces some hundred names, and includes, as a matter of course, those of Thorpe, Miller, Roscoe, Tilden, Muir, from whose works in particular much has been taken. There is little claim, it is evident, on the part of the author to original writing, but he has without question succeeded in putting together a mass of valuable and interesting facts—and facts which we find are in strict accordance with the present state of the science. More than passing mention is made, for instance, of the recent isolation of the element fluorine, Raoult's comparatively new method of fixing formulæ, and we meet with the announcement of T. Gross in Vienna that sulphur is not an element, but a compound containing carbon, a statement which chemists have not yet generally accepted. The now well-known Solvay method of obtaining soda carbonate is described, and on page 175 is a capital list giving the percentage composition and uses of the alloys of gold, silver, copper, tin, lead, zinc, antimony, and aluminium, as well as miscellaneous alloysand amalgams. The account of the theoretical portion of the science which generally proves to be the *pons asinorum* to most students is clearly and simply told. The book is intended, though not exclusively, for the use of the medical student, and to that end stress is laid upon the application, preparation, and purification of the inorganic substances used in medicine. But the author has surely overlooked the fact that organic chemistry, or the chemistry of the carbon compounds, an account of which finds no place in the work, occupies a considerable part of the medical student's study. The immense proportion of organic bodies now used in medicine, including alkaloids, makes this branch of the study every day of increasing importance. Should the author add at some future time an account of the more important facts of organic chemistry in the same clear way in which he has linked together the inorganic facts, the book would then be admirably adapted to the requirements of students of medicine. The work was, however, undertaken more with a view of supplying the chemical student with a cheap and authentic text-book, and so we regard it. Volume I. (414 pages) is divided into Book I., devoted to theory, and Books II. and III., to non-metals, metalloids, and metals; while Book IV. forms the second volume (63 pages), which treats of practical chemistry, containing useful analytical tables and notes on the grouping of the metals. The only typographical errors to be noticed are "preeace" for preface in Vol. I., and "strychinine" for strychnine on page 61 of Vol. II. We are not inclined to agree with the author when he says that the great principle of the indestructibility of matter is difficult of cognisance and proof, as several simple experiments are known which go to demonstrate this.

The Veterinarian for January is chiefly taken up with the reports and discussions of the various veterinary and agricultural societies. Mr. Albert Batt, M.R.C.V.S., contributes Notes on a case of "Quarter Evil," and also of Tetanus in Cattle; and Mr. J. C. James, M.R.C.V.S., gives an account of an Interesting case of Threatened Suffocation (Apnœa) through Displacement of the Epiglottis. Commenting on the Pleuro-pneumonia Order of 1891, which is published *in extenso* in the journal, the editor points out that the new order "revokes all regulations of local authorities in Great Britain relating to movement of cattle and also of fairs and markets on account of pleuro-pneumonia, and does not re-enact the articles which conferred the powers to make such regulations." The main principle that underlies the whole structure of the order is that of closure of centres of infection and the removal of restrictions from parts of the country which remained free from disease. The order deals with the questions of detention of cattle, compensation, movement licences, and the offences against the Act of 1878. Koch's discovery, it is reported, gave rise to a special meeting of the Council of the Royal College of Veterinary Surgeons, to consider the advisability of sending a delegate to Berlin, and it was unanimously resolved to appoint a committee of seven with full powers to act. A report of a paper by Dr. Herbert Manley on the Joint Sanitary Work of the Medical and Veterinary Profession is given, and also a couple of papers by Mr. Clement Stephenson, one on the Working of the New Pleuro-pneumonia Act and Orders, and another, Notes on Endocarditis in the Pig; there is also a paper by Mr. George R. Murray, M.B., B.A., Notes on the Condition of Three Hearts taken from Pigs Dead of Endocarditis; all of which were given at the joint meeting of the Northern Veterinary Medical Associations.

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THE LANCET.

LONDON: SATURDAY, JANUARY 24, 1891.

IT was with feelings of very great satisfaction that we placed before our readers on Saturday last KOCH'S statement respecting the composition and preparation of his anti-tubercular inoculation fluid, conveyed to the medical world through the *Deutsche Medicinische Wochenschrift* on Friday, Jan. 15th. We felt that a certain element of reproach had been removed from the substance now that it could no longer be classed amongst secret remedies, and we are convinced that the satisfaction will be shared by those who, like ourselves, have the greatest admiration for KOCH'S genius, but who have been of the opinion that he had made a mistake in scientific ethics. This opinion will not be entirely lost even after the perusal of the statement that "so long as it was only a question of proving the accuracy of the results indicated in my former paper, there was no need for anyone to know what the remedy contained or whence it was derived," for it could not but be felt that men who are not inspired with the same honesty of purpose that characterises KOCH'S work, who have not the same ability, and who do not enjoy the same confidence of the profession, may adduce his example in justification of similar methods of procedure, but with very dissimilar reasons for carrying them out. The proclamation of the full knowledge of the remedy and the partial description of the method of preparation are now before us, and though so anxiously awaited by all who take the slightest interest in their profession and in their patients, it has brought with it little that was not already anticipated; for although KOCH had kept back the actual description of his liquid, he had made it evident from the description of its mode of action that it was in some way a product of the tubercle bacillus itself; and, reasoning by analogy, most bacteriologists had come to the conclusion that the inoculating fluid contained some special product of the tubercle bacillus, although few guessed how this was obtained or separated. The hints that had been dropped by KOCH were very broad, but now that the whole truth is out we cannot but admire the process of reasoning by which he was led to experiment on the lines that are now familiar to the medical world. Commencing with inoculations of pure cultivations of tubercle bacilli, he found that the action of a second inoculation of tubercle bacillus was very different from a primary inoculation, the chief differences being manifested at the seat of injection. Led no doubt by the success of those who had worked with other diseases, and who had induced partial or complete immunity in certain animals against the effects of specific organisms by injecting the sterilised pure cultures of these same specific organisms, KOCH carried his experiments a step further, and showed that the peculiar phenomena above mentioned were also obtained when pure cultures of the *dead* microbes (previously killed by exposure to heat or to chemical agents) were injected, and that they acted in exactly the same fashion

The next step, however, is that in which the real experimental genius of the man comes out. Pure cultivations of tubercle bacillus, when triturated with water and injected into the subcutaneous tissue of a healthy animal, he found produced no effect beyond a localised suppuration; but injected into a tuberculous animal it gave rise to such marked local and constitutional disturbances that the animal died in from six to forty-eight hours. If the dose be diminished so that it is not sufficient to kill the animal, the ulcer that forms first extends as in the case of the experiments with the living bacillus, and, after sloughing, cicatrises. The swollen lymphatic glands also begin to diminish in size after one or two inoculations, and the general condition of the animal becomes distinctly improved. He found, however, that the presence of the dead bacilli gave rise to intense suppuration, and therefore it became necessary to get rid of these from his inoculation fluid or to separate the useful principle from that which caused suppuration; for by this time it had become evident that the substance that was useful was readily dissolved out from the bacilli by certain fluids, the best of which was found to be a 50 per cent. solution of glycerine, whilst the material that gave rise to suppuration was more tenaciously held by the bacteria.

KOCH works, then, with a glycerine and water solution of pure tubercle bacilli, from which the bacilli and certain other materials have been separated, and which contains the substance to which the inoculating fluid owes its virtue, but none, or comparatively little, of the suppuration-causing substance. The separation of this active material must evidently be rendered much easier by the fact that it will withstand a considerable amount of heat, and that it is readily dialysable. It thus differs both from the enzymes and the toxalbumins, to both of which substances have been ascribed, though without sufficient reason, the protective potency of the products of such bacteria as those found in septicæmia, tetanus, and diphtheria. The substance, whatever it may be, is present in exceedingly small quantities, and it appears to act beneficially only under certain conditions. Acting alone on healthy tissues, it probably has some effect in stimulating the leucocytes and connective tissue cells; but when acting in conjunction with the products of bacilli already present in tubercle nodules, and on cells that have been already weakened and altered so far by the products of these bacilli that they are undergoing a process of coagulation necrosis, the changes are exceedingly well marked and the process is completed comparatively rapidly. Some cells in which the changes have not already commenced have this same process determined in them; whilst immediately outside the necrotic area the tissues appear to be only so far stimulated that a mild specific inflammation is set up — an inflammation which differs little in character from an ordinary reactive inflammation such as is set up around irritant foreign bodies or masses of dead tissue—which appears to localise the slough when it lies in the substance of a tissue or organ, and to separate it from the deeper tissues when it is near a free surface. We have in all this an entirely new departure, both as regards the methods used and the principle involved in the treatment of a specific infective disease. In

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the first place, tubercle—a disease chronic in its course and accompanied by a loss of tissue which cannot be repaired—is attacked as follows:—In place of trying to antagonise the effects of the bacillus, KOCH, with his fluid, steps in and does two things: he kills off rapidly and completely those tissues in which the bacilli are present, and in so doing cuts off from these areas the lymph and blood-supply, the outflow at the same time of course being stopped, so that the bacilli are both starved and poisoned *in situ*. There is in addition, *a priori*, less chance of their being carried from the dead tissue in which they now lie into the surrounding tissues. Along with this, however, there is set up around this dead mass a barrier of actively stimulated connective tissue cells and leucocytes, the result of inflammation which, under ordinary circumstances, and if left sufficiently at rest, may become converted into a fibrous zone such as is found in cases where tubercle has undergone spontaneous cure. We have here, in fact, simply an acceleration of those processes that occur in the normal processes of cure of this disease. Where the slough is on a free surface, and when it can obtain a free exit, the dead tissue with its contained bacilli may be thrown off almost at once; but where the tubercle occurs embedded in solid tissues such as bones, or in such cases as tubercular cold abscesses, operation becomes necessary, in order that the latent tubercle may not be left to be again brought into action in case of accident, or to set up suppurative changes as the more insoluble pus-exciting products are set free to act on the surrounding tissues.

A most important point to be borne in mind is the difference between such free surfaces as those met with in the lung and free cutaneous surfaces. In tubercle of the skin treated by KOCH'S method the slough is cast off as soon as it forms, and may be rendered harmless at once by the use of antiseptics; but in the lung the process of localisation and sloughing at one point may be the indirect cause of infection at others, from the fact that the fragments of the slough with their contained bacilli may not be expectorated at once, but may be drawn into the terminal bronchioles of other parts of the lung, and so set up much more extensive tuberculosis, similar in character to the acute catarrhal tuberculosis that may follow the inspiration of material from an ulcerating apical cavity into the lower parts of the lung of the same or even of the opposite side. Although KOCH apparently does not claim to produce any immunity against tuberculosis in those treated by his method, it is possible that some such immunity may play a part in the subsequent history of these patients. This of course cannot be proved for some time to come owing to the extreme tardiness with which the disease runs its course; but in connexion with this question it may be remembered that in the case of anthrax and diphtheria an injection of the albumose or of the soluble products during the course of an attack of one or other disease accelerates rather than interferes with its regular course. The method that KOCH uses is strictly analogous in this respect, but owing to the different nature of the diseases the effects are not manifested in the same way.

The publication of the details of this method marks a new advance in bacterio-therapeutics, which must influence in a very great degree the study of bacteriology. It may be anticipated that it will give a stimulus to such study in this country—a stimulus that is still much needed, though scarcely so much as it was ten years ago. A new field of observation and research is opened up to both bacteriologists and clinicians, and it leads us to hope that other diseases which at present are looked upon as incurable may be brought within the pale of therapeutics. KOCH has made known his method of treatment; he has placed in the hands of medical men a most potent agent for good or ill, according as it is used with intelligence and discretion, or without regard to the principles on which it is based. The method will suffer, and has suffered, through a neglect of the elementary principles that guide the bacteriologist even in his experimental work, and it can only be by careful attention to the most minute details, as insisted upon by KOCH himself, and then by a most accurate observation of the symptoms and course of the disease in tuberculous patients treated by inoculation, and by most careful deductions therefrom, that the results already obtained can be corrected or corroborated. That the clinical part of the work will be carried out with the greatest care and with the utmost impartiality in this country no one can doubt; but there is also promise that the bacteriological side of the question may receive something more than scant justice at the hands of some of our scientific workers.

IN an article which appeared in our issue of Jan. 10th, we dealt with Dr. ALFRED RUSSEL WALLACE'S attempt to put before the Royal Commission on Vaccination the views of the anti-vaccinationists from the scientific aspect, and we showed how his evidence was permeated with blunders that must be obvious even to those who are devoid of all scientific training. Dr. WALLACE was succeeded by Mr. ALEXANDER WHEELER, another leader in the same cause; and he followed his predecessor's example by first occupying several hours of the Commission with inferences drawn from statistics of a past century and of distant countries, the former of which at least have been shown to be untrustworthy, and which, as we have already pointed out, cannot have any particular bearing on the question of the influence of our present vaccination laws in controlling small-pox. But as he proceeded he enunciated views of a very curious character, which led Sir WILLIAM SAVORY at last to sum them up in these words:—"Then it comes to this, that, if people escaping small-pox died of something else, it would not be worth while to check small-pox?" At a subsequent sitting some attention was given by the witness to years since registration of deaths came into operation, but his main effort seems to have been to show that small-pox needs no State intervention, that it exerts little or no influence on the general death-rate; and that the "best authorities"—whom the witness forgot to name—"are agreed that, in epidemic years, small-pox is not diminished by vaccination or greatly affected by it."

The point previously indicated was next enlarged upon, on a question from Mr. BRADLAUGH:—"Do you suggest, then, that the people who took small-pox would have taken some other disease if they had not had small-pox?" to which the witness answered, "That is so." In other words

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his evidence, dealing as it does with annual death-rates, actually propounds the theory that, if people in a given year had not contracted fatal small-pox, they would have taken and have died of some other disease—a theory which naturally struck Lord HERSCHELL as being "a singular one."

The following are some of Mr. WHEELER'S views on this point. Being asked whether the Commission properly understood his proposition as being "that there is a certain amount of total death-rate ..... which is uninfluenced by the greater or lesser amount of small-pox death-rate?" he answered, "I put it so." But when asked whether he would say this of every disease, and, if not, why of small-pox in particular, he ignored that latter part of the question, and said, "I should not say so of every disease," adding that he did not think such an assertion would apply to measles, for example. And on being pressed by Sir WM. SAVORY as to whether it was, under such circumstances, "worth while to try to reduce the mortality by small-pox by any means," the difficulty was evaded by an answer to the effect, "That is not my object." This aspect of the question does not seem to have been thought worthy of further detailed investigation, but it involves an opinion that Mr. WHEELER says he does not hold alone, and which we know is advanced by a certain class of persons. Hence, we will endeavour to set out the real meaning of it if pushed to its logical conclusion.

Seemingly, the thesis may, and this without violence to Mr. WHEELER'S representation of it, be enunciated in propositions as follows:—1. That in a given year there is a certain amount (greater and smaller in different years) of small-pox death which is "proper" to the year. 2. That similarly, as regards *each and every* cause of death there is, in each year, an amount of mortality proper to the year. 3. That if, in a particular year the amount of small-pox death proper to the year be diminished by human interference, an equivalent amount of death in the same year will occur from other cause or causes. 4. That if in a particular year the amount of death proper in that year to measles, to scarlatina, to enteric fever—or, indeed, to any cause other than small-pox—be diminished by human interference, such diminution of death is clear gain; it will not be balanced, as in the case of small-pox, by extra deaths under other headings. 5. That the vicarious deaths which thus come to balance the deficit of small-pox deaths brought about in the particular year by human interference with that disease will affect (in the same year) those individuals and those alone who have by such agency been withheld from small-pox. These supplementary deaths, therefore, will be *vicarious* as regards cause, *not as regards persons*. 6. That the vicarious deaths in question will not be forthcoming unless the human interference with small-pox has been interference by means of vaccination; that, indeed, small-pox death prevented by segregation of small-pox cases in hospital, by quarantines and the like, will not be balanced by an equivalent amount of death by other causes.

But by the time the fifth proposition has been reached Mr. WHEELER'S thesis tends to become unthinkable, and for the reason that every cause of death is by hypothesis proper to the particular year, and the balance, therefore, of vicarious death is not to be had, unless, indeed, *absolutely new causes* of death are, so to speak, created to satisfy the demand for them. In short, it would seem, according to Mr. WHEELER, that whilst all other measures for the promotion of health and the prevention of disease can properly be allowed to work out admittedly good results on mortality, vaccination could only be regarded as a means of prevention on the condition that it conferred immortality. We may fairly leave Mr. WHEELER and his "singular" views to the Commission and to the ordinary intelligent reader.

But whilst we do this we would by no means imply that Mr. WHEELER is devoid of a certain kind of cleverness. He has to an exceptional degree a gift, which he shares with his fellow anti-vaccinationists, of avoiding questions, that sap the very foundations of his theories, by giving such answers as the following:—"If I might defer that till later on," "I will come to those afterwards," "That I shall come to by-and-bye," and then instantly going on with something else. Mr. BRADLAUGH, who is courteous in the extreme to witnesses, and is little disposed to say anything that would hurt anyone who thinks he is aggrieved by the Vaccination Acts, very aptly summed up the difficulties raised by Mr. WHEELER'S mode of giving evidence when he addressed him thus: "I only put this for your guidance, whether it may not be possible that the valuable points in your evidence are embedded in a mass of details from which even the Commission may fail to extricate them." We trust Mr. BRADLAUGH may be able hereafter to unearth the "valuable points," for they have sunk altogether beyond our reach.

The president of the London Society for the Abolition of Compulsory Vaccination, Mr. WILLIAM TEBB, was the next witness. He told some "hideous" stories, mainly of syphilisation and other allied calamities, largely obtained from such sources as foreign newspapers, and collected from such distant places as France, Holland, Germany, Algeria, the United States, the West Indies, and British Guiana, which stories, even if all were true, would do little more than prove that in certain parts of the world there is much negligence in the performance of vaccination. As to our English experience in this matter, we would recall an answer given in August, 1887, to Mr. PICTON in the House of Commons by the President of the Local Government Board. Mr. RITCHIE said: "The Board have the authority of Mr. HUTCHINSON for saying that, though he has been diligently on the look out for similar cases during the ten years' interval [since 1871], he has failed to meet with any. In his recent work, published this year on the subject, Mr. HUTCHINSON says: 'There certainly cannot be any difficulty, under ordinary circumstances, in procuring vaccinifers which are absolutely free from risk.' Mr. HUTCHINSON'S experience is, in these respects, entirely confirmatory of that of the Board, which is to the effect that, although three-quarters of a million of children have been vaccinated annually for many years past, not a case of the communication of the disease in question by vaccination has come under their observation."

When Dr. WALLACE found himself confronted with the difficulty of having to explain how it was that there had been "an enormous decrease of the mortality from small-pox amongst children under five years of age since the

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introduction of vaccination," and that no similar diminution had taken place as regards "any other disease to which children are subject, such as measles and the like," he said to the Commission, "You will have a gentleman before you who will explain it far better than I can, *if it is to be explained.*" We hope that the point embodied in the words which we have taken the liberty to italicise will not permanently affect the obvious hesitancy which the gentleman in question has hitherto exhibited in coming forward. The point is *the* vital one at issue.

IN the last number of the *Journal of Mental Science* is published a paper by Dr. PERCY SMITH, originally read at a meeting of the Medico-Psychological Association for the purpose of introducing a discussion on the working of the Lunacy Act of 1890. It may be said at once that the paper contains a very strong indictment of the Act as regards certain clauses. No doubt such regulations as the Act contain are subjected to the most severe strain at a hospital like Bethlem, which admits more private patients in a year than any similar institution in the country; but that the inconvenience has been, if not quite as great at other places, still sufficient to give rise to much unnecessary trouble and worry, is abundantly shown by the discussion which took place at the meeting at which the paper was read.

The chief difficulties in regard to the working of the provisions of the Act seem to depend upon the manner in which justices have acted in regard to petitions presented to them. They have for trivial reasons refused to sign, and they have done so without fixing any future time for consideration of the petitions. In one case a stipendiary magistrate refused to sign, certifying that to do so would interfere with his judicial functions. It can be imagined that such a course is not calculated to lessen the anxiety or allay the apprehension from which the friends of a lunatic may naturally be supposed to be suffering. In another case a magistrate refused to sign a reception order unless the medical men who had signed the certificates were present to be put on oath, although the Act expressly states that every medical certificate for the purposes of the Act is equivalent to evidence on oath. Then, again, the provision that no justice shall sign unless the patient be in his own county seems to be an unnecessary limitation of the powers of justices, and, as may be supposed, it gives rise to endless trouble in practice. The same may be said of the appointment of justices to act specially, for there may be ignorance of the names of such justices on the part of the asylum superintendent, on account of delay in the circulation of the list; and orders, invalid by reason of being signed by a justice not authorised to do so, have actually been presented. It might be supposed that a magistrate himself would know whether, in a given case, he was the proper person to sign the order; but so far is this from being the case that not only have justices signed for patients in the county of London who had no jurisdiction in that county, but, as has just been said, on more than one occasion it has happened that a magistrate actually not appointed for the purpose has signed a reception order, and the whole matter has had to be gone over again from the beginning. Asylum superintendents, in addition to their numerous duties to the patients under their care, have to find a specially appointed magistrate—no easy task in the holiday season, when they are nearly all out of town—and are also expected to see that they perform their duties properly. To judge from Dr. SMITH'S recent experience, this will lead to a considerable increase in their work. No one would wish to curtail in any way the right of an inmate of an asylum to be examined by a judicial authority; but when such a procedure is prefaced by the service of a notice it can be imagined what a prejudicial effect the reception of a probably unintelligible official document is calculated to have on a person of unstable mind, and in the paper before us Dr. SMITH gives more than one instance in which such an effect was produced.

Such are some of the difficulties which so far have arisen in the working of this Act, and we cannot doubt that some means of surmounting them will be found. The means, we think, are such as Dr. SMITH indicates—viz., the multiplication of justices specially appointed for the purposes of the Act, provision for a sufficient number to be available during the holiday season; that their jurisdiction should not be limited in the way it is; that the list of appointed justices should be circulated immediately after the appointments are made, and that some means should be taken to inform them of the nature of the duties which are required of them and the manner in which they are expected to carry them out.

THE annual report of the Medical Defence Union (Limited) is a document which has interest for our readers. Our profession is a very undefended profession. The examining bodies are the natural custodians of the medical body. They prescribe the terms of admission. It is the possession of their diplomas that entitles to medical registration. They were charged with disciplinary powers over their members. Unfortunately, they have shown little power of discipline, and a strange reluctance to use what little power they have. They have piled up examinations for the applicant for their diplomas, and increased wonderfully the examination fees, but they have then left their diplomates to take care of themselves. If they did well it was without much encouragement from their *alma mater;* if ill, they met with no remonstrance. In the legal profession, if a member misbehaves himself and dishonours his profession he will soon hear of it from the Incorporated Law Society or the Inns of Court. But in the medical profession irregular behaviour is little noticed by the authorities of the profession, and the General Medical Council is without power in such a case unless the behaviour can be characterised as "infamous in a professional respect." Whenever an adequate amendment of the Medical Act takes place it must impose on each professional body which grants degrees or diplomas the stern duty of insisting that those who hold such high credentials shall act in harmony with them.

The Medical Defence Union is in the meantime doing some of the work that the medical authorities ought to do in the way of instigating prosecutions of those who disgrace the profession by irregular methods of practice and by association with quacks. But it does more. Medical men

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are liable to all sorts of attacks, some curious illustrations of which are given in the annual report, attacks from ungracious patients, or possibly even from unprincipled and cowardly rivals, and anonymous attacks through the medium of the Post Office. The Medical Defence Union undertakes to help its members in unearthing such dastardly and malignant enemies, and succeeds in getting the co-operation even of the Postmaster-General, and in two instances it has succeeded in stopping the grievance, if not in detecting the criminal. Audacious quacks are so conscious of the power and determination of the Union that in several instances they have forestalled the trial of their case, and paid large penalties and costs.

There is one great drawback to the efficiency of the Medical Defence Union in the metropolis—viz, that by an inadvertent defect in the Medical Act of 1858 fines imposed for violation of the Medical Act go, not to the General Medical Council, which would doubtless apply them to the payment of the expenses of the prosecution, but to the Receiver of Police, by whom they are kept for the relief of the Exchequer. The Defence Union feel this to be very hard, and have determined to postpone metropolitan prosecutions till the law is amended. They cannot be blamed. They have brought the matter under the notice of the General Medical Council, which ought without delay to apply for an amendment of the Act.

The steady growth of the Union in financial stability and in the confidence of the profession is shown in various ways. In 1888 the membership was 442; in 1889, 834; in 1890, 1446. The guarantee fund on Dec. 1st, 1888, was £538; 1889, £1249; 1890, £2173. These are fine figures, but must involve a large amount of personal trouble to the Union, and especially to the honorary secretaries, Dr. A. G. BATEMAN and Dr. LESLIE PHILLIPS. It is difficult to estimate this, but one is helped by learning that in 1888 they wrote 571 letters; in 1889, 4186, and in 1890, 5936. The Defence Union has wisely adopted the rule of refusing to undertake the grievances of those who are not members of that body. It would be monstrous to add to enormous labours for the members similar labours for those who will not contribute the small sum for membership. The moral is that this Union should be joined by all members of the profession, who will then be less exposed to suffer injury from libel and other causes than at present.

Annotations.

"Ne quid nimis."

HOUSING OF THE WORKING CLASSES.

EARL COMPTON, as Chairman of the Committee of the London County Council on the Housing of the Working Classes, has presented to the Council a report on the method of dealing with the Bethnal Green area, which it may be expected will be cleared under Part 1 of the Act of 1890. On this area there are now resident nearly 6000 persons, and the question the committee has had to consider is that of dealing with the area in such a way that these persons may be put to the least inconvenience. The committee, on obtaining possession of the property, will at once proceed to close the worst houses in whatever part they may be situated, and from these about 288 persons will be removed; afterwards the area will be dealt with in three sections—i.e., one section will be cleared at a time, and the second section will be left untouched until the first is covered with houses; so, again, the third will not be cleared until dwellings have been erected upon the second. By this arrangement the maximum number of persons who will be displaced at any one time is about 2000, and, with the exception of those resident in the part to be first cleared, there will be abundant provision made. An inquiry which the committee has instituted shows that there is accommodation for more than 2000 persons in rooms situated about five minutes' walk from stations within the limit of the workman's 2*d.* return fares. Further, by next year the Guinness trustees will have provided for 1500 people on a site in close proximity to the area under consideration, and cottage accommodation for 200 persons will be provided by other bodies on another area, while, beyond this, there is at the present time accommodation for 1580 persons in empty rooms in the neighbourhood. The committee, moreover, recommends that the Council should acquire another adjoining site and erect on it dwellings for 500 persons. It cannot be urged that the acquisition of this last site is a necessity, but the committee has pointed out that it can be purchased for a sum which is equivalent to an annual rental of not more than 2*d.* a foot, and that should there be no necessity for the devotion of the whole of the represented area to artisans' dwellings, it would enable the Council to utilise some portion of it for other purposes. This last argument appears to us to be that which can be most properly urged for the acquisition of further land. The scheme devotes for all time some fifteen acres for dwellings for the working classes, and the Council are certain before they have concluded this work to find need for bathing and laundry accommodation for this large population. It may be expected that the committee's proposal will meet with some opposition from those who will see in it opportunity for the Council to undertake building operations; but it by no means follows that they will not deal with this land in the same manner as has hitherto been done with that acquired under Cross's Acts. There is of course no expectation that the occupants of houses on the represented area will in any large number themselves migrate into the new buildings; but there is certain to be an upward movement among the more orderly persons in the immediate neighbourhood, and thus vacancies will occur in the class of house to which the former persons are accustomed, and into which it may be expected they will remove. There is therefore much reason for allowing the committee to have a free hand in dealing with this subject, and especially as their proceedings, so far as the acquisition of additional land is concerned, will not eventually impose increased expense on the ratepayers.

THE FUTURE OF KOCH'S REMEDY.

NOW that Professor Koch has so far satisfied legitimate curiosity as to the nature of the fluid which has such marked influence upon tuberculous tissues, and as thereby any scruples regarding the employment of the remedy on account of its "secrecy" may be set aside, it remains more than ever imperative that we should have clear knowledge concerning its effects and its utility. We trust that, if the College of Physicians continues to be of opinion that it is beyond its province to undertake the investigation of the treatment of tubercular disease (thus, in its scientific capacity, practically drawing the line at leprosy), one of our leading medical societies will take up the question. The report of an influential committee of physicians and surgeons, based upon several months' observation of the effects of the injections, would be of

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inestimable value in indicating more precisely the circumstances under which it is safe to administer so powerful an agent, and the extent to which its action may be deemed curative. Of individual records there will doubtless be enough and to spare, and all these must be carefully collated and analysed; but the best and most reliable inquiry would be one undertaken as we suggest, where the members of the committee might act on certain definite lines, and meet frequently to discuss the progress of their cases, and any new points that may come up for consideration. The warnings uttered by Professor Virchow may also, it is to be hoped, act beneficially in restraining the indiscriminate use of the remedy, the risks of which are so grave and manifold. Another matter of some importance is that of the sources to which we must look for supplies of this glycerine extract of the tubercular bacillus, the precise formula for which has not been made known. It is obvious that great difficulties may lie in the way of procuring samples of constant strength and purity (within limits); and we do not see how this can well be tested, except by physiological means. If, then, the "lymph" is to be prepared in this country it should be done under the protection of some central authority that could attest the genuineness of the supply. Until this can be effected no one should venture to make any injections except with the fluid prepared in Professor Koch's laboratory.

THE CHAIR OF HYGIENE AT OWENS COLLEGE.

THE chair of Hygiene and Public Health in Owens College, Manchester, has been offered to and accepted by Mr. John Tatham, M.A., M.D. Dr. Tatham's career in the department of public health, as medical officer of health (first for Salford and now for the city of Manchester), as exponent of the principles of health in connexion with local scientific or other societies, and as examiner in the University of Cambridge, has throughout been an exceptionally distinguished one, and it would have been difficult to have filled this chair at Owens College in a more appropriate manner.

BARON HAUSSMANN.

THE death of Baron Haussmann, recorded recently, is not only a political event, but concerns all who are interested in the cause of sanitary reform. From 1853 to 1870 Baron Haussmann held the reins of office as Prefect of the Seine; and, in those days of absolutism, there was no popular control to check his actions. The Emperor Napoleon III. gave him a free hand, and he set to work, regardless of expense, to regenerate Paris. Broad boulevards were cut right through overcrowded districts. Light and air were let in upon quarters where epidemic diseases had become endemic. So mighty were the changes wrought, that a new word had to be coined to describe the work, and all Europe talked of the Haussmannisation of Paris. The great changes effected have not, however, proved an unmixed blessing. The financial situation they created supplied M. Jules Ferry with the materials for the pamphlet which first brought him into political fame, and which he humorously entitled "Les Comptes Fantastiques de M. Haussmann." The debts then incurred are now so great a burden that they prevent the realisation of sanitary reforms more urgent than those achieved by Baron Haussmann. It is not for us to criticise the artistic faults and merits of the new Paris Baron Haussmann built. The æsthetic side of the question is not our phase of the subject. Though opinions widely differ among artists, sanitarians can only mete praise for the giving of lungs to the town by creating the beauties and attractions of the Bois de Boulogne and the Buttes de Chaumont, &c. The splendid markets, slaughter-houses, and similar buildings of public utility Baron Haussmann caused to be built, have greatly contributed to the improvement of public health. But, on the other hand, there can be no doubt as to the evil tendency of sacrificing to external appearances financial resources that should be devoted to internal improvements. The magnificent dwellings raised on the new boulevards are constructed in defiance of all laws of hygiene, while but little was done to improve the sanitary condition of the old houses left standing. Judged by external appearances, nothing can be more vast, more splendid and sweeping than the new thoroughfares pierced by Baron Haussmann. The eye is fascinated, the imagination exalted, by these changes, realised so rapidly as to suggest the wave of a magician's wand, rather than the slow evolution of municipal progress. But there is a theatrical element about this that fails to satisfy the scientific mind. The worse consequence, however, was the spread of Haussmannisation to provincial towns, and especially to health resorts. For instance, at such towns as Cannes, Nice, &c., the public money was freely spent to cut broad boulevards, to raise handsome theatres and casinos, but the sewers were left in a deplorable condition, and domestic drainage utterly neglected. To the credit of the Third Republic it must be acknowledged that more interest is now taken in real sanitary improvements and less is expended on mere external show. Nevertheless, and in spite of all and numerous criticisms to which Baron Haussmann exposed himself, he gave an immense impetus to the cause of municipal progress. All the errors, the extravagances committed, the political motives that may have inspired some of the improvements initiated by Baron Haussmann, will not suffice to efface the glorious record of great works achieved by the late Imperialist Prefect of the Seine.

RESPONSIBILITY IN ANÆSTHETISING.

MR. E. H. DAVIES, deputy district coroner, was certainly right in the remarks he is reported to have made during an inquest held upon the body of William Woods, aged forty-nine, a labourer, who died from the effects of chloroform at Newport. The coroner's inquiry elicited the facts that Woods was admitted into the Newport and County Infirmary on Nov. 27th, suffering from disease of one of his tibiæ, for which an operation was about to be performed, when the patient died. The house surgeon, according to the evidence before us, gave the man chloroform in the presence of a nurse only, with the view of subsequently performing the operation. The patient's heart was duly examined and pronounced not to be contraindicative to chloroform. "After two whiffs," says the report, "he suddenly fell back upon the bed and died." The necropsy, carefully made, gave evidence, it is said, that the man died from syncope due to chloroform acting upon a fatty heart. Two drachms of chloroform were given, a quantity which the report says the house surgeon stated "was scarcely enough to kill him" (i.e., the patient). The coroner could not but call attention to the dangerous and reprehensible practice here adopted of one medical man undertaking the duties of chloroformist and operator, and working single-handed. It seems hardly credible that, when the death-rate from anæsthetics is so lamentably high, all medical men do not recognise the grave responsibility which must devolve upon anyone who undertakes the duties of anæsthetising another human being. It has been pointed out again and again that the whole of one person's energies and attention are required to induce and maintain anæsthesia, so that we cannot but hold it as most dangerous for anyone to undertake the double *rôle* of anæsthetist and operator. And further, even with care and skill, patients are liable to contingencies under an anæsthetic which, although not perhaps absolutely fatal in themselves, yet become so should prompt and accurate

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measures not be taken to combat them. But when the administrator is single-handed, or aided only by a nurse, such aid as may be necessary is wanting, or unobtainable until too late. In the report before us the statement that two drachms is not enough chloroform to cause death is distinctly misleading, for, if administered in too concentrated a form, even less is capable of killing. The moral is plain. Let no one undertake the responsibility of giving chloroform unless fully able to devote the whole of his attention and skill to the matter, and never unless in the presence of another medical man.

THE HEALTH OF SOUTHEND.

A LAMENTABLE want of discretion and even of worldly wisdom seems to have been exhibited by the Southend Local Board. In view of the serious prevalence of enteric fever in their town, they called in Dr. Thresh, as a sanitary expert, to advise them. He explained his views as to the disease prevalence, and made certain definite recommendations with regard to the need for consulting a skilled sewerage engineer, for providing a hospital for infectious diseases, for the adoption of proper measures of control in the construction of houses &c. Unfortunately, the Local Board proceeded to issue what has been called a "rejoinder," and this document is stated by Dr. Thresh to be misleading. It is reported, amongst other things, that this Board first assert that the sewer outfall is adequate, and then, as we noted last week, proceed to pass a resolution to provide another one. As the *Essex County Chronicle* well puts it: "It seems a pity that a body of men who feel themselves competent to criticise the work of an expert did not long ago frame and carry out the resolutions passed at the last meeting of the Local Board without waiting for an epidemic of typhoid fever and a special report to rouse them to action." The attitude adopted is hardly likely to encourage visitors to seek health at Southend.

HÆMORRHAGE AFTER TOOTH EXTRACTION.

DR. B. J. RICHARDSON read a paper upon this subject at a recent meeting of the Odontological Society. The comparative rarity of hæmorrhage following the extraction of a tooth in recent years he ascribed to modern improvements in dental instruments, especially the abandonment of the "key," the greater surgical knowledge possessed by dentists generally, and to the fact that the hæmorrhagic diathesis is greatly reduced amongst the members of the community. There are three distinct conditions leading to dangerous hæmorrhage: (1) Abnormal fluidity of blood—purpuric hæmorrhage; (2) deficient contractile power of the divided vessels—vascular hæmorrhage; (3) mechanical lesion favouring the flow of blood—mechanical hæmorrhage. In the purpuric class there is generally a history of hereditary predisposition, the blood is abnormally fluid (due to excess of water), and does not coagulate when taken from the body, and purpuric eruptions present or past, though not a constant symptom, are a very frequent one. In other cases the extreme fluidity of the blood is caused by excess of soluble saline material such as has been observed on a large scale in scurvy produced by too long a subsistence on food preserved by salt. Vascular hæmorrhage is due to the want of contractile power of the bloodvessels. The subjects are persons of enfeebled constitutional and nervous type, showing relaxed circulation in sudden blushing and suffusion of the face, or they are anæmic, alcoholic, or the victims of specific degeneration. Mechanical hæmorrhage is due to accidents connected with the extraction of a tooth, such as fracture of the alveolus. In the treatment of hæmorrhage of the second and third classes, styptics with pressure are most immediately useful, the best being tannin and perchloride of iron, either of which may be applied by means of a plug of gutta-percha. In purpuric hæmorrhage, should ordinary styptics fail, coagulation must be induced by the electric or actual cautery, which is allowed to cool down to a temperature just below redness, and, applied with care, gives little pain. In all cases alcoholic stimulation is unadvisable, as it acts after the manner of a salt in destroying the coagulating power of the blood, and, what is more serious, increases the heart's action, stimulating it to throw out more blood through the divided vessels.

THE FROST AND ACCIDENTS.

WE understand that the results of the recent frost in the shape of numerous accidents due to the slippery condition of the roads have not only been felt at all the great hospitals both in London and the provinces, but also by the Insurance Companies, one of which reports 305 claims traceable to this cause during a single week. It is true that the office in question, the Railway Passengers' Assurance Company, is the largest of its class, and transacts a much greater proportion of the kind of business which would be affected in this way than any other society; but when it is considered that the persons who carry accident policies, though absolutely a large number, are few in comparison with the uninsured community, it will probably be felt by those of us who have so far passed through the frost without fracture or contusion that we have escaped a greater peril than at the time we appreciated.

THE RESPIRATORY CENTRE.

THE details of a research of considerable importance, undertaken by Laborde with a view to determining the situation of the centre for respiration in the medulla, are given in a recent number of the *Comptes Rendus*. Full particulars are promised in a more elaborate form. It was found that superficial destruction of the alæ cinereæ produced impairment of respiratory movements; deeper injury produced slowing or temporary cessation of breathing, while destruction, at least down to the centre, gave rise to complete suspension of respiration. This condition was produced with the greatest certainty when a particular part of the floor of the fourth ventricle was removed. This part in rabbits has a diameter of 0·5 mm., in dogs of 1–2 mm.; but the instrument must penetrate at least half the thickness of the substance of the medulla, and pass to the raphe immediately above the calamus scriptorius. Destruction of this region on one side suspends temporarily respiratory movements of the opposite side of the body. Division of the medulla just below the calamus always suspends the respiratory movements of the trunk, those of the head persisting for a time. The movement never returned if nothing was done, but it did so if artificial respiration were kept up for a long time. The spinal reflexes remained present, were even increased, and there were superficial, irregular, but ineffective contractions of the respiratory muscles. In newly born animals the exaggeration of the reflexes was especially marked. All parts above the medulla, including the cortex, the corpora quadrigemina, and the optic thalami, were found to have no particular influence on respiration.

A CENTRAL MORGUE FOR LONDON.

IT is stated in an evening contemporary that the London County Council will shortly consider the advisability of erecting and maintaining a central morgue for London. It is probable the statement is well founded, for the Council obtained powers last session for making this provision. The General Powers Act of the Council enables them to make arrangements for the reception into a suitable building of

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unidentified bodies, which will be removed there on the order of coroners, and inasmuch as it will be used by all the coroners in the county, each will be able to follow there any body to which his attention is directed in any district. If the Council in making its arrangements is guided by careful medical opinion both in the erection and management of such a morgue, it is probable that it will serve an exceedingly useful purpose in giving increased opportunity for medico-legal investigations, and that eventually increased knowledge, useful for the detection of crime, will be the result.

THE TEES-SIDE EPIDEMIC AND LOCAL PANIC.

AT the last meeting of the Middlesbrough Corporation Alderman Hugh Bell, J.P., brought forward a number of statistics which show that in 1874 a typhoid epidemic in Middlesbrough led to 104 deaths, whereas the 1890 epidemic only led to 59, and that during the intervening period the fatal attacks of this disease varied from 12 to 69 annually. Properly interpreted, this would go to show that typhoid fever is a constant endemic cause of disease and death, and that in certain years, such as 1890, some special influence came into play to cause rapid diffusion of the poison amongst the people. But this is not the lesson the alderman would teach. He relies on two circumstances to urge that there is no cause for "panic." Oddly enough, one is the picking out of "five or six years" in which the mortality "had rarely reached a score"; and the other is to quote a report of Dr. Thorne Thorne on the Cleveland Iron Districts—not on Middlesbrough—in which it is shown that typhoid fever some sixteen years ago was "in large measure" due to local defects of sanitation in those Cleveland districts, and not to the public water service. Great stress was then laid by Alderman Bell on the need for improving the sanitary condition of the town, and in the end he exclaimed, "In heaven's name do not let them give up panic-stricken!" It so happens that Alderman Bell is "Chairman of the Stockton and Middlesbrough Corporations Water Board," and that the water supplied by this company has been credited by Dr. Barry with being the cause of the recent epidemic. The alderman, who actually referred to the late outbreak as "a matter of ordinary occurrence," frankly admits that he is unable to say that the "present supply was above suspicion," and to his promise that the Water Board would welcome any suggested remedy we would advise that they should get rid of the excrement and sewage which are admitted into the river which the Middlesbrough people are given to drink; and at the same time go on by all means improving the internal sanitary state of the town.

MICROBE OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

AT the present time very few opportunities occur of studying epidemic cerebro-spinal meningitis. Dr. Bonome has had such an opportunity, and made careful investigations as regards the anatomy and etiology of this disease. The outbreak occurred near Padua. His conclusions, together with an account of his experiments, are published in Ziegler's *Beiträge zur pathologische Anatomie und zur allgemeine Pathologie*. Dr. Bonome was able to examine thoroughly the bodies of five patients who had died from the disease, and the meningeal exudation from a sixth. In addition, in several other cases the blood and catarrhal secretions from the throat and nasal cavities were submitted to investigation. He succeeded in isolating from the exudations of the cerebro-spinal meninges, and from hæmorrhagic collections in the lungs, a streptococcus, which did not, however, grow readily on artificial media, and when so cultivated, or after being preserved in a dry state, soon lost its pathogenic characters. In white mice and rabbits the micro-organism produced the same effects as those brought about by injections of the pneumococcus or meningococcus, fibrinous inflammations being induced, whilst in guinea-pigs and dogs the micro-organism scarcely reacted at all to the pure cultures. This streptococcus found by Dr. Bonome differs from the pneumococcus and meningococcus again in the ball-shaped appearance of the colonies on agar-agar plate cultivations, in its inability to grow on blood-serum, and in the difficulty which is experienced in carrying the cultures through five or six generations. Also it fails to produce true septicæmia in white mice; and when rabbits are inoculated, the micrococci obtained from the blood are arranged in chains surrounded by a capsule, and the same forms are obtained from the gelatinous transudation met with in mice, guinea-pigs, and dogs which have been artificially infected with the disease. The streptococcus, again, is distinguished from the streptococcus of erysipelas by its action on animals and by its failure to grow on gelatine and blood-serum, and also by the appearance of the colonies on agar-agar plates. In contrast with other micro-organisms which are morphological analogues many differences can be made out. Thus, it differs from the streptococcus pyogenes and from the septic streptococcus found in earth by Nicolaier and Guarnieri; also it can be clearly distinguished from the streptococcus found by Loeffler in cases of diphtheria, and from the organism found by Weichselbaum in some cases of pneumonia. After careful consideration of all the points in connexion with this epidemic at Padua, and the results of his bacteriological examinations, Dr. Bonome claims that he has substantiated the existence of the microbe of epidemic cerebro-spinal meningitis.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

WE gladly give space in our correspondence column for the letter which Mr. Chatham has addressed to us in further discussion of the death-rate among medical practitioners, for the subject is one in which our readers have the best reason to take a lively interest. It does not, however, appear to us that our correspondent's defence of his results goes far to establish them. It now appears that in forming his estimate of the deaths that might be expected to occur within a year he has had to deal *en bloc* with a group of persons whose ages varied from twenty to twenty-five years, with another group whose ages varied from twenty-five to forty-five years, with another group whose ages varied from forty-five to sixty-five years, and with yet another group, about which the only thing to guide him was that its members were of the ages of sixty-five years and upwards! Now, if any one of these groups comprised only persons who were subject to one uniform annual death-rate, or to several approximately equal annual death-rates, an actuarial estimate of their mortality might have significance. But that is not the case here, unless in respect of the first group, which we have special reasons for mistrusting, since it is evident that the stress of medical practice cannot be exhibited by the mortality of youths under twenty-five years of age, whether they are legally qualified or not. But, on referring to the mortality table from which Mr. Chatham has deduced his estimates, we observe that between twenty-five and forty-five years of age the death-rate varies from under 7 to over 12 in the 1000. How can Mr. Chatham or anybody else tell what rate within these wide limits would be applicable to the particular group of persons under discussion without any knowledge of the age distribution within the group—that is to say, without knowing how many of its members are subject to

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the higher and how many to the lower mortality rates? The next group affords a more striking illustration still of the conjectural character of Mr. Chatham's data. From forty-five to sixty-five years of age the death-rate varies from 12 to 43 in the 1000. Mr. Chatham seems to have assumed 21 in the 1000 for the purpose of his calculation, but why? It is within the tabular limits truly, but so is 26 in the 1000. If he had assumed 26, his expected deaths would have been exactly what the actual deaths were; and who can say that this is not just as trustworthy a conclusion as the one which he has brought out? The case of the last group is one of conjecture pure and simple, since no superior limit of age is given, and need not be discussed. To put our criticism in one word, we decline our correspondent's conclusions because we are not satisfied that the age distribution of the "physicians &c." whose mortality he has essayed to examine was at all conformable to that of the table with which he has compared them. Unless this were so his results are valueless. The numbers of persons in his various groups afford some rough indication of the age distribution, and, comparing these with the table on which he builds, we gather that the two are about as unlike one another as is possible.

THOMSEN'S DISEASE.

ANOTHER case of this curious disease is recorded by Seifert in the *Deutsch. Arch. für Klin. Med.* The patient was a young man of five-and-twenty, who had no history of predisposition from heredity. He had suffered from the malady from childhood, and while he had a sister in every respect healthy, a brother was the victim of the same disease. In his case also the condition dated from childhood. The patient exhibited more than usually well-developed muscles, but his muscular power was not in proportion to the bulk of the muscles. The usual condition on electrical stimulation was observed—viz., that a momentary stimulation of the nerve caused a momentary contraction of the muscle, while a continued stimulation set up the usual tonic contraction; while the characteristic slow wave-like contractions passing from the negative to the positive pole were produced by a strong unbroken current. Microscopic examination of an excised part of the biceps showed the presence of large muscular fibres, an increase of nuclei, indistinctness occasionally, absence of striation, increase of connective tissue, and infiltration of granular material. No vacuolation of the fibrillæ was detected. The same phenomenon was observed in this case as has been noted in others—viz., that by frequently repeated stimulation the contractions, at first slow, became shorter and quicker, until at last nothing unusual could be observed in their character.

FIGHTING THE FROST IN FRANCE.

THE action of the French Government and the Paris Municipality in dealing with the exceptional distress caused by the prolonged winter constitutes a brilliant example which other civilised nations should hasten to follow. For once the cause of humanity has not been sacrificed to the exigencies of red-tapeism. On Tuesday the Chambers and the Senate voted *nem. con.* £160,000 for the relief of distress, which, with the £80,000 already granted, makes a total of £240,000. Better still, it has been decided to dispense with all administrative formalities, so that the money will reach the poor and the suffering in about twenty-four hours. The Government has also issued orders that persons imprisoned for vagrancy may remain in prison till the frost ceases if they so desire; and it is a proof of the severity of the distress that no less than seven hundred vagrants have preferred the scientifically ventilated and warmed cells of the Nanterre prison to the hardships and hazard of freedom during the frost. Permission also has been given to the poor to gather dead wood in all State forests. The Municipality of Paris, in organising night refuges, showed equal energy. What remains of the great Exhibition of 1889 has been converted into a refuge for the destitute. The huge machine gallery is a day refuge. Here are soup kitchens and large fires, where warmth, shelter, and food can be obtained. The fine arts galleries are converted into vast dormitories. More than six thousand mattresses and rugs have been provided by the Minister of War, so that plenty of good beds were prepared in a very few hours. As the *Daily News* correspondent very aptly remarks:—"The Fine Arts Palace is an abode of wretchedness, but a spirit of thoughtful and tender humanity is so evident that, to my mind, the spectacle presented there to-night is more creditable to the Republic than all the glorious sights presented by the last Universal Exhibition." There is a special pavilion for women, and those who are suffering from colds &c. are gratuitously given hot infusions and placed nearest to the fires. Above all, there is a total absence of Bumbledom. No questions are asked that are likely to humiliate the deserving poor or to make them hold aloof from the aid the State so freely gives in the hope of saving life and preventing illness. In the streets also large braziers are burning day and night, so that pedestrians may warm themselves, and thus recover strength when their vital powers are impaired by the excessive cold. The energy and promptitude with which all this has been organised will certainly save many hundred lives; and the authorities who govern London should feel in no small degree humiliated by the contrast thus established between what has been done in the metropolis of France and what has been left undone in the capital of England.

THE MEDICAL STAFF AND THE COMMITTEE OF THE GERMAN HOSPITAL.

OUR readers will remember that a very proper attempt was made last year to gain some representation of the medical staff on the committee of the hospital. Unfortunately, the attempt failed. It is to be renewed in a somewhat different form this year. The committee will move "that the senior honorary physician and the senior honorary surgeon shall be *ex-officio* members of the committee." The objection to this is that it gives a permanent position on the staff to the senior officers, who may not always be in touch or sympathy with the younger ones, and who after a time may lose interest in their committee work. Another proposal will be made, and it is so reasonable that it ought to be accepted by the governors—viz, "that two members of the active medical staff should by rotation be elected members of the committee every three years according to seniority." This proposal will give freshness and interest to the medical representation, and will be acceptable to the majority of the staff. The governors will find that they lose nothing and that the charity gains much by putting two medical colleagues on the committee. To treat honorary officers as if they were not honorary, or to give them anything short of an effective voice on the committee, is to court discord and disruption.

CHLOROSIS AND ITS TREATMENT.

DR. FREDERICK SCHOLZ of Bremen has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as indeed was observed by Bamberger, Rokitansky, and

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Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "plethora ad vasa," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practised by Dr. Scholz is justifiable.

THE OUT-PATIENT QUESTION &c. AT CAMBRIDGE.

AN interesting discussion on the abnormal growth of the Out-Patient department at Addenbrooke's Hospital took place at the recent quarterly meeting of Governors. The Rev. H. Hall showed that the out-patients had increased by 1000 in the last five years, as compared with the previous five, an increase out of all proportion to the increase in population. Dr. Macalister testified that the patients were not only more numerous but more gaily dressed, the ladies on more than one occasion being in plush, the gentlemen in broadcloth. He advocated a Provident Dispensary Scheme. Sir George Humphry said, truly enough, that in many such cases persons were in depressed circumstances, and great care was necessary in judging. Unfortunately the chairman voted the discussion, though interesting, out or order, and it was abruptly closed. Dr. Latham then raised another question proposing as an alteration of rule that no physician or surgeon, after seventy, should be eligible for re-election. The question is a fair one, but it requires great delicacy of touch. And there are places in which it is not an easy one and where the detachment of such seniors would be a veritable disadvantage. The motion was not seconded, and the matter dropped.

THE RELATION OF BACTERIA TO PRACTICAL SURGERY

PROFESSOR J. B. ROBERTS, in his address on surgery delivered before the Medical Society of the State of Pennsylvania, gives a very concise and accurate statement of the facts in bacteriology that have a special bearing on the surgical treatment of wounds and on the practice of obstetrics. He gives the rules to be observed in operations at his clinique at the Woman's Hospital at Philadelphia, which are eminently practical, and he considers that such rules "ought to be taught to every medical student and every physician entering practice, as earnestly as the paragraphs of the catechism are taught the Sunday school pupils." That such efforts are not always successful in America, even in the case of the surgeons, must be considered possible, as Professor Roberts informs us "that there is unfortunately a good deal of abominable work done under the name of antiseptic and aseptic surgery because the simplest facts of bacteriology are unknown to the operator." Things must certainly be much worse in America than they are here, for we find that at the beginning of his paper Professor Roberts goes out of his way to give the plurals of "coccus" and "bacillus," information which should scarcely be required by men who are supposed to have sufficient education to enable them to engage with success in the profession and practice of medicine and surgery.

"COVERING" IN MANCHESTER.

THE deputy city coroner for Manchester, Mr. Sidney Soult, made some very important remarks on the prevalence in Manchester of a system by which the poor are attended by unqualified assistants. In one case a certificate of death was signed "E. Gilmore, *pro* Dr. Bourke, Oldfield-road, Salford." The coroner said he could not find Mr. Bourke's name in the Directory, and he believed he had recently left Salford and left Gilmore a number of signed blank certificates. Gilmore, in evidence, said that on the death of the patient he sent the certificate for signature to Mr. Bourke. In connexion with another case, the coroner said he knew of a man who had as many as sixteen places in Manchester, and unqualified assistants at all of them. He intimated his intention of reporting the facts of Gilmore's case to the Registrar-General. He will only be doing his duty in acting so. And his remarks on unqualified practice should receive the attention of all practitioners who, except under their own observation and supervision, employ unqualified assistants.

THE EFFECTS OF OREXIN ON ASSIMILATION.

THE effects of hydrochlorate of orexin on the assimilation of nitrogen and fat and on the nitrogenous metabolism in healthy as well as in diseased subjects has recently been studied by Dr. E. T. Kotliar, chief of Professor Manasseïn's therapeutic clinic in St. Petersberg, the pathological cases comprising three of chronic gastric catarrh and one of carcinoma of the stomach. The results obtained are thus summarised. Orexin given in quantities of from five to twelve grains daily for four or five days increases the assimilation of nitrogen both in healthy and in diseased subjects. It increases the assimilation of fat in diseased subjects. The nitrogenous assimilation is lessened to a marked degree in healthy persons, but much less so and less constantly in diseased subjects. In both classes of individuals the appetite is improved, the sensation of hunger not, however, being always increased.

THE WORTLEY ACCIDENT.

HOWEVER we may recognise the good intention of those who organised the Children's New Year Entertainment at Wortley, which was attended by such fatal consequences, we cannot but endorse the verdict of culpable negligence pronounced upon them by the coroner's jury. It seems almost incredible that the circumstances connected with this disaster should not have produced in the minds of ordinarily intelligent persons any marked impression of the risk involved. All the conditions of a serious conflagration, the cotton-wool clothing, the highly inflammable lamps carried in childish hands, the crowded passage, and the insufficient stage area, were present, and yet no prudent misgiving seems to have dimmed, no precaution to have secured, the fair prospect of such precarious festivity. We need not now revise in detail the evidence brought forward; but we must, in common with most, if not all, persons who have followed it, regret that the position occupied by the responsible committee was so purely ornamental. Had there been more of counsel in the preparatory stages which preceded this ill-fated gathering, its method and its issue might have been very different. The suggestion made by the jury that

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arrangements for schoolroom entertainments, hitherto exempt, should henceforth be subject to the supervision of local authorities, is eminently sensible and should not be overlooked. In the course of his observations, the coroner, Mr. Malcolm, referred to a chemical process by which clothing materials could be rendered fireproof. Doubtless this refers to their impregnation with tungstate of sodium, a process to which we have directed attention in a former issue, though its application to cotton-wool would probably be difficult. Ball and stage dresses should be thus treated before they are worn, if the never distant risk of fire is to be prevented. The lessons of experience are often bitter. To many those of the Wortley accident will be painfully so; but it is most profitable to remember that their smart in any case knows no relief so real as that which comes of their candid acceptance and application.

NIGHT EXPOSURE OF SENTRIES AND POLICE.

IN former days the military authorities of this country were not remarkable for the attention they bestowed upon the necessary comfort of the private soldier. The old order which they represented is happily passing, if it has not already passed away, and our army organisation, even in this matter, may now safely venture a comparison with any other European system. Well clad, well fed, and well housed as he commonly is, the soldier on active service now encounters the necessary hardships of his vocation with odds in his favour. This needful care is but right as well as politic. It implies no coddling process, but merely aims at preventing the fruitless dissipation of physical energy. We can hardly believe therefore that the blame attached to such an alleged incident as the desertion of responsible duty in order to escape the trying ordeal of sentry duty during the present extreme cold should rest entirely with the War Office. Night policemen and sentries are much exposed at all times, and their lot in a winter of exceptional severity is enough to test the sternest quality of endurance. It is reported, indeed, that in Holland night-watchmen, though warmly clad, have been found frozen to death. This experience alone should teach us that some further protection besides that afforded by clothes is called for. We may therefore be allowed the suggestion that in addition to an ample equipment of thick woollen and cloth material, with sound and solid boot leather, particular care be taken wherever possible to afford convenient access to warm food and drink, the latter non-stimulant, and also to promote brisk movement and a system of ready and frequent reliefs.

THE POLLUTION OF THE LEA.

AN important legal decision has been given affecting the statutory powers of the Lea Conservancy Board for preventing the pollution of the Lea. It will be recollected that since 1884 the Conservancy Board has been dissatisfied with the action of the Tottenham Local Board in reference to the purification and disinfection of the Tottenham sewage, and that the Home Secretary came to the conclusion that the method of treating the sewage was insufficient. Alterations in the works were then made, and eventually a Joint Drainage Committee of the Tottenham Local Board and the Wood Green Local Board was constituted. Subsequently the Conservancy Board proceeded against the Tottenham Board for continued pollution of the Lea, the Conservancy Board adopting this course because, although the value of the property apportioned to the local boards of Tottenham and Wood Green and the price to be paid by the latter had been duly settled by arbitration under the Tottenham Local Board Act of 1888, the sewerage works used for the purposes of sewage treatment or disposal had not been included in the arbitration. The result of the proceedings was that the magistrates dismissed the summons, taking the view contended for by the Tottenham Board, that, under the circumstances, the disposal and treatment of the sewage and effluent water from the sewerage works had been removed from the control of the Tottenham Board. A case was, however, stated, and this has just been heard before Mr. Baron Pollock and Mr. Justice Charles. Mr. Baron Pollock, in giving judgment, said that the offence charged was not an offence at common law, or under any public Act, as the Public Health Act, but was only one under Section 93 of the Lea Conservancy Act, and he held that the Tottenham Board were not responsible, and that the decision of the magistrates must be upheld. Mr. Justice Charles concurred. Application was made for leave to appeal, but the court said there was no appeal, this being a quasi-criminal proceeding.

THE RHYTHMIC ACTION OF THE HEART.

FROM some researches made by Dr. Hamel, under the direction of Professor Kronecker of Berne, on the circulation and the pulse, some new facts have been added to our knowledge on the subject. The vascular system of animals (frogs and crabs) was connected with an artificial heart, and it was then found that the more nearly the natural condition of intermittent pumping was imitated the more blood could be driven through the vessels. When continuous pressure was employed, less blood was caused to circulate; but, on the other hand, there was a greater tendency to injury of the vessels, permitting exudation of fluid into the surrounding tissues, and thus causing œdema. It would appear that the elasticity of the arteries is kept up by the rhythmical dilatation they undergo. Henricius and Kronecker have also shown that the regular movements of respiration act as a kind of beneficial massage on the heart muscle, and it is suggested that the rhythmical movement of the pulse may act in the same way on the arteria walls.

LONG HOURS ON RAILWAYS.

WHATEVER view may be entertained with regard to strikes as a means to an end, the opinion of all who have some knowledge of human physiology must be absolutely in favour of a reduction of the hours of labour actually imposed upon railway servants. This is so obvious that it constitutes a truism requiring no argument. Only those who are not acquainted with the number of hours actually worked by railway servants can entertain any sort of doubt on the subject. The facts, however, are very clearly stated in the Return of Railway Hours just issued by the Board of Trade. From this official document we learn that last March, when the statistics were taken, there were 1593 engine drivers and firemen employed by the North British Railway Company. Out of this number 1121 were on duty for more than twelve hours at a time, and in that month there were 4001 instances where the duration of the work exceeded fourteen hours in the day. Thus 70·37 per cent. of the men were on duty more than twelve hours. The Caledonian Railway Company employed 1426 enginemen and firemen, of whom 1216 worked more than twelve hours, and there were 2968 cases where the work exceeded fourteen hours. No less than 336 cases are given where the men had only seven hours' rest between the intervals of labour. Very frequently the men work eighteen hours and upwards at a stretch, and this we state on the authority of the Blue-book. It is, we repeat, absolutely futile to argue as to the iniquity of thus prolonging labour beyond the limits of human strength and endurance. The fact that the work is actually done does not prove that it is not injurious. On the

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contrary, it must of necessity undermine the constitution even of the strongest, particularly when we remember that it is incessant toil performed by men who are exposed to all the inclemency of the weather. Under such circumstances, we are glad to see that Mr. Channing, M.P., will move in the House of Commons that the Board of Trade should possess the legislative power "to issue orders, where necessary, directing a railway company to limit the hours of special classes of their servants." Our Factory Acts protect the health of women and children by limiting the hours of labour; but railway servants who work eighteen hours at a stretch not only endanger their own lives, but also the lives of those who travel on lines so insufficiently manned. If the men are not able to obtain a remedy for this state of things, and if the railway companies are so inhuman as to tolerate its continuation, then there will be a good case for legislative interference on behalf of public security and public health.

CHOLERA AT VLADIVOSTOCK.

CHOLERA is still causing great ravages at Vladivostock on the Russian North Pacific coast, the Mansas and the Coreans being the chief victims. There seems to be an utter disregard of sanitary precautions, unless under this term quarantine can be included, whilst such abuses as the casting of the dead into the bay still go on. The Mansas settlement is stated to be desolated, more than half the colony being believed to have already died.

DEATH OF THE DUKE OF BEDFORD.

IT has now been announced that the late Duke of Bedford committed suicide by shooting himself during a paroxysm of pain, and a coroner's jury have returned a verdict of "temporary insanity." It will be remembered that the remains of his Grace were cremated, and we may have to offer some remarks later on on the important bearing the sad event has on the legal restrictions which should safeguard cremation. It is certainly to be regretted that the true cause of the death of such a prominent member of the community should not have been at once announced.

RECENT HOSPITAL APPOINTMENTS.

MR. J. ASTLEY BLOXAM, F.R.C.S., has been unanimously elected to the post of senior surgeon and lecturer on surgery at Charing-cross Hospital, vacant owing to the recent death of Mr. Edward Bellamy, F.R.C.S. Dr. F. H. Champneys, M.A. Oxon., F.R.C.P., has been elected as obstetric physician and lecturer, and Dr. W. S. Griffith, F.R.C.S., as assistant obstetric physician, at St. Bartholomew's Hospital.

ST. BARTHOLOMEW'S HOSPITAL.

WITH reference to the charges recently advanced by a Society contemporary against this hospital, and more especially with regard to the accusation that consideration had not been given to the prevalence of diphtheria among the nurses, we are able to give the following facts:—1. The authorities have been already for two months engaged on the question. 2. Six weeks ago the beds in the diphtheria ward were reduced by one-half—namely, from sixteen to eight—in order to diminish the chances of direct infection. 3. Seven weeks ago a sanitary inspection and report were made by the architect attached to the hospital. 4. An improved system of dietary for the nurses was established several weeks ago. 5. A more searching medical examination of candidates for the office of nurse was adopted. In the article in question there is no reference to the fact that diphtheria is contagious, and that cases are admitted freely from outside (140 cases of diphtheria were received last year). We understand that amongst the twenty-six nurses who have suffered from diphtheria there has been no fatal case, and that the cases remaining (four in number) are now convalescent. Four cases of typhoid fever occurred amongst the nurses during 1890, and one ended fatally. Previously to this there was no death amongst members of the nursing staff for three years. With regard to the state of the building, we learn that an eminent expert in sanitary science has been engaged to make an exhaustive inquiry into the matter.

DIPHTHERIA AT TOTTENHAM.

DIPHTHERIA has again broken out in Tottenham, and it is associated with conditions of nuisance that ordinary sanitary inspection, if effectually organised, should keep under. It is useless to assert that such conditions have no causal relation to this disease so long as their retention in the midst of a population places them in constant association with preventable disease.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Flügge of Breslau has been recommended by the Faculty of Medicine for the appointment to the chair of Hygiene vacated by Professor Koch.

Leipsic.—Dr. P. Schröter has been promoted to the rank of Extraordinary Professor of Ophthalmology. Dr. M. Sänger, Superintendent of the Gynæcological Clinic, has also been granted an extraordinary professorship.

Vienna.—Professor von Schrötter having taken charge of the Third Medical Clinic, Professor C. Stoerk has been appointed to the Laryngological Clinic, which the former gentleman vacates.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. G. Leopardi, Extraordinary Professor of Pathology in Florence.—Dr. Garrigat, a member of the French Senate.

AS will be seen by the report of the meeting of the Northumberland and Durham Medical Society, published on another page, the objectionable practice indulged in by a portion of the lay press of printing intelligence of a purely medical character, which must necessarily be *caviare* to the general public, has evoked a protest from the members of that Society. Dr. Murphy's resolution, though bearing primarily in this connexion on the transactions of the Society and local newspapers, will admit of a much wider application, and conveys a hint which might wisely and properly be taken by the non-professional press at large.

THE Cambridge Medical Graduates' Club has invited Sir George Murray Humphry to a congratulatory dinner to be held on Feb. 24th. Sir George Paget, K.C.B., President of the Club, will preside. Among the distinguished and influential guests invited to meet Sir George Humphry are: the Vice-Chancellor of the University of Cambridge, the Provost of King's College, Cambridge; Sir James Paget, Bart.; Sir Joseph Lister, Bart.; Sir William Bowman, Bart.; Sir Henry Acland, Bart.; and Professor Liveing.

MR. HUTCHINSON'S third lecture, to be delivered on Tuesday next, at the Examination Hall, will deal chiefly with the results of the treatment of lupus by Koch's fluid. The demonstrations will commence at 4.30 P.M., and patients who have been under the care respectively of Dr. Heron, Mr. Watson Cheyne, Mr. Colcott Fox, Dr. Gayton, Dr. Abraham, and others, will be in attendance.

WE hear that the Swiss Federal Diploma, which gives the right of practice, has been granted to Dr. Holland of St. Moritz. This gracious act on the part of the Swiss authorities ends satisfactorily a long controversy.

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THE UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

THERE was a tolerably large attendance of graduates at the meeting of Convocation of the London University on Jan. 21st. The Chairman of Convocation, Dr. F. J. Wood, presided. Mr. Henry E. Allen, LL.B., B.A., was re-elected clerk of Convocation. Before entering on the agenda, the Chairman read a memorial which had been addressed by the Association of Fellows of the Royal College of Surgeons to the Registrar of the University of London, and was published in our issue of Dec. 13th, 1890. The Chairman said that on the 19th inst. the Special Committee concluded their labours in connexion with the scheme for the reconstitution of the University, which was to be placed before the Senate on the 21st. It would not be possible to say what the Senate would do with it. They might either reject or accept it. In the latter case they might go to the Lord President with the scheme and ascertain his views; or they might confer with the Colleges, more particularly University and King's, or lay it before Convocation. It is possible the Lord President would decline to give any opinion, and would want the final scheme. As regards the choice of laying it before the Colleges or Convocation, the former had put some pressure on the Senate, which required no further delay in conferring on the scheme. It was probable that no action would be taken on the 21st beyond ordering the draft to be printed and circulated before being brought before the meeting of the Senate, who were most anxious to give the fullest information.

Dr. W. J. COLLINS then presented the report of the Annual Committee and moved its reception, being seconded by Dr. O'REILLY. He (Dr. Collins) then moved the adoption of the following motion, recommended on page 1 of the report of the Annual Committee:—"That, in view of the recent changes made in the examination in subjects relating to public health, this house respectfully urges upon the Senate the equity of conferring the degree M.D. (State Medicine) upon those M.D.'s who had, previously to 1889, been awarded the diploma in Public Health, and upon those M.B.'s who had, previously to 1889, been awarded the diploma in Public Health, and who shall subsequently pass in the Mental Physiology of the M.D. examination." This resolution differed slightly from that moved on May 13th, 1890, and as the degree in Public Health was not very well known, Dr. Collins proceeded to explain that it was founded in 1875, and continued to 1889 to be known by the initials D.P.H. Lond. In 1889 the M.D. (State Medicine) was established, and the former title became obsolete, so that those who had already passed the examination were in a position of not being capable of comparison with other degrees, and it was desirable that the more modern title, M.D. State Medicine, should be conferrred upon them. The scope of the former examination was equal to, or even beyond, that required for the present degree.

Dr. BAINES, in seconding the motion, said that inasmuch as the former examination had been even more extensive than the present one, it was only just to admit those who had passed to equal privileges, provided they passed in Mental Physiology. The fairness of the matter seemed acceptable to the Annual Committee.

Dr. THOMPSON said the question was not one of equity alone, and that, although the former examination was claimed to be of a higher grade than the present, he would like to ask whether any precedent existed for going back in history in conferring degrees.

Dr. COLLINS suggested that an excellent precedent existed, in that, those women who had passed an Arts examination before the date at which women were admitted to matriculation had been subsequently included in the list of those matriculated. The change advocated, therefore, did not require the exercise of any new power.—The motion was carried *nem. con.*

Mr. NESBITT then moved, "That, in the opinion of Convocation, it is desirable that special examiners should be appointed to conduct the Matriculation Examination." He said that the whole tone of the examination was such as would be addressed to much older students than those for whom it was intended. He quoted examples from the papers last set, and said that the points of scholarship were too minute, and that there was much inequality in the difficulty of pieces set for translation at sight.

Mr. NAPIER, LL D., seconded the motion.

Mr. TYLER then proposed an amendment, which was seconded by Mr. LYNN. It referred to a further modification of the examination by the appointment of moderators and the arrangement of successful candidates in three divisions. This was the substance of Mr. Tyler's motion at the last meeting before it was referred to the Annual Committee; but was now withdrawn, owing to lack of time for discussion in addition to the original motion.

Dr. FITCH said that the wishes put forward were fulfilled, in that special assistant examiners, such as those referred to, looked over the papers. The questions were supervised by members of the Senate specially deputed before being finally laid before the candidates. He considered it was necessary to maintain the unity of system with the higher examinations. He thought the harder questions were more likely to be set by the younger examiners, and that the proposed remedy was not likely to improve matters. It was the aim of examinations to do simple justice to the humbler students, whilst offering more advanced ones a chance of distinguishing themselves.

Dr. R F. WEYMOUTH expressed his dissatisfaction with Dr. Fitch's remarks, and said that the examiners should be in sympathy with the examinees.

Mr. PAUL objected to the style of the questions. He said a separate staff of examiners were required for matriculation, and urged as a reason that many candidates set that examination as the limit to their work, and did not go on to the others.

Dr. THOMPSON said that nearly all the speakers approached the subject from the point of view of teachers. This was of course not to be neglected, but the training of examiners was an important feature. From personal experience he was not in favour of moderators. He urged that a paper should fulfil three requirements: (1) To test the candidate's knowledge; (2) to test his mental power to deal with the questions; and (3) to test his training. He thought that the setting of questions on very modern subjects kept the teaching up to the mark, and that the style of the examiner had an immense influence on that of the teaching. There was room for considerable choice among those who applied for examinerships, and sometimes men were appointed on account of their fitness to examine for matriculation, with diminished regard for higher examination. If the ordinary examiners were relieved of the labour of testing 3000 matriculation candidates, men could be obtained more suitable for the more advanced examinations.

Sir PHILLIP MAGNUS considered the term "special examiners" very indefinite, and that if the proposed motion were carried into force, the examination would be lowered to meet schoolboys.

Mr. NESBITT, in reply, said there was no desire to lower the standard, but only to keep in touch with the candidates. The motion was carried.

Dr. COLLINS moved that the clerk of Convocation be requested to make application to the Senate for their latest revised scheme for the reconstitution of the University as soon as it may be completed, and that he be instructed to post a copy of the same to every member of Convocation.

Dr. THOMPSON seconded the motion.

The CHAIRMAN said the Senate had gone beyond the recommendations of the Royal Commission in order to conciliate the Colleges, and evinced a strong desire to get the scheme adopted.

The motion was carried, and, as many members left, the rest of the business was adjourned

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MEDICAL MAGISTRATE.—The name of Dr. James Alfred Harris, of Chorley, has been placed on the Commission of the Peace for the county of Lancaster.

THE LONDON WATER COMMISSION.—The Bill promoted by the Corporation of the City of London to establish a public authority to promote Bills to provide the inhabitants of London with an improved and cheaper water-supply, having been found to comply with the Standing Orders, will now be allowed to proceed.

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THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE debate at the Berlin Medical Society upon the paper on Professor Koch's remedy read by Professor B. Fraenkel on Dec. 17th,[1] which was followed by Professor Virchow's demonstrations and remarks (vide THE LANCET, Jan. 17th) on the 7th inst., was continued on the 14th (vide special verbatim report in the *Berliner Klin. Wochenschrift*, No. 3, 1891).

Dr. BERNHARD FRAENKEL referred to some of the cases which he had exhibited on Dec. 17th. One of these, a case of tubercular disease of the pharynx, had died since that meeting, having two days later been attacked with acute peritonitis from perforation. The intestine showed numerous ulcers, one of which, two metres above the ileo-cæcal valve, was perforated, whilst in others the serous coat was exposed by the necrotic process. There were extensive cavities in the lungs. The larynx showed widespread destruction. In the pharynx, behind the arytenoid cartilages, could be seen the margins of clean-cut ulcers. The soft parts of the epiglottis were destroyed, only the cartilages remaining, the destruction corresponding to the infiltration previously noted. There were no miliary tubercles around the ulcers. Bacilli could be obtained from the base of the ulcers, showing that Koch's remedy, which destroys the tuberculous tissue, does not affect the bacilli. Professor Fraenkel then exhibited cases shown on the previous occasion: 1. *Phthisis of the right Lung with changes in the Larynx:* Here a dose of 0·1 grm. had been attained without exciting any general reaction. His appearance had much improved and the physical signs had greatly diminished. The larynx was unaltered. Since Dec. 14th the patient had gained 6 lb. in weight. The sputum still contained bacilli. 2. *Lupus of the Nose:* This showed a notable progress in healing, although but few injections had been practised. Slight reddening remained near the infiltration, whilst the nose and ala were quite cicatrised. 3. *Ulceration of Larynx on posterior wall and on Arytenoids:* There still remained some of the pseudo-membranous formation on the posterior wall, but the lateral ulcers were healed. The pulmonary condition had improved, and so had the patient's general health. 4. *Lupus of the Larynx:* A few injections had been practised, but further swelling of nodules could be perceived. 5. The case of a patient from Moscow who on the last occasion presented a peculiar swelling on the posterior wall of the larynx, which was breaking down. For some time he had been injected with a decigramme dose. The tumour had disappeared; the lungs, so far as physical signs went, seemed healthy. Bacilli were no longer to be found in the sputum, and during the last fortnight he had gained about four pounds in weight. Dr. Fraenkel considered this case as cured, although there might perhaps be a recurrence.

Dr. ALBERT FRAENKEL said he showed a case of *lingual tuberculosis* which, he reminded the Society, occurred under two forms—the one as firm nodules of conglomerate tubercle in the substance of the tongue, which, as they increase, break down into ulcers; and the other in the form of scattered miliary tubercles beneath the mucous membrane; these enlarge and eventually form lenticular ulcers. The patient in question, a waiter twenty-five years of age, showed a combination of these two forms; he also had both lungs and the larynx affected. The treatment was commenced on Nov. 22nd, and had been continued for seven weeks and a half. Commencing with 0·001 grm. the dose had now reached 0·04 grm., after a total number of thirty-five injections (or 360 milligrammes in all). Very slight effect had been produced on the temperature curve, the highest rise noted not exceeding 1° C. above the previous pyrexia (viz., 39·5° instead of 38·5°). On Dec. 10th the tongue, which had previously appeared to be normal, showed some aphthous-looking ulcers on its right anterior margin. Another lung case also developed similar ulcers on the tongue and cheek, but they rapidly healed; whilst in this case they slowly increased in size. But at this time no bacilli could be obtained from them. On Dec. 18th there appeared painful infiltration and intense redness, with swelling of the right border of the tongue; and about a week later, during which time the ulcers had still further enlarged, and had become partly confluent, there were seen some yellow deposits of the size of millet seeds on their margins. Then the base of the ulcers, which had been coated with a greyish deposit, cleared up, but became deeper; and now bacilli were abundantly found in the secretion. The infiltration continued to spread, so that now a firm nodule as large as a small walnut could be felt in the tongue; and, further, within the last few days there had been an eruption of miliary and submiliary tubercles on the mucosa not only around the ulcers, but in what seemed to be healthy membrane at a distance of 1 cm. from them. There seemed no doubt that the virus had been disseminated. [The same patient had also just developed an abscess near the anus, the pus of which contained numerous tubercle bacilli. Dr. Fraenkel proposed to excise some of the lingual tubercles and examine them for bacilli.]

Dr. B. BAGINSKY exhibited the case of tuberculous affection of the gums which Professor Litten had shown to the Society of the Charité Physicians on Dec. 4th, 1890. The patient had apparently been infected nine years previously through the medium of the pocket-handkerchief of her tubercular sister, and an ulcer had formed on the septum narium. This had been taken for lupus and scraped. Three years later an ozœna was traced to ulceration on the nose; and some time afterwards there also appeared ulceration of the gum on the upper jaw, which was painless, and for a long time had not been treated. She came under Dr. Baginsky's care on Nov. 26th, 1890, having then a granulating ulcer of the gum involving the left side of the jaw, and partly extending to the right half. The granulations were covered with yellow puriform secretion, and amongst them were many well-defined miliary nodules in process of disintegration. Two ulcers were found on the left of the septum narium and ala. The palate, pharynx, and larynx were normal. There were signs of infiltration of both pulmonary apices. In a portion of the granulations that was excised giant cells were present, but no tubercle bacilli could be found. Treatment by Koch's fluid was commenced on Nov. 28th, and the patient had received altogether twenty-three injections, the last on Jan. 13th, 1891—viz., 13 milligrammes. There had been severe general and local reaction. The temperature rose to 40·9° C., and there was great swelling of the nose and gum; then, as the necrotic portions liquefied, fresh nodules appeared in the deeper parts. Nevertheless bacilli could not be found. During the treatment, after the fourteenth injection, a painful glandular swelling appeared in the left cheek, and, at the same time, the submaxillary glands became swollen, but under continued treatment these swellings diminished and the tenderness ceased. But suddenly, after the twenty-first injection, there was pain in the left side of the neck, and next day it was found that there was redness of the left arch of the palate, with redness and swelling of the tonsil, in which small grey nodules could be seen. The redness subsided, and only a few of the nodules remained visible. The disease of the gums, however, remains just as before, or is even worse than before treatment. The nasal ulcer seemed to have cicatrised.

Professor VIRCHOW desired to add a few facts to those of his demonstration at the previous meeting. He first showed a specimen kindly sent to him by the physicians of the Jewish Hospital. The case was one of phthisis, which had received two injections the last four weeks before death, and showed a most unusual degree of change in the intestine. Amongst the effects which he had considered to be due to the injection of Koch's remedy was the occurrence of marked medullary proliferation occurring in lymphatic glands and their vicinity. This case exhibited such a change to the greatest extent he had seen. There was so much medullary infiltration in the parts usually attacked in typhoid fever that he himself at first thought the case was one of typhoid. On both sides of the ileo cæcal valve, especially in the ileum, were follicular ulcerations; and around the ulcers, as well as in parts where the ulceration had just commenced, and also where the mucosa was still intact, were circumscribed swellings. Peyer's patches, and groups of follicles approaching them in size, were converted into raised whitish medullary plaques, the surfaces of which were more or less ulcerated. The process differs essentially from that ordinarily seen in typhoid, for the ulcers begin at several points, then become rapidly confluent, and gradually break down in the centre, a change

[1] Reference to this article will be found in our Berlin letter of Jan. 3rd, p. 62.

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often interrupted by direct sloughing, causing a rapid extension of the destruction. In some parts subjected to a stream of water the surface presents a sieve-like aspect from the rupture or destruction of separate follicles. The case was also remarkable for the considerable swelling and semi-caseation of mesenteric glands in the vicinity of the ileo-cæcal valve, a change also analogous to that seen in typhoid. Over the largest of these glandular swellings lay a zone of recent submiliary peritoneal tubercles. Professor Virchow then showed some preparations exhibiting quite recent submiliary eruption on the serous coat of the intestine in cases of phthisis. One specimen was from the body of a patient, a Russian merchant, aged thirty-seven, and was sent by Dr. O. Israel. It was a portion of the ileum near the ileo-cæcal valve, having two old tuberculous ulcers of the size of a ten-pfennig piece with clean but indurated base and thick margins. On the serous surface were small submiliary tubercles in exceptionally large numbers. Another from the Charité, a working woman twenty-three years of age, with ulceration of larynx and lungs, who had had four injections, the last on Dec. 10th. Tracheotomy had to be performed on Nov. 23rd, a week before Koch's treatment was commenced. The large laryngeal ulcers showed a smooth base, with recent miliary nodules in margins and vicinity. On the ileo-cæcal valve were some older partly healed ulcers, and the serosa in this region showed a large tract of delicate, transparent, grey, submiliary nodules. On the posterior surface of the liver and near its lower margins the capsule presented a group of very fine barely visible nodules in a thin inflammatory exudation. He then showed the lungs from the first of these two cases, illustrating the marked extension of disease in the form of foci of caseous hepatisation scattered throughout. In this case nine injections had been made from Dec. 18th (1 mg.) to Jan. 5th (5 mg.). The first examination yielded a tympanitic dull note in the left first interspace and the infraspinous fossa; on the right, above, some rough expiration, normal resonance anteriorly, and some moist râles. The condition now presented was that of smaller and larger cavities filled with soft creamy contents. Had all these foci been emptied of their contents nothing would have been left of the lung but a framework of a few bands enclosing cavities in all parts of the lung. It is obvious that under such circumstances the action of the remedy must be unfavourable. Professor Virchow added that in citing these cases he expressly desired not to impugn the remedy as such; it was a question rather of testing its employment. We must be convinced that there is a very definite limit to the action of art, where no possibility exists of a restoration to the normal or even of a tolerable condition. Professor Virchow next showed some specimens from the body of a student, twenty-five years of age, who had been injected nine times, the last on Dec. 25th. The case was under the care of Dr. Lazarus at the Jewish Hospital. It was a case in which perforation of the pleura leading to pneumothorax had rapidly occurred after the injections had ceased. The left lung was quite free from tubercle, as well as the middle lobe, the major part of the lower lobe and apex of the right lung. But below the apex was a walnut-sized ulcerating cavity with gangrenous contents, reaching to the pleura and perforating at a minute spot. In the neighbourhood were caseous pneumonic nodules; in the pleura, recent and old tubercle; and scattered in the lung some foci of softening to the size of a cherry, with loose necrotic contents of yellowish-white colour. He also showed two lungs from an indubitable case of phthisis, the right organ showing at several points connected areas of diffuse hepatisation, upon which he spoke last time as a relatively rare appearance. He related this case because, so far, he had not been able to ascertain that injections had been practised. The patient had been transferred from the surgical wards in the Charité—where he was admitted for a wound of the arm—to the medical wards, owing to his phthisis, from which he succumbed after twenty-four hours. There was widespread hepatisation, very different from the ordinary form, resembling the caseous form, but of a moist, yellowish character, reminding one of phlegmonous conditions. If it should turn out that such cases occur without injections, then the opinion given last week must be modified, for it would have to be determined in what cases such a type of inflammation should be regarded as a result of the injection and in what as a mere complication. Whether the man was injected before the time of his admission into the Charité—where he was for eighteen days—was not then known. Professor Virchow concluded by showing a specimen of induration at the apices of the lungs of a case of congenital heart disease (a woman aged thirty), a change often regarded as healed tubercle, but which he attributed in this instance to interstitial pneumonia due to syphilis. In these cases, too, he remarked, the bronchi may become ulcerated, or form bronchiectatic cavities.

Dr. LAZARUS gave some details of the case of pneumothorax referred to by Professor Virchow. The patient was admitted into the hospital at the end of November, with abundant bacilli in the sputum, but only slight dulness at the left apex. He was a robust, powerful young man of healthy parentage, and injections were commenced on Nov. 30th, and up to Dec. 24th nine injections were given. The highest reaction was 39·4° C., and 5 milligrammes was the largest dose given. Although his appetite had improved, the temperature began to have more tendency to rise, the respiration became shorter, and the pulse very rapid. The injections were discontinued, and the area of dulness increased from above downwards. On Jan. 6th the temperature rose suddenly to 40° C., and remained at this level till the 9th, after which for three days the fever rapidly subsided. Then appeared signs of pneumothorax on the right side, which soon increased.

These demonstrations having terminated, the discussion on Dr. B. Fraenkel's paper on the Employment of Koch's Remedy in Tuberculosis was resumed by

Dr. PAUL GUTTMANN, who gave his experiences at the Moabit Hospital, where 170 cases had been treated, of which number 120 were in the part assigned by the city authorities to Professor Koch. Forty-one cases of pulmonary tuberculosis were in a relatively early stage of the disease—i.e., with infiltrations at the apices,—and had been under treatment for from three to six weeks. The great majority of these had notably improved. First, there was gain of weight from ½ to 6½ kilogr.; some remained of the same weight as before injection; five had lost weight. Second, in no small number were there favourable changes in the physical signs, the number of râles manifestly diminishing; and in some patients there had been moderate clearing up of the dulness on percussion. Third, all the patients felt subjectively better. Dr. Guttmann said he had only selected the initial cases for his statistical inquiry, because Koch had affirmed that such cases could be cured by his remedy. The two girls mentioned as cured in his (Dr. Guttmann's) previous communication remained still free, and may be regarded as cured of tuberculosis. To them he now added a third patient, who for four weeks had suffered from cough and sweating, and in whom over both apices were scanty fine râles. After three weeks' treatment, in which the injections reached 0·1 grm., she had lost cough and night-sweating, and only now and then could any râles be heard. Manifest improvement also took place in some of the other cases. Favourable results were also yielded in laryngeal cases, of which there were more than thirty, comprising all various forms, from simple infiltrations to ulcers and perichondritis. All these cases, examined once or twice daily by the laryngoscope, show marked tendency to improvement, and in fact towards cure. The cases of simple infiltration improved the most rapidly, ulcers less so; but their bases became clearer and margins thinned, and in some cicatrisation took place. He believed that the results of the treatment depend largely on the selection of the cases. Only the early stages of pulmonary tuberculosis are suitable for it; by no means should very advanced cases be treated, and when such selection is made he thought other hospitals would attain similar results to those which were to be found at the Moabit Hospital.

Dr. KÖRTE, jun., said that since Nov. 22nd there had been twenty-eight cases treated in the surgical department of the Urban Hospital. So far no definitive result had been noted, but the treatment had probably not been long enough employed. No case had exceeded 0·1 grm. dose. The injections had also been used for diagnostic purposes in doubtful ulcerations, without reaction, save in one case of actinomycosis. There had been eight cases of lupus. One had been treated for four weeks and showed improvement, but was not cured; the rest had marked reaction, but had not been long under treatment. Of three cases of tuberculosis of soft parts, one—a case of suppurating gland—at the end of four weeks' treatment had the same characters as before. Only water dressing was employed, and at first the wound enlarged, suppurated freely, then diminished, and then took on the usual characters of such glandular wounds. Of two cases of intestinal tuber-

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culosis, one improved, the other died from pulmonary phthisis. There were also treated ten cases of bone and joint tubercle, and five others associated with lung disease; and lastly two cases of pulmonary tubercle which happened to be in the surgical wards. Dr. Körte advocated starting with small doses, which should be slowly increased; and said that the very severe symptoms which followed the earlier injections when larger quantities were used had led them to adopt that plan, and also to allow a sufficient interval between the injections. In a few cases there was loss of weight, but in some a slight gain; whilst in several, especially children, who had no general tuberculosis, but only local disease, marked anæmia developed during the treatment. In one case of a boy there was a measly eruption, with herpes; and in another, a case of recent tubercle of the knee-joint, marked hallucinations, lasting for a day, followed an injection of 8 milligrammes. Some of the cases had been already treated by resection or iodoform injections, and it was to be noted that in the latter the reaction was much delayed. As a rule the febrile movement began on the second day; but the height of this did not correspond with the intensity of the disease. Patients with extensive lesions reacted very slightly, until perhaps a dose of 5 milligrammes was reached, when there was a strong reaction. In two cases dyspnœa occurred after 8 milligrammes and 9 milligrammes respectively, although up to that point they had shown nothing abnormal, and only very moderate reactions. This dyspnœa led him to leave off the injections, but it continued until the deaths of the patients, which took place in the one case ten days and in the other four weeks after the last injection. Still, he was not disposed to attribute the deaths to the injections. They were cases of advanced tuberculosis, and were injected in order to see if any improvement could take place. One was a case of fistula, the other a large abscess of the hip-joint, and both had considerable lung disease. The injections had no notable effect on the suppuration. A boy with tuberculous abscess of the knee-joint, and in the true pelvis, which had been opened, did not react to the remedy. An epileptic seizure followed one injection, but he appears to have been previously subject to such attacks. The dose was raised to 8 milligrammes without any effect on the fistula or the cicatrix. One case of actinomycosis of the face was treated. It was a young lady twenty years of age, who suffered from an abscess of the cheek, at first thought to be connected with dental caries. There was dulness at the left apex, and a history of hæmoptysis. The diagnosis rested between tubercular ulcer and actinomycosis, and she was admitted into hospital and treated by injections, commencing with one milligramme. There was marked general reaction, and local redness and swelling, with increased discharge, but no improvement. Dr. Israel detected actinomyces in the discharge, and extirpation had been followed by healing of the wound. The general reaction was attributed to the lung affection, but no bacilli were found in the sputum, which was very scanty. At any rate, the case showed that a local reaction could be produced by the remedy in actinomycosis. Dr. Körte then referred to the fatal cases. Two of these, as already said, were cases of pulmonary tuberculosis with surgical affections, and were injected without any hope of effecting a cure. Dr. Hansemann found much recent tubercle in the organs, together with older caseous foci. A third case was that of a child four years old, with fungous disease of the knee, which had been treated by iodoform injections. The condition of the joint had much improved, but the disease was not quite got rid of, and from Nov. 22nd to Dec. 5th he was given six injections up to 6 milligrammes. Reactions were marked, not excessive, the fever never exceeding 39·6°. The knee became swollen and painful, and the child lost its colour and appetite. Continued fever setting in, the treatment was stopped at the sixth injection. Then occurred vomiting, hyperæsthesia, and headache, followed by marked symptoms of cerebro-spinal meningitis, from which he succumbed thirteen days after the last injection. There was quite recent meningitis, with grey transparent granulations in the arachnoid, and the brain substance was somewhat œdematous and moderately hyperæmic. The lungs were healthy, but there was recent miliary tubercle in the liver. The knee-joint showed some tuberculous granulation tissue in the inner surface of its capsule, some erosion of cartilages, and a tuberculous focus in the head of the tibia. Dr. Körte next referred to a case of knee-joint disease recently treated on Koch's method, with very severe local and general reaction, the joint swelling from the first; but, whilst the general reaction became less, the local reactions continued severe. There was so much pain and inflammation, and the patient losing ground, that resection was had recourse to. The joint showed an abundance of recent synovial tubercle, which was invading the cartilage. Lastly, he mentioned the case of a man for whom laparotomy had been performed. No tubercle was seen in the peritoneum, but bacilli were found in the pus. He recovered from the operation and increased in weight, but there remained some resistance in the inferior region of the abdomen. He was transferred to Dr. Fraenkel's ward, and injections with Koch's fluid were given, but with hardly any reaction. Occasionally he had a slight dragging in the abdomen. The injections were increased up to 0·1 grm., but without any recognisable result; whilst the exudation which had been felt after the operation remained, but in less amount.

INTERNATIONAL MEDICAL CONGRESS AT BERLIN.

RÉSUMÉ OF THE PRINCIPAL PAPERS READ IN THE SURGICAL SECTION.

Abstracted from the MSS. for THE LANCET.

BY C. LAUENSTEIN, M.D. HAMBURG,
ONE OF THE SECRETARIES TO THE SECTION.

Resection of the Stomach and Intestines; gastro-enterostomy &c.

BILLROTH details an experience of 124 cases, 83 of which were operated upon by himself, the rest by his pupils. There were 41 resections of the pylorus (7 males and 34 females); 28 cases were for carcinoma; 1 for sarcoma; 12 for cicatricial stenosis; 19 healed, 22 died. The operations lasted between one hour and a quarter and three hours and a half. The resected pieces were from 4 to 21 centimetres. Twenty-seven typical resections were made, with 12 successes and 15 deaths. Twice, after removing a very large carcinoma, the stomach and the duodenum were both closed, and gastro-enterostomy performed. One patient died, and one recovered.

Results.—Of the 13 cases which recovered after resection for carcinoma, 5 died within ten months, 2 after a year, 1 after one year and a half, 1 after two years and a half, 1 after five years and a quarter, and 3 females are still living. One of these was operated upon a year ago, and under the cicatrix a knot is now felt; 2 of them are quite well; they were operated upon four years and a half and two years and a half ago. Of the patients who were operated on for cicatricial stenosis, one woman died three months and a half afterwards from peritonitis, a young man died five years after from intercurrent disease, and four women are living in perfect health. Gastro-enterostomy was performed in 28 cases for carcinomatous stenosis (13 males and 15 females); 14 were successful, 14 died. Life lasted from one to eight months, the patients being greatly relieved. Resection of small gut: 11 patients were successfully operated on. Resection of cæcum: 24 cases; 11 died, 13 recovered. Resection of the colon (transverse and sigmoid): 8 resections, with 4 deaths and 4 recoveries. Billroth always uses interrupted silk stitches. The inequalities in the lumina were equalised by folding in the larger viscus and fixing it thus with stitches. Occasionally the gut was cut obliquely to make it wider, or it was implanted laterally.

Novaro (Siena) records 20 similar operations. His conclusions are (1) Pyloroplastic operations are indicated in cicatricial stenosis; (2) in cases of pyloric tumour, pylorectomy is necessary, but it is advisable to remove a little of the tumour for microscopical examination first.

Postempski (Rome) records 5 cases: (1) A successful Loreta in a woman aged forty-six; (2) an excision for round anterior wall ulcer—perfect recovery; (3) stenosis of œsophagus and pylorus—dilatation of the former and pyloroplastic operation, with recovery; (4) same operation, with success, in a man aged forty-three; (5) gastro-enterostomy for cancer, with death six months after.

Lauenstein (Hamburg) gives 25 cases of pyloric stenosis:

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12 cases were resected (4 successful, 8 died); 11 cases had gastro-enterostomy (9 recoveries, 2 deaths). Success depends on asepticism, the patient's condition, and rapidity of operation. Dry hands and instruments are advised.

Czerny (Heidelberg) refers to 3 cases of sarcoma of the gut which he had resected successfully.

Maydl mentioned that he had made 40 resections. Out of 9 cases of resection of the colon, 2 died. He advises the Czerny-Lembert suture.

The Newer Operations in Cancer of the Rectum.

Axel Iversen (Copenhagen) formulates the following conclusions upon 247 cases of excision of the rectum operated upon in Denmark, Sweden, and Norway: 1. The older as well as the more recent methods of amputation and resection of the rectum are only palliative procedures. They give a longer tenure of life than colotomy affords, but they are more dangerous. 2. The extirpation of the entire rectum, together with the regional glands, is the most reasonable of the procedures, for in favourable cases radical cure is obtained. But as of 19 cases of Kraske's operation 8 died (5 in collapse), the method is very dangerous where cancer is far advanced. 3. The greatest number of cases must still, as formerly, be treated palliatively (colotomy, rectotomy, "*évidement*"), because most patients present themselves too late for radical operations. 4. Colotomy should be performed by the Madelung, Maydl, or Reclus methods.

Bryant submits that excision is only applicable to cases in which the disease is limited to the lower two inches and a half, and all can be removed; otherwise colotomy or rectotomy should be performed.

König (Göttingen) does not deem the Kraske method so dangerous. As regards the prognosis, after the older and newer operations, out of 96 extirpations on the older plan he lost 27. Of 16 patients operated upon by this method he has lost only 4. His mortality has latterly dropped to 12 per cent., and he thinks it due to the fact that he has given up uniting the gut section to the skin.

Czerny (Heidelberg) reported that he has performed 18 rectal extirpations (with resection of sacrum), with 4 deaths. In all the fatal cases the peritoneum was opened. He advises that the peritoneal wound should be immediately sutured. His experience goes to prove that a better prognosis as regards recurrence is afforded by a carcinoma which affects the upper parts of the rectum. One of his cases has lived twelve years. The cancer was situated 12 cm. from the anus. The best prognosis obtains in case of carcinoma of the mucous membrane which infect the glands late, and in scirrhus strictures which induce pain early.

Resection of the Thorax in Empyema.

Schede (Hamburg) demonstrated several patients in whom he had resected the greater part of one side of the thorax for inveterate empyema. The incision is begun at the external border of the pectoralis major on a level with the fourth rib, and is continued downwards to the post-axillary line on a level with the tenth rib. It is then carried upwards along the middle edge of the scapula. The soft parts are raised from the ribs, which are resected subperiosteally. The whole thorax hollow is now laid bare and upholstered with the skin-muscle flap. Healing takes more than a year before it is complete.

Sabbotin (St. Petersburg) recommends the following:—Two longitudinal parallel incisions are made in the side of the thorax; several ribs are divided, each once or twice. This movable flap is now pressed into the pleural cavity and the external wound closed.

Küster (Berlin) is an advocate of rib resection. He advises such to be done in two places, the posterior being placed low down at the lowest level of the pleura. He has thus treated 136 cases with 78 recoveries (57·3 per cent.); 41 died (30·1 per cent.), and 17 were unhealed (12·5 per cent.).

Osteogenesis.

Ollier (Lyons) has performed 500 subperiosteal resections and verified many of his results by necropsy. The humerus, radius, and ulna are reproduced in the form of the normal bone. After removal of the lower end of the humerus, the length of the bone is restored by the activity of the upper epiphyses, provided that the stump is used. He has never observed the absorption of newly produced bone. Antiseptic treatment of wounds does not prevent its production. In extensive resection for tubercular disease the bone does not reproduce itself; hence in such cases the tubercular focus only must be removed. Ollier says that the periosteal production of bone is but slight; the results are better if a thin layer of bone is preserved under the periosteum. It is as yet too soon to judge of the utility of transplanted bone. His experimental work on animals tends to show that such bone disappears. It only sets up tissue irritation in which it is implanted. It would be more logical if ivory pegs or platina pins were used instead.

Rubio (Madrid) has used decalcified bone in two cases with excellent results; he advises the vault of an ox's cranium for repair of skull defects.

Kümell (Hamburg) transplanted decalcified bone in twelve cases—viz., into bone cavities, trephine hollows, for replacing phalanges, for defects in radius, to close opening of the canalis vertebralis after operation for spina bifida, and to fix the bone fragments after resection of the knee. His experience is that bone chips unite in spite of suppuration.

Abdominal Section for Tubercular Peritonitis.

König (Göttingen) has collected 131 cases of laparotomy for tubercular peritonitis (11 male, 120 female). His personal experience consists in 14 of these, of which six were soundly cured; most of the patients (70 per cent.) were over twenty years. He states that laparotomy will cure a quarter of all cases; 107 were much ameliorated; some have remained well for lengthy periods — viz., twenty-five, thirteen, nine, eight, and seven years. The danger of the operation is not great—only 3 per cent. mortality—as opposed to the fatal nature of the unattacked disease. The chief elements of success appear to be the employment of not too small an incision and the thorough evacuation of fluid and removal of tubercular masses and organs. Lavage with strong antiseptic solutions was performed in 80 cases, and without such in 50 cases. It is noticeable that more cases healed *without* antiseptic lavage. In the future, careful microscopical examination should be made of the evacuated débris in every case in order to explain the mystery of the healing process. König gives the following valuable statistics from the Göttingen Pathological Institute. Out of 2230 post-mortems there were 107 cases of tubercular peritonitis (4 per cent.). Of these 89 were males and 18 females. In 99, tuberculosis of the lungs was coexisting, only 8 cases were therefore free; 60 had more or less severe pleural complication; 80 had ulceration of the gut (74 per cent.); 44 had affection of the mesenteric glands (41·6 per cent.); 38 had tubercle of the kidneys; 40 had the spleen affected; 4 of the 18 females had tuberculosis of the tubes and ovaries.

Kümell (Hamburg) records eight cases. He uses sponges and antiseptic fluids in the abdominal cavity with the view of setting up adhesions, believing that such proceedings prevent ascites recurring. One of his cases has remained well for four years, another for two years, two of the healed cases have fistulæ still.

Diseases of the Thyroid in Sweden.

Rossander (Stockholm): In Sweden degeneration of the thyroid is rare; out of 141,045 patients only 84 had disease of the thyroid, whilst out of 31,312 operations only 102 were directed against disease of this gland. Rossander states that in suitable cases injection of iodine is a valuable treatment. Although relapses occur, yet this treatment is better than enucleation in cystic goitre, which variety forms 40 per cent. of the cases. In 32 cases total extirpation was performed (25 at one sitting, the rest in 2 sittings). No consequences followed, neither myxœdema nor tetany. Cretinism is unknown, myxœdema also. The enucleation after Socin's method is warmly recommended if enucleation is adopted; in thyroidectomy the division of the operation into two stages is advised.

Biondi (Bologna) states that the special secretion of the thyroid gland in reptilia, aves, and mammalia is produced by the columnar epithelium lining the acini; that thence it is discharged into the lymphatic spaces. He further holds that the sub-capsular and peri-capsular layers are capable of regenerating or reconstructing the gland, and therefore that in all excisions the capsule should be left.

Calculus Disease.

Lewschin (Kasan), upon a review of 30,000 cases of stone which the author has collected from reliable sources, the

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following conclusions are based:—1. For the most part calculus occurs in the infant and child. 2. Calculus disease is distributed very unequally in Russia. Thus, in the Baltic provinces, Finland, Volynsk, and elsewhere, the disease is almost unknown; whilst in the province of Moscow alone 14,000 cases have been recorded (there it may be said to be endemic), and in the divisions Kasan, Danileff, Tamboff; each affords more than 1000 cases. 3. Etiological conditions are not clear; the vegetable food of the Russian peasant and heredity are the two factors suggested.

Aretaos (Athens) believes arthritis plays an important *rôle* in the production of stone. He finds the children of the poor most often affected. Litholapaxy is the preferable operation. He has treated 256 cases. His mortality in lateral lithotomy is 24·4 per cent.; in sectio alta it is 44 per cent.

Pathogenesis of the Popliteal Cysts.

Poirier (Paris) has studied 500 knee-joints, of which 200 were injected. He has found, contrary to the text-book teaching, that popliteal cysts are for the most part in communication with the joint, and are of joint origin. His conclusions are (1) the cyst between the inner gastrocnemius and the semi-membranosus is extended and rendered larger in extending the joint, and diminished in flexing it; (2) the cyst of the bursa of the popliteus muscle appears as a rule like a tumour in the deeper part of the calf; (3) cysts in the neighbourhood of the condyles on a level with the insertion of the gastrocnemii are in communication with the joint.

Diaphragmatic Hernia.

Postempski (Rome) read a papar on Suture of the Diaphragm in cases of Traumatic Hernia through this Muscle. He forms a flap on the side of the base of the thorax, resects one or two ribs, opens the pleural cavity and sutures the gap in the diaphragm after replacing the escaped abdominal viscera. The flap closes the pleural cavity without drainage. Six cases have been successfully treated by this method in the hospitals of Rome.

Buried Horn Forci pressure Forceps.

Tantini (Modena) submitted that horn was a suitable substance for leaving in the tissues if need be. He has made artery clamps of horn, which are easily disinfected and can be left in the body. He showed a clamp which he had used seven months previously in removing the spleen of a dog. The foreign body had caused no reaction.

Absorbable Drainage-tubes.

Weeks (Portland, U.S.A.) demonstrated the prepared arteries of different animals (preferably the ox) which he uses as drainage-tubes. He contends that they have qualities superior to the decalcified bone drainage-tubes.

The Blade of a Knife as a Nucleus of a Vesical Calculus.

Lavista (Mexico): Two years before coming under treatment for symptoms of stone the patient was stabbed in the supra-pubic region. On removal by sectio alta of the calculus the blade of a large knife was found as its nucleus.

Artificial Production of Hernia.

Bornhaupt (Krew) stated that in Russia the Jews produce inguinal hernia in order to avoid military service. An instrument is used similar to an ordinary glove-stretcher, and by it the canal and ring are gradually enlarged.

THE INTERNATIONAL CONGRESS OF HYGIENE.

THE first of the Sections of this Congress to complete its organisation and issue its programme is that of the "Relation of the Diseases of Animals to those of Man"—a subject which has of late achieved considerable development in view of the recent discoveries of Dr. Koch, and the discussion with regard to tuberculosis, which has culminated in the appointment of a Royal Commission to inquire into the subject.

The Section proposes to consider, amongst other subjects, the Infectious, Contagious, Parasitic, and other Diseases communicable from animals to man, and *vice versâ*; the methods of the propagation of diseases affecting mankind by means of animals and animal products: the infection of meat, milk, and other comestibles, and the restrictions to be placed upon the sale of infected food and the movement of infected animals.

The President of the Section will be Sir Nigel Kingscote, K.C.B, Chairman of the Board of Governors of the Royal Veterinary College; and the Vice-Presidents will be Prof. G. T. Brown, C.B., and Dr. E. Klein, F.R.S. They will be assisted by a Council containing amongst other members Dr. Edward Ballard, F.R.S.; Dr. Edgar Crookshank; Dr. George Fleming, C.B.; Mr. J. T. Reeves, representing the Company of Grocers, which has for a considerable period made munificent grants in aid of scientific research; Professor James McCall, F.R.C.V.S.; Professor John McFadyean, M.B., B.Sc., F.R.S.E.; Shirley F. Murphy, M.R.C.S., Medical Officer of Health for the County of London; Dr. J. Burdon Sanderson, F.R.S.; Sir John Thorold, Bart.; Dr. George Turner; and Sir Jacob Wilson. The Secretaries of the Section are Mr. W. Duguid, F.R.C.V.S.; Dr. G. Sims Woodhead, F.R.S.E.; and Mr. Ernest Clarke, Secretary of the Royal Agricultural Society of England, to the last-named of whom communications relating to the Section may for the present be addressed, at 12, Hanover-square, London, W. Sir George Harris, L.C.C., Mr. H. H. Collins, F.R.I.B.A., Fellow of the Sanitary Institute, and Mr Mark H. Judge, A.R.I.B.A., Fellow of the Sanitary Institute, have been elected to represent the Vestry of Paddington at the Congress.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

City of Dublin.—Dublin is now estimated to have a population exceeding a quarter of a million and a death-rate as high as 27·9 per 1000 living, and amongst the causes of death to which Sir Charles Cameron especially adverts is phthisis, which he says shows no falling off in its ravages as compared with recent years. It is somewhat curious that the proportion of deaths in infants under one year of age in Dublin distinctly exceeds that for England and Wales and for London. Irish communities in English towns often stand out in favourable contrast with the English in this respect, and the difference has generally been regarded as being influenced by the practice of feeding Irish infants on breast milk. But Dublin differs from such other communities in this respect. The Municipal Council have adopted the compulsory notification of disease, and it came into operation in March last. In an account of the sanitary work carried out, it is stated that much attention is being bestowed on the inspection of dwellings and other buildings; disinfection is gratuitously carried out, a laundry has been established for washing and making up infected linen &c., a large number of offensive ashpits have been abolished, and unwholesome tenement houses have been closed. All this tends to sanitary improvement, and we may hope that it will not be long before Dublin gets finally rid of still more of the factors of a high death-rate which it possesses, including the deplorable condition of its river.

Hull Urban District.—The annual death-rate from all causes in 1889 was 19·9 per 1000, the zymotic rate 2 per 1000, and the infantile death-rate 191 per 1000 births registered. There were 157 deaths amongst infants from diarrhœa, and of this number only 22 had received their mothers' milk. Dr. Ballard's report on this latter subject is quoted at great length by Dr. Mason, and it is certain that if the Town Council act upon the practical suggestions which are the outcome of it, there will be a diminution of death from more than one cause as the result of such action. The hospital for infectious diseases received 314 patients during the year, and, the institution having been largely extended and improved, the Corporation, it is stated, may congratulate themselves on possessing one of the finest isolation hospitals in the kingdom. House-to-house work is steadily in progress, 4149 premises having been inspected during the year, and this with the result of securing many sanitary improvements. The night-soil and scavenging department is in the hands of contractors. This plan is almost universally a bad one, and we gather from Dr. Mason's remarks that the

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adoption of this duty by the Corporation themselves would be attended with advantage. Other current work is referred to in detail, and the report is well illustrated by a number of useful tables and diagrams. Appended to it is a disease chart, one of the most useful forms of recording preventable disease occurrences.

Portsmouth Urban District.—The death-rate for this borough during 1889 was lower than in any year since 1879—namely, 18·2 per 1000 living; and Dr. Mumby gives an account of some excellent sanitary work done. Thus the subsidiary sewers are being dealt with at a reasonably rapid rate, and additions are being made to their means of ventilation. Scarlet fever was, however, very prevalent during the year, and the deaths from diphtheria numbered 33, as opposed to 17 in the previous year. In one case Dr. Mumby ascribes five attacks of diphtheria to the use of impure water, an experience which is exceptional, water-borne diphtheria infection never having been conclusively proved. In connexion with the diphtheria, it should be noted that 12 deaths occurred from croup other than those entered under the name of laryngismus stridulus. There were 309 cases of enteric and continued fever reported, which is somewhat less than in the previous year. Their occurrence led to the discovery and remedy of a number of local sanitary defects. A public abattoir is again urged as necessary. General improvement is in progress as to dairies, cowsheds, and milkshops, the old-fashioned, dark, dirty buildings being replaced by clean, light, well-ventilated, airy, and properly drained structures. The public scavenging department is unsatisfactory in so far as the disposal of the town refuse is concerned, and Dr. Mumby strongly advises that the cause of complaint which results should be met by the provision of a destructor.

Oldham Urban District.—Dr. James Niven opens his annual report for 1889 with the important statement that the unremitting attention devoted to the emission of black smoke from chimneys gives every prospect of success, and that without loss to mill owners and others. The questions of insanitary dwellings and the prevention of tubercular phthisis have also received much attention, and the action taken in these directions is of a sort that tends generally to the improvement of the public health. Fortunately great changes for the better are taking place, the general death-rate has been almost continually falling, and the remaining causes of disease are discussed in a manner calculated still further to promote progress in this direction. Much, indeed, in the report will repay perusal by persons interested in public health and preventive medicine. The statistical portion of the report is voluminous, and well handled; and it is evident from other appended matter that good results are following the sustained house-to-house inspection that was organised some time back.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6077 births and 5240 deaths were registered during the week ending Jan. 17th. The annual rate of mortality in these towns, which had been 28·7 and 28·1 per 1000 in the preceding two weeks, were 27·3 last week. The rate was 29·2 in London and 25·8 in the twenty-seven provincial towns. During last quarter the death-rate in the twenty-eight towns was 22·1 per 1000, and exceeded by 1·1 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 14·9 in Hull, 17·7 in Derby, 19·0 in Nottingham, and 19·1 in Brighton; the highest rates were 29·9 in Bristol, 34·4 in Preston, 35·0 in Manchester, and 35·2 in Halifax. The deaths referred to the principal zymotic diseases, which had risen from 472 to 485 in the preceding three weeks, declined again last week to 404; they included 141 from measles, 113 from whooping-cough, 54 from scarlet fever, 35 from diphtheria, 32 from "fever" (principally enteric), 29 from diarrhœa, and not one from small-pox. The lowest death-rates from these diseases were recorded in Hull, Derby, Plymouth, and Portsmouth; the highest in Oldham, Salford, Preston, and Halifax. The greatest mortality from measles occurred in Leeds, Bolton, Oldham, Halifax, and Preston; from whooping-cough in Preston, Huddersfield, Sunderland, Leicester, Salford, and Birmingham; and from "fever" in Norwich. The mortality from scarlet fever showed no marked excess in any of the twenty-eight towns. The 35 deaths from diphtheria included 23 in London, 2 in Birmingham, and 2 in Salford. No death from small-pox was registered in any of the twenty-eight towns; one small-pox patient was under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1469, against numbers declining from 2122 to 1524 on the preceding ten Saturdays; the patients admitted during the week were 112, against 107 and 92 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding seven weeks from 375 to 991, further rose last week to 1018, and exceeded the corrected average by 412. The causes of 123, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Plymouth, Derby, Birkenhead, Preston, and Cardiff. The largest proportions of uncertified deaths were recorded in Bristol, Liverpool, Blackburn, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 20·1 to 28·8 per 1000 in the preceding five weeks, declined again to 27·8 during the week ending Jan. 17th, and was 0·5 per 1000 below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 19·3 in Leith and 20·6 in Edinburgh to 35·6 in Glasgow and 42·8 in Paisley. The 729 deaths in these eight towns showed a decline of 26 from the number in the preceding week, and included 16 which were referred to whooping-cough, 12 to measles, 9 to diphtheria, 8 to diarrhœa, 7 to scarlet fever, 1 to "fever," and not one to small-pox. In all, 53 deaths resulted from these principal zymotic diseases, against 65 and 68 in the preceding two weeks. These 53 deaths were equal to an annual rate of 2·1 per 1000, which corresponded with the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 22 and 19 in the preceding two weeks, further declined last week to 16, of which 12 occurred in Glasgow. The 12 deaths referred to measles showed a decline of 3 from the number in the previous week, and included 6 in Glasgow and 4 in Greenock. The fatal cases of diphtheria, which had declined from 9 to 5 in the preceding three weeks, rose again last week to 9, of which 3 occurred in Glasgow and 2 in Edinburgh. The 7 deaths from scarlet fever were within one of the number recorded in the previous week, and included 3 in Glasgow. Only 1 death resulted from "fever" in the eight towns last week, against 14 and 8 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in these towns, which had increased in the previous five weeks from 137 to 240, declined last week to 228, and were slightly below the number in the corresponding week of last year. The causes of 66, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 40·6 and 36·0 per 1000 in the preceding two weeks, rose again to 37·1 during the week ending Jan. 17th. During last quarter the death-rate in the city was 25·4 per 1000, the rate during the same period being 21·3 in London and 18·8 in Edinburgh. The 251 deaths in Dublin showed an increase of 7 upon the number in the preceding week, and included 4 which were referred to "fever," 2 to diphtheria, 2 to whooping-cough, 1 to diarrhœa, and not one either to small-pox, measles, or scarlet fever. Thus the deaths from the principal zymotic diseases, which had been 11 and 15 in the previous two weeks, declined to 9 last week; they were equal to an annual rate of 1·3 per 1000, the rate from the same diseases being 1·8 in London and 1·3 in Edinburgh. The deaths referred to different forms of "fever," which had been 7 and 4 in the preceding two weeks, were again 4 last week. The 2 fatal cases of diphtheria also corresponded with the number in the previous week. The deaths from whooping-

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cough, which had been 2 and 6 in the preceding two weeks, declined again to 2 last week. The 251 deaths in the city included 42 of infants under one year of age, and 83 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers in the preceding week. Five inquest cases and 5 deaths from violence were registered; and 88, or more than a third, of the deaths occurred in public institutions. The causes of 24, or more than 9 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

RECENT DEBATES ON GYNÆCOLOGY.

To the Editors of THE LANCET.

SIRS,—On page 146 of your issue of to-day, my friend Professor Sinclair is reported as saying "the Staffordshire knot ought to become obsolete, for it was not to be trusted." Surely there must be some mistake. I have tied the knot certainly nearly four thousand times, and I know of its constant use by others with equal success when it is properly tied. Professor Sinclair must have meant that there were hands who could not be trusted to tie the Staffordshire knot. If it is tied according to the instructions I have given its failure is an absolute impossibility. On the same page Sir Spencer Wells alluded to a case operated upon here, and seen by him that day (Jan. 7th) and characterised by him as a "deplorable and disastrous failure. He had seen other cases as discreditable." I confess I see nothing discreditable to the operator in one or two failures out of every hundred of such cases, for there is not a single surgical operation which knows no failure. If there is anything discreditable in the present case the discredit must lie at Sir Spencer Wells' own door, and not at mine; for if the original account[1] of the case be read it will be seen that "During the last seven years she had been the patient of a distinguished gynæcological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him (Mr. Tait) and he had operated. She had double pyo-salpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina, he would have been obliged to tap several cavities. Instead of doing anything of the kind he opened the abdomen a month since and the patient was now practically cured. A case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years who could have been relieved at any time, who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter."

If anybody is to blame for the "deplorable and disastrous failure . . . discreditable" it is Sir Spencer Wells, who, during seven long years, treated this poor woman uselessly by pessaries &c., instead of employing the only remedy possible, removal of the diseased organs. The reason, probably, why Sir Spencer Wells did not do this I am prepared to argue if he cares to prolong the discussion. But the most interesting part of the case remains. Sir Spencer Wells saw the case on Jan. 7th, because of my absence in Italy. On my return I saw the patient on the 14th. I take the liberty of contradicting every word Sir Spencer Wells says about the case. It is not a failure at all. So far as the tubal and ovarian abscesses are concerned the patient is not only "practically cured," but she is absolutely cured, for I have the diseased parts in a bottle. On the 13th I asked the patient to tell me what Sir Spencer Wells' opinion of her case was, and her reply (taken down at the time) was, "He said he could make neither head nor tail of my condition."

This I believe to be a perfectly exact statement on the part of Sir Spencer Wells, for the patient is now suffering from another condition altogether, which Sir Spencer Wells cannot have discovered, or I am sure he would honestly have mentioned it and not have fallen into the absurd mistake recorded as part of his speech at the Obstetrical Society. The whole story of this case is so interesting, and will prove so full of instruction for others as well as Sir Spencer Wells, that I shall, in due season, give it in full detail.

I am, Sirs, yours truly,

Birmingham, Jan. 17th, 1891. LAWSON TAIT.

[1] Trans. Gynæcology for 1888, p. 457.

ILEOSTOMY, AND DIGITAL DILATATION OF SMALL INTESTINE.

To the Editors of THE LANCET.

SIRS,—It must be more than a year ago since I operated on a case of cancer of the cæcum in a manner almost identical with that described by Mr. Bryant. The patient was a man about forty, and a consultation resulted in differences of opinion as to the nature of the growth and as to the advisability of operation. As there were recurrent attacks of pain with alternations of constipation and diarrhœa, I proposed to the man that I should, if possible, excise the diseased part of the bowel if exploration proved it to be malignant, and that if this were impossible or unhopeful that I should open the small bowel near to the seat of disease. He having consented, I proceeded much in the same manner as Mr. Bryant depicts, previously explaining to the class that if the conditions were unfavourable for excision I would perform ileostomy (using this word), on the same principle as one performs sigmoidostomy for rectal cancer. Mr. Hurry Fenwick kindly assisted, and Mr. Rivington and Mr. Eve were present. Finding the mass immovable and the lumbar glands involved, removal seemed out of the question, not only because of fear of shock following a long operation, but because of the certainty of a speedy return of the disease. The ileum near its termination was readily picked up, after being traced to the cæcum, and stitched to the abdominal wound, and opened a few days later, there being no obstruction or distension at the time. The patient was several weeks in the hospital, and there is nothing special to note except that there was some excoriation around the lower parts of the skin surrounding the wound, and that for some days he passed motions by the rectum. When he could get about, he went, I believe, to the infirmary. At the time I thought the operation was novel, and intended to publish the case; but priority in this respect is Mr. Bryant's. Whether either of us is a pioneer in this operation I leave it to those who have more time than either he or I possess to delve into surgical literature to decide. I am content to remark that ileostomy is a palliative procedure, comparable and of equal value to sigmoidostomy, when more radical proceedings are unjustifiable.

At about the same period Dr. Wilson of Hackney asked me to see a case of chronic intestinal trouble. The patient, aged forty-four, had had the benefit of advice from Dr. S. Fenwick and the late Dr. Habershon. I came to the conclusion that the cause of his trouble was mechanical, and probably due to a growth or a stricture, and told him I could do nothing but operate and act according to circumstances. With this view Dr. Wilson readily coincided; in fact, the operation was his intention in calling a consultation, and the poor fellow, worn out with suffering, readily acquiesced. Assisted by Drs. Wilson and J. Oliver, I opened the abdomen in the mid-line and traced down a distended piece of bowel to the narrowed portion. I then opened the distended bowel near to the narrowed part and, having introduced my finger, found an obstruction which the apex of my index could not enter without force. There were irregularities about the seat of stricture of the nature of which I could not make sure; but I determined to dilate the stricture with my fingers, and this was done by supporting the gut with the fingers of one hand and gradually insinuating, first the index, then the second finger, applied to the dorsum of the former, as far as the second interphalangeal joint, and then rotating them. The opening in the distended portion of bowel—which was much thickened—was stitched to the abdominal incision. As soon as the patient began to vomit, a fast and free gush of intestinal contents of a light yellowish aspect escaped from the bowel. The patient is alive and well, and has gained flesh, though he has been troubled with excoriation about the wound, as is common when secretions from the small intestine come in contact with the skin. For a short time a small quantity passed per rectum, but since then the artificial anus has entirely acted. I believe the stricture was in the ileum or low in the jejunum, and I think the survival of the patient for so long, added to the fact that

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he has gained in weight, point in this direction, unless our physiology is wrong, and we can live and do well with only a few feet of small gut. A few weeks since I heard from Dr. Wilson that the patient was doing well, and, in reply, suggested that I should excise the strictured part. To this proposition I have not had a reply, so I hope and presume that patient and doctor are satisfied. It may be said that I should have excised the strictured part at the time and have narrowed the hypertrophied and dilated bowel above the obstruction prior to circular enterorrhaphy, and, had this proceeding succeeded, perhaps it would have been the better course; but, after all, an operation, like a surgeon, must be judged by results, and up to date our patient is satisfied (being fitted with a suitable obturator), and it may have been that a more radical proceeding in a debilitated patient would have had a different result. It is still open to me, should occasion demand, to excise and suture. I do not know if the small gut has ever been digitally dilated; but, carefully performed, the proceeding is safe; and, though in this case the opening above the seat of digital dilatation prevented the latter from having its full effect, there may occur cases in which the plan may be more effective. Digital dilatation of the rectum in many cases of stricture and also in some cases of malignant disease, as a temporary measure, was advocated by me seventeen years ago. Loreta's operation is an extension of a similar proceeding, much higher up the alimentary canal, with the important addition of opening the peritoneal cavity and the stomach. The operation just described is an application of the same idea about midway between the points mentioned.—I am, Sirs, yours faithfully,

Grosvenor-street, W., Jan. 6th, 1891. H. A. REEVES.

MALARIA.

To the Editors of THE LANCET.

SIRS,—The poison of malaria is responsible for so much loss of health and life amongst Anglo-Indians that a full discussion of the disease and its treatment must necessarily prove beneficial. Associated with it is the effect of heat, and these two factors require mutual consideration. The influence of a hot climate is to increase the action of the skin, diminish the number of respirations, to lessen the force of the circulation, to impoverish the blood, and to induce a torpor of the liver and other organs. Further, the heat extracts the products of putrefaction, and the humidity of the air retains them, so that it is impossible to obtain fresh and pure air. This contamination, together with the diminished number of respirations, interferes with the proper oxygenation of the blood and the due elimination of the carbon. In addition the heat produces a rarefaction of the atmosphere, and thereby diminishes the amount of oxygen inhaled at each inspiration. The results are at first functional derangement, and later on organic disease. The impairment of health is an insidious process, since between the various organs a sympathetic balance of functions exists, so that the sluggishness in one set is compensated for by increased activity in the other organs, or *vice versâ*. As long as the state of equilibrium is maintained the progress of disease is masked and no appreciable ill effect is noticeable, but as soon as the balance is disturbed disease more or less severe inevitably develops. A sound constitution is able to resist the poisonous effect of malaria (unless the strength of the miasm is intensified); but, since the heat is slowly undermining the health, the power of resistance becomes more and more enfeebled.

The aim of preventive treatment is to obviate this constitutional deterioration, and not any drugs have the desired effect. Removal from the heat is the only remedy to enable the various organs to resume their normal functions, and a change from a hot to a cooler climate, at least every alternate year, but better still annually, is a necessity for the preservation of health. But even this recuperation is insufficient, and at the expiration of five years a return to Europe for at least twelve months is imperative. The disregard of this latter injunction accounts for the frequent deaths of old Anglo-Indians who on retirement return to Europe. The organs, which from the prolonged effect of the heat have become excessively torpid, are suddenly requisitioned to resume their normal functions, and, enfeebled by comparative disuse, are unequal to the task of accommodating themselves to the strain. The medicinal treatment should aim at the restoration of the functions of the various organs to their normal condition. In an ordinary case of fever dependent on the poison of malaria, a liver pill or draught at the onset is sufficient to restore the health and enable the constitution to throw off the miasmatic poison, and subsequently one drug is as good as another, and no medicine is equally good treatment. When, however, the health is below par and the patient is unable to shake off the fever, then quinine acts as a charm. I protest that the condemnation of the value of this drug by Surgeon-General Moore, Brigade-Surgeon Hunter, and others is too sweeping. The indiscriminate administration is indisputably a mistake, but the judicious use in suitable cases is undoubtedly beneficial. I quite agree with them, as every observer must do, that when the system is saturated with malaria, quinine, except in tonic doses, is not only useless but injurious, because the fever is secondary to the disorder of the functions of the various organs, and that in treating the fever the cause of its presence and severity is overlooked.

There are several other points which exercise a marked influence on the Anglo-Indian's health. The early rising, the over-indulgence in meat, the dislike to water, and the necessity for exercise, are details of great importance. The early morning is the coolest, and therefore the most pleasant time for work or pleasure, but it is also the most refreshing and invigorating for sleep; and when it is borne in mind how frequently the night is spent in restlessness and tossing about, the importance of a good sleep cannot be over-estimated. The amount of meat eaten far exceeds the physiological requirements, for, since animal and fatty foods are heat-producers, the necessity for this class of food is small. Good drinking-water plays an important *rôle* in the preservation of health, for the incessant drain of fluid from the system by perspiration requires a liberal supply of water, and though the result is prickly heat, the benefit to health is ample compensation. A long drink of cool—not iced—water before and after exposure to the sun is an almost certain protection against sunstroke, provided the water is not diluted with a little spirit. Exercise in strict moderation is essential to health, as it promotes the action of the liver, but exercise amounting to fatigue assuredly excites an attack of fever. Although it is quite impossible for a European to become acclimatised, nevertheless, with due regard to these details, a change to a cool climate annually, and a twelvemonth's residence in Europe every five years, an Englishman can exist in a hot country without the risk of permanent injury to health.

I am, Sirs, yours faithfully,

G. SHERMAN BIGG, F.R.C.S. Edin.,
Formerly Staff Surgeon, Allahabad, India.

Victoria-street, Jan. 10th, 1891.

ANÆSTHETICS IN TRACHEOTOMY.

To the Editors of THE LANCET.

SIRS,—In this week's portion of the very interesting paper on Stenosis of the Trachea by Mr. Bernard Pitts and Mr. William F. Brook they write regarding the advantage of intubation against tracheotomy that it does not require any anæsthetic, "and this we consider a most important point, for often the necessary giving of an anæsthetic in cases of tracheotomy is a direct cause of death, and always of much anxiety." I cannot insist on the value of intubation, but with regard to giving an anæsthetic for the operation of tracheotomy I consider it nothing less than sinful for a surgeon to permit it; and feeling so strongly on this point, I am glad to note these surgeons' remarks on the dangers accompanying anæsthesia, although differing from them that it is often—ay, ever—necessary to anæsthetise. In the work I wrote in 1876 on tracheotomy it was recommended that chloroform should not be used, but that freezing the skin was sufficient for the avoidance of any acute pain. I had then performed tracheotomy thirty-eight times, but I have not changed my opinion since that time, and have now operated over one hundred times. A surgeon, even if alone, can safely manage tracheotomy on a child if it is wrapped up in a sheet. The dangers with an anæsthetic are that the patient, especially a child, may suffocate whilst it is being given, or that after the windpipe is opened the unconscious patient is unable to cough up the blood which is blocking up the air-tubes.

I am, Sirs, yours faithfully,

Canterbury, Jan. 16th, 1891. PUGIN THORNTON.

P.S.—After reading this letter through, I would add that

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I hope every surgeon may be encouraged to open the windpipe without an anæsthetic, believing that sometimes it may be kind to be cruel; and I further hope that some future day surgery may insist that every operation of tracheotomy be performed without anæsthesia.

"MIDWIVES' REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—Dr. Drage seems entirely to forget that so far from producing a second-rate uneducated class (i.e., of midwives), we have them already with us, and no one can say we have much competition with midwives at present, as he suggests *will* be the case; and he actually puts the difficulty with these uneducated midwives down to "certain members of our profession" who have "allied themselves with a body like the Midwives' Institute instead of taking their own profession into their confidence, &c." Does Dr. Drage know that midwives are to be found practising all over England? What sort of a body does he consider the Midwives' Institute to be? Does he know anything about it personally? Does he not know that your journal has kept the necessity of the legislation about midwives before the eyes of the whole profession for many years without exciting their active interest in the matter? Are we not to try to improve what we cannot at once cure? Dr. Drage evidently represents the "Do-nothing" party. He will allow uneducated midwives to go unchecked *ad infinitum*. Is this not quite an impossibility under our modern conditions of life? I should like to know what Dr. Drage considers to be a good case in favour of legislation. The midwives desire it, the public and leading journals, lay and medical, are in favour of it. What good will legislation do? It will cause all future midwives to receive a minimum of education, will define their powers, and control them. If the methods of control suggested are thought bad, if it is difficult to prevent a few midwives from stepping over the traces (we ourselves are not absolutely free from reproach), is not that rather a plea for legislation than against it. In any case difficulty of legislation can be no excuse for not trying to remedy a crying evil. Whether Dr. Drage agrees with me or not, he should, I think, withdraw his insinuations with regard to the Midwives' Institute and those medical men who think it their duty to stand by it—of whom I am one—till he can do more than insinuate.—I am, Sirs, faithfully yours,

Queen's-crescent, N.W., Jan. 13th, 1891. F. R. HUMPHREYS.

TREATMENT BY SUGGESTION.

To the Editors of THE LANCET.

SIRS,—The following cases illustrate the power of suggestion as a sleep producer and anodyne. All of them were patients whom I had frequently hypnotised before by the fixation method and suggestion, and had more or less relieved from intense pain and other symptoms. But in all the pain returned after a certain time if the hypnosis and suggestion were discontinued, and I found it irksome to have to visit them every day or several times a week. Not thinking it advisable to instruct the friends of the patients in the method of producing the hypnotic state, I was forced to have recourse to a plan which I thought would answer the purpose. I took to each of them a small quantity of tincture of valerian in a green bottle labeled "ten drops in water," and assured them that this would produce sleep similar to that I had brought about, and that on waking their pain would have disappeared or, at least, be lulled. I then gave them the "drops," as they now term the tincture, and in all four cases the desired effect was produced. The patient passed at once into the hypnotic sleep. They were told to take it at night if they could not sleep, or during the day if the pain was very severe. On nearly every occasion sleep and relief from pain have been brought about. The cases are in detail.

1. C. W——, fifty-three; locomotor ataxy of twelve years' duration, with almost continuous and excruciating pain. Hypnosis and suggestion relieved him greatly. Has had more pain since I have ceased to visit him, and if the pain is very severe "the drops" do not always produce sleep. As a rule they do, and he told me the other day that when ten drops had failed to produce sleep he increased the dose to fifteen, and slept at once. This patient sometimes takes six drachms of liq. morph. hydroclor. in the day, but this does not relieve the pain.

2. Mrs. H——, forty-three; scirrhus of mamma. In this patient the result never failed to follow, and she would sleep all night or three or four hours during the day after taking "the drops." If she did not take them she generally passed sleepless, restless nights, even though she had a large dose of opium. The pain was also much relieved. This patient died a few days ago.

3. Mrs. S——, thirty-two; carcinoma uteri. She takes small doses of morphia, but if pushed it induces extreme sickness and nausea. The "drops" generally make her sleep, and control the pain in a wonderful manner. At night, if the morphia fails to relieve her, she takes some "drops" and goes to sleep. She takes a few minutes to go to sleep, and during that time she says she feels the medicine "creeping all over her and lulling the pain."

4 E. D——, twenty-two; hysterical fits with hemiplegia of long standing and athetosis. In this patient sleep is produced immediately she shuts her eyes after taking the medicine—even during an attack; but as she visits me and is hypnotised by me personally, I am unable to judge what effect the indirect treatment has on her.

In conclusion, I would say that all these persons are from the poorer and uneducated class, and are accustomed to be hypnotised, which probably accounts for the success of this innocent deception.—I am, Sirs, yours faithfully,

R. ARTHUR, M.B.,

Wesleyan East-end Med. Miss., Cable-street, E., Jan. 12th, 1891.

MILK IN CONNEXION WITH SEPTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—Although I believe the law relating to the sale of milk in Sydney is superior to that in force in this country, yet, owing to adulteration &c., outbreaks of typhoid fever due to milk may occasionally occur. In an interesting report (August, 1890) by Dr. J. Ashburton Thompson, chief medical inspector, N.S.W., on an outbreak of typhoid at Waverley and Randwick, two adjoining suburbs of Sydney, the outbreak was clearly proved to be caused by contaminated milk. Eighty-nine households are stated to have been attacked. Taking the first case only in each household, I find the eighty-nine consisted of forty-nine females and forty males. The average ages are as follows:—

Age.	No. attacked.
One to five years	9
Five to fifteen years	32
Fifteen to thirty years	33
Above thirty years...	15

From the above figures the incidence in this epidemic did not especially fall on children.

I am, Sirs, yours obediently,

G. L. L. LAWSON, M.R.C.P.EDIN., D.P.H.

To the Editors of THE LANCET.

SIRS,—With regard to Mr. Watson Cheyne's letter on the above subject in your current issue, the following extract from a paper by Dr. Bang of Copenhagen, in the *Deutsche Zeitschrift für Thiermedicin* for July last, may be of interest: "The result of the entire series of experiments thus shows that heating of milk to 80° C. does not always suffice to kill the tubercle bacilli (or their spores) in it. On the other hand, heating up to 85° C. appears to suffice to kill tubercle bacilli and their spores. Heating up to 100° likewise renders it innocuous." Observations of my own upon clotted cream and the bye product, "scald" milk, tend to corroborate the above.

I am, Sirs, yours faithfully,

Exmouth, Jan. 17th, 1891. FRAS. E. PLACE, M.R.C.V.S.

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—I have read with much interest your editorial comments on my letter in last week's issue, and will be glad if you will allow me to correct a slip on the part of the printer, who has omitted to insert a hyphen mark after each of the ages in the table. Each group given by me

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embraces physicians &c. between twenty and twenty-five years of age, twenty-five to forty-five, forty-five to sixty-five, and sixty-five and upwards, these being the groups of ages used by the officials when extracting the deaths in various occupations corresponding to the numbers living at the last census. There need not, therefore, be any of the tender age of twenty years, although I am told that as a matter of fact some do practise under the statutable age. The excess for the group twenty to twenty-five, however, is small; but it shows that they are more likely to succumb than those of maturer years. You say I am mistaken in supposing that my figures will appear startling to your readers. I may mention, however, that an eminent member of the medical profession here considered the results startling; and certainly they are startling to insurance offices, as I am not aware of any who charge an extra premium to physicians, although they do so to those engaged in various occupations where the mortality is not so high.

I am, Sirs, yours faithfully,

Edinburgh, Jan. 19th, 1891. JAMES CHATHAM.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Royal Infirmary.

THE report as to the condition of the four patients originally subjected to Koch's treatment at the Infirmary is as follows. Case 1, lupus, still continues to improve; the skin in the situation of the patches, especially on the arm, is almost normal in appearance. Case 2, phthisis, continues to improve slowly. Case 3, diseased elbow-joint, appears to be stationary. Case 4, diseased cervical glands, seems to be still improving. The most important change for the better is observed in the case of lupus. St. Luke's Chapel, as the beautiful little chapel attached to the infirmary is named, was reopened yesterday by the Bishop of Newcastle. It has been undergoing extensive decorative changes, and is well worth seeing by all visitors to the infirmary.

The late Nitric Acid Disaster in Mosley-street, Newcastle.

It will be remembered that I mentioned in these notes the accident at Messrs. Mawson and Swan's, chemists, of this city, on Sept. 23rd last, through the breakage of a carboy of nitric acid; nitrous acid fumes were evolved, and an alarm of fire was raised. Several firemen, although warned of the danger by the manager, rushed in, and three of them suffered so much from the corrosive fumes that they died in consequence at the time, or soon afterwards. I have now to record another or the fourth death as an indirect consequence of the accident. A young fireman about twenty-seven years of age had so far recovered that he had resumed active duty, but about a week ago he caught cold which developed into pneumonia, and he has died after a very short illness. Even in the cases which have recovered the patients appear to have passed through an insidious form of pneumonia.

The New Home for Incurables in Newcastle.

At a special meeting of the Schools and Charities Committee held a few days ago at the City Hall the plans for the new hospital for incurables to be erected in Newcastle were passed and approved, and it was decided to ask for tenders at once. The new hospital will give accommodation for sixty-eight beds, and, as mentioned in these columns on a former occasion, it will be built and supported by the accumulation of funds from an ancient charity, the Mary Magdalene, originally founded for the benefit of lepers; but the property has so vastly improved in value, and is so likely to still increase, that the hospital seemed to all to be the best direction in which to employ the funds.

Glendale Dispensary, Wooler.

The sixty-seventh annual meeting of the Glendale Dispensary, Wooler, has been held, and, as was stated, it befriends families and individuals at their greatest time of need, and very often enables them to tide over an illness without applying to the guardians for help or becoming chargeable to the rates. Altogether in this scattered mountain district 160 cases were relieved in 1890.

Sunderland.

The secretary of the Sunderland Eye Infirmary has received a cheque from Mr. Backhouse for £300, and from Mr. S. P. Austin one for £50, towards the proposed new building. It is also stated that as a result of the Sunderland Infirmary ball £160 has been realised.

Proposed Lunatic Asylum for Middlesbrough.

A deputation appointed by the Middlesbrough County Council have been to York to meet the committee of the Clifton Lunatic Asylum on the subject of founding a similar institution in the neighbourhood of Middlesbrough, and the deputation have resolved to recommend to the County Council at a special meeting the erection of an asylum on the Clifton model. At present "pink eye" is rife amongst horses at Middlesbrough.

Newcastle-upon-Tyne, Jan. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Board of Supervision and Medical Officers &c.

THE Board of Supervision has sent a most important communication to county councils dealing with the appointment of medical officers and sanitary inspectors. It begins by intimating that it has been in communication with the Secretary for Scotland as to the conditions under which the grant of £15,000 from the local taxation account towards the cost of these officers should be distributed, and the general principles which are to regulate the distribution are as follows. They consider it their duty to see that the provisions of the Act are carried out in the spirit intended by its framers as regards sanitary administration, and that the distinctive feature of the scheme is the appointment, with an adequate salary, of a duly qualified county medical officer and a duly qualified county sanitary inspector; and if the counties are too large or too populous the appointment of additional officers, or the other smaller counties may combine and elect joint officers. The circular states very explicitly that it was the obvious intention of the framers of the Act that the persons to be appointed to these important and responsible posts should be of high standing in their respective professions. Scientific attainment and considerable practical experience are among the qualifications required, and the services of persons so qualified cannot be obtained unless adequate salaries are attached to the offices, and persons should be selected who are able to devote their whole time to the discharge of their duties; that is, medical officers should not be permitted to engage in private practice. The district committees are advised to appoint the county officers the chief officers of their districts, and the amount of assistance within each district which the chief medical officer may require must depend upon the circumstances of each district; and the Board expresses its readiness to agree to any proposal which *primâ facie* appears to be reasonable, and in the public interest, and which is approved by the chief medical officer. Similar arrangements are suggested with regard to the chief sanitary inspector. It is also pointed out that these officers can be removed from office only with the sanction of the Board of Supervision, and that they cannot be appointed for a limited period, or during the pleasure of the County Council. As if anxious to make their meaning abundantly clear it is specifically stated at the end of the circular that they cannot recommend a scheme by which the medical officer of a county, or the chief medical officer of a district, is permitted to engage in private practice; or that the medical officer of a district should thereafter be appointed medical officer of the county for that part of the county which is embraced in his district. Similar suggestions are made with regard to the sanitary inspectors. The wisdom of these suggestions will be fully recognised by the profession, and are in accordance with the resolutions passed by various medical corporations and societies. It is only to be regretted that the appearance of this communication is so late, coming as it does after most of the appointments have been made. Its earlier appearance, backed by the knowledge that local grants would depend upon appointments and arrangements being satisfactory to the Board of Supervision, might have smoothed down a number of difficulties.

Edinburgh Health Statistics for December.

The total number of deaths in Edinburgh during December was 479, making the death-rate 21·19 per 1000,

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which is rather above the average of the preceding five years. As regards age, 27·13 per cent. were under five years and 30·68 per cent. above sixty years. The deaths from diseases of the chest were 41·54 per cent. of the whole, while zymotic diseases caused 8·34 per cent.

Health of Edinburgh.

The mortality last week was 104, making the death-rate 20 per 1000. Diseases of the chest accounted for 39 deaths, and zymotic diseases for 6, of which 2 were due to diphtheria, 1 to scarlatina, 1 to measles, and 2 to whooping-cough. The intimations were—typhoid fever 23, diphtheria 3, scarlatina 25, and measles 8.

Koch's Liquid at the Edinburgh Royal Infirmary.

A quantity of liquid has been received by the authorities at the infirmary, and it has been left to the medical and surgical staff to determine its distribution.

Meeting of Contributors to the Edinburgh Royal Infirmary.

On Monday an adjourned meeting of the contributors to the Royal Infirmary was held. The report, of which an abstract has already appeared here, was submitted, and special attention was also directed to the increase in the number of out-patients; and it was proposed that a record of these cases and the circumstances of the patients be made for a year. The necessity for increased hospital accommodation was also strongly represented, and it was suggested to the managers that they should open negotiations with the directors of the Sick Children's Hospital with a view to its possible acquisition for purposes of extension.

Edinburgh, Jan. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Ligature of both Lingual Arteries.

ON Tuesday, the 20th inst., I had an opportunity of seeing Mr. H. Gray Croly, president of the Royal College of Surgeons, at the City of Dublin Hospital, tie both lingual arteries as a preliminary to excision of the tongue for cancer. The patient, a man aged fifty, about six months since noticed a growth on the left side of the tongue, due to some irritation of an adjoining tooth, and on being admitted to hospital the base of the tongue was found to be involved and some of the glands under the jaw. The left lingual was first tied, an incision being made from the angle of the jaw to the upper part of the hyoglossus, and then to the symphysis; the artery was very deeply situated, and required a tedious dissection. The submaxillary gland was removed, also a gland under the chin. The right lingual artery was then ligatured, the time occupied from the commencement of the incision until the ligature was placed on the vessel being twelve minutes. By this procedure the danger of secondary hæmorrhage in cases of excision of the tongue is obviated, and by giving an opportunity for the removal of any contaminated glands a better chance is afforded the patient of escaping recurrence of the morbid growth. Next Tuesday Mr. Croly will excise the tongue.

Koch's Treatment of Tuberculosis.

Koch's treatment is in full swing in the various hospitals in Dublin, and cures have been reported as having occurred. Some are very sanguine, but time must elapse before any definite and decided opinion can be given as to the positive benefits to be derived from using the fluid. Professor Virchow's assertion that injections with Koch's fluid may infect healthy portions with tubercular disease is a very serious statement, and hospital physicians ought to be extremely careful in the cases selected for the treatment, and not unduly sanguine as to the ultimate good effects of the proposed remedy.

National Eye and Ear Infirmary.

The Committee of Management have issued an appeal for funds to enlarge this hospital and render it available to accommodate sixty intern patients at an estimated cost of £7000. The long-talked-of amalgamation between the two ophthalmic hospitals in Dublin has not yet been carried out, although all concerned are anxious to have a single institution. It is stated that there is some legal difficulty involved, a solution for which has not yet been found.

Death of Samuel Bigger, F.R.C.S.I.

Last year this gentleman was attacked with paralysis, and lingered on until Tuesday, the 20th inst., when he succumbed at his residence in Harcourt-street, at the advanced age of eighty-two. He had been surgeon to Simpson's Hospital, but resigned shortly after his illness commenced. He was a graduate in medicine of the University of Dublin, and obtained the Fellowship of the Royal College of Surgeons in 1844. He was a kind and benevolent man, and attended many indigent sufferers without fee or reward.

Dublin Hospital Sunday Fund.

The total sum collected in 1890 for the Dublin hospitals amounted to £4188 2*s.* 11*d.*, being an increase of £32 17*s.* 7*d.*, as compared with the previous year. In this is included a sum of £60 10*s.* 1*d.*, the proceeds of the annual football match.

South Dublin Union.

By the death of Dr. J. A. Byrne a vacancy has arisen for a medical officer to the Grand Canal-street Dispensary, which will be filled up on the 4th prox. The emoluments of the post are £125 a year, and the usual vaccination and other fees.

Numerous cases of mumps—an epidemic on a small scale—have occurred during the past few weeks in Dublin.

The Mitchelstown guardians have applied to the Local Government Board for a provisional order to sanction the expenditure of £5000 for supplying the town with water.

Mrs. Mary Jordan died this week at her residence in Warrenpoint, at the advanced age of 101 years.

Jan. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Koch's Treatment at the Hôpital St. Louis.

AT this hospital the excellent plan has been adopted of constituting the medical and surgical staff into a committee, whose duty it will be to furnish a concise report on the results obtained on their patients by the application of Koch's method. In anticipation of the expression of their views by each individual member of the committee, promised for the next meeting of the Société de Dermatologie et de Syphilographie, M. Vidal, one of their number, communicated at last Thursday's *séance* a preliminary *exposé* of their collective opinion. It appears that thirty-two patients have been inoculated since Nov. 30th, 1890, each receiving an average of from four to six injections, with an interval between each of from four to eight days. The committee find that with the shorter interval (two or three days) advocated at Berlin the subjects remain more feeble and become anæmic; and that, moreover, both the local reaction and the specific action on tuberculous elements become less and less pronounced at each inoculation. The three points to which M. Vidal desired to call particular attention were (1) the irregularity of the general reaction; (2) its dangers; and (3) the precautions indicated in order to obviate, or at least diminish, these dangers. The general reaction has not been found to present the regular features ascribed to it by Berlin physicians, nor is the local manifestation of the activity of the lymph always proportionate to the general reaction—this remark applying more particularly to cases of lupus. In several instances general reaction had been intense after as small a dose as half a milligramme; and this intensity had been observed in them after repeated inoculations. In one patient an injection of half a milligramme, practised after an interval of twelve days, determined a greater reaction than that induced by two preceding injections of double the strength. The duration of febrile reaction is variable. In most cases the temperature becomes normal within twenty-four hours; but it is by no means uncommon for it to reascend in the afternoon of the next day, and for this recrudescence to exceed in violence the primitive fever. A repetition of this vesperal ascent has been noted in a few cases on the third and even fourth day. Koch's liquid acts as a powerful pyrotegenous agent, exciting congestion of the whole system, but so unequally that it is difficult to predict its intensity, and which organ is destined to bear the brunt of the attack. This capriciousness has even been noticed at different inoculations in the same patient. Viscera previously diseased (the disease not necessarily being of a tuberculous nature) are particularly prone to this congestion, and even organs apparently

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quite healthy may become intensely congested. During the first four days the bronchi and the lungs at their bases are frequently congested. Symptoms of myocarditis and endocarditis have several times been recorded, as also swelling of the spleen, albuminuria, and (in three cases) hæmaturia, lasting three or four days. In two women affected with lupus the injections gave rise to a tumefaction (lasting six and five days respectively) resembling that of erysipelas, which invaded the cheek, forehead, and scalp. These patients had already had facial erysipelas. Examination of the blood failed to reveal the streptococcus, nor did an attempt at cultivation succeed. The precautions taken at St. Louis consist in beginning with a half-nilligramme, increasing the dose at each succeeding injection by a half-milligramme until the temperature reaches 102·2° F. The quantity producing this effect is then taken as the maximum permissible dose for that patient. As seen above, an interval of from four to eight days is allowed to elapse before an inoculation is repeated.

The New Military Law and Students of Medicine.

One of the clauses of the military law which has recently come into force ordains that all medical students shall at twenty-one years of age serve one year under the flag. It is also enacted that if, at twenty-six years of age, the student shall have failed to attain to the rank of doctor of medicine or *interne des hôpitaux*, he shall serve during a further period of two years. Now, as the curriculum is not generally commenced before the age of twenty, it follows that the aspirant's studies are interrupted by Bellona just as he has got—to employ a current expression—"into the swim." The *Temps*, in a temperate article on the subject, points out that, as a consequence of this measure, the future French medico will, in many cases, be debarred from competing at all for the *internat*, and that the foreign student, unhandicapped by such pre-occupations, and enjoying, consequently, more leisure to prepare for this really difficult ordeal, will easily oust his French rival. Moreover, the student, returning to his studies at twenty-two, will, in his anxiety to escape a further term of service, endeavour to scramble through his examinations anyhow, thus laying the foundation for the creation of an inferior class of practitioners. Inspired by the foregoing considerations, the General Council of the Faculties and Schools of Paris have, at the instance of Professor Brouardel, the Dean of the Faculty of Medicine, submitted to the Minister of the Interior the following modifications in the obnoxious regulation: (1) to extend the limit of age (from twenty-six to twenty-seven or twenty-eight) at which candidates may compete for the *internat*; (2) to accord to students of all the faculties the privilege now enjoyed by those of the École Normale of fulfilling their duties as citizen soldiers before the commencement of their studies, or of obtaining a respite, so as to join their regiments at the close of their studies. Professor Brouardel further asks what, in the name of common sense, is the use of instructing medical students in the management of the rifle—a weapon he will never be called upon to wield—instead of initiating him into the principles and practice of military medicine and surgery. Seeing that the chances are extremely problematical of obtaining, out of the 11,500 practitioners of France, the 7500 military doctors under fifty years of age requisite in the event of mobilisation, the question put by the Dean admits of only one answer.

Prophylaxis of Small-pox, Enteric Fever, and Diphtheria.

In conformity with the recommendations of M. Dujardin-Beaumetz, the Board of Health of the Department of the Seine has submitted to the Prefect of Police a code of instructions calculated to prevent the spread of the above diseases. It is a reflection on the sanitary instincts of our gifted neighbours that such regulations should not already have the force of law. The principal clause of the proposed regulations provides for compulsory notification, presumably by the friends of the patient. The authorities will undertake the isolation of the case or his removal in a special vehicle to a fever hospital, as also the disinfection of the room. Instruction as to efficient isolation is given, and the employment of solutions of sulphate of copper at 1·25 and 5 per cent. recommended, the weaker solution for washing the hands of the attendants and soaking the unsoiled linen, and the stronger for disinfecting the soiled linen and the excreta. Commissaries of police provide any applicant with packets of cupric sulphate, together with instructions as to the employment of that substance. Information as to the mode of propagation of the disease in question is contained in the code of instructions. The case terminated, the duty of disinfecting the room and its contents (fumigation, removal to public disinfecting ovens) will devolve upon the local commissary of police, a medical man being specially delegated to certify to the proper carrying out of these measures. To combat the ravages of scarlatina, measles, and whooping-cough the board had not deemed it necessary to apply for special powers, contenting themselves with issuing a table of information to the public as to the best means of limiting their spread. At a subsequent meeting M. Ollivier strongly urged the including of scarlatina in the category of dangerous zymotic diseases (variola, typhoid fever, and diphtheria), and his arguments finally prevailed.

The Number of Students Studying in Paris.

With its five faculties and the High School of Pharmacy, the University of France counts in Paris more *alumni* than any other in the world. In 1890 there were no less than 10,174 students on the rolls, these figures including 986 foreigners, 759 of whom are studying medicine. In 1889 the number of students registered was 10,375. These figures do not include men pursuing their studies at the Collège de France, the Muséum d'Histoire Naturelle, the École de Chartes, and kindred special establishments.

Small-pox at Marseilles.

The following statistics of the mortality from small-pox at Marseilles, given by Professor Proust at the last meeting of the Comité Consultatif d'Hygiène de France, are not calculated to allay the fears of the public regarding the insanitary conditions of that town:—

	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total.
1889 ...	39	36	46	75	196
1890 ...	121	125	135	168	549

Lorain is responsible for this trite reflection: "Dans 20 ans, on jugera du degré de civilization d'une ville au nombre de ces décès par variole." There is evidently "something rotten in the state of"—Marseilles.

Paris, Jan. 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Koch's Remedy for Tuberculosis.

I HAVE already more than once informed the readers of THE LANCET of the wish pretty generally entertained among medical men here that expression should be given in the Chamber of Physicians and Surgeons to the well-founded complaints as to the manner in which the medicament has been distributed. At the last meeting of that body Professor Mendel stated that the great enthusiasm with which Koch's discovery was greeted had been followed by deep dissatisfaction among medical men. He pointed out that the statements about the dangerous character of the remedy and the necessity of clinical observation were by no means tenable, as the use of it had been permitted to some private doctors on terms which were far from securing clinical observation. By this kind of monopoly a state of things had been brought about for which it was impossible to find a parliamentary expression. It was incumbent on the Chamber of Physicians and Surgeons, which had to guard the interests and the prestige of the medical profession, to protest against this mode of procedure. No resolution was taken on this matter. The supply of Koch's fluid being insufficient for the general demand, it was, however, evidently the mere dictate of common sense and humanity to take care that it got into the most competent hands. If, after all the care that has been taken to secure this result, one hears that, despite the emphatic warnings of Koch and other great authorities, advanced cases of phthisis have been treated with the fluid, and people sent to their graves in consequence months sooner than necessary, what would the result have been if the medicament had been accessible to all medical men? *Bene facere et male audire regium est.* It is probable that Koch's wise resolution has saved many patients from premature death and many of his professional brethren from ruin in the shape of an action for culpable homicide. Professor Koch will leave Berlin in a few days for several weeks' holiday. He will go

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to Egypt, which he visited in 1883 as leader of the German cholera expedition. He will return in March to undertake the management of the institute for infectious diseases, the building of which, as I convinced myself yesterday by ocular inspection, is progressing rapidly. An eminent Australian physiologist suggested to me yesterday that the true inference from Virchow's observations may be, not that the bacilli wander from their burned-out homes to new ones in healthy tissue, but that Koch's fluid renders them more easily visible to the microscopist.

Berlin, Jan. 17th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Chemistry of the Tubercle Bacillus.

AT the clinic of Professor Nothnagel a very interesting investigation on the chemical composition of the tubercle bacillus has been carried out by Dr. Hammerschlag, who had commenced his studies on the bacillus at Professor Nencki's chemical laboratory at Berne. For the chemical examination of the bacillus, glycerine-bouillon and glycerine peptone agar cultures were used. The fresh bacteria had a rose-red colour, and a smell resembling the odour of fruit. Two analyses of two different culture series were made. The cultures were 0·2–3 months old, and 7·5 and 2·2 grammes moist bacteria were obtained for the analyses. They contained between 88·7 and 83·1 per cent. water, between 28·2 and 26·2 per cent. substances soluble in alcohol and ether—i.e., lecithin, fats, and a poisonous substance which injected subcutaneously into guinea-pigs produced clonic spasms of the muscles, acceleration of pulse and respiration, and finally general convulsions and the death of the animal from twelve to fifty-one hours after the injection. The residue which remained after the extraction with ether and alcohol contained an *albuminoid body* and *cellulose*. Therefore the tubercle bacilli seem to differ from other bacteria by the high percentage of substances soluble in alcohol and ether, as they contain between 26 and 28 per cent., while bacterium termo contains only 7·3, Friedländer's diplococcus only 1·7, the bacillus anthracis only 7·8 per cent. Concerning the specific reaction of the tubercle bacilli, and their resistance to acids, it was found that this property must be due to a specific morphological distribution of the albumins and the cellulose in the body of the bacillus, the presence of both substances being necessary for the production of the characteristic staining. It has been found that the presence of carbohydrates and glycerine is necessary for the growth of the bacilli, and that albumins alone are not sufficient as nourishing media for the tubercle bacillus, which differs thereby from the other bacteria. By experiments on rabbits it was proved that a poisonous albuminoid body is formed in the cultures by the bacilli, which (the dose used varied between 0·2 and 0·4 gramme) produced, a few hours after the injection, a rise of temperature amounting to 1° or 2° C., lasting for one or two days, without any other effect, even after repeated injections. The glycerine bouillon cultures lost their virulence on being kept for eight months at a temperature of 39° C., but they retained their vital activity. In experiments made on animals with such cultures of eight months' standing only negative results were observed with regard to the production of immunity in animals by such cultures, and Hammerschlag, Falk, and Charrin have failed to produce a protective inoculation.

The Composition of Koch's Fluid.

As has been reported in a previous letter to THE LANCET, an Austrian professor has made experiments on animals with Koch's liquid and with a liquid prepared by himself. Now these experiments have been brought to an end, and Professor Hueppe and Dr. Scholl of Prague have made a communication on their experiments to the *Berliner Klinische Wochenschrift* nearly at the same time as Koch's article appeared. They found Koch's liquid to contain, besides albuminoid bodies, glycerine in large quantity, and themselves made experiments with extracts made from tubercle bacilli cultures with peptone (3–8 per cent.), glycerine (5 per cent.), common salt (0·5 per cent.), and extract of beef (0·1 per cent.), on tuberculous animals, which gave positive results.

Vienna, Jan. 20th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Increase of Cancer.

DR. GORDON MACDONALD of Dunedin has recently published in the *New Zealand Medical Journal* information regarding the steady and alarming increase of cancer in the colony. In 1879 the estimated population was 507,324; in 1889, 645,830. In 1879 deaths from cancer to the number of 68 were registered at the office of the Registrar-General, while in 1889 the number amounted to 136, or as Dr. Macdonald puts it, "the mortality from cancer exactly doubled itself in ten years, although the population had only increased about a fifth." Sir Spencer Wells, in his Morton lecture in 1888 on "Cancer and Cancerous Diseases," makes special reference to the same steady increase of the disease in Great Britain and Ireland. He states that he has found the mortality from cancerous diseases to have almost doubled itself during the past ten years. In a table compiled by Dr. Copland, house surgeon to the Dunedin Hospital, it seems that at this hospital during the same ten years 233 cases of cancer occurred. In males the seat of the disease was in the following order—(1) lips, (2) stomach, (3) liver. In females the commonest seat was in the uterus, and next to that the breast. During the ten years 42 cases occurred in the lips, almost entirely in males, 40 in the uterus, 33 in the breast, 33 in the stomach (all but three in the male), 21 in the liver (all but four in the male), 9 in the tongue (all in the male). Two cases are recorded as occurring in the brain, and one in the spleen. In the males epithelioma predominated, and in the females carcinoma and scirrhus.

Report of the Royal Commission on the Dunedin Hospital Inquiry.

Sir James Hector, M.D., and Mr. E. H. Carew, R.M., the commissioners appointed by his Excellency Lord Onslow to hold an inquiry touching complaints made concerning the Dunedin Hospital's insanitary condition, have submitted their report. Both the hospital trustees and Dr. Batchelor were represented by able counsel, and a large amount of medical evidence was brought before the court. The report begins by stating that the commissioners were empowered to hold an inquiry touching complaints which have been made that the hospital known as the Dunedin Hospital, or certain parts thereof, are in an insanitary condition, and dangerous to the health of the inmates, and particularly the allegation that certain cases of blood-poisoning have arisen from the general condition of certain wards. The report itself is voluminous. In brief it amounts to this, that the inquiry itself, as a trial between Dr. Batchelor as a presumed plaintiff (for Dr. Batchelor made these charges on his own authority in a letter written to the trustees, and dated July 22nd ult.) and the hospital trustees as defendants, ended unsatisfactorily, for both sides are commended in the course of the report. The report, nevertheless, is an able one. The Commissioners spared no pains in thoroughly investigating the matter, and offered many valuable suggestions. The only unfortunate part connected with the whole affair is that the result is not considered satisfactory by either side. Indeed, at a meeting of the hospital trustees, held at Dunedin on Nov. 19th ult., the report was read and discussed. All the members who spoke condemned the report of the Commissioners as unsatisfactory and valueless. As a trial between Dr. Batchelor and the hospital trustees this expression of opinion may be true as regards its unsatisfactory termination; but that the inquiry was valueless I venture to deny. As a matter of fact, I quite agree with Sir James Hector's closing speech at the inquiry itself, when he stated "that the result of this inquiry will be to show to the public that a mass of evidence bearing on the questions of hospital management and construction has been accumulated that will form a State paper of very high value for the future guidance of those concerned in the management and care of hospitals in all parts of the colony; and I think that the manner in which the evidence has been brought forward, the carefulness with which all sources of information have been drawn on, and the impartial way that the evidence has been put in, reflect the very greatest credit on both sides.

Wholesale Poisoning at Wanganui.

Since I last wrote the medical men practising at Wan-

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ganui have been busy attending a considerable number of families, the members of which exhibited all at the same time symptoms of poisoning by an irritant. Several cases were of an alarming nature, but happily no deaths occurred. On investigating the matter it seems that all the patients had eaten on that particular day "tapioca." Samples of the tapioca were forwarded to Wellington for analytical purposes, and the Government analyst reported that the tapioca was impregnated with arsenic. It appears that the tapioca was forwarded to Wanganui from a wholesale firm at Dunedin, and that this special consignment was received by two separate grocers, who, unknowingly, of course, purveyed the poisoned food to their customers. The matter is being further inquired into.

Bequest.

The late Mr. Thomas Reid has left the sum of £5000 to the Wanganui Hospital. Mr. Reid came to New Zealand in the very early days, and gradually accumulated a fortune. Curiously enough, his first billet in the colony was that of custodian to the hospital to which he left this handsome bequest.

Obituary.

SURGEON-GENERAL T. GRAHAM BALFOUR, M.D., F.R.S.

IT is with sincere regret that we have to record the death on the 17th inst., at Coombe Lodge, Wimbledon Park, of Surgeon-General Dr. Thomas Graham Balfour, F.R.S., F.R.C.P., Honorary Physician to the Queen. If it did not fall to the lot of the late Surgeon-General Balfour to discharge great medical and administrative services in the field, he certainly rendered very exceptional and distinguished scientific services to the army and nation; and his name was probably better known and more highly regarded in scientific and professional circles than that of almost any other member of the Army Medical Department. Dr. T. Graham Balfour's busy and, we may say, eventful life embraced many points of considerable interest. He sprang from that family of Balfours which traced its descent from a minister of St. Giles, Edinburgh, in the end of the sixteenth century, and was born on March 18th, 1813. He was educated first at the High School, then at the newly established academy, and finally at the University of Edinburgh, where he graduated as Doctor of Medicine in 1834. He consequently remembered Edinburgh when Sir Walter Scott was still to be seen in its streets, in the days of Jeffrey and Cockburn, and when Alison, Chalmers, Wilson, and Christison were the leading teachers at the University. Tait, the late Archbishop of Canterbury, though a little senior to him, was one of his contemporaries, and with Dr. John Brown—of "Rab and his Friends" celebrity—he formed a life-long friendship. Dr. Balfour entered the army in 1836 and was gazetted to the staff in order to assist his friend Dr. Henry Marshall and Lieutenant (afterwards Sir Alexander) Tulloch in collating a vast number of medical and statistical returns which had been accumulating for twenty years at the headquarters of the army. These formed the basis of the first five volumes of the "Statistics of the British Army," produced by Mr. Tulloch and Dr. Balfour, Dr. Marshall having soon retired from ill-health. Dr. Balfour was gazetted Assistant-Surgeon to the Grenadier Guards in 1840, and in 1848 was promoted to be Surgeon of the Duke of York's Asylum, Chelsea. In 1853 Dr. Balfour and Lieutenant-Colonel Tulloch published another volume of statistics.

In 1857 Dr. Balfour was appointed Secretary to Lord Herbert's Commission following the Crimean War, the report of which brought about a complete reorganisation of the Army Medical Department. In 1855, during the same war, Dr. Balfour showed no little courage and force of character by appearing daily to aid and advise his friend Colonel Tulloch in a struggle against vested interests and Horse Guards' influences which were brought to bear against an official report by Sir John McNeill and Colonel Tulloch, with the result, in the end, that the unanimous vote of the House of Commons successfully vindicated and praised their conduct. In 1859, when the Army Medical Department was reconstituted, and consisted of a Director-General, aided by three branches—statistical, sanitary, and medical,—Dr. Balfour became the head of the former branch, which he organised. He originated those army statistical reports which, for their accuracy and comprehensiveness, have not been surpassed, and for fourteen years compiled the Blue-books relating to the health of the British army all over the world. In 1866 he was nominated by Lord de Grey to represent the War Office on Mr. Skey's Committee. In 1867 he represented the War Office at the International Statistical Congress at Florence. In 1873, on his promotion as Surgeon-General, he occupied the post of principal medical officer at Netley, and subsequently went to Gibraltar. He proved an excellent administrator, and was deservedly very popular at both stations, and there is no doubt he would have made a capital Director-General. In 1876 he retired after forty years' service, but he was far too energetic and able a man to remain idle. In 1859 he was elected a Fellow of the Royal Society, and in 1860 a Fellow of the Royal College of Physicians. He was a foreign corresponding member of the Académie Royal de Médecine de Belgique, was three times Vice-President of the Statistical Society, and was chosen President of that Society in succession to the present Chancellor of the Exchequer. In 1887 he was appointed honorary physician to Her Majesty. In 1889 he served as a member of Lord Camperdown's Committee as the representative of the Royal College of Physicians, and in the same year he attended the International Statistical Congress at Paris. In 1890 he was nominated a manager of the Metropolitan Asylums Board. In addition to his interest in statistics, Dr. Balfour was one of the earliest sanitary reformers, and, notwithstanding that he was always thorough in what he undertook, his versatility was shown by his researches in spirometry, meteorology, and anthropology, and by his inquiries into the health statistics of the horses of the army.

The late Dr. Balfour lost his wife about two years ago, and to his intimate friends it was plainly discernible that this was a sore trial, and had left its mark upon him. He had exhibited some signs of failing strength and health during the last year or two of his life. He complained from time to time of attacks of dyspepsia attended with palpitation and irregularity of the heart's action, but these attacks were easily relieved by careful dieting and simple remedies. He dwelt with evident satisfaction on the amount of walking exercise he had accomplished in Scotland during the past summer, and on the satisfactory state of his health. The intense cold of the present winter, however, tried him very much, and he was more than commonly troubled with his usual winter cough. He recently noticed, too, that his pulse, which had usually been rather quick, and sometimes irregular and intermittent, had become large, voluminous, and regular, and had fallen to 40 in the minute. Shortly afterwards the amount of urine passed began to diminish and was of high specific gravity and albuminous, and some œdema of the ankles appeared. The pulse, which was one of increased arterial tension, was from 38 to 40, and on the morning of his death only 36, and intermittent. He suffered also much from flatulence and acid dyspepsia. There was no cardiac bruit. Although his physical strength, spirits, and appetite remained fairly good, the above symptoms were, of course, regarded as grave indications in a man of nearly seventy-eight years of age, but his death, when it occurred on the afternoon of the 17th inst., was somewhat unexpected, and resulted from a sudden cardiac failure. He was assiduously and most kindly attended by his old friend Dr. Martyn, F.R.C.S., and at his own request Dr. Jeffery Marston, whom Dr. Balfour had been in the habit of consulting for many years and for whom he had a great regard, was asked to see him, which he did on four or five occasions during the last week or ten days of his illness.

The late Dr. Balfour was a really able man, of excellent common sense and remarkably sound judgment. He possessed a vigorous and highly cultivated intellect, was sincere and honest in all things, genial, and endowed with a keen sense of humour, a firm friend, and an excellent colleague. We are proud to say that for many years past, and almost up to the date of his death, he was a regular and highly valued contributor to THE LANCET. On Dr. Balfour's judgment and experience in military medical matters, vital statistics, sociology, and many scientific and literary subjects, the Editors were wont to place the greatest confidence. He will be mourned and missed by a large circle

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of friends and acquaintances, but by none more than by his late colleagues on THE LANCET, to one and all of whom he had much endeared himself.

GEORGE GULLIVER, M.A., M.B. OXFORD, F.R.C.P.

Dr. GEORGE GULLIVER died of acute pneumonia on Jan. 11th after a week's illness, at 16, Welbeck-street, Cavendish-square. He was the only son of the late George Gulliver, F.R.S., the celebrated naturalist, who was Professor of Anatomy and Physiology at the Royal College of Surgeons and surgeon to the Horse Guards. George Gulliver, jun., was born at Windsor in 1851 and was educated at King's School, Canterbury, whence he proceeded to Pembroke College, Oxford. Inheriting his father's love of science, and specially of biology, he selected the latter subject for his degree examination, and became a pupil and admirer of the late Professor Rolleston. In 1873 he gained a first class in the Natural Science School, and took his Bachelor of Arts degree. For some time he held the post of Demonstrator to Professor Rolleston, who formed a high opinion of his character and abilities, and by his influence secured for him the post of assistant naturalist to the *Venus* Expedition, which sailed for Rodriguez in 1871. On his return he wrote a report on the zoology of the island, for which he received the thanks of the Royal Society. He entered St. Thomas's Hospital as a student in 1875, and in 1879 took the degrees of Master of Arts and Bachelor of Medicine in the University of Oxford, and the Membership of the Royal College of Surgeons of England. During his student's career he made his mark as a man of great ability, and was elected in 1880 to the important post of resident assistant physician. During 1880 and 1881 he held, together with this, the medical registrarship, and gained a very wide and accurate knowledge of medicine. He then took the Membership of the Royal College of Physicians, and, a vacancy occurring on the medical staff of the hospital in 1882, he was elected assistant physician. Shortly after this, in 1883, when the cholera was rife in Egypt, he was sent out and became attached to the Ibrahim Pacha Hospital at Cairo, but later, at his own request, he was transferred to Assouan to carry out whatever sanitary measures he might think necessary. While there his dragoman was attacked with cholera, and Gulliver, who was the only European on the spot, nursed him successfully through his illness. The epidemic soon subsided and he returned to London, where he read a valuable paper on the Etiology and Pathology of Cholera before the Epidemiological Society. In 1884 he was elected Lecturer on Comparative Anatomy, and subsequently Demonstrator of Morbid Anatomy, at St. Thomas's Hospital, appointments which he still held at the time of his death. In 1886 he became a Fellow of the Royal College of Physicians. In addition to the various posts which he held in succession at his own hospital, he also filled in the earlier part of his career those of clinical assistant at Victoria Park Hospital for Diseases of the Chest and at the Brompton Consumption Hospital. Later on he was elected assistant-physician (1883) and subsequently physician (1889) to the London Fever Hospital, and only a few weeks before his death he entered into an agreement with his publishers to bring out a book on Fevers. In 1885, 1886, and 1887 he edited with Mr. Clutton the St. Thomas's Hospital Reports. He was a member of most of the Medical Societies in London, at which he read from time to time papers of considerable value. But that which probably gave him the greatest pleasure of all was his Fellowship of the Zoological Society. He visited the Zoological Gardens on many Sundays in the year, and thoroughly enjoyed his stroll among the animals which he knew so well and so often talked about.

The foregoing summary of Dr. Gulliver's career shows what splendid opportunities he had, and how he used them as steps for rising higher and higher in his profession. Those who knew him intimately were well aware what a wide knowledge of medicine he possessed, and how skilful he was at the bedside, both in diagnosis and in treatment. But all had not this intimate acquaintance with him. One of his most striking characteristics was his modesty—one might even say his shyness. He seemed averse to showing his knowledge and skill before a large number of people, and seldom opened out much before the students in his out-patient room; while in the summer, when he was doing temporary duty in the wards, he seemed particularly anxious to avoid having a large following. But in the comparative privacy of the lecture-room, where a small class assembled to hear his lectures and demonstrations on Comparative Anatomy, he felt more at home, and took evident delight in teaching. In addition to his purely professional accomplishments, Dr. Gulliver had a very wide acquaintance with English writings, both in prose and verse, and took great pleasure in the lighter varieties of French literature. The general information which he thus had at his command, and the genuine humour he was wont to display, proved a charm and often a surprise to those who conversed with him. He was a man of strong likes and dislikes, but he rarely allowed himself to be betrayed into an unkind expression of antipathy to anyone. His views on questions of general interest, and on those which came up from time to time in his own hospital, were often very decided, and he supported them with vigour; but, on the other hand, he was often apathetic about things which roused the feelings of many around him. From whatever point of view one contemplates Dr. Gulliver, whether as a as man or a physician, one cannot but feel that those who knew him well will mourn that so staunch a friend and genial companion has been taken from them; while the medical profession must also deeply deplore the loss of so able a physician and comparative anatomist, and a man of such wide literary culture.

THOMAS TAYLOR, F.R.C.S. ENG.

MR. THOMAS TAYLOR of Sutton Coldfield, near Birmingham, died on Dec. 29th, in the ninety-fifth year of his age. He was the oldest medical practitioner in the Midlands probably—possibly the oldest in England. He was born at Redditch in 1796, and in 1806, in his twelfth year, he went to Birmingham with his uncle, who had been apprenticed to a notable Birmingham surgeon, Mr. Hector, of the Old Square, the schoolfellow and lifelong friend, and not infrequent host, of Samuel Johnson. From his uncle Mr. Taylor's earliest training was derived. From Birmingham Mr. Taylor went to London to complete his professional training—to "walk the hospitals," as the phrase then was. Probably at the suggestion of Mr. Freer he chose St. Bartholomew's, where Abernethy was then the chief of the surgical staff, and for Abernethy he contracted an intense regard. One of the oldest and most venerable of Birmingham surgeons writes that "he preserved his faith, as he often told me, in three books only—the works of Jeremy Taylor, from whom he said he was descended; John Abernethy's works, which I think he must have learned by heart; and the Bible."

In 1821, at the age of twenty-five, Mr. Taylor finished his course at St. Bartholomew's Hospital and became a Licentiate of the Apothecaries' Company and a Member of the Royal College of Surgeons. He became a Fellow of the College in 1861, the necessary fees being then, as a mark of personal respect, contributed by some of his medical friends, on his retirement from the office of honorary secretary to the Midland Medical Benevolent Society. He was appointed to the office of resident surgeon at the General Dispensary, which he resigned to enter upon private practice. In 1876 he removed to Sutton Coldfield, to reside near his daughter, the wife of the Rev. Albert Smith, Head Master of Sutton Grammar School. He was much esteemed by his medical colleagues and personal friends, and those who knew him never failed to arrest his attention for the sake of a cordial greeting, ending with the familiar "God bless you!" with which, in tones of manifest sincerity, it was his wont to close the passing interview. There was in this life nothing that was striking in the ordinary sense, very little incident, no public manifestation; and yet it is especially worthy of record, as a memorial of one who constituted a link between the present and the remote past, and who was emphatically a good, honourable, and honoured man; one who did his duty thoughtfully and quietly, and who carried with him to the age of well-nigh a century the esteem and regard of all who knew him, and the affection of those who enjoyed the honour and the pleasure of his intimacy. By his professional brethren he was held in great esteem as a high-minded, honourable gentleman of the old school, retiring in disposition, courteous in manner, and of great amiability. A medical man who had known him for sixty years says, "I should think he never had an enemy."

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HENRY PENFOLD, L.R.C.P.ED., M.R.C.S., L.M.

ON Jan. 7th, Henry Penfold died at Rainham, after a short illness due to the severity of the winter. For those who knew him but little more need be added. The sorrow of his family—deep though it must needs be—is shared by all who have ever come in contact with him whom we have now lost. Mr. Penfold, at the termination of his student life at Guy's Hospital in 1856, became a Member of the Royal College of Surgeons. Shortly afterwards he was appointed surgeon in charge of the works of the London, Chatham, and Dover Railway, which was then being laid down. On the completion of the railway he settled in general medical practice at Rainham. Amongst other appointments he subsequently held for many years the surgeoncy of the 1st East Kent R. V. For twenty years his skilled service as honorary surgeon to St. Bartholomew's Hospital at Chatham was given with untiring zeal. His private and professional life at Rainham was one of unaltering kindness and self-forgetful labour for those who most needed his help. In Masonic circles he will long be remembered as a true brother, a Mason in heart and in deed. To all his genial manner and sincerity endeared him. Generosity in him was a part of his very nature, no less were kindliness of heart and honesty of purpose. And "these riches shall not pass away with life."

JOSIAS WILSON PATRICK, L.R.C.P. & S. EDIN.

WE regret to announce the death, at the early age of forty-eight, of Mr. Patrick of Carrickfergus, county Antrim, which occurred on Jan. 9th. Mr. Patrick, who was a licentiate of the Royal College of Physicians and Surgeons of Edinburgh, began practice on the death of his brother, Dr. W. H. Patrick, twenty-five years ago, and succeeded him as medical officer of the Carrickfergus dispensary district. At the time of his death he was medical officer of health for Carrickfergus, and medical attendant to the troops stationed there, also medical officer under the Factory Acts. He was an honoured member of the Masonic Order, and, owing to his exertions, a new lodge was established in Carrickfergus, of which he was first master. He had a very large private practice, and, in addition to enjoying the respect and confidence of the public, he was on terms of intimate friendship with the other medical men in his district. Mr. Patrick was buried on Monday, an immense concourse of people following his remains.

THE SERVICES.

AN order recently issued from the War Office notifies that in future recruits for the Medical Staff Corps will have the option of enlisting either for seven years' army and five years' reserve service or for three years' army and nine years' reserve service.

ARMY MEDICAL STAFF. — Deputy Surgeon-General Chamney Graves Irwin, M.B., has been placed on retired pay (dated Jan. 4th, 1891); Surgeon John Robt. Stevenson Robertson, M.B., resigns his commission (dated Jan. 21st, 1891).

ARMY MEDICAL RESERVE OF OFFICERS.—The following notification is substituted for that which appeared in the *Gazette* of Nov. 25th, 1890: Surgeon J. J. A. V. C. Raye, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve (dated Nov. 26th, 1890).

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Fleet Surgeons: Edwd. E. Mahon to the *Impérieuse* (dated Jan. 27th, 1891); Frederick M'Clement, M.D., to the *Iron Duke* (dated Feb. 12th, 1891). Staff Surgeons: Frederick A. Trevan to the *Ringarooma*, and Charles W. Buchanan-Hamilton, to the *Tauranga* (undated); Henry G. T. Strickland to the *Boscawen*, additional (dated Jan. 27th, 1891). Surgeons: Henry F. Iliewicz and John D. Hughes to the *Impérieuse*, and R. Barnard to the *Ganges* (all dated Jan. 27th, 1891); and William Hayes to the *Porpoise* (undated).

VOLUNTEER CORPS. — *Royal Engineers* (Submarine Miners): The Forth Division: Henry Hay, M.B., to be Acting Surgeon (dated Jan. 17th, 1891); Thos. P. Grosart Wells, Gent., to be Acting Surgeon (dated Jan. 17th, 1891).—*Artillery:* 2nd Lancashire: Acting Surgeon H. R. Jones, M.B., to be Surgeon (dated Jan. 17th, 1891).—3rd Volunteer Battalion, the Cheshire Regiment: Alfred Herbert Marsh, Gent., to be Acting Surgeon (dated Jan. 17th, 1891).—3rd Volunteer Battalion, the Hampshire Regiment: Surgeon and Surgeon-Major H. R. Smith is seconded whilst serving as Brigade Surgeon in the Portsmouth Infantry Volunteer Brigade (dated Jan. 17th, 1891).—1st Volunteer Battalion, the Princess Charlotte of Wales's (Royal Berkshire Regiment): Alexander Gordon Paterson, M.D., to be Acting Surgeon (dated Jan. 17th, 1891).

VOLUNTEER MEDICAL STAFF CORPS. — The London Division: Surgeon H. G. Read resigns his commission (dated Jan. 17th, 1891).

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following candidates passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Thursday, the 15th inst.:—

Anatomy and Physiology.—Daniel S. Owen, Ambrose J. Russell, Angus E. Kennedy, and Hugh P. V. Wiggins, students of London Hospital; Frank E. Reynolds and John E. H. Davies, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; Alexander W. Quait, of St. Thomas's Hospital; Alan Murdoch, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; John A. Procter and John P. Atkinson, of King's College; Arthur W. Denny, of Charing-cross Hospital; Alexander H. M. Hood and Henry Witham, of Westminster Hospital; and John D. Seller, of St. Mary's Hospital.

Anatomy only.—William H. Read, of Grant Medical College and King's College; John J. Culmer and Alfred Alexander, of Guy's Hospital; Edgar C. Pern, of St. Thomas's Hospital; William E. E. Powles, of London Hospital; Charles W. Williams and D. D. Brown, of St. Bartholomew's Hospital.

Physiology only.—James B. Bettington and George H. Steele, of Guy's Hospital; Harold W. Clarke, of St. Mary's Hospital; George R. Hannon, of King's College; Frederick W. J. Goodhue, of St. Thomas's Hospital; Charles Corben, of St. Bartholomew's Hospital; and Percy C. Spark, of Charing-cross Hospital.

Passed on the 16th inst:

Physiology only.—Basil E. Church and Philip T. Jones, of St. Bartholomew's Hospital; Charles M. Welburn, Alexander W. C. Lindsay, Cecil W. Smith, and James A. Edsell, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Harry Andreae, of University College; William F. C. Dowding and Henry N. N. Dodd, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; Ernest E. S. Silver, James G. B. Colman, Ernest S. Tuck, and Alexander B. Creak, of Guy's Hospital; William Pell, George E. Kinnersley, Frank W. Mason, and William G. Macauley, of St. Thomas's Hospital; George R. Swinhoe, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Francis Whitelaw, of St. Mary's Hospital; George Edward Williams, of London Hospital; William H. Gossage, of Westminster Hospital; and Charles M. S. Farnum, of King's College.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 15th inst. the following degrees were conferred:—

Bachelors of Medicine and Bachelors of Surgery.—Walter Winslow, Gonville and Caius; Robert Stanley Thomas, Jesus; Jermyn Francis Gillett, Sidney, Sussex; William Hubert Sale Fosberry, non-collegiate.

Sir G. M. Humphry, Professor of Surgery, has been appointed a member of the General Board of Studies.

NATIONAL HEALTH SOCIETY.—A course of six lectures on Domestic and Personal Hygiene will commence on Friday, Feb. 6th, at 3 P.M., in the Committee-room, 53, Berners-street, W.

FOOTBALL CASUALTIES.—In a Rugby match at Montrose, on the 3rd inst., a player sustained a fracture of his left leg below the knee.—At an inquest held at Liverpool, on Dec. 31st, on the body of Thomas Hebley, a verdict was returned that the deceased died from the effects of a blow received in a football match on the previous Saturday.—Last week a Wombwell Main player had his collar-bone fractured during a game at Wombwell Main.—On Jan. 12th two players named Cawley and Mumford, of the Wednesday team, accidentally collided with each other in a match at Bramall-lane, Sheffield, and sustained slight concussion of the brain, Mumford also sustaining an injury to his eye.—In a match on Saturday between Llanrwst and Trefriw with Bettwys-y-Coed combined, a Llanrwst player broke his collar-bone.

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EPSOM COLLEGE.—E. M. Corner of Epsom College gained an exhibition last week of £30 at Sidney Sussex, Cambridge, for Natural Science.

CREMATION IN DENMARK.—In pursuance of a decision recently pronounced by the Supreme Court of Copenhagen, cremation will be prohibited in Denmark pending the passing of the new law for the disposal of the dead.

THE REGULATION OF OVERHEAD WIRES.—The Bill promoted by the London County Council for dealing with overhead wires came before one of the examiners on Standing Orders at the House of Commons on the 19th inst., when compliance with the Standing Orders was proved.

ANONYMOUS GIFTS TO HOSPITALS.—An anonymous doner has forwarded two bank notes for £1000 each to the Essex and Colchester Hospital and the Eastern Counties Asylum for Idiots respectively. Similar munificent anonymous donations were received by the two institutions last year.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—The Lord Mayor presided over a meeting held at the Mansion House on Monday, in aid of the movement to raise £20,000 for the purpose of rebuilding the front portion of this institution. The hospital was founded in 1827, and 2,000,000 sufferers had been relieved within it walls. Three sides of the building had been reconstructed, but the fourth, the front, remained in its old form, with all its faults and defects. A resolution was carried, pledging the meeting to use every endeavour to obtain the funds required. The secretary announced that about £2000 had already been contributed.

PRESENTATION.—Mr. William Blasson, M.R.C.S., who was in practice at Edgware and Mill-hill, Middlesex, for twenty-eight years, has been presented, on his leaving Edgware, with a massive silver bowl on an ebonised stand, a handsome walnut sideboard, and a cheque for £140 by his friends and patients, in testimony of their esteem and appreciation of his professional skill.—Mr. Martin Howard L.A.H., L.M.Dub., has been presented by the members of the St. John Ambulance Class, formed under the auspices of the London and North-Western, Lancashire and Yorkshire, and Oldham, Ashton, and Guidebridge Railway Companies, with an artistically illuminated address, expressing the indebtedness of the class, for his kindness, and simple system of instruction, as their lecturer.

THE LATE PROFESSOR MCGILL.—A well-attended and representative meeting was held last week, in the board-room of the Leeds General Infirmary, to decide upon the form of memorial to perpetuate the memory of the late Professor McGill. Mr. R. Benson Jowitt, chairman of the infirmary board, occupied the chair, and in opening the proceedings expressed the loss the infirmary had sustained, and passed a high eulogium upon the late professor. After some discussion, it was resolved that the form of the memorial should be a prize in surgery, to be awarded to students of the medical department of the Yorkshire College and of the Leeds Infirmary. A committee, honorary secretaries, and a treasurer were appointed, to promote the object in view.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The following members were elected on Jan 12th as officers and councillors for the year 1891:—President: Mr. S. J. Hutchinson. Vice-Presidents: Messrs. J. Stocken, David Hepburn, T. H. G. Harding, W. Bowman Macleod (Edinburgh), J. H. Redman (Brighton), and R. T. Stack (Dublin). Treasurer: Mr. Thomas Arnold Rogers. Librarian: Mr. Ashley Gibbings. Curator: Mr. Storer Bennett. Editor of the Transactions: Walter Coffin. Honorary Secretaries: Messrs. J. Ackery (Council), W. A. Maggs (Society), and F. Henri Weiss. Councillors: Messrs. C. S. Tomes, F.R.S., Willoughby Weiss, W. H. Woodruff, W. Hern, F. Newland Pedley, C. J. Boyd Wallis, F. J. Bennett, Cornelius Robbins, E. G. Betts, M. de C. Dickinson (St. Leonards-on-Sea), A. A. de Lessert (Aberdeen), Alex. Fothergill (Darlington), W. B. Bacon (Tunbridge Wells), H. B. Mason (Exeter), Mordaunt A. de C. B. Stevens (Paris), T. S. Carter (Leeds), Edm. Binns (Middlesbro'), and W. S. Woodburn (Glasgow).

ST. THOMAS'S HOSPITAL.—A handsome brass lectern has been presented to the hospital chapel by the new treasurer, Mr. J. G. Wainwright.

WATER-SUPPLY, COLWYN BAY.—A scheme has been adopted, involving an expenditure of £21,000, to secure for Colwyn Bay a new and abundant supply of water from Llyn-Cowlyd, situated on a branch of the Snowdonian range of mountains, on the Carnarvonshire side of the river Conway.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly Court of Directors of the Society was held on Wednesday, Jan. 14th, at 20, Hanover-square. The President, Sir James Paget, presided. Five new members were elected, the resignations of two were accepted, and the deaths of two reported. An application for a grant was received from a widow, and assistance was given her. It was resolved to distribute £1418 10*s.* among the sixty-four widows, fifteen orphans, and three orphans on the Copeland Fund now receiving grants. The expenses of the quarter were £80 5*s.* 6*d.* The treasurer announced that a sum of £360 had been given in presents to the widows and orphans at Christmas, and that one orphan had through age ceased to be eligible for further grants.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—The annual meeting of this Society was held at Owens College, Manchester, on Friday, Jan. 16th, when the office-bearers for the ensuing year were elected. Dr. Braithwaite (Leeds) was elected President in place of Dr. Wallace (Liverpool), whose term of office has expired. The following were elected:—Vice-presidents: Drs. Lloyd Roberts and Neafield (Manchester), Drs. J. E. Burton and McFie Campbell (Liverpool), Mr. C. J. Wright and Dr. Hellier (Leeds), and Dr. Heeling and Mr. Arthur Jackson (Sheffield). Dr. Sinclair (Manchester) was appointed honorary general secretary, and Dr. Walter (Manchester) hon. treasurer. The following gentlemen were appointed local secretaries:—Dr. Donald (Manchester), Dr. Briggs (Liverpool), Mr. Sydney Rumboll (Leeds), and Mr. Richard Favell (Sheffield).

CO-OPERATION IN NURSING.—A scheme formulated by Miss Napper and Miss Belcher, "to supply private nurses, thoroughly trained and certificated, to practitioners and the public through the agency of nurses who have combined for their mutual benefit and welfare," was set on foot on Tuesday evening last by a meeting held in New Cavendish-street. The coöperation had secured the services as lady superintendent of Miss Philippa Hicks, the late matron of the Hospital for Sick Children, Great Ormond-street, who is well known on account of her labours at St. Thomas's Hospital, King's College Hospital, and during the Egyptian campaign. Each nurse will be paid her own fees, less a charge of 7½ per cent., which will be placed to a common fund for working expenses, and if the nurses wish they can reside in the institute. It is also proposed to start immediately lectures and clinical instruction for assistance of the nurses.

MANCHESTER MEDICAL SOCIETY.—Last week the annual meeting of this Society was held at Owens College. Dr. J. Ross presided. The report stated that twenty-two new members had been elected during the year. The completion of the new library catalogue, involving considerable cost, was recorded with satisfaction. The cash statement showed a small balance in hand. The report was adopted, and the following were elected office-bearers for 1891:—President: Dr. Thos. Jones. Vice-Presidents: Drs. Samuel Buckley, John Dixon Mann, F. A. Southam, and Graham Steell. Treasurer: Dr. C. E. Glascott. Secretary: Dr. T. C. Railton. Ex-officio Members of Committee: Dr. Henry Browne, Dr. J. Dreschfeld, Mr. James Hardie, Mr. F. A. Heath, Dr. D. J. Leech, Dr. David Little, Mr. Edward Lund, Dr. J. E. Morgan, Dr. Arthur Ransome, Dr. D. Lloyd Roberts, Sir William Roberts, Dr. James Ross, Dr. Henry Simpson, Mr. Thomas Windsor, and Mr. Walter Whitehead. Elected Members of Committee: Dr. J. S. Bury, Mr. William Coates, Dr. Archibald Donald, Dr. A. M. Edge, Dr. S. J. Graydon, Dr. A. H Griffith, Dr. A. Hodgkinson, Mr. F. W. Jordan, Dr. Siegmund Moritz, Dr. C. J. Renshaw, Mr. C. E. Richmond, and Dr. G. A. Wright.

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THE MIDWIVES' REGISTRATION BILL.—At the annual meeting of Devon and Exeter Medico-Chirurgical Society, held at the Exeter Hospital on the 16th inst., the following resolution was passed:—"The members of the Devon and Exeter Medico-Chirurgical Society strongly disapprove of the Midwives' Registration Bill (amended)."

COTTAGE HOSPITALS.—The annual report, just issued, sketches the satisfactory progress of the Tamworth Cottage Hospital, established ten years ago. The financial position is satisfactory. Considerable sanitary improvements had been effected during the year.—A new Cottage Hospital was formally opened at Goole on the 15th instant. It is a commodious stone building, centrally situated, and was formerly used as the court house, and has been presented to the committee. The necessary structural alterations and furnishing have been defrayed by other generous supporters of the scheme, and it will provide a long felt want in the town.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 20th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	257	44	2	61	4	368	442
North-Western Hospital	282	35	..	8	..	325	443
Western ,,	149	16	..	18	1	184	262
South-Western ,,	175	13	..	2	3	193	340
South-Eastern ,,	225	14	..	41	1	281	463
Northern ,,	286	19	..	15	..	320	480
Gore Farm ,,	63	..	..	..	..	63	300
Totals	1437	141	2	145	9	1734	2729

SMALL-POX.—*Atlas* hospital ship, 1.

BOOKS ETC. RECEIVED.

BLACK, ADAM & CHARLES, Edinburgh.
The Collected Writings of Thomas De Quincey. By D. Masson. Vol. XIV. New and Enlarged Edition. 1890. pp. 447.

BICKERS & SON, London; CORNISH BROTHERS, Birmingham.
Constance Naden: a Memoir. By W. R. Hughes, F.L.S. 1890. pp. 91.

CHURCHILL, J. & A., New Burlington-street, London.
Year-book of Pharmacy, and Transactions of the British Pharmaceutical Conference at Leeds, 1890. pp. 612.

GREVEL, H., & Co., King-street, Covent-garden, London.
The Student's Atlas of Artistic Anatomy. By C. H. Roth. Edited by C. E. Fitzgerald, M.D. With Plates and Figures. 1891.

GRIFFIN, CHAS., & Co., Exeter-street, Strand, London.
Railway Injuries in their Medico-legal and Clinical Aspects. By Herbert W. Page, F.R.C.S. 1891. pp. 148.

LEWIS, H. K., Gower-street, London.
Pocket Medical Lexicon. By J. M. Keating, M.D. (Pa.), and H. Hamilton. 1891. pp. 280.

LIVINGSTONE, E. & S., Edinburgh.
The Urine, in Health and in Disease. By H. A. Husband, M.B., F.R.C.S. Edin. With Plates. Second Edition. 1891. pp. 71.

LONGMANS, GREEN, & Co., London.
Aphorisms in Applied Anatomy and Operative Surgery. By Thos. Cooke, B.Sc., M.D. (Paris). 1891. pp. 173. Price 3*s.* 6*d.*
Studies of Old Case-books. By Sir James Paget, Bart. 1891. Price 8*s.* 6*d.*

SIMPKIN, MARSHALL, & Co., London.
Evolution the work of a great Intelligence. By W. A——. In Two Parts. Part I. 1890. pp. 128.

SMITH, ELDER, & Co., Waterloo-place, London.
Transactions of the Pathological Society of London. Vol. XLI. 1890. pp. 416.

STAB, PROSPERINI, Padova.
Tito Vanzetti. 1891. pp. 351.

Dr. Kállay's Aertzlicher Almanach, 1891 (Wilhelm Braumüller & Sohn, Wien, 1891).—De l'Intervention Chirurgicale dans le Péritonites Tuberculeuses généralisées et localisées; par le Dr. Adrien Pic (J. B. Baillière et Fils, Paris, 1890).—Biennial Report of the Alabama Insane Hospital at Tuscaloosa for the years ending September, 1889 and 1890 (The Brown Printing Company, Montgomery, Ala.).—The Philosophy of Cookery; by Fredk. Pearse, M.D. (Holbrook & Son, Portsea).—Saint-Raphael, with Valescure and Boulouris as a Winter Health Resort; by Howard D. Buss, M.R.C.S. (V. Chailan, Saint-Raphael, 1890).—The Dog Owner's Annual, 1891; illustrated (Dean and Son, London); price 1*s.*—Etude expérimentale sur les Microbes des Eaux; par le Dr. Victor Despeignes (J. B. Baillière et Fils, Paris, 1891).—Catechism Series: Materia Medica, Part I. (E. & S. Livingstone, Edinburgh, 1891); price 1*s.* nett.—Hunterian Lectures on Intracranial Inflammations; by A. E. J. Barker, F.R.C.S. (H. K. Lewis, London, 1890); price 3*s.* nett.—Social Diseases and Worse Remedies; by T. H. Huxley, F.R.S (Macmillan & Co., London, 1891); price 1*s.*—Dr. Koch's Remedy, the Treatment of Consumption; by A. E. Bridger, M.D. (John Hogg, London, 1891); price 1*s.*—Archives of Surgery, by Jonathan Hutchinson, LL.D., F.R.S., January, 1891 (J. & A. Churchill, London); price 2*s.* 6*d.*—Magazines for January: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister), Boy's Own Paper, Girl's Own Paper (Religious Tract Society), Scribner's.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BEASLEY, J. G., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Rowley Regis Urban Sanitary District of the Dudley Union.

BENJAFIELD, W. B., M.B. Edin., M.R.C.S., has been appointed Medical Officer for the Workhouse at Edmonton, vice Day.

BERRY, JAMES, B.S. Lond., F.R.C.S., has been appointed Surgeon to the Royal Free Hospital, vice F. J. Gant, F.R.C.S., resigned

BEVERIDGE, ARTHUR J., M.B., C.M. Edin., has been appointed Medical Officer for the Parish of Assynt, Sutherlandshire, vice McFadyen.

BROWN, ROBERT, M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Duirnish, Skye, vice Dewar.

BRUMWELL, G. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Scalthwaiterigg District of the Kendal Union.

COOK, J. W., M.D. Aberd., M.R.C.S., has been reappointed Medical Officer of Health for the Tendring and Lexden and Winstree Rural Districts.

CRICK, WM. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Western District of the Billesdon Union, vice Fewkes, deceased.

CROSSE, REGINALD E., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Norfolk and Norwich Hospital.

EDWARD, VICTOR-HUGO, M.B., B.S. Lond., has been appointed Assistant Medical Superintendent to the Paddington Infirmary, London, vice T. Ernest Hillier, M.B., M.A. Cantab., resigned.

EVANS, WILMOTT, M.D., B.S., B.Sc. Lond., F.R.C.S., has been appointed Registrar to the Royal Free Hospital.

EVERSHED, ARTHUR, M.R.C.P. Lond., M.R.C.S., has been appointed Medical Adviser to the North London Railway Company.

FULLER, G. E., M.D. Irel., has been appointed Medical Officer for the Cheswardine District of the Drayton Union.

GANT, Mr. F. J., late Senior Surgeon, has been appointed Consulting Surgeon to the Royal Free Hospital, Gray's-inn-road.

GREEN, C. D., M.D., L.R.C.P. Lond., has been appointed District Medical Officer of the Edmonton Union.

HAWKINS-AMBLER, GEORGE A., M.R.C.S., L. & L.M.R.C.P. Irel., has been appointed District Medical Officer and Public Vaccinator for the Kirkburton District of the Huddersfield Union, vice H. A. Lowndes.

HILL, HEDLEY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Bristol Dispensary.

HILL, J. S., M.B., C.M. Edin., has been appointed Medical Officer for the Fifth District of the St. Saviour's Union, vice Wingate, resigned.

IREDALE, J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical and Vaccination Officer for the Saltfleetby District of the Louth Union.

KEAN, HUGH J., M.D., L.R.C.S. Irel., has been appointed Medical Officer for the Meigh Dispensary District.

KILNER, C. S., M.D., C.M. Edin., has been appointed Assistant Medical Officer to the Suffolk General Hospital.

LANCASTER, W. C., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ballytoggan Dispensary of the Edenberry Union, vice Purdon.

LAWSON, F. D., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer and Public Vaccinator for the Chiddingfold District of the Hambledon Union.

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LEACH, J. C., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Sturminster Union.

MCCALL, A., M.B., C.M. Glasg., has been appointed District Medical Officer for the Conisborough District of the Doncaster Union, vice Hills.

MACDONALD, DAVID, M.B., C.M. Glas., has been appointed Medical Officer for the District of Stratherrick, Inverness.

MACKAY, WILLIAM, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Norton Urban Sanitary District of the Malton Union.

MACLAGEN-WEDDERBURN, M.D. Aberd., has been appointed Medical Officer of Health for the County of Forfar.

MACNAUGHTON, W. A., M.D. Edin., has been appointed by the County Council Medical Officer for the County of Kincardine.

MARTYN, REGINALD, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Devon and Exeter Hospital.

MASON, F. J., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Cheltenham Union, vice Cottle, resigned.

NOBLE, SAMUEL C., M.R.C.S., has been reappointed District Medical Officer of the Kendal Union.

RIGDEN, BRIAN, M.R.C.S., has been reappointed Assistant Surgeon to the Canterbury Dispensary.

RIGDEN, GEORGE, M.R.C.S., has been reappointed Surgeon to the Canterbury Dispensary.

RODEN, PERCY A., M.B., C.M. Aberd., has been reappointed Medical Officer of Health for the Borough of Droitwich.

ROUGHTON, EDMUND W., B.S., M.D. Lond., F.R.C.S., has been appointed Assistant Surgeon to the Royal Free Hospital, Gray's-inn-road.

SOLLY, ERNEST, M.B. Lond., F.R.C.S., has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, vice E. C. Stabb, F.R.C.S., resigned.

SOMERSET, EDWARD, M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed House Surgeon to the Carmarthen Infirmary, vice Hedley Hill, resigned.

THOMPSON, M., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Puddletown District of the Dorchester Union.

TURNER, C. BYRON, M.R.C.S., L.R.C.P., has been appointed Demonstrator of Anatomy at University College, London, vice G. B. M. White, F.R.C.S., resigned.

TURNER, FREDERICK, M.R.C.S., has been reappointed Medical Officer of Health for the Buxton Urban Sanitary District.

WHITAKER, H., M.D. Irel., M.R.C.S., has been appointed Medical Superintendent Officer of Health to the Belfast Corporation.

WILLIAMS, C. R., M.B., C.M. Edin., has been reappointed Medical Officer for the Second and Third Districts of the Ashby-de-la-Zouch Union.

WILLIAMS, J. D., M.D. Edin., has been appointed Assistant Medical Officer for the Workhouse of the Cardiff Union.

WOODHOUSE, EDWD. R., M.B., C.M. Edin., has been appointed Medical Officer for the Stafford Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon.

CHARING-CROSS HOSPITAL, London.—Assistant Surgeon.

CHELMSFORD UNION.—Medical Officer, including the office of Public Vaccinator for the sixth district of this Union. (Apply to the Clerk, Chelmsford.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Physician to the Out-patients. The office is honorary.

CHICHESTER INFIRMARY.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant for one year. Terms £50 for the first year, and, if reappointed, £70 for the second year, with board, lodging, and washing.

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, and attendance. (Apply to Mr. Youle, Clerk to the Committee, Guildhall, London.)

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, S.W.—Surgeon,

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants in the Out-patient Departments.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Physician.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Physician.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Surgeon.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing provided.

ROYAL ORTHOPÆDIC HOSPITAL, Oxford-street, London.—Resident House Surgeon and Apothecary. Salary £100 per annum, with partial board.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House Surgeon. Salary, with board and residence, £70 per annum.

SMALLBURGH UNION.—Medical Officer for the Smallburgh District and the Smallburgh Workhouse. Salary £60 per annum for the district and £30 for the Workhouse, with the usual extra medical fees. The person appointed for these offices will also be appointed Public Vaccinator and Registrar of Births and Deaths for the Smallburgh District, with the usual fees payable in each case. (Apply to Mr. Davies, Clerk, North Walsham.)

ST. JOHN'S WOOD AND PORTLAND TOWN PROVIDENT DISPENSARY.—Surgeon. (Apply at the Dispensary, 1, Henstridge-villas, Ordnance-road.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—Anæsthetist. Honorarium £50 per annum.

UNIVERSITY OF SYDNEY.—Demonstratorship in Physiology. Salary £350 per annum. £60 allowed for passage expenses to Sydney. (Apply to the Agent-General for New South Wales, 9, Victoria-street, London, S.W.)

WINCHCOMB UNION.—Medical Officer for the No. 2 or Vale District of this Union. Salary £65 per annum, and in addition, midwifery, Surgical, and vaccination fees. (Apply to the Clerk, Winchcomb.)

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon (Lady or Gentleman). Salary £50 per annum, with board, lodging on the premises, and washing.

WORCESTER GENERAL INFIRMARY.—Physician.

Births, Marriages, and Deaths.

BIRTHS.

CHETWOOD.—On Jan. 14th, at Christopher-street, Finsbury-square, the wife of William Chetwood, M.R.C.S., of a son.

EDWARDS.—On Jan. 14th, at Waverley, Sydney, the wife of Charles A. Edwards, L.R.C.P. &c., of a daughter.

ELKINGTON.—On Jan. 15th, at Newport, Salop, the wife of E. A. Elkington, M.B. Lond., of a son.

HALLEN.—On Dec. 21st, at Tres Arroyos, F.C.S., Argentine Republic, the wife of A. E. H. Cornelius Hallen, M.B., C.M. Edin., of a son.

MASON.—On Jan. 17th, at Rosemont, Maidenhead, Berks, the wife of David James Mason, M.D. Edin., of a son.

MATHEWS.—On Jan. 17th, at Vandour Bolingbroke-grove, Wandsworth-common, the wife of E. Dewar Mathews, of a daughter.

RICHARDSON.—On Jan. 14th, at Bryngwy Rhayader, Radnorshire, the wife of Frank L. C. Richardson, surgeon, of a daughter.

WELLS.—On Jan. 14th, at Belsize-park, N.W., the wife of Poulett Wells, M.B., of a son.

WEST-SYMES.—On Jan. 15th, at Hope Hall, Halifax, the wife of Edmond West-Symes, M.D., of a daughter.

WEST.—On Jan. 15th, at Wimpole-street, Cavendish-square, W., the wife of Samuel West, M.D., of a son.

MARRIAGES.

CLARKE—JOPLIN.—On Jan. 14th, at St. Matthew's, Thorpe Hamlet, Norwich, William Frederick Clarke, M.D., B.S. Lond., to Amy Robertson, daughter of the late Rev. J. J. Joplin, of Halifax, Nova Scotia.

LAWSON—TAYLOR.—On Jan. 14th, at Almondbury Parish Church, near Huddersfield, Doctor F. Duncan Lawson, of Burrell House, Chiddingfold, Surrey, eldest son of William Lawson, Esq., of 83, Palmerston-road, Dublin, to Grace Crosland, daughter of the late John William Taylor, Esq., of Moorfield, Huddersfield.

PEMBERTON—HOOPER.—On Jan. 14th, at St. Mary Abbot's, Kensington, Robert Pemberton, Surgeon-Major H.M.'s Indian Army, to Mabel Constance, younger daughter of Mrs. Sydney Hooper.

RANDLE—DAVIES.—On Nov. 19th, 1890, at St. Paul's Church, Breadfruit, Lagos, West Africa, by the Honourable and Rev. James Johnson and Venerable Archdeacon Johnson, John Randle, M.B., C.M. Edin., Assistant Colonial Surgeon, to Victoria Davies, daughter of Capt. J. P. L. Davies.

SOUTH—JUPP.—On Jan. 20th, at St. Jude's, Southsea, Henry Erskine South, Surgeon, R.N., to Annette Helena, youngest daughter of Alfred Jupp, of Saxon House, Southsea.

DEATHS.

BALFOUR.—On Jan. 17th, at Coombe Lodge, Wimbledon-park, T. Graham Balfour, M.D., F.R.S., Surgeon-General, Honorary Physician to the Queen, late President of the Royal Statistical Society, in the 78th year of his age.

CRESSY.—On Jan. 15th, at Hayesden, Wallington, Surrey, William Everard Cressy, M.R.C.S., L.S.A., aged 76.

ROWAN.—On Jan. 17th, at Ladywell Park, Lewisham, Dr. Andrew Rowan, aged 82.

VIANT.—On Jan. 17th, at Elingfield, Totton, Henry Viant, L.R.C.P., M.R.C.S., L.M., L.S.A., in his 50th year.

WINSTANLEY.—On Jan. 17th, at "The Limes," Ingatestone, Essex, Clement Winstanley, M.R.C.S. & L.S.A., aged 56.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, January 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. M. Gunn: Affections of the Cornea.—London Throat Hospital, Great Portland-st.: 8 P.M., Mr. W. R. H. Stewart: Otorrhœa.
SOCIETY OF ARTS.—8 P.M. Mr. A. J. Hipkins: The Construction and Capabilities of Musical Instruments. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Adjourned Discussion on Dr. William Duncan's and Mr. Alban Doran's papers on "The Operative Treatment of Chronic Disease of the Uterine Appendages."

Tuesday, January 27.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Mental Stupor, Dementia.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
SOCIETY OF ARTS.—8 P.M. Mr. William Simpson: Lithography, a Finished Chapter of Illustrative Art.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. P. H. Pye-Smith: The Therapeutical Value of Venesection, its Indications and its Limits.—Sir G. M. Humphry: On Macrodactyly and some other forms of Congenital Overgrowth, and their Relation to Tumours.

Wednesday, January 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Biss: Asthma and its Results.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. A. Q. Silcock: Glaucoma.
HUNTERIAN SOCIETY.—8 P.M. Clinical evening. Dr. Dundas Grant: Epithelioma of Larynx treated by Thyrotomy, and other cases (by limelight).—Mr. T. Mark Hovell: Multiple Papilloma in Larynx of a Boy aged three years and a half removed by Forceps.—Mr. John Poland: Rheumatoid Arthritis in a Child.
SOCIETY OF ARTS.—8 P.M. Mr. C. Thomas: Illustrated Journalism.

Thursday, January 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. C. Bastian: Some Varieties of Hemiplegia.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Barlow: Morbid Anatomy of Rickets.—London Throat Hospital, Gt. Portland-street: 8 P.M., Mr. Geo. Stoker: Malignant Disease of the Larynx.
ROYAL INSTITUTION.—3 P.M. Mr. Hall Caine: The Little Manx Nation.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Dr. Berry (Edinburgh): (1) An Unusual Result of Cataract Extraction; (2) On the Connexion between Accommodation and Convergence.—Mr. T. Thompson (Cardiff): (1) Miners' Nystagmus amongst the South Wales Colliers; (2) Case of Emphysema of the Conjunctiva.—Mr. Lawford (for Mr. G. D. Johnston of Vancouver): Penetration of Eyelash into Anterior Chamber; removal by operation.—Mr. Hartridge: (1) Case of Chronic Glaucoma, with Hæmorrhage into Cup; (2) Set of Models for Demonstrating Errors of Refraction.

Friday, January 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Biss: The Treatment of Asthma.
ROYAL INSTITUTION.—9 P.M. Sir Edward Fry: British Mosses.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Sir Douglas Galton: Ventilation, Warming, and Lighting.

Saturday, January 31.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Diseases called Acne.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. Mr. W. Martin Conway: Pre-Greek Schools of Art.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, Jan. 22nd, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Jan. 16	30·11	N.E.	32	..	45	33	31	·06	Snowing
,, 17	30·30	N.E.	28	..	40	30	26	..	Cloudy
,, 18	30·43	N.E.	25	..	52	31	23	..	Bright
,, 19	30·31	N.W.	27	..	39	37	24	..	Overcast
,, 20	30·06	S.W.	37	36	56	45	27	..	Overcast
,, 21	29·50	W.	35	34	59	42	34	·18	Bright
,, 22	29·47	W.	36	35	62	44	34	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

KOCH'S TREATMENT OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I see by your report of the recent discussion at the Harveian Society that I am credited with having said that I believed that if Koch's treatment was to be of service (in surgical cases) acute, and not chronic, ones should be selected. I cannot venture to make any such statement. My remarks were to the effect that for certain reasons the definite consequences noticed in comparatively active disease could not be expected in the very chronic cases which were treated by injection at this hospital.

I should not trouble you with this correction but for the widespread interest shown in the subject.—I am, Sirs, yours faithfully,

Hospital for Sick Children, Great Ormond-street, W.C., Jan. 17th, 1891. J. D. MORTIMER.

R. H. F.—1. The report appeared as a separate folio volume, entitled "Supplement in continuation of the Report of the Medical Officer of the Local Government Board for 1887 on Diarrhœa and Diphtheria [C. 5638], 1889" (Eyre and Spottiswoode, East Harding-street, E.C.)—2. The annual reports of the Local Government Board, and also of the Medical Officer of the Board (which are a distinct series), can be obtained of the same publishers. Their prices vary according to their contents.

Mr. W. M. Roocroft.—Application had better be made to the hon. secretary of the Cremation Society of England, Mr. J. C. H. Swinbourne Hanhan, 8, New Cavendish-street, Portland-place, W.

Nemo.—Our correspondent's query is not sufficiently explicit. Moreover, the first two qualifications are diplomas, not degrees.

Dr. John W. Keyworth is thanked.

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"TAXATION AND SANITATION."

To the Editors of THE LANCET.

SIRS,—I have read with much interest the criticism upon my paper, which appeared in an annotation in your issue of Jan. 3rd, under the above heading; but the brevity of the paper prevented my giving a more comprehensive or complete statement of my views. In order to make it clear to your readers, will you allow me to say: 1. I hold it is unnecessary to tax houses or improvements at all if a just tax be levied upon land values arising from the growth of population, and in proportion to the increase in the wealth of the community. 2. That the present system of the taxation of houses is a very great hindrance to the construction of substantial houses, and distinctly conduces to the use of bad materials and of cheap and inefficient sanitary appliances. 3. That one result of the taxation of industry is simply the enrichment of the great landlords, who thus receive as a present the unearned increment of the land which is created by the public. 4. That the neglect to tax land values puts a premium upon withholding land out of use until the enhanced value enables ground landlords to get their price. So much land is kept idle or put to an inferior use that a monopoly value is given to lands which are in the market. 5. If taxation could be transferred from the improvements to land values generally, the result would be to "the man who is the lucky possessor of a freehold and lives upon it" that the taxation being shifted—if the house be of the same value as the land—he would pay the same amount of tax on the land as he now pays upon the improvements, but he would be free to further improve or completely rebuild his house without his assessment being augmented *pari passu*. His taxes would probably be considerably less than at present, because the taxation upon land values generally would bring into the field of taxation a great deal of land either not built upon or held out of use. The present system encourages the landlord to hold valuable land out of use until the growth of population near it enhances its value. It imposes a fine upon the landlord who builds upon or otherwise improves his land by taxing him in proportion to the intelligence and energy he exercises. Such a system, I would urge, is therefore unjust and inexpedient, existing for the benefit of the bad landlord who does nothing and to the detriment of the landlord who is disposed to make improvements in buildings and sanitation.—I am, Sirs, yours truly,

London, Jan. 7th, 1891. S. M. BURROUGHS.

A. E. B.—It is difficult to answer our correspondent's question in general terms, as a large number of gas undertakings are regulated by private Acts of Parliament; but, generally speaking, the statutory penalties for default in respect of the sufficiency or quality of the supply may be enforced either by the local authority or any aggrieved consumer.

Gune.—1. No general rule can be laid down.—2. The decision must rest on the circumstances of each individual case.

F. C. might consult Huth's book on "Marriage of Near Kin," published by Longmans.

LONGEVITY.

To the Editors of THE LANCET.

SIRS,—Seeing in the *Pall Mall Budget* for Oct. 23rd, 1890, an account of a Widow Morfew, who is reported to be the oldest woman in the world, I thought a few particulars about a late patient of mine might interest some of your readers.

Mrs. George Davis died at Gounyan, near Yass, N.S.W., on Aug. 29th, 1889, at the reputed age of 113 years. I knew her personally for six years, and my late partner, Dr. Campbell, for nearly fifty years. She was a native of Dorsetshire, and arrived in this colony in 1803, at the age of twenty-seven. She was married in England, and was a widow when she came out. She married for the second time George Davis, about the year 1809. Her eldest child by him, a daughter, would, if she had lived, have been seventy-nine years old last year, and the second child, the present George Davis, sen., is alive and well, aged seventy-seven years last year. Her son George Davis, her grandson George Davis, and her great grandson George Davis I know personally, all being patients of mine. Her husband died in 1867, aged eighty-nine years, and her son has often assured me that his mother was two years older than his father. She was the first white woman to cross the Gap Ranges, separating Yass from Goulburn, and the first white woman to see and cross the Yass Plains, which she did in 1828. They made their home at Gounyan, ten miles from Yass, where she had constantly resided since. Her son Thomas, now dead, was the first white child born between Goulburn and Port Phillip (now Melbourne). She always enjoyed most excellent health, and up to ten years previously to her death drove into Yass regularly every week to sell dairy and garden produce. A few months before her death I saw her in Yass, she having been driven in to transact business about land, which she was quite capable of doing. Her hearing, sight, and memory were somewhat impaired during the last few years; but she was able to walk about the house and garden up to a fortnight of her death, which was caused by erysipelas and senile decay. That she was considerably over 100 years old there can be no reasonable doubt, as her second child by her second husband was seventy-seven years old at her death. She lived to see her children's children (by her second husband) to the fourth generation, and her descendants, I am told, number over 550. With her, the oldest, was buried a great grandchild, a babe of only a few hours, the youngest of the Davis family. I am, Sirs, yours faithfully,

Yass, N.S.W., Dec. 12th, 1890. P. T. T.

THE MANUFACTURE OF DRUGS FROM CRUDE CHINESE PRODUCTS.

MUCH ingenuity is frequently exercised by practitioners in eastern lands, whose knowledge of botany, chemistry, and of the native language and customs is considerable, in taking as much advantage as possible of drugs which are always obtainable on the shortest notice. An instructive paper has recently appeared in the *China Medical Missionary Journal* by the Rev. A. W. Douthwaite, M.D., on the use of native drugs. Arsenic trioxide may be prepared by subliming the crude mineral (*Sing shih*), and condensing the fumes on the inside of a basin kept cool by means of ice, or a cloth wrung out of cold water. For the manufacture of sublimed sulphur all that is required is an iron pan in which to burn the native sulphur, and a tube to convey the fumes to a large wooden box, on the sides of which the flowery crystals will be deposited. Rectified spirit can be made in a native still from native whisky, with half its weight of freshly burned lime. Chloroform, too, can be thus made: From native sulphate of iron you obtain sulphuric acid by distillation; from this and salt you obtain hydrochloric acid; from this and native oxide of manganese, which is used by painters in drying oils, as with us, you obtain chlorine; from which native lime you obtain chloride of lime, and this distilled with native spirit gives you chloroform. Spanish fly is common in some provinces, and the natives believe that their preparation of it is stronger than ours. A valuable styptic fern was mentioned which is as yet but little known out of China, the Pangar Djambi, or golden lion hair, the soft down on the stalk of which has a remarkable effect in arresting hæmorrhage, a hard coagulum being formed on the surface of the down.

Mr. J. Spring.—Application might be made to Mr. P. D. Coghill, Royal Veterinary College, Camden Town, London, N.W., who will probably be able to supply our correspondent with the loan, at any rate, of any slides he may require.

Dr. S. W. Smith.—Messrs. Kegan Paul, Trench, and Co., Ludgate-hill, London, E.C.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—"Justus" accuses me of "ignoring" unqualified assistants, when what I did was to draw attention to them. I said I had no objection to the employment of unqualified assistants if the patients knew them to be such, and merely drew attention to the fraud that is perpetrated through and by them on a confiding public by their being palmed off as fully qualified. About his friend's pamphlet, which is going "to set at rest the vexed question of the usefulness of unqualified assistants to medical men," I have not heard of anyone denying their usefulness to their employers. I consider them very useful, especially to that unprincipled section which does not hesitate to palm them off as fully qualified; though their usefulness to patients may well be questioned. I am not an assistant, and do not want to be. I only draw attention to the fraud so that it may be remedied for the honour of the profession and the protection of the public. The only time I acted as unqualified assistant was during a vacation. I had not been at my post many hours before my employer represented me as fully qualified, and wished me to do the same; and great was his surprise at my objection to being a party to this gross fraud. He said all the students he had had previously had represented themselves as fully qualified. I resigned, and left the same day. Since then I have found that this fraud is almost the invariable rule. I again repeat, I have no objection to unqualified assistants if they are known to the patients as such. I am, Sirs, yours truly,

Jan. 17th, 1891. X. Y. Z.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me briefly to reply to the letter signed "Justus," which appeared in last week's issue of THE LANCET?

I think that "Justus"—of course, inadvertently—will give rise to an erroneous impression with many who are considering the important subject of the unqualified assistant; for he assumes that they are medical students walking the hospitals. I think I am justified in saying that three-fourths of the men complained of are not students at all, or, if so, are not medical students, but pharmaceutical students, who enter the ranks by taking appointments as dispensers to general practitioners. Even in the case of medical students it cannot be just and right that persons should seek and pay for advice at a legally qualified practitioner's consulting-room, and, without knowing it, receive and pay for the advice of one who is not so qualified. I think it will be long before we hear of a pamphlet from the rector of a parish on "The Usefulness of the Bogus Clergyman as Curate."

I am, Sirs, yours faithfully,

Jan. 19th, 1891. A QUALIFIED ASSISTANT.

B. A. C.—The suggestion is a judicious one, but a vessel should be selected which is especially fitted up and destined for the reception of persons who are subject to the infirmity referred to by our correspondent.

Mr. J. H. Heron.—From what is known of the disease we fear that there may be some slight risk of contagion in the case of tubercular leprosy *with ulceration* under the conditions mentioned.

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A DANGEROUS REMEDY FOR MALTHUSIANS.

AN American physician is reported to have given the following testimony:—"Mrs. —— had been suffering with uterine troubles for ten years. She also had leucorrhœa. One bottle of —— effected a complete cure, also causing conception, and a fine child after twelve years of barrenness."

L.R.C.P.—Our correspondent must exercise his own judgment in the matter. We may say we do not repeat any announcement of the kind in respect of which we receive any complaint.

Scotus.—It seems to us very doubtful whether such an inquiry would be attended by any useful result.

Mr. G. W. B. Stevens.—The scheme was noticed in THE LANCET of Oct. 11th last.

Dr. Daniel White.—Our correspondent probably refers to Professor Seegen.

Mr. G. Hudson.—The lecture was not reported in THE LANCET.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bland Sutton, London; Dr. Willoughby, London; Dr. Stevenson; Dr. Leslie Phillips; Dr. Stewart, Whitby; Dr. Crawford, London; Mr. Lawson Tait, Birmingham; Mr. Hutchinson, London; Mr. Howarth, Bedford; Dr. Stoker, London; Dr. Apostoli, Paris; Messrs. Keith and Co., New York; Dr. Kirk, Partick; Mr. W. A. Lane, London; Mr. Lawrence Hamilton, London; Dr. Stevenson, Carlisle; Messrs. Merryweather and Sons, London; Mr. J. D. Mortimer, London; Messrs. Wood and Co., New York; Messrs. Livingstone, Edinburgh; Messrs. Laughton and Co., London; Mr. Heron, London; Mr. Blackett; Dr. Hingston Fox, London; Mr. T. Cooke, London; Mr. Sleman; Messrs. Horner and Sons, Aldgate; Dr. R. M. Moffat, Jersey; Mr. W. Furner, West Brighton; Mr. Mackeson, London; Mr. Foulerton, Chatham; Mr. Le Feuvre, Jersey; Mr. Warren, Exmouth; Mr. Barlow; Messrs. Black and Co., London; Mr. E. N. Davies, Pontypridd; Mr. Cumming, Great Harwood; Mr. Atkinson, London; Messrs. Pimms; Messrs. Griffin and Co., London; Messrs. Sells, London; Messrs. Richardson and Co., Leicester; Mr. Wright, Thirsk; Messrs. Burgoyne, Burbidges, and Co., London; Mr. Brooks, Hull; Mr. Hall, Woking; Messrs. Austin and Son, Bristol; Messrs. Keith, Edinburgh; Messrs. Cassell and Co., London; Dr. Luff, London; Mr. Pead, Dulwich; Messrs. Bates and Co., London; Mr. Thomlinson, Partick; Mr. F. Davies, North Walsham; Mr. Gravatt, London; Mr. Hall, Surrey; Messrs. Isaacs and Co., London; Mr. Scott, jun., Dundee; Messrs. G. Back and Co., London; M. Huffkine, Paris; Mr. Bradley, Leeds; Mr. Lauphin, Alford; Dr. Ross, Tarriff; Mr. Church, Maidstone; Mr. Soper, Dartmouth; Messrs. Morley, London; Dr. Hehir, Hyderabad; Dr. Knox, Paris; M. Castoldi, Brescia; Professor Rose, London; Mr. A. Neve, Kashmir; Mr. B. Pollard, London; Dr. Blomfield, Exeter; Mr. F. E. Place, Exmouth; Mr. Batten, London; Dr. Money, London; Mr. H. Burton, Marple; Mr. Richardson, Radnorshire; Mr. St. V. Mercier, London; Dr. Sinclair, Manchester; Mr. Mason, Manchester; Mr. A. Hunt, London; Dr. Drage, London; Mr. Adam, Glasgow; Dr. J. W. Carr, London; Mr. Browne, Liverpool; Messrs. Hockin, Wilson, and Co., London; Dr. Younger; Mr. Denman, Beaconsfield; Mr. Wand, Leicester; Secretary, General Infirmary, Macclesfield; A Qualified Assistant; Scotus; M.D.; P. T. T.; R. H. F.; Secretary, Blackburn Infirmary; Lorna, London; Revd., Ipswich; Maltine Manufacturing Co., London; R. S., Lewisham; Devon, London; Eagle Range and Foundry Co., London; Dowker, London; The Clerk, Winchcombe Union; T. D., London; Alienist, London; Alpha, Manchester; Lady Superintendent, Forest-hill; Chichester Infirmary; Medical Officer of Health; Alpha, Chesterfield; L.R.C.P.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Bastian, London; Mr. Smith, Bradford; Dr. Bronner, Bradford; Messrs. Ellis and Co., Staffs; Messrs. Rimmington, Bradford; Messrs. Richardson and Co., Liverpool; Dr. Arnison, Newcastle-on-Tyne; Messrs. Brown and Son, Douglas; Mr. Naylor, Hickley; Messrs. Vanderpump and Son, London; Dr. White, Sheffield; Messrs. Oppenheimer Bros. and Co., London; Dr. Ritchie, Otley; Mr. Tully, Hastings; Messrs. Taplin and Tanner, Winchester; Mr. Edgeworth, Bristol; Messrs. Curtis and Co., London; Mr. Burke, Wolverhampton; Mr. Hyatt, Shepton Mallet; Dr. Deane, Ellesmere; Miss Wendon, Essex; Messrs. Blondeau et Cie., London; Mr. Detmould, Bournemouth; Mr. Cuthbert, West Bromwich; Mr. Tyte, Minchinhampton; Dr. Philip, Newcastle-on-Tyne; Mr. Jones, Eckington; Mr. Lewis, Birmingham; Mrs. Davies, Liverpool; Mrs. Gregory, Swindon; Mr. Elliott, Devon; Mr. Oliver, Doncaster; Mr. Mouth, Somersetshire; Dr. Gunther, Massachusetts, U.S.A.; Mr. Simpson, Norwich; Mr. Wright, Lambeth; Mr. Scott, Felling-on-Tyne; Mr. McKeay, Eastbourne; Mr. O'Meara, Loughborough; Mr. Dyer, Ilfracombe; Mr. Rowlands, Towyn; Mr. Jennings, Manchester; Mr. Croydon, Ingatestone; Mr. Fletcher; Mr. Johnson, Forest-hill; Mr. Barclay, Glasgow; Mr. Shimeld, Ilford; Mr. Isaac, Wokingham; Mr. Bannatyne, Greenock; Mr. Williams, Machynlleth; Mr. Cross, Sheffield; Mr. Macgregor, Glasgow; Mr. Lockwood, Allerton; Mr. Sullivan, Tralee; Mr. Rutherford, Redcar; Dr. Hinde, Banbury; Mr. Williams, Bristol; Dr. Tizard, Weymouth; Mr. Roe, Somerset; Mr. Williams, Birkenhead; Mr. Boulter; Miss Shrubsall, Laughton; Mr. Heywood, Manchester; Mr. J. W. Adam; Dr. Owen, Gloucestershire; Mr. Macaulay, Leicester; X. Y., London; R. G. B., London; Sultan, Hampstead; D. G; Secretary, Clinical Hospital for Women, Manchester; Medicus, Strand; Trebor, London; Rotherham Hospital; Z., London; Medicus, Cheltenham; Secretary, Norfolk and Norwich Infirmary; Loxton, Bristol; X. Y. Z., London; Worcester General Infirmary; X. Y., Leeds; E., Kilburn; Secretary, Warneford Asylum, Oxford; B. A., Staffs; J., Barnsley; Liverpool Convalescent Institution; M., Accrington; H. S. C., London; Branch; Royal Isle of Wight Infirmary, Ryde; Assistant, London; T. S., London; Box 14, Uttoxeter; Student, London; Practitioner, London; Physician, London; Tarsus, London; Delta, London; H. W., London; Fides, London; M. E. M., London; Fibula, London; Thorax, London; M., London; Cromwell House, Yorkshire; Alpha, Kidderminster; B. B., London; Devon, London; Dr. O., Manchester; Single, London; J., London; Durham, Newcastle; Sigma, Broewood; Imperial Dairy Co., Old Kent-road; Alpha, Manchester; A. F. C., Seaforth; Nurse Farrington, Drogheda; Viola, London; Beta, London; M.D., Swansea; T. D., London; Matron, Ventnor; A. B., London; A. B., Deptford; A. B. C., London; F. C., London; C. M., London.

NEWSPAPERS.—*Evening Telegraph (Dublin), Rangoon Times, Norfolk Daily Standard, Eastern Morning News, Newcastle Daily Chronicle, Glasgow Herald, Scottish Leader, Windsor and Eton Express, Reading Mercury, City Press, Weekly Free Press, Mining Journal, Hertfordshire Mercury, Scotsman, Liverpool Daily Post, Leeds Mercury, Law Journal, Kilkenny Journal, Windsor and Eton Gazette, West Middlesex Standard, Bristol Mercury, Spectator, Architect, Guy's Hospital Gazette, Surrey Advertiser, Daily News, Saturday Review, Pharmaceutical Journal, Dorset County Chronicle, Derby Mercury, Bilston Weekly Herald, Birmingham Daily Post, Madras Times, Boston Independent, Corriere d'Italia, Haddingtonshire Advertiser, Loughborough Herald, Blackpool Times, Hawick Advertiser, Leek Post, Bedworth Guardian, Rugby Advertiser, Braintree Advertiser, Wiadomosci Farmaceutycznych, Work, The Therapist, &c.*, have been received.

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London Post-graduate Course:

ON THE

NATURE OF LUPUS,

WITH ESPECIAL REFERENCE TO ITS RELATION TO TUBERCULOSIS.

Delivered at the Examination Hall, Jan. 27th,

By JONATHAN HUTCHINSON, F.R.S., LL.D.

LECTURE III.

GENTLEMEN,—I have yet several other forms of lupus to mention to you if time permitted. I should like to have shown that in some cases its processes very closely resemble those of an eczema, and that in others the follicles of the larger hairs may be attacked by preference, and that a sort of lupus-sycosis is the product. We might also have brought under consideration the curious and very interesting malady which Hebra has named "rhino-scleroma," in which the nostrils and upper lip become involved in a lumpy, thick, indolent growth, which is certainly infective, almost as certainly inflammatory in its beginning, and very prone to return after operations. This disease is not absolutely restricted to the parts from which it takes its name. Although very different in many features from other forms of lupus, I could, I think, have easily proved to your satisfaction that in its main features it comes much closer to lupus than to any other malady, and that it has good claims to be one of the family. My motive in bringing before you the different forms of disease which were the subject of our last lecture has been double. First, I have thought that these various types of morbid action, although most of them very rare in practice, are yet of sufficient interest to claim our careful recognition and study. Next, and for the present occasion chiefly, I have wished to convince you of the statement, with which I set out, that it is quite impossible to restrict the term "lupus" to any one form. We can no longer say with any regard to pathological accuracy that the disease which eats away the tip of the nose and the alæ nasi, and is attended by the brownish-yellow apple-jelly deposit, is "lupus," and that the others have nothing to do with it. We can no longer speak of a "true lupus" and place the other maladies apart as if they bore resemblance only, and had no real relationship. No, the relationship is real, and its bond consists in this, that all these various maladies depend upon inherited tissue-vice. That inheritance renders its possessors liable to chronic inflammations, which assume specialised peculiarities in each in connexion with the inheritance of other tendencies, and modifiable also by the part of the body on which they are first displayed. In some connexion, as yet very ill understood, it would appear that these inflammations are peculiarly apt to be attended by the development of the tubercle bacillus. Our knowledge does not permit of our being in any way definite as to what the relationship of the two really is. We must wait for further facts. I am bound, however, to repeat what I have already said, that, looking at the facts as we have them from a clinical point of view, they do not seem to favour the belief that infection with the tubercle bacillus is the sole and efficient cause of the disease which we call "lupus."

The possession by inheritance of peculiarities as regards cell nutrition, and proclivity to its disturbance, seems to me at the basis of all maladies which assume the lupus type. It is also, doubtless, of many others. In lupus that which is inherited seems to be a susceptibility to external influences, above all to that of cold, but sometimes to that of heat also. This appears to me to be the key to a real knowledge of the nature of the disease. I have suggested over and over again that lupus erythematosus is after all only a modified form of chilblain. Amongst the modifications which it has received there is one which I admit to be all important. It is this that the products of the inflammatory action, or perhaps it would be safer to say its attendants, become capable of spreading the disease by contagion. Chilblain inflammation is but little if at all capable of infecting the adjacent tissue; but it has become so when it assumes the name of lupus erythematosus. This is its chief peculiarity. Since I had the pleasure of addressing you last week a case has come under my notice which so emphatically illustrates these views that you will almost suspect that I have invented it. I show you the drawings from the case of a lady residing in Essex, a little past the middle period of life. You will see that her hands are covered with patches of dusky erythema which affect the palmar surfaces more than the dorsal ones. Her fingers are swollen, and their tips peeling and excoriated. The nails are thin, softened, and flattened out by the swelling of the fingers. Her hands are disabled, and she cannot dress herself without the assistance of her maid. We turn to her face, and on the nose and cheeks we find the characteristic bat's wing patches of lupus erythematosus, and a similar condition involves both her ears. Her affection began in the beginning of the present winter, which, as you know, has been exceptionally cold. In reference to the possible influence of season, however, it must be remarked that the patient has been living in warm rooms and surrounded by every comfort. Shall we call the disease lupus erythematosus or acute erythematous chilblains? In one sense it matters but little what we call it; for in the beginning I hold that they are the same thing. As regards prognosis, however, very much depends upon the name. If it be chilblains only, it will probably pass wholly away when the warm weather comes. If it be lupus, it will be relieved by warmth, but not cured. It will demonstrate infective qualities, other patches will occur on adjacent parts, and it may probably prove incurable. I have myself no doubt whatever that the disease has to some extent passed into the lupus condition, and that the prognosis just suggested will be the one realised. At the same time, I have no doubt that the red patches which you see on the hands are to all intents and purposes acute chilblains, and that they will pass away when the warm weather comes. In saying this I am not speaking at haphazard. A lady whom I have been attending for the last three years for patches of lupus erythematosus on her nose, cheeks, and chest had her disease begin during cold weather by an attack of inflammation of the hands, attended by cracking and excoriation of their tips. Very soon after this a patch formed on her nose, and although her hands have long since got well and continued so, the disease in most typical conditions still continues on her face. This will be a suitable place for me to tell you that both these ladies had enjoyed very fair health through life up to the date of the attacks which I have described. Both of them had suffered from chilblains in childhood, but in neither had the proclivity been severe, nor had it persisted in adult age. In both of them, as I hold is usual in lupus erythematosus, there was an overwhelming family tendency to tuberculosis. Miss G——, the first patient, had lost a brother and a sister from phthisis, and, to use her own expression, "all her father's family excepting himself had died of it." She herself, on account of chest delicacy, had been obliged to take cod-liver oil for six months. In Mrs. K——'s case (the second one) the facts were almost equally strong, and she herself, although a lady of great energy, was fragile and delicate. You will ask, on the hypothesis that lupus erythematosus is not a bacillary disease, and on the more than hypothesis that chilblains have nothing to do with bacilli, what is the bond of connexion between tuberculosis, lupus erythematosus, and chilblains? I must reply with what is only a conjecture. The lupus and the chilblains are directly and essentially connected as depending on the same kind of cell organisation and vascular endowment. They are influenced by the same kinds of disturbance of vascular equilibrium—such, for instance, as sex, inherited delicacy, &c., which are at the basis of Raynaud's symptoms. Their connexion with tuberculosis is probably indirect and non-essential. They imply and reveal a state of constitution in which the bacillus, once implanted, will easily flourish. The discoveries of the future may perchance demonstrate a closer connexion than this, but for the present this is all that we can say.

Amongst the best established and yet the most remarkable of the laws regulating the transmission of tendency to disease are those which produce what are called "family diseases." By this term, in the special and conventional sense, it is not meant that there is tendency to the recurrence of the same malady in successive generations, but that in one and the same family of children several examples of the same malady are produced.

Family diseases, using the term in this sense, are all more or less peculiar; although they approach and resemble, they are never exactly the same as those which are transmitted

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from generation to generation. Ichthyosis is one of the best examples of what is meant; but deaf-mutism, colour-blindness, retinitis pigmentosa, and a host of other maladies, also afford examples of it. Family diseases are by no means always congenital; indeed, as a rule, they are not so, but wait until the patient has attained a certain age, and until the tissues have been subjected, so to speak, to a certain amount of trial in the highway of life, before they are developed. Then it is found that they will not bear ordinary exposure. The skin becomes dry and harsh in the case of ichthyosis, or the retina speckled with pigment in the case of that of retinitis pigmentosa. Although, as just said, these family maladies are never the exact reproduction of any other recognised disease, yet they have, I think, invariably their prototypes, which they resemble, and which probably stand to them in some mode of parental relationship. We must suppose for their explanation that in the father and mother of children so affected certain peculiar inheritances meet and become welded together in their offspring. Amongst the minor forms of disease which come under this law of family production I believe that we must count some cases of exaggerated tendency to freckles and of some others to chilblains. Probably there is a family form representative of nearly all the types of intrinsic disturbance of health. I exclude by the word intrinsic all maladies caused by accidents or due to contagion. Now it happens that there is a family disease of which the following are the main features:—The children, several in the family, and always all of them apparently healthy at the time of birth, become in early childhood liable to the production, on a most extraordinary scale, of freckles. At first the disease is thought to be only freckles, and in many cases it stops there; but in some others the freckles inflame and become vascular, and ulcerations occur, and when they heal little vascular tufts—stigmata—remain. The face is always the part most severely affected, and exposure to either sun or cold are the influences which exaggerate the disease. The tip and alæ nasæ are often attacked, and then sometimes to a considerable extent destroyed. In later stages bossy masses of granulation tissue may form on the ulcerated surfaces, and later still, in exceptional instances, the ulcers may assume the condition of epithelial carcinoma. Some of the milder cases of this malady recover, and many probably survive without actually recovering; in not a few, however, it ends fatally in an early period of adult life. It fell to my lot, through the kindness of Mr. Balmanno Squire, to have the opportunity of examining two children who were the subjects of this malady, and who were the first in whom it had been observed in Britain. I cannot tell you the interest which they excited in me. "Here," I exclaimed, "we have the family form of lupus." It was a disease certainly not common lupus, but partaking of all its characters, affecting the same parts, evoked by the same class of causes, and tending to the same results. Subsequently, when I became acquainted with cases which were attended by pigmentation only, I was inclined to modify the expression, and to say that it was a family form of freckles. But, later still, reviewing the facts which have since been so ably collected by numerous observers, I am inclined to go back to my original position, and to hold that Kaposi's disease is really and essentially a family form of lupus. You will see that it unites in itself lupus vulgaris and lupus erythematosus—being symmetrical, but at the same time showing a tendency to destroy by ulceration. Its relationship to freckles is, of course, undoubted, and I put it aside, not as in any degree ignoring it, but simply because the relationship to lupus is much more important. Probably after all the tendency to freckles, when extreme, reveals an irritability of cell structures of the same kind as that which lupus discloses. I need scarcely remind you, for it has been often remarked, that strumous children are very liable to freckle.

The argument which I adduce from this demonstration of a family form of lupus is that the latter cannot be a disease due to the accidental implantation of a parasite. If it were so it could not have a family form. As to what the value of the argument may be, and as to the cogency of the facts on which I have built it, I leave them for your consideration. I have, however, much interest in showing you, especially as I omitted them in their proper place, a series of drawings illustrating cancer as it occurs in the ulcerations of lupus. Some of them are taken from a report by Dr. Bayha of Tubingen. By their side I show a beautiful drawing lent me by Dr. Radcliffe Crocker, showing a fungating mass in Kaposi's disease. I think you will find their comparison instructive.

It remains to say a few words in defence of the attempt to constitute a family of lupus diseases, instead of allowing one single member of it to arrogate that name and leaving a whole series of cognate affections to receive each for itself a distinctive designation. It is quite possible that I have not succeeded in convincing you, or at any rate all of you, that the maladies of which descriptions have been given are really all of them in their essential nature lupus. I may, however, claim to have brought before you clinical evidence that these several maladies do exist. Even of the very rarest I have been able to produce more than one case (with the exception, perhaps, of Dr. Morrow's), and thus to prove that the malady in question keeps close to its type. Whilst this keeping close to type is true of a certain number of cases in each group, I think I may also claim to have proved by demonstration that there are ill-marked or mixed examples of every one of these type-forms which constitute connecting links between them. If now we refuse to recognise a lupus family, if we continue to insist that there is a "true lupus," that lupus erythematosus is distinct from lupus vulgaris, and that the other diseases which I have claimed as belonging to the same family are yet further apart from it, what is our position? It seems to me to be this: that we shall have to continue to use a number of separate names, and to invent many new ones, burdening the memory of the observer in each instance with detailed descriptions, and at the same time not throwing the least light by nomenclature on the real nature of the things described. We shall be involved in what is surely an *a priori* improbability—the suggestion that there are a large number of separate maladies resembling each other in some of their features, but in reality wholly different, having neither known parentage nor relationship, and being in many instances *sui generis*. Such would certainly be the position, if we refuse to accept a lupus family, of the maladies known as rhino-scleroma, lymphangeioma pigmentosum, Kaposi's disease (or xeroderma pigmentosum), tuberculosis papulomatosa cutis, and a number of others. If we accept, on the other hand, the word lupus as the family name for them all, coupling with it in each instance some distinctive epithet, this laboriously contrived confusion is avoided. The diseases in question, as I have already, and, I fear, at too great a length, endeavoured to prove, have all of them these features in common. They attack chiefly those parts of the surface of the body which are exposed to the influence of cold and irritants, and they occur by preference to those who are by inheritance or acquisition of somewhat feeble organisation, and who are proved to be in greater or less degree liable to the attacks of the tubercle bacillus. Every one of the diseases named is developed most commonly in the period of adolescence. They are all infective in their local qualities, and continue to spread slowly for an indefinite number of years; and it is possible in every one of them that after prolonged duration as a non-malignant chronic inflammation a tendency to cancer may be shown. Every one of them disorganises the tissues which have been affected by it, and leaves behind it a scar. Concerning almost all of them, we freely admit that syphilis may produce very close simulations, and, at the same time, we utterly deny that their type-forms have any connexion, remote or otherwise, with such taint. Finally, and most importantly, it is true that if the word lupus were used in the sense for which I have pleaded, it would in every case to which it is applied afford a clue to a correct treatment. With the exception only of the most erythematous forms of erythematous lupus, destruction by local measures of the infective material is required in every case, and, without any exceptions at all, attention to the general health by the use of a liberally tonic regimen is requisite, together with the protection of the parts from all external irritation, and more especially from cold. As regards prognosis, it is, speaking in general terms, the same in all. Very few cases will be really cured, and in almost all instances, even under the most careful and persevering treatment, an inveterate tendency to relapse, or to a reproduction of the malady, will be witnessed.

I might add that all diseases of the lupus family are liable when inflamed to have the inflammation assume the characters of erysipelas. This is a point which many observers have noted; and, further, it has been generally agreed that after attacks of erysipelas the lupus is usually in a much improved condition. This was an article of creed which the late Mr. Startin was very fond of expressing, and excepting

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in erythematosus (in which such attacks may prove fatal), I have always been accustomed to hail erysipelas in lupus as a direct gain to the patient. We must, I think, keep this fact in mind when we examine the results of Koch's treatment.

Before proceeding to endeavour to estimate the different measures of success attending the different plans of treatment for lupus, it may be well to say a few words as to the grounds upon which such plans have been based, and to what may be reasonably expected of them. My argument has been that lupus processes of inflammation originate in persons who are locally or constitutionally of feeble cell nutrition and prone to vascular disturbance. That a parasitic bacillus attends many of them is to be freely admitted; that its implantation constitutes the initial stage of lupus may be strongly doubted. The influence of enfeeblement of the general health, of exposure to weather and to cold as causes of the aggravation of lupus must be admitted by all without a moment's hesitation. It is an old observation that those who live in country districts and are exposed to weather suffer more from lupus than those who dwell in towns. It is also a matter of quite general knowledge that most forms of lupus become worse in winter. Applying these facts to the development of principles of treatment, we should expect that much might be done by attending to the general health of the patient, and by protecting him from the influence of cold. Such is, I may say, undoubtedly the fact. Whatever increases the general tone does tend to restrict the lupus process and to favour the healing of its ulcers. If the patient can be allowed to remain in warm rooms during the winter, or still better, if by changes of climate he may be enabled to enjoy summer weather all the year round, the chances of recovery from lupus will be very much increased. As regards lupus vulgaris I cannot think that it is reasonable to expect a cure, unless advantages of this kind can be obtained. If the patient is still to be exposed to a defective dietary and a hard life, if the vigour of his nutrition is to diminish rather than increase, there will then be no chance of his recovery from his lupus. The causes which set it agoing still remain in action, and they, in conjunction with his constitutional tendency, would begin the disease anew, even if by successful surgery it had been completely cured. As well hope to prevent the recurrence of chilblains in cold weather as that of lupus in a patient who has once suffered from it, and in whom no changes can be made in the conditions of life. In reference to these assertions I might ask attention to the results of treatment of lupus in two special classes of cases in which I think nothing even approaching a cure is ever obtained. I allude to those first, a large class, in whom lupus begins in young persons who are obviously of very feeble health; and secondly to those, a small class, in whom it begins in the aged. Senile scrofula in all its forms is less amenable to treatment than that of young persons, for it occurs at a time when the powers of life are on the wane, and when it is impossible to do anything definite in the way of their reinvigoration. On the other hand, the cases of lupus in which we do obtain cures, or in which we approach them, are those in which the disease begins in young persons or in early adult life, and is not associated with any conspicuous enfeeblement of health or of circulation. In these cases the advance of years is, if accompanied with suitable local and constitutional treatment, in our favour. The patient gets to eat and to drink more, and as the period of growth ceases the constitution often settles down into a state of more assured vigour. To use a popular phrase, "he grows out of his delicacy."

In what has just been said I have been speaking solely of the constitutional element in lupus; but we must not forget for a moment that there is another, and even more important one—I refer of course to its locally infective tendencies. In a few cases constitutional treatment, or the improvement in health stamina which comes with advancing years, is sufficient to put an end completely to the lupus process. Examples of perfectly healthy scars without the least fragment of lupus tissue remaining, and without any tendency whatever to relapse in winter, may not infrequently be seen under these circumstances. Very often they are in patients who have suffered from the disease on several parts at once, and in whom some patches have undergone cure, whilst others have persisted. Although not very common, they are abundantly sufficient to prove the point that the lupus process may, in exceptional instances, come spontaneously to an end. In the majority of cases, however, it may be freely granted that whatever be done for the benefit of the general health it does not cure the lupus patch. The latter continues in virtue of its own infective elements to spread at its edge and to produce fresh satellites. It is here that surgery comes to our aid. By treating the lupus nodules exactly as we should those of cancer or any other material known to be infective, we can do very much towards effecting a cure. Undoubtedly the surgeon takes the most conspicuous if not really the principal share in the cure of lupus. If I speak a little doubtfully on this point, and if I seem to rate measures of constitutional treatment more highly in comparison with local ones than I have done in some of my former writings on lupus, it is because I have become more and more convinced that it is absurd to expect a permanent cure of a disease by measures which do not include the removal of its original causes. The results of surgical treatment, however careful and persevering, are, I fear, on the whole, strongly confirmatory of this impression, for however excellent may be the cure at first obtained, the disease almost invariably relapses on fresh exposure to cold.

I will now pass to consider the details of the local measures which have been chiefly employed. We will, if you please, consider that enough has been said as to the paramount importance of protection from cold and attention to the general health. The different measures of local treatment have all had a common object—that, namely, of getting rid of the infective material. When I was a student at the York Hospital I was taught to use for this purpose a chloride of zinc paste, sparingly and thinly applied, and I have never since seen better results from any treatment than, as far as my memory serves me, we occasionally obtained from this. Its use, however, is inconvenient on some of the parts which lupus most commonly attacks—the nose, for instance. When I came to London and worked as assistant to the late Mr. Startin at the Blackfriars Hospital, we treated all our lupus patients by repeated applications of the acid nitrate of mercury and an arsenical paste. If the surface were not broken, the acid nitrate was applied; but if there was an ulcer, then it was our practice to fill it with the paste. These applications were made over and over again. Our cases were very numerous and attended frequently, and half my occupation many an afternoon consisted in making these applications. The patients always took tonics and cod-liver oil, and often, for many years together, minute doses of mercury. The results were on the whole very satisfactory, but the treatment was tedious and the periods of attendance very long. When some years later the patients at this hospital passed under my own care, and I had also at the Metropolitan Free and at the London Hospital many other cases, I tried to expedite the cure by the use of the actual cautery instead of the acid nitrate. I had cautery irons of various sizes made, and we used them, under an anæsthetic, very freely. This was long before the introduction of M. Paquelin's ingenious little instrument, and at that time we used to heat our irons in the fire. At the time I thought this method, as regards expedition, a great improvement, and wrote strongly in its favour. I recollect that my friend Dr. McCall Anderson of Glasgow also took it up, giving figures of my cautery irons. Somewhat later Mr. John Gay made the radical proposal that lupus nodules should be cut out with the knife, and treated exactly as we would those of cancer, but unfortunately the inapplicability of this excepting to a small number of cases was only too obvious. You could not cut away the greater part of a man's nose or cheeks. Later still came the introduction of the process of erasion by means of Volckmann's scoops. This attained a very wide popularity, and it is indeed a very efficient method. The general verdict would, I think, appear to be in its favour over all other methods of local destruction. For myself, I may admit that I doubt if it possesses any advantages over the use of the actual cautery or the acid nitrate of mercury. I was accustomed some years ago to use it frequently, but I find myself now falling back more and more on the older methods. Instead of the arsenical paste which Mr. Startin employed so much (Dupuytren's paste), I now use the liquor arsenicalis. The latter may be painted on with a camel-hair pencil, and if the surface be not too large the patient may be trusted to do it himself. It does not perhaps matter so much which of the several methods of getting rid of the lupus tissue we adopt, provided we do it very freely, and repeat it as often as is necessary. I have a decided impres-

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sion, however, that the sores left after the acid nitrate or the actual cautery heal better than after the scoop. In many instances undiluted carbolic acid, freely and repeatedly applied, is very efficient, and it has the great advantage that, if the patient be intelligent, he may be trusted to make the applications. I am quite aware that in this sketch I have not enumerated by any means all the methods which are employed in the local treatment of lupus. There are many others, but I think that for the most part they are of the same class. I must not, however, omit to mention that Dr. Unna of Hamburg some years ago introduced a method by the application of plasters containing salicylic acid, which for a time obtained great favour with some well qualified to judge. I cannot speak from much personal experience regarding them, but have formed the impression that they are not less troublesome nor more efficient than some of the other methods. In this connexion it may be well to state that whatever in the nature of a plaster or other application protects a lupus patch from the influence of air and keeps it warm invariably does good. This is of especial importance in reference to lupus necrogenicus and to all lupoid affections of the extremities.

As regards the prognosis of lupus, it is at once to be candidly admitted that examples of complete and permanent cure are rare. At the same time it is to be asserted that under favourable conditions and perseverence on the part of both patient and surgeon, great improvement may be obtained, the disease kept in abeyance, and a condition secured which nearly approaches a cure. In cold weather, however, and if through any influence the state of the health is lowered, relapses are almost certain to occur in almost all cases. I have recently had under observation a lady who when young was quite cured of lupus under the old methods by the late Dr. Anthony Todd Thompson. She enjoyed thirty years of immunity, and has only now relapsed when her tissues and her circulation have become enfeebled by age.

We must now engage in the most interesting question of all in reference to the treatment of lupus—that is, the effect upon it of the injections of Koch's fluid. As all are aware, it is now about three months since this remarkable fluid—a glycerine solution of substances resulting from the pure cultivation of the tubercle bacillus—was placed in the hands of the profession. It was reputed to have the power when used by means of hypodermic injection in most minute quantities of causing the cell structures adjacent to bacillary deposits to inflame. Very soon after its introduction it was announced that the most remarkable demonstrations of its effects were to be obtained in cases of lupus vulgaris. In these it caused the patches to inflame, and certain small fragments to undergo necrosis, and after this a process of healing set in which left the patient, if not absolutely cured, at any rate in a greatly improved condition. During the last three months trials of this remedy have been very extensively made, and I now purpose to attempt some sort of brief *résumé* of their results. I know that it will be said that it is too early to arrive at any conclusions, and, in a certain sense, this must be admitted. Very definite results have, however, on some important points been obtained, and it is highly desirable that, for the guidance of future investigators, these should be stated. My own personal experience—that is, as regards patients under my own care—has been very small, but through the kindness of many friends I have had opportunities of collecting facts over a tolerably wide field. In endeavouring to report upon them it may, I think, be stated in the first place that the original statement that the injection of Koch's fluid does cause lupus patches to inflame has been well borne out, but not without some striking exceptions. In a case under my own care, the portraits of which I have shown you, and concerning which the diagnosis of lupus vulgaris cannot come into any question, no effect whatever was produced on the patches, although the patient's temperature rose on every occasion after nine or ten successive injections. In this case Dr. Heron made the injections and examined the patient at all stages with the utmost care. I avail myself of his skill as a diagnostician in reference to diseases of the lungs to assure you that the patient had no indications of pulmonary tuberculosis which would explain the recurrence of febrile reaction. After about a month's treatment, the injections having ceased to produce fever, we laid them aside, and the patient is now exactly as he was before they were begun. I have received information concerning more than one case in which somewhat similar results were observed. In one, about which Dr. Abraham is my informant, neither febrile reaction nor local reaction resulted, although the patient displayed nodules of the apple-jelly deposit of lupus in considerable abundance. Without an exception all my friends report that in the cases in which the lupus patch has been made to inflame the results, as regards its subsequent improvement, have been very definitely good. Large areas, which had been previously swollen and covered with scab and crust, have been made to heal, and the resulting scar has been flat and sound. No one, however, ventures to report an instance of complete cure. Of the cases which have been shown to me as the most satisfactory, I am bound to say that in every one there has been evidence at some part of the edge of the remains of lupus tissue, ready, I do not doubt, to start into fresh growth on the slightest provocation. In reference to this point I have to make a most important assertion, and that is, that the treatment does not always influence the essential element of lupus. The brown apple-jelly-like deposit which is universally acknowledged as the most characteristic of the lupus conditions sometimes remains untouched. This assertion is illustrated by a case which Dr. Heron was kind enough to show me, and in which he had practised injections some ten or twelve times. In this instance the inflammatory swelling of the parts affected had been quite got rid of and the patient considered herself very much benefited. Nodules of lupus were, however, scattered about her cheeks in a conspicuous manner, and had she come under my care without my knowing anything of the previous treatment I should certainly have regarded her as an ordinary case of lupus, still standing in need of efficient treatment by either the cautery or spoon. In the case which Dr. Gayton was kind enough to send us last week—and which had been under Mr. Watson Cheyne's treatment in King's College Hospital, and had received great benefit—you had equal opportunities with myself of judging whether it could be called a cure. The lupus edge was still there. As substantiating my statement that the treatment does not always destroy the most characteristic part of the lupus formation, I might quote from a letter from Mr. Waren Tay, of the London Hospital, who, speaking of a case in which great benefit has been obtained, remarks "that there still remain nodules which I should much like to attack with the scoop." The cases which appear to derive the greatest benefit are those in which there is most of inflammatory swelling, and in which the more specialised elements of the lupus process are least abundant. You will see the bearing of this statement. Should it be supported by future facts we shall be obliged to suspect that the remedy is, after all, one for certain conditions of the inflammatory process, and not for tuberculosis. Even in this position, however, it is possible that it may still prove of great help to us in the treatment of certain forms of lupus. I am not aware that it has yet been tried in any of the cases of what has been described as perfectly quiet lupus—such, for instance, as those of which I showed two portraits illustrating single patch lupus occurring on the cheeks of healthy persons, characterised by a thick growth of apple-jelly, and by the entire absence of any surrounding inflammation. These cases would be very suitable ones in which to test the power of the fluid in attacking the lupus growth itself; and from what I have seen thus far I quite expect that they would escape its influence. In the more rare forms of lupus the remedy has not yet been tried. On lupus erythematosus, however, a good many experiments have been made. It was foretold by those who believe that what they call "true" lupus is bacillary, and that lupus erythematosus is not so, that the fluid would have no effect on the latter; and, in the main, this prognostication has been fulfilled. In a very marked case under my own care, and in which Dr. Heron was kind enough to carry out the treatment, the patient had good febrile reactions after repeated injections, but without any inflammation of her lupus patches. This remarkable result was perhaps explained by the supposition that the lady had tuberculosis of the lungs as well. She was, as is usual in lupus erythematosus, of a phthisical family, and she had herself been treated for suspicious symptoms. In her case, a week after we had abandoned the injections in the belief that they were doing no good, the erythematous patches on her face suddenly disappeared almost wholly. A number of discs on the upper part of her chest, however, some of which were so thick and definite that some observers were inclined to regard them as lupus vulgaris, remained wholly untouched. She had had nine or ten injections, and latterly in full doses. I have

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seen this patient to-day, and her face patches are already returning to their first condition.

Apart from the question of its direct influence on the lupus itself, some collateral observations of much interest have been made as to the possible results from Koch's fluid. I am told that it has repeatedly caused general erythematous eruptions on the skin, and, in some, nodular effusions into the cellular tissue. In one case the inflammation of the lupus (on the face) passed into unquestionable erysipelas of a rather severe type, and the patient was for some time in danger. In two cases, at least, during the febrile reaction old chilblains became again inflamed.

If we are obliged to report that nothing that can be called a cure of lupus has yet been obtained in London practice, it may seem unnecessary to ask whether cures are lasting. On this point, too, however, I am sorry to say that some evidence is already forthcoming. I fear it is the fact that relapses occur very quickly. The patient who was taken to Berlin by Mr. Malcolm Morris and Dr. Pringle, and was for a time supposed to be almost cured, is now, I am assured by both the gentlemen concerned, in a condition almost as bad as before the treatment.

If, on the whole, we are obliged to return a qualified verdict as regards this method of treatment in London, it by no means follows that it may not in the future be put to some use. On the contrary, it has in many cases done very great good, and no one can doubt that the fluid possesses very remarkable powers. It may be that in the future we shall learn to combine the older methods of destruction of the lupus deposit by means of cautery or caustic, with suppression of the attendant inflammation by injections. What I have seen would certainly lead to the belief that some patients are by the injections brought into a condition much more favourable for surgical treatment than they were before. The ill effects of the treatment on the general health, although obvious and considerable for a time, seem to pass away. No one has reported to me any instance of permanent damage. I may confess that nothing which I have seen leads me to be hopeful that very prolonged periods of treatment will avail more than short ones. If febrile reaction has ceased to occur, I do not think that there is any further hope that the lupus nodules will be attacked. On this point, however, as well as on many others, we need further experience. Amongst those to whom I have been most indebted for the facts upon which the preceding statements are based are Dr. Heron, Mr. Watson Cheyne, Mr. Waren Tay, Dr. Gayton, Dr. Radcliffe Crocker, Dr. Pringle, Mr. Malcolm Morris, Dr. Colcott Fox, Dr. Abraham, and Mr. James Startin. To these gentlemen you and I are alike indebted for the opportunities they have afforded us for seeing their cases this afternoon. For myself I cannot sufficiently express my sense of the compliment they have paid me in placing their facts at my disposal and giving me leave to make my own criticisms. I hope that I have not been premature in expressing the opinions which I have done. If I have spoken with less enthusiasm of the results of Koch's treatment of lupus than it really deserves, I can only say that it will give me great pleasure in the future to change my opinions. By the kind permission of the two Colleges we shall meet in this well-lighted and beautiful theatre every Tuesday afternoon for the next five weeks. On any of these lecture days cases illustrating Koch's treatment of lupus will be welcome by whomsoever they may be sent, and those will be most welcome, which come nearest to demonstrating completeness of cure. It is only by combined effort and by the public examination of the facts that satisfactory conclusions can be reached. Although, as you know, these lectures are not in any way under the sanction of the Colleges, nor does their committee of management incur any responsibility in connexion with them, yet I feel sure that this use of the theatre which they so liberally allow us to occupy is in entire consonance with its original destination. We are doing our best to elucidate one of the most important pathological questions of the day.

WEST CORNWALL INFIRMARY.—Mr. T. Bedford Bolitho, M.P., has forwarded to the West Cornwall Infirmary a scheme for a convalescent home in memory of his late father, Mr. Edward Bolitho. He proposes a first endowment of £10,000 for eight beds, and more money will be available to render thoroughly useful the proposed home.

A Lecture
ON
DEVELOPMENT OF MODERN IDEAS ON PREVENTIVE, PROTECTIVE, AND CURATIVE TREATMENT OF BACTERIAL DISEASES, AND ON IMMUNITY OR REFRACTORINESS TO DISEASE.[1]

BY SHERIDAN DELÉPINE, M.B. EDIN.

GENTLEMEN,—The intense excitement and the unbounded hopes created by the announcement that a cure for consumption has at last been found have led me to lecture to-day on a subject which I generally relegate to the end of my course of pathology. For, after discussing the various phenomena which are brought about by disease, and attempting to connect these phenomena with their cause, apparent or real, it is natural to try to explain why these causes do not always bring about the results which are observed only in a certain percentage of cases.

Effects of individuality, age, sex, family, race, species.—It is a matter of common experience that in times of epidemics persons equally exposed to infection are not all affected. The weak members of the community are generally more readily affected than the strong ones, the starved than the well fed, the intemperate than the temperate, the fearful than the fearless; but, apart from these often doubtful distinctions, some other influences must be at work in helping some to resist, for many a man or woman of weak constitution has been able to pass through plagues that had carried away more than one of powerful frame. This resistance of some individuals to disease has probably at all times attracted the attention of men, and very early in the history of civilisation observations have been made which by gradual extension have led to some of the most striking triumphs of medicine. It will be my object in this lecture to show you how immunity to disease, at first supposed to be due to individual peculiarities or supernatural influences, has gradually become connected with certain external circumstances acting directly or indirectly. Among the factors which are generally discussed in medical books as influencing the liability or immunity of certain individuals to disease I may mention age, sex, family, and race. These, as far as we can see at the present time, have an influence on the occurrence of disease which is in many instances difficult to explain. Some facts, however, tend now and again to lighten our ignorance, and to show that even these apparently inherent qualities are perhaps the result of the transmission of acquired properties through generations of cells or of individuals. This will be more evident perhaps if, by extending our field of observation from one to several kinds, we consider how the immunity of certain species, orders, or even classes of animals is brought about. Take, for instance, the remarkable immunity of the fowl and of the frog to anthrax. At first sight it seems impossible to understand why a small animal like a frog or a fowl should be able to resist a disease that is so rapidly fatal to such large animals as the sheep, man, or even the ox. Pasteur, however, more than twelve years ago recognised that the difference of the body temperature of the various animals was enough to affect the development of the parasite. He immersed a fowl for two days in water, bringing the temperature down to 28° C., and showed that the fowl was as liable to anthrax as any other animal. A similar observation was made later on by another observer, who by raising the temperature of a frog rendered it also liable to the disease. Thus it was demonstrated that certain conditions of temperature were necessary for the anthrax bacillus to attain its full virulence. What temperature does in these cases chemical products, special to certain animals, can also bring about in others. This is well proved by the influence of various culture media on the growth of micro-organisms. The presence of chemical compounds of well-known nature, even in very small quantities, has been shown by a great many observers to influence much the mode of growth of bacteria. It has

[1] A lecture delivered at St. George's Hospital on Nov. 20th, on the occasion of the publication of Koch's method for the cure of tuberculosis.

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even been proved that bouillon obtained from the muscular tissue of various animals, notwithstanding the absence of any very definite active chemical compound causing marked difference, gave cultivation media more or less suitable for the growth of certain organisms. I will only mention out of a large number of other observations the very recent experiments of Hippolyte Martin on the bacillus tuberculosis. This observer found that animals can be classified roughly in the following way, according to the ease with which the bacillus grows in bouillon made with their tissues: herring, oyster, mussel, monkey, horse, calf, rabbit, birds, dog, cat, rat. It would be difficult in the present state of our knowledge to ascribe these differences to the presence of any definite compound, yet it cannot be doubted that they are due to certain physico-chemical properties. We have thus distinct evidence of marked differences between animals of different classes, orders, and species; and if we admit the truth of the doctrine of evolution, we must admit that such differences are in great part the result of the influence of external circumstances. We might infer from this that differences between animals of the same species, but of different races, families, sex, or age, are likewise the result of similar influences; we have, however, better evidences than these in support of the view that either extreme liability or immunity to disease may be acquired. Indeed, I shall be able to show you that it is the gradual development of that knowledge which has prepared men for the reception of Pasteur's discoveries, and of their recent momentous extension by Koch.

1. *Refractory state resulting from a first attack of certain fevers.*—It was very early recognised that after a first attack of many infectious fevers, such as small-pox, measles, typhus fever, &c., a second attack seldom occurred. This fact seems to have been observed more specially in connexion with small-pox, or at any rate to have led to practical application first in connexion with that disease. We learn that the *inducement of a first attack of small-pox* was an antique practice in Africa, Persia, and China, and that the method of inoculation was brought from there to Constantinople in 1673, and from that town to England by Lady Mary Wortley Montagu. The idea was evidently to produce a mild attack of the disease in individuals placed under circumstances most favourable to recovery in order to induce immunity. The practice, although open to serious objections, must have had no little success, and was much resorted to in the middle of the last century. Another practice which is not so rare as one might be inclined to believe is the *inducement of measles.* Many people are under the impression that unless children have had all the ordinary exanthematous fevers it is almost desirable that an opportunity should occur for them to have mild attacks of these fevers, and I have known of instances in which, one out of several children being attacked with measles, no attempt has been made to isolate the sick child, for, it was argued, it was as well for the other children to have the fever also and be done with it as soon as possible. Since this has been done under the influence of a popular belief, I think I am justified in suspecting that the practice of inducing measles for protective purposes is far from uncommon, although not generally carried out by professional men. Boeck and Sperino introduced about 1854 the practice of *syphilisation*, and these authors recognise clearly that this method is not only a prophylactic, but also a truly therapeutical one. The inducement of a certain disease in order to prevent its recurrence, and even to modify the course of an attack, was therefore a method early recognised in this century both in connexion with small-pox and syphilis.

2. *Refractory state produced by inoculation of an allied disease less fatal, or of the disease modified by passage through another animal.*—Certain country people had early suspected that a disease affecting cows was communicable to man, and that individuals thus affected were not so liable as other people to small-pox. History tells us that an English farmer and a German schoolmaster in the course of the last century, under the influence of that belief, had resorted to inoculation of that cow disease in preference to the inoculation of true variola. Jenner was the first medical man who discovered the immense importance of these traditional beliefs and practices, and after devoting all his energy to the study of the subject became so convinced of the value of the method of vaccination that after a long struggle he has succeeded in convincing others, and has become thus one of the greatest benefactors of the human race. From 1798—when Jenner brought vaccination before the world—up to 1880 very little was done to extend the scope of the principle thus discovered. Then Pasteur arose, who, after studying for many years the nature of the virus causing several diseases, became gradually convinced that this virus may become intensified or attenuated at will, and in 1880 was able to state positively that the production of an attack of definite intensity of many infectious diseases was a thing not only possible, but also practicable and capable of application for the prevention of disease. In 1880, also, Burdon Sanderson suggested that the attenuation of the virus of anthrax for the purpose of vaccination might be obtained by using the guinea-pig as an intermediate host. Greenfield experimented also at the same time and in the same direction with very satisfactory results. In 1883, Pasteur and Thuillier made experiments in the *rouget des porcs*, showing clearly that by causing the virus to pass through a series of pigeons it became gradually more virulent for the pig; whilst the reverse was true when series of rabbits were used as intermediates, showing thus at the same time how disease may originate or be modified. The principle of vaccination as introduced by Jenner seemed therefore to have become a fact capable of general application by this time. All that seemed necessary was to find a suitable intermediate host for the parasite. By growing the parasite in a series of such intermediate animals one was able to obtain a "vaccine" or "lymph," which, like that of vaccinia, was capable of inducing immunity, as well as an attack of the unmitigated disease would have, but without the same danger. Another fact of great importance has also been noticed by several observers—viz., that the occurrence of certain febrile affections may modify the course of other febrile affections previously established. Daniellsen and Boeck were perhaps the first to notice this fact, and to record the beneficial influence which an attack of small-pox might have on the course of tubercular leprosy. I need not refer to the numerous attempts which have been made since in that line.

3. *Refractory state produced by inoculation of a virus modified by cultivation outside the body.*—Another discovery, more fertile in results, although similar in principle, was, however, made known by Pasteur in 1880. He showed that by cultivating the microbe causing chicken cholera at a temperature of 33°, with free access of oxygen, he could obtain in from two to eight months an attenuated virus, which would cause the disease in a form mild, but sufficient to produce immunity. Toussaint and Chauveau were experimenting at the same time on the anthracis bacillus. Toussaint made the important discovery that by heating cultivations of the bacillus anthracis rapidly to a comparatively high temperature its virulence was attenuated. In 1881 Pasteur produced attenuation of virulence of the bacillus anthracis by cultivation for nine days at a temperature of from 42° to 43° C., and produced immunity by vaccination with the modified virus. Koch, Gaffky, and Loeffler repeated Pasteur's experiment in 1884, confirmed his results, and extended them, differing from him only with regard to the influence which he attributed to oxygen. In 1882 Pasteur and Thuillier applied to the bacillus of "rouget" the same principle as that used in the case of the chicken cholera and splenic fever, and succeeded in attenuating that virus also. During the whole of this period Pasteur was occupied in trying to isolate the virus of rabies. Although he did not succeed in doing so, he discovered that the nervous tissues acquired in that disease virulent properties which indicated the presence in them of some unknown virus. Not being able to obtain the virus itself, Pasteur used the nervous tissue as he would have a nutrient medium, and having discovered the method of obtaining spinal cords having a constant virulence (fixed virus), he dealt with these cords in the same way as he would have with ordinary cultivations, and thus succeeded (1885) in attenuating the virus and being able to produce immunity by vaccination, as in the case of the other diseases. Many other methods have been proposed for attenuating the virulence of organisms than those introduced by Pasteur. We have already seen how Toussaint and Chauveau used rapid heating. Paul Bert showed that oxygen under high pressure (20 atmospheres) kills the bacillus anthracis. Toussaint, Chamberland, and Roux (1880–86) added dilute carbolic, chromic, and sulphuric acids to nutrient media for the same purpose. Klein (1888) used also very small quantities of corrosive sublimate for the same purpose. Arloing (1886) showed that bright sunlight has also an attenuating effect on cultivations in fluid media. It is

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useless to go into the further developments of these methods, that of Pasteur being the only one which has had very extensive application as yet as far as man is concerned.

4. *Refractory state produced by the introduction into the system of definite chemical products resulting from the action of pathogenic organisms on cultivation media.*—Salmon and Smith (1883) seem to have been the first to realise the practical importance of the injection of the products of growth of organisms independently of the organisms themselves. They showed that the injection of cultivations of the microbe causing hog cholera produces the effects of attenuated virus after being sterilised by heat, at any rate in the case of pigeons. (It was, however, accepted before that time that micro-organisms generate products which are deadly to themselves and are capable of arresting their growth, a fact which has also long been known in connexion with fermentation organisms.) Pasteur very early showed also that filtered chicken cholera bouillon injected into a bird produced the symptoms of the disease, although no organism was present in the fluid. He showed also that the same is true of the blood of animals affected with anthrax.

In attempting to explain the effects of inoculation with spinal cord for rabies, Pasteur also alluded in 1885 to the probable existence of some chemical compound in the cords which he used for protective inoculation, and suspected that this compound was instrumental in bringing about immunity. It was only about 1887 that these facts and views acquired fresh significance by the work of Toussaint, Chauveau, Wooldridge, Chamberland, and Roux on anthrax, of Charrin on the pyocyanic bacillus disease, of Chamberland and Roux on acute septicæmia &c., of Brieger, Chantemesse, and Vidal on typhoid fever, of Roux on symptomatic anthrax, and of Roux and Yersin on diphtheria. In most of these experiments the material used for inoculation was the cultivation medium modified by the growth of the organism, and sterilised either by heat, by filtration, or by both methods. The work of Charrin, Woodhead, Cartwright, and Wood has also shown that protection may sometimes be obtained not only by injection of the products of the growth of the pathogenic organism itself, but also of some quite different ones (bacillus anthracis and bacillus of blue pus).

The products used were therefore of a very complex nature, and it was not known to what kind of compound they owed their property of conferring immunity. Roux and Yersin had in 1888 tried to prove that their chemical vaccine for diphtheria owed its properties to an albuminoid body allied to unorganised ferment, but this last supposition is not generally accepted, although not disproved. (In order to understand the origin of the following improvements it is important to remember that the work of Panum (1856), Gautier, and Selmi (1873) had revealed the production of very poisonous alkaloidal substances during putrefaction. The more accurate researches of Nencki, and still more of Brieger, demonstrated clearly the existence of an important class of poisonous alkaloids produced by the micro-organisms of putrefaction. Gautier (1881), on the other hand, was trying to prove that animal tissues are also capable of producing by their metabolism poisonous substances of allied nature. The experiments of Lauder Brunton and Sir Joseph Fayrer on cobra poison (1873) should be kept in mind in relation with this subject. It was soon found that, besides these poisonous albuminoids, other more or less poisonous products might be manufactured either by animal or vegetable cells; these products were found to belong to the ill-defined class of albumoses. I need only refer to the work of Weir Mitchell (1860) and Reichert on the albumoses of snake poison; of Sydney Martin on phytalbumoses—i.e., albumoses produced by vegetable cells, whether bacterial or others—an important work, which led him to infer later on that albumoses were products intermediate between the non-poisonous albuminous substances of the culture media and the most poisonous alkaloids. Büchner, Wooldridge, Hankin, and others were also discovering toxic albuminous substances in various fluids or tissues of the body, some of which were deadly to bacteria.) Returning now to preventive inoculation, we find that in 1889 Sydney Martin in London, and Hankin of Cambridge working in Koch's and Brieger's laboratories, had isolated from cultivations of the bacillus anthracis albumoses which were found by Hankin to produce immunity from the disease when injected into the body. Possibly under the influence of Hankin, *certainly later in the year*, the important researches of Fraenkel and Brieger on the toxalbumins of diphtheria, typhoid fever, cholera, tetanus, &c., were published. Thus, just as in the case of many remedies used for centuries in the shape of powders, extracts, decoctions, infusions, tinctures, &c., active principles have ultimately been discovered by chemists, *it was now found that out of the material used for the last ten years by Pasteur and his school, it was possible to isolate some active products of definite composition*, to which the lymphs or "vaccins" owe their prophylactic and curative properties. Such was the state of science when, in the course of last year, it was announced that Koch had found the means of curing phthisis by inoculation. All minds were to a certain extent prepared for such an announcement; yet the fact that one of the greatest scourges affecting human kind had at last come within the pale of treatment has created immense sensation. The little that is known of the treatment and of its effects seems to point clearly to the fact that Koch is using some of the chemical products which have just been discussed, and therefore there is good reason to expect that *a certain amount of success* will attend the method. The results of previous experimenters show, however, that it would be wrong to hope too much from a system which has always been attended with *a certain proportion of failures.*

I have carefully avoided in this *exposé* to enter into many details, some of which are of great importance, in order that you should be able to follow the main line of observations and thoughts which have led to the recent discovery. I will therefore not attempt to discuss on what basis vaccination, essentially prophylactic in principle, may become a curative method when the modified virus answers certain requirements. There is a very distinct connexion between these two methods of treatment.[2] It may, however, be interesting to consider for a moment the methods which the knowledge of pathogenic organisms has introduced in medicine.

These methods can be subdivided into three classes: (1) The preventive, (2) the protective, (3) the curative. They have all something in common, and yet they all differ, as will be seen in the following brief enumeration:—

1. The *preventive method* consists in *destroying or attenuating the cause*, or avoiding it in some way or other so that the body may remain unaffected. (*a*) The *antiseptic method* introduced by Lister is a good instance of the methods which aim at *destroying the cause* before it has acted. (*b*) *Residence* in high localities, *drainage*, &c., are instances of the methods by which the causes of disease may be so *attenuated or diluted* as to become harmless. (*c*) *Absolute cleanliness. Aseptic* methods are based on the possibility of avoiding certain causes entirely without destroying them.

2. *Protection* consists in so *modifying the possible host* so as to render it able to resist virulent parasites. This can be done either by (*a*) increasing its *strength* and activity, as by diet, warmth, functional activity, and other hygienic conditions (Wargunin); (*b*) rendering its tissues and fluids *unsuitable media* for the *growth* or *full development* of the parasite. *Inoculation* and *Jenner's vaccination* are good instances of that method, which has been further extended by Pasteur and others; (*c*) by establishing *tolerance* (Sewall, 1887).

3. The *curative methods* consist in *attenuating* or entirely destroying the virus causing the disease *after it has penetrated into the body.* (*a*) The *actual destruction of the parasite within its host* is apparently still a desideratum. (*b*) *Attenuation of the virulence* can be obtained by introducing into the blood and tissues some product either interfering with the full development of the parasite or modifying the tissues and fluids of the body so as to increase their resistance to the extension of the parasite or to its products. This seems to be the chief principle at the root of Pasteur's *vaccination* for hydrophobia, &c. (*c*) *Neutralising the physiological action of the virus by using its physiological antagonist.* Muscarin, for instance, may be antagonised by atropin. Lauder Brunton (1873) directed attention to the possibility of applying this principle to the treatment of cholera. (The same idea has been applied to the treatment of poisoning by snake venom. Wynter Blyth, 1877; Lacerda, 1881). (*d*) *Destroying and removing the substratum* or ground which has become contaminated by

[2] For explanation as to the mode of action of the products used in vaccination see Lauder Brunton's lectures on Chemical Structure and Physiological Action, especially Lecture II. (Brit. Med. Jour., vol. i. 1889, p. 1889).

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the parasite. This is *apparently the view which Koch has taken of the action of his lymph.* The action of the product on the tissues is, however, of the *same kind as that of the substances used in some of the methods already mentioned,* but more intense, and Koch's views will probably have to be modified.

In this attempt to analyse the methods which have been proposed I have separated processes many of which may act concurrently. This is, however, of little consequence, for my object was less to give an account of any single method than to trace the development of the ideas which are at the basis of the treatment of bacterial diseases. In this way I hope I may have been able to show you how *science* prepares the way for the highest branches of the *art*—viz., *preventive, protective, and curative medicine.*

HODGKIN'S DISEASE; PYREXIA: SUDDEN DEATH, WITH COPIOUS SANGUINEOUS EFFUSION INTO THE LUNG.

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THE following case is of interest on account of its somewhat puzzling nature during life, but more particularly on account of its very unusual mode of ending. The patient was admitted under Dr. Thorowgood, but she was subsequently seen by me during his absence; it is at his kind request that I place the case on record.

Annie A——, aged eighteen, single, a matchbox maker by occupation, was admitted into the Victoria-park Hospital on Aug. 7th, 1890. She complained of pain in the left hypochondrium and of weakness. She stated that she had been ill four weeks suffering from feverishness and weakness; for three days there had been headache; the bowels had been rather constipated during the whole period, acting some two to three times a week. There had been slight pain in the lower part of the abdomen; she had never vomited. On admission, there were a flushed face, hot skin, and dry glazed tongue, showing posteriorly a little fur. The temperature was 101·2°; pulse 114, and of low tension. The abdomen was normal in appearance, there was no tenderness, but the spleen projected one inch and a quarter below the costal margin. There were no symptoms pointing to the chest, neither cough nor expectoration, and the physical signs were negative for both heart and lungs. In the neck the glands were enlarged, especially on the right side in the supra-clavicular region; but they were not conspicuous, and, though the enlargement was decided, they were to be felt rather than seen. There was slight enlargement of the glands in the axillæ and in the right groin. The enlarged glands were hard, well-defined, and freely movable. The urine was acid; sp. gr. 1010, and free from albumen. In the absence of any definite symptoms—diarrhœa, spots, &c.,—but in the presence of the fever and the enlarged spleen, the patient was put on typhoid treatment, and, so far as the diet was concerned, this treatment was maintained for some time after it had become clear, from the temperature curve, that the case was not one of enteric fever. The patient was examined on several occasions up to the time of her death, which occurred quite suddenly and unexpectedly, but no fresh signs developed. On Aug. 14th the spleen showed slight increase in size, and some scybalous fæcal accumulation in the descending colon was noted. Throughout the bowels were rather constipated, and in the early stages glycerine enemata were required. On Sept. 12th the glands on the right side of the neck above the clavicle were larger. On the 20th the glands in the left infra-maxillary region were enlarged, but the spleen had diminished somewhat. On Oct. 1st the spleen was again somewhat larger. Death occurred on Oct. 2nd.

In the chest some creaking sounds were heard near the angle of the right scapula on Sept. 27th, and on Oct. 1st the note under the left clavicle was doubtfully impaired. On this date a systolic bruit was heard at the base of the heart. Nothing more definite was discovered in the chest. On the two occasions that the blood was examined it was found to contain 75 per cent. of the normal corpuscular richness and no excess of white cells. The amount of hæmoglobin was unfortunately not estimated. The temperature curve was very interesting. There was fever the whole of the eight weeks during which the patient was in hospital; it was, however, markedly remitting, the lowest records falling just above or just below 99° F. (98·8° and 98·6° were frequent records). On six occasions only did the curve touch 98·4° or dip just below it. The maximal temperatures were 102°, 101°, 100°; on two occasions 102·8° was reached. The remissions and exacerbations were very regular, the former taking place about 8 A.M., the latter between 8 and 12 P.M. The range of temperature was about 4° during the first week, about 3° during the second week, and about 2°, or a little over, during the third week. During the fourth week the temperature was at its lowest, and the pyrexia appeared to be gradually breaking up; but in the fifth week the range again increased, and it mounted still more during the following three weeks, averaging 3° to 4°. If to the hospital period we add the four weeks of feverishness, of which she gave the history on admission (she had been on milk diet for two weeks before admission), we have a total period of three months of pyrexia. In spite of this prolonged pyrexia, the patient did not seem seriously ill; so little, in fact, that it was thought well to allow her to get up to tea in the last days of September, and according to her own statement she felt better. On Oct. 1st the last examination was made, with practically negative results. The enlarged spleen and lymphatic glands were the only positive signs.

Mode of death.—At about 2.10 P.M. the patient went to sleep after dinner, and nothing unusual was noticed until 3.30 P.M., when the nurse's attention was directed to her. The head and neck were then rigid, and the eyes fixed in an upward direction. There was slight turgescence of the face; no cry was uttered. There was no evidence of blood in the mouth either immediately before or after death. Five sighing respirations took place, and death happened in about thirty seconds.

I unfortunately could not be present at the necropsy, but the following is the post-mortem record by Dr. Ruffer, the pathologist to the hospital:—Body emaciated; staining well marked; rigor mortis well marked. In the pericardium about half a pint of clear serum. The left lung adherent everywhere by white adhesions; soft over the greater part of the lung, but tough behind; at the back part the lung was torn during removal; the lower lobe filled with blood, which oozes from every pore, so that the whole lung looks like currant jelly; portions excised sink in water; the upper lobe normal; the bronchial glands not increased. The right lung normal, except at the base, where there has been a much less extensive but similar hæmorrhage to that on the left side; no adhesions on this side. The spleen red, 22 oz. in weight; no infarcts; its substance was highly coloured, but fairly hard. The retro-peritoneal glands larger than natural; some attain the size of a walnut. The liver 59 oz. in weight; smooth; tough. The kidneys very large, tough, and firm. The intestines healthy. The pancreas healthy.

Remarks.—As to diagnosis little need be said. It is true that in the first stage some hesitation as to the possibility of typhoid was felt, but this was abandoned later upon studying the temperature curve, and the pyrexia was referred to the enlarged lymphatic glands and spleen in the absence of any other lesion—the case being diagnosed as one of lymphadenoma or Hodgkin's disease. The temperature curve corresponded with the third or remittent type of pyrexia described by Gowers as occurring in lymphadenoma;[1] the other types met with, according to this authority, being the continuous and the alternating types. Pyrexia is of course not a necessary feature of the disease, but this case accords with Gowers' statement that there is fever in nearly all cases under twenty years of age. The absence of much pallor helped to mask the case, nor did the microscope give any very striking proofs of anæmia; the observations on this point were, however, too few to base any conclusions upon, and the hæmoglobin percentage was not estimated. We may, however, mention the fact, according to Gowers, that glandular enlargement may occur and advance before any signs of deficient blood formation present themselves. Real anæmia may be present even to the extent of a reduction of the red cells to 60 per cent., whilst the face is well coloured. The urine was not watched, but the note on admission records a specific gravity of 1010 and the absence of albumen. As to the mode of death, this is, I believe, very unusual. Gowers mentions hæmorrhage from the nose and mouth

[1] Reynolds' System of Medicine, vol. v.

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as a cause of death in one case. Birch-Hirschfeld[2] writes of a tendency to profuse hæmorrhage from nose and mouth, but he gives no details. Coupland[3] mentions hæmorrhage as less common in lymphadenoma than in leukæmia and pernicious anæmia. But I have not been able to come across a case quite similar to this. That the lungs should to a great extent fill with blood without the appearance of any blood in the mouth seems astonishing, and the only explanation for this, at all plausible, seems the suddenness with which death took place. I understand that at the necropsy the main bronchi did not show any blood in their lumen. Was it really a hæmorrhage or an acute sanguineous œdema? In either case the sudden death in association with this remarkable condition of lungs is surely worth recording.

Welbeck-street, W.

HÆMORRHOIDS.

CAN OPERATIVE INTERFERENCE BE AVOIDED BY EFFICIENT MEDICAL TREATMENT ADOPTED IN TIME?

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FOR many years I have felt very confident that the majority of cases of hæmorrhoids we meet with, some of which we treat with medicine, others by operation, are entirely preventable, and that many of those even which are far advanced can be cured by medical treatment alone, but it is necessary when treating them to give due consideration to all the causes, and to treat each one. I have found during the last few years, when I have met with a patient willing entirely to submit to medical treatment, that such treatment has always been a success; but unfortunately the majority of patients are self-indulgent, and quite wanting in perseverance; and in such cases treatment, because incomplete, is often a failure. In my remarks I refer to both internal and external hæmorrhoids, but more particularly to the internal. I select three out of the last sixty cases I have had to deal with as fair examples of all.

CASE 1.—A gentleman, aged forty, anæmic, great debility, functional cardiac symptoms, &c. He has suffered from internal hæmorrhoids for six years, with frequent hæmorrhage when at stool, the mass, when protruded, being the size of a small orange. Cause: sedentary life, laziness, constipation. Treatment: Daily walk insisted on, more vegetable food, friction to abdomen, white mixture or Æsculap in the morning when required, injections daily, local sponging. After three months' treatment he was quite well.

CASE 2.—This patient, a female, has had six children; very weak; hæmorrhoids for years, which now protrude at each evacuation and bleed, causing anæmia. Treatment: Daily walks, more vegetable food, white mixture when required, injections of lukewarm water at first, and then cold water, local applications of cold every morning. At the end of two months there was no protrusion at all when at stool; no local discomfort whatever; quite well.

CASE 3.—The patient, a male, aged forty-two, stout and florid, is a heavy drinker and eater. Liver and abdomen enlarged; he suffered from hæmorrhoids for the last four years; they protrude, bleed, and are about the size of a small orange. Hæmorrhoids always worse after drinking. Cause: Excess in eating and drinking, want of exercise, constipation. Treatment: Abstinence from drink, almost total; injections of cold water every morning. White mixture when required. Local applications of cold.

There are a number of factors which have to do with the production of hæmorrhoids which it would be well for us to remember, as it is only by considering each one which has helped to bring on the disease that we can hope to effect a cure. These are: the valveless condition of the portal veins, gravitation, obstruction owing to hepatic disease, obstruction from heart or lung disease, sedentary habits, excessive eating and drinking, straining from any cause, excessive obesity, and taking purgatives too frequently. Owing to the valveless condition of the veins, there is not any propulsion forwards from the contraction of the surrounding tissues, and a congested condition of the radicles of the portal veins is the result, giving rise, perhaps, ultimately to hæmorrhoids. Gravitation will tend to increase the size of the lowest veins. Obstructions from liver, heart, or lungs will have the same effect. Sedentary habits induce a diseased condition of the liver, with consequent obstruction to the passage of portal blood through it. The abdominal muscles do not, by their contractions, assist in propelling the contents of the intestines forwards, a constipated condition of bowels and dilated state of veins being thus produced. Excessive eating or drinking produces disease of the liver, obesity, and other injurious consequences. Straining at stool from any cause is a factor of importance; for the pressure brought to bear upon the intestines generally, by the abdominal muscles, diaphragm, and other muscles, tends to produce a very dilated condition of the lowest vessels, those of the rectum, which, often during the act of defecation, give way and hæmorrhage ensues. Excessive obesity aggravates, by its pressure, this tendency to congestion. Many people are in the habit of taking purgatives daily. They do not seem to appreciate, or to be aware of the fact, that ordinarily only a certain amount of fæcal matter, that which is in or near to the rectum, should be expelled daily; and that if, by taking purgatives, several feet of intestine be evacuated, proper purgation cannot be expected the next day; time must be allowed for reasonable accumulation, which will generally be a sufficient stimulus to the whole intestinal canal. Now when treating hæmorrhoids, I believe that if we take into consideration and treat each one of the several causes we shall often meet with most satisfactory results. Many of the recommendations appear to be trivial; but success very frequently follows attention to them, and operative treatment follows neglect of them.

Daily action of bowels.—Owing to hurry many sadly neglect the bowels, which act very irregularly. It is very important that they should be trained to act once a day from childhood, say, immediately after breakfast, and those who have paid proper attention to this rule but seldom require treatment. Sponging the anus and surrounding parts with soap and cold water is a very efficient application. Acrid fluids &c., which during the ensuing day would irritate the skin, are removed.

Diet &c.—In this country we, as a rule, eat far too much meat and too little vegetable food. I am confident that this habit has much to do with the costive state of bowels and the formation of hæmorrhoids. I have seen cases of hæmorrhoids with constipation cured by such attention alone, by taking apples or pears after breakfast, by increasing the quantity of cabbage, cauliflower, &c., taken with dinner and with luncheon, and by at the same time diminishing the amount of meat eaten.

Exercise.—I believe that this is a most important cause, and that if a reasonable amount of physical exertion were undergone by the nation generally, constipation and hæmorrhoids would very seldom require treatment, the liver would be well kneaded daily, inspissated bile would be propelled, and the action of the intestines would be assisted by the abdominal muscles.

Injections.—It is astonishing how much relief some patients obtain by an injection daily of as much water as can be retained for four or five minutes with comfort. I generally begin by recommending lukewarm water, but as soon as the patient can bear cold I order it. This seems to stimulate the whole bowel from above downwards, to act as a tonic on its interior by daily removing large masses which lodge in the rectum, to enable its walls to regain their elasticity and contractility, and by removing irritating secretions and pressure, to prevent hyperplasia of cellular tissue which accompanies a dilated condition of veins.

Alcohol.—Those who suffer from hæmorrhoids should, if possible, give up taking stimulants entirely; for they tend to produce a dilated condition of vessels everywhere, and by causing disease of the liver of an obstructive character give rise to dilatation of all the small branches of the vena porta, and those of the rectum suffer more than any.

I may here repeat what I have already said, that nearly all cases of hæmorrhoids, both internal and external, can be cured by proper, simple, rational medical treatment.

Bournemouth

[2] Ziemssen's Cyclopædia. [3] Fowler's Dictionary.

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FIBROMATA OF THE NASO-PHARYNGEAL SPACE, THEIR SUCCESSFUL TREATMENT BY NEW METHODS.[1]

BY J. L. W. THUDICHUM, M.D., F.R.C.P. LOND.

THESE tumours of the naso-pharynx were formerly described as polypi, of which they represent the most severe forms. But they differ from tumours now commonly termed polypi in this, that if they are not removed by art they mostly lead to a fatal termination. Of the perniciousness of these tumours the literature of the subject contains ample evidence; death occurred most commonly by hæmorrhage, spontaneous, often repeated and long continued; some cases perished from the progress of the tumour to the base of the brain, others from suffocation, whatever was the temporary symptomatic relief—e.g., by tracheotomy. Not a few cases perished in or after the attempt to effect relief by surgical means; many perished of secondary effects succeeding an operation effective or attempted—pyæmia, pneumonia, anæmia, and other accidents. The second prominent peculiarity of the fibroma is its frequent recurrence after it has apparently been extirpated; an accident which necessitates periodical examination of such patients. The third peculiarity of these fibromata is that they occur in an active state, mainly in males below the years of manhood; they most frequently come under observation in fast growing lads, but are also observed in a quiescent state in older men, when from the history of the cases it can be ascertained that they were carried by the bearers from adolescence into manhood. They mostly become quiescent, at least as regards increase, after the age of twenty-one years or, physiologically speaking, after the completion of the structural development of the head and face. The tendency to hæmorrhage continues a few years longer, but ceases with the atrophy of the base of supply by pressure. The rate of growth of these tumours is quick, and is increased, as is also the tendency to hæmorrhages, when they are interfered with unsuccessfully. The tumours quickly send arms into the anterior nasal fossæ, the antrum and ethmoid, and sphenoid cavities; they appear under the zygomatic arches, or in the orbits, and produce blindness by pressure on the optic nerves.

The anatomical place from which the first growths which enlarge to these tumours mostly originate is probably the posterior end of the middle turbinated body, more rarely the pharyngeal rudimentary tonsil. The extraordinary hæmorrhage which takes place in most of these cases is not rarely the first symptom which tells the patient that there is something wrong in his pharynx. In some cases it was the only symptom observed by the medical attendants. Obstruction of the meati, or even of one of them, is not a necessary symptom of the early stage of the disease; on the contrary, tumours of considerable size may exist in the pharyngeal space without the breathing being notably interfered with, and without the voice being more than slightly altered. A frequent result of the existence of the tumour is ulceration, either on the tumour itself or on the mucous membrane. This simulates ozæna, and is sometimes mistaken for it. But in reality it is the almost constant cause of the hæmorrhages. Bleeding from mere congestion, so common in cases of polypi of the uterus or rectum, seems an exceptional sequence of nasal fibromata. The fibromata have a remarkable effect in this, that by mere pressure, with and without ulceration, they effect the absorption, without purulency or expulsion or sequestration of dead particles of bones adjacent to the nasal cavity. I have known the osseous palate underneath the tumour to be as soft and movable as the soft palate itself; I have seen it pressed down low into the mouth, and pulsate synchronously with the tumour in the nose. In such cases quick relief is required to prevent perforation with all its attendant evils. When the tumour is removed, the bone is again rather quickly restored; the thin bones, such as the papyraceous laminæ of the orbits are not restored, but supplanted by imperfect membranes. Sometimes all molar teeth are lost on the most affected side.

The pernicious fibroma effects a highly vascular adhesion to all parts of the mucous membrane with which it comes in contact. This adhesion becomes universal over its surface in contact, and results in the formation of a vascular layer, which is the source of all the fearful hæmorrhages as well during the progress of the disease as during any operation for its removal. The substance or body of the fibroma is remarkably free from bloodvessels of any kind. The mere touching of the adhesions with a blunt probe for the purpose of ascertaining the extent or firmness of the adhesion not rarely causes a rush of blood, for which it is difficult to suppose the lesion adequate. These hæmorrhages are the principal impediment which the surgeon meets with in his attempt to remove the tumours.

Surgical literature contains many descriptions of a great variety of operations which were instituted for the removal of these tumours. There is no possible anatomical direction which has not been taken to get at the root of the evil, and all are avowedly mainly modulated under the fear of hæmorrhage in front. One can easily see that the means chosen were desperate expedients applied to cases judged to be equally desperate. After the introduction of anæsthetics, during the last thirty years, a very common set of operations was the following. The first step was tracheotomy and the insertion of an inflated plug in the larynx. Next the nose was split up from tip to root, the nasal bones were broken aside, or temporarily or permanently severed. The tumour was then attacked with forceps, scissors, and knives, and the bleeding was from time to time diminished by actual cautery. In this way the nasal meati might be cleared roughly, but the pharyngeal part could not be reached. This was therefore attacked through the mouth; the soft palate was divided, and the tumour—or rather as much of it as would yield—was cut away with scissors and twisted with forceps until a tolerable passage was produced.

Of the cases attempted to be thus treated a number were left uncompleted owing to hæmorrhage; some operations were protracted, in the hope of excising the tumour, over fourteen days, one known to me over thirty days, during which time the slit nose was kept open. In fact, when John Bell described the operation as a "horrid scene from which most surgeons had to retire in confusion and dismay," he stated the bare truth. About a third of the patients succumb to anæmia; another third die from the immediate consequences—pneumonia and pyæmia; and about a third escape death after a long and complicated run of septicæmia. Of these many have relapses. Wutzer (of Bonn) had seventeen cases of relapse out of a total not stated. Nélaton added a special severity to the operation, with the intention of destroying the root, by removing permanently a portion of the osseous palate. Middeldorpf applied the electro-cautery to some such tumours, but he was confined to such as were pendulous and could be surrounded by the wire loop. For a tumour which filled the nostril entirely and adhered to a large surface he had no remedy. Moreover, he had no remedy for the profuse bleeding, which even the electro-cautery as commonly used allowed of in these cases. Even the monograph of Dr. H. Bensch, composed under the influence of the late Professor Voltolini, did not advance the subject, and its only novelty, a burner invented and depicted after the essay had been printed, "did not possess the advantages of the fundamental idea."

In my operations the electro-cautery is the operative tool by which the tumour is dissected, divided, cut out, and destroyed; at the same time, the bleeding is either prevented or arrested by the cautious injection into the bleeding adhesions of a concentrated solution of ferric chloride. The electro-cautery is employed in two forms—one the fork-burner, which cuts into the parts like the sharpest chisel; the other the electro-caustic loop, used white hot, as an écraseur. The styptic is injected with a small syringe, armed with a long hollow platinum needle, the point of which is guarded, so that it can penetrate only to a measured depth. My patients are ordinarily not placed under any general anæsthetic, but, solaced with cocaine, give an intelligent aid to the operator; but where desirable a general anæsthetic is easily applicable. There is no tracheotomy, no plugging of the larynx, no splitting of the soft or hard palate, no dividing of the nose, no breaking of the nasal bones, no resection of the nasal ramus of the upper maxillary. Almost the entire operation is performed through the nose, whatever may be diagnosed or introduced through the mouth. Consequently, this new operation makes the patients absolutely free from the fearful risks to which, as the statistics of results show, the

[1] Substance of a paper read before the West London Medico-Chirurgical Society.

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former intrepid operation would make them liable. I adduce a few cases from private and hospital practice to bear out my general statement.

A young gentleman aged sixteen had his right meatus obstructed since June, 1885. Severe epistaxis set in, which confined the patient to bed during four months, when, in May, 1886, I saw him in consultation with Dr. Fyfe. I diagnosed a large bipartite choanal tumour, sending projections into both nasal canals, which were adherent throughout their course. When touched gently with the probe for diagnostic purposes the tumour bled profusely. I removed several pieces of the tumour, one of which was ulcerated, and effected a permanent passage for air. In June a serious hæmorrhage occurred, which was arrested by Dr. Fyfe by plugging. In consultation with Sir James Paget, it was decided to continue the operation by my method. This was done after the patient had recovered in October, 1886, when a large tumour was removed from the right nostril and choana by the electro-cautery. The patient continued well till April, 1887, when a slight relapse occurred, accompanied by bleeding. The anterior right turbinated was greatly swollen and adhered to the septum by fibrous union, while the choanæ were clear. Both anterior parts of the lower turbinated bodies were removed after discussion, and now a bleeding stump of the tumour could be seen; it was cut out, and found ulcerated and covered with a dry sanguineous crust. On July 7th, 1887, a movable piece of tumour, covered with dry blood, was cut off by electro-cautery; another in December, 1887. After this, with the aid of alterative and tonic treatment, the patient recovered perfectly. His breathing, articulation, and strength became perfect, and he is now a candidate for admission to the medical profession.

Another case, that of a lad aged seventeen, was sent to me from a midland town. An attempt had been made to operate upon the hard, large, bleeding tumour; the nose had been fissured all the way, but the bleeding became so appalling that the operation was arrested. Tamponade was applied, and the patient was discharged as hopelessly incurable. I removed piece after piece of the tumour through the right nostril, the enormous bleeding being arrested by the inflated obturator and ferric chloride injections. Now remained only the choanal pharyngeal part of the tumour of the size of a hen's egg. It was grown both to the soft palate and back of the pharynx; the soft palate stood perpendicular, and respiration was carried on noisily through a narrow round hole between the left base of the tongue and the tumour. There was evident dyspnœa. The choanal tumour was removed by the white-hot loop; the wire was passed through the mouth, both ends passing through the nostril were placed into the tubular carrier, and thus the adhesion to the soft palate was severed; in the same manner the adhesion to the back of the pharynx was severed, when the tumour was discharged through the mouth. The patient had a perfect passage, the septum which was preserved sprang back, and the patient could smell with the left nostril twenty-four hours after the operation. In 1889 the patient was perfectly well, and able to follow his business.

A case of this kind was sent to me from New Zealand, and after much correspondence between myself and the patient's guardians he arrived in London. But some relatives here disobeyed the guardians, and took him to a metropolitan hospital. There the patient died of the intrepid operation. I relate this case only because the hospital made me some amends for having taken this patient from me by leaving me another. When the surgeons attempted to operate in this case the hæmorrhage was such that as soon as feasible they got rid of the patient as incurable, and sent him home to die. He was received in the Queen's Jubilee Hospital, operated on and cured, and is now quite well. In this case no doubt the hæmorrhages were extraordinary, for the tumour was complicated with much destruction of the posterior part of the nose; the vomer and a piece of the sphenoid bone lay as dead sequestra in the middle of the tumour, and added fetor to the other tortures. The cartilaginous septum was saved, the exophthalmus disappeared, the arch of the palate, which was soft and depressed, resumed its place, grew bone, and became hard. The hearing of the right ear, which had been hard, and from which blood had been discharged for some hours, became restored. In this case the inner sphincter of the lacrymal duct was paralysed, for when the expanding obturator was applied to the nose to arrest bleeding the eye became filled with blood over the conjunctival space. The patient learned to prevent this by pressing his finger upon the saculus lacrymalis before the application of the plug. In this case the right facial nerve was partly paralysed by pressure, and the expanded cheek was nearly motionless. After the operation it resumed its mimic contractility.

Another case was that of a clergyman in whom the tumour had existed for several years and produced much destruction. The nose was distended and thickened, the bony palate was soft and pulsating; all molars were lost from the right upper jaw. An abscess had burrowed from the ethmoid region through the orbit down the face in front of the antrum, and risen outside to the height of the zygomatic arch. In this case the first attempt at an operation produced much hæmorrhage; several subsequent bleedings, unconnected with any operation, were arrested. The tumour was gradually removed entirely; the patient has now for three years been quite well and able to follow his profession.

Another case is that of a merchant from the city of London. The anterior parts of the meati were closed by impassable hypertrophies, and enormous deviation of the septum to the left. The hypertrophies were removed with the electro-cautery, and the bones ablated; when these wounds had healed a large cyst was found in the posterior part of the left meatus, opened and removed. Only then the pharyngeal tumour presented itself, and was removed through the right nostril. In both cases respiration and phonation were completely restored.

In the case of a young gentleman aged sixteen, a pharyngeal tumour of the size of an egg was removed entire, as in the first case. I might quote a number of similar cases, all of which were cured by the operation here insisted upon, without a single death and without severe reaction. In some the tumour was cut in pieces in the pharyngeal space through the nose by a cutting instrument like a lithotrite, and removed in pieces through the nose with the wire loop. The operations are laborious, but their safety compensate for all drawbacks, and their hitherto invariable success is a great recommendation, particularly in those cases which were formerly left unoperated upon or declared incurable. In about a dozen cases abscission of the lower turbinated bones, of one or both sides, had to precede the final operation; but all patients were practically, most of them completely, cured, and are now active and useful members in various spheres of society.

Pembroke-gardens, W.

THE TREATMENT OF ACUTE LOBAR PNEUMONIA;

FROM AN ANALYSIS OF A THOUSAND CASES TREATED AT THE LONDON HOSPITAL BETWEEN THE YEARS 1880–1890.

BY W. SOLTAU FENWICK, M.D., B.S. LOND., &c.

THE treatment of acute lobar pneumonia has always proved an exceedingly discordant topic in the science of medicine. From time to time various new remedies have been strongly advocated, and their beneficial influence upon the course of the malady apparently demonstrated by an appeal to statistics. But each new departure has in its turn met with the same fate at the hands of further inquiry, with the result that the statistical literature upon the treatment of the disease is chiefly remarkable for its extraordinary contradictions, and for the opportunity it affords to modern writers for unanimity upon one point—namely, that no reliance whatever should be placed on statistics as a guide to the future treatment of the malady. But however just such a conclusion may be, a more extended inquiry into the etiology of acute pneumonia has gone far to demonstrate the cause of these paradoxical results; and it is now an appreciated fact that the disease in question varies in its clinical features, and consequently in its reaction to treatment, not only in different countries, but even in the various parts of the same land. And hence it is that the practice of venesection, combined with large doses of tartar emetic, although now totally condemned in the treatment of the malady as it occurs in large towns, still proves itself the most potent of all remedies when employed in that type of the disease which is commonly

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met with in agricultural districts. It will therefore be admitted that, in order to form a just estimate of the influence of various remedies upon the progress of the disease, it is necessary that the cases submitted to observation should belong to the same clinical type. It may consequently prove of some interest to examine in detail the effects of various methods of treatment upon that class of the disease which presents itself in a metropolitan hospital, and accordingly I have collected the records of one thousand cases which have been treated at the London Hospital during the course of the last ten years. But before proceeding to the subject of my paper I must offer a few words of explanation upon the somewhat unusual method that has been adopted in the following analysis.

It is well known that some degree of fever is an almost invariable accompaniment of acute pneumonia; and since, as I shall have occasion to show, the danger to life during an attack of the disease bears a definite relation to the amount of fever which accompanies it, I have arranged the various cases according to the average degree of temperature which they presented. It may also be shown that those cases which present an average temperature of about 103° F., are usually attended with the minimum degree of mortality, the states of hyperpyrexia and apyrexia corresponding to the maximum of danger to life. I have accordingly drawn a line through this thermometric point, and by it divide the cases into two great classes, which, in default of better terms, I shall designate as "sthenic" and "asthenic." But it must be clearly understood that such a division is chiefly one of convenience, and that no attempt is made to determine whether any particular case should be styled "sthenic" or "asthenic" by a glance at its temperature chart. The main object of the analysis is to prove that the success of all treatment depends upon the individualisation of the patient instead of the disease from which he suffers. By thus arranging the various cases according to their average temperatures, I venture to think that several sources of error may be avoided, and that by examining the influence of the various remedies upon cases of approximately equal severity, we may arrive at a juster estimate of their relative value. The absolute duration of the disease is estimated by the length of time which elapsed between the initial rigor, or gastro-intestinal attack, and the first subnormal reading of the thermometer. The average duration of the malady, calculated in this way, was almost exactly eight days.

In order that a remedy may be able to exert its supposed influence upon the disease, a certain length of time must be allowed for its action. I have therefore included in my list only those cases in which the crisis occurred after the lapse of twenty-four hours from the time of admission into the hospital. On the other hand, more than one hundred cases were admitted during the same period of time, in which the disease terminated before the lapse of twenty-four hours, the patients having in all cases been previously nursed at home. No less than 49 per cent. of these cases terminated fatally, showing conclusively the high rate of mortality attending an expectant treatment when unaccompanied by proper nursing and attention. It is hardly necessary to state that all cases of so-called secondary pneumonia have been carefully distinguished from the primary or idiopathic form of the disease, and eliminated. Taking, in the first place, those cases which exhibited an average temperature exceeding 103° F., I shall proceed to examine them in the following order:—1. Cases in which the treatment consisted in the application of hot poultices to the chest, combined with the internal administration of various expectorant and tonic remedies. 2. Cases whose medicinal treatment consisted entirely of quinine in large doses. 3. Cases in which the disease was combated upon general antipyretic principles, similar to those employed in the treatment of other acute specific fevers.

CLASS I.—STHENIC CASES.

This group includes 502 cases, the treatment of which consisted in the administration of various medicinal remedies, while the local application took the form of hot fomentations or poultices. As I have already indicated, the cases have been arranged according to the average temperature observed during the course of the attack, the results being shown in the following way:—In 324 cases the average temperature ranged between 103° and 104°, and of these 60, or about 18·5 per cent., died. In 169 cases the average temperature ranged between 104° and 105°, and of these 51, or 30 per cent., died. In 16 cases the average temperature exceeded 105°, and of these 9, or 56·2 per cent., died. Without wishing to draw any exact conclusions from these figures, two facts are sufficiently obvious to allow of special mention—first, that the rate of mortality is a high one, and, secondly, that the death-rate increases with every degree in the average temperature. When, however, the clinical features of this group of cases are examined at greater detail, we are struck at once by several points of obvious interest, and a brief consideration of the most important of these may, perhaps, serve to throw a more concentrated degree of light upon the relative value of the various methods of treatment.

Death may occur at almost any time during the course of the illness, but it appears to be more apt to supervene at certain periods than at others. Thus, when the various cases are tabulated according to the day of the attack on which the case terminated, the proportion of deaths to recoveries is shown in the following way. Of the cases which terminated on the third day of the disease, 25 per cent. died; on the fourth day, 20 per cent. died; on the fifth day, 41 per cent. died; on the sixth day, 16 per cent. died; on the seventh day, 12 per cent. died; on the eighth day, 16 per cent. died; on the ninth, 32 per cent. died; on the tenth, 55 per cent. died; on the eleventh, 61 per cent. died; on the twelfth, 70 per cent. died; on the thirteenth, 84 per cent. died. But perhaps the most noticeable feature of all is, that among the entire number of 115 deaths, no fewer than 40 occurred at the crisis of the disease; in other words, 35 per cent. of all the deaths coincided in time with the sudden defervescence of the temperature. The following facts are, therefore, obvious from a perusal of these figures: first, that during an ordinary attack of acute pneumonia death is most apt to supervene about the fifth day—i.e., at the height of the fever; secondly, that after the eighth day the danger to life increases enormously with each day that the crisis is deferred; and thirdly, that the crisis itself is a period of very considerable danger. In the vast majority of cases some trace of albumen may be discovered in the urine before the third day of the disease. But I believe that the amount of albumen which can thus be demonstrated is in itself a point of very considerable prognostic value, and one which seems to have been much overlooked by systematic writers. I find that the quantity of albumen present in the urine during the first three days of the disease bears a definite relation to the attendant mortality. Thus, of cases which presented one-fourth of albumen, 32 per cent. died; of cases which presented one-third of albumen, 52 per cent. died; of cases which presented one-half or more albumen, 86 per cent. died. Again, in three cases death was directly attributable to pulmonary embolism; in each case the sudden dislodgment of clot being due to premature exertion on the part of the patient. In two cases the saphena vein was the seat of the thrombosis, while in the third the clot had evidently formed in the right ventricle of the heart. Another point of interest may be found in connexion with the initial symptom of the disease. In about 65 per cent. of all the cases a distinct history of an initial rigor was obtained; but in seventy-six cases the disease is distinctly stated to have commenced with a severe gastro-intestinal attack. Now the rate of mortality among those cases which commenced with a rigor was about 23 per cent.; but of the seventy-six cases alluded to where the disease was ushered in with severe vomiting and diarrhœa, no fewer than thirty-six died—i.e., nearly one-half.

There are only two other points to which I would here draw attention. Digitalis was administered in forty-three cases, and of these nineteen died. This extreme degree of mortality would appear to condemn the remedy outright, but it must be remembered that in these cases the heart was probably failing from the commencement, and it is well known that such cases are exceedingly prone to die, in spite of treatment. A preliminary venesection was practised in six cases, a fatal result supervening in five. Some form of alcohol was administered in 68 per cent. of all the cases.

CLASS II.—QUININE.

This drug appears to have been administered with the view of exerting some special influence upon the exciting cause of the disease, and I find that in fifty-two cases it constituted the entire medicinal treatment, in doses varying from twelve to forty grains daily. In thirty-two cases the average temperature varied between 103° and 104°, and of these six, or 19 per cent., died. In twenty cases the

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average temperature varied between 104° and 105°, and of these five, or 25 per cent., died. Stimulants were administered in thirty-nine cases; nevertheless, two out of the eleven deaths occurred from collapse, when the fever suddenly defervesced at the crisis on the seventh day. From these facts it would appear that quinine, in the afore-mentioned doses, exerts but little beneficial influence in these cases; and after very careful examination of the various temperature charts, I have been unable to satisfy myself that the exhibition of the drug had tended in any way to modify the degree of fever. When these results are compared with those in the previous section, several points of similarity become apparent. In both cases the total death-rate exceeds 20 per cent.; under both methods of treatment the mortality bears a constant relation to the severity of the symptomatic fever; and both emphasise the same important fact—namely, that fatal failure of the heart at the crisis is of frequent occurrence, and results from the sudden withdrawal of the stimulating action of fever.

CLASS III.—ANTIPYRETIC TREATMENT.

I will now pass on to consider the results which have accrued from the application of general antipyretic principles to the treatment of acute pneumonia. And it might be well to explain at the outset that the object of these measures is to effect a reduction in the useless expenditure of cardiac force by annulling as far as possible the profligate influences of fever. The reduction of temperature may be brought about by the agency of two distinct classes of remedies—either by the administration of the various so-called antipyretic drugs (of whose mode of action we are still in ignorance), or by the employment of some method which can effect the reduction of temperature by the direct abstraction of heat. Unfortunately, I have only been able to discover ten cases among our clinical records in which the treatment of the disease was confided solely to such drugs as antipyrin and phenacetine. And since it is quite impossible to draw any practical deductions from an examination of so small a number of observations, I shall have to omit the consideration of this method of treatment, and confine the inquiry to the results which have attended the systematic efforts to control the symptom of fever by the direct abstraction of heat, and in so doing it may be well to commence at the beginning.

A. *The ice-bag.*—The local application of ice in cases of acute pneumonia has long been a favourite remedy with many continental physicians, and it is now some years since the ice-bag was introduced into the London Hospital as a substitute for the poultice in the treatment of cases belonging to the sthenic type. As in the case of every other innovation in the practice of medicine, many objections have been urged against the application of an ice-bag over the consolidated lung; and it would seem as if its most ardent advocates, by not insisting sufficiently upon the class of case in which the ice-bag can be used with success, and also, perhaps, by a tendency to somewhat overestimate the real value of the procedure, have unconsciously enabled these objections to exert an undue influence upon public opinion. I think, however, that everybody who has had much experience in the use of the method will admit the truth of the following statements:—First, that it is in the acute sthenic cases, and in these alone, that the ice-bag can be applied with any hope of success, and that those cases which belong to the secondary or asthenic variety of the disease are not only totally unfitted for, but actually affected injuriously by, its application. Secondly, that many patients exhibit a marked idiosyncrasy with respect to the local application of cold, and in these cases, however suitable they may appear, the ice-bag proves absolutely intolerable, and should therefore be at once removed. Lastly, when the individual peculiarities of each case has been inquired into and respected, the ice-bag proves itself of singular efficacy, and not only is the phantom failure of the heart conspicuous by its absence, but in the majority the heart's action becomes actually stronger, and the general condition of the patient undergoes considerable improvement. The antipyretic value of the ice-bag is uncertain. In the broncho-pneumonia of children a fall of temperature certainly does follow its use, but in cases of acute pneumonia I have never been able to detect any constant or decided effect as the result of its application.

Among my series of cases I can find only twenty-six in which the disease was treated solely upon this principle; for although a very large number of others received the ice-bag as a local application, the temperature was at the same time moderated by some accessory means. Of this number, eighteen exhibited an average temperature of from 103° to 104°, with two deaths; while in the remaining eight, the temperature of which exceeded 104°, two cases ended fatally. In no case did any bad symptom result from the use of the cold application. The value of the ice-bag (or Lieter's tubes) may therefore be summarised somewhat as follows:—As a local application in some sthenic cases it proves itself of more practical value than the linseed poultice, the pleuritic pain being relieved, while at the same time the general condition of the patient undergoes improvement. Its manipulation is simple, and by its lesser weight it does not tend to hamper the movements of the chest like the jacket poultice. As a general antipyretic remedy its value is inconsiderable. The mortality attending its use is probably lower than that which results from the previously described methods of treatment.

(To be concluded.)

GASTROTOMY; REMOVAL FROM THE STOMACH OF A SKEWER WHICH HAD BEEN SWALLOWED, AND HAD PENETRATED THE THORACIC WALL; RECOVERY.

BY D. LOWSON, M.D.

THE mental vagaries of the insane often lead them to swallow, sometimes with suicidal intent, bodies entirely unsuitable for digestion or deglutition. Of these some are so irregular in shape that it is difficult to understand how they reach the stomach at all, and others so formidable in appearance that one wonders they are not immediately fatal. It is not an unusual thing at asylum autopsies to find in the stomach a miscellaneous collection of odds and ends, whose presence had been till then unsuspected. In a remarkable case, which I have seen recorded in more than one work on surgery, a couple of pounds' weight of such articles as nails, knife-handles, iron shoe heels, pebbles, screws, buttons, &c., was discovered for the first time post mortem. The motives influencing a diseased mind are often past finding out, but in such cases there is probably some local disease or neurosis, and in cramming things down the throat they are making an ignorant and impatient effort to relieve pain or satisfy a craving somewhat akin to that of early pregnancy. Suicide, however, is doubtless the intention in the majority. Certain things, of course, cannot be swallowed with impunity. A sharp instrument like a knife may be expected to prove fatal from hæmorrhage or visceral injury; metal palates have occasionally penetrated, the thoracic aorta; and even the swallowing of a coin, usually looked upon as a harmless accident, has been known to cause death, as in a case occurring some years ago in the practice of Mr. Rudd of Withernsea, where a halfpenny by becoming impacted in the ileo-cæcal opening caused complete and fatal obstruction. A sharp-pointed body like a skewer may, if directed upwards, enter lung or heart, or if downwards, may injure some viscus in the abdominal cavity. On the other hand, it may take a less perilous course and discover itself by penetrating the abdominal wall or the margin of the thoracic parietes, as in the following case:—

On Sept. 14th, 1886, I was summoned to a case at the Hull Borough Asylum. Dr. Merson, the medical superintendent, gave this history: "W. A——, aged thirty-seven, labourer, had previously to admission been for a number of years off and on an inmate of the Sculcoates Workhouse. Four months before coming to the asylum he had become more reserved and sullen, and latterly suicidal. A fortnight before admission he had tried to choke himself by cramming a handkerchief down his throat, on another occasion to push a poker down, and once he attempted to twist off his testicles. On admission, Sept. 2nd, 1886, he was rather thin and anæmic. His muscles were flabby, he had small boils on the back of his neck, and the epigastrium was reddened evidently from a blister. Heart and lungs were normal; pulse 58, regular and full; the breathing was somewhat rapid, otherwise normal; the tongue was flabby and covered with a moist brown fur, and the fauces were red and congested. He complained of pain

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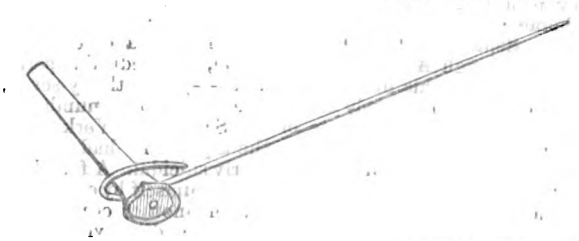
in the left side, and he manifested considerable sensitiveness when touched in that region, though the tenderness was not limited to one spot. There was neither sickness nor vomiting, nor any other symptom specially pointing to the stomach except an aversion to food, which he took in small quantity and after much pressing. He continued to complain of pain in the left side, but no abnormal appearance could be seen till four days after admission, when a small nodular prominence appeared under the seventh costal cartilage. It was painful when touched, and disappeared with a jerk on slight pressure. There was neither redness nor discolouration at this time, but later it became gradually more prominent and diffuse; redness began to appear around it, and abscess seemed to be forming. Poultices were now continuously applied, and on the evening of the 13th, a week after the local prominence was first observed, a small opening appeared in the centre, and the underlying tissue was apparently gangrenous. No foreign body was seen at this time, but next morning there projected from the opening an iron wire resembling a knitting needle, about six inches long. It could be pushed back and rotated to a certain extent, but could be pulled further out." I saw the patient in consultation with Dr. Merson on the same day, and found matters as above stated. A stiff iron wire protruded from the centre of a black slough between the seventh and eighth costal cartilages on the left side. It moved up and down with respiration, could be pushed back a little and rotated, but could not be withdrawn. As the cause of the obstacle to withdrawal was not apparent, and as there was no possibility of extracting from the patient any information on the point, no force was used. There was no pleurisy or peritonitis, so that it was evident that, whatever the thing was, its passage through the wall of the stomach and the other structures penetrated had set up sufficient adhesive inflammation to glue together the various layers and effectually prevent the escape of the contents of the stomach into the peritoneal and pleural cavities. Two modes of dealing with the case were advanced. One was to enlarge the opening and extract; the other to open the stomach through the peritoneal cavity and pull the wire back into the stomach, and then remove it through the abdominal wound. The first plan was rejected for two reasons. By enlarging the opening through which the rod projected we should certainly enter one serous cavity, perhaps both, and allow the gastric contents to escape, with the usual result; and in addition we had no knowledge of the magnitude of the obstruction at the other end, beyond the fact that it was small enough to pass the gullet. We therefore decided to open the stomach. An incision was made parallel to the left margin of the substernal triangle, and having divided the muscles and opened the peritoneum, I got hold of the anterior wall of the stomach, which, with a small piece of the great omentum, presented at the wound. Making an inch-long incision into the stomach, I introduced my finger, and behind the lower end of the sternum I felt the rod, and, attached to it, something resembling a handle. I hooked my finger round this and brought it out through the external incision, and with a slight amount of traction drew out the following: A skewer, 7½ in. long, with an oval eye, through which passed a fragment of a stem of a clay pipe, 2½ in. in length. One end of this had evidently been broken off close to the bowl, and was thus a little larger in circumference than the rest



of the stem. This, together with the oval shape of the eye of the skewer had prevented it from slipping quite through. I stitched up the wound in the stomach with Lembert's sutures, and closed the abdominal incision in the usual way.

Dr. Merson's report on the subsequent progress of the case may be summarised as follows:—The slough separated, and the wound looked clean and healthy on the fourth day. The abdominal wound healed in the greater part of its length by first intention, and was completely cicatrised on the sixteenth day. For nine days the patient was fed entirely by the rectum, and after the eleventh day by the mouth alone, the diet consisting at first of milk and beef and milk and egg. On the twentieth day solid food was resumed. The temperature on the evening after the operation was 100·2°; next morning 99·6°, evening 99·4°, after which it remained normal. The pulse was 98 on the first day, on the second 92 and 90, third 84 to 78, gradually falling to 64. The operation was performed on Sept. 14th, 1886, and the patient has remained until now in good health, and is still an inmate of the asylum.

It would be idle to speculate on the manœuvres and somersaults of the skewer and pipe stem during their sojourn in the stomach, or to attempt to estimate the probable number of failures before the latter accomplished its final and successful pass. The patient has always manifested an unwonted shyness, even when gently approached or questioned, with regard to the way in which the skewer was swallowed, and we have never been able to find out which end went first, or if the two articles were swallowed separately, or together as in the drawing.

Hull.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

CASES OF ABDOMINAL COLOTOMY; REMARKS.

(Under the care of Professor ROSE.)

WE give below notes of four cases in which it was necessary to open the bowel and establish an artificial anus for the relief of symptoms due in three cases to the presence of new growth in the bowel, and in a fourth for acquired communication between the rectum and bladder. In these cases the operation was performed through the wall of the abdomen, a procedure which presented many advantages, especially in Cases 3 and 4. Mr. Rose draws attention in his remarks to points in the technique of the operation to which he attaches most importance. Various methods having the same object in common—that of drawing the loop of intestine well forward and preventing its retraction—have been suggested. Maydl[1] passes a hard rubber cylinder covered with iodoform gauze through an opening in the mesentery close to the bowel. Lauenstein[2] effects the same result by closing the abdominal wound by passing sutures through the meso-colon or mesentery, and secures the extremities of the loop by careful suturing. Allingham[3] recommends a ligature passed through the meso-colon or posterior border of the gut; and Verneuil,[4] employs two large pins and resects two-thirds of the wall of the bowel protruding from the wound. Koenig[5] does the operation in a manner similar to that of Verneuil, but empties and closes the lower end before attaching the upper one to the wound. Kelsey's[6] method is somewhat like that of Verneuil. Cripps[7] secures the bowel by making two-thirds of the circumference of the exposed part project beyond the opening. For notes of these cases we are indebted to Mr. Cheatle, surgical registrar.

CASE 1.—W——, a gamekeeper aged sixty, was admitted under the care of Mr. Rose in January, 1890. A brother is said to have suffered from cancer of the lip. The patient stated that his health had always been good until about June, 1888, when he had a severe attack of diarrhœa and abdominal pains, the latter relieved by pressure, the attack lasting only a few days. Since then he had

[1] Sajous: Annual of the Universal Medical Sciences. Central. für Chir., 1888. [2] Ibid.
[3] Brit. Med. Jour., 1887. [4] La France Médicale, 1887.
[5] Medical Press and Circular, 1887.
[6] Med. Record, vol. ii. 1889. [7] Brit. Med. Jour., vol. i. 1889.

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experienced general abdominal uneasiness and the passage at intervals of blood with his motions, the blood being bright red and clotted. No other definite symptom could be obtained. He complained on admission of dull, aching, abdominal pains, which were relieved by pressure of the hand firmly upon the abdomen; also of flatulence and weakness across the loins. The abdomen was distended and very resonant on percussion, especially over the region of the ascending and descending portions of the colon. Per rectum the finger could just reach an irregular constriction which encircled the gut, and the examination caused pain, which lasted for some time. He complained of severe pain during and after the passage of each stool, which was generally accompanied with much mucus and stained with blood. He passed six or seven loose motions a day. On Feb. 8th inguinal colotomy was performed as follows:—Taking an imaginary line from the umbilicus to the anterior superior iliac spine of the left side, an incision about four inches long was made at right angles to it, and about half an inch external to its centre. The abdominal wall, which was fairly free from fat, was then divided carefully, and the peritoneum opened to a corresponding extent. The small intestine presented at the wound and was pushed back. The omentum was now seen and followed to the stomach; this in its turn was pushed back and the transverse colon exposed and traced down to the descending colon and sigmoid flexure. A thread of catgut was then passed through one of its longitudinal bands at the spot selected for future fixation, and the whole returned into the abdominal cavity, the catgut acting as a guide. The parietal peritoneum was then stitched to the skin with a continuous fine catgut suture. The sigmoid flexure and lower part of the descending colon were then pulled out of the wound by gentle traction, the guiding thread indicating the required portion of bowel. A long piece of thick catgut threaded on a handled needle slightly curved was passed through the abdominal parietes about one inch from the outer edge of the centre of the wound, then through the meso-colon and abdominal parietes on the other side; the needle was then withdrawn, and the suture repassed parallel to, and about one-third of an inch from, the first, in an exactly similar manner. The effect of tightening up and tying this suture was to bring into apposition broad surfaces of parietal peritoneum with the meso-colic visceral layers, thus bringing the abdominal parietes well behind the protruded colon, and effectually preventing its return to the abdominal cavity. About six inches of the gut were thus allowed to protrude. At the upper and lower angles of the wound a few additional fine catgut sutures were introduced, fixing the gut to the edge as an additional precaution, with a view to prevent further protrusion. The wound was then dressed, the bowel being covered with purified oil-silk protective, and the whole by the double cyanide gauze and salicylic wool. The patient still continued to pass loose blood-stained motions per rectum until the sixth day, when the protruded colon was opened by a small incision; fæces were squeezed out, and the peristaltic action thus induced led to a copious evacuation. The patient passed no more stools per rectum, and was discharged on March 1st with his artificial aperture acting efficiently. There was little or no alteration in the condition of the growth to be detected on rectal examination. The patient was exhibited at the Medical Society of London on March 17th, 1890.

CASE 2.—J. W——, a female aged twenty-three, was admitted in May, 1890, suffering from vesico-vaginal and recto-vaginal fistulæ. When ten years old she was, as she describes it, "cut for stone." The wound did not heal, and the patient lost control over micturition, a condition which has since persisted. Three years later, according to her account, an abscess formed, probably in front of the rectum, which burst and left a fistulous communication, allowing the passage of fæces into the bladder. For this distressing condition many plastic operations had been attempted, without success. So finally Mr. Rose performed inguinal colotomy in the manner described above. The result is satisfactory on the whole, though the lower opening has given some trouble in consequence of the occasional passage of fæcal matter.

CASE 3.—C. L——, a compositor aged sixty-three, was admitted on Nov. 27th, 1890. On Nov. 10th, whilst standing at work, he was attacked with violent abdominal pain, which was relieved by pressure; there was no vomiting, collapse, or faintness. Was not lifting or doing any laborious work at the time. The pain passed off, and he was able to walk home. Vomiting commenced on Nov. 11th, after every meal; the material vomited was simply food, with no fæcal odour; this, however, soon subsided. No motion had been passed since Nov. 9th, when, as far as he was able to judge, the action was normal. No abdominal pain was felt after the first attack. The patient was thin and emaciated, but with no anxiety of countenance. He seemed very comfortable, lying on his back, with knees and hips extended. Abdominal respiration was present. Examination revealed no abdominal distension; no pain on manipulation; no dulness on percussion. The liver was symmetrically enlarged, painless. Per rectum a small nodule could be felt high up in front of the anterior wall, suggesting an enlarged gland. On Nov. 30th vomiting reappeared, and became fæcal in odour. Constipation throughout this time had been absolute, and resisted treatment by castor oil and copious enemata, and so without delay operation was decided on, and from the uncertain situation of disease median laparotomy was performed. A tumour was found involving the sigmoid flexure and the intestine above it. The transverse colon was drawn out of the wound and treated in the manner described above. The case, as far as the colotomy is concerned, is doing well, but the probable presence of secondary deposits in the liver and his general cachectic condition do not justify his leaving the hospital.

CASE 4.—Although this is not a true case of colotomy, for in consequence of the situation of the disease such was impossible, still it is included with the above as the method of operation was precisely the same. M. D——, a violinist aged fifty-two, was admitted on Dec. 1st, 1890. No history or symptom could be clearly obtained prior to Nov. 24th, when he was seized with violent pains in the right iliac region of the abdomen, which he stated were relieved by pressure; the pains increased gradually until Dec. 2nd. Vomiting (not fæcal) commenced early, and increased in frequency *pari passu* with the amount of pain. His last motion was on Nov. 23rd, which was, as far as he knows, normal. The man was thin and emaciated. The abdomen generally was slightly distended, no pain on percussion or manipulation; per rectum nothing could be detected. There was vomiting after food, together with complete constipation. On Dec. 2nd the abdominal distension had greatly increased, and as the vomiting, pain, and constipation still continued, Mr. Rose opened the abdomen in the right inguinal region, as the symptoms pointed to disease near the cæcum. On examination, the disease was found to affect the upper part of the ascending colon, so a portion of the small intestine was brought out and fixed. In consequence of the excessive distension of the abdomen, it was necessary to open the gut on the operating table, when a copious evacuation of fæcal material took place, care being taken to protect the wound from contamination. The patient's condition improved (vomiting and pain ceasing) up to Dec. 5th, when his respiration became rapid, temperature subnormal, and dulness was detected at the bases of the lungs. The chlorides in the urine were decreased. He died on Dec. 7th. At the post-mortem examination the bases of the lungs were solid, swollen, and red, and the pleuræ covered with much lymph, and in the area of inflammation were hæmorrhagic patches. The top of the ascending colon was surrounded by a ragged ulcer with hard and abrupt edges, which encroached upon the lumen of the bowel, and only permitted the insertion of the tip of the finger. The wound appeared perfectly healthy.

Remarks by Mr. ROSE.—The above cases, supplemented by others treated in a like manner elsewhere, have convinced me of the great advantage of the mesocolic or meso-sigmoid suture described above, and for the following reasons: the operation is simplified, less time is taken in its performance, the separation of the upper and lower openings is definite, and the tendency to retraction of the spur avoided, thus preventing the passage of fæces into the lower part of the gut, one of the great troubles after such operations. The deep suture should not be removed until it is considered that the adhesions are sufficiently firm. In one case, however, I left it in longer than necessary, and suppuration occurred along its track, though this fortunately subsided after removal of the suture. Unless urgent circumstances arise, as in Case 4, the opening in the bowel should not be made before the fifth or sixth day. The occasional use of opiates or morphia hypodermically is sometimes necessary, especially when there is a tendency to vomit.

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BELFAST ROYAL HOSPITAL.

A CASE OF LIGATURE OF THE LEFT COMMON CAROTID ARTERY FOR HÆMORRHAGE; RECOVERY.

(Under the care of Dr. HENRY O'NEILL.)

ALTHOUGH it is some years since the operation described below was performed, it will be noted that the patient was recently seen in good health; and a record of cases where important surgical interference has been required, illustrating the effect locally and on the general state of health, is often desirable. Although it was considered advisable to ligature the common carotid artery for the arrest of the hæmorrhage, the surgeon secured later the ends of the vessels in the wound. The mortality after ligature of the common carotid for hæmorrhage has been somewhat high. Pilz gives 335 cases, with a mortality of 51 per cent.; Nunn's statistics gave a mortality of 50 per cent.; and those of Fischer a still higher death-rate, that of 66 per cent. During the American War, 81 out of 116 for whom this operation was performed died.[1] A case in almost every respect resembling this one, as regards position, character of wound, method of treatment, and result, was under the care of Dr. Geddings.

John C——, aged forty years, a pipe-maker, was admitted to the Belfast Royal Hospital, at 12.40 A.M., on Sept. 1st, 1885, suffering from an incised wound one inch and a half long and one inch deep, and about one inch below the lobule of the ear, and close behind the angle of the lower jaw on the left side. The patient on admission was pale and collapsed. No pulse could be felt at the wrist, and there was sighing respiration. It was reported that he had lost a great quantity of blood, but none was escaping from the wound on admission. On being placed in bed, however, a sudden gush of blood escaped, which was promptly arrested by Mr. Norman Smyth, resident pupil, who inserted his thumb into the wound, and pressing backwards, upwards, and inwards, effectually controlled the hæmorrhage until Dr. O'Neill arrived, who, on considering the position of the wound and the extensive hæmorrhage, decided upon ligaturing the common carotid artery and jugular vein on a level with the cricoid cartilage. This was successfully accomplished, as the hæmorrhage was controlled. The original wound was carefully examined and the divided ends of the external carotid artery and jugular vein were secured by forceps and ligatured; all hæmorrhage now ceased. Carbolised silk was used as ligatures, no sutures were used, and the wound was dusted over with iodoform, and a light gauze bandage applied. Considering the collapsed state of the patient, no anæsthetic was given. The patient was restless, thirsty, and occasionally delirious for the next two days. On the third day the temperature rose to 102° in the evening, and after the fifth day it was nearly always normal. From the third to the eighth day he perspired freely, causing sudamina over the chest and back. He complained of a severe pain over the whole left side of his head. The ligatures came away at various times up till the seventeenth day, when the ligature of the common carotid came away. He suffered from slight facial paralysis for almost four months. The wound healed by granulation. About six week after admission he was walking in the corridor of the hospital when he became chilly, and was suddenly seized with an attack of acute laryngitis, which caused such severe dyspnœa that it was feared tracheotomy would be required, but by prompt use of inhalation of steam and hot stupes to the neck and the administration of five grains of calomel, in a few hours he was free from danger.

Remarks.—When we consider the high mortality which is recorded after the ligature of the common carotid artery, this case ended satisfactorily, and notwithstanding the great loss of blood from a patient who had indulged freely in alcoholic stimulants for a long time previously to the accident. For the past four years and a half he has been able to perform his usual duties without a single unfavourable symptom. On Nov. 6th, 1890, he came under observation again, and Dr. O'Neill, who examined him then, found but little scarring to indicate the position of the former wound.

[1] Charleston Med. Journal, Sept. 1849.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Therapeutical Value of Venesection.

AN ordinary meeting of this Society was held on Jan. 27th, the President, Mr. Timothy Holmes, in the chair.

Dr. PYE-SMITH communicated a paper on the Therapeutical Value of Venesection, its indications and its limits. The writer recorded cases in which he had used bleeding from the arm, amounting to nearly fifty in number. The patients were suffering from bronchitis, acute and chronic broncho-pneumonia, lobar pneumonia, miliary tuberculosis of the lungs, valvular disease of the heart and pericarditis, Bright's disease, aneurysm, apoplexy and epilepsy. The general results were stated, and the remedy was then considered, not as one adapted for any single disease, but as useful in meeting certain indications of pathological states. These indications were stated as follows: First, cyanosis with distension of the right side of the heart, whether from pulmonary or from some other obstruction to the circulation; secondly, the intense pain of aortic aneurysm; and thirdly, uræmic and prolonged epileptic convulsions. The counterindications for bleeding were then considered, and criticism was offered of its use in fevers, in inflammatory disorders, in acute pneumonia, in hæmorrhage, and in apoplexy. An appendix of cases concluded the paper.

Dr. STEPHEN MACKENZIE thought that the time was ripe to reconsider the question of venesection. The pendulum of professional opinion with regard to it had swung from one extreme to the other. In many cases he had found it of great practical benefit, but its main use was in the first of the classes which Dr. Pye-Smith had mentioned—namely, in cases of over-distension of the right ventricle. In this dangerous condition, when the patient was in great peril, with blue lips and slow, feeble pulse, it did great good. In cases of heart disease it was often only of temporary benefit. In capillary bronchitis it gave great relief, and was sometimes curative; but it was in pneumonia that it often gave its best results. He quoted the case of a lady who was suffering from a very severe attack of pneumonia, with high temperature, rapid pulse and respiration, and cyanosis. Bleeding to twenty-six ounces proved of marked benefit. A second relapse was treated by leeching, which caused five ounces of blood to flow, and this did good, but, when bad symptoms returned for a third time, on the removal of twelve ounces of blood she rallied and recovered. He knew of a more extreme case, one of hæmoptysis, in which cyanosis was induced by the blood running down into the bronchi; in this also venesection was followed by recovery. The indications for its use might be generally stated to be venous congestion, with a struggling right ventricle. He had not used it for the pain of aneurysm, for he had found that iodide of potassium, amyl nitrite, or nitro-glycerine usually gave the relief required, and he referred to a case in which thirty grains of iodide entirely relieved the pain. He had bled many patients with uræmia, but the results were not encouraging. But the arterial tension in that case was produced by a toxic agent, and morphine, by acting as a chemical antidote, seemed to relieve it. Venesection in such cases he did not regard as the best mode of treatment, for it removed a minimum of the poison, and it took away blood which might be useful to the patient.

Sir GEORGE HUMPHRY said that his first experiences were at a time when bleeding was largely used, and he had lived to see it almost entirely forgotten. In his early days, when he was apprenticed, he used to bleed a great many people every week, especially in the spring and fall, to the advantage of his master and to no particular detriment to the patients. Many, indeed, came heavy and oppressed as if about to be ill, but they went away well; it therefore seemed to be valuable as a preventive measure. In those days they bled largely for inflammatory affections, especially for acute pleurisy, and he quoted two cases, in one of which recovery seemed to be due to this measure, while in another similar case in which it was not adopted a fatal result ensued. A small firm clot was held to confirm the necessity of bleeding, while if a large soft clot formed the indications were more doubtful. He asked how it was that one of the most important agents in the treatment of disease

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should have so completely gone out of use, and he came to the conclusion that it was because it had been greatly overdone. Many other excellent remedies had similarly fallen into disuse because they had been applied too indiscriminately and too generally. The same thing happened with trephining, and might, he feared, happen also with antisepticism.

Dr. BROADBENT could name an additional reason why venesection had been abandoned, and that was that the human medical mind was always under the dominion of theory, and theoretically it had been decided to be a wrong practice. The battle was decided on the worst of fields—pneumonia; for it was only applicable in that affection in the first stage of the disease, when there was interference with the pulmonary circulation and embarrassment of the heart. He was brought up in an anti-venesection school, and later he saw it practised in Paris in cases of rheumatic and other fevers with disadvantage; but since he had been in practice there had not been a year of his life in which he had not performed it. He had employed it repeatedly in aneurysm, though he admitted that the free employment of iodide of potassium had now done away to a great extent with its necessity. In cases of right ventricular overdistension his experience had been good, and he had seen life saved in both mitral stenosis and mitral regurgitation. In bronchitis, when cyanosis was present, he had not formed a favourable opinion of it; he preferred an emetic in such cases, which freed the bronchial tubes and compressed the right side of the heart, giving that relief to the latter which was required to see the patient through the emergency. It should always be remembered that the right ventricle should be in a condition to profit by venesection—a strong powerful impulse with a small, almost imperceptible, irregular, short, low-tension pulse. In uræmia his experience of venesection had been almost uniformly favourable. He did not attribute that affection to the direct effects of a toxic agent, but rather to the secondary effects of the toxic agent upon the circulation, producing high tension, and hence it was that venesection relieved it. He had also bled in cases of high tension without uræmia with good results. He once tried to arrest an ingravescent apoplexy by venesection, but he could get no blood from the vein owing to the excessive peripheral spasm. In another case of uræmic dyspnœa with acute distension of the heart the same difficulty arose, though the patient got better under the use of nitro-glycerine.

Mr. HULKE said that he was brought up in a practice where the patients consisted largely of seafaring men or agricultural labourers, and he testified to the relief which he had seen follow in cases of broken ribs or pleurisy. Great good also had followed bleeding in cases of aneurysm, and it was of immense value in certain cases of head injury. He mentioned a case of the latter class in which the abstraction of more than a pint of blood entirely relieved a condition of cyanosis and convulsion.

Dr. BATEMAN had used venesection, but only in healthy people, for head injuries, and he gave the details of two cases in which a good result had followed this practice.

Mr. POLLOCK had always felt the great importance of bleeding in certain classes of surgical injuries, especially in chest cases where ribs were fractured and lung perforated, there being hæmoptysis and a condition of great distress. He quoted the case of a deformed cripple with such an injury, in whom immense relief followed the abstraction of blood from the arm. He regretted much that students nowadays were not taught how to bleed.

Mr. HUTCHINSON, in connexion with the subject of venesection, mentioned the fact that surgeons were constantly seeing patients who had lost much blood and who were apparently none the worse for it. He had found that iodide of potassium took the place of bleeding in cases of aneurysm, though one of the best specimens of cured aneurysm in the London Hospital Museum owed the result to repeated bleedings. He too had been born in the bleeding era, and had alternately renounced and recommended it. Latterly, he had found that a very simple measure gave all the advantage of venesection, and that was placing the patient's feet up to the knees in a bath of very hot water for a considerable period. This local determination of blood appeared to him to act just as efficiently as venesection in cases of head and chest injury.

Dr. ANGEL MONEY considered it inadvisable to bleed in cases of bronchitis with cyanosis in the very old and very young. He had seen relief follow dry-cupping, but particularly desired to recommend a plan of Dr. Barlow's, of rapidly applying an Esmarch's bandage to the lower extremities, and then, on removing it, a considerable congestion of the limbs would result, with relief to the patient.

Dr. ROBERT LEE said that there had been a great want of breadth of philosophy in dealing with this subject. Bleeding went out of fashion because common experience was against the practice of it, and common experience likewise must bring it in again if it ever were to be reinstated in favour. He hoped the whole subject would be worked out from the beginning, and he felt that in the arrest of local inflammation bleeding would again be resorted to with advantage.

Dr. BERRY said that general practitioners would, as a rule, be content to leave the lancet in the pocket of the consultant, who then might get the blame if any were incurred for its use. The only case in which he had performed the operation was for the purpose of demonstrating the fact of death.

Dr. PYE-SMITH, in reply, expressed his gratitude for the general support his views had received. It appeared to him that the time had come to say that a valuable weapon, if rightly used, had been thrown away. Everyone would be sorry if its revival were to lead to abuse. The indications were probably the recognition of the anatomical and physiological condition of the organs at the time venesection was proposed rather than the consideration of the pathology of the disease. Bleeding had been done in the cases of aneurysm in addition to treatment by iodide of potassium. The combined accumulation of experience would soon lead to the formation of an opinion as to the cases in which this measure was desirable. He had seen in Paris the pernicious consequences of bleeding in acute rheumatism and typhoid fever, and the error then was due to theory; if, however, we followed merely clinical experience, this error would be avoided.

CLINICAL SOCIETY OF LONDON.

Lupus successfully treated by Scarification.—Acromegaly.—Bilateral Adductor Spasm, with Unilateral Congenital Dislocation of Hip.—Congenital Cleft of Nose.—Cervical Swelling.—Enteric Fever (fatal) without Intestinal Ulceration.

AN ordinary meeting of the Society was held on Jan 23rd, the President, Sir Dyce Duckworth, being in the chair.

Dr. BALMANNO SQUIRE exhibited a case of Lupus which had recovered under treatment. The patient was a woman aged thirty-five; the disease had lasted twelve years, and she had remained well for seven years after the treatment ceased. The method adopted had been erasion and multiple linear scarification.

Mr. STEPHEN PAGET showed a case of Acromegaly. The patient was a man aged forty-two, in whom the disease had been in progress for ten years. There was extreme lengthening of the face, with overgrowth of the facial bones, especially the lower jaw. The hands and feet were greatly enlarged, and the patient had lost six inches in height by the advanced deformity of the spine. The thyroid was enlarged. Vision was defective. There were molluscous growths on the trunk, and osteophytes in the knee-joints. The voice was thick and guttural and there was loss of strength. Mr. Paget regretted that he had not yet been able to make detailed notes of the case, or to get the patient photographed. He showed photographs, lent by Sir William Turner, of a skull in the Edinburgh Museum.

Mr. RAYMOND JOHNSON showed a girl, aged eight, with bilateral adductor spasm of the lower extremities, associated with congenital dislocation of the right femur. The head of the femur lay forwards almost beneath the anterior superior iliac spine. There was a history of malpresentation at birth.

Mr. ARBUTHNOT LANE showed a case of unusual Congenital Cleft of the Nose in a male child.

Mr. W. G. SPENCER exhibited a boy aged eight, who had a swelling at the root of the neck on the right side of obscure nature, which it was proposed to puncture for the purpose of diagnosis.

Sir DYCE DUCKWORTH then delivered his inaugural address. After thanking the members for the honour done him in electing him President, he proceeded to refer to the duty of clinicians to cultivate the best methods of the clinical art. He undoubtedly was the best practitioner who saw most of disease, and had most to do with trying to

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alleviate it. He referred to the pernicious and growing craving among the public for medical knowledge, and dwelt on the unwholesome practice of publishing pseudo-scientific articles by medical men in the lay journals. He then gave some illustrations showing how fluctuating were the waves of fashion with regard to remedies during his own medical life. When he was a student it was taught that brandy was a specific for all conditions of fever; and later, as a clinical clerk, he was told that mercury was of absolutely no benefit in the treatment of the lesions of syphilis. He next proceeded to refer to Dr. Koch's method of treating tuberculosis. He thought that that physician had been very unfairly pressed at first to disclose his research, for the work of bacteriologists, like that of philosophers, could not be hurried. A most unwholesome excitement had been fostered in the ranks of the medical profession, and an undue haste had been shown to carry out a plan of treatment not yet recommended for wide application by Koch himself. It would have been better to have waited till the results of his researches had been formally laid before the profession in the usual manner. After the publication of his recent communication, we could only regret that he had placed himself in an unprofessional position, and that he had been unwisely counselled to pursue a course which probably no one more than himself now more bitterly regretted. He regarded the practice of the Koch treatment at present as unwarrantable, and the time had not yet arrived for its general application. Referring to the bacillary theory of tuberculosis, he wondered what its position would be in ten years' time. With regard to the causation of tuberculosis, as of other diseases, it was of the highest importance to pay attention to the diatheses, to the tissue proclivities, of families and individuals. He next referred to the regrettable tendency on the part of many medical men to prescribe prepared chemical foods and medicines without adequate inquiry as to their composition and suitableness. He concluded with some remarks on the preparation for a medical career, expressing his sorrow at the present neglect of the study of botany, and advocating for general culture the study of the classical writings.

A vote of thanks to the President for his address was proposed by Sir Andrew Clark, seconded by Dr. Ord, and carried by acclamation.

Dr. SIDNEY PHILLIPS read a paper on two cases of Typhoid Fever fatal at a late period, without Intestinal Ulceration. The first case was a male, who, after fourteen days of illness with diarrhœa came into St. Mary's Hospital on Sept. 6th, 1890, with spots and other signs of typhoid fever. For some days there was nothing noteworthy in the course of the case, but on the 20th the temperature rose to 104·4°, the delirium greatly increased, and there appeared a copious eruption of many fresh spots; the tremor, already marked, became much more severe. On the 25th the signs of the typhoid state became marked, and the pulse-rate 150 a minute. There were never more, often less, than three stools daily, never any melæna. He died on Sept. 28th. The necropsy showed that Peyer's glands in the lower third of the ileum were in the stage of deposit, as well as the mesenteric glands. No ulceration existed anywhere in the intestine. The second patient, a male, came to St. Mary's Hospital after eight days' illness with typhoid fever. On Sept. 23rd, eight days after admission, spots were seen on the abdomen. Four days later the pyrexia increased to 104°, with commencing pneumonia of the right base. The signs soon became more marked, the patient sank into the typhoid state, and died on the fifteenth day after coming into hospital. Throughout the illness the tremor had been extreme; there was never diarrhœa nor melæna, but the stools were of typhoid character. The necropsy showed Peyer's glands in a stage of deposit, but no ulceration of the intestine; there was red hepatisation of the right lung. Dr. Phillips remarked that ulceration usually occurred in typhoid fever by the tenth day; the first patient died some time after the twenty-fourth, the second some time after the twenty-first day of the disease, but in neither case was there any ulceration of intestine. Since writing the paper, he had found a similar case was recorded in *La Semaine Médicale* of March last, and though there was always a presumption of ulceration after the tenth day, epidemics of typhoid fever varied in type, and these cases showed that ulceration might be long deferred and perhaps never present throughout the course of even a severe attack. Dr. Phillips also drew attention to the fact that though severe tremor in typhoid fever was usually regarded as associated with deep ulceration, it was not necessarily indicative of it, as the cases proved. The existence or non-existence of ulceration in any given case of typhoid fever was of great importance. These cases showed that it must not be taken for granted, either on account of the late stage the disease had attained, or on account of tremor, that ulceration was present; the signs more to be relied upon were melæna, excessive diarrhœa, and tympanites, and if these were absent there was no reason to abstain from aperients if otherwise indicated.—The PRESIDENT asked the author if he said that he was able to make a diagnosis and lay down definite rules for distinguishing between the presence and absence of ulceration in cases of typhoid fever, and if he proposed to treat these classes differently. He himself would prefer to give the patients the benefit of the doubt, and treat them all as if ulceration were present.—Dr. EWART said that among the cases which were labeled as enteric fever a certain number presented slight symptoms; a little fever, a few rose spots, and some tenderness in the iliac fossa. Such cases might mean nothing more than glandular reaction to enteric infection, and they would run a very mild and short course. The symptoms were due to nothing more than irritation from absorption of the poison. In other severer cases much of their gravity was due to auto-inoculation. He asked Dr. Phillips if the diagnosis of these cases had been placed on an unassailable footing, and if Ehrlich's reaction had been obtained.—Dr. KINGSTON FOWLER had never seen a fatal case of enteric fever without finding some ulceration of the intestine, but many cases of mild and abortive typhoid fever which recovered might not go on to ulceration. In treatment he would certainly be inclined to follow the rule the President had laid down, and not administer purgatives. He asked what measures had been taken to lower the temperature in the cases related. He himself had not seen the "typhoid state" for years, and thought its absence due to antipyretic treatment. He regarded abdominal symptoms as more valuable than tremor as indicative of deep ulceration.—Dr. GLOVER asked Dr. Fowler what special antipyretic measures he relied on to prevent the development of the "typhoid state."—Dr. FOWLER replied that he was speaking of general antipyretic means, such as cold bathing, the application of ice-bags, sponging with iced water, and the covering of the patient simply with a sheet. The drugs used had been antipyrin, antifebrin, and quinine.—Dr. SIDNEY PHILLIPS, in reply, defended the diagnosis of typhoid fever in these cases: the general symptoms during life and the enlargement of the agminate and mesenteric glands found after death were sufficient to establish it. Both his cases lasted more than fourteen days, and therefore could not be classed as abortive. As to treatment, they were sponged every hour when the temperature was high, and they were given quinine, as both antifebrin and antipyrin he regarded as unsatisfactory. He was not ready to formulate rules as to the administration of purgatives. Calomel might be highly injurious if ulceration was present, but what he wished to call attention to in the paper was that there might be little or no ulceration in cases where blood-poisoning symptoms threatened life; in such cases calomel might be the only means of saving it.

MEDICAL SOCIETY OF LONDON.

Adjourned Debate on Chronic Disease of the Uterine Appendages.

AN ordinary meeting of the Society was held on Jan. 26th, the President, Mr. Knowsley Thornton, in the chair.

The PRESIDENT, in reopening the debate, asked Dr. Duncan his reasons for selecting only the last thirty cases from his practice. Though statistical records were not of great value, because they did not show in individual cases the factors which led to success or failure, yet it was well to study the whole experience of any individual operator and to ascertain the amount of his failure before he attained fair success in operating. Whatever value might attach to the comparison of masses of statistics, a limited list such as that presented by the author was likely to give a false impression as to his practice and as to the dangers of these operations. He pointed out that these operations were not entitled to rank with ovariotomy for tumour, because tumour always killed if not removed, whereas a large proportion of these women would certainly not die and would most of them get well at the menopause.

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He allowed, however, that there were many cases in which these operations of expediency might with justice be performed. He then proceeded to criticise the paper in detail. With regard to Case 6, he thought this should not be included in a list of chronic diseases of the uterine appendages, for it was an ordinary ovariotomy for dermoid tumour. He preferred to reverse the order of events as described by the author in the formation of cystic tubes, either hydro-, hæmato-, or pyo-salpinx. He thought that the narrow uterine orifice first became occluded, then morbid material escaped at the open peritoneal end, setting up adhesive peritonitis, and hence cystic dilatation of the closed tube followed. He doubted if cirrhosis of the ovary resulted from the pressure of adhesions, for such adhesions were often absent in cases of ovaritis in the course of the exanthemata. In the great majority of cases of what might be called "adhesion tumours" the ovaries were large, thickened, and œdematous. He thought that in most cases the cirrhosis preceded the adhesive peritonitis. The cases described by the author as congenitally ill developed were probably the result of acute disease during childhood, especially about puberty. In these cases he would avoid dilatation of the cervical canal, as likely to set up inflammation. Amenorrhœa he regarded as a more important symptom of diseased appendages than menorrhagia. Many cases which suffered from pain and menorrhagia would cure without surgery, but none, so far as he knew, with pain and amenorrhœa would do so, even if the appendages were removed. He differed from the statement that the pain was referred to the side most affected, his experience having been opposed to this. Personally, he had found, contrary to Dr. Duncan, that most cases with a palpable tumour presented a marked increase of flow, whereas it was by no means a constant symptom in the milder cases of chronic inflammation of the appendages. He agreed that rectal examination was very valuable, often more so than vaginal. The first finger in the vagina and the second in the rectum enabled most accurate knowledge to be arrived at as to the size, relations, and amount of fixity of a swelling. Anæsthesia as a rule should be avoided for the purpose of examination, for the following reasons: (1) Its own inherent risks; (2) the abolition of pain allowed examination to be pushed to dangerous lengths; and (3) the absence of the patient's sensations were a loss to the examiner in forming a correct opinion as to the need for operation. Sometimes, however, it might be necessary in a very neurotic patient. Though he did not deny the occasional existence of intermittent hydro- or pyo-salpinx, yet it was a very rare condition. It was often years, rather than months, before patients experienced the full benefits of these operations. In certain cases of tubal gestation waiting and watching was the only proper course, and he alluded to cases diagnosed as probably tubal gestation which recovered perfectly with rest and care. He found that ergot given in a bitter tonic mixture for long periods in combination with efficient hot douching was very valuable. Blistering and tampons did no good, and he saw no benefit likely to follow dilatation and electricity. He affirmed that the removal of the ovaries unsexed a woman and destroyed her sexual desires, basing his statement on the results of careful inquiry as to the after-history of his patients. He added that it was often extremely difficult to determine, even by the aid of the microscope, whether ovaries were diseased or not. He had only once failed to complete the operation for removal of the appendages, in consequence of the matting together of the parts. He thought it was unadvisable to tie the pedicle in three portions, as the middle loop was liable to be left loose. The transfixion should be made through the utero-ovarian ligament, using fine silk and tying slowly. He drained at present more frequently than he used to, but left the tube in a much shorter time. He had seen little good and much evil from flushing the peritoneal cavity, and he was glad to find he was not alone in his experience. He had discarded oiled silk as a dressing many years ago, preferring gauze next the wound. He had not had half a dozen cases of stitch-hole suppuration in his whole practice. He had seen so many cases recover from subsequent peritonitis without opening, and he had seen so much evil from interference in the acute stage, that in most cases he would adopt expectant treatment with opium and atropine. Passing to Mr. Doran's paper, he did not think massage was likely to be of service, but decidedly dangerous in many cases. He agreed with his remarks as to the absurdity of relying on the efficacy of electricity to destroy adhesions, open up closed tubes, and kill gonococci without damage to the individual; he preferred to leave catheterism of the tubes to abler manipulators than himself. Vaginal puncture had nothing to recommend it, and much to contraindicate its use. He thought drainage of a hydro-salpinx far more dangerous than salpingotomy, but mere separation of adhesions sometimes gave good results. Speaking generally, he would encourage these patients to lead a natural life, and not one of chronic invalidism. The curette might be useful in endometritis before the tubes and ovaries became involved, in which latter case its use must be very dangerous. Without thorough asepsis, the curette was more likely to set up disease in the appendages than cure it. He did not believe that the mental conditions and after-effects referred to by Mr. Doran were at all common. The disappointing continuance of pain which sometimes occurred after operation usually arose from inflammatory troubles resulting in adhesions, especially of the intestines, often due to imperfect asepsis. The artificial opening in salpingotomy would probably be closed within twenty-four hours. He thought that persistence of menstruation after these operations was due either to imperfect removal or to the presence of a supernumerary organ; his own experience of it was practically *nil*. Even after complete removal, however, periodic metrostaxes might occur from habit or irritation of nerves by ligatures. He never read a more absurd or misleading statement than the words of Dr. Mary Dixon, quoted by Mr. Tait with approval at a discussion at this Society in 1888, in reference to the operation for removal of the appendages: "It will save more lives than ovariotomy, because more need it." The diseases for which ovariotomy was performed always killed in time without operation; while the diseases for which the appendages were removed rarely killed, but in the vast majority of cases did not even shorten life, though they often rendered it very wretched. The two operations could not, therefore, be fairly compared. The views promulgated by many authorities as to the amount of sterility due to these chronic diseases of the appendages were exaggerated and misleading, and he said that both ovaries and tubes were too often removed when only one side was diseased. Many of the cases in which pain recurred on the other side were neurotic cases which should never have been touched at all, and of the others most were the result of bad surgery and of imperfect asepsis.

Dr. C. H. F. ROUTH said that in the epitome of cases which had been circulated nothing had been mentioned as to the previous treatment, and though the gynæcologists had been accused of setting up inflammation in these cases, yet they brought about many recoveries without removal of the tubes. He quoted a case of pyo-salpinx, in which the matter became consolidated, and later a collection formed on the other side. The latter burst in attempting removal, with a fatal result. He advocated puncture, followed by aspiration either per vaginam or per rectum, injecting the sac with iodine and draining. He had treated seven cases thus without a fatal result. The average age of Dr. Duncan's thirty cases was only twenty-seven; the lives of these women were saved, but they had been castrated, their matrimonial love and future desire for having children were gone, and this mutilation gave rise to a moral question which they were bound to consider. He confessed he looked with horror upon cases treated with this result which might have got better by other means. The same remark did not apply to clitoridectomy, which did not appear necessarily to destroy the sexual appetite. Salpingotomy, which had been performed successfully, might perhaps have been adopted in some of these cases. He quoted a case of gonorrhœa in which, on examination at about the third day, he felt the tubes to be swollen. Electricity was applied to the interior of the uterus, and the patient was cured.

Dr. HEYWOOD SMITH said that his own experience was in favour of menorrhagia, and not amenorrhœa, being the common accompaniment of ovarian disease. He frequently found the pain greatest on the opposite side, and this he thought might be accounted for by uterine displacement. He was surprised to hear the President say that he would wait in cases of tubal pregnancy, and he asked how long they should delay, and how, in case of delay, the patients got well. He found it was quite the exception for the sexual appetite to be lessened after removal of the appendages. In cases of sexual excitement, removal of the

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clitoris was more likely to be curative than the appendages. As to the moral question, the important point was that the operation was done usually either to prolong life or to reduce the sufferings of the patient. Relief was a necessity to the poor, to enable them to earn their living. If a tube were removed, and the ovary left, he wondered what the effect would be as far as menstruation was concerned.

Mr. LAWSON TAIT was glad to find himself in the main in agreement with the author of the paper and with those who had spoken. He ridiculed the moral view of the question which Dr. Routh had put forward, and failed to see why an operator should be appealed to as a Christian to promote the development of the sexual faculties. In his own experience he had restored more sexual appetites than he had destroyed, and he could give numerous instances of patients who had led a single life before operation who had returned with cheerfulness to their marital duties afterwards. It was nonsense to say that a woman was ashamed to appear before mankind after her ovaries had been removed, and he believed that Dr. Routh would gladly make himself a eunuch if he suffered the pain endured by patients with ovarian disease. He was surprised to hear the President say that flushing did harm, for he was in the habit of using it most days of the week, and he had never had a mishap from it. The same remark applied to drainage. Sir Spencer Wells had said that the drainage-tube should be done away with, but he found it most valuable, especially in giving warning of the beginning of hæmorrhage. He kept it in a much shorter time than he used to—two or three days, instead of five or six. As to the Staffordshire knot, like other knots, it could not be tied with negligence. Once or twice he had failed with it, through not attending to his own directions for its use. It was not fair to say that the knot was not to be trusted; it was the man who tied it who was not to be trusted. Referring to the quotation of Dr. Mary Dixon, he called to mind the fact that at the time it was made there was great scepticism as to the very existence of pyo-salpinx, and Dr. Fowler's remarkable figures from the Middlesex Hospital records showed how fatal that disease was. Hence it was not unfair at that time to say that more women would be saved by removal of the appendages than by ovariotomy. Now, however, the fatality of this disease was not so great, because many cases were treated early. He was constantly protesting against the mixing up of cases which ought to be operated upon with those which should not, and because some of his critics were unable to recognise those which should be treated by operation they accused the operators of practising ignorant empiricism. He emphasised the essential difference between cases like those neurotic ones which demanded a guarded opinion and those cases of clear diagnosis in which operation was the only thing to save life, or at any rate to relieve suffering. In cases like those of menstrual epilepsy, where he had once removed the appendages he now hesitated to do so; but still, from recent experience, he was inclined to think that a vast field lay before them in these neurotic cases where operation might give relief. The gain at any rate would probably be greater than the evil, moral, Christian, or other, likely to result therefrom. Referring to the treatment of pyo-salpinx by electricity, he said it required a very robust faith to believe that this measure could cause pus to dry up. Let the advocates of it try a whitlow or a suppurative arthritis, where one could see and judge the result, before making assertions which could not be proved.

Dr. LEWERS said it was most important to inform ourselves as far as possible as to the natural course taken by cases of diseased Fallopian tubes when not operated on. He referred to a series of seventeen cases of dilated tubes which he had described in a paper read before the Obstetrical Society as bearing on this point. The late Dr. Matthews Duncan had commented on the comparatively advanced age of the patients in this series, and had argued that, as fifteen of the seventeen died from causes unconnected with disease of the Fallopian tube, it was probable that in many of the cases the disease had undergone a process of natural cure. Dr. Lewers believed this to be the true explanation. He considered, therefore, that a prolonged course of palliative treatment—one year and a half to two years—should precede operative interference. He commented on a case of ill-developed ovaries and uterus described in Dr. Duncan's paper. He could not agree that because the sound passed only two inches in a virgin of twenty the uterus was ill developed, as this measurement was the normal length of the uterine cavity in the virgin according to all standard authorities. The specimen of the appendages removed in this case had been shown, and he felt bound to say that as to size and all other obvious characters they, in his opinion, showed no abnormality.

Dr. AMAND ROUTH desired to emphasise the value of palliative treatment, and he quoted a case in which operation had been advised, but the patient's husband dying and sexual rest being thus gained, the patient got perfectly well. The measures he adopted were rest, administration of ergot, hot douches, and the occasional painting of the posterior cul-de-sac with strong iodine.

Dr. RUTHERFORD alluded to the paucity of cases of ovarian cysts in Dr. Duncan's list. In the case of ill-developed uterus with chronic dysmenorrhœa he thought the treatment by dilatation of the cervix would fail to relieve the patient.

Dr. CULLINGWORTH agreed in the main with the paper and the treatment. In speaking of chronic inflammation of the uterine appendages great importance should be attached to a history of recurrent attacks of peritonitis. As to preliminary palliative treatment, in many cases it was not at all desirable, and he certainly should not prolong it in the way Dr. Lewers had suggested. What could tonics and aperients do to cure a pyo-salpinx? Repeated blistering was an absolute barbarism, whether applied outside or inside. Hot vaginal douches were fashionable and did no harm, but they did no good. Glycerine tampons were mere child's-play. It was the rest in bed that did the good, and outside this no treatment other than surgical was of avail. A comparison of treatment by rest and by operation would be very fallacious, for rest constantly only temporarily alleviated a mischief which later broke out afresh. As to the proposition that adhesions should be separated and the parts not removed if normal, it should be remembered that a healthy looking tube might be full of pus. In cases of unilateral pyo-salpinx the opposite tube should be also removed, whether it looked healthy or not. He was open to conviction, but he did not at present countenance or teach that tubes or ovaries should be removed unless there was distinct evidence of gross physical lesion. He agreed with Mr. Tait as to drainage and flushing, and he concluded by stating his opinion of the absurdity of believing that curetting, so largely practised in France, could possibly cure tubal disease.

Dr. DUNCAN, in reply, was very glad to find that in the main the various speakers agreed with the views expressed in the paper. He said the thirty cases tabulated began some two years ago, from the date when the obstetric physicians at the Middlesex Hospital obtained the right to perform abdominal section. Prior to that date he had removed diseased appendages nine times, with one death from septic peritonitis. Since the last-published cases he had operated ten times, with, unfortunately, two deaths, the first from slipping of the pedicle ligature and fatal hæmorrhage, and here he emphasised the importance of tying the broad ligament in three places. He could not agree with the President that doing so was dangerous, and he meant in future, in those cases where the broad ligaments were bound down by old inflammation, to follow out this method, and trusted by doing so to eliminate one cause of death. The last death occurred a week ago, owing to a bit of the omentum getting strangulated, first in the drainage-tube, and then in the abdominal wound after the tube was removed. He still maintained that whenever tubal gestation was suspected an immediate operation was called for. He could not agree that dilatation of the cervix was attended by risk, provided the strictest antiseptic precautions were taken. He had never had any ill result. His experience was similar to that of Dr. Heywood Smith, who said that amenorrhœa was the exception and menorrhagia the rule in cases of diseased appendages. He was sorry to hear Dr. Routh advocating puncturing a pyo-salpinx per vaginam, as it was a most dangerous proceeding. He mentioned a case on which he intended performing abdominal section the following morning where a pyo-salpinx had been punctured two years ago, causing general peritonitis and not curing the disease. He did not think the operation of making an artificial ostium was of practical use, and he had no intention of performing it. He was sorry to hear Dr. Lewers recommending that these cases should be treated by an expectant treatment for eighteen months. Indeed, he was

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in complete accord with the forcible remarks of Dr. Cullingworth, who insisted that the time mentioned in the paper (two months) was too long. He also quite agreed with the last speaker as to the frequency of recurrent attacks of pelvic peritonitis in the causation of chronic disease of the uterine appendages.

Mr. DORAN, in reply, said that it did not necessarily follow that adhesions would re-form after they had been broken down. The conditions under which they originally formed were unfavourable, but not so after the operation for breaking them down. Scraping out the uterus was useless and empirical in tubal disease. He much regretted the idle talk that had been indulged in with regard to the sexual condition after ablation of the appendages. He concluded by advocating delay rather than decision in dealing with cases of chronic disease of the appendages, just as, on the contrary, they should be decided and not dilatory in dealing with patients with ovarian tumour.

ROYAL ACADEMY OF MEDICINE, IRELAND.

A MEETING of the Obstetrical Section was held on Jan. 2nd, the President, S. R. Mason, in the chair.

Exhibitions.—Mr. M'ARDLE exhibited a subperitoneal fibroid tumour which had been removed from a patient aged thirty-two, and a ruptured ovarian cyst taken from a patient aged twenty-four. He also exhibited a large ovarian cyst. — Dr. W. J. SMYLY showed a large fibro-myoma which he had removed on account of hæmorrhage. The pedicle was treated extra-peritoneally, and the patient made a good recovery. He showed the tubes and ovaries removed for gonorrhœal salpingitis. There was extensive perimetritis, and the uterus was retroverted and adherent. The adhesions were broken down and the uterus was anteverted and stitched to the abdominal wall. The patient did well. An ovarian tumour removed in July. The patient had been suffering great agony. The tumour was found universally adherent, and the pedicle was twisted four times on its long axis. The patient made a good recovery.—Dr. MACAN showed a case of fibrous tumour removed from a patient who was sent up to Dr. Bennett for abdominal tumour. She had been two months married, and was about two months pregnant. The operation was not a difficult one, but the peritoneum became infected from the stump, and she died on the fifth day after operation.—Dr. MACAN read a paper on a case on which he had performed abdominal section three times, and removed an ovary each time. He then drew attention to the fact that a great many similar cases to this had been explained by a separation of one ovary into two parts by some constricting band, and that Professor Winckel, in his work on the "Diseases of Women," says that no case is absolutely proved to be one in which three ovaries are present unless the three ligaments of the ovaries are also found. As his case did not fulfil this condition, he was obliged to place it in the second class, where there was a greater or less probability of three ovaries being present. The chief points of interest in the case were: (1) The performance of laparotomy three times on the same patient; (2) the probability of three ovaries being present; (3) the occurrence of a hernia in the abdominal walls, which would, in any case, have called for operative interference.—Dr. F. KIDD thought that the title of the paper was based on an assumption—as no microscopical examination of the tumour had been made at the time—nor was any description given as to where or in what manner the pedicles of these various tumours had been ligatured with reference to their attachments to the uterus. Dr. Kidd was surprised that Dr. Macan did not find that there still remained two ovaries when he operated on the so-called ovarian tumour, as most operators adopted the precaution of examining the condition of the uterus and the ovary before closing the wound. Dr. Kidd believed that there never had been demonstrated the presence of a third testicle, and there was a great analogy between the testicle in the male and the ovary in the female.—Dr. HORNE wished to know if both Fallopian tubes had been removed, and thought the occurrence of menorrhagia subsequently to the removal of two ovarian tumours as very unique and difficult of explanation.—Dr. BAGOT said that Dr. Macan had stated that this was the first case in Ireland in which a third laparotomy had been performed. He thought that it must have escaped Dr. Macan's memory that he had previously performed a third laparotomy in the case in which he mentioned that he had operated for abscess of the bladder wall. As to the method of flap-splitting the abdominal walls in operating for hernia, he had seen patients operated on by this method by its orginator.

Fæcal Fistula.—Dr. W. J. SMYLY said this fistula was the result of coitus, and passed through the navicular fossa upwards and backwards into the rectum. The case was cured by dividing the perineum, and thus splitting flaps on the lateral walls and uniting them by continuous catgut suture. The accident is one of extreme rarity.—Dr. MASON said a patient had recently been in the Coombe Hospital who had been locked in a room by a man who had forcible connexion with her. She had lost an enormous quantity of blood, and when admitted to hospital the posterior fornix of the vagina was found to be torn transversely; the rectum was uninjured. She made a good recovery, the vagina being kept clean by frequent injections.

At a meeting of the Surgical Section on Dec. 12th, the President, H. C. Croly, occupied the chair.

Treatment of Lupus by Koch's Method.—Mr. THORNLEY STOKER exhibited two patients in whom lupus had been treated by Koch's method.

Operative Treatment of Sympathetic Ophthalmia.—Mr. STORY read a paper on operations on eyes blinded by sympathetic ophthalmitis, and gave the details of several cases operated on by various methods. His conclusions were that during active sympathetic inflammation no operation should be performed, and that after the subsidence of the inflammation the best operation was that proposed by the late Mr. Critchett, in which the lens capsule is divided by two cutting needles. If glaucoma occurs during active sympathy, and an operation is absolutely necessary, he would incise the cornea or sclerotic, but not do an iridectomy. His object was to call attention to the operation described in his paper, though the result could not be regarded as very satisfactory. No doubt, had the injured eye been removed in time there would not have been any occasion for an operation on the sympathising eye.

Transfusion and Intravenous Injection of Milk and Saline Fluid.—Dr. MELDON read a paper on this subject. Having reviewed the history of transfusion, he expressed his opinion that the evil results which have at times caused this operation to fall into disrepute have been occasioned by the employment of dissimilar blood. The author then narrated several successful cases of direct transfusion, as also one case saved by the injection of carbonate of ammonia and water.—The PRESIDENT, with reference to one of the cases, asked whether introducing the hand into an empty uterus—if hæmorrhage was not going on—was not, in a case of collapse, a most dangerous proceeding. The late Alfred M'Clintock taught that if the placenta was retained with any symptom of collapse it was dangerous to introduce the hand into the empty uterus to remove it. He had himself been taught caution in an interesting case in which he was about to perform (with the late Dr. Robert M'Donnell's instrument) transfusion to save a woman's life. Her husband said he was willing to give some of his blood for the purpose; but having taken the precaution of examining him, the man proved to have valvular disease of the heart. In like manner, he should make sure that the kidneys were not diseased.—Dr. CRANNY said he had had experience of three cases of transfusion done by the late Dr. Robert M'Donnell for post-partum hæmorrhage. In two of them the result was perfectly successful, but the third patient died. There was an immediate increase in the volume of the pulse, and the general condition of the patient was so improved as to be noteworthy. It was a well-recognised principle that when there was bleeding from the uterus, and either a portion of the placenta or clots remaining inside, the uterus should be emptied; but if there was collapse at the moment the medical attendant should wait till the collapse was over. There would be no hæmorrhage during the momentary collapse, but if a piece of placenta were left in the uterus it would bleed.—Dr. MELDON, in reply, said he had injected saline fluid once, and on that occasion he had no time to obtain any other than what he carried to make the milk injection alkaline—namely, a ten-grain powder of carbonate of ammonia. He used Dr. M'Donnell's transfusion apparatus; but for the direct

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transfusion he had Aveling's, substituting Dr. Robert M'Donnell's cannula for the ordinary one supplied. At each contraction of the ball he assumed that about half an ounce was injected.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.

THE usual monthly meeting of this Society was held on Saturday, the 24th inst., at Camberwell Infirmary. Mr. Herbert Chabot exhibited two cases of Joint Disease in Children much improved by treatment. Also a well-marked case of Duchenne's Paralysis in a boy eleven years of age, and another of Jacksonian Epilepsy. A specimen of Aneurysm of the first part of the Arch of the Aorta extending backwards into the posterior mediastinum and rupturing into the pericardium was also shown. The members had an opportunity of inspecting the new block of infirmary buildings erected on the circular system, and the remainder of the afternoon was occupied in discussing matters relating to the improvement of infirmary administration.

Reviews and Notices of Books.

A Text-book of Animal Physiology for Students of Human and Comparative (Veterinary) Medicine and of General Biology. By WESLEY MILLS, M.A., M.D., L.R.C.P.Eng., Professor of Physiology in M'Gill University and the Veterinary College, Montreal. With more than 500 Illustrations. Pp. 700. London and New York: Appleton and Co.

IT is felt by some that in physiology, as in anatomy, the facts ascertained are too numerous for any student to retain in his memory, and that it is more important that he should obtain a good general view of the subject, a knowledge of principles rather than of details. It is, however, extremely difficult in physiology to single out those facts that are the most important, and still more to discard theory. What one teacher thinks important another passes lightly over. In most physiological treatises the coagulation of the blood is considered at great length. Here it is briefly treated, and we could imagine a student reading through the section devoted to it without noticing that the exudation of serum is a very remarkable feature of the process. The work commences with a description of the cell and the phenomena of karyokinesis. Examples are given, with short descriptions of the life-history of unicellular organisms and of the lower fungi, vorticella, and hydra.

An instructive comparison is drawn between the forms that belong to the organic and the inorganic worlds respectively, and we give a quotation from this to show that Professor Mills writes in an attractive manner: "A modern watch that keeps correct time must be regarded as a wonderful object; a marvellous triumph of human skill. That it has aroused the awe of savages and been mistaken for a living being is not surprising. ..... Now, however well constructed the watch may be, there are waste, wear, and tear, which will manifest themselves more and more, until finally the machine becomes worthless for the purpose of its construction. If this mechanism possessed the power of adapting from without foreign matter so as to construct it into steel and brass, and arrange this just where required, it would imitate a living organism; but this it cannot do, nor is its waste chemically different from its component metals; it does not break up brass and steel into something wholly different. In one particular it does closely resemble living things in that it gradually deteriorates, but the degradation of a living cell is the consequence of an actual change in its component parts, commonly a fatty degeneration. The one is a real transformation, the other mere wear. Had the watch the power to give rise to a new one like itself by any process, especially a process of division of itself into two parts, we should have a parallel with living forms; but the watch cannot even renew its own parts, much less give rise to a mechanism like itself. Here, then, is a manifest distinction between living and inanimate things. Suppose, further, that the watch was so constructed that after the lapse of a certain time it underwent a change in the inner machinery and perhaps its outer form, so as to be scarcely recognisable as the same, and that as a result, instead of indicating the hours and minutes of a time reckoning adapted to the inhabitants of our globe, it indicated time in a wholly different way; that after a series of such transformations it fell to pieces, took the original form of the metals from which it was constructed, we should then have in this succession of events a parallel with the development, decline, and death of living organisms." Professor Mills carries out the parallelism to a greater length, but we have quoted enough to show that his power of illustration is considerable and his writing attractive.

The last section is that on the brain, which is well given, and is illustrated by many and very good engravings. Even here, however, there is some pleasantry, as in the imaginary conversation in which the author supplies the answers that would probably be given by a man after section of his semicircular canals in the following terms: "How do you feel?" says the operator; "why can you not rise and remain standing or walk?" To which the subject of the operation replies: "I feel all confused. I cannot stand or walk, because I do not seem to be able to make out what I should do. I have no clear idea of things about me, and so do not know how to proceed."

All the senses are dealt with well, but the section on the eye is written in a specially interesting manner, yet even here we notice some indications of want of care; for under the head of astigmatism it is stated that "in this defect the vertical meridian is supposed to be more convex than the horizontal," a statement that requires qualification, for the opposite condition is often observed. The work as a whole, though by no means exhaustive, supplies the student, and especially the veterinary student, with all the facts he is likely to require.

Zur Lehre von den Contagiösen Infectionskrankheiten. Von Dr. ERNST REGER, Stabsarzt am Cadettenhause zu Potsdam. Berlin: H. Kornfeld. 1890.

IN the work before us are embodied the results of a series of most careful investigations on the specific contagious diseases carried out under most favourable conditions by one who has gradually built up for his own use a method of noting and tabulating certain features connected with the spread of infective diseases from individual to individual. The main interest of the work lies in the sixty-three tables that accompany the text; but in the text itself the author puts forward certain general conclusions at which he has arrived in the course of his investigations. Having charge of the cadet barracks at Potsdam, he was able to obtain an exact record of all the cases of infective disease that came into the hospital, the rooms in which the patients had slept, washed, eaten, or attended classes, and even the men with whom they had been most intimately associated; and from these data he was able to trace from patient to patient outbreaks of measles, scarlet fever, parotitis, and similar maladies, and to follow the modifications through which the disease went as it was passed on from individual to individual. On reference to the sixty-three tables given, it is easy to follow the author's arguments, but it will be found that he is inclined to generalise somewhat too freely from the facts that he has at his disposal, in some cases his facts not appearing to bear out the whole of his conclusions. For instance, he holds

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that because there is a general agreement as to the period of incubation in such diseases as scarlet fever, measles, rötheln, diphtheria, and mumps (with perhaps the exception of measles), and because all of them have many features in common, they are all species of mixed infection in which there is a common organism, and that the special modifications in each disease are the results of the presence of certain other specific bacteria. He holds that this common organism under certain circumstances loses its virulence, and regains it when placed under favourable conditions; that it and the other organisms which play a prominent part in the production of the special symptoms produce poisonous substances which may cause rapid intoxication of a patient, whilst through the spores that are formed the infection may be transferred to others, or they may give rise to a second crop of the organism in the original host (*Auto-infection*); that the producers of the mixed infection belong to the suppuration-causing group; and that they give rise to different symptoms and pathological conditions according to the tissues that they attack—the glands of the skin, the subcutaneous connective tissue, lymphatic glands, and lymph vessels, the mucous membrane, the serous surfaces, or other elements of special organs.

A short account is given of the relation of these facts to treatment, and then the writer records his observations on influenza and its relation to the diseases already mentioned.

The tables are models in their way, and a careful study of them will be well repaid, not only by the acquisition of a new method of tabulation by the reader, but also by the knowledge gained of the evolution of disease through a series of most interesting genealogical trees. Although we do not agree with the whole of the conclusions arrived at by Dr. Reger, we can heartily recommend his work to the careful study of practitioners, more especially of medical officers of health.

Analytical Records.

PURE CANE SUGARS.

(JAMES PHILIP AND CO., PURE CANE SUGAR COMPANY, 4, FENCHURCH-STREET.)

WE have received and examined the following samples of sugar from the above firm—icing sugar, castor sugar, refined lump, white crystals, Demerara crystals, and Barbadoes moist. They are neatly put up in 7 lb. bags, stamped, and guaranteed as pure cane sugars, free from beet. Beet sugar is now very largely consumed, but it is generally admitted to be not quite a perfect substitute for cane sugar, and, weight for weight, it does not possess the same sweetening power as the product of the sugar-cane (saccharum officinarum), whilst the keeping or antiseptic properties of cane sugar are certainly superior to those of the beet. There seems little doubt that a large proportion of sugar sold in London as cane is in reality beet sugar, or, at any rate, an admixture of beet. A distinct advantage is therefore offered to consumers of sugar by this excellent plan of Messrs. Philip and Co., who guarantee and label their sugars as consisting of nothing but the real cane variety. We have determined the amount of cane sugar in a few of the samples, which were merely selected as representative ones. The following figures were obtained: Castor sugar, 99·73 per cent.; white crystals, 98·86 per cent.; refined lump, 98·07 per cent.; Barbadoes moist, 92·00 per cent. The sample of white crystals, on drying in the oven and then allowed to cool, exhibited a bluish-green colour. On treatment with acid this was more marked. Caustic alkali discharged the colour to a light yellow. The addition of a minute amount of colouring material to sugar for the purpose of making it of a purer white and more attractive in appearance is admitted by manufacturers, who, indeed, state that it would be somewhat extraordinary to find a sample of sugar that was not coloured. It is also known that chloride of tin—of course in very minute quantity—is occasionally used to impart a bright golden yellow to the raw product. The results above are very satisfactory, the percentage amount of cane sugar, it will be noted, being as high as it can well be.

KEPLER EXTRACT OF MALT.

(BURROUGHS, WELLCOME, & CO., SNOW HILL BUILDINGS, E.C.)

The therapeutic value of extract of malt rests not only upon the presence of important food elements, as dextrin, maltose, and alkaline phosphate, but on the peculiarly active substance, diastase, which is concerned in converting the starch of farinaceous food into the more assimilable products. The masterly researches of Messrs. C. O'Sullivan, Brown, Heron, and Morris have shown that diastase is without action upon unaltered starch, or starch as it occurs enclosed in the cell. As soon, however, as the cellulose envelope of the granule is broken either by bruising or boiling, the starch granulose rapidly undergoes conversion or hydrolysis, even in the cold, into maltose and a variety of dextrin called erythro-dextrin. It is some time now since we had occasion to examine the well-known and much used Kepler extract of malt. Messrs. Burroughs and Wellcome evidently keep pace with the newest scientific facts, which every day contribute towards making this kind of preparation perfect. This is shown by the following analysis of a specimen which was recently submitted to us. One part by weight of the extract was found to completely convert in one hour at 100° F. seven times and a half its weight of starch into maltose and dextrin; in two hours at the same temperature fifteen times its weight of starch, and in three hours no less than thirty times its weight. Probably at a higher temperature Kepler extract would be capable of converting a still larger quantity. Moisture, 18·41 per cent.; solid matter (diastase, albuminoids, maltose), 80·37 per cent.; mineral matter (for the most part soluble phosphate), 1·22 per cent. The flavour has been further improved, and the delicacy of the colour contributes largely to its attractive appearance.

EFFERVESCENT BRAIN SALT.

(F. NEWBERY & SONS, 1 AND 3, KING EDWARD-STREET, E.C.)

Chief amongst the constituents of effervescent brain salt, according to our analysis, are bromide of ammonium and caffeine. The statements which are made, therefore, in favour of its efficacy as a remedy, used of course under medical direction, in the treatment of headache, nervousness, sleeplessness, and sea sickness, are not without foundation. Its composition reminds us of an excellent preparation of the same firm which we had occasion to examine a few years ago, and known as "bromo-soda." Brain salt is an elegant specimen of the art of granulating.

IVORINE—AN EMOLLIENT CREAM TO PREVENT CHAPS, CHILBLAINS, &c.

(BAKER & CO., 305, OXFORD-STREET, W.)

A preparation which can be said to possess properties of alleviative value to the skin will be regarded with satisfaction by the many who suffer from the tiresome affection of chaps or chilblains. The efficacy of ivorine is stated to be increased by the addition of an oleaginous extract obtained from the leaves of the ivor shrub, which is imported from the Pacific Islands, where, through its continued use, the natives are said to be enabled to withstand atmospheric changes. Mere chemical examination shows it to consist of a purely oleaginous substance which is entirely free from

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injurious ingredient. In a case of badly chapped hands, the use of ivorine was found to be attended with distinctly beneficial results.

DRAGÉES FERRUGINEUSES DU DOCTEUR RABUTEAU.—CAPSULES AU BROMINE DE CAMPHRE DU DOCTEUR CLIN.—PILULES ANTI-NÉVRALGIQUES DU DR. MOUSETTE.

(CLIN ET CIE., PHARMACIENS, PARIS.)

These are all excellent preparations of the skilled pharmacists Clin et Cie. of Paris. The dragées ferrugineuses consist of white sugar-coated pills, containing a pale-green nucleus, which is somewhat obstinately soluble in water, the solution exhibiting an inky and sweetish taste. According to the reactions which were yielded on examination we regard the medicament to consist of a peculiar organic form of proto-iron salt. Dragées ferrugineuses are stated to be specially useful in anæmia, chlorosis, &c.

The capsules au bromine de camphre are thoroughly genuine preparations, from the fact that we succeeded by means of sodium-amalgam in regenerating both camphor and bromine. Bromide of camphor has been recently advocated as of service in heart affections, asthma, nervous and mental disorders. It is prepared by adding liquid bromine to camphor and distilling. So obtained bromide of camphor ($C_{10}H_{15}BrO$) is insoluble in water, but soluble in alcohol, ether, and chloroform, and crystallises in colourless prismatic needles which possess a smell resembling camphor ($C_{10}H_{16}O$) and turpentine ($C_{10}H_{16}$).

The red sugar-coated pilules (anti-névralgiques) readily yielded the two alkaloids, aconitine and quinine, on suitable treatment with alkali and a solvent, as ether. The former alkaloid was recognised by its well-known effect on the tongue, and the latter by the characteristic chemical reactions.

FINEST OLD SCOTCH WHISKY (SPECIAL DIETETIC).

(GEORGE CAVENDISH, 4, CULLUM-STREET, E.C.)

If persons of diabetic, dyspeptic, or rheumatic tendencies drink whisky at all, it should at least be a spirit of unquestionable purity and free from acidity and saccharine matter. How far this is the case with Cavendish whisky will be seen from the following items of our analysis: Absolute alcohol, 40·60 per cent. by weight, 48·00 per cent. by volume; equal to 84·00 per cent. proof spirit. Acidity, reckoned as acetic acid, 0·012 per cent.; total solid matter 0·075 per cent., and mineral matter 0·005 per cent. There is a remarkable absence of solid matter, and the amount of acid goes for nothing. The whisky is smooth in taste, and the presence of traces of tannin shown by the iron test would indicate it to be a spirit which has been matured in wood casks.

THE NATURE OF PERNICIOUS ANÆMIA.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to make a brief explanation with reference to a statement which appears in your abstract of the second of the able lectures now being delivered before the Medical Society by Dr. Stephen Mackenzie. The prominence given in that lecture to my work regarding the nature of pernicious anæmia must be my apology for so doing. The result of that work has been, step by step, to trace back the characteristic changes in the blood to antecedent changes of a chemical character occurring within the gastro-intestinal tract, and to identify, as the basis of these changes, the various pathological conditions, such as cancer, atrophy of the gastric mucous membrane, gastritis, &c., which have been most usually met with in this disease. Since all these conditions are relatively common, while pernicious anæmia is rare, the conclusion is natural that when they coexist a new factor must have been introduced which still continues to operate from the same tract; and my latest observations have led me to the conclusion that this factor is the result of specific infection. It is with reference to this conclusion that the present explanation becomes necessary.

For in the lecture referred to as given by you in abstract, an objection to this view, raised by Dr. Mott, is quoted to the following effect: "It does not appear to me certain that this theory is proved, for in many diseases in which there is ulceration of the intestines lasting for months and years, *and in which the whole contents of the intestine must swarm with micro-organisms of many kinds*, with everything to favour absorption, there is no pernicious anæmia." Merely remarking in passing that the above statement tends to prove the *specific* nature of the intestinal changes in pernicious anæmia, assuming that such changes are the real cause of the disease, I desire to add that the above statement of facts, so clearly put, more especially that portion of it I have italicised, expresses very accurately the grounds on which, in part, my conclusion is based. For, as I have shown, an important difference exists between the intestinal changes under such circumstances and those found in pernicious anæmia. While in the former the amount of intestinal putrefaction is, as might be expected, not only relatively, but also absolutely greatly increased; in the latter the absolute amount of putrefactive change may be, and not infrequently is, actually less than in health. Nevertheless, in pernicious anæmia I have found certain poisons of bacterial origin in the urine, for whose presence the action of ordinary putrefactive organisms is inadequate to account, since they are absent in such conditions as those above mentioned by Dr. Mott in which these organisms abound. The absence of these substances from the urine when intestinal putrefaction is increased in amount, and their presence when it is not increased, were the grounds on which I based my conclusion as to the specific nature of the micro-organismal infection which I believe to occur in pernicious anæmia.

This conclusion is one, as I have further shown, which accords very well with the mode of onset of the disease in many cases, and explains at the same time its rarity. The pathological conditions of the gastro-intestinal tract may have existed, and frequently do exist for a long time, without giving rise to pernicious anæmia,—as is well exemplified in the frequent occurrence of cancer of the stomach, unaccompanied by pernicious anæmia. Whenever the latter is superadded to the former its origin can, I think, in most cases be traced to some antecedent exposure to such conditions of defective sanitation and the like as are well known to favour infection in the case of other specific diseases—such as typhoid fever and diphtheria. The explanation I have thus ventured to give is one which I feel to be due to Dr. Mott, to whom I have failed to make the grounds for my conclusion sufficiently clear, no less than to Dr. Stephen Mackenzie, whose admirable critical exposition has been the immediate occasion of directing attention anew to the subject.

I am, Sirs, yours truly,

Wimpole-street, W., Jan. 20th, 1891. WILLIAM HUNTER.

LIVERPOOL NORTHERN HOSPITAL.—The work accomplished in this hospital during 1890 has been satisfactory. The horse ambulance had attended 1001 cases in the year. The average number of beds occupied was 130. The in- and out-patients numbered respectively 1947 and 5440. The balance sheet shows a debt to the bankers of the hospital amounting to £1782 2*s.* 4*d.*, and the committee appeal to the public for additional funds.

REGISTRATION OF PLUMBERS. — The Mayor of Cork presided at the first annual public meeting of the Munster District Council for the National Training and Registration of Plumbers. Dr. Corby, in moving the adoption of the Council's annual report, said he wished to call attention to the fact that the national system of registration of plumbers had been founded for the purpose of specially examining and registering plumbers in the interest of the public health. From his own knowledge he could say that the connexion between plumbing and the public health was very marked. He detailed a number of cases in which deaths had occurred through defective sewerage, and among the diseases produced by this cause he mentioned diphtheria and typhoid fever. He strongly urged the corporation of Cork to appoint duly qualified plumbers to inspect the sanitary arrangements in dwellings where infectious diseases broke out.

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THE LANCET.

LONDON: SATURDAY, JANUARY 31, 1891.

ACCORDING to present appearances there is every prospect that the Midwives' Bill will not be rushed through Parliament. We are assured on good authority that an understanding has been arrived at between influential men on both sides of the House that time and opportunity shall be given for ascertaining the facts of the case—both those which, in the opinion of some, constitute a reason for legislation, and those which, in the judgment of others, constitute a reason for declining all legislation on the subject. It would go far to satisfy all parties if the evidence of experienced and responsible persons were taken on both sides of the question, such as coroners, registrars of births and deaths, medical practitioners, and others. Such an inquiry would have the further advantage of raising the question into an impartial atmosphere. We ourselves would suggest the appointment of a select committee of the House of Commons. It need not occupy any great length of time. The facts to be ascertained are not in their nature abstruse or difficult; but they are very important. They involve enormous issues of life and death and suffering. It is greatly to be desired that they should be thoroughly ascertained. If legislation must take place, it should not exceed the demands of the case, or be unmindful of the principle so fully recognised by Parliament in its last Medical Act that midwifery is a part of medical science, and cannot be practised satisfactorily excepting by persons trained in the three great branches of our art—medicine, surgery, and midwifery.

Some of the opposition to the Bill in our own ranks is reasonable enough from the medical point of view. Medical men know the risks of maternity, and know well that no cases in practice require more care or more judgment, or more medical insight and skill than puerperal cases. A painful case was reported in all the papers last week, where a midwife was committed for manslaughter by conveying puerperal fever—and so death—in three cases, though it is stated that she was warned by medical men, and even generously promised their assistance if she would desist from practice. It transpired that she knew nothing of puerperal fever, and thought all pyæmic conditions implied a cut finger. Yet this woman had attended 900 cases of midwifery! The whole character of the obstetric art has been raised since it passed from the hands of midwives into those of medical men, and became a recognised part of medical practice. On the other hand, the existence of midwives to the number of many thousands cannot be ignored, the majority of them being uneducated and untrained. The compulsion of law in medical matters is very light. If a man breaks his leg, it does not compel him to have a regular surgeon. If a woman is to be confined, it does not and it never will compel her not to employ a midwife. The compulsion can only take the form of requiring that persons calling themselves "midwives" shall show some justification for using the title and of restricting their practice to a simple class of cases, and in default of compliance with these conditions of imposing penalties. These penalties should be explicit and effective. It will be far better for the State to leave the subject untouched than to legislate on it in a half-hearted way, and, while giving a kind of status to trained midwives, either permit them to exceed their function, or allow others to practise and to pose as "midwives."

If, as we hope, a select committee should be appointed, the profession should try to agree on a rational and harmonious representation of the medical aspects of the case. Those who are altogether opposed to such legislation should candidly say so in the meetings of the profession or in its press. Their arguments point in this direction, though they seem to think it better policy to appear as only opposing this particular Bill, which, by the way, is practically the same as the Bill of last year. It is not easy to believe that the bulk of the medical profession really propose to prop up and perpetuate an order of "Gamps," and to allow women without intelligence or principle to go on attending a large number of cases. We can see no proof that medical men generally are prepared to undertake so great a responsibility, or to argue before a committee of the House of Commons that the correction of this evil will be fraught with danger to the medical profession. The attempts to commit the profession to so extreme and undignified a view have signally failed.

It may be argued that there is a deeper opposition to legislation than finds expression. We cannot deny the possibility of such a feeling, but unless those who believe in its existence can produce proofs of it they should seriously ask themselves whether they would not do well to combine with the rest of the profession to get the Bill so amended as to restrict midwives to the simplest cases and to take some guarantees of their respectability and training. If the profession goes before a committee harmoniously with such views, it will have much influence in controlling the shape of the Bill. If extreme views are pressed, it will lose all such influence and place itself in an undignified position. Though we report a disposition in Parliament to investigate all the bearings of this question, we have heard nothing to lead us to doubt that some such legislation will sooner or later take place.

DR. PURDY of Chicago has recently published in the columns of the *New York Medical Journal* the results of his researches into the distribution of Bright's disease in the United States, with the special object of showing the influence of climate upon the malady in question. He takes the year 1880 for a standard of comparison, and finds that in this year the deaths from morbus Brightii were 75,386—a proportionate mortality of 7·11 per 1000 deaths. The heaviest mortality is found in the States of New Jersey, New York, Connecticut, Massachusetts, and New Hampshire, while the lowest mortality is found in the States of Tennessee, Georgia, Nebraska, North Carolina, and Arkansas. Speaking generally, the eastern coast line of the Union would seem the most affected (its middle region most of all), then the northern portion, and, lastly, the southern. The first of these districts shows a mortality of 19·73 per 1000 deaths, and the northern coast region 17·38 per 1000 deaths, or, in

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other words, the rate is here from twice to three times the general average. In the south-western States the mortality from Bright's disease falls to from 1·5 to 2 per 1000 deaths, or about a fourth of the general average.

From these statistics Dr. PURDY draws certain conclusions regarding the influence of meteorological conditions upon the causation of Bright's disease. He relies upon his facts to prove that the conditions which favour the genesis of the malady are cold, damp, and variability of temperature, and that, on the contrary, heat, dryness, and equability tend to diminish the liability to Bright's disease. He believes that cold is effective chiefly when associated with a high degree of humidity, and that a low temperature is readily tolerated when the air is dry. Similarly he maintains that humidity is inoperative if accompanied by heat and equability.

These conclusions do not present any feature of novelty, and are quite in accord with established opinions and recognised facts. It seems obvious *a priori* that the subject of renal disease needs above all things such conditions of climate, occupation, clothing, and diet as will promote a free action of the various emunctories, above all of the skin. A dry climate, not too prone to sudden oscillations of temperature, permitting a maximum amount of exercise in the fresh air, and affording abundant sunshine, would seem best to meet the indications of the case; but it must be remembered that in very dry climates equability of temperature is simply a meteorological impossibility. We pay for abundant sunshine and dryness the price of great differences between sun and shade temperatures, and between the thermometric range of day and night. This cannot be helped, and the obvious lesson is that we must strive to obtain the maximum advantage from a climate of this class by a very careful regulation of clothing, habits, hours of exercise, &c. It is by no means so clear that a hot, moist, and equable climate is adapted to cases of Bright's disease. Such a climate tends to depress the system, but it has the very great advantage of protecting against chills and inflammations; and since we know how prone albuminuric patients are to inflammatory affections of the serous and mucous membranes, and to fresh exacerbations of the renal malady, it is obvious that a climate of this class may have its utility in some cases of Bright's disease. Its effect is probably less curative than palliative, and tends to protect the patient against the accidents and complications of his malady rather than to exercise any decided influence over the disease itself.

We are, however, disposed to doubt whether Dr. PURDY'S statistics afford any sure ground for attributing a preponderant influence to climate in the etiology of Bright's disease. It is significant that by far the heaviest mortality is found in those portions of the States which were first colonised, where, consequently, the density of population is greatest, and the struggle with mal-hygienic conditions of existence probably most severe. To compare Boston and New York with Arkansas and Tennessee, and to attribute all the differences in liability to disease simply to geographical position, would be an obvious fallacy which Dr. PURDY would certainly not perpetrate. The question, so far from being a simple one, is really most abstruse. It can be decided only by a careful attention to such points as proportionate density of population, the occupations and habits of the people, their food and drink, their clothing, amusements, &c., as well as climate and geographical position, which are in many ways, direct and indirect, very influential factors; it is only by such an exhaustive survey of the subject that we are likely to throw any light upon complicated questions of etiology. The race factor, again, cannot be left out of account in a country presenting such a multiplicity of races as the United States. The varying liability of different races to different diseases is a well-known and significant fact, and although the evidence on the subject is at present scanty, it will no doubt be some day thoroughly worked out. What can be more striking than the comparative immunity of the negro from yellow fever and his remarkable proclivity to small-pox? It is said that the Irish in America present a liability to Bright's disease out of all proportion to their numbers; but we cannot feel sure how far this liability is racial, and how far due to destitution and poverty.

On the whole, the evidence regarding the etiology of Bright's disease would incline us to the view that the most important cause of the malady is improper food, unwholesome occupations, and insanitary dwellings. The study of the question leads us, in fact, to the same conclusion as the study of phthisis—viz., that the chief danger of humanity at the present day is that the growth of great cities may lead to the neglect of some of those primitive conditions of health—fresh air, light, exercise, plain food, healthy housing,—without which the vigour of the organism cannot be long maintained. It does not follow that large cities are necessarily and inevitably unhealthy, but there can be little doubt that the concentration of great masses of population makes the attainment of the primary conditions of health more difficult. It is one of the hopeful features of this age that we are becoming more and more alive to these difficulties, and more solicitous for their removal.

A SUB-COMMITTEE was appointed by the Glasgow Town Council a few months since to inquire into the greening of French vegetables with sulphate of copper. The committee approved of the report which was presented to them, and recommended that intimation be made to dealers in canned vegetables that the sanitary officials would institute proceedings whenever the circumstances in connexion with their re-greening were sufficient to warrant a prosecution. The report is signed by the medical officer of health, the sanitary inspector, and the analysts of the city, who, in the evidence they furnish, quote the opinions of the French authorities upon the subject. That preserved peas are in many instances greened by means of a salt of copper seems well established. This treatment with copper salt, it may be remarked, is not at all necessary for the preservation of the vegetables. Sealing them up hermetically after exposure for a time to a temperature above boiling-point is all that is required. This was the simple method discovered by APPERT at the close of the last century, and early in the present century it was put into practice on a large scale, and rapidly grew, particularly in France, into an important industry. The preserving process, as might be expected, causes the vegetables to lose their natural

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colour and to acquire a somewhat stale flavour. Hence, and in order that the preserved article may become more attractive to the public eye, *reverdissage* or re-greening is resorted to, and this is accomplished by steeping the vegetables for from five to fifteen minutes in a hot solution of sulphate of copper of variable strength, the proportion used depending apparently on the caprice of the manufacturer. In actual practice the vegetables are washed and placed in tin boxes, which are filled up with sea-salt and sugar, soldered down, and subjected to a temperature varying between 220° F. and 239° F. The quantity of copper salt retained under this treatment amounts to from 8 to 27 parts per 100,000 of the dried vegetables. Compounds of copper are unquestionably poisonous, and small doses continued for some time are known to produce severe abdominal pain, impairment of digestion, and diarrhœa. Bearing in mind well-known toxicological facts like these, it is surely absurd to suppose that small quantities taken continuously in food are harmless. The action of the French Government in this matter in 1853 was somewhat experimental. They prohibited the use of copper salts in preserved articles of food, at first in Paris, but the prohibition seven years later was extended to the whole country on the recommendation of appointed experts, who were of the opinion that, although the quantities extracted from certain samples were small and not likely to produce serious accidents, yet the presence of a highly poisonous substance in proportions without a fixed limit involved a risk which should not be permitted to exist. But here was a pronouncement calculated to be fatal to the successful working of an industry which employed no less than 20,000 persons, and representing a business of 40,000,000 francs. Appeals were, of course, made against this decision, and toleration was urged to the extent indicated in the following curious conditions: (1) That a maximum limit of the quantity of copper salt should be fixed; (2) that on every box the nature of the agent should be legibly inscribed; (3) that greening for export should be permitted, *but not for home use*. At length it was reported by the Consulting Committee in 1889 that the position of the information which they possessed as to the noxious influence of salts of copper, there was no real ground for prohibiting the practice of re-greening preserved vegetables with those salts. The prohibition was withdrawn, and the practice of *reverdissage* continues to the present day. The cultivation of vegetables such as peas in this country, it is pointed out, is considerably handicapped by the substitution of the re-greened, stale, and probably less digestible article of foreign growth, which there is good reason to suppose is not infrequently palmed off as the genuine, fresh, home-grown product. The majority of those who have any concern in the important question of food in its relation to health will share generally in the views which are expressed by the medical officer of health, sanitary inspector, and the analysts of the city of Glasgow in the concluding sentences of their report. They are of the opinion that the process of re-greening is fraudulent in its intention and injurious in its commercial results; that re-greening with sulphate of copper does not make vegetables more but probably less wholesome; that the public ought when purchasing preserved vegetables to ask for ungreened or at least vegetables free from copper; that the guardians of the public health ought to come to an understanding as to the sale of vegetables containing copper, while holding themselves free to act according to the circumstances of the case and the scientific evidence obtainable from time to time.

A CONFERENCE was held at Spring-gardens last week between members of the Housing of the Working Classes Committee of the London County Council and delegates from the several vestries and district boards. The meeting received a report from the medical officers of health of the different authorities, prepared in compliance with a request that they should endeavour to prescribe the conditions which may render a house dangerous or injurious to health so as to be unfit for human habitation. We recently pointed out that, seeing that the question of degree enters largely into the consideration whether a house is be regarded in this light, it is impossible to define these conditions so that any fixed rule may be laid down. The medical officers of health have themselves pointed this out to the conference, but they have, besides, given some account in the briefest manner of the principles which guide them, and have enumerated such conditions as faulty site, insufficient light and ventilation, and dilapidations, as those upon which they rely. They have also expressed a preference for dealing with filth and defective drainage under the Nuisances Removal and Sanitary Acts, but have stated their opinion that where these are associated with other conditions they justify proceedings under the Housing of the Working Classes Act.

Although they have not been able to carry into effect the wishes of the conference, their labours cannot be said to be wholly wasted if they have made clear to the representatives of local authorities that houses faulty in one and another particular must be dealt with on their own merits, and that it is therefore necessary to exercise independent judgment in each case. The medical officer of health may recommend proceedings for the abatement of nuisances, and the improvement of houses under the Nuisances' Removal Act, and he must necessarily be guided by the whole of the circumstances whether the house should be closed.

But the question arises whether the closing, if this be necessary, should be effected under the Nuisances' Removal Act or under the Housing of the Working Classes Act—whether, in fact, the latter statute gives greater powers than the former. There does not appear to be very much difference between the two, but under the Housing of the Working Classes Act, if the house after closing becomes dangerous to the health of the neighbourhood, the local authority may make an order for its demolition. With this possibility hanging over the owner, and with risk of greater penalty, he is more likely to comply with the requirements of the authority. The newspapers have afforded considerable evidence that the Act of last year has been systematically enforced in many parts of London, and probably it will not be long before its effects come to be

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fully appreciated. We observe, however, that magistrates have in many instances not imposed penalties. This leniency, we think, is unfortunate, for if a reasonable standard of house conditions is to be maintained in London, owners must be made to recognise that it is their interest not to allow houses to fall into bad condition. The Act, to be useful in the best sense, must be preventive as well as curative, and for this purpose the willingness of the magistrates to punish offenders must not be a matter of doubt. We desire to commend this thought to their attention; without such assistance as they can render, the maintenance of a staff of inspectors, imposing considerable expense upon the ratepayers, is unavoidable.

Annotations.

"Ne quid nimis."

RAILWAY SERVANTS AND LONG HOURS OF DUTY.

THE report made by Major Marindin upon the collision which occurred on the 21st ult. at the Brindle Heath Junction of the Lancashire and Yorkshire Railway, coming as it does while the railway strike for shorter hours is pending in Scotland, will have, it may be hoped, a salutary effect in riveting public attention upon what is a crying abuse in railway management. The collision was a very serious one, involving injury to twenty-five passengers, and in at least one instance a fatal result. The blame of it is cast by Major Marindin entirely upon a goods train driver who had been on duty for twelve hours and three-quarters, and had still another two hours to work. The excuse is a lame one, for although such hours are excessive, they are not so excessive as to afford an explanation of the very culpable incompetency which the driver appears to have exhibited. But in awarding blame it is impossible not to feel that a share, and not a small share withal, is due to the managers, who are responsible for a system so thoroughly bad as that which imposes fourteen hours' continuous labour upon men entrusted with the heavy responsibilities which devolve upon locomotive engine drivers. Moreover, not only is a share of the blame their due, but it is at the present moment a matter of the greatest public interest that they should receive it. The criminal law deals, and deals fairly effectively, with delinquent railway servants, but the responsibilities in this connexion of directors and managers can only be enforced by public opinion. Public opinion, moreover, labours under the peculiar disadvantage of being very badly informed upon the point. Such a conclusion is, at least, inevitable if we may trust a communication which appears in one of our provincial contemporaries, and has been brought to our notice by a correspondent. The following is given there as an actual instance of a week's work:—

	Time on duty.
On duty Monday morning, off Tuesday ...	21 hours.
On Wednesday midday, off Thursday morning	19 ,,
On Friday night, off Saturday afternoon ...	16 ,,
Total	56 hours.

Now it will be seen that these men were on duty three times during the week for an "excessive number of hours at a stretch," but their total hours were only 56. Instead, therefore, of having "overtime pay," they will get four hours less than a week's money. Whether the public danger or the private injury involved in the imposition of such excessive labour is considered, the conclusion is equally inevitable that means must be found of ending the system.

THE ILLUSTRATION OF DISEASE.

THE methods at our disposal for recording the aspect of disease at some particular period in its progress, if that disease presents features which cause alteration in the outline or the colour of the surface of the body, have much improved of late years. The faithful representations which we owe to photographic skill or the trained pencil meet the requirements in many instances where mere change in outline or form is required to be shown; but where one wishes to closely represent affections, much of the successful exposition of which depends upon the colouring of the reproduction, for fidelity to nature and close resemblance to the original there is nothing equal to the models in wax or composition material. The museum of St. Louis, Paris, stands pre-eminently in advance of those of all European or other hospitals. It possesses some two thousand models in wax or other material prepared by M. Baretta. This represents thirty years' work of this celebrated artist. Guy's Hospital Museum has also procured this important aid to teaching through the work of the late Mr. Toune. However, although most medical museums have a few of such models, they are usually only copies of foreign works, and generally of an anatomical character, and are easily and cheaply reproduced. Not so with clinical and pathological specimens, which, being original, require expert handling. We have had an opportunity of inspecting two wax models which have lately been purchased by the Royal College of Surgeons from Messrs. Baillière, Tindall, and Cox, the medical publishers; they are very beautiful and artistic productions, and appear both in form and colour to faithfully represent the respective original diseases to which they refer. The above firm have established a studio at their publishing establishment for the production of anatomical, clinical, and pathological models in wax or other suitable materials. The studio is under the supervision of Mr. W. Swainson and an expert staff. For the teaching of our students such models are invaluable, and should, we think, form part of the equipment of all the museums connected with our medical schools. We trust, therefore, that the authorities of the schools will at once see their way to take advantage of acquiring such useful adjuncts to their teaching.

THE BETHNAL-GREEN AREA.

EARL COMPTON carried through the London County Council on Tuesday the recommendations of the Housing of the Working Classes' Committee as to the procedure in dealing with the area in Bethnal-green and Shoreditch, represented under Part 1 of the Housing of the Working Classes Act. The proposals of the committee were submitted to severe criticism, and in some instances the speakers discussed the desirability of the scheme. One of the recommendations of the committee, that a comparatively small proportion of the houses should be closed as soon as the Council obtained possession, was thought by some to indicate that the houses in the area were not in so unsatisfactory a condition as had been represented, and apparently the point was overlooked that the Council would desire to displace as few as possible of the inhabitants at once, and would do such temporary repairs in many of the houses as would give longer time for the inhabitants to find other homes. No doubt much of the opposition was due to the fear that the committee, in seeking for permission to acquire a neighbouring site, was desirous of undertaking building operations, which would eventually place the Council in the

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position of being responsible for the provision of dwelling accommodation for a vast section of the community. This would undoubtedly be disastrous, but there is no reason why the additional site should not be used to release the Council from the obligation of covering the whole of the represented area with houses for the working-classes, and why it should not give the Council the opportunity of devoting some portion of this area to purposes which would be more beneficial to this class than the erection of dwellings. The activity the Council has shown in considering the wants of the several classes of the community is ample reason for thinking that many uses for any spare land will abundantly occur to them.

SHEFFIELD AND THE MIDWIVES' BILL.

A DEPUTATION from the Sheffield Medical Society, consisting of Dr. Keeling, Dr. Martin, and Dr. Porter, hon. sec., waited on Mr. Stuart Wortley, M.P., complaining that the Midwives' Bill was ill drawn and faulty in several particulars. They had not confidence in the special knowledge of midwifery of the Medical Council, on whom the Bill placed the duty of framing regulations; still less in that of the Privy Council. Only those midwives who had had ten years' experience should be registered as existing midwives. If a large number of midwives were to be trained it would interfere with the clinical material, already scanty enough, for the teaching of medical students. It will be noticed that none of these objections touch the principle of the Bill or constitute a radical objection to some legislation to abate the evil of ignorant and untrained women practising midwifery.

POISONING FROM "BLACK-DAMP."

SOME of those who chance to escape from the explosion of the dreaded "fire-damp" in mines survive only to fall victims to the equally dreaded after-damp. After-damp consists of a mixture of carbonic acid, watery vapour, and nitrogen in varying proportions. It is in fact the gas which results from the combustion of fire-damp. Fire-damp is a mechanical mixture of carburetted hydrogen (CH_4), nitrogen, and carbonic acid. In an atmosphere containing 22 per cent. of the gas a man may still breathe for some considerable time, the only feeling of discomfort experienced being that of mental lassitude. But in an atmosphere containing one-third fire-damp the human subject is rendered insensible. On the other hand, in air containing 10 per cent. of carbonic acid gas, life can only be maintained for a short time, and a lighted candle for a still less time. The late Dr. Angus Smith has shown that 3 per cent. carbonic acid gas is fatal if the oxygen in the same atmosphere falls below 18 per cent. Coal has the peculiar property of occluding marsh gas or fire-damp, and again giving it off when the external pressure happens to be reduced or the temperature increased. This probably occurs in coal-mines and, likely enough, in the bunkers of a ship. One hundred grains of coal have been known to give off as much as 200 cubic centimetres of gas consisting of 90 per cent. marsh gas ($C H_4$), 9 per cent. nitrogen, and 1 per cent. of an equal volume of oxygen and carbonic acid. In the coal bunkers of a ship this liberation of occluded gases would, it seems probable, take place when any sudden fall in the barometer occurs, and also when the vessel passes into warmer regions. Hence, unless the coal bunkers are adequately ventilated serious explosions may ensue, culminating in the loss of the vessel. A very curious case of poisoning under peculiar circumstances, resulting from the inhalation of carbonic acid gas (known to miners as after-damp, choke-damp, black-damp, dampie, according to the origin and character of the gas), was recorded in a contemporary last week. It was noticed that a house in Darlaston, near Wolverhampton, which was occupied by a greengrocer and his family, remained for a longer time than usual shut up. Fortunately, it was decided to break into the house, and when this was done the inmates were found lying in bed in a state of insensibility. On making an examination the cellar of the house was found to be full of "black-damp," which is believed to have emanated from the ground, which is in close proximity to the workings of an old coal mine. So noxious was the foul air that many who endeavoured to render assistance were overcome and fainted. Two birds and a cat were found dead from the same cause, and the people occupying the adjacent houses, it was ascertained, had been attacked with sickness and prostration. Through the timely and prudent action of the neighbours any fatal consequence, which might otherwise have happened, was averted. So far as regards the predisposing cause, the case is one we think without precedent. The lesson it teaches is clear. Great care should be taken in the construction of houses close to disused coal mines, in order that the possibility of ingress of any form of "damp" may be avoided. It would be well perhaps to stop up any holes hard by a dwelling so situated, with slaked lime, that the poisonous gas may be to a large extent absorbed. Miners take the precaution of placing casks of lime-water at intervals in the mines, so that in the event of explosion they may dip a cloth in the lime, and hold it loosely to their mouths. This procedure removes much of the carbonic acid, and gives the miner a better chance of reaching the main shaft.

PENALTY FOR SELLING DISEASED MEAT.

THERE is an obvious justice in the strict supervision exercised by those authorities who control the importation of provisions intended for consumption in the metropolis. Neighbouring towns of large size are virtually robbed in order that London may be satisfied, and the superabundance thus forced upon the market is in some respects hardly justified even by the requirements of a colossal population. It is at least natural that under such conditions of supply quality of material should be a primary consideration. To sanction or overlook any neglect in this particular would especially injure the laborious thousands whose absolute necessaries, under pressure of work and in an atmosphere of indifferent purity, are sufficient rest and wholesome food. The sentence of six weeks' hard labour inflicted a few days ago on a salesman at the Guildhall Court, for sending diseased meat to the London market, though severe, was probably not unduly so. In comparison with one of three months, which we have already noticed in connexion with a similar offence, it appears almost lenient. The dealer punished on the present occasion had previously offended in the same way, and had paid a heavy fine. We may fairly conclude therefore that the prospect of a market profit had in his mind overcome the dread of a mere money penalty. Perhaps a few weeks' enforced absence from business may supply a stronger incentive to the belief and practice of an honest policy in future.

COUNTY HEALTH OFFICER FOR DERBYSHIRE.

WE are glad to learn that the Derbyshire County Council have decided to appoint a county medical officer of health. Many counties somewhat naturally feel that the elimination from the Local Government Act, 1888, of so much that had to do with public health administration justifies a postponement of the appointment of county health officers. But in counties where questions of river pollution arise there is no justification for any such delay. Indeed, there are few questions which are involved in greater difficulty, and at every turn that class of scientific knowledge which is especially the possession of the skilled medical officer of

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health is needed in order to deal with the subject. In the West Riding of Yorkshire and in Lancashire this need has been felt, and it has been met. It is now the same with the County Council of Derby, who find themselves face to face with questions involving the pollution by sewage and manufacturing processes of streams which take their rise in Derbyshire, and which are concerned with the pollution of the Irwell and Mersey and of the Manchester Ship Canal. The Council hope by this appointment so to deal with streams within their own jurisdiction as to render joint action with other counties and its attendant cost unnecessary. If this result is to be attained, a first-class appointment should be made, and the officer elected should be certain of the support of his Council in such action as he may advise or take.

THE VASO-DILATOR ACTION OF UREA.

THE researches of Abeles and Munk on the effect of urea in the blood upon the renal vessels, causing them to dilate, have recently been supplemented by Drs. Cavazzani and Rebustello, who have made a series of observations in the physiological laboratory of the University of Pavia upon the effect of urea when circulating in the blood on other vessels in different parts of the body. They find that a vaso-dilator action is produced similar to that observed in the renal vessels, but less marked in extent. The greatest effect is observed in the cerebral vessels, and the least in the vessels supplying the limbs, the hepatic vessels being affected to an extent intermediate between the two. Generally speaking the effect is directly proportionate to the amount of urea in the blood; but the hepatic vessels seem to present an exception to this rule, for the dilatation in them appears to be about the same whether the percentage of urea in the blood is high or low. The greater the quantity of urea, and the more marked its action, the sooner the effects pass off. With reference to the various organs, the effects pass off first in the cerebral vessels and in the vessels supplying the limbs, next in the renal vessels, and last in the hepatic vessels. In the renal vessels the acceleration of the circulation produced by the urea is most marked when the blood-pressure is low. The smallest dose of urea which will produce vaso-dilator effects is not the same in different parts of the body; thus, one part per thousand of blood is necessary in most of the viscera, but in the kidneys half that amount is sufficient.

BOLTON FEVER HOSPITAL.

SOME months ago the Fever Hospital belonging to the Corporation of Bolton, Lancashire, came rather prominently before the public in connexion with a dance or party given there by some members of the staff, and indignant protests were made at what was said to be expenditure of public money from the rates for any such purposes; but last week a more serious allegation was made concerning its internal administration and supervision. The Rev. S. Bond recently had his little girl removed there suffering from scarlet fever, and he now complains that she was sent home whilst in an infectious condition and conveyed the disease to another child. But he further complains that the child returned home in a dirty condition; that the conduct of boys and girls placed together in the same ward was indecent and disgusting, the supervision lax, even approaching neglect; that some of the patients had insufficient clothing, were set to fetch in coal &c., and that foods sent to the hospital never reached the patients for whom they were intended. The Sanitary Committee of the Corporation have instituted an inquiry into these charges, and as hitherto the hospital has had a good reputation as regards the treatment of patients sent there, it is to be hoped a different complexion may be put upon the above statements. In the meantime it may be pointed out that the fact of a child having infected another after leaving the hospital with such an intensely infectious disease as scarlet fever, unless there is shown to have been some neglect on the part of the hospital staff, is scarcely a fair ground for a sweeping condemnation. In all fever hospitals it is customary for boys and girls of nine or ten years of age to be mixed; and fetching in coal or otherwise assisting in the wards by convalescents, who often for two or three weeks prior to their discharge are in perfect bodily health, is no hardship. The absence of supervision, rude or indecent conduct, and want of cleanliness, are, if they prove to be true, serious matters, and should receive the prompt attention of the managing committee, otherwise the usefulness of the institution in checking the spread of infection will be greatly interfered with, as in almost all cases the admission of patients is voluntary, and often effected only by considerable pressure being brought to bear upon the friends to secure permission for their removal.

COMPLIMENTARY DINNER TO MR. GANT.

ON Wednesday evening, the 28th inst., the members of the medical staff and several of the governors of the Royal Free Hospital, together with past and present Presidents of the hospital, entertained Mr. Gant at dinner at Limmer's Hotel. Mr. Gant, whose name is widely known in connexion with surgical work, has recently retired from the staff of this hospital, and been elected consulting surgeon after a term of service of thirty-seven years' duration. Dr. S. West, the senior physician, occupied the chair, and a most cordial reception was given to the guest of the evening. This is the first occasion on which the medical staff of the hospital and members of the governing body have met together in this manner, and it is hoped that a Royal Free dinner will be an annual event, the good relations between the medical and lay elements of the hospital being thereby strengthened.

THE OPTIC THALAMUS AND SENSATION.

IN the *Philadelphia Medical News*, Dr. Hugo Engel describes a case of considerable importance with reference to the relation of the optic thalamus to the special senses and to common sensibility. The patient was a middle-aged man with a definite history of specific disease. Before coming under observation he had had more or less vague symptoms of affection of the central nervous system during the previous year. Those consisted chiefly of pain in the head with occasional acute exacerbations, and giddiness. On getting up one morning he found that he staggered. The patient ascribed this to loss of sensation in his right foot. He next found that the whole of the right side of his body was anæsthetic, and that he had lost the power of tasting and smelling on the same side. Nine days later there was complete loss of taste and smell on both sides, and deafness of both ears. Two days later he suddenly became blind in both eyes, and had frequent convulsions, in one of which he died. At the necropsy, characteristic changes were found in the cerebral arteries, and a large gummatous growth was discovered growing apparently from the fornix and spreading back over both optic thalami. The growth was more extensive and apparently older on the left than on the right side, pointing to a previous involvement of this side in the morbid process, and thus corresponding with the earlier symptoms on the right side of the body. The author points out the existence of four collections of cells in the thalamus described by Luys: the most anterior, which is highly developed in the dog, and is most probably in some way connected with smell; the second possibly connected with hearing; the third with general sensibility; and the fourth, in the region of the pulvinar, connected with the visual tract. While the situation and extent of the growth,

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coupled with the clinical history of the case, make the explanation which is offered, of a gradual involvement of those groups of cells in the order mentioned, a plausible one, it must not be forgotten that, even granting the existence of such isolated groups of cells, their function is probably only intermediary, so that pressure upon fibres, either conducting to them or from them, as well as upon others running in or near the thalamus, would produce the same effects as involvement of the cells themselves. In other words, we must, in any growth such as the one described, allow for pressure symptoms, and we must not lose sight of the fact that the growth started in the fornix, a structure which some authorities agree in connecting very intimately with the conduction of sensory impressions.

COLLEGE OF SURGEONS LECTURES FOR FEBRUARY.

THE Hunterian oration will be given by Mr. Hutchinson on Feb. 14th, in the lecture theatre, at 3 P.M. Mr. J. Bland Sutton, F.R.C.S. (Erasmus Wilson Lecturer), will give three lectures on the Value of Comparative Pathology to Philosophical Surgery, on Monday, Wednesday, and Friday, Feb. 9th, 11th, and 13th. Professor C. B. Plowright, M.R.C.S., will give three lectures on Fungi in relation to Plant Disease, on the 16th, 18th, and 20th; and Professor W. W. Cheyne, F.R.C.S., three lectures on the Pathology of Tubercular Disease of Bones and Joints, on the 23rd, 25th, and 27th. All these lectures will commence at 5 P.M.

THE CARE OF EPILEPTICS.

IN the *Boston Medical and Surgical Journal* Dr. Bullard discusses and attempts to answer the question, What is to be done with chronic epileptics? Everyone will agree with him that there is no disease more distressing to the sufferer, or more full of anxiety to his friends, on account of the liability to accident during an attack, as well as on account of the mental disturbance (slight and temporary it may be) which is so often the sequel of a paroxysm. The presence of epileptics, in short, among the ordinary community without any special protective provision is a standing danger not only to the patient, but to other members of the community. And this is true not only of the patients who can legally be transferred to an asylum: there are undoubtedly many others whom it would be impossible to treat in this way, and it is with regard to those that the difficulty as to what should be done with them arises. Three methods of dealing with them are open to us, according to Dr. Bullard. We may establish institutions in connexion with asylums, separate to a great extent but under the same management; or we may have a large number of small establishments grouped together and all under one management; or we may have an epileptic colony in which the patients are boarded out in families. In this last plan it is evident that there are many disadvantages. The patients are not under trained care or experienced treatment, and they are on the one hand liable to accidents, while on the other they may also become dangerous to others. Then the association of epileptics, not as a rule mentally affected, or at all events whom it is impossible to certify, in an institution, however independent, yet connected with a lunatic asylum, is a plan which, we fear, will not recommend itself either to the friends of epileptics or to the laity generally. Dr. Bullard concludes that on the whole the cottage hospital system, as he calls it, is best. In this there would be a large number of small buildings, with a few patients in each, and attendants according to the number. It is evident that in Massachusetts there exist difficulties similar to those we have here. Whether an attempt will be made to solve them in the manner indicated in the article under consideration remains to be seen. For our part we see far fewer disadvantages, and far more advantages, in the establishment of institutions in the nature of hospitals of considerable size than in the multiplication of smaller refuges. And there is no doubt that, in course of time, some provision will have to be made for the care of a class of patients who are unable to care for themselves, and who, moreover, may at any time become dangerous to others.

SANITARY REFORM IN FRANCE.

WE have to congratulate the *Revue d'Hygiène*, which is the official organ of the Société de Médecine Publique et d'Hygiène Professionnelle, on the twelfth anniversary of its publication. "L'Etude et les Progrès de l'Hygiène en France de 1878 à 1882," by Dr. Napias and Dr. A. J. Martin, is a bulky and interesting volume, which shows that some good work had been achieved before the twelve years in question. Nevertheless, this work was more of a tentative, theoretical character, and the cause of hygiene was then only advocated by a few sanitary reformers. The Second International Congress of Hygiene, held in Paris during the Universal Exhibition of 1878, gave a great impetus to the consideration of questions of public health; and the Society, which had so successfully organised this congress, felt that it was necessary to give the public periodically a record of its endeavours. With the foundation of the *Revue d'Hygiène* really dates the modern revival of sanitary science in France. This revival has been affirmed by congresses and expositions, and by the formation of numerous societies for the promotion of sanitary science, both in Paris and in the provinces. The practical results have been the creation of museums of hygiene and sanitary bureaux in a large number of towns, together with municipal laboratories for the analyses of food-supply, &c. Many hospitals have been reconstructed, the water-supply of towns has been more carefully organised, sewers and latrines improved, especially in schools and barracks, more care is now taken to isolate fever patients, and the practice of disinfecting is gradually coming into vogue. The question of sanitary reform is no longer reserved solely for the consideration of experts, it is a subject of general conversation. Hygiene has become popular, and even constitutes one of the planks of many a political platform. Those who knew France before the Exhibition of 1878 will admit that this is indeed a great change, and that the Society of Public Medicine and Professional Hygiene, which has been instrumental in bringing about this great progress, has "*bien mérité de la patrie.*"

"PERIODIC PARALYSIS."

IN the *Wiener Medicinische Presse*, No. 36, 1890, Dr. Goldflam describes a peculiar form of paralysis which is periodic, hereditary, and, according to him, auto-toxic. The case which he describes occurred in a lad aged seventeen, who, three years previously, had been attacked in the night with a sudden paralysis affecting the extremities and trunk. This lasted three days, and since then had frequently recurred, more especially in the spring of the year. The attacks generally commenced in the evening. The first symptom noticed was an almost unbearable itching over the site of the paralysis; there was always constipation. The paralysis was not absolute, the knee reflex was lessened, the plantar reflex lost; sensibility was not affected. There was no tenderness over the muscles or nerves, and no bladder symptoms. The backward and forward movements of the head were deficient. The muscles of the face, tongue, eye, and œsophagus were not attacked; speech and movements of respiration were normal. The faradaic irritability of the large nerve trunks in the upper extremities was greatly diminished during the

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attacks, and slightly so in the lower extremities. There was complete absence of direct muscular irritability. Reaction to the galvanic current was also considerably weakened. The attack lasted forty-eight hours, and concluded with profuse perspiration. The peroneal muscles alone remained affected for some time. After the attack all the nerves and muscles responded promptly to both currents. There was at no time a rise of temperature. Examination of the blood and urine gave negative results. One of the most interesting facts in connexion with this case is that eleven other members of the patient's family were subject to similar attacks, but only on the mother's side; the father's family was completely free. The hereditary character of this disease followed no regular course; occasionally all the females were attacked, leaving out the males, and sometimes the reverse was the case. The frequency of the attacks in the different sufferers also varied considerably, but they did not seem to affect the ordinary duration of life. Dr. Goldflam has collected several such cases from medical literature, and the following is a summary of his investigations: In the intervals between the attacks there was some diminution in the electrical reaction in the smaller muscles of the hand, together with the reaction of degeneration. Although improvement occurred in most of the cases, this was interrupted by relapses. As regards the pathology of the disease, Dr. Goldflam believes that the muscles themselves are affected, or, perhaps, the nerve-endings, such as occurs in poisoning by cocaine. Experiments were made by injecting into rabbits the urine of the patient between and during the attacks, with the result that in the latter case the secretion possessed distinctive toxic properties, although actual paralytic attacks were not induced. Further investigations showed that the organic constituents of the urine contributed the toxic material, perhaps owing to the condition of the muscles. In one case the attacks were successfully warded off for two months by small daily doses of atropine.

"PHYSIOLOGICAL ABERRATIONS IN EUROPEAN INHABITANTS OF THE TROPICS."

REFERRING to the observation of Braco, that an adult of normal development weighs as many kilogrammes as he measures centimetres after deduction of the first metre, Dr. Glogner, in a contribution to Virchow's *Archiv* under the above heading, contends that Braco's law does not apply to the European inhabitants of the tropics, because numerous examinations have proved that they almost always lose weight in proportion to their height. Dr. Glogner believes that part at least of the decrease in weight is due to a decrease of fat, the result of food which is not so rich in fats as that in Europe. He also found another difference in the temperature of the body, which from seven to nine o'clock in the morning was half a degree centigrade higher in the tropics than in Europe. Another interesting observation was that, with the same temperature, warmth radiates more easily from the native than from the European, possibly through the stronger pigmentation of the skin in natives and the greater changes of the temperature in Europe.

SUICIDE AMONGST GERMAN CHILDREN.

A CURIOUS return has been made concerning some 289 instances of suicide by school children in the German Empire during the six years 1883 to 1888 inclusive. The interest of the return centres in the motives assigned for these extraordinary acts. Among the cases which could be so explained the largest proportion appear to have been attributable to fear of punishment. This, perhaps, might have been expected, nor is it altogether surprising that such extreme terror should be chiefly exhibited among pupils of the elementary schools. The fact that 20 per cent. of all the collected cases fall into this particular class should, however, afford food for reflection. It is certain that undue severity has been practised, or, at least, undue apprehension has been aroused, in every one of these instances, seeing that the little victims were so far thrown off their balance by it as to be driven to the extremity of suicide. It would be unjust to assume that for these exaggerated fears the teachers are wholly, or even mainly, responsible; but, on the other hand, no really efficient teacher would ever leave upon a child's mind an impression so horrible as to precipitate such a crisis as this. The child who takes his own life rather than face an angry teacher must believe, rightly or wrongly, in the ferocity of the teacher; and it is much to be feared that children of tender years, even when they are not so terror-stricken as this, are apt to nurse a suspicion that most strangers and some friends—the teacher in particular among the latter—are human wolves. To eradicate this mischievous misapprehension ought to be one of the first tasks of a successful preceptor. Among the high school pupils the suicides are almost exclusively boys, and here the most common motive is dread or disappointment in connexion with examinations. Mental derangement and thwarted ambition come next in order, while precocious sentiment claims its share to the extent of four boys and one girl, whose unhappiness is recorded as due to *une affaire de cœur*. It is some satisfaction to be able to add that these emotional young people were all past the elementary school stage.

INOCULATION BY MOSQUITOES AGAINST YELLOW FEVER.

DRS. FINLAY and DELGADO of Havana have published in the *Revista de Ciencias Médicas* some statistics of their practice of inoculating persons newly arrived in Cuba against yellow fever by means of mosquitoes which have been caused to contaminate themselves by stinging a yellow fever patient. These observations have been carried on for the last ten years, and, in addition to a certain number which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and the twenty-sixth day after inoculation a mild attack of yellow fever, with or without albuminuria; twelve experienced no symptoms of yellow fever either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by albuminuria altogether or with only a very transient appearance of it; three who had had no symptoms within twenty-five days contracted well-marked yellow fever within three years one patient who had a mild attack in consequence of inoculation contracted a severe attack later on, which proved fatal: that is to say, that of those who had been inoculated only about 8 per cent. contracted the disease in a well-marked form, with a mortality of under 2 per cent. In order to enable us to appreciate the significance of these figures, the authors mention that they observed sixty-five monks who from time to time arrived in Havana, where they all lived under similar conditions. Thirty-three of these were inoculated, and thirty-two were not. Only two of the inoculated contracted well-marked attacks, which, however, did not prove fatal; whereas eleven of those that had not been inoculated were severely attacked, no less than five dying. It is remarked that inoculations performed in the cold weather are not entirely trustworthy, and that they should be followed up by a repetition in the spring; also that experience shows

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that a person who has been three years in the city without contracting the disease has become "acclimatised," and is very unlikely to be attacked at a subsequent period.

THE DIAGNOSTIC USE OF KOCH'S FLUID.

PROFESSOR PICK, at a meeting of the Prague Society of German Physicians, related two cases in which injections with Koch's fluid had been useful for diagnostic purposes. One was a case of Addison's disease, and, in view of the fact that in by far the majority of such cases there is tuberculous disease of the suprarenal capsules, sometimes associated with tubercle in other organs, the injections were made to see if any reaction would follow. A first injection of 0·01 grm. was without effect, which was explained on the hypothesis that old caseous tubercular foci may not react very readily. A second injection was therefore made, and was succeeded by a severe general reaction, the patient at the same time complaining of great localised pain in the lumbar region, which was increased by pressure over the spot. The other case was one of syphilitic condylomata on the labia and the buccal and pharyngeal mucous membranes, together with extensive induration and enlargement of lymphatic glands. The patient had also for twelve years had a tuberculous warty growth (lupus verrucosus) on the arm, with cicatrices over the site of glands that had previously cicatrised. An injection of 0·01 grm. was followed in six hours by severe general reaction; and whereas the syphilitic disease showed no changes, the tuberculous area on the forearm and the glandular cicatrices on the arm became in four hours swollen, reddened, and painful, with the appearances of tender nodules hitherto unobserved.

CHOLERA INTELLIGENCE.

AT the close of the past year the state of affairs in Upper Syria still caused considerable anxiety. Beyrouth and Libania generally were still threatened by cholera; cases were recorded from Aleppo, and the disease was progressing in the direction of Masachi and Adana. The last intelligence that comes to hand points to a very marked diminution in the spread of the epidemic. In the second week of January only eight cholera deaths occurred at Aleppo, five at Adana, and two at Momouret-al-Aziz; besides which, the entire villayet of Diadbekir was reported free. At Beyrouth the condition of affairs was, however, much less promising, 139 attacks having taken place in the preceding fortnight. But on the whole a hope was locally expressed that the epidemic might possibly altogether subside before the coming spring.

A MIDWIFE COMMITTED FOR MANSLAUGHTER.

AN inquest at the Town Hall, Wandsworth, held by Mr. A. Braxton Hicks, mid-Surrey coroner, on the 22nd inst. into the cause of death of Emma Spicer, aged thirty-four, resulted in the jury finding, after a few minutes' deliberation, a verdict of "Manslaughter" against the midwife, Elizabeth Sarah Berry, the wife of a labourer. It transpired at the inquest that three deaths from puerperal fever had happened in patients under Mrs. Berry's care, and that she was distinctly warned by the medical practitioner and his assistant in the second case not to attend others. She confessed to not knowing what puerperal fever was, and as to blood-poisoning, her only idea about it was that it was connected with a cut finger. Yet this ignorant woman had attended 900 cases. A fine point in medical ethics arose out of this series of cases—viz, that of the duty of medical men who are called to see the cases, too generally when they are too far advanced to allow of much being done. Are they bound to withhold certificates? Is it their duty to inform the authorities? In the first case the medical man did not give the midwife advice to desist from practice, perhaps thinking that a single case did not show the midwife to be at fault. Another medical man advised her to desist from practice for a month or two. Another thought the period should have been two months. It is a part of the lawlessness of the mid-wives' position that, as they need no qualification, they are under no discipline. A medical man has no disciplinary function. It is to be remembered, however, that under the Notification Act he is bound to notify cases of puerperal fever. The sanitary authority should then become responsible for any necessary investigation into the facts. In all similar cases the medical man will do well to speak plainly to midwives as to the duty of desisting immediately from practice. The midwife may promise to obey and yet go on practising, but the medical practitioner will have done his duty.

BOYS AND FIREARMS.

ANOTHER sad accident which recently resulted in the death of a lad of eleven shows the need of something more than occasional supervision where boys are entrusted with loaded firearms. In this case a pistol held by a still younger brother aged nine, while learning to shoot, went off, with the consequence above mentioned. The lesson here taught requires no lengthy explanation. It does not, of course, imply that young lads as a rule are incapable of learning to use a gun or pistol. For some whose lot is cast in outlying corners of the colonies an early training in the management of such weapons is almost a necessity, and this fact, supported by a generally successful experience, might reasonably sanction their careful use by youths brought up in this country. What the sad occurrence does very forcibly suggest, however, is the mistake of entrusting the possible means of so much mischief to mere children. A boy of thirteen or fourteen would be quite young enough to have this privilege allowed him, and only then sufficiently old if possessed of steady nerve. The presence, in addition, of a responsible adult as instructor is always advisable, and usually indispensable, and nothing could be more hazardous than to allow firearms without such supervision to any one, however cautious, of a group of boys.

CREMATION AND ITS SAFEGUARDS.

UNFORTUNATE circumstances connected with the death of the late Duke of Bedford have brought into prominence an important question respecting the procedure of the Cremation Society, of which the late Duke was a prominent member, in cases of death from other than purely natural causes. It is clear that in the case of the Society absolute certainty as to the cause of death when other than natural can alone justify the preferential application of its method. It will therefore be interesting to examine the practical value of the safeguards adopted by the Society to prevent the chances of fallacy in a matter so important. These are three—namely: (1) the certificate of the medical practitioner in attendance on the deceased during his last illness; (2) a second independent certificate by another practitioner after careful inquiry into the circumstances attending the illness; and (3), should any doubt remain, the evidence afforded by necropsy. A further, though possibly less permanent, security exists in the resolution of the Society to refuse cremation in any case where the least doubt exists respecting the cause of death. Such doubt, as observed by Sir Henry Thompson, could remain after necropsy only in an extremely small number of cases, and would, in fact, be virtually abolished. Not actually so, however. There still remains a minimum uncertainty, and this, it is apparent, is much greater where certification, even on the very

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careful system employed by the Society, is alone relied upon. The practitioner in attendance might, in spite of diligence and skill, be misled—for example, in a case where the signs of poison were obscurely blended with those of real or supposed disease. In this connexion the case of the late Mr. Maybrick is suggestive. Is it then to be believed that a second medical testimony, which would be independent of the former, could be relied on to guarantee the difference of opinion which would necessitate an appeal to the coroner? We should rather expect that this latter evidence, divested as it must be of various technical premisses which guided the statements in the first certificate, would be at best a carefully weighed and usually confirmatory assertion of moral certainty. After all it is probable that the most reliable safeguard against a too precipitate practice of cremation which we possess is to be found in the resolutions of the Society above mentioned. Cremation therefore under its present rules is certainly a valuable means of promoting accuracy in certification. As affording an absolute guarantee of such accuracy it cannot be depended on, while it must in all cases destroy every trace of morbid or mischievous agency contained in the tissues. While therefore we freely admit its practical security against any miscarriage of justice in the vast majority of cases, we cannot admit that it stands in this respect on a level exactly so high as the practice of burial. Moreover, while we also recognise its more absolute and destructive purity in the disposal of the infectious dead, we do not see that it possesses any such advantage in comparison with burial in other cases, provided that burial be conducted, as it increasingly is conducted, on a rational or "earth to earth" system.

THE DISSEMINATION OF TUBERCLE UNDER KOCH'S TREATMENT.

THE important and suggestive statements made by Prof. Virchow upon the possibility of the use of Koch's remedy being the means for the dissemination of tubercle throughout the body by the liberation of bacilli from a localised focus, seem to receive some confirmation from the discovery by Dr. Liebmann of Trieste (*Berl. Klin. Woch.*, No. 4, 1891) of tubercle bacilli in the blood of patients under this treatment. The method employed was to carefully disinfect by hydrochloric acid and alcohol the cover-glasses &c. employed, and to take a drop of blood from the finger, previously thoroughly cleansed with pure alcohol and ether, and the needle also having been previously heated to redness. The preparations were placed in warm carbol-fuchsine for half an hour, then washed in distilled water, stained for one minute in Gabbet's solution, and examined in water. (Dr. Liebmann used a modified Gabbet's fluid, viz., methyl-violet, 1·5 parts; absolute alcohol, 30 parts; concentrated sulphuric acid, 20 parts; and distilled water, 50 parts.) Nine cases are given; all the patients reacted markedly to small doses; and bacilli, sometimes granular or broken, were to be found in the blood on the evening of the day of the injection or the next day, but they disappeared if the injection was not repeated. Dr. Liebmann states that he could never find bacilli in the blood of tubercular patients not treated by this method, and considers his observation to prove that the employment of Koch's remedy may lead to the entrance of bacilli into the blood in patients not suffering from generalised miliary tubercle. It remains to determine whether this occurs at a definite time after the injection, and for how long it may persist. Already these investigations have been repeated by Dr. Ewald at the Augusta Hospital, the preparations being heated to 110° C., and the blood taken during and after the fever, but without in any case confirming Dr. Liebmann's results.

TYPHOID FEVER IN FLORENCE.

AN Italian correspondent writes: "There is little to add to my previous communications on the appearance of typhoid fever in Tuscany, except the fact that, in Florence particularly, the malady has shrunk to proportions certainly not greater than those ever present in a populous town. On the 16th inst. the number of cases was in the ratio of 3 to 100,000 inhabitants—six patients in all out of a population of 200,000 having been, within the twenty-four hours, reported to the sanitary authority. At no time, indeed, during the last four weeks has there been enough typhoid fever in Florence to justify the alarm that existed, or the stampede that, among the American portion of the English-speaking community especially, almost emptied the hotels, if not the pensions. Many of the cases reported at sanitary headquarters were at best suspected to be of the nature of typhoid fever; some of them turned out to have quite another origin. All the same, the measures set on foot by the municipality to secure absolute purity of drinking-water have not been relaxed, and the whole city, in every hygienic aspect, is now under a surveillance to which, if the truth must be told, it has long been a stranger. A laudable endeavour to minimise the sufferings of the poorer typhoid fever patients has been the formation of a committee to supply them with appropriate aliment, and, in the case of convalescents, to aid them with all the requisites for a complete recovery. This has become the more urgent as the cold during the last three or four days has been Siberian in its intensity, and the misery caused among a proletariat poorly clad at the best of times and scantily provided with fuel proportionately severe. With ice-floes on the Arno, and the tramontana blowing 'sharp as Shylock's knife' from the snow-clad Apennines, Florence may claim to be a 'winter city' in quite another sense than that in which she poses in fiction."

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Staff Surgeon Dr. Renvers has been granted the title of Professor.

Leyden.—Dr. Wijsman has been appointed to the chair of Pharmacy and Toxicology, in succession to Dr. van der Burg, deceased.

Munich.—Professor Trendelenburg of Königsberg has accepted the chair of Surgery, vacant by the death of Professor von Nussbaum.

St. Petersburg (*Medico-Chirurgical Academy*).—Dr. Cheltsoff has been recognised as *privat-docent* in Medicine.

Valladolid.—Professor Garín of Valencia has gained the chair of Obstetrics by competition.

Vienna.—Dr. Weidel has been appointed Extraordinary Professor of General and Pharmaceutical Chemistry.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Karl Reyher, from an accident while hunting. He was one of the best known surgeons in Russia. In Edinburgh, where he went in 1873 in order to study under Lister, he made many friends. He was very active during the Russo-Turkish War, and by his unwearied attention to antiseptic methods was the means of saving many valuable lives.—Dr. Dmitri Koshlakoff, formerly Professor of Medicine in the Medico-Chirurgical Academy, St. Petersburg. He had written largely on the subjects of diseases of the throat and of the kidneys.—Dr. Jules Baillarger, a

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well-known French alienist, who was a favourite pupil of Esquirol, at the age of eighty-one. — Dr. Nicolas Gutierrez, founder of the Cuban Academy of Medicine, and also of the medical press of that island, the first professional journal published there being the *Repertorio Médico*, which was commenced in 1840. He commenced practice in 1821, and in 1835 was appointed Professor of Pathology in the University of Havana. Many years subsequently he became rector. He preserved his faculties to the last, and never ceased to take an active part in the work of the Academy of Medicine.—Dr. Augustin W. Reyes, a well-known physician and medical writer in Cuba.

AT the annual meeting of the Obstetrical Society of London, on Wednesday, Feb. 4th, there will be a ballot for the election of S. Tarnier, M.D., Professor of Obstetrics, Faculté de Médecine de Paris, as an Honorary Fellow (foreign subject), to replace Professor F. C. Faye, of Christiania, deceased. The number of foreign Honorary Fellows of the Society is limited to ten. At the same meeting, after the address of the President, a discussion will take place on the Midwives' Registration Bill.

DR. TARNOWSKY, professor in the St. Petersburg Medical Academy, has published a work on "Prostitution and Abolismus," in which he contends that prostitution should be regulated by law, and points to the state of this country as a warning to those who on the Continent favour the doctrine of "abolismus"—that is to say, the abolition of all State regulation.

THE death is announced of Dr. Warlomont of Brussels, whose work in connexion with the advocacy of the use of animal lymph in vaccination is well known to the medical world. As an ophthalmologist his skill and experience were of no mean order. Dr. Warlomont was one of the chief organisers of the International Medical Congress, held in Brussels in 1874.

WE are informed that Dr. Prowde, the medical officer of the Sunderland Union Infirmary, has received from Berlin a supply of Koch's fluid, and that it will be employed on several suitable patients who are at present under his care in the infirmary.

THERE will shortly be published (Springer, Berlin) a first series (ending Dec. 31st, 1890) of official reports on the action of Koch's remedy for tuberculosis, from the clinics, polyclinics, and pathological institutes of the Prussian Universities.

THE Milan Correctional Court is engaged in trying a medical man for having caused the death of five persons who had been bitten by rabid dogs by inoculating them according to a system based on Dr. Ferran's method for cholera.

THE Russian Government has prohibited the sale of "spermin" by pharmacists, even when prescribed by a medical man.

MR. SYDNEY JONES has retired from the post of surgeon to St. Thomas's Hospital, his term of office having expired. Mr. Croft now becomes senior surgeon.

THE Council of the Metropolitan Hospital Sunday Fund have received a further donation of £100 from Ludwig Mond, Esq.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE discussion[1] on Professor Fraenkel's paper at the Berlin Medical Society was further continued on the 21st inst.,[2] the first portion of the proceedings being again taken up by demonstrations of cases subjected to the treatment, and specimens of organs from those who had been treated.

Dr. ALBRAND exhibited a case of Tuberculosis of the Conjuctiva—a very rare affection—from the clinic of Professor Schöler. The tuberculous infiltration was confined to the conjunctiva of the right upper eyelid, some glands in the cheek, the preauricular glands, and those at the angle of the jaws. The patient was a girl of seventeen, with some family history of lung disease, but having no lung symptoms herself, and the disease commenced at the beginning of 1890. In the summer she was under the care of Prof. Uhthoff, who excised a portion of the growth, and proved its tuberculous nature. The condition at the time of commencement of treatment by injections of Koch's fluid (in December) was some redness and swelling of the upper eyelid near the outer canthus, where there was a scar surrounded by greyish-yellow tuberculous nodules. At this time, too, slight dulness was detected at the apex of the right lung, but no respiratory symptoms, beyond some dyspnœa and cough, were excited by the injections. The dose of the injections ranged at first from 0·015 to 0·04 grm., the degree of general and local reaction increasing with the dose. Together with increased local swelling and redness, there appeared an increase in the tuberculous nodules, which became confluent. Gradually these conditions subsided, until a dose of 0·15 grm. produced no general or local reaction, the conjunctiva became pale, and the nodules disappeared. The affected glands shared in the local reaction, and then some suppurated, and others were treated by scooping. They were found to contain abundant bacilli.

Professor VIRCHOW showed specimens from the body of a man, aged fifty-four years, who was admitted into La Charité last October for pleurisy, with effusion. From Oct. 10th to Nov. 26th he remained in a satisfactory state; no fever or loss of weight. Then injections were commenced, five in all, each five milligrammes, and each time with marked reaction (temperature 104°). From this time he began to lose weight, and after the last injection to have continued fever. He died, and the examination made that morning (21st) showed, in addition to old induration at both apices and the remains of pleurisy, a widespread miliary tuberculosis in lungs, spleen, kidneys, and liver.

Dr. G. BEHREND showed a case of Lupus, premising that lupus was a local tuberculosis of the skin which may often arise from infection of eczema in early life. The patient had suffered for six years with pulmonary and laryngeal tuberculosis, the latter having been cured by the local application of iodo-glycerine and sozoiodol. The affection for which he was now about to be treated by Koch's remedy was a lupus arising out of inoculated tubercle of the hand.

Dr. EWALD resumed the debate on Professor Fraenkel's paper, confining himself to the cases treated at the Augusta Hospital under his personal supervision. These amount to 114, and there had been used no less than six flasks and a half of the "lymph"—i.e., about 32,000 milligrammes in all. On no single occasion had any inflammation or suppuration occurred at the site of injection. Of these cases thirty-six had been discharged, and five had died. Two of the fatal cases were advanced in the disease, and were treated during the early period when "enthusiasm" was at its height; but they only received one or two injections, being obviously unsuitable. Another was a severe case of laryngeal and pulmonary phthisis, which succumbed five days after the injections were left off. In the other two cases there was a probable connexion between the injections and the fatal result. One was a case of phthisis with amyloid nephritis; the temperature rose rapidly the day after 1 milligramme injection; there was profuse hæmoptysis and death the following day. The other was a man with slight apex affection, who came from America for treatment. He was very carefully examined by some English physicians then in Berlin, and only slight

[1] See THE LANCET, Jan. 24th, p. 215.
[2] Vide Berl. Klin. Wochensch., No. 4, 1891

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infiltration of the right apex was detected. He had a number of injections, up to 10 milligrammes, with the ordinary reactions, and felt well, when he was suddenly attacked with hæmoptysis, and at the same time signs of excavation appeared in the opposite lung. In one of these cases there was a recent eruption of tubercles on the pleura, such as had been described by Professor Virchow. He (Dr. Ewald) did not feel competent to judge whether this was *post hoc ergo propter hoc*, but Professor Virchow's statement had strengthened his feeling that the condition was a result of the injection. Of the thirty-six cases which had been discharged, seven of them had left before completing the full series of injections—viz, up to 100 milligrammes; some because they were not satisfied with the rate of progress; and four owing to their hopeless condition from the first. Dr. Ewald then read reports furnished by patients since leaving hospital upon their condition of health, especially as regards cough, expectoration, night-sweats, weight, and general state, the majority being favourable on the whole; but he gave some reports in which there had been retrogression in one or other of these points. However, he remarked that the actual state is a different thing from the reported condition. For, although an improvement in cough and expectoration is necessarily associated with diminution in râles, yet he was bound to say that, so far as regards the percussion signs, no case had since his discharge shown any change from the conditions carefully noted just before he left the hospital. This does not apply to pleuritic effusions, which were rapidly absorbed. He pointed out that a "clearing up" of dulness, noted by many, does not necessarily imply the cure of a tuberculous process. Such a change may be owing to the absorption of intra-alveolar products, or the re-entrance of air into parts previously closed by exudation; also to the formation of cavities. The two factors in phthisis—intra-alveolar exudation and inter-alveolar tuberculous formation—are on a different footing in this respect; and a clearing up of dulness due to the removal of the former may not prove in the least that the latter has also disappeared; on the contrary, the curative process in tubercle consists in the production of new tissue, the inspissation and calcification of the contents of cavities, and destruction of the affected part. These changes give rise to dulness and not to improved resonance; and therefore a "clearing up" of dulness does not mean the cure of the tubercle. Moreover, the lesions are not superficial, but more or less concealed by a layer of healthy tissue. Hence he affirmed that *he had not yet seen one case which he could say was cured.* The same applies to the finding of bacilli, which varies so much with the conditions of the secretion. Bacilli may be undetected for a long period, and then suddenly appear in large numbers. Turning to the reverse of the medal, he said that there were undoubtedly unfavourable effects as well as favourable. He did not deem it necessary to recount all the severe and even fatal accidents which had been noted in the course of the injections, sometimes of metastatic nature, at others due to the direct injuries caused by the hyperæmia of the affected parts. But he referred to a paper which was about to appear in the *Berliner Klinische Wochenschrift*, which contained statements that, if confirmed, were of the highest importance. Dr. Victor Liebmann of Trieste had discovered tubercle bacilli in the blood during and immediately after injections. These observations had been repeated at the Augusta Hospital, with negative result. Summing up, he said the conviction was borne on him that *in no single case*, with the exception, perhaps, of a few in the very earliest stages, and then not with positive certainty, *can one say how the case will go, either in respect to the character of the reactions, or to the ultimate result.* As he had remarked in a recent debate at the Hufeland Society, the cases show a most variable character. Dr. P. Guttmann had said that only slight cases should be injected, and that no cases with severe signs, whether afebrile or febrile, should be treated. In many cases the slight character could be positively affirmed; but there were others—for instance, where the disease was in the centre of the lung—where this was not possible. Even in Moabit such cases occurred, as shown by the case of "cured" intestinal tubercle brought forward by Dr. Guttmann. According to present experience, the physician is in the position of an operator who cannot foretell the issue of a difficult operation. The patient must be told that the remedy may produce the most severe effects, and even cause a fatal result. A case, to be published in the *Berliner Klinische Wochenschrift*, shows the supervention of tubercular meningitis with comparatively slight lung affection. Again, there was one series of effects not hitherto mentioned—viz., cases in which, free from fever at the commencement of treatment and in which for some time only slight reactions were produced, a permanent fever had been set up and the injections had to be abandoned. Here, again, one cannot absolutely affirm the *post hoc ergo propter hoc;* but the probability of a causal relationship was very great. Still, it can be said that in a certain number of cases there was a notable improvement, and that in a shorter time than ever observed after the use of any other remedy. Further, by careful selection of cases and judicious treatment the chances of a favourable issue were increased, although in some it is impossible to foretell what may happen. The patient must decide whether he will undergo the treatment or not. Dr. Ewald concluded by quoting the authority of Fraentzel on the marked improvement in phthisis from treatment by creasote in a report published by him in 1887, and compared the results then given with those affirmed in the reports he had just read of the cases treated by Professor Koch's remedy.

Dr. JAMES ISRAEL gave an account of 36 cases of surgical tuberculosis treated by the method. Subtracting 2 cases of cured joint resection which did not react, and 9 in which the treatment did not extend beyond twenty days, he said that one of the remainder (a case of hydrops tuberculosus genu) was cured; but before beginning Koch's remedy the joint had been twice injected with iodoform glycerine. Two patients had died, both being affected with extensive lung disease; one was a case of lingual tuberculosis, the other of synovial tubercle of the elbow. Five cases had not shown the slightest local reaction or any therapeutic effect from the injections, but in all there had been a general reaction. These were—(1) lupus of face, pulmonary tubercle; (2) tuberculous ostitis of wrist; (3) synovial tubercle of elbow, pulmonary tubercle; (4) tuberculosis of bladder; (5) tuberculosis of bursa over trochanter, pulmonary tubercle; cases in which the total quantity injected varied from 931 milligrammes to 43 milligrammes. A case of tubercle of prostate had no reaction, either general or local, after injections up to 4 c.g. Of the remaining eighteen cases, six had notably improved—viz., two cases of facial lupus, one of fistula after old hip resection, one of tubercular epididymitis, one of lingual tuberculosis (but fatal from lung disease), and one of tubercular teno-synovitis. Three cases of joint disease primarily cured by excision gave very slight reactions without notable change. The rest either showed no improvement (three of coxitis and two of spondylitis), or had relapses (one a resected knee-joint, and one caries of skull), or grew worse (one tuberculous testis, one arthrectomy of hip, and one apparently healed excision of hip). Summing up his experience, he said that one of the cases of lupus of the face showed no improvement, although the dose had been raised to 0·1 gramme, the total amount used being 896 milligrammes. Microscopic examination of excised nodules showed giant cells and no regressive change. In another case, a cancroid engrafted on the lupoid tissue had rapidly increased under the injections. In another, where the lupus had been excised, and a plastic operation performed, the injections caused the development of fresh nodules beneath the healthy skin. Only one case of joint disease, that of hydrops tuberculosus genu, had a good result. After each injection there was increased effusion, which ultimately became absorbed when the reactions ceased. In some cases latent foci in the bones seemed to be excited into activity; in others fresh disease appeared to be started. Details of some of these cases were given, and reference was made to two cases of tuberculous epididymitis. Dr. Israel's conclusions were: (1) The remedy, even apart from caseous foci, does not in all cases act on tuberculous tissue; (2) the remedy does not invariably excite obvious necrosis, but inflammation; (3) there is no proportion between the degree of the local reaction and the intensity of the general reaction; (4) the degree of local reaction is no measure of curative effect; good results may ensue upon slight local reaction; in spite of marked local reaction no curative effect may be observed. Sufficient time had not elapsed to enable a judgment to be formed of the therapeutical value of the remedy in surgical cases.

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THE MIDWIVES' REGISTRATION BILL.

A MEETING of registered medical practitioners was held at the Grosvenor Hotel, Victoria Station, on Saturday, Jan. 24th, at 4 P.M., for the purpose of taking steps to oppose the Midwives' Registration Bill, which is down for second reading in the House of Commons. The meeting was not very numerously attended. Mr. John Dewar occupied the chair.

Dr. CRAWFORD moved: "That this meeting strongly disapproves of the Midwives' Registration Bill now before Parliament, as it attempts to dissociate midwifery from medicine and surgery in the persons of unqualified midwives. This being so, it is wrong in principle, and will consequently be fraught with danger to the public, and cannot but be opposed to the high aims of the medical profession. At the same time this meeting feels the great need there is for a better system of medical aid and competent nursing of necessitous poor women, during and after labour, in town and country districts." In speaking to the resolution, he felt that these subjects should not be separated as this Bill proposed to do. If it passed, they would have midwives practising independently of medical men. This he objected to. He maintained that in all such cases the medical man should be the first to be called to the case, and not the last, as this Bill proposed. In cases of labour, should a midwife be engaged in preference to a medical man, she herself would require an assistant to attend to the mother and the child, and would consequently be in the same position as the medical man at present is, and the expense would be the same in both cases. General practitioners would see that this would tend to cut up their practice, and that would be very much against their own interests and also destroy public confidence in them. The high aim of the medical profession is to uphold the unity of the profession as practitioners of medicine, surgery, and midwifery. His notion was that there should be trained nurses in every district to look after all cases of illness, but that they should be under the immediate supervision of registered medical practitioners. He pointed out that registration was not a cure for the "old women" who were called in to cases now and then, as those who preferred them could still have them.

Mr. W. E. G. PEARSE seconded the motion, and fully concurred with its views.

Dr. H. A. DES VŒUX could not support a motion which thought the Bill to be wrong in principle, or fraught with danger to the public. At present poor women were attended by unqualified midwives—that is, by women only fit for charing work in a house, but totally unfit to take even a simple case of midwifery. Unless registration were substituted, the poor in the towns and rural districts would never have any better attendance. Midwives, good or bad, would always be called in to attend the poor, and it seemed to him that by being registered they would not be such a danger to the public. What was wrong with the Bill? If it decreased mortality, which must follow upon increased education, he could not see how it was opposed to the high aims of the profession. He gave illustrations of the kind of questions put to candidates by the Obstetrical Society, and proceeded to define natural labour, which the Bill permitted the midwives to deal with only. Midwives were taught to recognise natural labour, and those whom he taught had a whole lecture upon cases which they ought not themselves to attend.

Mr. JOHN CAHILL pointed out that the Bill before Parliament did not propose to draw distinctions between the different cases of labour, but to insist that no women shall legally practise as midwives without having received a certain minimum of practical education. This was a very wise provision for many thousands of women in this country. There was no doubt that uneducated midwives attended a vast number of lying-in women, and in a large proportion of cases the attendance was successful. Certain cases would arise with which the midwife was unfit to deal. The Obstetrical Society wished that those women should have sufficient education to know when a doctor should be called in. In poor districts it would enable medical men to relegate to the hands of midwives a proportion of the lowest class of patients upon whom a great deal of labour and time has to be expended gratis. The profession were bound to consider any method which tended to the greater good of the health of the community. He thought the Act would be a valuable measure for the protection of a class of women whom they, in the west of London, knew very little of. He therefore moved as an amendment: "That this meeting of medical practitioners recognises with much satisfaction the circumstance that it appears likely that the efforts of the Obstetrical Society to improve the education of midwives will receive the practical support of Parliament." Dr. Harry Scott seconded the amendment.

Mr. JOHN DEWAR (chairman) thought that London consultants were not very familiar with the details of the work done by midwives. In connexion with public dispensaries he had seen a great deal of their work, and he could not remember any serious injury as having occurred in their practice, although they were not registered. They had no special training beyond attending a lying-in hospital for two months or so, and had gone before the public with a certificate. He could not therefore see the advantage that would result to the public by registering them as a class of practitioners. In poor districts there were very many struggling practitioners who would be glad to attend cases for the same fee as midwives charged. Midwives, if registered, would regard themselves as a class of practitioners, and, so far from sending for a doctor in difficult cases, it was just likely that they would themselves try to remedy those conditions which were dangerous to both mother and child. The poor in the district would begin to think that there was no necessity for a doctor at all, the poor women themselves would not be benefited, and the general practitioner would be very much injured. He agreed that practitioners had to consult the safety of the public before their own well-being. But he asked, Would registration lend any safety to the public which at present the public did not possess? He maintained that from the very fact of their better education they would attempt to relieve patients whose condition was critical and demanded skilled assistance, and then, as now, when it was too late the practitioner would be called in. The profession ought to be considered, when it was remembered that in every parish and small village in England there was a practitioner able and willing to attend to the patient. He could not see the necessity for encouraging a class of women already far too numerous. The amendment was then put to the meeting, when three voted in its favour, and the motion then was declared carried.

Dr. CRAWFORD next submitted the following motion, to the effect: that this meeting calls upon the direct representatives of the General Medical Council and others who have maintained that medical students after a four years' medical education are imperfectly educated in the subject of midwifery, and that their attendance on lying-in women is fraught with danger to the public, to oppose a Bill which legalises the attendance of women, designated midwives, at the bedside of puerperal patients, notwithstanding the fact that their imperfect education has only extended over a period of three months.

The motion was agreed to, and the meeting terminated with a vote of thanks to the chairman.

A petition against the Bill was lying on the table, and was signed by most of those present. It has now been forwarded to Mr. Burdett Coutts, M.P. for Westminster, signed by about thirty practitioners in the district.

THE MEDICAL DEFENCE UNION.

A MEETING of the Medical Defence Union was held on Wednesday last at 429, Strand, when the annual report for the year ending Dec. 31st, 1890, was considered. The President, Mr. Lawson Tait, occupied the hair.

In presenting the report, Mr. Lawson Tait thought that very few but would agree that the growth of the Union had been very satisfactory, and equally so was the amount of work done by it. All the undertakings they had engaged in so far, with one exception, had been uniformly successful. In financial ability and in range of influence the Union had steadily developed. A matter which had given the council anxiety and which was still in hand was the strange way in which the Union was hampered in the metropolitan area of its work in the prosecution of irregular practitioners, by the fact that as the law stands at present the Receiver of

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Police was legally entitled to the penalties imposed, and that debarred the Union from obtaining repayment of the expenses to which it was put in these cases; so that the more the Union succeeded in its work the more they were hampered by this enactment. The council had determined to approach the Home Secretary in order to find out whether this condition of things could not by some arrangement be altered, inasmuch as its existence rendered the action of the Union a dead letter. He believed a private arrangement of the Home Office with the police would be sufficient for the purpose, and hoped within a short time to report to the council that a private arrangement had been made.

Dr. MEAD (Newmarket) suggested that it would be much more convenient to the members of the Society if the chief offices of the Union were removed to London; and after some discussion

Mr. TAIT pointed out that the branches of the Union were perfectly autonomonic. They ought to wait until they were in a very flourishing condition, with a secretary at £500 a year, and then it would not matter a straw where the offices were. The report was approved.

In receiving the financial statement the CHAIRMAN referred to the item under the heading — To law and detective expenses (including costs of reconstruction, £464 16*s.* 3*d.* The chairman pointed out that these were not the costs which had been incurred in a single year, but represented the sums paid to the lawyers for three years' work.

On the motion of Mr. FELCE, it was agreed that the president and other officers should press upon the Home Secretary to take such action as would enable the fines in question to be paid over to the General Medical Council.

Formal votes of thanks were awarded to THE LANCET and various other journals for publishing from time to time statements in connexion with the work of the Union.

Dr. R. R. RENTOUL brought forward the subject of the Midwives' Registration Bill, and a discussion followed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5850 births and 4816 deaths were registered during the week ending Jan. 24th. The annual rate of mortality in these towns, which had declined from 28·7 and 27·3 per 1000 in the preceding three weeks, further fell to 25·1 last week. The rate was 25·7 in London and 24·6 in the twenty-seven provincial towns. During the past three weeks of the current quarter the death-rate in the twenty-eight towns averaged 26·8 per 1000, and exceeded by 3·0 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·8 in Hull, 15·9 in Bradford, 18·2 in Derby, and 20·8 in Leicester; the highest rates were 29·9 in Bolton, 31·6 in Wolverhampton, 38·8 in Preston, and 39·0 in Halifax. The deaths referred to the principal zymotic diseases, which had been 485 and 404 in the preceding two weeks, were again 404 last week; they included 133 from measles, 115 from whooping-cough, 50 from diarrhœa, 44 from scarlet fever, 36 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Cardiff, Plymouth, Hull, and Huddersfield; the highest in Bolton, Manchester, Birkenhead, and Halifax. The greatest mortality from measles occurred in Leicester, Leeds, Birkenhead, Oldham, Brighton, Bolton, and Halifax; from scarlet fever in Halifax; from whooping-cough in Preston, Halifax, Newcastle-upon-Tyne, and Birkenhead; and from "fever" in Wolverhampton and Birkenhead. The 36 deaths from diphtheria included 17 in London, 3 in Manchester, and 3 in Salford. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1427, and showed a further considerable decline from recent weekly numbers; the patients admitted during the week were 103, against 92 and 112 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding eight weeks from 375 to 1018, declined last week to 845, but exceeded the corrected average by 252. The causes of 114, or 2·4 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Plymouth, Derby, Birkenhead, and Sunderland. The largest proportions of uncertified deaths were recorded in Liverpool, Salford, Brighton, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 28·8 and 27·8 per 1000 in the preceding two weeks, further declined to 24·9 during the week ending Jan. 24th, and was slightly below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 13·6 in Greenock and 18·2 in Dundee to 31·0 in Glasgow and 40·4 in Paisley. The 651 deaths in these eight towns showed a decline of 78 from the number in the preceding week, and included 27 which were referred to whooping-cough, 18 to scarlet fever, 10 to diarrhœa, 9 to diphtheria, 7 to measles, 5 to "fever," and not one to small-pox. In all, 76 deaths resulted from these principal zymotic diseases, against 68 and 53 in the preceding two weeks. These 651 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 19 and 16 in the preceding two weeks, rose last week to 27, of which 10 occurred in Glasgow, 9 in Edinburgh, 4 in Dundee, and 3 in Leith. The deaths referred to scarlet fever, which had been 8 and 7 in the previous two weeks, rose again to 18 last week, and included 14 in Glasgow and 3 in Edinburgh. The 9 fatal cases of diphtheria corresponded with the number in the preceding week; 5 occurred in Glasgow and 2 in Edinburgh. The 7 deaths from measles showed a further decline from the numbers in recent weeks, and included 5 in Glasgow and 2 in Greenock. Of the 5 fatal cases of fever 3 were recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 240 and 228 in the preceding two weeks, further declined last week to 210, but exceeded by 29 the number in the corresponding week of last year. The causes of 55, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 36·0 and 37·1 per 1000 in the preceding two weeks, further rose to 38·4 during the week ending Jan. 24th. During the first three weeks of the current quarter the death-rate in the city averaged 37·2 per 1000, the rate during the same period being 28·0 in London and 20·1 in Edinburgh. The 260 deaths in Dublin showed an increase of 9 upon the number in the preceding week, and included 5 which were referred to "fever," 2 to diarrhœa, 1 to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had been 15 and 9 in the previous two weeks, further declined last week to 8; they were equal to an annual rate of 1·2 per 1000, the rate from the same diseases being 1·7 in London and 19·7 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 in each of the preceding two weeks, rose to 5 last week. The fatal cases of whooping-cough, which had been 6 and 2 in the previous two weeks, further declined to 1 last week. The 260 deaths in the city included 40 of infants under one year of age and 92 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons showed a further increase upon those recorded in recent weeks. Three inquest cases and 54 deaths from violence were registered; and 72, or more than a fourth, of the deaths occurred in public institutions. The causes of 40, or more than 16 per cent., of the deaths in the city were not certified.

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Correspondence.

"Audi alteram partem."

FAILURE OR CURE?

To the Editors of THE LANCET.

SIRS,—For several years past I have taken some pains to condemn the unnecessary performance of mutilating operations upon women, and have endeavoured to caution the rising generation of medical men against any teaching or example which might tend to lower the standard of surgical ethics and endanger the character of British surgeons. Last month, at the College of Surgeons, I expressed my fear that the operation of oöphorotomy has been "performed without due explanation of the consequences; that advantage has been taken of the susceptible and impressionable condition of women in certain states of health to overstep the bounds of deliberative and consultative practice; that recoveries from the operation have been untruly tabulated as cures of the diseased condition; and that failures have not all been recorded." On the 7th of this month, after Dr. Playfair's paper on "Removal of the Uterine Appendages in Cases of Functional Neurosis," I read extracts from a paper by Dr. Ross of Toronto on "The Failure of the Removal of the Tubes and Ovaries to relieve Symptoms," in which he says, "Many cures I hear of as cures are not cures"; and in support of that statement I referred to one (among several others "almost as unsatisfactory") which had been reported as a "practical cure" less than a month after the operation, but has proved to be "a deplorable and disastrous failure." A letter from the operator in this case appears on page 221 of your last number, in which he refers to the original account of the case in the British Gynæcological Journal for 1888, vol. iv., p. 457. The following is this account given at the meeting of the British Gynæcological Society, Dec. 12th, 1888:—

"Mr. Lawson Tait said he had a specimen to show which bore very much upon what had just been said; he showed the appendages from a lady, thirty-nine years of age, with a very remarkable history. She had been married at the age of seventeen or eighteen, and had two children within twenty months of her marriage. Soon after her second confinement she contracted gonorrhœa from her husband, and she had never known what it was to be well since. She had led a life of single misery for several years. Then she married again, but her health did not improve, and she never became pregnant by her second husband, so that ever since nineteen or twenty she had been absolutely sterile. During the last seven years she had been the patient of a distinguished gynæcological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him and he had operated. She had double pyo-salpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina, he would have been obliged to tap several cavities. Instead of doing anything of the kind, he opened the abdomen a month since, and the patient was now practically cured. A case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years, who could have been relieved at any time, who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter." In the letter you published last week, the operator adds that if anybody is answerable for this failure "it is Sir Spencer Wells, who, during seven long years, treated this poor woman uselessly by pessaries &c." And he adds that the case is "not a failure," ..... the patient is "absolutely cured, for I have the diseased parts in a bottle." This lady is now in London. I have submitted the following questions to her, and I add her replies:—

1. During the seven years 1881-88 were you under my care, and did I fail to relieve you?—*Reply:* I consulted you in 1879, after Dr. Palfrey had failed to do me any good. You operated on me in the summer of 1879; I was in good health after that until you again operated on me in 1880. After that I enjoyed good health until 1887.

2. Had you before 1888 been "an invalid for years," or "led a life of single misery for several years?"—*Reply:* Except between my second confinement and 1879, I had been in good health.

3. After your second confinement had you "been absolutely sterile"?—*Reply:* I had two children after my second confinement—one born dead, one lived two weeks, and I had one miscarriage at three months.

4. Have you been "under the care of all the well-known specialists in London, many of whom declared that there was nothing the matter"?—*Reply:* You are the only medical man I consulted in London between 1879 and 1888, and no one ever told me that there was nothing the matter.

5. Did I treat you "for seven long years by pessaries &c."?—*Reply:* No, you never used a pessary; nor, after your second operation in 1880, treated me except for slight ailments, and that seldom. In 1887, while you were abroad, I was treated by Mr. Smith of Brighton after a carriage accident and was recovering when you returned.

6. Remembering your state before and after the operation performed at Birmingham in November, 1888, has that operation proved to be, in your opinion, a "practical cure" or a "deplorable and disastrous failure?"—*Reply:* A decided failure.

I need only add to this the fact that the operation I performed in 1879, assisted by Mr. Thornton, was amputation of part of the elongated cervix uteri. Dr. Palfrey had repeatedly injected solution of perchloride of mercury into the substance of the cervix, and it was feared that the disease was papilloma or epithelioma. Examination proved that it was simple hypertrophy of the utricular glands, or adenoma. About a year after this amputation, the remains of the cervix showed some tendency to enlarge and proliferate, and I destroyed the left side by the actual cautery. For two or three days after this there was a good deal of pain and some fever, but they soon subsided, and until 1887—about seven years—the patient was as well as most people, and for several months after her second marriage, in February, 1888, remained in good health, riding, rowing, and walking four or five miles without fatigue. Since the operation in November, 1888, she has been a confirmed invalid. The failure to the husband has been "disastrous" in expenditure; to two devoted daughters in health and anxiety from continuous nursing; to the patient "deplorable" in more than two years' almost continuous suffering and shattered health. It is a very poor consolation to her to be assured that she is "absolutely cured" because her "diseased parts are in a bottle."

I am, Sirs, yours truly,

T. SPENCER WELLS.

Upper Grosvenor-street, Jan. 26th, 1891.

THE LATE SURGEON-GENERAL BALFOUR AND THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—I should like you to add to your biography of the late Dr. Graham Balfour that he was a very important member of the Skey Committee of 1867, which was appointed to investigate the question of venereal disease as it affected the army and navy. Dr. Balfour came to the sittings prejudiced (as he informed us) against any State interference with women or any more stringent regulations for the soldier. At the closure of the committee, however, his convictions were quite changed, and he saw the necessity of legislative measures for the control of the disease. He therefore, with some slight modifications, signed the chairman's report in favour of them. He subsequently upheld the importance of the Contagious Diseases Acts, and lamented their repeal.

I am, Sirs, yours truly,

Grosvenor-street, Jan. 26th, 1891. SAMUEL WILKS.

*** Dr. Wilks has usefully drawn attention to a part of the life work of the late Surgeon-General Balfour which was but casually referred to in our notice last week. Though the Contagious Diseases Acts never formed a favourite topic with the distinguished deceased, yet his convictions to the last were entirely opposed to the action of the late Government in withdrawing the protection of those measures from Her Majesty's forces. That the facts brought out in connexion with the working of those Acts were capable of changing the views of so acute and honest a reasoner as was Dr. Balfour is surely strong evidence of the unwisdom of maintaining the existing legislative inaction in regard to the means of controlling this class of contagious disease.—ED. L.

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THE DISCUSSION AT THE MEDICAL SOCIETY ON THE OPERATIVE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—Having unavoidably been prevented from attending the above adjourned discussion on Monday evening last, I would like, with your permission, to briefly remark on one or two points in connexion with Dr. W. Duncan's paper on the subject in question.

In the first place, with regard to Dr. Duncan's tabulated series of cases, I think it a matter for regret that no indication whatever was therein afforded as to the dates on which the operations thus recorded were performed. Dr. Duncan, in reply to an inquiry by the President as to whether the cases—numbered consecutively from one to thirty—comprised all those of the kind which had been thus treated by him, stated at the meeting on Jan. 12th[1] that "his earlier results in all cases of abdominal section had been so awful that he would not like to publish them." In other respects the cases were said to be consecutive up to the date of writing his paper. While giving Dr. Duncan full credit for the frankness of his avowal on this point, I venture to think that his omission was an unfortunate one, since statistics thus compiled cannot be of much scientific value as to the comparative risks and advantages of the operation to which they refer. If we turn back to the history of ovariotomy in this country thirty years ago we learn that what chiefly tended to establish the operation upon a firm basis as a well-recognised surgical procedure in the eyes of the profession at large was the fact that each case in the practice of Mr. Spencer Wells, whether successful or unsuccessful, was duly and faithfully recorded by him from the commencement of his work in this field; and, so far as I know, the good rule then initiated has up till now been followed by his successors when bringing forward statistical results of their work in any special branch of abdominal surgery. It seems to me that any departure from such a rule must inevitably destroy the value of statistics in any given instance, and it is therefore to be hoped that the plan here adopted by Dr. Duncan may not be followed by other operators. The remaining subject to which I would allude in connexion with this paper is the comparatively large number of operations which appear to have been found necessary in Dr. Duncan's practice for the relief of suffering presumably connected with the state of the uterine appendages. The absence already noted of any indication as to the period covered by the work recorded makes it impossible to judge as to the relative proportion which these operations might bear to the total number of Dr. Duncan's abdominal sections during the same period, or from the date when he first began to operate. On neither of these latter points, however, does his paper afford us any information.

In order to estimate the comparative frequency of these operations in other hands than those of the author of this paper I have examined the register of the Samaritan Free Hospital, with a view to ascertaining some definite information on this subject. I find that in 1890, out of a total of 141 abdominal sections, the number of operations for removal of diseased uterine appendages (one or both) was exactly fourteen—a proportionate rate of as nearly as possible 10 per cent. on the total. These figures, considered in relation to the twenty-three hospital operations recorded by Dr. Duncan—which comprise seventeen cases of complete and three of incomplete removal of the uterine appendages, to the exclusion of two cases of ovarian cyst (Nos. 5 and 17) and one exploratory operation (No. 21)—would apparently indicate one or other of two things: either that the surgical staff of the Samaritan Hospital do not frequently enough resort to operative treatment for the cure of the diseases in question, or else that the number of urgent cases of such nature, unrelievable by rest and medical treatment, who apply at the Middlesex and Waterloo-road Hospitals, is greatly in excess of those to be met with at the Samaritan Free Hospital. In my own belief neither of these interpretations can be considered correct. The true explanation lies in the spirit of restless surgery now so prevalent that, unless restrained, it will, I fear, bring into disrepute an operation which, when judiciously undertaken in properly selected instances, may prove a most valuable means of restoration to health.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Jan. 28th, 1891. W. A. MEREDITH.

[1] See Brit. Med. Journ., Jan. 17th, 1891, p. 118.

ILEOSTOMY AND INTUSSUSCEPTION.

To the Editors of THE LANCET.

SIRS,—In your issue of last week, page 221, my friend Mr. Reeves gives a short description of a case in which he had performed ileostomy in a man suffering from cancer of the cæcum, on similar lines to those described by Mr. Bryant in a former number of THE LANCET. By adopting this method of treatment a fæcal fistula is formed, which is most distressing to the patient, and, being situated in the small intestine, somewhat difficult to manage. To obviate this I would strongly advocate the operation of ileo-colostomy, either by approximation of the ileum to some portion of the colon below the disease by means of decalcified bone-plates as suggested and practised by Dr. Senn, or by dividing the ileum some three inches above the ileo-cæcal valve, closing the distal end and implanting the proximal end into the colon below the disease. This latter operation I performed upon a patient some eighteen months ago, details of which will shortly be reported in your columns. By adopting this operation a fæcal fistula is avoided and the patient placed in as comfortable a position as possible for the remainder of his life. In the discussion at the Clinical Society on Jan. 9th, which followed Mr. Lockwood's paper on a case of Acute Intussusception, I was pleased to see Mr. Barker alluded to a method of treating those cases, when the intussusception could not be reduced, by making a longitudinal incision through the intussuscepiens and then cutting away the inner intussuscepted part, the original incision being closed by sutures. This is a plan of treatment which I have advocated for some time, but, like Mr. Barker, have not had an opportunity of putting it into practice. In carrying out the operation, however, I would suggest that a few Lembert sutures should be inserted, to unite the intestine at its junction with the intussuscepiens, for fear of the accident of its slipping after the removal of the intussuscepted part; this part, if small, might be withdrawn through the incision made in the intussuscepiens, or, if extensive and extending low down in the colon, might by manipulation be passed downwards and withdrawn through the rectum.—I am, Sirs, yours faithfully,

FRED. BOWREMAN JESSETT, F.R.C.S.

Upper Wimpole-street, W.

"THE THROAT AND NOSE AND THEIR DISEASES."

To the Editors of THE LANCET.

SIRS,—In thanking you for the lengthened and, on the whole, very favourable notice of my work, I am sorry to be obliged to point out that there are certain numerous instances of misrepresentation of matters of fact. These are due probably to the circumstance that your reviewer has imperfectly read the book, since an entirely different construction would have been placed on some of my quoted remarks had he even read the word before or the line following some of those that are criticised. To cite only two instances of a minor character—when he asks why I do not treat tuberculosis of the nose at length, he does not recognise that I immediately proceed to say that "it is but rarely if ever primary" (p. 580), and he also ignores the circumstance that I have exhaustively treated the subject of tubercle as affecting the throat, independently of the considerable attention given to lupus both in the throat and nose. Again, in speaking of my modified views with regard to the etiology of diphtheria, he quotes the word "probable" with a parenthetic "*sic*," whereas the words I use are "more probable" (p. 335).

To come, however, to something more serious. Your reviewer says, "The only instruments for treating bony or cartilaginous septal excrescences advocated are Curtis's nasal trephines ..... while no mention is made of the motive power;" and that "Bosworth's saws are not mentioned." As a matter of fact, after referring to Adams's operation of refracturing the septum, I *commence* my remarks on treatment by recommending "removal of the

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obstructing part of the septum by means of a *nasal saw, or* by circular trephine driven by a *surgical engine or electro-motor.*" It is true the nasal saw is not mentioned as that of Bosworth, and this is intentional, for the right of that surgeon to priority of invention is really in dispute; but marked attention is drawn by me to the practice and opinions of Bosworth on this particular method of treating nasal spurs, and he is quoted repeatedly as the authority most worthy of respect on this and all nasal questions, his name occurring no less than fourteen times in the chapter devoted to nasal diseases. There are further mentioned, described, and illustrated Dundas Grant's nasal splint for straightening deflections of the septum, especially in young children; Hewetson's dilator for forcible stretching of a stenosed nostril; and Hill's modification of the same instrument (p. 590); all of these being for the purpose of treating that special condition for which your reviewer says I only advocate Curtis's trephine. As a further evidence of the carelessness of this criticism, I must remark that in twenty detailed cases of septal deformity, each of which is illustrated, thirteen were submitted to operative treatment; in most of these the nature of the operation is indicated by dotted lines on the portrait figures, and in *not one* was the trephine alone used; while the trephine and saw combined were employed in eight cases, and the saw alone in three. As a matter of fact, in the ten pages devoted to treatment and relation of cases use of the trephine is alluded to thirteen times, whilst that of the saw is mentioned eighteen times.

Finally, your reviewer is of opinion that "the difficulties in the after treatment of such operations are ignored." In reply I must say that not only am I careful to give every necessary detail, but that I conclude my remarks under this heading as follows: "It is of the utmost importance to forewarn a patient that he must be prepared to give up so much time (fourteen days) for rest at home. While it is difficult to over-estimate the amount of improvement to be gained by removal of septal obstruction in suitable cases, nothing is more likely to bring the operation into disrepute than an under-estimation of the mischief which might occur from want of care during convalescence" (p. 598).

In making this remonstrance I would, with all respect, point out that your reviewer endeavours to prejudice me in the opinion of general practitioners by complaining that I do not give sufficient details of treatment, as instances of which he selects curetting the sphenoid and ethmoid cells for rhinitis caseosa, this rare disease and its treatment both coming absolutely within the province of a specialist. Lastly, his only allusion to my illustrations, which have generally been considered a feature of the book, is a complaint that I do not illustrate a trephine or a saw.

I am, Sirs, yours faithfully,

Weymouth-street, W., Jan. 27th, 1891. LENNOX BROWNE.

*** On referring to the passages in his book to which Mr. Browne draws our attention, we cannot see, in the first place, that his omission to discuss tuberculosis of the nose is justified by his having written on the same disease as observed in the throat. Nor do we perceive that his retractation of his theory that diphtheria was propagated by ptomaines is affected by the criticism. He would apparently have us indicate precisely that he does not quite consider it probable "that germs are the true element of contagion"; but that he holds this "more probable" (*sic*) than that the ptomaine spreads the disease, as he formerly maintained. But, so far as the treatment of septal excrescences is concerned, we willingly admit a slight inaccuracy in the *critique*. For we find that, as Mr. Browne indicates, mention of the saw is made, though we fail to discover either description of the instrument or directions for its use. No reference was made in the review to simple deviations of the septum, and hence the author's apparent complaint that several instruments for this purpose were overlooked is uncalled for. We also concede that Mr. Browne has not altogether omitted the mention of after-treatment in such operations. We can only account for our reviewer's inaccuracy by the fact that the subject is separated from the discussion of the treatment by four pages of cases. We disclaim on the part of our reviewer any desire to prejudice the author in the opinion of general practitioners; yet we cannot but think that when the curetting of such regions as the ethmoidal and sphenoidal cells is recommended some reference should be made to the hazardous nature of the procedure, although such a line of treatment be declared to fall "absolutely within the province of a specialist."—ED. L.

THE MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I will refer Dr. Aveling to my letter in a contemporary of last week, and further explain that the figures and facts which I alluded to as erroneous were those which he brought forward at the British Gynæcological Society, and were those he was unable to substantiate in his reply at the close of the debate. If he had been able to do so he would not have voted for the resolution, "That this association, while recognising the necessity for such legislation as shall prevent incompetent women acting as midwives, does not approve of the proposed Midwives' Bill." Since my letter was written he has published other figures. It appears that the present Bill is intended to serve two purposes—(1) To advantage the training schools of midwives and to make midwives competitors for practice with the registered medical practitioner. (2) To curtail the practice of untrained midwives. As it stands it would accomplish the former, but not the latter, which it is the object of everyone to effect. It seems a pity that the medical promoters of the Bill should have allied themselves with the Midwives' Institute, for it is evidently their influence which has ruined the Bill. Now I cannot believe that the eminent authorities mentioned by Mr. Nichol have been so disloyal to their profession as to countenance anything which would favour the former, though they may have approved of some scheme to effect the latter object. I should like to ask Mr. Nichol at what time and in what manner has the profession advised his Institute to take up the matter? I am very much obliged to Mr. Nichol for his piece of ancient history, tolerably well known as it is, but I would point out to him that he should have said the Council of the Obstetrical Society. The matter has never been discussed at a meeting of the Society. We are now practically asked to sanction a complete revolution in the practice of midwifery because the death-rate—the general death-rate—is slightly in excess of that in the out-door departments of some lying-in charities in London. It seems to be quite as reasonable to demand a complete revolution in the management of such institutions as the General Lying-in Hospital because the death-rate there was twice as high as that of Queen Charlotte's Hospital in 1889. It is a matter of great regret that this subject had not the advantage of free and open discussion before the introduction of a Bill on the subject into Parliament. The result has been that many members of our profession have been misled as to the scope of the present Bill, and that many outsiders have been led to believe that the death-rate in childbed is excessive, though it will compare favourably with that in any other county.

I remain, Sirs, yours faithfully,

Hatfield, Jan. 20th, 1891. LOVELL DRAGE.

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—In reply to your editorial comments on my letter in last week's issue, I have to explain that in ascertaining the expected deaths I did not take the average of the death-rates in the table you refer to, but employed the ratio of the sums of the numbers dying to the numbers living in each group of ages, which allows for the age distribution. This assumes that the physicians are a stationary class; but the error involved in this assumption must be extremely small, as the numbers living at all ages at the census of 1861 was 14,415, while in 1871 it was 14,684. I would remind you too that before publishing the results I obtained I tested them by taking out the figures for other classes, such as the clergy and the publicans; and I found that the method I adopted yielded results which agreed substantially with what had been brought out by other investigators with better materials and more exact methods. There is no reason to believe that the age distribution in the case of physicians differs materially from that in other

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classes; but the numbers living will not agree with those in the table by which I tested them, because the law of mortality is different. I gather, however, from your remarks that you would be satisfied if small groups of ages were used where the death-rates do not differ to any great extent. It is a pity that such wide groups of ages were taken when compiling the censuses of 1871 and 1881, especially the latter; but in the census of 1861 the numbers living are given for groups of five ages; and although the deaths are only given there for groups of ten ages, that will not matter. As you say the subject is one in which your readers take a lively interest, I give in the following table the numbers living after age twenty-five, one-half of the deaths which occurred in the two years 1860–1, and the deaths which might be expected to have occurred according to the Institute of Actuaries Healthy Males Table calculated in the manner above described.

Ages.	Number living.	Expected deaths.	Actual deaths.
25 to 30	1558	11	
30 to 35	1593	13	37
35 to 40	1566	15	
40 to 45	1932	21	48
45 to 50	1883	26	
50 to 55	1597	28	73
55 to 60	1186	29	
60 to 65	937	32	59
65 to 70	669	33	
70 to 75	376	28	65
75 to 80	217	25	
80 to 85	92	15	52
85 to 90	32	7	
90 to 95	9	3	10
95 to 100	1	1	
	13,648	287	344

Here the results are not quite so regular as in my last table, as we are dealing with very small groups of ages and with the figures for one census only; but it will be seen that, with two small exceptions, the actual deaths are throughout the table considerably in excess of the expected, and, taking all ages together, the extra premium which physicians should be charged comes out 8*s.* 5*d.* per cent. per annum. I think, therefore, that I have proved beyond all doubt that the mortality among physicians is much higher than that among assured lives generally. It is even higher than that of the ordinary population; and I say, all honour to the profession which alleviates the sufferings of humanity *at the risk of their lives.*

I am, Sirs, yours faithfully,

Edinburgh, Jan. 26th, 1891. JAMES CHATHAM.

*** Our correspondent has in the above letter very frankly admitted in effect the force of our criticisms, and it will be observed that he has now reduced his extra premium from 10*s.* 2*d.* to 8*s.* 5*d.* On further consideration, we think he will see that he still exaggerates what may be called the professional mortality of physicians, and we say so on two grounds. First, he has compared a miscellaneous body of men with a select body—i.e., with persons carrying life assurance policies who have been selected from the general population by medical examination. Secondly, the age distribution which his estimates assume does not obtain in the groups of which he has estimated the expected mortality. The first group in his table given above will make this clear. Seeing that the second group outnumbers the first, it is reasonable to assume that the older men are more numerous than the younger men within the first group—that is to say, it contains more men of twenty-nine than of twenty-five years of age. But the corresponding group in the H^{m} Table contains more men of twenty-five years of age than of twenty-nine. It is plain that this is most material to consider when an estimate of expected mortality is to be formed, for a group containing a preponderance of men aged twenty-nine must have a higher mortality rate than a group containing a preponderance of men of twenty-five years of age. Mr. Chatham's method of estimating assumes that twenty-five years of age predominate. Therefore, his estimate is not a correct one according to his data, and it is incorrect to the disadvantage of the physicians. On the other hand, the two groups from fifty-five to seventy-five show an age distribution too favourable to the physicians, and it is to be observed that over this important period the expected deaths are practically equal to the actual deaths. We do not seek to make this point against our correspondent, because we think that he is entitled here to the benefit of the argument which we have urged against him on the former part of his table; but we think that if he will apply his industry to the correction of the two defects which we have indicated in his present materials, he will probably be able to show that there is a distinct professional mortality among physicians, but not at all commensurate to the figure which he has put upon it.—ED. L.

"THE HEALTH OF SOUTHEND."

To the Editors of THE LANCET.

SIRS,—Will you allow me, without touching on controversial matters, to state, with reference to the article under this heading in your last week's issue, that the local board did and do cordially agree with all the recommendations of Dr. Thresh, and are already proceeding to carry them into effect to the full. The necessary steps for the provision of a permanent hospital, and of the new sewer and outfall you refer to, were already in hand some time before Dr. Thresh was called in. The other recommendations have since been taken up, and the board hope that all will be completely carried out before next summer. Trusting to your fairness to give this letter equal prominence to the article I have alluded to, I remain, Sirs, your obedient servant,

Southend, Jan. 27th, 1891. WILLIAM GREGSON, Clerk.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Death of Mr. T. S. Raffles, Stipendiary Magistrate.

MUCH regret was felt by all members of the medical profession when they heard of the death of Mr. Thomas Stamford Raffles, for nearly thirty-one years the stipendiary magistrate of Liverpool. During that period many thousand cases where medical evidence has been required have been before him, and his attitude towards medical witnesses has always been extremely affable and courteous. He was always most considerate in releasing them from attendance as soon as possible, and was instrumental in securing them payment in non-committal cases.

The Annual Meetings of the Hospitals.

During January and February the annual meetings of most of the medical and other charities are held. With the exception of the Royal Infirmary these annual meetings take place in the town hall, unnder the presidency of the mayor for the time being. Those of the Northern Hospital and Infirmary for Children have already been held. The story is the same, slightly varied. The Liverpool public are proverbially liberal and generous to medical charities, even to the extent of munificence. But this is true of only a part of the public. The population of Liverpool is now 600,000, and it has been calculated that the annual subscribers to all the medical charities would be amply included in round numbers varying from 5000 to 10,000, leaving a very large number who subscribe nothing, though well able to do so. This arises partly from indifference, partly from a belief that anything short of the conventional "guinea" would not be acceptable. The present mayor, Mr. J. B. Morgan, has a scheme for organising a better support to the charities in future, which it is hoped will be successful.

The Society for the Prevention of Cruelty to Children in Liverpool.

Liverpool has the proud distinction of having been the first city to establish a society for the Prevention of Cruelty to Children. But there is a cruel irony in the fact that it was not established, even here, till long after the establishment of the Society for the Prevention of Cruelty to

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Animals. Even now cruelty to children is regarded by too many persons with much more indifference than cruelty to a horse or dog would be. The local society is doing its best to prevent one form of cruelty—the employment of young children on the streets late at night by their unnatural parents for begging purposes.

Liverpool, Jan. 28th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Scarlet Fever.

IT is satisfactory to know that the recent severe weather has produced a marked effect upon this epidemic. The number of cases admitted during the past week into the Fever Hospital was twenty-six only, while there were sixty discharges. The total number of inmates was 311, which appeared to be a large number, but when the epidemic was at its height this was exceeded, on two occasions being over 500.

The New General Hospital.

Considerable enthusiasm was manifested at the town's meeting held on the 29th inst. towards the furtherance of the interests of this hospital. The amount already promised exceeds the most sanguine expectations of the promoters. To ask for £70,000 from the public and to get it before the first meeting is held marks an era in the history of local charities. To the energetic action of the chairman, Mr. J. C. Holder, the result is mainly due, while his efforts have been assiduously seconded by the committee. It is to be hoped that little time will now be lost in commencing operations on the new site. Necessarily a work of this magnitude must be protracted over some years. A beginning made with such zeal, however, augurs well for the future, and commands confidence in the undertaking.

Children's Hospital.

The annual meeting of the governors of this hospital was held on the 26th inst., under the presidency of Mr. C. A. Smith Ryland. Some interesting and elaborate statistics were given as to the cost and administration in various directions. Among others it was shown that the average detention rate during the last ten years was twenty-eight days; the average death-rate 9·5 per cent. The number of patients treated during the last year was 14,799, or 414 more than in the previous year. The income for the year was £4413 and the expenditure £4510. The usual votes of thanks were passed.

Hospital Sunday.

The annual meeting in connexion with the periodical collections was held on the 22nd inst., when the various officers were elected, the Mayor being appointed chairman.

Birmingham, Jan. 27th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

University of Durham.

I HEAR that at a Convocation held to-day the University of Durham resolved to institute two new degrees in Sanitary Science—viz., a Bachelorship and Doctorate in Hygiene. I have not yet heard upon what terms these degrees are to be granted, but no doubt full particulars will soon be issued. In the alterations of existing rules no degree of Doctor in Hygiene shall be granted unless the petitioner is a Bachelor in Hygiene, and has, subsequently to the date of his acquiring the degree of Bachelor in Hygiene, been engaged for two years in practice as medical officer of health, and shall have passed such examination as the warden and Senate shall require.

The Newcastle Throat and Ear Hospital.

The Newcastle charities are commencing their annual meetings, and the Throat and Ear Hospital is one of the first to report upon last year's work at the meeting held on the 23rd inst., the Mayor presiding. It was stated that the new cases entered were 1948; treated at the Surgical Home, 153; old cases under treatment, 415: making together 2516 cases treated. The patients had contributed £316. There had been an increase in the subscriptions and donations, but as the year's work had involved increased expenditure there was a small balance due to the treasurer.

Sir J. Crichton Browne on "Brain Rust."

Sir J. Crichton Browne lectured in Newcastle last night on "Brain Rust." Dr. Frederick Page, surgeon to the Royal Infirmary, presided. There was an immense audience, at least 2000 people, who listened with rapt attention to the eloquent and learned lecturer. He mentioned his own well-directed efforts against brain pressure and its resulting evils to the brain and general health, when the body was in an immature and youthful condition; but warned his audience, on the other hand, of the evil effects of torpor or misuse of the brain comprised in the term "brain rust," and instanced his own experiments on the brains of ducks in illustration. He showed that, while the wild and tame duck were incontestably the same, the brain of the wild duck was absolutely heavier than that of the domestic duck, and in proportion to its body nearly twice as heavy. He thought that no one would hesitate to attribute the diminished size and arrested development of the domestic duck's brain to the influence of domestication; few calls had been made on its intelligence; it had not its energies invoked by a free existence, and it had been dragged through eighteen centuries to a lower level. Of this effect in man he gave many instances, including the ill effects on the minds of boys through lack of stimulus; and also the baneful effects of solitary confinement on prisoners, believing that to shut an habitual malefactor within his own meagre, narrow, and depraved thoughts could only aggravate his viciousness and weaken his self-control. In the maximum period of three days' solitary confinement, and on bread-and-water diet, prisoners lost on an average from 2lb. to 3lb. in weight. He knew no surer method of producing premature senile decay than for a man of active habits to retire and do nothing when just past the zenith of life; and, on the other hand, he did not know a surer way of enjoying green old age than to keep on working to its close.

I learn that the Lord Chancellor has accepted the nomination of Mr. C. Clark Burman of Alnwick as deputy coroner for North Northumberland.

Newcastle-on-Tyne, Jan. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Royal Hospital for Sick Children.

THE thirty-second annual meeting of the contributors to this hospital was held on Monday. The report stated that during the year the number of patients treated was 7811, of whom 610 had been treated in the wards, 6551 in the dispensary department, 487 as outside surgical cases, and 163 children had been vaccinated. The income (exclusive of legacies) was £3921, which was a decrease of £284 compared with the preceding year. Reference was made to the outbreak of typhoid fever in the hospital and the removal of the patients and staff to Morningside. The change to the fresher and purer air of the suburbs had been much appreciated by the nurses and patients. Clinical lectures, which had been interrupted, have been resumed, and the directors have sanctioned female students obtaining instruction in the hospital on the condition that it be at a different hour from that for the male students.

The City Hospital.

At the meeting of the Edinburgh Town Council last week, Bailie Russell, M.B., referring to the typhoid epidemic, said it was decreasing, but that it had shown that the city hospital was not large enough for the needs of the city, for at present there was hardly room for another patient in it.

Medico-Chirurgical Society.

At the meeting of this Society last week several pathological specimens were exhibited, after which Dr. Halliday Croom made a communication on some Recent Work in Abdominal Surgery, in which he reviewed the results of treatment in a large number of his own cases. This was followed by a paper from Dr. Harvey Littlejohn on an Outbreak of Typhoid Fever, in which the source of infection was traced to a dairy farm. Both papers gave rise to considerable discussion.

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Scottish Microscopical Society.

The fourth meeting of this Society was held in Edinburgh on the 16th inst., Professor Rutherford, F.R.S., in the chair. The President referred to the loss the Society had sustained by the decease of one of its vice-presidents, Mr. Adolf Paul Schulze, a native of Saxony, who settled as a merchant in Glasgow, and devoted his leisure time to microscopical optics, more especially to photomicrography, in which he acquired very remarkable skill, his article on the subject in the *British Journal of Photography* for May 24th, 31st, and June 7th, 1889, being one of the best expositions of the practice of that difficult subject that has yet appeared. Mr. G. W. Watson, L.D.S., made a communication on pathology of dental caries, which was illustrated by sections and photographs of carious teeth prepared by himself, and which were shown on the screen with the oxyhydrogen microscope; the destruction of dentine by the growth of micrococci and bacilli in the tubules was clearly demonstrated. Mr. James Hunter, F.R.C.S. Edin., gave an interesting lantern demonstration of the properties of simple lenses, some of which had been devised by himself. Professor Macfadyean, B.Sc., gave an account and a demonstration of the morphology of actinomyces.

Health of Edinburgh.

The mortality last week was 90, and the death-rate 19 per 1000. Diseases of the chest accounted for 35 deaths, and zymotic diseases for 15, of which 2 were from typhoid fever, 1 from diphtheria, 3 from scarlatina, and 9 from whooping-cough. The intimations for the week were from typhoid fever 15, diphtheria 6, scarlatina 31, and measles 10.

Edinburgh, Jan. 27th.

ABERDEEN.

Aberdeen University Court.

At a meeting of the Aberdeen University Court held on Friday, 23rd inst., the Marquis of Huntly, Lord Rector, presiding, Dr. Angus Fraser raised the question as to whether the court had not the power to appoint all examiners and lecturers. All were agreed that it was the duty of the Court to appoint examiners, but there was considerable doubt with regard to the appointment of lecturers. The question came before the Senatus in the case of the appointment of the next Gifford lecturer, and a communication from that body was read at the meeting, requesting the University Court to join them in obtaining the opinion of counsel as to the right under the Act of 1889 of electing the Gifford lecturer. In discussing the question Dr. Fraser suggested that it might be well to have the opinion of counsel upon the point; but it was ultimately agreed, on the motion of Mr. Edmond, "That the Court communicate with the Courts of the other Universities with the view of arriving at a common understanding as to the respective rights of the Courts and Senatus of the Universities to appoint examiners and lecturers, and especially the Gifford lecturer."

Students' Representative Council.

A statutory meeting of the Students' Representative Council was held at Marischal College on the 24th inst. A considerable amount of routine business was transacted, and it was also agreed that the council should offer to the University Court to conduct all the arrangements for the rectorial address on March 6th, as was done by the Council in 1888, provided the University Court paid the necessary expenses which were on that occasion paid by the Senatus.

Koch's Treatment of Tuberculosis.

Professor Smith Shand and Dr. Blackie Smith, physicians to the Royal Infirmary, have procured a supply of Koch's liquid, and in their wards several cases of lupus and phthisis are being treated. So far the results have been characteristic and, on the whole, satisfactory.

Health of the City.

During the week ending Saturday, 24th inst., the following cases of zymotic diseases were notified to Professor Matthew Hay, the medical officer of health: Measles, 1; scarlet fever, 16; diphtheria, 2; whooping-cough, 2. In his report for the month of December Dr. Hay states that the death-rate was 20·48, as against the average of 22·52 for the same month during the past ten years; it is also lower than in any individual year except 1888. About this time last year he directed attention to the exceptional prevalence at that period of puerperal fever. In his present report he says he regrets to have again to note a recrudescence of this disease. During the month there were five deaths from puerperal fever—an unusually large number, seeing that the total number for a whole year is usually not beyond six or seven.

Aberdeen Jan. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

British Medical Association: Dublin Branch.

THE fourteenth annual meeting was held last week at the Royal College of Physicians. The annual report of the Council, which referred to the admittance of Irish graduates to English hospital appointments and the condition of army medical officers, was adopted. The new President, Dr. Walter Smith, delivered an address which dealt with the administration of hospital extern departments and their special importance as a means of developing in the best manner the education of students. The following resolution, proposed by Dr. Atthill and seconded by Mr. Horne, was adopted:—"That in the opinion of this Branch the registration of midwives as proposed by Parliament will not tend in any marked degree to render more efficient the nurses practising as midwives, unless steps be first taken to improve their education; that the question of registration be postponed till it is shown that facilities exist for the education of such women as may desire to practise as midwives, and that the proposed registration of all women at present practising as midwives would be a most dangerous proceeding. This Branch is further of opinion that any legislation on the subject of improving the education or status of midwives should not be undertaken without serious consideration, and desires to urge on the Government the necessity of having it referred, in the first instance, to a select committee for consideration and report." The annual dinner took place the same evening in the hall of the College of Physicians.

The Rights of an Unborn Infant.

In the Queen's Bench Division judgment was given last week in the case of Mrs. Walker *v.* the Great Northern Railway Company, which involved an important point—viz., the rights of an unborn child. The plaintiff was a passenger in the excursion train that was wrecked last year at Armagh, and was *enceinte*, the child being born deformed. She alleged that the child which she was carrying at the time of the accident was injured, and as a result was born deformed. The railway company, by counsel, demurred, alleging that an unborn child had no right of action or interest to recover damages for personal injuries. The plaintiff's case was lost, the demurrer being allowed. It may be mentioned that a sum of £800 had already been given to the mother by the company as compensation for injuries received by her.

City of Dublin Hospital.

The patient whose lingual arteries Mr. Croly tied as a preliminary step to excision of the tongue, referred to last week in these columns, died suddenly while incautiously sitting up in bed to eat.

Magrath, the Irish Giant.

Professor D. J. Cunningham this week read a paper at the Royal Irish Academy on the skeleton of the Irish giant Cornelius Magrath, at present in the museum of Trinity College. He believes it was a case of acromegaly, there being undue development of various portions of the skeleton—viz., abnormal size of the hands, feet, and lower jaw, which projected greatly below the upper jaw, while the head itself was not in equipoise with the vertebral column, and in this respect resembled the negro head. Magrath's height was said to be 7 ft. 8 in., but Professor Cunningham, from a careful examination of the skeleton, believes it was 7 ft. 2¼ in.

Mr. Michael Joseph Bulger has been elected assistant surgeon to the House of Industry Hospitals.

Jan. 27th.

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PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Treatment of Strictures of the Ileo-cæcal Valve.

AT a recent meeting of the Academy of Medicine M. Péan made a communication on the Operative Treatment of Strictures of the Ileo-cæcal Valve. Stricture of this valve was rare; the speaker had met with but eight cases. They might be divided into two main divisions—those of an inflammatory origin and those of a neoplastic origin. M. Péan had devised an operative procedure which consisted in creating, without the removal of any part of the bowel, a dilatation at the exact seat of stricture. Having incised the abdominal wall above Poupart's ligament, the neighbourhood of the valve is quickly reached. The adjacent portions of large and small intestine—that is, on each side of the valve—are then ligatured. Next, an incision is made into the ileum and cæcum respectively above and below the valve. The valve being thus brought into view is itself resected in such a manner and to such an extent as to render the strictured portion again normally patent. This done, the extremities of the intestinal wound are brought together so that the ileum and cæcal incisions may be in close juxtaposition and next sutured. The abdominal wound is treated in the ordinary manner. M. Péan had recently operated in this way in two cases, which gave excellent results. The advantages he claims for the method are: that it serves equally well for inflammatory strictures of the small intestine as for those of the cæcum and ileo-cæcal valve; that it presents none of the inconveniences arising from an artificial anus; that it is comparatively easy of execution; that it requires fewer sutures than a resection, which lessens the length of time required for the operation and diminishes the chance of perforation, fæcal fistula, and septic peritonitis; that it runs no risk of leaving a circular stricture, as follows sometimes after resection; and that, finally, it establishes in the place of the stricture a passage sufficiently large for fæcal matters to pass freely.

Action of Retinol on other Substances.

M. Vigier communicated at a recent meeting of the Therapeutical Society some observations on the power of retinol to dissolve various substances ordinarily insoluble. He dwelt especially on its property of dissolving phospharen, a substance for which it was difficult to find an excipient. Retinol he found to act admirably in this way, and being unoxydisable the solution remained unaltered. Thus a small piece of burning phosphorus thrown into a solution of retinol was at once extinguished. He pointed out that the preparation of phosphorus thus prepared could be administered with advantage perhaps in rickets, scrofula, anæmia, chlorosis, locomotor ataxia, &c. Amongst other substances which retinol will also readily dissolve are salol, iodol, naphthol, aristol, cocaine, &c.

A New International Clinique.

Seeing that the giving of medical assistance to the various foreigners of all nations who inhabit this city was no special part of the State system of medical relief, a number of medical men have formed themselves into a society called the Society of Medical Assistance to Foreigners, for the purpose of (1) organising a system of hospital relief to all foreigners, (2) to give them gratuitous consultation, and (3) to take advantage of the clinical material which will be thus collected to give practical instruction in all the branches of medical art. This establishment, it is hoped, will meet a great want in this cosmopolitan city, and will, it is trusted, form the basis of an international Parisian hospital. The Society is already assured of the hearty concurrence and assistance of a number of French and foreign notabilities.

The Siege of Mayence.

The *Archives of Military Medicine* recently gave an interesting account of the medical history of this siege in 1793. The medical officer in charge of the hospital says: "On the 11th of April there was a dreadful cannonade. Amongst the number brought us with enormous wounds—and the number was not inconsiderable (in less than an hour, eight for various amputations)—was a little volunteer with great courage, although suffering terribly. I ordered that he should be undressed while I went round the ward to glance at the various operations which the assistant surgeons were performing. Returning to him with Citizen Rivière, who was to perform the operation, we perceived an enormous lower limb, enormous from the unusual amount of swelling. Manipulating the limb, we came across a hard swelling, which we took to be caused by a grapeshot ball lodged in the limb. Our astonishment was great when we found that an incision of five or six fingers' breadth was insufficient to extract this enormous foreign body, which, on being finally got out, turned out to be a Prussian ball weighing no less than 13lb.! How could a mass of this size have just the amount of force necessary to lodge in a thigh and not pass through it! This problem I leave to natural philosophers, but I admit it to be almost necessary to have seen such things to believe them. Of course there was nothing for it but to operate on this poor fellow or leave him to certain death; we therefore amputated high up. When we had finished he asked if it was done, and on being told that it was, he cried out loudly, 'Long live the nation!' Anæsthetics had not then seen the light, it must be remembered. On another occasion the firing of a mine caused a tremendous explosion, which shook the hospital building terribly. At that moment I was engaged amputating the limb of a soldier. As I was sawing the bone amidst the general confusion caused by the first shock, a second occurred which brought down the whole of a glass skylight over the patient and myself. Not knowing whence all the glass came, I asked those standing round what was the matter. The patient overheard me, and said, 'Go on, don't alarm yourself, you will see plenty of this kind of thing.' When I had finished the operation he cried, 'Vive la République!'"

Paris, Jan. 27th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Koch's Remedy at the Medical Societies.

DURING the past week the medical societies have been more than ever occupied with Koch's treatment; demonstrations, papers, and discussions upon it have taken place at the Society for Internal Medicine, at the Medical Society, the Society of the Charité Physicians, and the Hufeland Society. At the first-named society, Dr. Guttmann exhibited the intestine from a case at the Moabit Hospital, where twenty-five injections had been given before death occurred. The intestine showed marked healing of the tuberculous ulcers; they were free from caseous masses, the bases and margins being quite clean. In this situation the tissue destroyed by Koch's remedy could be wholly removed. The proceedings in the Medical Society are fully reported in the *Berliner Klinische Wochenschrift*.[1] The discussion occupied the whole evening, and was most attentively listened to, the chief speakers being Drs. Ewald and James Israel; whilst Professor Virchow showed specimens of miliary tuberculosis from a case of pleurisy treated by this method. At the Society of the Charité Physicians Drs. Senator and Sonnenberg were the speakers. They both showed some interesting cases. Senator's case was that of a young lady with very marked infiltration of one apex, in whom, in spite of the effect of high doses (commencing at 0·003 grm.), rapidly increased (in twelve days up to 0·1 grm.), not the slightest rise in temperature occurred, although the lung affection retrogressed. During the treatment some laryngeal disease arose, but this gradually disappeared. The pulmonary signs, at first so favourable, had latterly shown some tendency to get worse. Sonnenberg reported on five patients in whom he had opened cavities before commencing the treatment by injection. Three of the patients were apparently cured, and he exhibited them before the Society. In one of them there could be seen below the right clavicle a small pulmonary cavity which appeared to be in course of contraction. Sonnenberg's fourth patient showed no improvement; the fifth was operated on only a short time since. Sonnenberg had the opportunity of comparing a patient whose pulmonary cavities had been opened, and who was not inoculated, with those who were inoculated, and could affirm that in this the changes in the cavities do not take place. He spoke of the great difficulties in formulating indications for such operations, but thinks that eventually this will occupy a wide field in the treatment of tuberculosis. One view depends on whether, with the destruction and

[1] This is fully abstracted in another column.

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shrinking of a cavity, tuberculosis is made to disappear from the organism. In the Hufeland Society Dr. Heymann brought forward a patient in whom the ulceration of the larynx had extended very much, but at the same time stated that he had in the rest no more striking features, but also no cures. Dr. Hansemann, Virchow's assistant, then spoke, clearly and lucidly, upon his pathological and histological experiences in the treatment by Koch's liquid, and explained his remarks by a demonstration of macroscopical and microscopical preparations. Hansemann agreed in the main with Virchow's well-known statement, but emphasised still more plainly the important proposition that after the increase of necrosis in the lungs the unaffected tubercle bacilli must be absorbed and thereby propagated, to the great danger to the patient. The speaker summarised the position in the following terms:—The condition which is excited by the injection of Koch's remedy is curable. Still, the method may doubtless destroy life. The remedy does not destroy all the tuberculous tissue, and even if this be destroyed the organism may suffer severe changes from its reabsorption.

Berlin, Jan. 24th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Treatment.

KOCH'S second publication has caused considerable surprise in medical circles, and especially the first passages of his paper in which all the publications made by clinical observers on the action of the remedy were ignored. Recollecting the statement of Minister von Gossler, that the preparation of the remedy could not be described (a unique statement in view of the great advancement of natural science), the physicians were somewhat astonished by the simplicity of the preparation of Koch's liquid, the more so as Koch was found to be following the directions initiated by Pasteur's school, and by the works of the late Dr. Wooldridge, Hankin, and others, without mentioning even the names of his scientific predecessors. It must be assumed that Koch's second publication has not been less premature than his first one, and that it has been provoked by Virchow's reports. The effect of suggestion on the subjective symptoms in patients could not be better illustrated than in the recent era of Koch's treatment. At first it was rare to find a patient subjected to the cure who did not feel better at least in some way after the injections; but after Virchow's publication, which has been widely circulated by the lay press, the majority of patients in the General Hospital commenced to complain of different new subjective troubles which were ascribed by them to the action of the liquid, and there were frequently cases where the patients, formerly highly enthusiastic, declined to be treated further by Koch's method. Certainly the General Hospital, with its constant pressure of space, has not been a suitable place for such an extensive trial as has been made here at the clinics, where about 30 per cent. of the beds were allotted to tuberculous and lupus cases—that is, to cases which would not have applied for admission to hospital wards under ordinary circumstances. It cannot be said that any case has been cured by the treatment, but it must be stated that improvement has taken place in some of the cases of surgical tuberculosis. New eruptions of lupus nodules have made their appearance in Professor Kaposi's improved cases. There is also a difficulty in the improved cases as very large doses (5 centigrammes and more) do not produce any reaction, and one does not know how far the dose of the injection can be raised. It is extremely difficult to say anything about the pulmonary cases. It seems that there are two different types. In one of them the temperature curve rises after every injection corresponding to the reaction, but returns to the previous level; while in the other the temperature curve does not return to its former level, and the patients remain feverish after the reaction has passed. The latter type is the less favourable for the treatment, and to it belong most of the fatal cases. Not less difficult is the explanation of the anatomical facts, as the pathological changes occurring in the course of tuberculous disease have not been fully recognised till now, and there is no other disease which has been more neglected by pathologists on the Continent on account of its frequency. But in slight cases of laryngeal tuberculosis, where the changes could be observed clinically by the laryngoscope day by day, it could be stated that the injections of "Kochin" caused the rapid and extensive appearance of new ulcerations, sometimes of highly destructive tendency, and at the last meeting of the Medicinisches Doctorencollegium a case was shown where the ulcerative process occurring after the injections was an extensive one, which has never been observed by any of the Viennese professors. These observations seem to corroborate Virchow's statement that a dissemination of the tuberculous virus takes place in the body due to the injections. Referring to the diagnostic value of the fluid, it has been reported already to THE LANCET that it produced local and general reaction in cases of leprosy, actinomycosis, and fever (with small doses, one to two milligrammes) in apparently healthy persons. The explanation of the action of his liquid given by Koch in his recent publication was also not believed to be satisfactory in medical circles here. It seems to me that the specific action of the liquid must correspond to a specific chemical substance contained in the mesoblastic tissues under certain pathological conditions—e.g., tuberculosis, lupus, lepra, actinomycosis,—and Koch's discovery will certainly stimulate the hitherto neglected study of pathological chemistry. At present we know only a single chemical substance peculiar to tuberculosis—viz., cellulose, or at least a substance exhibiting all the reactions peculiar to cellulose, which was discovered some years ago in the blood and in the tissues of tuberculous cases by Dr. Freund of Vienna. This discovery, reported in THE LANCET of 1887, confirmed later by Dr. Kabrhel of Prague, and which is also highly interesting from the naturalist's stand-point, did not receive much attention.

Vienna, Jan. 26th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Liquid.

UP to this date the only hospital where Koch's fluid is being used in Canada is the General Hospital, Montreal, where seven patients are under treatment.

Amalgamation of Medical Teaching Centres.

The vexed question of the amalgamation of the Montreal Branch of Laval University with Victoria Medical School has at last been amicably arranged and settled by the passage of a Bill through the Quebec Legislature. Its quietus was a cablegram from the Pope to Premier Mercier.

Medical Reunions.

The fourth annual banquet of the Toronto University Medical College was held on the evening of Dec. 4th, some 250 guests being present. The Chancellor, replying to the toast of "Toronto University," compared it to a sturdy oak, whose growth, lacking in symmetry, preserved the elements of strength and at the same time peculiarities in its constitution which time alone could remedy; the dean, Dr. W. T. Aikins, advocated the founding of a chair in Sanitary Science.—Trinity Medical School held its annual dinner on Dec. 5th. The attendance was large, many of its graduates, in happy reunion, drinking to the prosperity of their *alma mater*.

Malignant Cutaneous Epitheliomata.

Dr. Robinson of New York read a paper on this subject before the Toronto Medical Society, at the regular meeting on Dec. 17th. Discussing more particularly the treatment, he has found arsenious acid in the form of a paste more successful in many cases than the knife, scraping, or caustics.

Post-graduate Lectures.

The most interesting event in medical circles during the month of December was a series of post-graduate lectures and demonstrations given under the auspices of the University of Toronto The attendance of practitioners from without the city was large, and testified to the appreciation of the efforts of the Medical Faculty in this new departure. The chief features of the programme were lectures by men of prominence from the United States, one of whom, Dr. A. R. Robinson of New York is a graduate of the University. He delivered two lectures on Eczema—Catarrhal Dermatitis. Dr. Abbe, New York, delivered three lectures, the subjects

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being (*a*) the Limitations of Spinal Surgery; (*b*) Mastoid Pyæmia, Jugular Thrombosis, Ballance's Operation; (*c*) Technique of Intestinal Anastomosis. Perhaps the most important subject for the general practitioner was that discussed by Dr. Vaughan, of Ann Arbor University, of Typhoid Fever. Certainly great interest centred in the address delivered by Dr. J. W. White (Philadelphia) on the Present Position of Antiseptic Surgery, a reply to Mr. Tait's recently published criticism of Sir Joseph Lister's Berlin address. It was a careful review of the progress and development of the Listerian treatment, the results of its adoption in the practice of leading surgeons, and a discussion at some length of Mr. Tait's arguments and reasonings. The other lectures of the course were given by local practitioners. It is to be regretted that so many lectures should have been crowded into the brief space of three days, partaking of the nature of a medical revival.

The Pathological Society.

This Society held its regular meeting on the evening of Dec. 18th. Dr. Robinson (New York) read a paper on Psorospermosis Follicularis Vegetante. Specimens were exhibited of Paget's Disease of the Breast; Cirrhosis of Liver and Suppurating Mesenteric Glands, in a case simulating Typhoid Fever; a Dermoid Cyst of the Orbit and Recurrent Sarcoma of the Orbit.

Toronto, Jan. 1st.

THE SERVICES.

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Surgeons: Geo. T. Broatch to the *Duke of Wellington* (dated Jan. 22nd, 1891); Robert Hardie to the *Defiance* (dated Jan. 24th, 1891); John Grant to the *Firebrand* (dated Jan. 27th, 1891); and Alfred E. Weightman to the *Duke of Wellington*, additional (dated Jan. 12th, 1891).

YEOMANRY CAVALRY.—Lanarkshire (Queen's Own Royal Glasgow, and Lower Ward of Lanarkshire): Surgeon and Honorary Surgeon-Major R. D. Reid, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Regiment on his retirement (dated Jan. 24th, 1891).

VOLUNTEER CORPS. — *Artillery:* 1st West Riding of Yorkshire (Western Division, Royal Artillery): Acting Surgeon W. Gay, M.D., resigns his appointment (dated Jan. 28th, 1891).—1st Gloucestershire: Surgeon and Surgeon-Major (ranking as Major) T. S. Ellis resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Jan. 28th, 1891); Acting Surgeon T. M. Wilkinson resigns his appointment (dated Jan. 28th, 1891).—2nd Hampshire (Southern Division, Royal Artillery):—Acting Surgeon J. Hill resigns his appointment (dated Jan. 24th, 1891).—*Royal Engineers:* 1st Durham: Acting Surgeon W. Munro Jennings is appointed Second Lieutenant (dated Jan. 6th, 1891).—The Tyne Division: The services of Surgeon R. K. Tait are dispensed with (dated Jan. 24th, 1891).—1st Lanarkshire: Robert Cowan Lees, M.B., to be Acting Surgeon (dated Jan. 24th, 1891); Acting Surgeon M. F. Anderson, M.B., resigns his appointment (dated Jan. 24th, 1891).—1st Volunteer Battalion, the Essex Regiment: Surgeon A. Wright is granted the rank of Surgeon-Major, ranking as Major (dated Jan. 24th, 1891).

Obituary.

W. ORLANDO MARKHAM, M.D., F.R.C.P.

THE announcement of the death of Dr. Markham, which took place at Clapham Common on the 23rd inst., will awaken but few memories in the minds of the younger members of the profession. For a good many years past his name even will have been unfamiliar, save to those whose professional work lay for the most part amongst the sixties and seventies of the present century. He was, however, a man of striking ability and originality, and his book on Diseases of the Heart marked a distinct advance in knowledge, and may, with his papers in the Medico-Chirurgical Transactions on points in Cardiac Physiology and Pathology, be still read with profit. Being possessed of ample means, and his health breaking down, he retired early from active professional life, but he long continued to take a keen interest in medical matters. Dr. Markham was born in 1818, and was the son of Charles Markham, formerly clerk of the peace for Northampton. His professional studies were carried on in Edinburgh, Paris, and Heidelberg, and in 1840 he obtained the M.D. Edin. In 1854 he was elected a Fellow of the London College of Physicians, and delivered the Goulstonian lectures in 1864. Two years thereafter he was selected by Mr. Gathorne Hardy as medical inspector under the Poor-law Board, of which he was also medical adviser. Dr. Markham was for some years physician to St. Mary's Hospital, Paddington, and lecturer at the school, and was from 1860 to 1866 editor of the *British Medical Journal*.

SENATOR G. B. BORELLI.

ON Saturday, the 10th inst., after a long and severe illness, died at Cuneo in Piedmont the Commendatore Dr. Giovambattista Borelli, Senator of the Kingdom of Italy. Born at Boves in the province of Cuneo in August, 1813, young Borelli followed up his classical studies at the University of Turin by enrolling his name in the medical school, and after a brilliant academic course graduated in medicine and surgery. He was shortly thereafter nominated *primaris* in the Hospital of SS. Maurice and Lazarus. There he laid the foundation of that clinical accomplishment which was ere long to place him in the front rank of Italian consultants, and which seemed enlarged and refined rather than diluted and weakened by his studies in those physical and natural sciences of which he was passionately fond. His masculine power of work and his philosophical love of sound generalisation made him singularly popular with the successive relays of students who for nearly forty years repaired from all parts of Italy to his surgical clinique. His fame spread beyond the Italian frontier, and numerous learned bodies, foreign as well as domestic, elected him Honorary or Corresponding Fellow. In America particularly he had many admirers, who classed his work, expository and operative, on the lesions of the genito-urinary organs with that of Marion Sims. His publications were frequent and in great request with the profession in Italy, those on the Hernias, on the Angular Ankyloses of the Knee, on Nasal Polypus, and on Tumours of the Mouth, still retaining authority even with the generation that succeeded his own. He competed for the gold medal offered by the Medical Society of Toulouse on Iodine Injections, and gained the prize from many able competitors. Another distinction he won from France was that of the Cross of the Legion of Honour, for surgical services rendered to the French wounded in the campaign of 1859, at the battles of Palestro and Magenta. "John Baptist Borelli," writes an Italian correspondent, "was a man of iron will, with an intelligence luminous and serene, and with a soul ever ardent and young. As a citizen he was devoted to his native land, and his fellow townsmen, recognising in him the qualities of the publicist and the legislator, elected him as their representative in the Parliament of Italy. For some time, however, he withdrew from the political arena, but in 1876 he re-entered Parliament, this time for the constituency of Fossano, which he represented with liberal enlightenment and statesmanlike ability till 1881, when he was created a Senator of the Kingdom. In him the country loses a man of great worth, a *savant* of high reputation, a politician of weight, one of the most revered of its senators, and one of the most independent and upright of its sons."

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary Comitia of the College of Physicians was held on the 29th inst., the President, Sir A. Clark, Bart., in the chair.

In opening the proceedings the President made a graceful allusion to the honour conferred by Her Majesty upon one of their most distinguished Fellows, Sir Richard Quain, Bart.

The following gentlemen were admitted Members of the College:—H. J. Campbell, M.D. Lond.; E. C. Carter, M.B. Edin.; E. L. Fox, M.D. Camb.; H. G. Turney, M.B. Oxon.

Communications were read from the University of London and the secretary of the Royal College of Surgeons,

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and from the Medical Society of London. The last-named referred to the alteration in the terms of the disposal of the Fothergillian Fund, and the Society asked the College to permit its President to act on the board for awarding the prize. On the motion of Dr. C. T. Williams, seconded by the Senior Censor, it was resolved to accede to the request of the Society provided that the President be empowered to invoke the assistance of one of the Censors if necessary.

The opinion of the College solicitors on the Bradshaw bequest having been given, it was resolved to apply to the Charity Commissioners to permit the College to change the date of the delivery of the lecture.

A communication from Dr. Rentoul was ordered to lie on the table; and on the motion of Dr. Farquharson, seconded by Dr. Priestley, it was resolved to appoint a committee to watch the progress of the Midwives' Registration Bill. The President nominated Drs. Farquharson, Priestley, Douglas Powell, and Sturges.

The following Fellows were elected to serve on the Council: Drs. W. H. Ransom, Thos. Stevenson, C. T. Williams, and Whipham.

Dr. C. T. Williams moved the following resolution: "That it be referred to the Council to consider how far the services of non-resident Fellows connected with provincial medical schools can with advantage be made available for the College examinations." This was seconded by Dr. Leach, warmly commended by the President, and carried unanimously.

A report on certain mineral waters forwarded from Persia by Dr. Carson was read. It was signed by Drs. H. Weber and Burney Yeo, and was to the effect that all the specimens were mainly feeble sulphurous waters of no special value.

The usual quarterly report of the Finance Committee was read; also that of the Examiners for the Licence. On the recommendation of the Committee of Management the University of Adelaide was recognised as fulfilling the conditions of the Board for the complete curriculum of professional study. Its graduates will therefore be admitted to the Second and Final Examinations on the same conditions as those of other recognised universities.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 23rd inst. the following degrees were conferred:

Bachelors of Surgery and Medicine.—Frederick Eustace Batten, Sydney Nevill Harrison, and Frederick Charles Martley, Trinity; Chas. Robert Arnold Sutton, Clare; James Jenkinson Knox, Cavendish Hostel; Edwin Webster Hardwick, non-collegiate.

UNIVERSITY OF GLASGOW.—The following is a list of gentlemen who have received the degrees of M.B. and C.M. since the general graduation in July, 1890:—

Thomas Primrose Anderson, Partick, Glasgow; Alexander Andrew, Tarbolton, Ayrshire; Alexander Percy Agnew, Burnley, Lancashire; Thomas Berry, Langside, Glasgow; James Cordiner, M.A., Lesmahagow, Lanarkshire; George Henry Edington, Hillhead, Glasgow; Malcolm Gillies, Easdale, by Oban; James Kirkwood, Greenock; Hugh Lang, Woodside, Cardross, Dumbartonshire; George Lowson, Dundee; Arthur Henry Lucas, Carmyle, near Glasgow; Thomas Dryden Moffat, Glasgow; Robert James Nevin, West Auckland, county Durham; Douglas Wills Russell, Paisley; William John More Slowan, Hilton, Kilmalcolm, Renfrewshire; James Sim Wallace, B.Sc., Shawlands, Glasgow; James Alexander Wilson, Langley Moor, Durham; John Zuill, M.A., Buchlyvie, Stirling.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following gentleman, having passed the necessary examination, has been admitted a Fellow of the College:—

Patrick Joseph Murphy (Thomastown, co. Kilkenny), L.R.C.S.I. 1881, and L.R.C.P.I. 1881.

CHILDREN'S HOSPITAL, PENDLEBURY.—The medical statement for the past year states that disease of the digestive organs, the result of improper feeding and insanitary conditions, directly or indirectly, was the most fatal of any class of disease with which they had to deal, giving rise to some 35 per cent. of the fatal cases of infants under two years of age. With reference to infant insurance, it was found, of the fatal cases occurring at the Dispensary, that out of 213 cases in which information was obtained, 144 were in a club at the time of death, and 70 were not. Mr. Wm. Agnew has announced his intention to endow another cot with a sum of £1000. The financial position shows an accumulated deficit amounting to £2300.

SUPERANNUATION GRANT.—Mr. F. A. Willington, M.R.C.S., lately medical officer for the district and workhouse of the Ecclesall Bierlow Union, has been granted a superannuation allowance of £80 per annum.

BATH ROYAL UNITED HOSPITAL.—The Mayor of the borough on Monday opened the new Children's Ward of this institution. The buildings just completed form an additional storey to the Albert Wing, and will accommodate twenty beds. The cost is £2060, towards which £1680 has been raised.

FOOTBALL CASUALTIES.—At Gateshead, on Saturday, whilst playing at football, a youth aged fourteen, in a scrimmage, broke his right leg.—At a league match at Sunderland, on the same day, between Sunderland and Notts County, a Sunderland player, to score a goal, charged the Notts goal-keeper, the latter sustaining a fracture of his right leg.

WESTMINSTER MEMORIAL HOSPITAL, SHAFTESBURY.—The annual report for 1890 shows that the work during the year was exceptionally heavy and expensive. Twelve operations were performed in the hospital, and the number of patients averaged six a week of five weeks each. There were sixty-five patients during the year, making a total of 846 since the hospital was opened. The endowment fund now amounted to £3589. The income and expenditure statement showed a balance in hand of £94 10*s.* 6*d.*

CITY OF LONDON DISPENSARY.—Mr. F. P. Alliston presided at the annual meeting held last week at the dispensary. The institution was founded in 1789, and continues to maintain its usefulness and efficiency. During the year 11,865 patients received treatment, and 10,848 were discharged cured or benefited. The balance-sheet of receipts and disbursements shows a sum of £221 in the treasurer's hands, but there were liabilities amounting to £500.

COLLEGE OF STATE MEDICINE.—The following gentlemen, having been duly proposed and seconded, were elected Associates of the College at a meeting of Council held on Jan. 22nd:—William Geo. Barras, M.B., C.M. Glas., L.S.S. Durh. Univ., Govan, N.B.; Robert Cattley, M.B., C.M. Edin., D.P.H. Camb., Monkgate, York; Dr. Alexander Macindoe, D.P.H. Camb., Willoughbridge, Market Drayton; Dr. William Francis Menzies, B.Sc. Edin., County Asylum, Rainhill; Hamilton C. Reid, M.B., C.M. Glas., D.P.H. Fac. P. and S. Glasg., Coatbridge.

METROPOLITAN HOSPITAL SATURDAY FUND.—A largely attended meeting of the delegates of this Fund was held at the offices, Farringdon-street, on Saturday last, for the purpose of considering a report relating to the office staff and the salaries paid, which had been prepared by a special committee. Mr. Acland, chairman of the Fund, presided. The committee reported that what was required was one efficient person as secretary, whose duty should be to direct the whole of the work, and make recommendations as to the future office staff, which would effect a saving of £300 a year. On a motion for the adoption of the report, a long and desultory discussion ensued. Ultimately an amendment was carried, to the effect that so much of the report as referred to the question of dual control should be adjourned for six months. Meantime the secretaries should be provided with sufficient clerical assistance.

OBSTETRICAL SOCIETY OF LONDON.—The following list of officers for the ensuing year has been recommended by the Council:—President: Dr. Watt Black. Vice-presidents: Drs. Percy Boulton, Corry (Belfast), Hayes, W. A. Meredith, and Tapson; Mr. Evan Jones (Aberdare). Treasurer: Dr. Ernest Herman. Chairman of the Board for the Examination of Midwives: Dr. Champneys. Honorary Secretaries: Mr. Alban Doran and Dr. Peter Horrocks. Honorary Librarian: Dr. William Duncan. Other members of Council; Drs. Frederick William Coates (Salisbury), Charles James Cullingworth, W. Radford Dakin, S. Houston Davson, John H. Galton, Henry Gervis, Wiliam Lenton Heath, Joseph Johnston, Henry Ambrose Lediard (Carlisle), Henry Colley March (Rochdale), Thomas Cargill Nesham (Newcastle-on-Tyne), Joseph Henry Philpot, John Baptiste Potter, and Herbert R. Spencer; Messrs. Albert Charles Butler-Smythe, Henry W. Freeman (Bath), G. R. Turner Phillips, and Harry Speakman Webb (Welwyn).

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THE ANIMALS' INSTITUTE. — At a recent special meeting of the Council of this Institute it was decided to appeal to the public for subscriptions to enable them to carry out their scheme of rendering aid to injured horses on the London streets. They propose to have ambulance carriages in available places, fully equipped with necessary appliances. Attention was specially called to the cruelty of the practice of mixing salt with the snow on the streets. Subscriptions and donations may be sent to the hon. treasurers, Lady Florence Pelham Clinton and Lady Frances Trevanion.

PRESENTATIONS.—Dr. Robert Lunan of Blairgowrie, Perthshire, has been presented, at a public meeting held in that town, on the occasion of his retirement from the profession, with an illuminated address and a silver dinner service, together with a diamond and pearl necklet for Miss Lunan.—Mr. P. F. Sturridge, L.R.C.P.Ed., M.R.C.S., has been presented by the railway *employés* at the Kendal station with a silver-mounted umbrella, suitably inscribed, in recognition of his services as lecturer to the class in connexion with the St. John Ambulance Association.

THE METROPOLITAN HOSPITAL. — The annual meeting of the governors of this hospital was held on Wednesday at the institution, Kingsland-road. Mr. Joseph Fry (chairman of committee) presided. The secretary (Mr. C. H. Byers) read the fifty-fifth annual report of the committee, which stated that the in-patients had increased from 489 in 1889 to 709 last year, and the new out-patient cases from 9482, representing 16,411 attendances, to 14,104, representing 23,074 attendances. In the provident department there had been 43,208 attendances. The receipts for the year had amounted to £6132 and the expenditure to £7528. To close up all the accounts connected with the building of the present hospital the committee had been obliged to borrow £6000 on mortgage.

METROPOLITAN ASYLUMS BOARD.—At the last meeting of the board the announcement was made that the admissions to the hospitals of the board during the last fortnight numbered 250, showing a decrease of 114 as compared with those of the preceding fortnight. Mr. Mann was elected secretary in place of Mr. Jebb, deceased.

NATIONAL ASSOCIATION OF SANITARY INSPECTORS, YORKSHIRE CENTRE.—The third annual meeting was held at Leeds on Saturday. Representatives of upwards of thirty sanitary authorities attended from all parts of Yorkshire. The president, Mr. T. Pridgin Teale, occupied the chair, and in his address congratulated the Association on its continued satisfactory progress. Of the public matters which were of interest to the meeting, he specially urged the adoption in Leeds of the Act for the Compulsory Notification of Infectious Disease, which was supported by other speakers. Mr. G. Paul, of Knaresborough, read a paper on the relation of meteorology to public health. An interesting discussion followed. Mr. Tarvis, of Halifax, was elected chairman, in the place of Mr. James Chambers, resigned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 27th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	256	45	2	54	2	359	442
North-Western Hospital	269	35	..	8	..	312	443
Western ,,	157	16	..	16	1	190	262
South-Western ,,	169	11	..	4	3	187	340
South-Eastern ,,	227	12	..	40	1	280	462
Northern ,,	278	19	..	21	..	318	480
Gore Farm ,,	33	..	..	..	..	33	300
Totals	1389	138	2	143	7	1679	2729

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

THE Committee of the House of Lords, which was appointed last Session, met again on Monday last to continue their inquiry. The reference to the committee is to inquire with regard to all hospitals and provident and other public dispensaries and charitable institutions within the metropolitan area for the care and treatment of the sick poor which possess real property or invested personal property in the nature of endowment of a permanent or temporary nature, and to receive evidence tendered by the authorities of voluntary institutions for like purposes, or with their consent in relation to such institutions, and to inquire as to what amount of accommodation for the sick is provided by rate and as to the management thereof.

Lord Sandhurst, as before, presided, and the other members of the committee present were—Earl Cathcart, the Earl of Arran, the Earl of Lauderdale, Lord Saye and Sele, Lord Zouche of Haryngworth, Lord Thring, and Lord Monkswell.

Guy's Hospital.

Mr. Edward Lushington, treasurer of Guy's Hospital, was the first witness examined. In reply to the Chairman, he said he had been for fifteen years treasurer of Guy's, and previously to that he had been for twenty-seven years in the Bengal Civil Service, in the financial department of the Government of India. Guy's Hospital was founded, he said, in about the year 1725, by a person named Guy, who made a will in which he defined what, in his opinion, should be the constitution of the hospital, and his will formed the basis of an Act of Parliament passed in 1726 or 1727. The constitution was as follows: There were sixty self-elected governors and a court of committees, consisting of nineteen members, selected from amongst the governors; and if any special necessity arose subcommittees were appointed to deal with particular matters. When he first became treasurer the sisters in charge of the wards were not trained nurses. They knew little or nothing about their duties when they came to the hospital, but learned them as they could. The matron, the medical superintendent, the chaplain, and assistant physicians and surgeons were elected or dismissed by the general body. The matron, whose duty it was to go round the wards every day, recommended to him the appointment of the sisters when a vacancy occurred, and they were selected from amongst the lady pupils who had had not less than a year's training in the hospital and who knew all about the work of the hospital and their respective duties. The probationers were appointed by the matron, and became nurses after eighteen months, provided that they conducted themselves properly. During their period of probation they could be dismissed by the matron. For the first month they had the option of terminating their engagement, but after that period they had to sign a paper saying that they would serve in the hospital for three years. The nurses were expected to be out of their dormitories at twenty minutes past seven; they breakfasted at half-past seven, and they entered the wards at eight o'clock; they dined in two batches, half-an-hour being allowed for dinner, from half-past eleven to twelve, and from twelve to half-past; they had tea from half-past four to five and from five to half-past; they had supper from half-past eight to nine and from nine to half-past, and they left the wards at a quarter to ten. The income from the estates had fallen from about £50,000 a year to £26,000, owing to the agricultural depression, before which they had never asked the public for a single sixpence. They had received altogether from the public £100,000, from which they took whatever was necessary to meet any deficiency. When they received a large donation of £400 or £500 they advertised the fact in the newspapers, and asked for further subscriptions.

Mr. Edward Cooper Perry, M.D., assistant physician to Guy's Hospital, Dean of the Medical School, demonstrator in morbid anatomy, and warden of the residential college, was then examined. In answer to the chairman, he explained the duties of the staff engaged in the residential college and the system of management. Last year the fees of the students at Guy's amounted to £11,000, of which £3000 was devoted to the expenses of the school, irrespective of the salaries of the lecturing staff.

St. Bartholomew's Hospital.

On Thursday Mr. W. A. Cross, clerk to St. Bartholomew's Hospital, was examined. He stated that the affairs of the hospital were conducted by an executive committee. He was a salaried officer. The steward would report to him.—The Chairman: As a general rule, do you not think it is inconvenient to have two heads, as in the case here? You are supreme in the absence of the treasurer, and at the same time you have a very important official who is indirectly under you. — The Witness: It would be much better to have one on the spot who had supreme authority. The system of accounts having been explained, and the method of checking them dealt with, the witness stated that the House Committee dealt with the estates of the hospital, which were situated in various counties, and comprised about 11,000 acres. The principal estates were in Essex, and the hospital had an agent in Chelmsford. The witness did not think the comparison of the rate per bed was a just one, as each individual hospital should be judged according to its own circumstances. He did not, however, mean to imply that a uniform system of keeping accounts in the various hospitals should not be tried. The figures representing the cost per bed published by the Charity Organisation Society were not trustworthy as far as St. Bartholomew's was concerned.—Lord Sandhurst: Have you had an outbreak of diphtheria recently in the hospital?—The Witness: Yes. We took into the hospital last year from the outside 140 cases of diphtheria, being double the number that we received on the previous year, and several of our nurses—twenty-three nurses and three ward assistants—have been attacked with more or less severe forms of diphtheria. The matter has engaged the very anxious attention of the treasurer and the almoners from the earliest development of that disease, and it is still under consideration.—Lord Sandhurst: Do you admit all cases of diphtheria?—The Witness: We have admitted all cases of diphtheria. We commenced this year to put diphtheria patients into a separate ward.—Lord Sandhurst: Do you take advantage of all the available space in your hospital for these patients?—The Witness: Oh, yes.—Lord Sandhurst: Have not you a magnificent hall in the centre of the third floor?—The Witness: Yes; the hall is not available for patients.—Lord Sandhurst: What is the

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use of that hall?—The Witness: The governors hold their meetings—their court, and occasionally hold their annual dinner there.—Lord Sandhurst: Is that the only place where the governors could hold their court?—The Witness: According to the present arrangement.—Lord Sandhurst: How often does the Court of Governors meet?—The Witness: Once every three months, sometimes more frequently. After some further questions from the Chairman, Lord Cathcart pointed out to the witness that there was an idea abroad that the nurses in the hospital were suffering from something being wrong in the quarters given to them in the hospitals, and asked if the witness had any reason to suppose that that was so. The Witness: We had no reason to suppose that. Two months ago the surveyor was instructed to make a complete examination of the building.—Lord Cathcart: And then did you move the nurses away from the places they had formerly occupied?—The Witness: From some cubicles they were occupying.—Lord Cathcart: I suppose you removed the nurses for some reason?—The Witness: We moved the nurses away, as some scarlet fever had broken out in the room, for the purpose of disinfecting the whole place. Another reason was that we had increased accommodation for them.—Lord Cathcart: In the treasurer's house? The Witness: No, that is at present used by the night nurses.—Lord Cathcart: And the removal had nothing to do with it? The Witness: Nothing at all.—Lord Cathcart: With regard to the accounts, do you not think that if the cash book dissections were made on a uniform principle throughout the hospitals the cost per bed would be a good standard of comparison as between one hospital and another? The Witness: I do not quite follow your lordship, but there would be great difficulties in doing so, and the disturbing element of the out-patient department would have to be got rid of. Lord Cathcart further examined the witness on the nature of the supervision exercised by the steward in reference to the food supplies for the hospital.

Lord Zouche: I suppose your buildings are very old? The Witness: They were erected for the most part in the middle of last century. The rebuilding of the hospital began in the first quarter of the last century.—Lord Zouche: Do you think that any danger arises in connexion with infectious diseases from the antiquity of the building? The Witness: I do not think there is any evidence of it so far as our hospital is concerned. The wards are frequently cleansed and repainted. Lord Zouche: Because it has been suggested that the walls might become impregnated with infection, and that might be communicated to sick persons. The Witness: I believe that our statistics of surgical results are very good indeed, which would hardly be the case in a hospital impregnated with infection.—Lord Zouche: I suppose every care is taken to keep everything clean—the paint of the wards &c.,—is it not?—The Witness: Oh, yes; and if there is any case of infectious disease in a ward, and the surgeon suggests that it is desirable to clean it, there is never any hesitation about doing so.—Lord Zouche: You would not state that this outbreak was in consequence of the antiquity of the building.—The Witness: Personally I have never heard it suggested.

In answer to Lord Monkswell, the witness stated that the governors did not contemplate enlarging the hospital until they got an extended area. With regard to the outbreak, Lord Monkswell asked what the surveyor had discovered wrong with the hospital. The Witness: He could not discover anything to account for the illness, but he pointed out that some of the appliances were not of the most modern type, and that they should be made so. We at once gave orders for the substitution of newer appliances in their stead.—Lord Monkswell: Do the ward assistants sleep in the hospital? The Witness: I think there are two who sleep out, but as a rule they sleep in the hospital.—Lord Monkswell: Are the ward sisters put up in sanitary bedrooms? The Witness: Yes, I think so.—Lord Monkswell: Are not they sometimes made to sleep in a room low down in the building, almost on the ground?—The Witness: No. The ward assistants sleep, some on the upper floor, and some on the second floor in the nurses home.—Lord Monkswell: But is there no person connected with the hospital who sleeps in bedrooms partly below ground?—The Witness: I think I know what your lordship refers to. Some of the male attendants in connexion with the resident staff sleep below ground, but the rooms are at present being raised.—Lord Monkswell: Did they suffer from illness?—The Witness: There was one attendant there who last summer had diphtheria.—Lord Monkswell: And might not this be traced to the insanitary nature of his bedroom?—The Witness: I say I do not know.—Lord Monkswell: Was there any other case of illness arising from bedrooms being partly underground?—The Witness: No, none that I have ever heard of.

Lord Cathcart: Can you tell me exactly what is being done regarding the sanitary condition of the hospital?—The witness stated that a different kind of waste trap for the sinks situated in a little room off the wards had been provided. The waterclosets had not been objected to.—Lord Cathcart: Have the sanitary arrangements below ground been altered?—The Witness: No. Merely the traps and the sinks have been altered.—Lord Cathcart: Can you suggest some other things which have been done?—The Witness: I am afraid I cannot charge my memory with the details of the improvements in ventilation, in waste-pipes, and putting special traps under ground.—Lord Cathcart: Are you going to do that?—The Witness: That is being done. In addition to this report from the surveyors, the governors have called in an expert in sanitary matters to advise them generally on the drainage. There is no ground, I believe, for thinking the drainage has had anything to do with the outbreak.

Dr. Norman Moore, warden of St. Bartholomew's Hospital, was the next witness. Questioned by the President as to the out-patient departments in hospitals, witness thought their demolition would inflict serious injury on the progress of medical study in this country. In reply to Lord Thring, the witness thought there was some risk of infection being spread by the congregating of large numbers of people in out-patient departments. The income of the school attached to St. Batholomew's Hospital last year was about £14,000 and the expenses £4000, the remaining £10,000 being divided among the lecturers.

Mr. Cross having been recalled, said the day nurses went on duty at 7 A.M., remaining till 9 P.M., time being allowed for lunch, dinner, and tea. Some part of the nurses' duties consisted of ward sweeping, but they were relieved to a very great extent by the ward maids.

The Committee adjourned till Monday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABBOTT, C. E., L.R.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health to the Braintree Urban and Rural Sanitary Districts.

BALE, WM., M.R.C.S., has been reappointed Medical Officer for the Heaton Norris District of the Stockport Union.

BURY, A. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Butterton and Grindon District of the Leek Union.

CARLINE, W. A., M.D. Aberd., M.R.C.S., has been appointed Surgeon to the Lincoln County Hospital, vice Wilkinson, resigned.

COOKE, W. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Urban Sanitary District of Bognor.

CRANSTONE, W. L., M.R.C.S., has been appointed Medical Officer for the Shire of Swan Hill, Lower Murray Riding, Victoria.

CROSS, W. J., M.B. Toronto, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Central and South Ridings, in lieu of the whole Shire of Arapiles.

DAKEYNE, T. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Leckfrith District of the Leek Union.

ESLER, A. W., M.D., M.Ch. Irel., has been appointed Medical Officer for the Borough of Heathcote, Victoria, vice Scobell, deceased.

FOX, J. A., L.R.C.P. Lond., L.R.C.P. & L.R.C.S. Edin., L.F.P.S. Glasg., L.S.A. (1885), L.S.A. (Med. Act, 1889), has been appointed Honorary Surgeon to the West Cornwall Infirmary and Dispensary, Penzance.

FRANEY, EDWARD, M.R.C.S., has been reappointed Medical Officer of Health for the Banbury Rural District.

GAILEY, J. A., M.D. Edin., has been appointed Medical Officer for the Norton and Endon Districts of the Leek Union.

HART, D. B., M.D. Edin., F.R.C.P., has been appointed Medical Officer of the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HASLETT, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Clinical Assistant to St. Luke's Hospital for Lunatics, E.C.

HOOLE, JOHN, M.R.C.S., L.S.A. Lond., has been appointed Medical Officer to the Anglo-Chilian Nitrate and Railway Company at Tocopilla, Chili.

KELYNACK, T. N., M.B., Ch.B., has been appointed Pathological Registrar to the Manchester Royal Infirmary, vice R. B. Wild, resigned.

MARSHALL, G. B., M.B., C.M. Edin., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Bournemouth.

ROSS, C., M.B., C.M. Edin., has been appointed Medical Officer for the Shire of St. Arnaud, Warnacknabeal Division, Victoria.

SANDERS, W. G. W., M.B., C.M. Edin., has been appointed Pathological Assistant Medical Officer to the County Asylum, Rainhill, Edinburgh.

SEARLE, G. C., M.R.C.S., has been reappointed Medical Officer of Health for Brixham.

SHAW, CECIL EDWARD, M.A., M.D., M.Ch., has been appointed Honorary Laryngeal Surgeon to the Hospital for Consumption, Belfast.

SHIELDS, GEORGE, M.B., C.M. Edin., has been appointed Medical Officer for the First Division of the Greystoke District of the Penrith Union.

SHIRRES, GEORGE, M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Board of Health, Victoria.

SOMERVILLE, A., M.D., L.R.C.P., F.R.C.S. Edin., has been appointed Medical Officer for the Longnor District of the Leek Union.

SOULBY, C. ERNEST, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed House Surgeon to the Middlesex Hospital.

STEPHENS, RICHARD J., M.R.C.S., L.S.A., has been appointed Assistant Medical Officer to the Wilts County Asylum.

SWINDELLS, J. A., M.R.C.S., has been appointed Medical Officer for the Shire of Glenlyon, Victoria.

THOMAS, ROBERT STANLEY, M.A., M.B., B.C. Cantab., has been appointed House Surgeon to the Middlesex Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident' House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser for the Asylum in Cleveland-street. Salary £100 per annum, with board and residence. (Apply to the Clerk to the Managers, Cleveland-street Asylum, Cleveland-street, W.)

CHELMSFORD UNION.—Medical Officer, including the office of Public Vaccinator, for the sixth district of this Union. (Apply to the Clerk, Chelmsford.)

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CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Physician to the Out-patients. The office is honorary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE SKIN, Victoria-park, E.—House Physician for six months. No salary, but board and residence, and an allowance for washing provided. (Apply to the Secretary, 21, Finsbury-circus, E.C.)

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary £600 per annum, with £200 extra for travelling and other expenses. (Apply to the Deputy Clerk to the County Council, 40, St. Mary's Gate, Derby.)

COUNTY OF FIFE.—County Medical Officer for the counties of Fife and Clackmannan, to act also as Medical Officer for the four districts of the County of Fife and for the County of Clackmannan. Salary for the combined offices £600, with travelling expenses. (Apply to Mr. Patrick, County Clerk, Cupar, Fife.)

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon to reside and board in the hospital. Salary £70.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum, board, lodgings, and washing allowed. (Apply to the Secretary, Thorofare, Ipswich.)

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 19, Bartlett's-buildings, Holborn, E.C.—Honorary Physician.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer required as House Physician for one year. Salary £60 per annum, with board and residence in the hospital.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Physician.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Physician.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—Surgeon.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Clinical Clerk for four months. No salary, but board, lodging, and washing provided.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

ROYAL ACADEMY OF ARTS.—Professorship of Anatomy. (Apply to the Secretary.)

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—Anæsthetist. Honorarium £50 per annum.

WINCHCOMB UNION.—Medical Officer for the No. 2 or Vale District of this Union. Salary £65 per annum, and in addition, midwifery, surgical, and vaccination fees. (Apply to the Clerk, Winchcomb.)

Births, Marriages, and Deaths.

BIRTHS.

MOIR.—On Jan. 22nd, at Cassillis-road, Maybole, N.B., the wife of James Moir, Physician and Surgeon, of a son.

PIDCOCK.—On Jan. 17th, at Fitzjohn's-avenue, Hampstead, the wife of G. Douglas Pidcock, M.A., M.D., M.R.C.P., of a son.

WAKEFIELD.—On Jan. 20th, at The Beacon, Guildford, the wife of Horace Wakefield, M.R.C.S.E., L.R.C.P., of a daughter.

MARRIAGES.

BROWN—MAPLESTONE.—On Jan. 21st, at the Parish Church, St. Mary's, Aldeby, Norfolk, William Henry Brown, B.A., M.R.C.S., of Northumberland-square, North Shields, to Fanny Sophia, only child of John Maplestone, The Grove, Aldeby, Norfolk.

CLARKE—JOPLIN.—On Jan. 14th, at St. Matthew's, Thorpe Hamlet, Norwich, William Frederick Clarke, M.D., B.S., to Amy Robertson, daughter of the late Rev. J. J. Joplin, of Halifax, Nova Scotia.

MOORE—PALMER.—On Nov. 11th, at South Yarra, Melbourne, George Ogle Moore, M.R.C.S., eldest son of J. J. Ogle Moore, to Ethel M'Crae, second daughter of the late T. W. Palmer.

WALSH—PENNELL.—On Jan. 21st, at St. Paul's Church, Sheerness, James Joseph Walsh, Surgeon, R.N., to Eveline Mary, eldest daughter of Col. Pennell, R.A.V., of Sheerness.

DEATHS.

CARMICHAEL.—On Jan. 24th, at 227, Oldfield-road, Salford, William Carmichael, B.A., M.R.C.S., aged 44. No cards.

FERNIE.—On Jan. 22nd, at Macclesfield, Henry Mortlock Fernie, F.R.C.S., youngest son of the late Rector of Yelden, Beds, aged 53.

MARKHAM.—On Jan. 23rd, at Nightingale-lane, Clapham-common, W. O. Markham, M.D., F.R.C.P., in the 73rd year of his age.

MOSELEY.—On Jan. 22nd, at his residence, Wilbury-road, West Brighton, George Moseley, F.R.C.S.E., aged 65.

WARING.—On Jan. 22nd, at Clifton-gardens, W., Surgeon-Major (Retired) Edward John Waring, M.D., F.R.C.P., F.R.C.S., C.I.E., late Indian Medical Service, Madras, aged 71.

WELLS.—On Jan. 21st, at Randolphs, Biddenden, Kent, Robert Wells, F.R.C.S., in his 84th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, February 2

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Conjunctival Diseases.—London Throat Hospital, Great Portland-street: 8 P.M., McNeill Whistler: Syphilis as it affects the Larynx.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Dr. F. Silk: Clinical Observations on Bromide of Ethyle as an Anæsthetic in Dental Surgery, with recorded cases.—Mr. Sewill: The Etiology of Empyema of the Antrum.—Mr. Charters White: A New Method of Demonstrating Dental and Osseous Structures in Microscopical Specimens.—Mr. Storer Bennett: A case of Alveolar Abscess of three years' duration caused by the perforation of the side of a root.—Mr. Ackery: Some cases of Eruption of Teeth in Abnormal Positions. Short Inaugural Address by the President.

SOCIETY OF ARTS.—8 P.M. Mr. A. J. Hipkins: The Construction and Capabilities of Musical Instruments. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. Mackenzie: Anæmia, its Pathology, Symptoms, and Treatment. (Third Lettsomian Lecture.)

Tuesday, February 3.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Delusional Insanity, Moral Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

SOCIETY OF ARTS.—8 P.M. Mr. William Simpson: Lithography, a Finished Chapter of Illustrative Art.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. H. Law: Principles of Calculating Areas, Cubic Spaces, &c.; Interpretation of Plans and Sections to Scale.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Professor Crookshank: Researches on the Morphology, Cultivation, and Products of the Tubercle Bacillus.—Professor Crookshank and Dr. Phineas Abraham: Tubercular Guinea-pigs treated by Koch's Method.—Mr. Stephen Paget: Imperforate Rectum.

Wednesday, February 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Biss: The Diagnosis of Intrathoracic Aneurysms.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. J. B. Lawford: Optic Neuritis.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown. Annual Meeting. Election of Officers and Council. The President (Dr. Galabin) will deliver the Annual Address. Discussion on the Examination and Registration of Midwives.

SOCIETY OF ARTS.—8 P.M. Mr. J. E. Dowson: Decimal Coinage, Weights and Measures.

Thursday, February 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Lecture by Dr. Gowers.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Barlow: The Clinical Aspects of Rickets.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. E. Law: Catarrh of the Middle Ear, and Methods of Inflation.

ROYAL INSTITUTION.—3 P.M. Mr. Hall Caine: The Little Manx Nation.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Sir Edward H. Sieveking: Falmouth as a Health Resort.

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Friday, February 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Bliss: The Treatment of Intrathoracic Aneurysms.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Ordinary Meeting. Mr. Percy Dunn will show some Pathological Specimens. Dr. Clemow: Observations upon the Treatment of certain cases of Fatty Heart.—Mr. Rickard Lloyd: Practical Notes on the Administration of Ether and Chloroform.—Dr. Alderson: A case of Attempted Suicide by Chloroform.
ROYAL INSTITUTION.—9 P.M. The Right Hon. Lord Rayleigh: Some Applications of Photography.

Saturday, February 7.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Different Forms of Alopecia.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. Mr. W. Martin Conway: Pre-Greek Schools of Art.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, Jan. 29th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 23	29·71	W.	41	40	56	50	36	·01	Overcast
,, 24	29·59	S.W.	49	48	54	50	41	·23	Overcast
,, 25	30·00	S.W.	39	38	65	50	38	·27	Bright
,, 26	30·10	S.W.	42	41	72	49	37	..	Cloudy
,, 27	29·94	S.W.	44	42	59	49	42	..	Cloudy
,, 28	30·03	S.W.	47	46	59	52	44	·01	Cloudy
,, 29	29·94	S.W.	48	47	..	49	47	·07	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

PHYSICAL TRAINING.

A CORRESPONDENT, under the pseudonym "Dragoon," favours us with the following interesting note on the results of a case of systematised physical training observed at the Gymnasium Cavalry Barracks, Canterbury.

"Corporal A. U—— joined a hussar regiment as a recruit in the spring of 1888. He went through a three months' recruit's (gymnastic) course in England, through a six months' course in India, and has just finished another six months' course in England. He is now a qualified instructor. The following table shows the results of these gymnastics upon the man's frame.

Date.	Age.	Height.	Weight.	Girth of Chest.	Forearm.	Upper Arm.
July 5, 1888.	19 3/12 yrs.	5 ft. 6½ in.	10 st. 7½ lb.	35¾ in.	11 in.	11¼ in.
Oct. 5, ,,	19 6/12 ,,	Not taken	11 st.	38 ,,	12⅝ ,,	12 ,,
Jan. 26, 1891.	21 1/12 ,,	5 ft. 8 in.	11 st. 11½ lb.	41 ,,	13⅜ ,,	15 ,,

Thus it will be seen that in two years and a half this man has gained 1½ in. in height, 18 lb. in weight, 5½ in. in girth of chest, 2⅜ in. in girth of forearm, and 3¾ in. in girth of biceps. These figures are more eloquent than words."

Mr. A. Webster.—Goodhart or Angel Money, or the fuller treatises of Eustace Smith and Meigs and Pepper.

MORTALITY FROM THE BITES OF SNAKES AND ATTACKS OF WILD ANIMALS IN INDIA.

ACCORDING to the latest official return, the number of deaths from snake-bites and attacks of wild beasts in India is still on the increase, in spite of the large sums which are spent yearly on rewards for the destruction of these scourges. In 1888 the number of human victims to snakes and ferocious beasts was 22,970, and of cattle 76,271. Of the former number 20,571 deaths were due to snake-bites, 975 were caused by tigers, 184 by leopards, 139 by wolves, 110 by bears, 57 by elephants, and the remainder by other animals (scorpions, dogs, foxes, crocodiles, lizards, wild boars, &c.). In 1881, on the other hand, the number of cattle killed was 43,669; in 1885, 59,029; and in 1887, 68,840; while the number of persons killed each year since 1880 varies from 21,000 to 24,000. During the same period the work of destruction of wild beasts and snakes has advanced, as has also the expenditure for rewards. In 1888 20,709 wild beasts were destroyed, and 511,948 snakes. The total amount paid in rewards was Rs. 159,253. In 1880 14,890 wild beasts and 212,776 snakes were killed, at a cost of Rs. 99,992. In 1884 and 1885 the expenditure exceeded two lakhs of rupees.

Dr. E. G. Younger.—The best treatment of such articles is, probably, to take no notice of them. It is sad indeed for the readers of the periodical quoted if the stuff given in the quotations constitutes the most interesting article in the January number.

Nemo.—The L.S.A. is certainly not the highest qualification. The value of degrees must depend on the completeness of the examinations after which they are granted.

L.R.C.P.—The information desired will be found in Martindale's Extra Pharmacopœia.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—This will be the last letter from me on the above subject, as I start abroad this evening. When I return perhaps I shall have more to say. The letter of the writer "X. Y. Z." in THE LANCET of Jan. 24th, I characterise as a senseless piece of sarcasm, evidently written by one of no practical experience as an assistant, as he admits himself "that he never was one, nor should he be." Such an admission proves his utter inability to cope with the subject. I have been both an unqualified and qualified assistant, and, before I entered University College Hospital in Gower-street, served a pupilage to a surgeon attached to a large Union Infirmary and lying-in hospital, after which I was fortunate enough to obtain an assistancy in the neighbourhood of Russell-square during the four years at the hospital. The statement "X. Y. Z." mentions about his principal wanting him to "dub" himself to his patients as a qualified man whilst he was a student is the exception. I deny *in toto* that it is the invariable rule. It is a gross calumny to level at practitioners who employ them. Why did he not, for the sake of the profession, expose this gentleman? My principal was quite a different man to that. "X. Y. Z." talks about "protecting the public against unqualified persons." I am sorry to say, before the law steps in, something should be done to protect the public from qualified assistants, who enter the ranks perfectly ignorant of midwifery—at least, any operative part. Whilst acting as assistant in the W.C. district my principal, who was away, had a locum (L.R.C.P., M.R.C.S.) who attended a lady near Bedford-square in confinement. Post-partum hæmorrhage set in to an alarming extent from a retained placenta. The locum sent for me. Now, I was the unqualified assistant. Ought I to have introduced myself as the unqualified assistant? In all probability, if I had done so, I should have been told to go. Now, "X. Y. Z." wishes all unqualified assistants to be known as such to their patients. Instead of doing that, I helped my friend, and introduced my hand and emptied the uterus. Did I do rightly? Several other cases I could mention. As to pharmaceutical men acting as assistants, that, again, is an exception, not the rule. Apologising for thus troubling you with such a long letter,

I am, Sirs, your obedient servant,

Jan. 26th, 1891. JUSTUS, M.B. EDIN.

To the Editors of THE LANCET.

SIRS,—I, for one, do not think unqualified assistants ought to be ignored, but that the employment of them should be restricted as much as possible. Your correspondent, "X. Y. Z.," considers them very useful. Well, so they are to a man holding many public appointments in addition to a large private practice; too many appointments, indeed, for him to attend to personally, so he obtains an unqualified assistant, who does work—after a fashion—that ought to be performed only by a qualified man. Also, the employer takes very good care to hide the fact that his assistant is—to put it in the euphemistic terms of an advertisement column—"*sine* diploma."

I think it ought to be a law with the Local Government Board that they do not sanction any man holding a plurality of appointments unless he *does* (not *can*) attend personally to them, or has a properly qualified assistant to help him in the discharge of his duties, and that no man holding any public appointment shall employ any unqualified person other than a dispenser, who, under no circumstances, shall visit, attend to, or prescribe, to assist him in the performance of his duties either in private or public practice. If the above were the law, then there would be few, if any, unqualified men acting as assistants. Qualified men would get employment at a fair remuneration, fees would

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improve all the way round, and last, but not least, the social status of the profession would be vastly higher in a very few years than it is at present.

Here is a case in point. Near me lives a medical man who has all the usual district appointments, an extensive country practice, and he is a medical officer of health to a large rural district and to a town several miles away from his residence. How can he attend to all his duties himself? If he were like Sir Boyle Roche's bird, he might be able to attend to all his duties at the same time; but to help him he has an unqualified assistant. Now I say that if it is worth while having these many appointments, surely it ought to be worth while to have a properly qualified assistant. I think I ought to say that I am not an assistant "out of place."

I am, Sirs, yours truly,

Jan. 23rd, 1891. DIPLOMA.

To the Editors of THE LANCET.

SIRS,—In reference to my letter, published in your issue of the 3rd inst., first, I have to thank you for the readiness with which you inserted it, and opened up this important subject. Upon further consideration I fear that no member of the Medical Council will reply to it. To my mind the reason is that the Medical Council, as a body, are out of touch with the hard-worked general practitioner. I would be inclined to think that there is not one member of it who ever was so placed as to require the services of an unqualified assistant. If this be so, how then can they speak on this subject? From which I infer that until the general practitioners of England, Ireland, and Scotland are represented (why not?) on the Medical Council this question will remain *in statu quo*. At present the consultants, hospital surgeons, professors, and specialists, in my opinion, are only on it—where is the general practitioner who can only put M.R.C.S. after his name on the Medical Council? England, Ireland, and Scotland should have at least one general practitioner on the Council; then the subject of bone-setters, consulting phrenologists, travelling quacks, and unqualified assistants—they are all about one—would receive attention. I venture to think that it would not then be so easy for any man to put on a tall hat and pair of gloves, and go visiting.

I remain, Sirs, yours faithfully,

Jan. 27th, 1891. G. P.

To the Editors of THE LANCET.

SIRS,—Your correspondent's—"X. Y. Z."—letter has raised a point which I have often thought of myself. His principal, I consider, did not wish him to be a "party to a gross fraud." It all arises from our technical use of the word "qualified." If patients are told that the assistant is unqualified, they are apt to take it in the general sense of not being fitted to treat cases, and naturally object to his attendance. This is a fact. I am myself a qualified assistant, successor to six or eight unqualified men, and on various occasions—for instance, taking a midwifery case that my principal had promised to attend personally—I have had occasion to explain the difference between myself and my predecessors. The easiest way I have generally found was to say that, comparing our profession to the church, I was like a curate in full priest's orders, whereas the men before me were like deacons; and to give the example that an unqualified man could not sign a death certificate or examine for life assurance, just as a deacon could not read the absolution in church. It would be well, I think, to limit the term "assistant" to unqualified men, and to call the qualified assistant "salaried partner," or better still, "temporary partner," which would at the same time tend to neutralise the prejudice at first against "the young doctor."

I am, Sirs, yours faithfully,

Jan. 24th, 1891. C. A. L.

THE STAFFORDSHIRE KNOT AND ITS ADVANTAGES.

To the Editors of THE LANCET.

SIRS,—Having during an extensive practice of some years tied daily the Staffordshire knot in preference to all other forms, reef or surgical, I deem it the ideal knot if properly manipulated, so much so that I receive it, as part of my surgical creed, to be absolutely infallible and to be superior to any other form, whether practised by the most brilliant operator or an ordinary unskilled hand. The following cases are demonstrative—*viz.*: 1. As to its rapid execution if performed according to Tait's first method, to its absolute safety, and to its easy manipulation. 2. Comparative surgery. On animals I have known the prolapsed uterus to be successfully removed with an ordinary pocket knife and whipcord ligature (tied with the Staffordshire knot) by an ordinary unskilled farmer. 3. The Staffordshire knot is in common use among farmers as a mode of castration among male animals, and is reported to be without any mortality.

I am, Sirs, yours obediently,

Jan. 27th, 1891. PTOLEMAIS.

J. S. D.—There can be no doubt, we think, as to our correspondent's clear legal right to a notification fee. The law gives the medical officer of health no power to annul that claim. He would do a service to the profession, having the strong *mens conscia recti*, by pressing the claim in the county court. The leading article in question, on the duties of medical officers of health, will be found in THE LANCET of Sept. 27th last.

Dr. J. Stewart.—Scarcely. We cannot deny the right of patients to change their medical man, even in the circumstances named. But B should act with the utmost reluctance, suggesting coöperation and consultation with A.

BARBAROUS TREATMENT OF LUNATICS.

A MEDICAL MAN who was proprietor of a private lunatic asylum in the neighbourhood of Wiesbaden has just been sentenced to six months' imprisonment for inhuman treatment of patients. The case against him was brought to light by one of the attendants, who was so disgusted by the practices that went on that he left and informed the authorities. It seems that the doctor really believed that corporal punishment was the best treatment for insane patients, and he used to administer it freely to both males and females, the instrument used being an indiarubber tube. In one case evidence was given that a patient who was suffering from disease both of the brain and of the spinal cord was chastised severely on the very day on which he died. For the defence several experts were called, who stated that corporal punishment is considered to be an admissible method of treatment in lunatic asylums!

Medical Officer of Health.—It appears from a table published in the Registrar-General's fifty-second annual report, just published, that the mean annual death-rate in England and Wales during the nine years 1881–89 was equal to 18·9 per 1000, the rate in the individual years ranging from 19·64 in 1882 to 17·8 in 1888. It may be pointed out that the mean annual death-rate in England and Wales was equal to 22·5 per 1000 in 1861–70 and declined to 21·4 in the following decennium, 1871–80; while in the first nine years of the last ten years, 1881–90, the mean rate as above stated further fell to 18·9. The publication of the Registrar-General's quarterly return for the last quarter of 1890, which is due on the 1st prox., will afford the means for ascertaining the mean death-rate during the whole of the next decennium, 1881–90.

Fairplay is thanked for his communication. He will see that the subject of it has not escaped our attention.

Dr. Arnison (Newcastle-on-Tyne).—We shall be pleased to receive the paper.

VALUE OF ISINGLASS IN DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—During a recent epidemic of diphtheria in this district I have been much struck with the value of isinglass in the treatment of the cases. When the patients, in consequence of the severity of the throat symptoms, were unable to swallow, I used it in enemata with beef-tea. In one case, where for days the patient absolutely swallowed no food whatever, I depended entirely on injection of peptonised beef-tea (half a pint with two drachms of isinglass). The patient's strength was maintained under this treatment. The isinglass causes the enema to be much longer retained. Sir Morell Mackenzie points out that Dr. Massie (who had seen a great deal of this disease at Naples) proved that milk is often digested with great difficulty in these cases, and that he used lime-water to render the milk more easy of digestion. I have found isinglass has just the same power. It readily dissolves in warm milk, and patients seem to have an instinctive fondness for this substance.

I am, Sirs, yours truly,

Coggleshall, Essex, Jan. 27th, 1891. E. A. APPLEBE, L.R.C.P.

Justice will find in THE LANCET of Aug. 8th, 1885, an extract from the *Justice of the Peace*, in which the opinion is expressed that there is nothing in the Education Act requiring a medical certificate without a fee.

DEATH CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—The enclosed illustrates the injustice we lie under in giving our certificates gratis, and the registrars convert them into a source of revenue. I never saw the patient referred to in the registrar's letter alive, so of course my certificate would be out of the question.

I am, Sirs, yours faithfully,

JAMES GILROY, M.B.

Waterbeck, Ecclefechan, N.B., Jan. 26th, 1891.

Jan. 24th, 1891.

DEAR SIR,—A gentleman has called for a certificate of his mother's death for the purposes of an insurance society. A certificate from me is of no use for that purpose unless it contains a copy of the medical certificate with cause of death. I enclose a form, and the gentleman will probably call for it on Monday. I am sorry to trouble you, but cannot help it.—With kind regards, I remain, yours very truly,

Dr. Gilroy, Waterbeck.

THE CAT AS A CARRIER OF INFECTION.

To the Editors of THE LANCET.

SIRS,—In the programme of the coming conference I do not notice any allusion to the consideration of the "domestic cat" as a microbe carrier. Will not a cat lap up the ejecta from infected children, scratch over the refuse heaps and eat the "plate scrapings" from houses where there are infectious diseases, and then after travelling over a large area return to its owner's house, perhaps carrying the germs of disease with it? I think the number of cats should be considerably diminished; exceptions for keeping them could be made for corn stores or farms, or where they might be of some service; there are plenty of ingenious contrivances for destroying mice in private houses.

I am, Sirs, yours truly,

New Brompton, Kent, Jan. 27th, 1891. J. MORTON, Surgeon.

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RESPIRATORY CENTRE.

We are indebted to a correspondent for calling our attention to an inaccuracy which appeared in our annotation of last week. Instead of saying that destruction of the alæ cinereæ caused cessation of respiration, it should have been stated that it was destruction of the grey matter in this neighbourhood which did so—strictly speaking, the V-shaped grey matter above the point of the calamus scriptorius. In the middle of the annotation it is stated that "destruction of this region *suspends* temporarily respiratory movements of the opposite side." It is manifest from the context that "suspends" has been printed instead of "permits." We hope again to refer to this interesting subject when Laborde has given full details of the experiments, of which only a preliminary statement has as yet come under our notice.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Spencer Wells, London; Dr. Broadbent; Dr. Prout, Edinburgh; Mr. Alban Doran; Dr. Sainsbury; Dr. Boobbyer, Nottingham; Mr. Marmaduke Sheild, London; Dr. W. Hunter; Dr. Pisani, Malta; Mr. Braxton Hicks; Dr. Haughton, Clapham; Mr. Humphreys, London: Sir James Grant, Ottawa; Dr. W. G. Spencer; Mr. Hill, Crickhowell; Mr. Lloyd Bruce, New York; Dr. Weir, Erycobo; Mr. St. Dalmas; Messrs. Gale and Co., London; Mr. Mortimer, London; Messrs. Bates, Hendy, and Co.; Mr. C. Stretton; Dr. Castle, Rotherham; Messrs. Hertz and Collingwood; Mr. Hodgson, Ecclefechan; Dr. Gilroy; Messrs. Salt and Son, Birmingham; Dr. Thomas, Brighton; Messrs. Mitchell and Co., London; Mr. Chatham, Edinburgh; Messrs. Evans, Lescher, and Evans; Dr. Dutt, Scarborough; Mr. W. Gregory; Messrs. Maclean and Sons, Edinburgh; Dr. Prowde, Sunderland; Messrs. Blondeau et Cie.; Surgeon-Major Lawrie, Hyderabad; Messrs. Lippincott and Co., Philadelphia; Dr. Arnison, Newcastle-on-Tyne; Messrs. Sutton and Co. Preston; Dr. L. Kidd, Enniskillen; Messrs. Richardson and Co., Leicester; Mr. L. Mark; Mr. H. R. Whitehead; Messrs. Harris and Sons; Mr. Applebe, Coggeshall; Mr. Cardew; Messrs. Christy and Co.; Dr. A. H. Robinson; Dr. Fergusson, Banff; Messrs. Keith and Co.; Mr. Meredith, London; Mr. J. H. Thompson; Mr. Hughes Hallet, Derby; Dr. Grose, Melksham; Messrs. Smith, Elder, and Co.; Mr. W. S. Watson; Dr. Ormiston, Glasgow; Mr. Morton, New Brompton; Mr. Mansell Moullin; Dr. Webster; Messrs. Reynell and Son, London; Prof. Rutherford; Dr. J. F. Little; Messrs. Duncan and Co., Edinburgh; Mr. Coles, London; Mr. Saxon; Messrs. Mann and Co.; Mr. Gottlich; Dr. Collins, Manchester; Messrs. Shelley and Son; Dr. C. Purvis; Mr. Durlacher; Mr. Black; Messrs. Smith and Son, London; Dr. Bowie, Blantyre, E.C. Africa; Messrs. Dawson and Sons; Dr. F. P. Atkinson; Mr. Jessett; Messrs. Reynolds and Branson; Dr. Aulde, Philadelphia; Mr. C. H. Robinson; Mr. R. H. Elliot; Dr. Bampton; Dr. Mackinnon, Damascus; Rev. S. Wigan, Maidstone; Mr. Knox; Mr. Campbell, Melbourne; Dr. Chaudhury, Calcutta; Mr. Johnson, Leicester; Mr. Bonney; Mr. Hay; Mr. Kelly, London; Mr. Hope; Mr. W. Scott; Mr. Wand; Mr. Scott, Bloomsbury; Mr. Bayley, Walsall; Dr. Isaac, Wokingham; Dr. Moorhead, Carrington; Dr. Waters, Liverpool; Mr. Greenish; Mr. Roberts, Westminster; Mr. Birchall, Liverpool; Dr. Hime, Bradford; Mr. Bradley, Leeds; Dr. Duncan, London; Mr. Roberts, Sheffield; Mr. Phillips, Birmingham; Mr. Henderson, Dundee; Mr. J. J. Tate; Dr. Gilbert, Germany; Mr. Hamilton, Brighton; Mr. T. E. Mahew; Dr. Mersvan, Austria; M. Roland, Barcelona; Mr. Shaw, Edinburgh; Mr. Deeley, Blackpool; Prof. Le Montais, Detroit; Mr. Armstrong, Newcastle-on-Tyne; Mr. Parsons, Hastings; Dr. Thomson, Oldham; Mr. Brown, Moseley; Dr. Anderson, Newfoundland; Mr. Cooke, Totnes; Mr. F. Piggott; Mr. McNidder, Menston; Mrs. Forrest, Blackburn; Mr. R. Coombe; Mr. Bischoff; J. S. D.; Justus; Diploma; Secretary, Jessop Hospital for Women; B. S.; Nemo; Ptolemais; Secretary, Chichester Infirmary; Justice; General Practitioner; House Surgeon, Norfolk and Norwich Hospital; Zeta, London; F.R.C.S., London; County Clerk, Co. of Fife; Matron, Manchester; Jurisprudence; Durrant's Press Agency; H. W. R., Southsea; Melville; Clerk, Dorset County Hospital; L.R.C.P., Oxford; Dragoon; C. A. L.; Fairplay; An Observer.

LETTERS, *each with enclosure*, are also acknowledged from—Sir Andrew Clark, Bt., London; Mr. Bush, Bath; Messrs. Blake, Sandford, and Co., Piccadilly; Mr. Evans, Llanerchymedd; Messrs. Ormiston and Sons, Glasgow; Mr. Edwards, Sunbury-on-Thames; Messrs. Watkin and Osmond, London; Mr. H. Sell, London; Mr. Cornfield, Stoke Newington; Mr. Thin, Edinburgh; Messrs. Roberts and Jones, North Wales; Mr. Tully, Hastings; Mr. Saunders, Eton; Mr. Clarke, West Kensington; Dr. Whitla, Belfast; Dr. Ritchie, Otley; Messrs. J. and R. Morley, London; Mr. Lockwood, Huddersfield; Messrs. Waltham Bros., Stockwell; Mr. Tyte, Minchinhampton; Mr. Cuthbert, West Bromwich; Mr. Orchard, Dublin; Mr. Ernst, London; Messrs. Kilner Bros., King's-cross; Mr. Sheen, Fernhill Heath; Messrs. Horner and Sons, Aldgate; Rev. C. Sutcliffe, Halstead; Messrs. Robbins and Co., London; Miss Scott, Newcastle-on-Tyne; Messrs. Hogg and Son, London; Mr. Maturin; Mr. Martindale, London; Mr. Davies, Pontypridd; Mr. Saunders, Manchester; Miss Howarth; Mr. Bayes, Wellingboro'; Mr. Shea, Chesterfield; Dr. Liveing; Dr. Burgon, Hereford; Mr. Haslett, Liverpool; Mr. Cressy, Mansfield; Dr. Muat, Kensington; Mr. Baker, Brixton; Mr. Evans, Penybont; Mr. Rowlands, Merioneth; Mr. Catella; Mr. White, Haughley; Mr. Booth, Manchester; Mr. Scriven, London; Dr. Peters, Timperley; Dr. Nicholl, Australia; Mr. Blackburn, Hong-Kong; Mr. Keary; Mr. Thomlinson, Partick; Dr. Sealy, Weybridge; Major Pead; Mr. Zeppenfeld, West Indies; Dr. Owen, Ruardean; Mr. A. C. Coles; Miss Rogers, Colwyn Bay; Mr. O'Meara, Leicester; Mr. Buncle; Messrs. Richards and Co., Liverpool; Mr. Ricketts, Liverpool; Dr. Hughes, Ashton-under-Lyne; Mr. McAdam, Glasgow; Mr. Deane, Shropshire; Mr. Sim, London; Mr. Gordon, Llandudno; Dr. Hardwick; Dr. Galbraith, Lowestoft; Mr. Guinness, Bow; Mr. Heywood, Manchester; C. M.; X. Delta, London; Z., London; Matron, Royal National Hospital for Consumption, Ventnor; M.D., Bournemouth; Sister Louise, Tulse Hill; Caledonia, London; W. X. Y., London; Secretary, Royal Albert Hospital, Devonport; F. B. Y., Sheffield; X. Y. Z., Holloway; Bryant and Co., Toronto; Physician, London; Cordis, London; Alpha, Ebbw Vale; B.A., Brewood; Thor, London; Assistant, London; Medicus, London; C. G. O., Croydon; W. K., London; Domum; X. B.; V. B., Seaford; Alpha, Hull; Zircon; Rural; Duplex; Astragalus; Lady Superintendent, Bath; M.D., Manchester; Pulsometer Engineering Co., London; Midlands; D. M. S.; Delta, London; F. C.; Salford Royal Hospital; Climate, London; Dextrose; Sydney; Children's Hospital, Bradford; Dr., Manchester; Practice; L.R.C.S.; P. B. D., London.

NEWSPAPERS.—*Yorkshire Post, Bradford Daily Telegraph, Melbourne Daily Telegraph, Reading Mercury, Mining Journal, Windsor and Eton Express, Bradford Observer, Surrey Advertiser, Scottish Leader, Hertfordshire Mercury, Leeds Mercury, Liverpool Daily Post, Bristol Mercury, Law Journal, Essex County Chronicle, Architect, Sheffield Daily Telegraph, Spectator, Edinburgh Evening Dispatch, Worcester Daily Times, Staffordshire Sentinel, Public Opinion, Alliance News, Bombay Gazette, New Zealand Herald, Kentish Gazette, Courrier de Londres, Derby Mercury, Northampton Daily Reporter, Mirror, Cambrian News, Coleshill Chronicle, Salisbury Journal, Newbury Express, Bristol Times and Mirror, &c.*, have been received.

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ABSTRACT OF

The Lettsomian Lectures

ON

ANÆMIA, ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London, 1891,

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,
PRESIDENT OF THE HUNTERIAN SOCIETY, AND PHYSICIAN TO THE LONDON HOSPITAL.

LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—I have already mentioned that there are cases of idiopathic anæmia which differ from the type of chlorosis and the general type of pernicious anæmia. To these I must now direct your attention.

Scorbutic anæmia.—I have recorded[1] a case of a young man aged eighteen who had had meat and potatoes daily and green vegetables once a week, but who became affected with swelling and bleeding from the gums, petechiæ in the skin, and headache. When admitted, examination of his blood showed C. 51, H. 27, W. 0·52.[2] His urine was free from blood and albumen. Notwithstanding the history, scurvy seemed possible, and he was vigorously treated with antiscorbutics. In spite of these and all other treatment he got worse. The gums continued to be spongy, ulcerated, and bled; retinal hæmorrhages, which were absent on admission, developed and became more profuse than in any case I have seen. Frequent and distressing vomiting set in, murmurs developed, and a slight amount of albumen occurred in the urine, but no œdema took place. The red corpuscles sank to 13 per cent.; they varied much in size, some presenting cracks and fissures, and he sank after an illness of a little over two months' duration. After death, small hæmorrhages were found in the pia mater, lungs, and heart; all the organs were anæmic, the heart muscle was pale and mottled, the solitary glands of the large intestine were prominent, and in the latter were two small ulcers. Micrococci were found in the capillaries of the liver, kidneys, and heart, but only in small colonies, without changes in the surrounding tissues, and they probably only gained admission to the blood shortly before death. The patient had had a recent attack of syphilis, but no specific lesions were found in the viscera. I have recorded another somewhat similar but more acute case, and Dr. Gowers[3] has published two cases of the kind, one fatal, and suggested the appropriate title of "scorbutic anæmia."

I must next call attention to two cases of what may be called "relapsing pernicious anæmia." The first case is that of a man aged thirty-nine, who had repeated attacks of the most profound anæmia, which always yielded to arsenic, but after repeated relapses he ultimately died at home. Another case is that of a man aged forty-eight, at present under treatment for a relapse of severe anæmia, now, as on the first occasion, recovering under the administration of arsenic. These cases differ from some recently published in the absence of dark-coloured urine, except occasionally, when recovering, and when it is conjectured it is due to arsenic. They are important also in relation to apparent cures of pernicious anæmia by arsenic. Dr. Hale White, in a paper about to appear in Guy's Hospital Reports, of which he has allowed me to see a proof, draws attention particularly to the fact that such cases frequently relapse and ultimately die from the disease, and has been able to find in the records of Guy's Hospital only two cases in which a real cure was effected—one of Dr. Pye-Smith's, where the patient was well at the end of two years, and one case of his own, where the patient remains quite well at the end of nearly four years.

Diagnosis.—The diagnosis presents no difficulty if we make the reservation that pallor does not exactly indicate anæmia. Having established the existence of true anæmia by actual examination of the blood, we have next to determine whether it is secondary and symptomatic, or primary and idiopathic. To exclude the former we have to consider the history, and make a careful and complete physical examination. There are two diseases in this country in which anæmia is symptomatic, and in which the signs of local disease may be wanting for some time. These are tuberculosis and cancer, which must be carefully searched for and excluded before the diagnosis of idiopathic anæmia can be made with certainty. Still the careful examination of the blood will go far towards the diagnosis of the variety of anæmia. Thus the reduction of the red corpuscles to or below 30 per cent., especially if the hæmoglobin exceeds the corpuscles, is in favour of pernicious anæmia. The other diseases in which such great reduction in numbers occur are *hæmorrhage*, in which usually, though not invariably, the corpuscles and hæmoglobin are proportionately lowered, whilst the history of loss of blood is rarely wanting; and *cancer*, in which, as in some cases I have mentioned, the hæmoglobin is sometimes greatly below the corpuscular richness. In chlorosis the characteristic is the deficiency of hæmoglobin. I must again repeat that retinal and other hæmorrhages, whilst characteristic, are not pathognomonic of pernicious anæmia. They indicate a severe degree of oligocythæmia, in which usually the red corpuscles are below 50 per cent. A rough but serviceable guide, in the absence of the hæmacytometer, to the recognition of this degree of anæmia is furnished by the nail-bed of the fingers. It will generally be found that as long as any pink colour is seen through the nails 50 per cent. of red corpuscles are present, and that when less than 50 per cent. are present, all trace of pink has disappeared from the nail bed. The recognition of this degree of anæmia is a warning that the grave consequences of anæmia may be expected.

TREATMENT.

The treatment to be rational must be based on a sound pathology, and accordingly we have tried to work out the pathology of anæmia, and have shown that anæmia depends upon either defective hæmogenesis or increased hæmolysis, or upon the two combined. The principles of the treatment must, therefore, follow upon these lines. It will be convenient to consider treatment under three heads—dietetic, hygienic, and medicinal.

In *defective hæmogenesis*, whether the anæmia is idiopathic or symptomatic, the diet should be liberal, and contain a considerable amount of animal food. A small quantity of red wine, such as burgundy, port, or claret, or malted liquor, as light bitter ale or stout, is often useful. The patient should get out into the open air, and take gentle exercise when the strength permits; but in profound anæmia absolute rest is imperative to save the fatty and weakened heart. The patient should be encouraged to take a tepid sponge-bath in the morning if not too ill. Warm, but not tight, clothing should be worn. Coming now to the medicinal treatment, the following remedies have to a greater or less degree the property of increasing the rapidity of, or of perfecting, blood formation, and are therefore *hæmogenetics:* iron, phosphorus, potash, manganese, arsenic, oxygen, hydrochloric acid (indirectly). *Iron* is the most important of the hæmogenetics; it is a constituent of hæmoglobin, the physical condition of which is determined by its state of oxidation. Iron must therefore be regarded as a food as well as a medicine, and it must be borne in mind that the ordinary food taken in sufficient quantity contains all the iron necessary for blood formation in health. The manner in which iron acts when administered as a medicine appears to be by first stimulating the formation of new or young red corpuscles, and only later does it go to increasing the amount of hæmoglobin in the existing corpuscles. All forms of iron are useful in anæmia, but the bland preparations, and probably ferrous salts, are usually better borne, and can be exhibited in larger doses and for a longer time. The most convenient form is by pills which do not blacken the teeth, allow of easily adjusted dosage, and have been proved to be efficacious. Disturbance of the stomach and intestine is no bar to the administration of iron, but in these circumstances a bitter and alkali mixture should be given between meals and the iron in pills with, or directly after, food. Constipation is best combated by a morning saline aperient, as by one of the natural purgative waters or a teaspoonful each of sulphate of sodium and sulphate of magnesium (with or

[1] Ophth. Soc. Trans., vol. i., p. 51.

[2] For brevity the following signs are employed: C = red corpuscles per cent., H = hæmoglobin per cent., W = worth or value of individual corpuscles.

[3] Medical Ophthalmoscopy, third edition, p. 246.

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without a teaspoonful of chloride of sodium) in half a tumblerful of warm water. Sir Andrew Clark[4] has insisted on the great importance of purgatives in the treatment of chlorosis. Fashion determines in a great measure the choice of the preparations of iron employed. At the present time, mainly due to the influence of Niemeyer's teaching, Blaud's pill is the general favourite. The reactions which take place in this pill are interesting. It is shown by Mr. Martindale that a five-grain Blaud's pill, according to the additions to the B.P., 1890, should contain about one grain of true carbonate of iron, as ferrous carbonate, but it is found that before the pills can be dried and coated quite one-half of this has been converted into ferric oxide. Mr. Martindale states that the pill is best made by taking three parts of carbonate of potassium and five parts of sulphate of iron (crystals), or equal weights of *dried* sulphate of iron and carbonate of potassium. A five-grain pill made with saccharated carbonate of iron and *syrup*, instead of confection of roses, or a five-grain pill of dried sulphate of iron, also made with syrup, will contain three times as much iron as Blaud's pill. The excess of potash in the latter is not of any therapeutical importance, as potash is so abundantly supplied by the food. Three points in the iron treatment remain to be noticed: 1. The importance of pushing the iron to a considerable quantity when it is tolerated. 2. The value of sunshine and fresh air in aiding its remedial effects. 3. The importance in chlorosis of taking iron for two or three months after apparent cure. The other hæmatinics are much less active, but are of occasional use.

We now pass on to the treatment of *hæmolytic anæmia*. Here theoretical considerations suggest that animal food should be sparingly given from its tendency to increase hæmolysis in the formation of bile. Dr. Hunter has suggested, and put into practice in one case, a purely milk, and a milk and farinaceous diet, with slight benefit, but the case was too advanced for striking results. I feel sure that a purely milk, or milky and farinaceous diet, deserves a trial in pernicious anæmia. Alcohol is not as a rule indicated, and when administered should be given in the form of spirit very freely diluted. In the advanced stages absolute rest in bed is necessary, but when the strength permits sitting or driving in the open air and sunshine are distinctly of benefit in combating the hæmolysis. We must not forget to foster the increased and compensatory hæmogenesis which is struggling to maintain the balance. We now come to the medicinal treatment of pernicious and other forms of hæmolytic anæmia. Amongst the remedies which diminish blood destruction—*anti-hæmolytics*—may be enumerated arsenic, quinine, mercury, phosphorus, β-naphthol, iodoform, carbolic acid, sulpho-carbolates, menthol.

Arsenic.—Amongst the great gains we have had in the treatment of anæmia in recent years arsenic certainly stands in the foremost position. It was first employed by Dr. Byrom Bramwell in pernicious anæmia in 1877.[5] Since then abundant testimony has confirmed its value, and its action, if not specific, is at least very striking. Fowler's solution is the most convenient form, in which the maximum dose can be given. Beginning with quite small doses (from two to four or five minims) it can, if tolerated, be gradually increased to ten or even fifteen minims three times a day, and I believe the larger doses are the most successful. It is not, however, always well borne, though I cannot remember to have had a case of pernicious anæmia under my own care in which such was the case. In such cases I should unhesitatingly try it subcutaneously. It is not always of benefit even when tolerated. As regards its mode of action we have no certain knowledge. It was originally tried from its occasional, though somewhat uncertain, action in Hodgkin's disease, in which it is supposed to exercise some unknown influence on the cytogenic organs. It has been suggested that it acts locally on the mucous membrane of the stomach and intestines (Hunter), I presume as a germicide in preventing the development of ptomaines. In malarial anæmia it probably also acts as a germicide on the *plasmodium malariæ* in the blood-corpuscles. Arsenic inhibits the glycogenic function of the liver, and it is possible that it may restrain its hæmolytic function. A new light has recently been thrown on the mode of action of arsenic by an interesting observation of Dr. Copeman's.[6] Writing of pernicious anæmia, he remarks: "When a drop of blood was removed from the finger and allowed to fall on a glass slide, then when the edge of the drop had dried somewhat, a cover-glass was gently placed upon it, crystals of hæmoglobin gradually formed in the film of blood in from ten to forty-eight hours without any further preparation. The only exception to this was in the case of patients who had been treated with arsenic for some days, after which crystals could not be obtained; although, if then the arsenic were discontinued for an equal length of time, they again put in an appearance." It would appear from this important observation that arsenic exercises a direct influence upon the red blood-corpuscles, lessening the vulnerability which we have seen is one of the characteristics of anæmia, especially of hæmolytic origin. An interesting point in connexion with the administration of arsenic is its occasional effect in causing bronzing or pigmentation of the skin. How this is brought about is a disputed point, but it is probable that it acts by increasing the activity of the pigment-producing tissues. It is possible that the increase of colour of the urine noticed in some cases of pernicious anæmia during the administration of arsenic is in some way connected with this action. Quinine is useful in the pyrexial attacks of pernicious anæmia. Phosphorus proved successful in one case recorded by Broadbent, but has failed in others. The evidence regarding mercury is conflicting, but Keys has asserted that corrosive sublimate also increases the number of red corpuscles. β-naphthol has been suggested by Dr. Hunter, and I have added to the list other disinfectants which may be worthy of trial, but have no personal experience of their employment in anæmia.

I had intended to deal with Transfusion in the treatment of anæmia, but my time is exhausted, and I must leave this undiscussed. This is the less to be regretted as my experience in this mode of treatment is small and distinctly unfavourable. Moreover, the subject has been very fully dealt with by M. Hayem, and quite recently by Dr. Hunter,[7] and the outcome of their experiments and general medical experience is against the employment of transfusion for anæmia, though cases of recovery after transfusion in pernicious anæmia have been recorded. Intra-peritoneal and subcutaneous injections of blood have also been tried, especially on the Continent, but Cohnheim has shown that such treatment, even in the most skilful hands, is not free from danger, fatal peritonitis having occurred in several cases after intra-peritoneal injections.

But I must now bring my lectures to a close. I am deeply conscious of the imperfect manner in which I have accomplished my task. I feel that in trying to cover so wide a field I have dealt in a very sketchy and imperfect manner with many parts of my subject. Still I cannot but believe that it is desirable that an endeavour to consider the subject of anæmia as a whole should be attempted, so as to fit the many and detailed observations of the numerous workers into one harmonious whole. The enormous amount of work that has been done in recent years and the complexity of the subject render the office a difficult one, requiring an abler exponent than myself.

In conclusion, I desire to express to you, Sir, and the Council of the Society, my sense of the honour conferred upon me in inviting me to deliver these Lettsomian lectures, and also to thank the Fellows and gentlemen who have patiently listened to them.

[4] THE LANCET, 1887, vol. ii., p. 1003.
[5] Edinburgh Med. Journ., Nov. 1877, and Med. Times and Gaz., 1877, vol. ii., 431.
[6] St. Thomas's Hospital Reports, vol. xviii., p. 104.
[7] Arris and Gale Lectures, Royal College of Surgeons: Brit. Med. Journ., vol. ii., 1889.

Address

ON THE

PRINCIPLE OF EXPLORATORY AND CONFIRMATORY INCISIONS.

Delivered to the Obstetrical and Gynæcological Society of Glasgow, Feb. 2nd, 1891,

BY LAWSON TAIT, L.R.C.P., EDIN., &c.,
HONORARY PRESIDENT OF THE SOCIETY, PRESIDENT OF MASON'S COLLEGE, BIRMINGHAM.

GENTLEMEN,—It has been stated by an authority of the highest order that a prophet has no honour in his own country—a general rule which, like all of its kind, has an exception, certainly in the present instance a notable one in my own case; for the honour which you confer upon me to-night, taken with that which I have to receive to-morrow

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in a neighbouring and my native city, ought to satisfy any mind for the ordinary period of lifetime which belongs to the profession which we all practise. To me such honours rank far higher than the titular distinctions which are so much run after by some of our brethren; for those which I have received have been given by the votes of my brethren, in the land of my birth, by men, some of whom taught me in my youth and brought me up, some who have watched my growth with mingled feelings of alarm and satisfaction, others who have worked and fought in our young army by my side, whilst there are others amongst them who have honoured me by being my pupils. Such distinctions are better than those of the titular order, arising as the latter do from far different sources, and from motives so mixed as to be little calculated to please the independent spirit of a Scotchman, and too strongly tinctured with the doubtful savour of Court influence to be grateful in a healthy provincial atmosphere.

I need not say, therefore, that I am grateful to you for this great distinction, the greater that it was as entirely unexpected as it was unsought, not only because it is a distinction of a high personal order as because it is a mark of approval of the work and struggle of the last twelve years for the advance of the special objects of study in which in such a Society as this you are engaged. The work has been hard and the struggle has been keen, and I fear it is by no means over yet, for even within the last few days there has been a violent overflow of the vials of wrath on the part of one or two of the old conservatives who represent the departing school, and, as usual, I have been the chief object of the outburst. I feel also that there is a large element of honour in the office you confer upon me by reason of the fact that, as a matter of history, it was in your city, at least in its neighbourhood, and by a Glasgow man, that there first was achieved the idea of an exploratory incision so far as abdominal surgery was concerned, and it is a matter of historic fact that from the incident in question, by direct descent from master to pupil in generation after generation, do we derive our present splendid position. So far as historic investigation has yet gone, it was Robert Houstoun, who, in August, 1701, extended the idea of tapping an ovarian tumour into that of an exploratory incision. He was driven by the exigencies of the case to a complete and successful removal of a gelatinous tumour of the left ovary, curing the patient, who lived for thirteen years afterwards. This was the first ovariotomy, the story of which I have told completely in my book on Diseases of the Ovaries.

The interest for us is that the story of the case, passing through William and John Hunter, reached John Bell, whose pupil Ephraim McDowell was in the year 1793. John Bell in his lectures alluded to the probability of ovarian tumours being some day successfully removed, basing his prophecy on the suggestion of William Hunter. McDowell carried the idea into the back woods of Kentucky, and there he worked it out in its completeness. The story of his first experience he sent in manuscript to his old master, John Bell, in the year 1816; but John Bell was then upon his death bed in Rome, where I visited his grave but a few weeks ago, and the manuscript fell into the hands of Lizars, who was at that time doing Bell's work, and this accounts for the fact that Lizars was the first to follow McDowell's footsteps on this side of the Atlantic. From this point of course your knowledge of the history of the operation for the removal of ovarian tumours is complete, and I need not dwell upon the matter further, as it is not pertinent to the issue which I have to lay before you. But I cannot help suggesting that a Society such as this, in a city which was the birth place and, during the best part of his life, the residence of Robert Houstoun, ought not to rest till some public memorial of this great man has been brought into existence. If you study his life and writings, you will find abundant reason, in addition to that which I have given you, to characterise him as a man far in advance of the days in which he lived. You know that up to the year 1872 there was nothing practically attempted in abdominal surgery outside the removal of ovarian tumours. Anything that did happen beyond that was the result of blundering, so that we may take it that all the cases of uterine tumours and other things of the kind which were removed before that year were the result of mistaking them, as in Lizars' instance, for ovarian tumours; for it had become the fixed impression and the ruling practice in this department of work that nothing was to be touched as long as the patient could get about, nor until life was really actively and acutely threatened. Ovarian tumours were therefore tapped, and the evil hour of the operation was put off till its risk was greatly enhanced. Between the years 1872 and 1878 a revolt from this practice occurred in various directions. It was sought to establish for the work of abdominal surgery a duty far higher than merely saving half-dead women from the grave—a duty of relieving suffering as well as of saving life. And with this higher object in view, the new school of gynæcologists claimed the right of removing tumours long before they threatened life; claimed the right of removing diseases which did not threaten life at all, but made it a burden; claimed the right of interfering with diseases which were not mere ovarian tumours; and, finally, claimed the right of interfering in cases where there was great doubt as to the very nature of the disease, and after a good deal of struggling in the dark this idea became crystallised. In the year 1875 I formulated a proposal quite new in this department of surgery, to the effect that we were entitled to open the abdomen in all cases where there was disease present which threatened life or made it a burden, for the purpose of seeing in what direction the diagnosis could be made more certain, and how the line of effectual treatment could be opened up. This was a new doctrine as far as abdominal surgery was concerned, but it was nothing new in surgery. A good many years ago I saw a gentleman remove a breast, after having given a long harangue upon the nature and methods of diagnosing the scirrhous tumours of the breast. After he had the gland in his hand, he made an exploratory incision into it to find about three tablespoonfuls of pus occupying a perfectly non-malignant mass; and then he told us that it was a "chronic abscess." So far as the patient was concerned, it would have been far better if he had acted upon my principle of exploration—that is, if he had made an exploratory incision before he completed his operation. In all cases of abdominal surgery, as you can easily understand, this is a matter of necessity, but it does not seem ever to strike our critics that inasmuch as in all other departments of our art they have been acting upon the principle of exploration, though sometimes they put the cart before the horse, as in the instance I have just given you in the tumour of the breast, we very naturally ask them the question—Why do you object to the adoption of the principle within the cavity of the abdomen?

The new principle introduced, and certainly alluded to on the other side of the Atlantic, as "Tait's law" was first of all subject to a great deal of misrepresentation, and even within the last few years I have heard with my own ears the president of a distinguished London society say that "Tait's law" was that when you are in doubt you must open the abdomen. I have constantly had to repudiate any such statement, because I hold that in every case in which an operation is performed the serious risk to the patient's life is to be justified by the incidence of suffering which she is undergoing, or the degree of risk of life to which she is being continuously subjected by the disease, either immediately or in prospect. To open the abdomen for the fun of the thing, or merely as a matter of curiosity, is a proceeding to which I have never given the most remote sanction. I once heard Professor Huxley say he thought that all men of science ought to be painlessly extinguished at the age of fifty-five; and the explanation of this singular view was that the learned speaker at that time was himself about forty-eight years of age, and he was suffering from the recent attacks of the old school of teratologists, who so much and for so long hampered the progress of the evolutionary school of philosophy; who, in fact, kept it back for the first fifteen years of its existence. In gynæcology we are going through exactly the same kind of struggle; we are hampered and watched and vexed perpetually by elderly persons, who ape a juvenility which they have long since lost and a wisdom which they never possessed. To be serious for a moment, the struggle of the revolution in gynæcology is really a matter of age. In London it seems to be an impossibility to get any man over fifty-five years of age to see things in the new light, and therefore we must wait patiently for that process of natural extinction which seems there to be the only road to progress. I saw the announcement of the death of my old friend and master, Dr. Matthews Duncan, and I read the obituary notice of him, which caused me no little surprise. I have a great respect for the old saying that it is not desirable to say anything but good of the dead, but I have a

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still greater respect for justice for the living, and the benefit to them of holding up to their inspection of everything that should not be. In what I have to say of him there is nothing that I have not said publicly of Dr. Matthews Duncan, and nearly all of which I have said to him by word of mouth, face to face; for his faults were those of judgment and not of the heart, and he liked no man the less for a fight with him. We fought every time we met, and were at constant war by letter in public and in private, and the estimation I had of him he was perfectly familiar with. In 1886, in an address delivered to the Medical Society of London, I said: "When I find Dr. Matthews Duncan and Sir Spencer Wells interfering with what I believe to be the steps proper to be taken alike for the relief of our patients and the advance of our art, I utter prayers that they may soon be brought into a better light, but I also tell my patients to avoid them and consult some more reasonable men." His faults were those of judgment based upon a constitution of mind that was essentially illogical. He had a blunt, honest-looking manner, which carried of course, by reason of his convictions, a real honesty with it, and this commanded the respect of his *clientèle* and to a very large extent of his professional brethren. We can call to mind that so late as 1860 he condemned ovariotomy as quite unjustifiable, and took an active part in an agitation to get it prohibited in the Edinburgh Infirmary. He never encouraged operative interference to the end of his life, save in straightforward ovarian tumours, and not always in them, and he ever counselled such operations to be deferred as long as they possibly could. Concerning the new-fangled operative proceedings, he would listen to nothing in their favour and would countenance none of them; and of this I can give a strange and almost terrible example. In 1884 Dr. Chapman Grigg was consulted in a case which had been under Duncan's care, and in which Dr. Grigg at once diagnosed pelvic suppuration, and on my confirming his opinion the patient and her friends assented to an operation. Almost by force of arms we compelled Duncan to be present at the operation; and in a very few minutes I proved to him, by handing to him two huge suppurating ovaries and tubes, how grotesquely he had blundered, and how terribly the patient had suffered by his obstinate refusal to listen to the voice of progress. He admitted all I had said, but he mended his ways not one bit, for in a few weeks he made the same objection to a similar operation in a precisely similar case, and I have never heard that since that memorable morning he altered his custom in the least, or even admitted the necessity of such a perfectly legitimate and much-needed abdominal section; and he certainly to my own knowledge succeeded in mischievously postponing, and even in entirely preventing, many which were quite as much needed. Let me give in detail a case which illustrates the foregoing remarks.

In November, 1890, Dr. Boulton of Horncastle sent to me a lady aged twenty-eight, married about four years, and who had been twice pregnant. In her first labour Dr. Boulton discovered a tumour which blocked up the pelvis and impeded labour. He turned the child and delivered it, but it died in the process. Dr. Matthews Duncan was consulted, and his advice was characteristic. She had a lump in her womb, for which no operation could be performed, but perhaps she might have a living child if premature labour was brought on. This was done in the second pregnancy, but with the result that the infant lived only a few hours. Dissatisfied with the advice given and the experience derived from it, Dr. Boulton sent the patient to me, and with no difficulty at all I recognised the tumour as cystic, and as being fixed to the back of the uterus. From its peculiar feeling, I suspected that it was a dermoid cyst with a short pedicle, but in any case I felt perfectly certain that it could be removed, even if there was doubt about this. I explained to patient and doctor alike that it was an instance for the adoption of my new rule of exploratory incision. I advised the patient, therefore, to submit to operation, and I arranged with her and her medical attendant that if I were wrong, and the case should turn out to be really a lump in the womb which could not be removed, I should remove the uterine appendages so as to prevent its growth and prevent the patient again becoming pregnant. On operating, the tumour turned out to be a dermoid cyst of the ovary, and was removed with the greatest ease, and with a perfectly successful result. The other ovary was quite healthy, and was of course left, and now therefore she is quite as well off as she ever was in all her procreative organs, and has had the fatal obstructions to her labours removed. We can learn a lesson from this case in two ways. First, no man, however eminent and experienced, has a right to be so sure of his adverse diagnosis in abdominal diseases as to tell his patient to go home hopeless and helpless, that nothing can be done. I say an "adverse diagnosis," because with that the door is closed, whilst in positive diagnosis an error, even if it occurs, amounts to nothing more than that an exploratory incision of an infinitely small risk has revealed the conclusive nature of the error, has placed the case beyond all doubt, and justifies everyone in saying to the patient, "You must bear the fate which is in store for you." The diagnosis in this particular instance just given was easy; but even if it had been difficult, I hold that his duty was to recommend an exploratory incision to make that conclusion certain or to alter it for ever. He had what he was pleased to call conscientious objections to surgical operations, but he had no objection to the operation of the obstetrician with the induction of premature labour, fatal to the child and more risky to the mother than the removal of the tumour was.

The lesson to be drawn from the attitude occupied by Dr. Matthews Duncan in the instance I have narrated, and in very many others which I could give in detail, is that by opposing the application of the principle of exploratory incision he inflicted upon the patients a very serious positive harm, risking lives needlessly, and destroying lives of children the parents of whom were most anxious to preserve. Further than this, he hindered very materially the progress of our art. But there is another side to the picture, in which the passive resistance on the part of men who ought to know better to this commonsense proposal of exploration is seen to be as mischievous, perhaps even more mischievous than in the illustrations I have already afforded. In the passive evil we have the immediate cause of a most insane outcry against unnecessary operations, an outcry which I absolutely believe is not so much directed against measures as against men. My own experience is that the evil to be guarded against in the performance of unnecessary operations does not lie in this direction at all, but really in the opposite. Personally, I have seen infinitely more harm done by delayed operations and by advice given to the effect that operative interference was either unnecessary or impracticable at a time when it was really easy and safe, the result being that cases come up for our surgical treatment at a time when the difficulties are enormously increased and the risk correspondingly greater. Let me give an illustration of this kind, pointing out to you at the very beginning that the origin of the evil is the same—that is, the resistance to the principle of exploratory incision.

An unmarried lady, aged thirty-five, came to me in October last with an enormous solid tumour occupying the whole abdomen and pushing up the diaphragm. It was perfectly solid, pushed down into the pelvis, and a small uterus was pressed down in front of it, but apparently no part of it. The uterus was, however, immovable. The tumour was discovered in 1884, at which time it was of small size. In that year her medical attendant took her to Sir Spencer Wells, who said that no operation could be accomplished because the uterus was so fixed and implicated. The unfortunate girl was at the time engaged to be married, and when this doom was pronounced she and her intended husband resigned themselves to their unhappy lot, maintaining, however, their hopeless relation of betrothal. The tumour slowly grew till it reached the monstrous size it had when I saw her. During these long, weary years incalculable suffering was borne by this poor woman, physical as well as mental; and the latter was shared by parents, numerous relatives, and perhaps most of all by the man whom she is now about to marry. When I examined the patient last October I came to only one conclusion, and that was that it was a case of solid non-malignant tumour, and I felt my duty clear to take it out. This I did by an eleven inch incision with the greatest of ease, for it was only a solid ovarian tumour without a scrap of adhesion, and with a thin pedicle nearly three inches long. The patient made an immediate recovery, and only waits for the firm cicatrix to enter the state of holy matrimony and reward her lover for a constancy greater than that of Jacob for Rachel. The lessons of this case are, like the former, conclusive that no one can be sure of an abdominal or pelvic diagnosis.

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The mistake made by Sir Spencer Wells in the diagnosis of this case might be made by anyone, but I think there are few surgeons—I am sure there are none of the modern school—who would have refused the poor woman the chances of an exploratory incision, and the great question is now close at hand, Shall we not rise and protest? If it were an isolated case I would not speak so strongly of the subject nor of the person, but it is only one instance of a long series of cases where the same influential surgeon has proved himself deaf to the reasonableness of our doctrine. To use his own words concerning another matter and another person—to wit, myself—it "was a deplorable and disastrous failure. I have seen other cases almost as discreditable." Now, I want to put it seriously to Sir Spencer Wells, Is it not a deplorable and disastrous failure of our great art to occupy six of the best years of a fair young life simply because he will not listen to the voice of a generation coming after him? Is it not discreditable beyond all expression that an obstinate and wilful disregard to the continuous advance of our profession should be the only cause why he spreads such wholesale misery for six years into a wide family circle? Yet that is the language he uses when he fancies he has found one of his brethren tripping.

I would not lay such stress upon this principle of exploration were it not that the whole progress we have attained in the last few years has arisen out of it. It is not merely that its adoption must of necessity confer benefit on individual patients, but no kind of further progress could have been possible without it. It is the basis of our new school, and unless we are prepared to abandon all that we now achieve, we must lay this down as the first rule of our practice. It is a rule which evidently must be, to a large extent, its own destruction, for just as its adoption is freely admitted on the one hand, so must the facility of experience when the diagnosis has been correct tend to diminish the necessity of its application; and, on the other hand, the humiliation of the mistake when the diagnosis has been erroneous or incomplete equally and alike tend to limit the necessity of exploratory incisions, and to reduce them more and more to the performance of operations of confirmation. Here I begin to open out ground that is rather new, and upon which I am very likely to be misunderstood. I shall try to make myself clear even by redundancy of explanation and illustration; but with all that I may say now I know quite well that within a month some one will write a letter to some journal accusing me of saying exactly the opposite of what I have said, and of meaning something quite different. The meaning of an exploratory incision must be perfectly appreciated before I discuss the other. An exploratory incision is one in which, having done your best to make an exact diagnosis, you have honestly to say that you hesitate between two conditions—say, between an ovarian tumour which is pretty solid, and a soft œdematous myoma. The differential diagnosis here is very important, because if you go prepared to do an ovariotomy and find you have to complete a hysterectomy, you may be handicapped by want of efficient preparation or provision of the proper instruments. Besides this, the patient and her friends will, in all probability, have asked you to give an estimate of the risks, and if you have given that estimate on the basis of belief that you are going to deal with an ovarian tumour, and find you have to deal with a uterine myoma, you may have trouble afterwards. You confess, therefore, that you have to make an exploratory incision to clear up the doubt, and then you must be prepared for anything. It is quite certain that as your fingers become wiser, such exploratory incisions will become much fewer. I know that in my own case I do not make one now for eight or ten that I made some years ago. Confirmatory incisions, on the other hand, become more common with me because of the same reason, that the exploratory incisions are fewer, and they are limited to a class of cases where the majority suffer from hopeless disease. You will at once ask me why I should operate on cases of hopeless disease, and that is precisely the point on which I am sure to be misunderstood and misrepresented. Let me give three illustrations of confirmatory operations and the reasons for them and I shall make my meaning clearer; certainly I shall prevent all reasonable men from misrepresenting me.

A patient, aged fifty-three, was sent to me from London with a large abdominal tumour, and an absolute diagnosis was sent with her to the effect that it was a case of ordinary ovarian tumour, which I was to remove. But it was not a case of ordinary ovarian tumour. My own diagnosis was that it was a large mass of cancer of the omentum, and I gave both patient and friends that adverse opinion. They were, of course, greatly disappointed and disposed to doubt the correctness of my opinion, whereupon I at once proposed a confirmatory incision. I explained to them that if they took their patient elsewhere, they could only get a multitude of opinions; whereas by a small opening they could have the matter settled beyond all possibility or shadow of doubt, and that with a mere bagatelle of risk. They at once accepted the proposal, my diagnosis was confirmed, and there was an end of all difficulty or doubt. The patient went home, and died in the course of the disease within two months. If she had been taken to half-a-dozen surgeons she would inevitably have come on one who would blunder, and who would say, "Certainly it is an ovarian tumour and can be removed." He would make an "exploratory" instead of a "confirmatory" incision.

In all cases, therefore, when a conviction is forced upon me that the disease is malignant, I tell the patient so, but at the same time say that all such opinions are liable to error, and that a confirmatory incision is the only and best way to give security. Sanguine patients accept the offer, and they are the majority; and I have to confess to such a percentage of error that I am determined to continue my practice—that is to say, every now and then a case which seems to be cancerous with perfect certainty, is not so, and none could have been discovered to be so without, not a confirmatory, but a corrective incision. A second illustration is the instance where ascitic effusion with a fixed uterus is clearly due to papilloma. Here I always recommend a confirmatory incision, because the evacuation of the fluid with subsequent drainage often cures these cases—cures certainly one-third of them,—and no kind of chemical examination of the fluid, no microscopic investigation of the peritoneal growths, has yet enabled us to determine which cases will prove curable and which malignant. The confirmatory incision becomes here an essential and most valuable method of treatment, and has come to be a matter of course in my practice. The third illustration is perhaps the best, but not the most satisfactory, for the majority of the parties concerned. I was sent for by an eminent practitioner in the country to remove a tumour from a lady which had, a few days before, been pronounced to be an ovarian tumour by a titled metropolitan physician. I was not thought worthy by my metropolitan brother to be admitted to the dignity of having an opinion of my own. "Send for Tait, and have the tumour removed." The fee was paid, and I was sent for. I went prepared. The patient was anæsthetised, and placed on the table, when I examined her for the first time, and finding a tympanic note just below the umbilicus, I was at once satisfied that I had not to deal with an ovarian tumour at all, but with ascitic effusion. As I made my incision I said so, and further said that I was merely making a confirmatory incision to put the matter beyond doubt. The matter was speedily settled, for we found only a few pints of serum, and no tumour. The dropsy turned out afterwards to be due to kidney disease, of which the patient ultimately died. In such a case as this you may, perhaps, ask me—Why did you go on with the operation when you saw that a mistake had been made? My reply is—firstly, because I was sent for to do an operation, an operation had been arranged for and everything was ready; a tremendous commotion would have been the result of my refusal to proceed, the titled physician would have been sent for again, might have persisted in his mistake, a second surgeon would have been sent for who might or might not have acquiesced in the physician's mistake, and very valuable time would have been wasted. The confirmatory incision did no harm, it really rather benefited the patient than otherwise, and it buried in oblivion a ludicrous blunder which ought not to have been made, and the exposure of which could have done no good to anybody. Finally, it taught my colleague a wholesome lesson and made him more than ever my friend. It is, of course, an easy matter to condemn such operations as unnecessary, but I for one am perfectly satisfied that the good gained by them in having a settlement, beyond dispute, of a point in diagnosis which would only be the cause of needless quarrelling and subsequent and unnecessary distress on the part of the patient and friends by far counterbalances any slight risk that may be run.

In my opinion there is no field in which the principle of exploratory operations has proved more beneficial than in

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the numerous cases of ailment from chronic inflammatory disease in the pelvis. Until they were boldly attacked by the hand of the operating surgeon they were the subject of much speculation in the mind of the obstetric physician. What was more unfortunate, the patients were the victims of great waves of disastrous experimental treatment, each of which had its origin in some fashionable but quite mistaken view of their pathology. We can all remember when the uniform treatment for menstrual distress, no matter what its origin, was a wide division of the cervix. After that all pelvic troubles were due to some mysterious displacement, and the mischievous pessary was omnipotent; then came the caustic stick; and, finally, the false notions about pelvic cellulitis introduced the soluble pessary and the hot douche. Now that we can investigate the real nature of the trouble, we know that there exists a vast number of cases of chronic inflammatory disease of the uterine appendages for which there exists no remedy except their destruction. My own special contributions to this department of surgery have constituted me a sort of court of final appeal, and cases of first instance rarely come under my notice, save occasionally in hospital practice; and hospital patients seem so long-suffering, seem to bear their maladies so much as a matter of course, that I hardly ever see even these cases in their early stages. It is not surprising, therefore, that I never see them in their curable stage, a condition spoken of very glibly by men in whose statements generally I confess I have not the slightest confidence, and sometimes I feel disposed to wonder if they ever really do get cured. My experience in the other direction is so great that my scepticism need not surprise anyone. Women come to me from all parts of the globe with these damaged appendages, they give histories of all sorts of treatment, persevered in for months and years, and they give the names of those who have conducted the treatment. I often write to these gentlemen, and, as a rule, I get confident and satisfactory replies from them to the effect that when the patients in question left their hands the cure in each case was complete and undoubted; and I believe that they honestly believe this. The poor patients, however, come to the apparently inevitable treatment by surgical interference, and I find, as a result, that my correspondents have been mistaken about the supposed cure. The pelvic organs of women are singular in this respect, that it is perfectly impossible to apply directly to them the greatest of all remedial agents for any inflammatory damage—rest. You may keep a patient in bed indefinitely, to the great detriment of her general health, with a view of benefiting a chronic inflammation of her uterine appendages, but with every returning menstruation the inflammatory condition is maintained intact. Symptoms are relieved undoubtedly, and the evil day may be deferred; but I am so sure, from a uniform and steadily increasing experience, that a cure is rarely effected, that I look upon cases of alleged cure as cases of initial mistake. I need not say that this explanation is not one which justifies us in rushing into ill-considered surgical interference; but, on the contrary, it constitutes the strongest of all reasons for the more careful examination of our cases at the outset. There can be no doubt whatever that within a very short time there has been a large amount of grave malpraxis upon this point, and a large number of patients have been operated upon who ought never to have been touched. A few years ago I had to pay a professional visit to a town of fair size, not very far removed from the spot where I now am, and where there is a county hospital somewhat famous for its surgical activity. I there met a gentleman for whose many virtues I have much respect, though one virtue, that of surgical enthusiasm, I think he carries to the point of error. To my great delight he professed himself as one of my ardent disciples, and he triumphantly brought out a series of some two dozen bottles containing the results of what he was pleased to call "Tait's operation." As soon as I had him by himself, I informed him in very ardent language that he must never, under any circumstances whatever, attribute to me the awful proceedings involved in the display of these dreadful bottles. They contained sets of uterine appendages in almost every instance free from guile, not such as I should have undertaken to remove save under circumstances so exceptional as to be hardly worth an estimation. As for their being the result of "Tait's operation," I entirely disowned the suggestion. And this brings me to the repetition of views and warnings which I have uttered over and over again, and which, I see clearly, I shall have to go on enunciating for some years to come. The immediate need is growing less and less perhaps, but recurrent outbreaks of objectionable misrepresentation, if not of mistaken practice, are still occurring, and need to be corrected. The so-called "laparotomy epidemic" has probably been stopped in this country at least—I certainly hope it has—for nothing could have been more disastrous in its effects than such a proceeding as I have illustrated. But nothing could be more stupid or discreditable than the persistent misrepresentation to which the real pathology and surgery of the uterine appendages are still occasionally subjected.

[Mr. Tait here alluded to the matter which was discussed by himself and Sir Spencer Wells in our last two issues, and which is further commented on by Mr. Tait in our present number.]

ON THE MORPHOLOGY, CULTIVATION, AND TOXIC PRODUCTS OF THE TUBERCLE BACILLUS.

BY EDGAR M. CROOKSHANK, M.B.

(Abstract of a Communication to the Pathological Society, Feb. 3rd, 1891.)

MORPHOLOGY.

IN 1888, while investigating the transmission of tuberculosis by the milk of tubercular cows, I was led to study the morphology of the bacillus in the manifestations of this disease in different animals.[1] It is well-known that the bacilli in tissue sections of bovine tuberculosis are shorter and less granular than those in human tubercular sputum. On examining milk from tubercular cows my attention was arrested by the appearance of the bacilli in the preparations which I have placed under the microscopes before you. They do not possess the familiar appearance of the bacilli in tissue sections. They are longer and very distinctly granular or beaded, and are thus brought much closer, morphologically, to the bacilli in human sputum. If we take individual bacilli in cow's milk, some are even longer and more regularly beaded than the bacilli in most preparations from a human source. Speaking generally, however, the average length of the human bacilli is greater than the average length of the bacilli in cow's milk, but the longest of the bovine bacilli cannot be distinguished in length from the longest human bacilli. There are, however, exceptional cases, and I would illustrate this by drawing your attention to a particular preparation of pus from human lungs in which the bacilli are remarkable, not only for their thinness, their uniformly beaded character, but more particularly for their extraordinary length. This may be compared with another preparation in which the bacilli, though in human sputum, are much more distinctly rod-shaped, much shorter and thicker, with complete absence of any beaded appearance. In short, neither length nor granularity afford characteristics which are sufficient to denote any specific difference between human and bovine bacilli. Following up the same line of inquiry I have examined minutely the bacilli in tuberculosis of other animals, such as the horse, pig, and cat; and of birds—the fowl, guinea-fowl, pheasant, and ostrich. Here, again, minute morphological differences can be observed. For example, in many cases in fowls the bacilli are conspicuously short and straight. In the liver and lungs of an ostrich, for which I am indebted to Mr. Bland Sutton, I found packets of short rod-forms, while in other parts of the same sections the bacilli attained a greater length than I had at that time observed in any other tubercular specimen. Many of the long sinuous forms exhibited a peculiar terminal enlargement. There were also short rods with a similar appearance, and free ovoid bodies singly and in groups, which, from their connexion with the bacilli, and their sharply defined outline in the free state, are very suggestive of spores. Thus morphological differences are found under different circumstances, and within limits the

[1] Annual Report of the Agricultural Department for the year 1888: Report on Tubercular Mammitis in Cows, with Experiments relating to the Infectivity of the Milk, and Remarks on the Tubercle Bacillus.

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morphology of the tubercle bacillus varies with its environment.

Having succeeded in producing tuberculosis in a calf by inoculation with human sputum, the next step in my investigation was to ascertain the effect of inoculation of calves with a pure cultivation of the tubercle bacillus. I was thus at the same time led to study the morphology of the bacillus under different conditions outside the animal body.[2]

CULTIVATIONS.

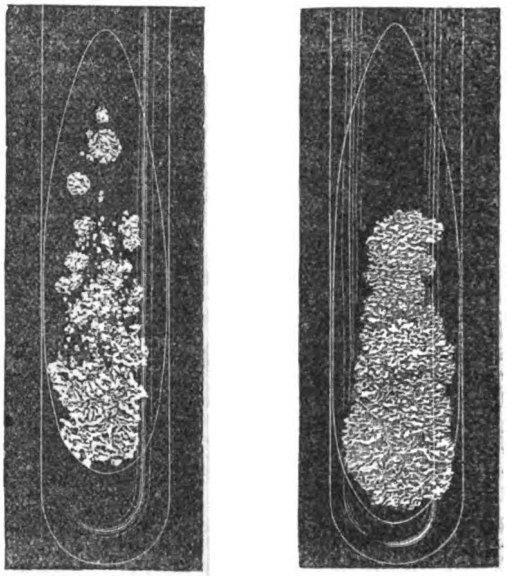
Blood serum. — Koch[3] attempted to cultivate the bacillus on nutrient gelatine, without success, and concluding that it was necessary to employ a high temperature he substituted sterilised blood serum. The blood serum was prepared by an elaborate process involving enormous expenditure of time and labour, and very few were able to verify his researches. In about ten or fifteen days a growth began to appear and minute dry scales were visible to the naked eye. In liquid blood serum a thin film formed on the surface of the liquid, easily broken by agitation. In neutralised broth there was very little indication of success; a triturated culture was added to the broth and a granular, sandy, whitish deposit collected at the bottom of the vessel with indications of an increase in amount. Koch also tried nutrient agar-agar, which did not prove to be at all a favourable medium. Some increase took place, but there was no continuous growth over the inoculated area.

Glycerine agar-agar.—Nocard and Roux[4] were among those who worked at the subject and confirmed Koch's observations. Nocard attempted to get cultures of avian tuberculosis on blood serum to which peptone, salt, and cane sugar had been added. The results were more successful than with ordinary serum. But he encountered a difficulty in the rapid drying of the surface of the medium which rendered the tubes unfit for use. It occurred to Nocard and Roux to obviate this by the addition of a hygroscopic agent, and accordingly they added sterilised glycerine. The result, which far exceeded their expectation, evidently was not solely attributable to the prevention of desiccation. Following up their discovery, and being anxious to find a medium more easily prepared than blood serum, they added 6 to 8 per cent. of glycerine to ordinary nutrient agar-agar. The bacillus grew so abundantly in this mixture that a culture in fifteen days equalled in extent a culture on blood serum which was several weeks old. The bacillus was found to grow abundantly in veal broth to which glycerine had been added in the proportion of 5 per cent., the bottom of the flask being covered in about three weeks with a flocculent deposit having some resemblance to anthrax cultivations in liquid media. In beef broth, chicken broth, and in Cohn's liquid, cultures were obtained after the addition of glycerine.

Confirmation and extension of the results obtained by Nocard and Roux.—Through the kindness of M. Roux I had an opportunity the same year (1888) of examining his cultivations at M. Pasteur's laboratory, and I am also indebted to him for a cultivation from which subcultures have been kept up in my laboratory during the past year to the present time. I have another distinct series of cultures which I shall also show you; cultures up to a ninth subculture, originally obtained direct from human tubercular sputum. I propose first to supplement the statements of Nocard and Roux by a more detailed description of the macroscopical and microscopical appearances of cultivations in different media.

Description of cultivations on glycerine agar-agar.—The cultivations on the sloping surface of obliquely solidified glycerine agar-agar[5] begin to appear in from four to six days as very minute white colonies. These steadily increase in size, and either look moist and smooth, or, even at this early stage, appear dry and crinkled. This early growth can be seen in the tubes of the ninth generation which were inoculated twenty-five days ago. According to the number of bacilli inoculated, the colonies will either remain isolated or coalesce and form a more or less continuous film. If the nutrient agar-agar has only recently been prepared, there is usually a quantity of liquid present, and the bacillus forms a white coating over the inoculated area and beyond it. The appearances are much more characteristic when this medium is, comparatively speaking, dry. A semi-transparent membranous growth develops, thickens, and assumes a characteristic lichenous appearance. Such a culture, examined with a pocket lens, resembles a model in wax in miniature of the folds of the gastric mucous membrane. This appearance is especially well seen in Figs. 1 and 3. In about six weeks to two months the culture has

FIG. 1. FIG. 2.



Fourth subcultures on glycerine agar-agar, nearly ten months old, from human tubercular sputum. Inoculated April 17th, 1890. (From photographs.)[6]

FIG. 3. FIG. 4.

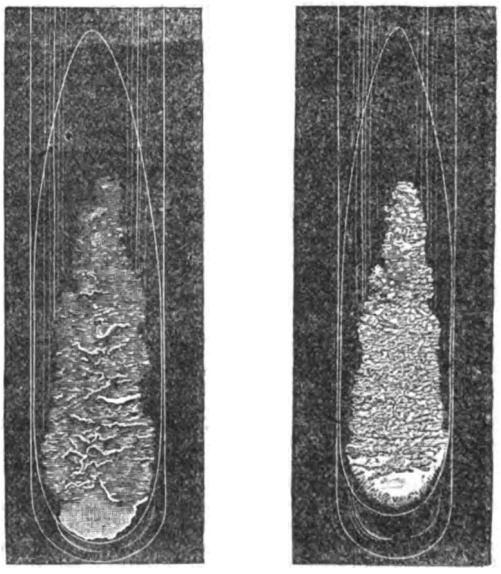


FIG. 3.—Another subculture on glycerine agar-agar of the same age and source as Figs. 1 and 2.
FIG. 4.—Fifth subculture on glycerine agar-agar, more than six months old. Inoculated July 22nd, 1890.

[2] The inoculation of the bacillus in the living animal—in calves, rabbits, guinea pigs, and frogs—must be left for future consideration. But, in order to explain some of the preparations under the microscopes, which are labelled "Tubercle bacilli and Metschnikoff's phagocytes," I may say that I have studied these phenomena by injecting a few minims of a liquid culture of tubercle bacilli into the dorsal lymph sacs of frogs and removing at intervals a drop of the lymph by means of a capillary tube.

[3] Mittheilungen aus dem Kaiserlichen Gesundheitsamt, 1884.

[4] Annales de l'Institut Pasteur, 1887: "Sur la Culture du Bacille de la Tuberculose."

[5] The nutrient agar-agar is prepared in the ordinary way, and by preference I add the glycerine in the proportion of 5 per cent.

[6] Fig. 1 has been already published in my Manual of Bacteriology, third edition

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fully developed. In old cultures, especially when the individual colonies remain isolated, the appearance is very characteristic (Fig. 7, A and B.) Some cultures in appearance closely resemble cultivations on blood serum. The consistency of the growth depends upon the character of the soil and the age of the culture. If the medium be moist the growth is moist and viscous, but more often it is distinctly tallowy, and in old and dry cultures scaly and friable.

Cultivations in glycerine broth.—From subcultures on glycerine agar-agar I have obtained luxuriant growths in glycerine broth. In a few days minute flakes are visible.

FIG. 5.

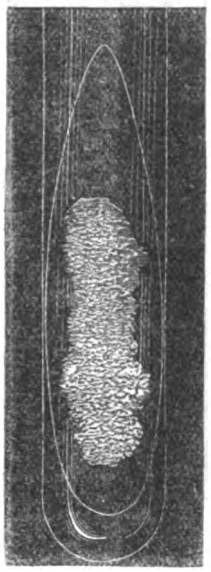


FIG. 6.

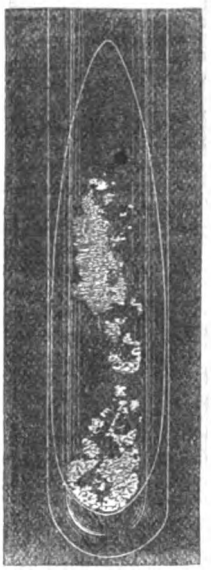
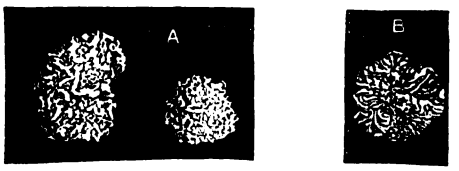


FIG. 5.—Sixth subculture from the same source, more than three months old. Inoculated October 15th, 1890. (From photographs.)

FIG. 6.—Eighth subculture, nearly two months old. Inoculated December 8th, 1890. (From photographs.)

They rapidly increase in size, and form in four or five weeks a copious deposit at the bottom of the flask. When shaken the flocculent deposit rises in stringy masses, and this appearance is quite characteristic (very marked in the glycerine broth cultures prepared Nov. 11th and 28th). The liquid in the flask remains clear. Turbidity is a sign of contamination. If the cultures are left absolutely undisturbed for two or three weeks the whole of the surface of the liquid is covered by a delicate greyish-white veil, easily broken up

FIG. 7.



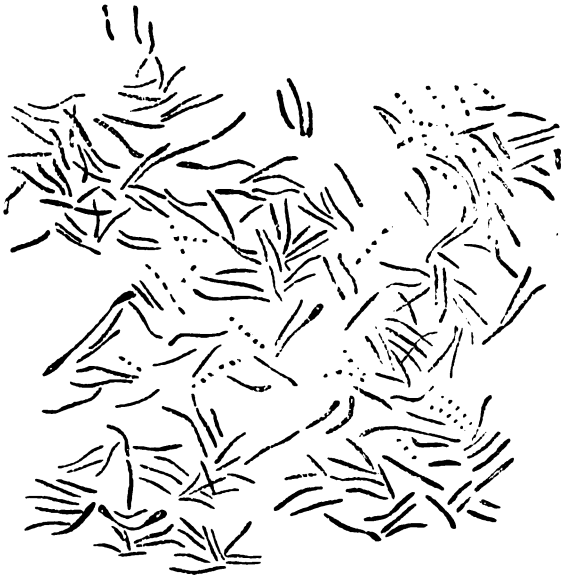
A, Isolated colonies on glycerine agar-agar after nearly ten months' growth. Subculture from human sputum (fourth subculture). B, Isolated colony after seven months' growth.[7] (From photographs.)

by gentle agitation, and forming flakes which gradually sink in the liquid. If undisturbed for several weeks this film increases in thickness, is irregularly fissured, and has more the appearance of masses of tallow floating on the surface. The growth also may be seen to extend up the side of the flask above the liquid. Pasteur or Erlenmeyer flasks can be employed for these cultures. I prefer the former. Solidified egg-albumin added to the glycerine broth seemed to increase the amount of growth which clings to the albumin and waves to and fro in the liquid when the flask is gently shaken. I have also confirmed the observation of Nocard and Roux that subcultures from glycerine agar-agar or from glycerine broth will give cultures in ordinary broth without glycerine. Ordinary broth with egg-albumin and without glycerine will also give a good growth when inoculated from previous subcultures, although the attempt to produce primary cultures in these media has hitherto failed.

Cultivations in glycerine, milk, and other media.—In milk I find there is only a slight increase in the number of bacilli inoculated, but milk with glycerine in the proportion of 5 per cent. forms a more favourable medium. I have also attempted to cultivate the bacillus on sterilised urine and glycerine, and ordinary nutrient gelatine with 5 per cent. of glycerine.

Examination of cultivations.—To examine the bacilli in these various preparations I prefer to use Neelsen's method, floating the cover-glasses for from five to ten minutes on warm carbolised fuchsine and passing them through diluted sulphuric acid. In some cultures the bacilli are shorter and thicker than is commonly observed in human sputum, and they are for the most part without the beaded appearance. In old cultures on glycerine agar-agar the number of granular or beaded bacilli increases, and there are also a number of peculiar forms. These are long bacilli, in some cases two or three times the length of an ordinary bacillus, provided with a club-shaped enlargement at one or both extremities (Fig. 8). I regard these as corresponding with

FIG. 8.



Cover-glass preparation stained with carbolised fuchsine and treated with sulphuric acid, from a cultivation on glycerine agar-agar. × 1200. (Powell and Lealand $\frac{1}{4}$ apochrom., o.i. E.P. 10 lamplight illum., edge of flame.)

the so-called involution forms, and they are no doubt identical with the bacilli with swollen extremities observed by Nocard and Roux.

In milk the appearance is very striking, many bacilli attaining in old cultures a great length, and all are more uniformly beaded than in any other cultivations (Fig. 9). Staining preparations by the method of Gram in all cases exaggerates this appearance. The important part played by the environment is shown by the morphological differences observed in artificial cultivation under varying conditions, and by the fact that by successive cultivation the bacillus can be educated to grow upon a medium which is unsuitable for obtaining primary cultures.

Microscopical preparations of the bacilli from these various cultures, and the cultures themselves, I will demonstrate to you.[8]

Impression preparations of the growth of the bacillus on the surface of glycerine agar-agar in capsules, show a

[7] The photograph (B) was from a very characteristic culture inoculated by Sir Hugh Beevor from my Paris series.

[8] The paper was illustrated by numerous microscopical preparations and the various cultivations described, and by photographs projected by the oxyhydrogen lantern.

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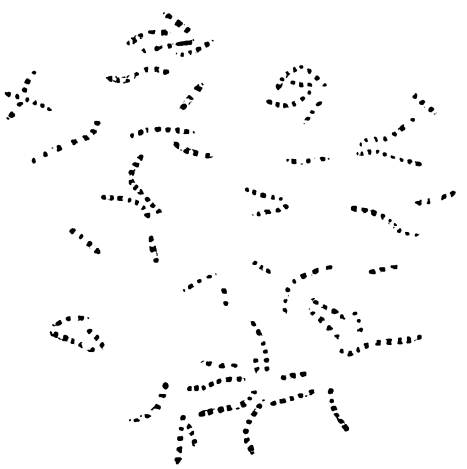
tendency to the formation of serpentine colonies, composed of bundles of more or less parallel bacilli.

TOXIC PRODUCTS.

In August last Koch[9] announced that after failing with ethereal oils, and with metallic substances such as compounds of cyanogen and gold, to check tuberculosis in animals, he had hit upon a substance which prevented the growth of bacilli, not only in tube cultivations, but in the body of an animal. On Nov. 14th Koch[10] published a further communication describing the effects upon lupus and other tuberculous processes. It had occurred to me as possible that Koch had been working on the same lines as Wooldridge, Hankin, and Martin. On the other hand, it was equally possible that Koch's researches were in an entirely new field. I was therefore stimulated to investigate the products of the tubercle bacillus in glycerine broth cultures, as in any case the results could not fail to be of interest. I prepared glycerine broth cultures in bulk, and having by Dec. 5th obtained abundant growths of the bacillus, I separated the bacilli from the liquid cultures by filtration. Before, however, describing and demonstrating the methods and the apparatus which I employed and the results which followed, I will venture to remind you in a brief historical sketch of the work which had previously been done in this field of physiological and pathological chemistry.[11]

FIG. 9.



Cover-glass preparation of a cultivation in glycerine milk stained by Neelsen's method (carbolised fuchsine and sulphuric acid). × 1200.

Ptomaines, toxines, and albumoses.—In 1822 Gaspard and Stick found an intensely poisonous principle in cadaverous extracts. In 1856 Panum discovered a poisonous substance in putrid material, and in 1863 Bergmann and Smiedeberg found a nitrogenous crystallisable substance in putrid beer which they named *sepsin*. Zuelzer and Sonnenschein isolated a venomous nitrogenous body from putrid meat. In 1872 Gautier found that the decomposition of fibrine lead to the formation of various complex alkaloidal substances, and in 1875 Dr. B. W. Richardson[12] obtained in pyæmia an alkaloid, *septine*. This subject, however, received most attention from the classical researches of Selmi, the Italian toxicologist. Selmi, in a celebrated poisoning case, demonstrated the presence of an alkaloid as the result of post-mortem changes. Similar substances were found in alcohol in which morbid specimens had been preserved. Thus the researches of Gautier and Selmi established the fact that albuminoid material undergoing decomposition leads to the formation of cadaveric alkaloids. These animal alkaloids Selmi named *ptomaines*. To several investigators, but to Nencki and Brieger particularly, we owe the additional knowledge we have obtained of these poisonous animal substances. Brieger, finding the bases derived from the products of putrefaction less poisonous than those obtained from the pathogenic bacteria, suggested the term *toxines* for the latter. Ptomaines have been divided into two classes—those which are non-oxygenous and are liquid and volatile, and those which are oxygenous, solid, and crystallisable. They are for the most part precipitated by the ordinary reagents for alkaloids such as chloride of gold, double iodides of mercury and potassium, picric acid, and tannin. Phospho-molybdic acid precipitates them without exception. They are powerful reducing agents. Ferricyanide of potassium is converted into ferro-cyanide in their presence, and the addition of ferric chloride gives the Prussian blue test. Selmi discovered this test, and Brouardel and Boutmy regarded it as absolutely characteristic of ptomaines; but this is not the case. Some vegetable alkaloids, for example, behave in the same way.

As examples of the ptomaines already investigated, I may refer to *parvoline*, from putrid mackerel and horseflesh, an oily base of an amber colour; *hydro-collidine*, from the same source, and compared by Gautier in its toxic effects to the venom of the cobra di capello; *collidine*, from putrid gelatine and pancreas of a bullock; *neuridine*, from flesh, fish, and decaying cheese; *cadaverine*, from putrefaction and from herring brine; *putrescine*, from the same sources. These are non-oxygenous.

As examples of oxygenous alkaloids there are *neurine* in cadaveric putrefaction, *choline* in bile, *muscarine* in a poisonous mushroom and putrid fish, *gadinine* in putrefying cod-fish. Poisonous alkaloids are of great importance in connexion with those cases of meat poisoning produced by sausages, hams, and poultry. Tyrotoxicon is an alkaloid obtained from cheese. But the poisonous substances of most interest to the bacteriologist are those isolated from pure cultivations of pathogenic bacteria, such as cadaverine and putrescine, isolated by Brieger from cultivations of Koch's comma bacillus; typhotoxine and tetanine, and poisons which are not alkaloids—the *albumoses* or *tox-albumins*—poisonous substances allied to the albumose of snake poison. Pasteur[13] suggested that in antirabic inoculations the immunity resulted from the action of a substance secreted by a hitherto undiscovered microbe. Salmon[14] produced immunity from hog cholera by the injection of the filtered culture fluids. Charrin,[15] and later Woodhead and Wood[16] and Blagovestchensky,[17] worked with bacillus pyocyaneus. Roux and Chamberland[18] performed similar experiments with the bacillus of malignant œdema; Roux[19] with symptomatic anthrax; Chantemesse and Widal[19] with the typhoid bacillus. Roux and Yersin[19] worked on the same lines with diphtheria, and Brieger and Fraenkel[20] obtained a tox-albumin from their cultivations. Anrep[21] found an albumose in the medulla of rabid animals, and Babès[22] claims to have found an albumose in both rabies and glanders. It is not, however, too much to claim for our own countrymen priority in the scientific investigation of the poisons of pathogenic bacteria.

Wooldridge's researches.—In 1887 Wooldridge[23] succeeded in protecting rabbits from anthrax by a new method. A proteid body obtained from the testis and from the thymus gland was used as the culture fluid. This proteid substance was dissolved in dilute alkali and the solution sterilised by repeated boiling. This was inoculated with the anthrax bacillus and kept at 37° C. for two or three days. A small quantity of the filtered culture fluid injected into the circulation in rabbits produced immunity from anthrax. Subcutaneous inoculation of extremely virulent anthrax blood made at the time of the injection of the protecting fluid and subsequent inoculation remained without effect, and Wooldridge concluded that the growth of the anthrax bacillus in special culture fluids gave rise to a substance which when injected into the organism protected against an immediate and subsequent attacks.

Hankin's researches.—In 1889 Hankin[24] worked under the guidance of Professor Koch in the Hygienic Institute of Berlin. The acquired tolerance of the effect of ordinary albumoses and the experiments of Sewall,[25] who produced

[9] An Address on Bacteriological Research: International Medical Congress, August, 1890.

[10] A Further Communication on a Remedy for Tuberculosis: Deutsche Med. Woch., Nov. 14th, 1890.

[11] I would refer the reader interested in this subject to Animal Alkaloids or Ptomaines and Leucomaines, A. M. Brown; Ueber Ptomaine, Brieger; Chemical Physiology and Pathology, Halliburton.

[12] THE LANCET, April, 1875.

[13] Comptes Rendus, tome ci., p. 700, 1885.

[14] Americ. Vet. Rev., 1886; Reports, Agricultural Department, U.S., 1887.

[15] La Maladie Pyocyanique, 1889.

[16] THE LANCET, 1890.

[17] Annales de l'Institut Pasteur, 1890.

[18] Ibid., 1887 and 1888.

[19] Ibid., 1888.

[20] Berliner Klin. Woch., 1890.

[21] Vrach, quoted by Brit. Med. Journal, 1889.

[22] Quoted by Hankin, Brit. Med. Jour., July, 1890.

[23] Transactions of the Royal Society, xxii., p. 312, received April 16th, 1887. Archiv für Anatomie und Physiolog., 1888.

[24] Brit. Med. Journal, Oct. 12th, 1889, and July 12th, 1890.

[25] Journal of Physiology, 1887.

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immunity against lethal doses of the albumose of snake poison by the injection of minute doses, led Hankin to expect that if an albumose developed in anthrax cultures such anthrax albumose would probably confer immunity from the disease. Such an albumose Hankin succeeded in isolating from culture fluids. It was precipitated by addition of excess of absolute alcohol, well washed in alcohol to free it from ptomaines, filtered, dried, then redissolved and filtered through a Chamberland filter. With this albumose Hankin succeeded in producing immunity in mice and rabbits.

Martin's researches.—Sidney Martin,[26] working quite independently, grew the anthrax bacilli in a solution of pure alkali albumin made from serum proteids. After ten or fifteen days the organisms were removed by filtration in a Chamberland filter. The filtrate contained *proto-albumose* and *deutero-albumose*, a trace of *peptone*, an *alkaloid*, and small quantities of *leucin* and *tyrosin*. The mixture of albumoses proved poisonous to mice. The anthrax alkaloid produced symptoms and lesions similar to the albumoses, but much more rapidly and severely. Martin concluded that the anthrax bacillus in digesting the alkali albumin formed albumoses and an alkaloid. And he suggested that the alkalinity of the albumoses explained their toxic properties, the alkaloid probably being in a nascent condition in the albumose molecule.

Toxic products of glycerine-cultures of the tubercle bacillus.—I will now proceed to describe my own experiments. Having obtained by December 5th several batches of cultures in glycerine broth, the next step was the separation of the bacilli by filtration. I employed for this purpose a simple apparatus constructed for me by Becker. It consists of an exhausting apparatus in which the bell-glass is cylindrical in form. The mouth of the cylinder is plugged with a perforated indiarubber stopper, which tightly grips a porous pot of white porcelain. To prevent putrefaction during the process of filtration I add 5 per cent. solution of carbolic acid in the proportion of 1 per cent. The filtrate is perfectly transparent, alkaline in reaction, and yellowish-brown in colour. As it was probable that any toxic substances were present in very minute quantity, I evaporated down the filtrate in a vacuum over sulphuric acid and at a low temperature. This proved to be a very tedious process, and occupied from Dec. 8th to Jan. 12th. In the meanwhile I prepared additional filtrates in the way I have already described. On Jan. 12th the filtrate was reduced to a brownish viscous residue consisting principally of the glycerine from the original culture fluid. I diluted this viscous residue with ten minims of sterilised water and injected two minims subcutaneously in a guinea-pig. There was no doubt that I was in possession of a very toxic substance. The effect was almost immediate. The temperature began rapidly to fall, the coat was erect, and the heart's action extremely irregular. This was followed by irregular muscular spasms. There was loss of control over the extremities, and death ensued. The temperature before injection was 99·½°; at 1 P.M., 93°; 2 P.M., 94°; 3 P.M., 93·½°; 4 P.M., 92°. In a lethal dose in the healthy animal this toxic extract is therefore a powerful hypothermic agent.[27]

The separation and effects on animals of pure materials will be the subject of a joint paper with my friend, Mr. Herroun, and I will therefore only briefly refer to the tests applied to the culture filtrate. Phospho-tungstic acid gives a copious white precipitate. Potassic bismuthic iodide a distinct orange-yellow. Potassic ferri-cyanide gives after standing a few minutes a beautiful blue (Prussian blue test) on addition of ferric chloride. Iodine in potassic iodide solution gives a precipitate after standing for an hour; more marked after twenty-four hours. The precipitate examined microscopically is composed of boat-shaped and acicular crystals; examined after some hours the crystals are in varied forms of a highly characteristic appearance. There is also under other conditions an amorphous precipitate. Phospho-molybdic acid gives a yellowish precipitate, and a blue colour on the addition of ammonia, which disappears on boiling.

The tubercle bacillus probably produces from proteid substances a complex proteid poison in which, as in anthrax, the alkaloid of tubercle, or *tuberculine*, is in a nascent condition. According to different stages of cultivation, we should therefore expect to find either a complex proteid substance of the nature of an albumose or this complex substance together with free ptomaine, or the ptomaine alone; the ptomaine being a later product of the splitting up of the proteid substances.

Glycerine infusion of tubercular tissue—I have also pursued another line of inquiry. I obtained on Dec. 10th masses of tubercular glands from the lungs of a cow suffering from *Perlsucht*. The lungs had been sent to the Royal Veterinary College for examination. These masses of tubercular new growth were cut up, rinsed in distilled water, finely minced, left in ice overnight; the turbid extract obtained by squeezing through a cloth was finally filtered through porcelain. A perfectly clear amber-coloured fluid was obtained. I must defer a detailed account of the experiments with this infusion; but one result of interest, proving that the virus of tubercle is particulate, is that guinea-pigs inoculated with the infusion before filtration contracted tuberculosis; guinea-pigs inoculated with the clear filtrate remained free from tubercle. To ascertain whether there is protection given in the latter cases they have since been inoculated with fresh tubercle, and the result remains to be seen. More recently I have prepared a similar filtrate by another method. Masses of tubercular glands from another case of *Perlsucht*, amounting in weight to about 5 lb., were cut up, finely minced, mixed with 4 oz. of glycerine, and left in ice overnight; 15 oz. of a turbid infusion were obtained. Solution of phenol (5 per cent.) was added in the proportion of 1 in 10. This was filtered through porcelain, and a clear yellowish filtrate obtained. This filtrate gives similar chemical reactions to artificial cultures of the bacillus.[28]

Koch has not yet published the details of the effects of his liquid upon animals when administered in non-lethal and lethal doses; and we await with patience his account of the chemical and physiological properties, and the exact mode of preparation and the regulation of the dose. But it is not undesirable at this time to take an opportunity of pointing out the toxic effects of the concentrated extract of cultures in glycerine broth as a precaution to any who might be disposed, without exhaustive experiments on animals, to make the details I have given in this purely pathological investigation the basis for the preparation of material intended for injection into the human subject.

[26] Nature, May 29th, 1890, p. 118.

[27] Three days afterwards (Jan. 15th) Koch announced that the substance used in his anti-tubercular treatment was a "glycerine extract of pure cultivations of the tubercle bacillus."—Deutsch. Med. Woch., Jan. 15th, 1891.

[28] The following are the results obtained when the same reagents are added to the liquid supplied by Koch:—Alcohol added in excess produces a turbidity, phospho-tungstic acid a white precipitate, potassic bismuthic iodide slight orange precipitate. Potassic ferri-cyanide, after standing a few minutes, gives the Prussian blue test on the addition of ferric chloride. Iodine in iodide of potassium gives after standing an amorphous precipitate. Phospho-molybdic acid gives a yellow precipitate; blue colour on addition of ammonia, which disappears on boiling.

ON SOME FORMS OF ABDOMINAL ABSCESS.

BY G. A. WRIGHT, B.A. OXON., F.R.C.S.,
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ABSCESSES may form in many positions in the abdominal walls or cavity, and may be produced by a variety of causes. They may, in the first place, be intra-peritoneal or extra-peritoneal; the latter may be parietal or visceral. Of visceral extra-peritoneal abscess—i.e., abscess in the substance of the liver, spleen, kidneys, pancreas, &c., I do not propose to treat, nor shall I further allude in the present paper to abscesses connected with the female genital organs. Abscess in the anterior abdominal wall, inter-muscular or subcutaneous, though often met with and sometimes puzzling in origin, is a less obscure subject than that of the deeper forms of suppuration, and may for the present also be set aside. The cases I wish to bring forward now are certain of those in which suppuration occurs either in the structures immediately outside the peritoneum, whether pro-peritoneal or retro-peritoneal, and those in which there is localised intra-peritoneal abscess. Many extra-peritoneal abscesses are due to visceral lesions—i.e., are peri-visceral—such are peri-nephritic suppurations, &c; others are due to bone or joint lesions—spinal disease, sacro-iliac disease, and so on. A few arise from the tracking downwards of empyemata or other intra-thoracic collections of pus;

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some are obviously traumatic. But after excluding all these, there is still a large residuum that requires consideration; that receives very scant, if any, notice from most writers, and that ought to be, I believe, recognised as due to inflammation of lymphatic glands. Part of the object of this paper is to illustrate this proposition.

Intraperitoneal abscesses are usually due to visceral lesions in which the mischief has spread to some part of the surface of the affected organ that is covered with peritoneum. Others result from a primary peritoneal lesion; such are some of the tubercular abscesses. Others are obscure in origin—for example, subphrenic abscess. Others, again—primarily extra-peritoneal (parietal)—reach the peritoneum by direct extension. Diffuse suppurative peritonitis is no doubt most frequently due to the escape of certain irritating material into the peritoneal cavity. Such a condition is seen when one of the hollow viscera becomes perforated and its contents leak into the general peritoneal sac. Occasionally, of course, diffuse purulent peritonitis arises from other causes. Local peritoneal abscess has frequently a similar origin to that given in the case of the more widely spread suppuration; thus we constantly see it occurring as a result of appendicular inflammation. Subphrenic abscess and some of the local tubercular abscesses are instances of other forms. Why in some cases the suppuration is diffuse and in others strictly localised is at times difficult to explain. Usually it is a question of time, of the acuteness of the process; it takes time to form a firm barrier of adhesions around the irritating material. Sometimes apparently the feeble condition of the patient, sometimes what might be called the "indolence" of the peritoneum, its lack of reaction to irritation, is the reason of a failure to localise the mischief. In considering the subject of abdominal abscess it must of course be remembered that any form of localised suppuration may by extension affect other parts or become diffuse.

The following cases illustrate several of the varieties of abdominal abscess, and I have in most of the cases given my own view of the origin of the mischief, though it is often quite impossible to be sure, without wholly unjustifiable manipulations, whether the case is one really of extra-peritoneal abscess or of localised peritoneal suppuration. Some of these abscesses disappear without operation and without discharging externally; probably most of those that recover without operation burst into some adjacent part of the bowel or other viscus, and are thus emptied. In other instances they no doubt dry up. My own opinion is that they should be opened and drained as soon as they are recognised. So far as I have seen the great majority do well, and it is certainly more reasonable to treat them in that way than to wait for the chance of any other mode of cure. I have, however, inserted the notes of two cases which were allowed to subside spontaneously. I recognise of course that many of the cases of so-called typhlitis get well by resolution, but more die for want of an incision than fall by the surgeon's knife.

I have said that I believe many of these abscesses are glandular in origin. I do so because we know how readily lymphatic glands become inflamed and suppurate, especially in the young, in whom these abscesses are common, and because it is often possible to find some sources of irritation in connexion with the intestines or other parts, comparable to those which we see causing glandular abscesses in other more accessible regions of the body. I was not fully alive to the probability of this explanation of my earlier cases, and so no doubt in many of them overlooked the primary source of irritation.

CASE 1. *Right iliac abscess, probably glandular, possibly appendicular.*—John H——, aged nine, was admitted on May 19th, 1887. A doubtful family history as to tuberculosis. Ten days ago, while walking, he was seized with sudden pain in the right groin. Four days later a swelling appeared. He continued to limp about. There was constipation, with loss of appetite. On his admission to the Children's Hospital an abscess was found in the right iliac fossa, lying above the outer half of Poupart's ligament. The boy's legs were drawn up, but there was no general abdominal pain and no bulging in the loin. The abscess was opened and found to contain thick offensive pus. No cause for the abscess was found on exploring the cavity. The wound speedily healed up, and he was discharged on June 9th. In this case there is little clue to the source of the mischief; it may have been an "appendicular abscess," and from the character of the pus probably lay adjacent to the bowel, though not in direct communication with it. If not due to irritation of the appendix, it should, and as I think with more probability, be classed with the glandular abscesses.

CASE 2. *Right ilio-pelvic abscess (glandular).*—A male, aged one year and one month. Previously a healthy child. Three weeks before admission it "lifted its leg and cried." It was then found that the leg could not be straightened. Sixteen days later some swelling appeared. No cause for the mischief could be found. On admission (June, 1881), a large abscess was found pointing above Poupart's ligament on the right side. The abscess was opened, and five ounces of inoffensive pus were discharged. A probe passed into the opening went downwards and backwards into the pelvis. Extension was applied to the right leg, and in a little over three weeks the abscess was healed. There was a tuberculous family history, but there was apparently no disease of any bone or joint.

CASE 3. *Abscess of lumbar glands; psoitis (?)*—A boy five and a half years old. Four days before admission (April, 1882) he began to stoop in walking, and two days later complained of pain in both hips; the left thigh became drawn up, and he had pain and cried in his sleep. On admission, he lay on his left side, with both knees flexed. Movement of the right limb was unrestrained and painless; the left thigh was kept semi-flexed and somewhat abducted, and passive movement was resisted. There was great tenderness, with some heat around the left hip; no swelling anywhere. Extension was applied to the left leg, which soon became straight; the pain was also relieved. Twenty-six days after his admission an abscess suddenly appeared below the anterior superior spine of the ilium; this was opened, and a drainage-tube, eight inches long, passed readily upwards from the opening. Fifteen weeks after admission he was discharged well, there being little or no limitation of movement of the leg. This possibly may have been one of the cases described as simple psoitis, and the length and direction of the abscess cavity may be urged in support of this view. I, however, think it was more likely due to glandular inflammation.

CASE 4. *Pelvic glandular abscess.*—A boy of three years and a half had an abscess above Poupart's ligament on the left side. His illness was of fourteen days' standing, and came on without known cause. The symptoms were much as in the last case. On opening the abscess it was found to extend into the pelvis, and a tube passed into it could be readily felt through the wall of the rectum. The child was well in eighteen days. He had a tubercular family history, and phimosis, with much retained smegma. Though the superficial penile lymphatics go primarily to the inguinal glands, it must be remembered that these drain into the iliac glands, and that we often see abscess, not of the nearest glands, but of those more remote from the source of irritation.

CASE 5. *Lumbar abscess (glandular) from irritation of ascarides.*—A boy of five years and eleven months old. Five weeks before admission he complained of pain in the left side on moving or breathing deeply. A fortnight later there was swelling in the left loin. He had passed ascarides. On admission, there was an abscess reaching from the last rib nearly to the iliac crest, and there was dulness nearly to the angle of the scapula. The urine contained a good deal of mucus and much albumen. The abscess was opened; no cause for it was found. A week later all albumen disappeared from the urine. A month later the wound was almost healed and quite superficial, and all that remained was a little dulness at the left base. It will be remembered that the lymphatics of the colon and rectum drain to the lumbar and not to the mesenteric glands.

CASE 6.—*Abscess discharging into the bowel.*—A male, aged two years and five months. He had scarlet fever seven months before his admission in April, 1883, and has never been well since. There has been pain in the abdomen for five weeks. On admission, there was a large abscess on the left side of the abdomen, reaching past the middle line and up to the margin of the ribs. There was considerable swelling of the left thigh, with rigidity and flexion. The swelling subsided, and nine days later about an ounce of pus was discharged in the motions, and a day or two after there was no sign of the abscess.

CASE 7. *Left iliac abscess, cause obscure.*—Wm. Thomas W——, aged six, was admitted into the Children's Hospital on July 29th, 1890. He had always been a delicate child, though his family history was good. Three weeks before admission he complained of pain in the left side of the

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abdomen, and was noticed to limp in his walking. Urine and bowels have been apparently natural; no worms have ever been seen in his motions. He never had an attack like the present one before. He was found to be in poor general condition, and in the left iliac fossa was an abscess. The hip-joint, spine, and sacro-iliac joints showed nothing abnormal. He was a little feverish; the bowels were regular. The abscess was opened the same day by an incision an inch and a half internal to the left anterior superior spine of the ilium. A small quantity of pus escaped. The cavity lay within the venter of the ilium, and no bare bone or other cause for it was found. He got well, though somewhat slowly, being discharged on September 13th.

CASE 8. *Left iliac abscess, glandular; worms* —Wm. T——, aged three, was admitted on July 25th, 1890. He had a tuberculous family history, but was personally healthy, except for an attack of bronchitis. Three weeks before admission he had pain in the left iliac fossa. His urine was noticed to be thick and white on standing, and his stools contained worms. When admitted there were fulness and fluctuation in the left iliac fossa. The left leg was flexed, and great pain was caused by attempts to extend it. There was no evidence of any joint lesion. Urine phosphatic; stools natural; no pus. Under treatment by rest in bed all the symptoms subsided, and he was discharged well on Aug. 26th. No pus was ever seen in his motions.

CASE 9. *Abscess around urachus.*—A boy two years and two months old was admitted in July, 1883. Ten days before admission he had pain in passing his urine; this continued until his admission, when he complained of pain about the lower ribs and front of the abdomen, and it was found that he had only a pin-hole orifice to his prepuce. A catheter drew off about an ounce of urine from the bladder. On examination per rectum and externally, a swelling the size of a Tangerine orange was found apparently in the anterior wall of the bladder. The swelling was firm and passed down beneath the upper border of the pubes; it reached upwards to the umbilicus in the form of a pyramid with an enlargement at the apex which corresponded with the umbilicus in position. There was a soft area midway between the umbilicus and pubes, and on pressing this a little more urine flowed from the catheter. The child was circumcised, and a few days later the swelling was opened in the middle line close to the umbilicus and about two ounces of pus escaped. On exploration the cavity of the abscess led down to the bladder, and its walls seemed to be continuous with those of the bladder. The child was discharged well a month later. Probably an imperfectly obliterated urachus became distended with urine by back pressure caused by the obstruction of the phimosis, and an abscess resulted.

CASE 10. *Subphrenic abscess.*—Wm. S——, aged twenty-seven, was admitted to the infirmary on March 8th, 1889; died March 24th, 1889. He was a healthy man, and worked as a labourer in a blast furnace until the day before admission. On March 7th he had unusually heavy work, and drank a great deal of cold water. He first noticed shooting and striking pains in the abdomen while at work. He was sent home and put to bed, but early on the morning of the 8th he was seized with severe pain in the right hypochondriac and lumbar regions. The pain got worse and he was sent to the Royal Infirmary. On admission, he was found to be very ill, in great pain, his face pinched and anxious, and he was collapsed. He remained very ill, but with no material alteration in his condition, up to the 23rd, when he had a rigor, followed by vomiting, and died the next day. At the necropsy a large abscess cavity was found in the subphrenic region, its walls being formed by the left lung, liver, spleen, stomach, intestines, and posterior abdominal wall. The diaphragm was perforated, and there was a cavity in the base of the left lung and double basal pneumonia, with pleurisy and local peritonitis. On referring to the post-mortem records of the Royal Infirmary on the medical side from March, 1886, up to date, and on the surgical side from July, 1882, up to date, I find only one other case—a patient of Dr. Ross—in which the abscess was apparently tubercular and associated with a peri-typhlitic abscess. There have been, however, Dr. Reynolds tells me, two or three other cases of subphrenic abscess in the infirmary in the last four or five years—all, with one exception, fatal.

CASE 11. *Local peritoneal abscess; appendicular peritonitis* — Ebenezer W——, aged thirty-five, was sent to me at the Royal Infirmary by Dr. Stallard on Aug. 16th, 1887. He had suffered from pain about the umbilicus with irregularity of the bowels for five years, but had never been very ill. In February, 1887, he had pain in the right side; indeed, it seems that for some months before this he had occasional shooting pains in the side at night. His bowels were confined, and the pain increased in March and April, and prevented his working. There was tenderness on pressure in the right iliac fossa in May and June. In July he was in bed for a month; there was some hardness in the groin with flexion of the thigh on the abdomen, and a relaxed condition of the bowels. He got worse up to the time of admission. On his arrival at the infirmary I saw him, and opened an abscess in the right iliac fossa. A second incision was made later. The wound was healed in eight weeks, and he has remained quite well since, except that the side "does not feel so strong as it did before." His bowels are now regular.

This and the following three cases illustrate well the different courses taken by the inflammation in cases of appendicular peritonitis. They may be compared with the preceding cases, and also illustrate the value of operative treatment.

(To be concluded.)

THE TREATMENT OF ACUTE LOBAR PNEUMONIA;

FROM AN ANALYSIS OF A THOUSAND CASES TREATED AT THE LONDON HOSPITAL BETWEEN THE YEARS 1880–1890.

BY W. SOLTAU FENWICK, M.D., B.S. LOND., &c.

(Concluded from page 249.)

B. *The cold pack.*—In 26 cases of the entire number an attempt was made to control the temperature by repeated applications of the cold wet pack, the antipyretic properties of the method being sometimes increased by the inclusion of pieces of ice among the folds of the sheet. The results are shown in the following way:—In 8 cases the average temperature varied between 103°–104° F., with one death. In 17 cases the average temperature ranged between 104°–105°, with 3 deaths. In 1 case the average temperature exceeded 105°. The medicinal treatment of these cases chiefly consisted in the administration of some preparation of ammonia, stimulants being given in 21 cases. When compared with the other antipyretic methods at our command, it must be admitted that the wet pack is certainly of inferior value; for we seldom find that the actual reduction of temperature entailed by its use amounts to more than half a degree. But, on the other hand, the method possesses certain special properties which render it of great practical value. Not only does it always prove agreeable to the patient, but it also tends to soothe that form of mental irritability which is often so marked a feature in cases of acute pneumonia; and it is constantly found that a patient who has experienced no rest for several days will fall into a refreshing sleep soon after he has been enveloped in his first pack. In addition to this, the wet pack is sometimes of use in limiting the muscular movement in those cases where violent delirium is a prominent feature, and thus preventing to a certain extent the unnecessary exhaustion which would otherwise ensue. It is for these reasons that the wet pack, although in itself but of limited utility, proves itself of such value when used as an adjunct to the more powerful measures subserving temperature reduction.

C. *Sponging* —Although the use of the tepid bath in cases of acute pneumonia seems to have met with considerable success at the hands of many German physicians, it has never yet become a favourite remedy with practitioners in this country, and we accordingly find that the most popular method consists in the systematic sponging over of the body with tepid water.[1] The reduction of temperature that can be attained by this procedure necessarily varies in different cases; but it may be stated as a general rule that by energetic sponging the temperature in a case of acute pneumonia may be reduced about two degrees, and

[1] It is the custom at the London Hospital to employ water at the temperature of about 116° F., this degree of warmth being not only more grateful to the patient, but actually more efficient in effecting a reduction of temperature.

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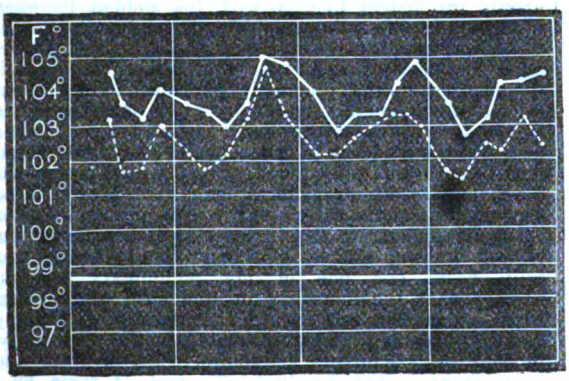
that within one hour the mercury will have regained its former level. The following chart represents fairly well the effect of sponging in these cases; the temperature being recorded at the commencement of the operation, and again at an interval of ten minutes from its completion. It is therefore obvious that, in order to maintain a constant reduction of temperature, the operation ought to be repeated at intervals of at most an hour. I might also remark that the readiness with which the temperature of a case responds to sponging is often a very fair indication of its general severity; and it is found that an unfavourable prognosis in cases whose temperature is stubborn and difficult of reduction is not unfrequently justified by a fatal result. During the course of the last ten years 65 cases of acute pneumonia have been treated upon this principle, the results being shown as follows: In 25 cases the average temperature was 103° to 104°, and of these 3, or 12 per cent. died; in 33 cases the average temperature was 104° to 105°, and of these 4, or 12·2 per cent. died; in 7 cases the average temperature exceeded 105°, and of these 1, or 14·3 per cent. died. Stimulants were administered in 33 cases, the majority also receiving medicinal treatment in the form of a mixture containing ammonia and ether. No death occurred at the crisis. Thus we find that in 65 cases treated upon general principles, subserving the

FIG. 1.

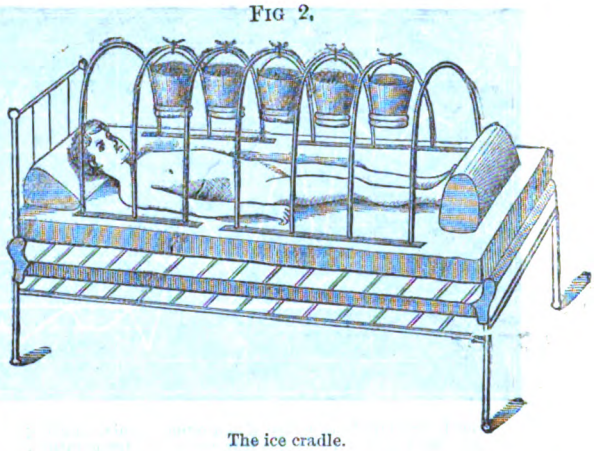


Four hour chart from a case of acute pneumonia, showing the influence of hot sponging upon the temperature.

economy of cardiac force, and in which the average temperature exceeded 103°, the mortality attending the disease only amounts to 12·8 per cent.—a reduction to the extent of almost one-half.

D. *The ice-cradle.*—The ice-cradle is an arrangement by which a constant current of cool air can be brought into immediate contact with the surface of the body, and thus bring about a reduction in its temperature by direct abstraction of heat. This method was originally introduced by Dr. Samuel Fenwick as a substitute for the cold bath in the treatment of typhoid fever, and with this object it has now been used for many years in his wards at the London Hospital, with the most excellent results. It consists essentially of an iron surgical cradle, from the central bar of which are suspended several small zinc pails half filled with ice. The patient lies undressed upon the bed,[2] and the cradle, covered by a light counterpane, is placed over him. In order to prevent any feeling of chilliness a hot-water bottle is kept in contact with the patient's feet. The ice in the pails is renewed at intervals, and it is found convenient in practice to cover the bottom of the pails with a piece of lint in order to prevent any condensed moisture from dripping upon the body of the patient. In default of the iron cradle, a very good substitute can be easily made with a piece of strong wire, or from two wooden hoops sawn through the centre. Under such an arrangement a patient may lie for many days, the utmost required being to replenish the ice-pails, and occasionally to renew the hot-water bottle at the feet. Although the mean temperature of the cradle can rarely be reduced more than a degree or two below that of the surrounding atmosphere, it usually suffices to effect a reduction of several degrees in the bodily temperature, and, what is of more importance, to maintain it at a reduced point. In certain cases where the pyrexia has been moderate, or where ice was unobtainable, the cradle has been used without the pails, and it has been found under these circumstances that the circulation of air at the temperature of the ward was sufficient to effect a gradual reduction in the temperature of the body to the amount of several degrees. But in order to obtain the maximum value from the use of the ice cradle it is necessary that the attention should be directed to several indispensable details in connexion with its mode of application. In the first place, the cradle must be of sufficient width, for nothing tends to render a patient so hostile to the procedure as the use of a cradle so narrow as to cramp the free movement of his limbs. Secondly, it is always necessary to keep the feet warm by means of a hot bottle; for by this means any feeling of coldness can be easily counteracted, while at the same time the general comfort of the patient is considerably increased. Thirdly, the free circulation of air through the cradle is a *sine quâ non*; unless this be attended to the ice is quickly melted, the temperature of the air in the cradle rapidly rises, and little if any good results from its employment. Lastly, in all cases it is well to take the patients' temperature every three or four hours, and to remove the cradle should the mercury

FIG 2.



The ice cradle.

have fallen below 100°, or the patient exhibit any inclination to shiver. When these precautions are observed the patient soon becomes accustomed to the method of treatment, and many severe cases of enteric fever have lain beneath the cradle for as long as ten days or a fortnight with only the happiest results.

The cradle was introduced into the treatment of acute pneumonia with the view of minimising the injurious influences of fever by maintaining the temperature of the body at a point below 103°. With this object it is applied to the case until the temperature has fallen to 100°, and when this has been attained the cradle is lifted off and the patient covered with a light blanket. As soon, however, as the thermometer again indicates a temperature of 103°, the arrangement is reapplied; and this process is maintained until the termination of the malady. The effect of this intermittent application of the cradle is well shown in the following four-hour chart. But in some cases in which the pyrexia is exceedingly severe, the ice-cradle proves insufficient for the immediate reduction of the temperature; and it has therefore become our custom to supplement its action by the employment of such adjunctory measures as sponging or ice packing. Not only does the act of sponging excite the skin to the performance of its normal functions, but the sudden slight reduction of temperature it entails seems to provide the necessary impetus to the action of the cradle; and we accordingly find that a stubborn temperature will often begin to give way after the patient has once been sponged with hot water. During the last eighteen months 43 cases of acute sthenic pneumonia have been treated with the ice-cradle, with the following result. In fifteen cases the average temperature amounted to 103–104°, and of these one died; in twenty-five cases the average temperature amounted to 104–105°, and of these two died; in three cases the average temperature exceeded

[2] The patient may be covered with a light sheet made of opaque gauze.

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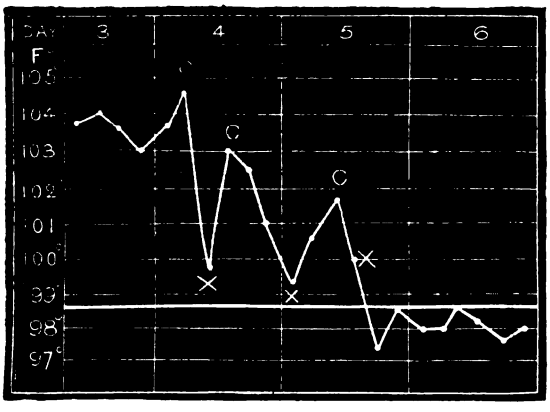
105° without a fatal result. In no case did death occur at the crisis, and the percentage mortality only amounts to 7. The internal remedies usually consisted of some preparation containing quinine and ammonia. The greatest attention was paid to the functional condition of the heart, especially at the time when the temperature fell spontaneously to normal, and any tendency to cardiac failure was promptly treated by the administration of alcohol or by the hypodermic use of camphor. I may also add that it has latterly become our custom to resort to systematic sponging of the body, in addition to the use of the cradle, in all cases.

Before concluding this part of my subject I would endeavour to answer the important question whether any bad results have accrued from the use of cold as a therapeutic agent in the treatment of acute pneumonia. The following facts may help us to frame a satisfactory answer. In six cases of the entire number the patient suffered from a second attack of the disease during the period of his convalescence; only one case occurred among those who were treated by the application of cold, the other five being subjects under the poultice and quinine *régime*. It

FIG. 3.



Four hour chart from a case of acute pneumonia, showing the influence of the ice cradle upon the temperature. The cradle was applied at C and removed at X.

has been stated that the application of cold is apt to induce the condition of albuminuria in these cases; but I have been unable to discover among my 161 cases a single instance in which albumen to the amount of one-tenth was observed in the urine after the crisis of the disease. On the other hand, the reduction of temperature seemed not unfrequently to excite an increased renal action, the diuretic effect of sponging being particularly well marked. Again, five cases of gangrene of the lung are recorded among the 552 cases treated by poultices; while only one case is to be found in the antipyretic series. In a few cases treated by the ice cradle or by sponging pleuritic pain was complained of after the crisis. Such a symptom would probably be ascribed by opponents of the method to its injurious influence; but this can hardly be so. Nearly every case of acute pneumonia is accompanied by localised pleurisy, and since we know that pleuritic effusion is but slowly absorbed in the presence of fever, I would rather ascribe the symptom, and the slight rise of temperature which accompanies it, to the result of a premature absorption of the exudation consequent upon the artificial reduction of temperature. The symptom is one that can easily be subdued by the application of strapping to the affected area of the chest, or by the subcutaneous injection of antipyrin. For these reasons I do not hesitate to assert that the injurious results from the application of cold in cases of acute sthenic pneumonia are inappreciable, and may well be ignored when the great value of the treatment is taken into consideration. For among 108 cases in which this method was systematically carried out, we find a percentage mortality of only 10 instead of 23.

3. *Asthenic pneumonia.*—Among the thousand cases from which my statistics have been drawn, no fewer than 285 exhibited an average temperature below 103°. This form of pneumonia—presenting all the signs of pulmonary consolidation, but unaccompanied by any high degree of fever—is the type which most usually supervenes during the course of chronic diseases, and to which the fatal termination of the case is often directly attributable. It is still a debated question whether this form of pneumonia does not own a different cause from that which inaugurates the sthenic type of the disease. But it would appear as if the clinical aspect of different cases was determined, not by a difference in the exciting cause of the malady, but rather by the vital condition of the tissues upon which that cause is brought to act; in the one type the high fever and its concomitant symptoms being the resultant of force and resistance, while in the other case, the vital activity of the tissues being insufficient to offer any resistance to the onslaught of the exciting cause, the signs of organic failure tend from the first to overshadow and eclipse the symptoms characteristic of the invading force; resembling in this way the transmission of an electric current, the physical effects of which bear a definite relation to the amount of resistance offered to it in the form of the conducting wire. The unsatisfactory results that have attended the treatment of these asthenic cases depend directly upon this inability of the system to offer an adequate resistance to the progress of the disease. The heart, weakened by privation, myocardial degeneration, or from disease in other organs, is unable to respond to a sudden call upon it for increased activity. Its propulsive power is utterly insufficient to cope with the sudden increase of resistance in the pulmonary circuit, and, after a slight initial response, it gives up the attempt. Following quickly upon the heels of the first symptoms of cardiac failure there springs up that progressive phenomenon of pulmonary œdema which, increasing rapidly when once started, and augmenting the resistance offered to each beat of the heart, increases the tendency to dilatation in the right ventricle. And I venture to think that the rapidly fatal course which the malady so often runs in asthenic cases is often directly dependent upon the early occurrence of pulmonary œdema. The great danger to life in cases of asthenic pneumonia is well known, and a glance at the following figures fully bears out one of my preliminary remarks—namely, that the mortality in this form of the disease bears an inverse relation to the severity of the fever. Among 240 cases which were treated in the ordinary way by poultices, stimulants, and tonics, in 213 the average temperature amounted to 102°–103°, and of these 63, or 30 per cent., died; in 27 the average temperature was below 102°, and of these 13, or nearly 50 per cent., died. In 45 other cases the treatment was supplemented by large doses of quinine, with the following result:—In 35 the average temperature amounted to 102°–103°, and of these 9, or 25·7 per cent., died. In 10 cases the average temperature ranged below 102°, and of these 5, or one-half, died. Thus, beyond affording proof of the frequency with which this form of the disease terminates in death, but few lessons can be gathered from an examination of the foregoing figures. Here is, however, one very obvious deduction: any attempt to employ cold in the treatment of these cases is not only unscientific but actually of danger, from its liability to bring about a fatal result. For the rest the treatment must be a stimulating one, and quinine in large doses may prove of some use. Venesection for the relief of pulmonary œdema is almost certain to prove useless.

Summary.—Can the study of the foregoing statistics throw any light upon the immediate cause of death in cases of acute pneumonia? It has been conclusively shown that the mortality from the disease is directly proportionate to the severity of the symptomatic fever; and it is therefore but natural to conclude that the presence of a high temperature tends to destroy the functional activity of some vital organ. Standing out as it does in such bold relief to the other morbid phenomena of the disease, it is hardly surprising that the condition of the lung has always concentrated upon itself the attention of the physician, and constituted the recognised target at which all his remedial treatment should be aimed. At the present day, however, it is held by most observers that the symptoms of the malady are not the direct result of a simple inflammation of the lung, but rather the outcome of a constitutional affection. And since it will be admitted by all that, whatever may be the true pathology of the disease, there exists no definite relation between the amount of the consolidation and the severity of the fever, it is obvious that the lung cannot be

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that vital organ upon which a high temperature exerts such a destructive influence. We must therefore look elsewhere for the immediate cause of death; and every item of evidence, whether it be pathological or clinical, points to the same inevitable conclusion—namely, that the fatal termination of acute pneumonia is the direct result of cardiac failure.

There are two general factors which are capable of producing the condition of cardiac insufficiency—an increased resistance to the propulsive action of the heart, and a progressive deterioration of its muscular substance. And in acute pneumonia both these factors are conspicuously present; the former in the increase of tension in the pulmonary circuit consequent on the consolidation of a portion of the lung, and the latter as the direct result of a high temperature. The action of these two forces is to compel the heart to beat more forcibly and more quickly, while at the same time it is steadily deprived of the power to do either. In the asthenic variety of the disease the heart is intrinsically feeble from the outset, and hence the malign influence of fever is an unnecessary element in the production of its insufficiency.

That these *a priori* considerations are in accordance with actual facts has already been shown, for it has been proved that death is most liable to supervene at two periods in the disease: about the fifth day, when the fever is at its height, or at the crisis, when cardiac collapse is apt to result from its sudden withdrawal. One step further. Two great methods of treatment have been examined in detail as to their influence upon the mortality from the disease. In the one we find that the chief remedies were aimed at relieving the condition of the lung; and while stimulants were freely administered with the object of whipping up the flagging heart, the cause of its physical lameness was allowed to proceed unmolested. The result was that among 552 cases so treated the mortality exceeded 23 per cent., although alcohol was exhibited in no less than 70 per cent. In the second case a method of treatment was adopted with one special object: to economise cardiac force by minimising the injurious influences of fever. In 108 cases of similar severity to the foregoing the treatment consisted in the systematic reduction of temperature by means of sponging or ice cradling. Of this number only 45 (41 per cent.) received alcohol, and only 10 per cent. died.

Again, among the former class 46 deaths resulted from collapse at the crisis of the fever. Among the latter, where special attention was paid to this source of danger, not a single death is recorded from this cause. Nothing could be more conclusive, for these facts show to what a considerable extent the mortality from acute pneumonia may be reduced when prophylactic treatment is applied with the view of strengthening that vital position against which death almost invariably concentrates the force of his attack. And the success which has attended this rational treatment of acute pneumonia appears as a still further argument in favour of the specific febrile nature of the disease; for it would indicate that the consolidation of the lung is after all but an analogue of the typhoid ulcer and of the scarlatinal sore-throat—a characteristic result, but never the cause, of the disease. It has also been shown that, firstly, the quantity of albumen in the urine is of considerable prognostic value; secondly, that the crisis is often a period of great danger to life; and thirdly, that those cases which commence with a severe gastro-intestinal attack are twice as liable to end fatally as those which exhibit the more usual initial rigor.

In conclusion, I beg to thank the various members of the medical staff of the London Hospital for their kind permission to publish in this manner the results of their cases.

WEST KENT GENERAL HOSPITAL.—The fifty-eighth annual report records the munificent gift during the year of the Dowager Lady Howard de Walden. The entire top floor had been very completely fitted up by her ladyship as a women's ward for eight beds, together with a ward for special cases and bedrooms for the staff. Ample funds (£10,000) had been placed in the hands of trustees as an endowment. During the year there had been a considerable increase in the number of in-patients. A generous gift of £200 had enabled the committee to avert any addition to the adverse balance.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF GASTROSTOMY.

BY HENRY J. ROPE, F.R.C.S.

W. R——, aged sixty-four, a waiter, was admitted to the Salop Infirmary on Sept. 15th, 1890, complaining of difficulty in swallowing for the last three weeks. Cannot take anything solid, and fluids come back through the nose. Rapid emaciation; weight, 7st. 10lb. Has been a free drinker. Has a soft blowing systolic murmur. Œsophageal bougie passed thirteen inches, and found a hard unyielding obstruction. The patient was put on fifteen grains of iodide of potassium three times a day. Sept 17th: He retains about half of the fluids that he takes. He cannot retain puddings or arrowroot.—Oct. 4th: He feels much better, and takes exercise daily. Bougie has been passed at frequent intervals, and to-day was passed fifteen inches.—19th: He does not complain of any pain, and is always anxious to have the bougie passed, as he says it gives him great relief. He seems weaker. Weight, 7st. 6lb.—28th: He complained of pain when the bougie was passed, referring it to the right mammary region. He does not retain his food so well, and is weaker. Weight, 7st. 3lb. Is unable to leave his bed.—31st: Gastrostomy (first stage) was performed under ether. The stomach was easily found, and was attached to the abdominal wall by Mr. Howse's method. He rallied well, but complained of great pain.—Nov. 1st: No pain; temperature normal; mouth very dry. Dressing soaked; fresh gauze packed over it.—2nd: More pain; mouth still very dry. Pulse 90, weak, respiration 30.—Nov. 3rd: Cough troublesome, with profuse expectoration of very tenacious, non-aerated sputa.—4th: Dressings removed; wound perfectly sweet, edges almost in contact. The edges were separated and held apart, and the stomach was pinched up and carefully opened with sharp-pointed scissors; two ounces of strong beef-tea and milk were at once introduced through a catheter, to the intense satisfaction of the patient, giving him a very pleasant sensation. The catheter was tied in, and he was fed every two hours. At each feeding a slight flow of saliva was noticed in the mouth.—5th: Slept well and is cheerful. On coughing some fluid escapes through wound, bile-stained, very acid.—6th: Slept well, but is weaker; more cough, more escape of gastric juice. Skin round wound red and irritated. Rubber tracheotomy tube used instead of catheter.—7th: The introduction of food causes a cough, which expels some of the food again; nutrient suppositories at frequent intervals.—8th: Pulse quicker and weaker; temperature 101°, delirium, jactitations; free return of food through wound.—9th: Temperature 102°, pulse almost imperceptible; Cheyne-Stokes breathing. He died the following morning.

Necropsy (*Nov. 11th*).—Great emaciation; well-marked rigor mortis. Stomach firmly adherent by strong adhesions all round the wound, of normal size and thickness, containing a small quantity of brownish fluid. Intestines much contracted. Kidneys small; capsules adherent. Aorta atheromatous; aortic and mitral valves puckered. The upper part of the œsophagus was dilated and much thickened. Three inches and a half above its cardiac end was a tight stricture, barely admitting a No. 8 English catheter; and here the œsophagus was greatly thickened and as hard as cartilage. There was ulceration of the mucous membrane for half an inch above the stricture, with perforation into the root of the right lung, where there was a sac, the size of a filbert, containing grumous fluid similar to that found in the stomach. The bases of the lungs were œdematous. The mediastinal glands were enlarged.

The patient was persistent in his opposition to any operation, and when at last his consent was obtained he was too weak to derive more than a few days' advantage from it. The notes were kindly supplied by Mr. Harold McLeod.

Shrewsbury.

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A CASE OF EXOPHTHALMIC GOITRE, ENDING FATALLY FROM SUDDEN PRESSURE ON THE TRACHEA.

BY HUGH MONTGOMERIE, M.D.,
ASSISTANT PHYSICIAN, WEST CORNWALL INFIRMARY, PENZANCE.

THROUGH the kindness of Dr. Humphry Davy I am able to record this case, which, so far as my researches extend, seems to be unique.

In March last I saw the patient, Mrs. X——, aged thirty-five, who complained of a swelling in the neck, nervousness, slight difficulty of breathing, with stridor and cough. She stated she was pregnant. Her own health and family history were good. Her neck, she informed me, had been swollen for two years (I since hear it was longer), and measured twenty-three inches in circumference. The swelling consisted in a softish elastic mass, larger on the left side than the right, and with a small central mass. There was no doubt the swelling was a bronchocele. The eyes showed some exophthalmia and dilated pupils; Von Graefe's sign present to a slight extent; there was no tremor. The pulse was 120. The larynx showed nothing abnormal, but it was impossible to see below the cords with the laryngoscope. From her condition and the deep origin of the growth no interference was recommended. In September, 1890, I had another opportunity of examining her after delivery, and found the symptoms abated, the neck only measuring twenty-one inches in circumference. In the early morning of December 1st, 1890, I was called to the patient's house, and found her lying on a bed unconscious, breathing rapidly and with considerable stridor, the lips and face cyanosed. Dr. Davy, Mr. Symons, and myself were sent for. We learnt that at half-past ten the previous night she had gone to bed quite well. In about an hour she got up to attend to the baby, and was seized with severe difficulty of breathing. She got back to bed, struggled violently, and became unconscious in the course of five minutes. Tracheotomy was determined on, though the patient was evidently moribund. The tube was inserted by Dr. Davy, who performed the low operation. There was scarcely any bleeding during the operation. One inspiration was taken through the tube, and artificial respiration resorted to without avail.

A necropsy was granted, which I performed in the afternoon. It was then found that the right lobe of the thyroid was attached to the trachea firmly, and the size of an egg. The left lobe about double the size, and implicating the deep structures of the neck. The isthmus was much enlarged, and a supplementary lobe of the gland lay on the thyroid cartilage. On removing the larynx, trachea, and thyroid gland, one saw on looking up the trachea that the right wall was bulged in towards the left, leaving only a mere chink to breathe through. The bulging corresponded with the right lobe of the thyroid gland. On splitting up the trachea, the cartilages at the obstruction were softened, and had lost all their resiliency, thus aiding the collapse of the tube. The mucous membrane was injected.

I have considered this case worthy of record, as showing that, although the cartilages of the trachea had been softening for some time, the actual "caving in" was in the end quite sudden.

Penzance.

A CASE OF TETANUS; RECOVERY.

BY A. C. DUTT, B.A., M.B. CANTAB., A.K.C. LOND.,
SENIOR HOUSE SURGEON TO THE SCARBOROUGH HOSPITAL.

ON the 22nd September James A——, aged thirty-five, a fisherman belonging to Peel, Isle of Man, was admitted under the care of Dr. Everley Taylor, suffering from well-marked symptoms of tetanus. In August last his left hand was crushed between two boats, producing a wound three inches long at the level of the heads of the second and third metacarpal bones. For this he was treated as an in-patient at the Berwick-on-Tweed Infirmary for five weeks, and left that institution (with the wound not quite healed) to join his boat. He fished off Hartlepool for some days, whence he came to Scarborough and sought admission here. On inquiry the patient admitted he had indulged freely in alcohol, and had syphilis about twenty years ago. On one leg there was a fetid tertiary ulcer, and on both legs there were several pigmented cicatrices. He was unmarried. Patient said that when he was off Hartlepool he had pain in the back of his neck, and then the "jaws began to contract"; the legs felt very stiff, and he found he could not swallow. On examination it was found that he could not separate his teeth more than a quarter of an inch; there was a very peculiar anxious look, and the masseters and the recti abdominis were extremely rigid. The wound on the hand was covered with small unhealthy granulations, and was very foul-smelling. Before he came into the hospital he had taken lodgings in the town, where Dr. Everley Taylor had seen him in a state of opisthotonos. His temperature on admission was 98·6°, and was never above normal throughout the course of the disease. He was ordered a mixture of ten minims of the tincture of cannabis indica, fifteen grains of chloral and bromide of sodium, five minims of chloric ether, with mucilage and water, every four hours. As to diet, he had three pints of peptonised milk, two pints of beef-tea, two eggs, six ounces of brandy, and six ounces of port wine daily. The wound on the hand was dressed with starch poultices for the first fortnight, and then with boracic ointment; the ulcer on the leg was also washed and dressed. The patient complained of "spasms," but steadily improved under the treatment. After Oct. 3rd stimulants were reduced to two ounces each of port wine and brandy daily; minced meat and bread were given on the 7th. On the 15th, pills of Calabar bean, one-sixth of a grain (gradually increased to half a grain) three times a day, were ordered. The patient could sit up on the 10th, and had full diet on the 19th. On the 20th the wound on the hand had quite cicatrised, and the patient was discharged on Nov. 1st.

Remarks.—Of late the theory has been gaining ground that tetanus is of microbic origin, and that the microbes produce an alkaloid which acts on the nervous system. The fact that division of the injured nerve at the seat of injury has sometimes been found curative does not necessarily disprove this theory, for doubtless with the division of the nerve precautions are taken to render the wound aseptic, so as to prevent the development of the microbes. The absence of any definite lesions in fatal cases also lends support to this view. According to Dr. George Kemp, there are three essential objects to be attained in the treatment—(*a*) The destruction of the nidus of development of the bacilli; (*b*) the elimination from the system of the products of the bacilli; and (*c*) the calming of the nervous system.

Scarborough.

SPONTANEOUS AMPUTATION OF THE SMALL TOE IN AFRICANS.

BY J. TOPPIN, L.R.C.S.I., L. & L.M. K.Q.C.P.

ALTHOUGH doubtless this anomaly has been observed by Englishmen who have visited Africa, it has not hitherto, to the best of my belief, been described in the medical press. It seems, as far as I am aware of, only to occur amongst Africans; although I have never seen it in those inhabiting the West India islands, I believe it is common enough in Brazil amongst the negroes. The cases I have met with were among Kroomen, who come from a part of the West Coast of Africa about a day's journey from Sierra Leone. These men seldom wear boots, and consequently have very well shaped feet. The affection commences by a crack appearing on the under and inner surface of the little toe; a thing which is frequently met with amongst soldiers of whatever nationality, and which English sailors designate by a name more expressive than elegant. It, however, never goes beyond a crack or fissure in Europeans; but with Africans, whether living on shore away from the sea or on board ship, there is a progressive process, resulting ultimately in the toe dropping off. It is in no way connected with leprosy; the little toe is nearly always the only one affected, though the natives tell me that in rare cases the fourth toe goes also. I have tried incising the fissure, and then dressing it, and making them wear boots to keep out the salt water, but all to no purpose. The process when once commenced goes on, the fissure gradually extending round the toe. I have never allowed it to proceed to complete loss of the toe, because after a few months there is considerable pain, with some œdema of the foot, and in order to render the man able to work I have taken the toe off. In their own country, however, not having a surgeon at their service,

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they have to let it run its course, and it then takes about a twelvemonth before it finally drops off. The appearance when the fissure has extended completely round the toe is exactly as if a ligature had been bound tightly round it, as near its junction with the foot as possible. The extensor tendon can be seen as a white cord marked with a black ring where the fissure crosses it. In two cases where I have removed the toe, the joint of the ungual phalanx was wanting. The wound heals quickly after removal, and the men do not seem to feel the loss of the toe in the slightest.

Pernambuco, Brazil.

TRAUMATIC ENCEPHALO MENINGOCELE.

BY HARRY BURTON, M.R.C.S., L.R.C.P. IREL., &c.

HAVING used the above title for a case I reported in THE LANCET of Jan. 10th, and having read a note in the same journal of Jan. 17th by Mr. Clement Lucas objecting to the name, I wish to give the following reasons for having done so.

According to Messrs. Clement Lucas and Golding Bird traumatic cephal-hydrocele can only be developed in early childhood, and is caused by cerebro-spinal fluid extravasated under the healthy integuments, through a fissure or fracture of the skull, such fluid communicating with the ventricles through the perforated meninges and brain. In the case mentioned by me, the girl was eight years old; the fracture was at first compound, the skin wound healed, absorption of a necrosed circular portion of the skull occurred, and the meninges and brain substance were gradually protruded through the opening. I do not think the fluid communicated with the ventricles, but was simply increased inflammatory secretion, as after aspiration the tension became less, and (which was not the case before) pressure could be borne. I also explained that on withdrawal of the needle, which was not inserted to the base of the tumour, brain substance appeared on it. The tumour also was only partially emptied, which proves that its contents were not altogether fluid. I quite agree with Mr. Lucas that traumatic cephal-hydrocele is a better name for the cases he has published than traumatic meningocele, as only fluid could come through a crack in the skull, the absorption of bone being secondary, and therefore no meninges are contained in the swelling at all; but I must say, with all deference to him, that the case I described differs so much in all its salient points that the above title only thoroughly conveys a right idea of its composition. I may again state that there is no sign of any tumour remaining, no heaped-up or everted edges of bone, the skin being perfectly level, the circular opening in the bone almost filled with dense fibrous tissue, and that the girl is in good health at the present time.

Marple.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

A CASE OF AURAL POLYPUS ACCOMPANIED WITH MASTOID SUPPURATION AND THREATENING THROMBOSIS OF THE LATERAL SINUS; PERFORATION OF THE MASTOID CELLS; REMOVAL OF THE POLYPUS; CURE.

(Under the care of Mr. MARMADUKE SHEILD.)

THE attention of the profession has been frequently directed, more especially during recent years, to the dangers of a chronic discharge from the middle ear. Such cases, where treatment has been neglected, are not uncommonly admitted to our hospitals for mastoiditis or even more serious consequences secondary to the discharge, especially if it is decomposing and its escape is impeded, as in this instance, by the presence of a polypoid growth. Great improvement in our knowledge of the pathology of the inflammatory affections of the mastoid process has resulted from more careful study, and we recognise that there are in such affections especial dangers from the proximity of vital structures. One direction in which inflammation may extend is through the petro-mastoid canal into the cranial cavity, or it may involve further the transverse sinus and cause thrombosis, and symptoms of the commencement of this condition were present in this case. The fatal termination of a purulent otitis media may be due to many causes—phlebitis, thrombosis, embolism, septicæmia, pyæmia, purulent meningitis, intra-cranial abscess, &c.—any one of which may be excited by apparently accidental circumstances. In all these the chance of life is small without operative treatment, and in few can such success be obtained, both as regards arrest of symptoms and restoration of function, as in the case which we record.

A healthy-looking young man was admitted into Charing-cross Hospital on Dec. 3rd, 1890, under the care of Dr. Green. He was supposed to be suffering from some cerebral disease. A fetid discharge being found to issue from the right ear, the patient was transferred to the surgical wards. The leading symptoms observed were as follows: Great tenderness over the side of the head and mastoid region, but no obviously tender spot or œdema. Marked tenderness also over the course of the internal jugular vein on the right side of the neck, but no hardness. There was no evidence of lung complication. Profuse fetid discharge issued from the right ear. On washing this away a large, vascular, friable polypus, of the colour of a ripe raspberry, was seen to fill the auditory canal. The patient was absolutely deaf upon the right side, and could not hear when shouted at. A large tuning-fork placed upon the vertex was heard most plainly on the affected side. The left ear seemed normal. The patient was somewhat drowsy and stupid, but answered questions fairly well. There was no optic neuritis. The pulse was quick, hard, and full, the tongue very foul, and the bowels constipated, but the temperature was not high. A reliable history was difficult to elucidate. It appeared that he had suffered from right otorrhœa for an indefinite period. For the last few days he had had intense pain in the head, so severe as to cause him to cry out and entirely to prevent sleep. He has felt giddy, and was sick several times at the commencement of the attack.

It was resolved to open the mastoid cells, and this proceeding was sanctioned by Mr. Bloxam, who kindly saw the case in consultation. The operation was performed at 5 P.M. on the same evening. The side of the head being shaved and rendered aseptic, a free vertical incision was made by Mr. Sheild over the right mastoid, and the soft parts and periosteum were turned back from the bone on either side. An opening was then made immediately behind the upper margin of the external auditory meatus, by means of a small sharp gouge and mallet. The bone was exceedingly dense and hard, and the opening was cautiously deepened to a depth of nearly one-eighth of an inch before a blunt director passed into the mastoid cells. Very free bleeding occurred as soon as the cells were opened, the blood welling out in a continuous stream, as though some large vessel had been wounded. A strong syringe filled with hot boracic lotion was applied to the aperture, and blood mixed with a quantity of thick pus and masses of débris escaped from the auditory meatus. The bleeding soon spontaneously ceased. The polypus was next removed by a pair of ring forceps, and the incision behind the ear united with horsehair, a drainage-tube being inserted into the opening made in the bone. The parts were dressed with iodoform and sal alembroth gauze. After the operation the patient lost all pain and disagreeable sensations in the head and side of the neck. He made an uninterrupted recovery. The wound united soundly, and the tube was removed on the fifth day. The after-treatment consisted in washing through the mastoid with warm boracic fluid and the application on three occasions of pure chromic acid to the remains of the polypus. The latter had grown from the interior of the tympanum through a large perforation in the membrana tympani. By the fifth day he could hear the watch at three inches and conversation fairly well. Treatment was now directed towards the perforation. Under simple syringing with warm boracic fluid and cleansing of the ear afterwards with wool this closed in about three weeks.

A month after the operation the patient was carefully examined. All discharge had ceased, and the chasm had

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apparently healed. Hearing was, for practical purposes, perfect. He had lost all pain and tenderness about the mastoid.

Remarks by Mr. SHEILD.—The combination of a large aural polypus and "head symptoms" in a case of long-standing otorrhœa is often difficult to manage. In a large number of such cases there is retention of pus and caseating products of inflammation within the mastoid cells. A soft granulation polypus in a child will often disappear on opening the mastoid and washing out the cavities contained in it. In cases like the present there is always considerable danger of thrombosis of the lateral sinus, and this in itself is a sufficient argument for opening the mastoid. Should there be definite evidence of thrombosis in the deep jugular vein, the question of ligature of that vessel below the thrombosed parts must arise. These cases are desperate, and if general pyæmic infection has already occurred the chance of recovery is small. It would seem generally better to remove the polypus at the same time as the cells are opened. Thus a free exit is afforded through the auditory canal for pus and the irrigated fluid. Should there be definite evidence of necrosis of the mastoid, and the dead bone be deep and fixed, a permanent opening had better be established behind the ear by the introduction of a small lead or silver tube, for in such cases pus will certainly re-collect. Every effort must be made to destroy the remnants of the polypus, and to obtain the healing of a perforated membrane. If this be accomplished the results may be surprisingly good, as in the present instance, and hearing may for practical purposes be completely restored. In most cases, however, such will not be the case, the ear remaining permanently damaged, and needing long-continued care and attention. Much has been written lately about the operation of opening the mastoid, and the position of the lateral sinus. The divergence of opinion regarding the latter important anatomical consideration leads to the practical conclusion that, as one can never be certain of the exact depth and situation of the sinus in any given case, the utmost caution should always be employed. By the method of removing layer after layer of bone with a mallet and gouge, and carefully inspecting each portion of exposed bone before going deeper, the lateral sinus can hardly be wounded, and the actual entrance into the cells can safely be made with a blunt-pointed director. The free hæmorrhage observed in these cases appears at first sight alarming. It is due to excessive engorgement of the vessels of the inflamed bone, and soon ceases on the application of hot water with the syringe. Doubtless the local depletion is most beneficial, and goes far to aid the striking relief of pain and discomfort which the operation usually effects.

HULL ROYAL INFIRMARY.

PAPILLOMA OF BLADDER; SUPRA-PUBIC CYSTOTOMY; RECOVERY.

(Under the care of Mr. CRAVEN.)

THE following account of the removal of a tumour from the bladder after cystotomy and of its microscopical characters is of interest and importance. From the duration of symptoms, the small size attained by the growth, and its intimate structure, there is reason for giving a favourable prognosis as to non-recurrence of the disease. We hope that the ultimate result will be given on some future occasion, for growths somewhat resembling this in site and characters have recurred and proved fatal, the recurrences having been of sarcomatous nature. The supra-pubic method of operating for the removal of these growths is the one which is found to give the most general satisfaction. For the notes of this case we are indebted to Mr. Frank Savery, house surgeon.

G. W——, a labourer aged sixty-four, was admitted as an in-patient under the care of Dr. Daly on May 15th, 1890. He had enjoyed good health until 1886, and had never had any illness of importance previously to that date. In September, 1886, he was seized quite suddenly with pain in the right lumbar region, and this was followed in a few days by the presence in the urine of some material like "coffee," and then by bright blood. Since that time the urine has never been free from blood. The blood, however, varied considerably in amount; it was generally uniformly mixed with the urine, but sometimes in clots; the clots were not worm-shaped, and the passage of clots was not preceded by pain in the lumbar region. Exercise increased the amount. There was no pain before, during, or after micturition, and no difficulty in micturition except when clots were present. The frequency of micturition was not increased; the amount of urine was not increasing. He lost a little weight—about 1 st. in three years. There was no family history of cancer or new growth.

On admission the patient was a well-nourished man, but very anæmic. He complained of pain in the right lumbar region. The urine was acid, sp. gr. 1020; it contained albumen and a considerable quantity of blood, the colour being bright red; the albumen was not in excess of the amount of blood; under the microscope blood-corpuscles were seen, but no casts. The urine was more darkly coloured with blood towards the end than at the commencement of micturition. Temperature normal; pulse weak; other organs appeared to be quite healthy. The bladder was sounded, but no stone felt. The prostate was not enlarged. There was no pain or swelling in the renal regions. Perchloride of iron was given, but the urine remained the same; then hamamelis, with a similar result. Dr. Daly and Mr. Craven considered the blood came from the bladder, probably from a new growth, and, as the patient was evidently going down-hill, advised an exploratory operation. On June 10th, at 9.30 A.M., Mr. Craven operated, being assisted by Mr. Evans. The bladder was washed out, and then moderately distended with boracic lotion. The rectal bag was passed, and filled with eight ounces of water. An incision was then made in the middle line of the abdomen, four inches long, the lower end being at the symphysis. The bladder was opened and explored with the finger, when a small growth was found on the left side of the fundus near the opening of the left ureter, and possibly surrounding it. It consisted of several nodules, and had a broad base of attachment. It was removed by means of scissors. There was very little hæmorrhage. A few stitches were put in the upper part of the wound, and a drainage-tube, with a long tube attached to it, in the lower, passing into the bladder.

June 12th.—The patient has an attack of bronchitis, and is very bad; he wanders a good deal. All the urine comes by the wound, and contains blood.

20th.—Urine alkaline (sp. gr. 1020); contains a trace of albumen, but no blood; there is a deposit of pus. He passes some urine by the penis. The bronchitis is much better, but he is still delirious at night. Ordered boracic acid internally.

26th.—Urine acid, contains a little blood; pus much less.

From this time the urine remained free from blood. He passed more and more urine by the penis, and on July 20th the wound in the abdomen was quite healed. He slowly recovered, and was discharged on Aug. 8th to a Convalescent Home at Ilkley.

On microscopic examination the tumour had the appearance of a simple adenoma, there being a considerable fibrous stroma, with tubes cut across, lined by a single layer of epithelium.

BEDFORD GENERAL INFIRMARY.

A CASE OF STRANGULATED HERNIA COMPLICATED WITH PAROTITIS; RECOVERY.

(Under the care of Mr. KINSEY.)

THIS case is an example of inflammation of the parotid glands following an operation in which not only was the peritoneum implicated, but the testis manipulated to an unusual extent. We published a paper by Mr. Stephen Paget,[1] giving the result of his investigations as to parotitis supervening on surgical operations. Of the 101 cases which he had collected, 10 followed injuries or diseases of the urinary tract; 18 injuries or diseases of the alimentary canal; 23 injuries or inflammation of the abdominal wall, peritoneum, or pelvic cellular tissue; and 50 injuries, diseases, or operations on the generative organs, 27 of these being operations on the ovary. The chart bears out his observation—that, as a rule, the parotitis is not accompanied by very severe fever, rigors are rare, and the inflammation does not progress to abscess, unless it forms part of a pyæmic infection. For the report of the case we are indebted to Mr. R. H. Elliot, house surgeon.

G. D——, aged eighteen, was admitted to the Bedford Infirmary on August 29th, 1890, suffering from strangulated

[1] THE LANCET, vol. i. 1887, p. 314.

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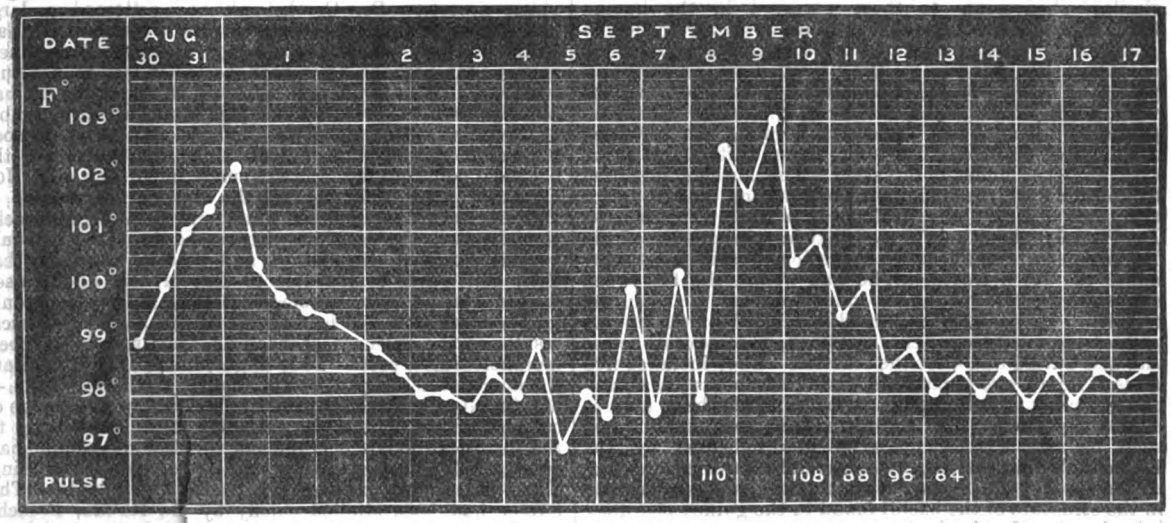
right inguinal hernia. The hernia, which is then said to have been strangulated, was reduced with difficulty five days ago. The rupture again became irreducible at 8 A.M. of Aug. 29th. His medical man gave opium (?) in the form of a pill, and made two attempts at reduction. The patient arrived here at twelve midnight. He had had nausea and absolute constipation all day, and abdominal pain during the afternoon. There was a strangulated inguinal hernia as large as a hen's egg, lying in the scrotum on the right side, behind the testicle. Constitutional signs well marked. Mr. Kinsey came at 2.15 A.M., and under chloroform cut down on the hernia. It was exclusively enterocele, and the strangulating band was long and tight, lying in the neighbourhood of the internal ring. The gut was red and polished. It was returned, and the sac was dissected off from the surrounding parts with considerable difficulty, the dissection taking a long time. The temperature rose steadily till it reached 102° on Aug. 30th, at 10 A.M., from which time it fell and remained normal till Sept. 7th, on which day the bowels acted twice after an enema. The patient gave no real cause for anxiety beyond his temperature, but the wound suppurated freely. It was dressed twice daily after Sept. 4th, having been dressed already on the night of Aug. 30th and on Sept. 1st. On the eighth day acute left parotitis began, the right side became affected on the ninth day, the temperature reaching 102·4° on the eleventh day and 103° on the twelfth day, after which it gradually fell, to reach normal on the fifteenth day. On the thirteenth day the right side of the face was more swollen, and the eyelids on that side were swollen. The left side was also swollen. On the fifteenth day the pain was much less, and the swelling on the left side had almost disappeared, but was still present on both sides on the nineteenth day, after which it gradually subsided. There was no albuminuria.



Remarks by Mr. ELLIOT.—This case, I think, raises an interesting point of connexion between the testicle and parotid. The position of the testicle, the tediousness of the operation, the suppuration which unfortunately ensued, would probably indicate considerable interference with the cord; and, on the other hand, the patient could in the fortnight or so preceding admission think of no source from which he could have contracted the mumps, nor did he communicate that disease to his fellow patients, nurses, or others.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Carcinoma following Lupus of Face—Morphology, Cultivation, and Toxic Products of the Tubercle Bacillus—Tubercular Guinea-pigs under Koch's Treatment.

AN ordinary meeting of this Society was held on Feb. 3rd, the President, Dr. W. H. Dickinson, in the chair.

Mr. E. SOLLY showed, for Mr. James Berry, a case of Carcinoma following Lupus of Face. The patient was a male aged forty-five, who had been cured of lupus of the face when aged fifteen, and the present cancerous growth commenced only two months ago.

Professor CROOKSHANK made a communication on the Morphology, Cultivation, and Toxic Products of the Tubercle Bacillus (an abstract will be found in another column). This was followed by a demonstration of microscopical preparations and cultivations. The preparations were shown under thirty-four microscopes (including twenty-three one-twelfth objectives). The preparations included tubercle bacilli in sputum and pus from different cases in man; in pure cultivations in glycerine agar-agar, glycerine broth, broth without glycerine, and glycerine milk; in cream from a tubercular cow; in the liver of fowls, lung of guinea-fowl, lung of ostrich, lung of rabbit, in bovine tubercular mammitis, in miliary tuberculosis in a calf inoculated with human tubercular sputum, in lung of horse, in spleen of tubercular guinea-pig, and several preparations illustrating tubercle bacilli and "phagocytes"—from frogs inoculated with pure cultivations of the bacillus. There were also preparations shown of the crystals obtained from the extract of cultures and of tubercular tissue. More than sixty cultivations of the tubercle bacillus were shown; on glycerine agar-agar of different generations, inoculated April 17th, June 28th, July 22nd, Sept. 15th, Oct. 15th, and Dec. 8th, 1890, and Jan. 14th, 1891; in glycerine broth, broth without glycerine, broth without glycerine with egg albumin, and glycerine milk, inoculated Nov. 11th, 1890, Nov. 13th, and Nov. 28th, and filtrates of these cultures prepared Dec. 5th and 9th. The chemical tests applied to the glycerine culture filtrate and to Koch's own liquid were also shown.

Drs. ABRAHAM and CROOKSHANK made a joint communication on the effect of Koch's Treatment on Tubercular Guinea-pigs with liquid received by Dr. Abraham direct from Berlin. Two tubercular guinea-pigs had received six injections since Jan. 7th in centigramme doses. Similar doses were at the same time administered to a healthy guinea-pig. As further to control observations, two guinea-pigs in the same stage of tuberculosis were carefully examined both macroscopically and microscopically after death as a guide to the condition of the internal organs in the cases selected for treatment. The lymphatic glands were caseous, and contained bacilli. There were deposits in the spleen, which also contained bacilli. The cases selected for treatment were therefore undoubtedly tubercular, without the disease being, in the opinion of the authors, too far advanced. There were well-marked chains of tubercular glands, but the animals were nevertheless active and well nourished. The first injection caused considerable constitutional disturbance, rise of temperature,

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tenderness, and great swelling of the diseased glands and redness of the surrounding skin. The second and subsequent injections produced a rise of temperature and tenderness, but no sudden glandular swelling. In one guinea-pig the tubercular glands had steadily increased in size; in the other there had been but little change since the first injection The temperature reaction was most marked in the former after the fourth injection, when it reached 107¾° F. in two hours. With the exception of a very slight rise in temperature the healthy guinea-pig was not affected by the injection. So far, these cases showed that in tubercular guinea-pigs Dr. Koch's fluid in centigramme doses produced similar phenomena to those observed in the human tubercular subject. Whether the fluid would arrest the progress of the disease remained to be seen, the average life of tubercular guinea-pigs being sixty days. A cow suspected of being tubercular was injected on two occasions with doses of two and three centigrammes. The temperature, taken hourly, remained normal, but increased cough was observed for some hours afterwards; the case was still under observation. The authors promised to continue and extend their observations, and to place the results before the Society at a future meeting.—Dr. PHINEAS ABRAHAM stated that in consequence of the alarmist reports as to the dissemination of bacilli in patients under the Koch treatment, he had within the last week examined the blood of the two guinea-pigs before and during reaction. He had also examined the blood of ten human patients now undergoing the treatment; in some cases before and also during and after the reaction. They included five cases of lupus, two of phthisis, two of strumous joints, and one of leprosy. In no single instance had he been able to detect any bacilli. He considered, therefore, that if any such metastasis took place as was indicated by Dr. Liebmann's observations, it was certainly not of common occurrence.—Dr. GRÜN asked if any changes had been observed in the structure of the bacilli found in the guinea-pigs after injection by Koch's fluid.—Dr. ABRAHAM replied in the negative.—Dr. SIDNEY MARTIN said that the selection of proper cultivating media was a matter of much importance. No bacillus could act mechanically, but only by producing chemical products which acted as poisons. Often hitherto unsuitable cultivating media had been used, and therefore those chemical products had only been found sparsely or not at all. Substances like glycerine, glycerine agar-agar, and glycerine broth were not met with naturally in the body, and one was apt to go wrong if these were used as media. Glycerine, in fact, was not necessary at all, and an exuberant cultivation could be obtained if alkali-albumen were used with an amount of salts added in proportion to those of serum. It was not necessary to use any other products than those found in the body, and alkali-albumen was the nearest approach to a natural medium that could be sterilised and handled with convenience. The bacilli seemed to produce their poisonous products almost entirely from the proteids, the carbohydrates and hydrocarbons being apparently unacted on. He asked if we were on the road to forming any generalisation as to the production of these bodies from the proteids. He thought we were. Ordinary digestion produced albumoses, and, if carried a stage further by artificial digestion, pepto-toxin, a basic body of definite chemical formula, would be formed. So the anthrax bacillus formed not only albumoses, but a specific alkaloid, which could be isolated, and which produced the symptoms of anthrax. Similarly he thought it would be found that all virulent organisms would produce not only albumoses, but an alkaloidal poison, which was lethal if injected in large doses. He was not convinced that the chemical reactions Professor Crookshank had mentioned proved that an alkaloid was really present. It should be separated as a base, salts should be formed from it, and its reactions in a pure state ascertained. It was quite possible that with a slowly acting pathogenic organism the process had been carried no further than to form a proteid poison, the alkaloidal stage not being reached. The actions of these bodies in producing the lesions of their respective diseases should be carefully studied, and all the albumoses were of interest. Anthrax albumose produced fever, but so also did the peptic albumose formed in ordinary digestion. The fever produced by injection of Koch's fluid was like that produced by the injection of a large dose of peptic albumose into animals, and this latter might be accompanied by coma in the animal just as coma had followed some of Koch's injections into human beings. He hoped that Professor Crookshank would go further and isolate the poison he had produced. The position he himself took at present was that an organism could not produce a proteid poison sufficiently powerful and in sufficient quantities to cause death, but that if this happened some alkaloidal substance must have been formed.—Dr. WOODHEAD looked at Professor Crookshank's paper from another point of view. In a complete study of the tubercle bacillus it was necessary to try to trace its morphological relations in the bacteriological kingdom; to trace out its life history, how it developed, and to follow it outside the body as well as within it; to study it in both its parasitic and saprophitic aspects. Dr. Crookshank had collected a large number of facts, but some of his observations, particularly those on the inoculation of tubercular guinea-pigs, might perhaps have been better if left to a future occasion. A very large number of experiments had already been made on guinea-pigs, and a fair number on cattle also, and no doubt definite results would soon be recorded. The study of this question from the chemical point of view was extremely important.—Dr. JOB COLLINS, after referring to the classical experience of Buchner with bacillus subtilitis and bacillus anthracis, thought that the position with regard to bacteria would become considerably modified, and that it might be that their action was comparable to that of the unorganised ferments of the body. Professor Crookshank's paper would lead to more attention being paid to the chemico-physical results of the presence of bacteria than merely to their morphological aspects. They might, indeed, only facilitate a change which could be accomplished without them.—Mr. SPENCER asked the author if he had any knowledge of cultivations in cold media.—Dr. HUNTER, in referring to the historical review of Professor Crookshank, said he had done wisely in separating the researches concerning alkaloidal bodies from those regarding proteids. The former had been studied chiefly by the Italian, French, and German schools; but these proteid bodies had been isolated by British study. Wooldridge, indeed, was the first to study them, but he was unfortunate in his nomenclature, and his work did not excite the attention it deserved at the time. Since then Hankin and Martin had conclusively established their importance in the symptomatology of disease and in explaining the production of immunity. Brieger and Fraenkel had afterwards described a series of bodies isolated from bacterial cultures which they called toxalbumins. The account of Professor Crookshank's experiments with his extract was interesting; it produced at first a marked lowering of temperature, and he had observed the same thing in cases inoculated with Koch's fluid which were tending towards a favourable result. As to the action of these toxalbumins and toxalbumoses in producing immunity, one of their most marked properties was to excite the cells around tubercular foci to an activity they were previously incapable of. At a post-mortem examination of a phthisical patient who had died after Koch's injection he had seen an intense cellular infiltration engaged in causing the absorption of caseous matter. The active principle seemed, therefore, to strengthen the natural properties of the ordinary cells of the body in combating the poison. However important the tubercle bacillus was in producing the disease, it should not be forgotten that it was the inherent weakness of the cells which allowed the body to be attacked. The treatment therefore should be in the direction of fortifying the cells to enable them to resist the action of morbid products.—Dr. CROOKSHANK, in reply, said that he had already come to the conclusion that the small amount of toxic substance produced was due to the fact that his media were not rich enough in proteids, and he had therefore begun to use alkali-albumen. He had also gone further in the separation of the chemical constituents of his extract than he had indicated in what he had read of his paper. He referred to Sir Hugh Beevor's important researches into the growth of bacilli at low temperatures. He injected cultivations into the dorsal lymph sac of the frog and the phagocytes could be observed taking up the bacilli; the contest between the two was prolonged, and the result at present uncertain. The secrets of success in such a research as he had been carrying out were to have carefully prepared media, a good incubator, and a thoroughly reliable trained assistant.

The following card specimen was shown:

Dr. E. PERRY: Tuberculosis of the Thyroid Gland.

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OPHTHALMOLOGICAL SOCIETY.

An Unusual Result of Cataract Extraction.—The Connexion between Accommodation and Convergence.—Miners' Nystagmus among the South Wales Colliers.

AN ordinary meeting of this Society was held on Jan. 29th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Dr. BERRY (Edinburgh) called attention to an unusual result of Cataract Extraction occurring in a female patient aged seventy-two on whom he operated. The extraction was performed on Nov. 27th about midday, and just at the termination of the operation an escape of decidedly vitreous fluid took place. About twelve hours later pain began, and was followed by vomiting. At 11.30 A.M. next day the dressing was removed, and was found soaked with blood, the eyeball being distended with blood. Shortly afterwards the patient had an epileptic seizure, followed within the next three hours by two more. No further fits occurred; the patient had never previously suffered from them. Dr. Berry brought the case before the Society in reference to the relation between intra-ocular hæmorrhage and the epileptic attacks. He ventured to suggest in explanation that the pressure of the blood in the eyeball caused an irritation of the intra-ocular sensory nerve filaments, resulting first in sickness and afterwards in a more marked nerve explosion.—Mr. CRITCHETT mentioned a case of intra-ocular hæmorrhage coming on apparently six or eight hours after an operation for cataract, and probably induced by the reduction of tension due to gradual leakage of abnormally thin vitreous.—Mr. EALES spoke of a somewhat similar case, in which the vomiting ensuing from administration of a general anæsthetic appeared to cause the bleeding.—The PRESIDENT cited an incident in his own experience in which an epileptic seizure occurred in a patient just as he had entered the knife in the course of a cataract extraction. He was able to complete the section, and then supported the eye until the fit had passed off, when he finished the operation.

Dr. BERRY also read a paper on some points with reference to the Connexion between Accommodation and Convergence, in which, whilst admitting that the ordinary rough method of estimating latent deviation of the eyes was quite sufficient to afford indications for operative interference, he indicated that there were very frequently present minor degrees of deviation which afforded a study of much scientific interest, though he deprecated these being made the grounds for unnecessary operative interference or application of prisms, as would appear from recent American literature to be too often the case. The apparatus employed in the investigation consisted of scales for different distances, graduated in metre angles, and a vertically refracting prism or Maddox's glass rod held in front of one eye. Dr. Berry had previously insisted that in adopting the metrical notation it was necessary to regard as the basis of measurement not the whole, but only half the angle included between the deviated axis and what should be the normal axis of the eye for binocular fixation, the entire angle being shared between the two eyes, for the most part equally. Dr. Berry referred to somewhat similar methods of investigation by which Donders obtained his well-known curves of relative accommodation and Nagel those of relative convergence, and pointed out that it had been then shown that the amount of dissociation possible was subject to individual differences and varied with the degree of accommodation or convergence, the amplitude of relative accommodation or convergence being greatest for the reading distance and beyond it. This also being the range at which deviation is least governed by association of these two functions when binocular vision is prevented, the relative divergence tending also to increase tolerably uniformly as the ordinary near point is approached—that is, with the amount of convergence required. It is greater also in myopia than in emmetropia, and in that than in hypermetropia, though it does not necessarily follow that the convergence lags behind the accommodation. The relative degree of these two depends upon the direction of the axis when convergence begins. For instance, the initial position might be one of one-metre angle of divergence; four-metre angles of convergence associated with four dioptres of accommodation would then still leave a divergence of one-metre angle on fixation for one-quarter of a metre distance. Of 120 individuals representing all conditions of refraction, the emmetropes in large proportion exhibited almost perfect parallelism for distant fixation, the tendency being to slight divergence. The myopes showed a greater tendency to convergent or divergent deviation, the latter being more conspicuous; whilst in the hypermetropes convergence was more prominent. These results alone would indicate that there is no necessarily intimate relation between accommodation and convergence for a distance, and further investigation indicates that correction of ametropia cannot be relied on to remove latent want of parallelism, but the tendency is for accommodative effort, whether voluntary or induced by glasses, to lessen divergence or increase convergence, but not coextensively. That individuals possessing this aparallelism of the optic axes do not see double under ordinary conditions is due to the establishment of an innervation equilibrium which serves as the starting point of convergent movements, and represents the position of physiological as contrasted with that of anatomical equilibrium. It is possibly the survival of a portion of this habitual extra innervation after correction which disturbs the ratio between accommodation and convergence in some of these cases. The paper was illustrated by diagrams representing the relative convergence and accommodation for fixing points at varying distances, expressed in dioptres and metre angles.—Dr. BERRY, in reply to Messrs. Hartridge and Frost, admitted that there would probably be some variation with the age of patients, but that all those examined by him had been between thirty-five and forty. He thought also that the amount of deviation did increase with hypermetropia.

Mr. TATHAM THOMPSON read a paper on Miners' Nystagmus among the South Wales Colliers. He called attention to the uncertainty existing as to the causation of the disease. The two most commonly accepted causes were: First, persistent strain of ocular muscles, especially in those miners who worked lying on their sides; secondly, insufficient stimulation of retina from imperfect illumination. After calling attention to the statement so frequently made, that nystagmus only occurred in those engaged in the process of "holing," where the miner lies on his side with the eyes directed obliquely upward, Mr. Thompson said that in the South Wales district there were special opportunities of judging between these two points of position or illumination. The coal worked there is of two kinds—house coal and steam coal. As a rule, miners engaged in cutting house coal worked in their seams with very little head room, some holing, the majority working "long wall." Safety lamps were the exception. On the other hand, the steam coal miner had, as a rule, from six to eight feet of head room, the seams being thick; no holing, all long wall work, which was done principally standing, but with much poorer illumination, owing to the necessity of using safety lamps. It was pointed out that in the former group there were all the conditions which, according to the supporters of the "ocular muscle strain" theory, should induce nystagmus. As a matter of fact the disease was extremely rare among the house coal workers, except in a few cases where safety lamps were used; whilst it was very frequently met with amongst the steam coal miners. Mr. Thompson had collected evidence from colliery surgeons, engineers, mangers, and workmen from all parts of the district, and held that the general consensus of opinion pointed emphatically to the imperfect illumination being a potent, if not the essential, factor in the causation. Several of the medical men whose experience on the subject he had sought had been for years in districts where house coal had been worked and holing practised, but who, until the stirking of the steam coal and the introduction of the safety lamp, had never seen miners' nystagmus. Cases were quoted where those suffering from the disease on using the safety lamps had been relieved on going back to work with the naked light. The absence of nystagmus amongst the labourers and "haulyers" was explained by the fact that their occupation was much more varied, as a rule with better illumination, and that much of their work was done by "feel," there being nothing like the necessity for continued strain of vision in semi-darkness. The symptoms experienced were usually dazzling, difficulty in fixation, and hemeralopia, but the writer had very rarely found vertigo, vomiting, or incoördinate movements of the extremities. In trying to induce nystagmus, attempted fixation of vision in a dark room had been found quite as effective as the oblique upward vision with the head flexed. The relation of miners' nystagmus

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to that induced by corneal and lenticular opacities and congenital deficiencies was considered, and the influence of imperfect stimulation of the retina in both cases pointed out. Mr. Tatham Thompson went on to point out that errors of refraction, and especially hypermetropia and hypermetropic astigmatism, were very commonly met with in those suffering from miners' nystagmus; it was exceptional to find it in the emmetrope. He suggested an inquiry in this direction as likely to prove of value. His opinion had been strongly corroborated by the evidence of Mr. G. A. Brown of Tredegar, who had some years ago found hypermetropia to be a very constant accompaniment of nystagmus. In conclusion, Mr. Thompson said: "I would submit that I have brought reasonable evidence to show that visual strain, with insufficient illumination, is, at any rate, as great a factor in the causation as strain of the ocular muscles; that the disease is by no means confined to those whose work is done lying down, and that errors of refraction, especially hypermetropia and hypermetropic astigmatism, are predisposing causes."—Mr. SNELL (Sheffield) spoke at some length in answer to Mr. Tatham Thompson's paper. He said it was a very curious fact that all the individuals exhibiting this form of nystagmus were following one occupation. He did not deny that defective illumination might have something to do with the condition, but his contention was that the oblique position in which the head and eyes were maintained whilst the man was at work exerted the chief influence in its causation. He thought the South Wales miners were worse off than those in the north country through lack of improvement in their lights, their lamps only yielding $\frac{1}{10}$ candle illumination, whilst in the north $\frac{7}{10}$ were attained. In spite of this advance, however, the disease was more common in the north now than formerly. The miners he knew were unanimous in accusing their lamps of being responsible for the disease; but men working in other departments with the same light did not suffer, whilst those affected did not recover when substituting naked candlelight, and others even developed the nystagmus whilst using candles. Mr. Snell quoted also three cases which had occurred in an excellent light, in men subjected to a similar lateral and upward eye strain whilst occupied in putting carriages in the cage at the bottom of a shaft. Some foreign observers had visited the pits, and came to the same conclusion as himself. The miners occupied in holing were obliged to adopt a peculiar position, which he illustrated by photographs. Only about 30 per cent. were so engaged, and these chiefly suffered. There were also many instances among them of tremors of the face, head, and neck, which were usually more marked on one side. The nystagmus could be checked by directing the eyes downwards. Many sufferers had been advised not to continue the same work and had improved; one especially got quite well under ordinary work, but relapsed directly he resumed the constrained attitude.

The following living and card specimens were exhibited:—

Mr. HARTRIDGE: (1) Chronic Glaucoma with Hæmorrhage in the Cup; (2) Models for Demonstrating Errors of Refraction.

Mr. WRAY: Binasal Hæmianopsia.

Mr. DOYNE: Case of Paralysis of Right Sixth and part of Right Fifth Nerve, with Partial Optic Atrophy.

Mr. JULER: Congenital Buphthalmos.

Mr. CRITCHETT: Conical Cornea treated by Cauterisation without Perforation.

Mr. LANG: Absolute Glaucoma with Extensive Retinal Hæmorrhage.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT the meeting on Jan. 15th, Mr. W. Dale James, M.R.C.S., President, in the chair, most of the time was taken up by a discussion on the proposed Midwives' Registration Bill. After a legal opinion on the Bill had been read, the President invited discussion, in which Mr. A. Jackson, Dr. Keeling, Mr. West Jones, Dr. Martin, Dr. Hargreaves, Mr. R. Favell, Mr. E. Skinner, Mr. Wrench, Mr. E. Barber, Dr. Sinclair White, Dr. S. Mathews, Dr. Stokes, Dr. Law, and Mr. E. W. Thomson took part—all the speakers, without exception, being opposed to the Bill in its present form. Dr. Martin proposed and Mr. Arthur Jackson seconded the following resolution, which was carried unanimously: "That this meeting of the Sheffield Medico-Chirurgical Society is of opinion that the passage of this Bill for the registration of midwives through the House of Commons should be delayed, and that a committee of the Society, consisting of the President, Secretary, Dr. Keeling, Mr. A. Jackson, and Dr. Martin, be appointed, to see the members of Parliament for Hallamshire and the borough of Sheffield, and to take such other steps as may be needful to secure delay."

Dr. HARGREAVES showed a Liver, weighing eight pounds, with Carcinoma. The cancerous nodules, of the size of a pea, were closely disseminated throughout the liver, those on the surface being somewhat softened and umbilicated. During life the liver extended into and filled the left hypochondrium. The patient was a married woman aged thirty-seven, dark-complexioned, of slight build, weighing about 7st. Twelve months before Dr. Hargreaves had showed a tumour removed from the left breast and two glands from the axilla of this patient. There had been a recurrence of the tumour in the breast, of rapid growth, and the axilla was filled with enlarged glands, as well as secondary deposit in the liver.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Jan. 7th, Mr. C. Haydon White, President, in the chair.

Gastrostomy.—Mr. A. R. ANDERSON showed a man aged fifty-five on whom the operation of gastrostomy had been performed six months previously (June 26th, 1890) for malignant stricture of the œsophagus. The disease was situated in its lower portion, close to its termination in the stomach. At the time the operation was performed the patient was much emaciated, and could swallow only fluids in small quantity and with considerable difficulty. He spat up blood-stained mucus, and any attempt to pass a bougie caused bleeding. There was no history of syphilis or of injury to the gullet. After the operation he improved greatly in health and gained weight, but there had been some falling off during the last month.

Mr. ANDERSON also read notes of a case of a youth aged eighteen over whose abdomen the wheel of a heavy cart had passed, the injury being followed by symptoms closely resembling those of ruptured bowel. An exploratory laparotomy revealed nothing beyond an intra-peritoneal hæmorrhage of considerable amount. The abdomen was washed out, and the patient made a good recovery.

Hysterical Lethargy.—Dr. HANDFORD communicated this case, which was of interest chiefly from its close simulation of organic cerebral disease. The patient was a young married woman aged thirty-seven, and was first seen late on the evening of July 20th in conjunction with her usual medical attendant. She was supposed to be suffering from either meningitis or uræmia. Her illness began three days previously with headache, delirium, and vomiting. She soon improved sufficiently to go about and take solid food. On July 20th she became unconscious, in which state she was first seen by Dr. Handford. It was impossible to communicate with her in any way. At long intervals she cried out "I shall go mad." Otherwise she never spoke and appeared not to understand questions. There was no alteration of the reflexes, no affection of the sphincters, no optic neuritis or ocular paralysis and no albumen in the urine. The breathing was quiet and the pulse soft and regular (100). The temperature remained normal throughout. She could swallow a few spoonfuls of milk, but retained it a long time in her mouth. The limbs were flaccid, but there was no paralysis. The physical signs pointed to the absence of any serious organic disease, and hysterical lethargy, corresponding to one of the phases of hypnotism in which the unconsciousness is deepest, was suspected. Next day it was ascertained from some other friends that she had been subject to hystero-epileptic fits since childhood, and also that she had lately been overworked and underfed, and had helped to nurse a neighbour's child who died of tubercular meningitis, and who had been accustomed to cry out "I shall go mad." The patient gradually recovered consciousness and mental power, but it was a month or more before she talked readily. The case bore some resemblance to one of acute primary dementia, but there were well-marked differences.—Dr. HANDFORD also related another private case in a boy aged ten, where, after a very trivial injury to

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the head, unconsciousness came on suddenly at the end of a week, and the boy was thought to be dying. But during examination he sat up and began to laugh. He had previously been somewhat wilful. He soon got well.

On a mode of Sterilising Milk for Infants.—Attention was drawn to the evidence, clinical and experimental, of the important part played by milk in conveying pathogenic micro-organisms into the system and to the probability of its being a frequent agent in producing tubercular disease in infants. Soxhlet's apparatus for sterilising milk was exhibited, and the possibility demonstrated of attaining the same object with the ordinary boat-shaped bottle and ordinary domestic utensils.

Dr. CATTLE read notes on examination of the Sputum.

Preparations.—Dr. HANDFORD demonstrated the Diazo Reaction in Ehrlich's Test for the Urine in Enteric Fever.—Dr. RANSOM showed Micrococci in Ulcerative Endocarditis.—Mr. ANDERSON showed an Encysted Vesical Calculus.—Dr. CATTLE showed Tubercle Bacilli stained by different methods.

ROYAL ACADEMY OF MEDICINE, IRELAND.

A MEETING of the Section of Pathology was held on Dec. 5th.

Congenital Deformity.—Dr. E. H. BENNETT exhibited a dissection of an upper limb congenitally deformed, and a cast of the limb taken previously to its dissection. The deformity was one to which special attention had been directed by the writings of Montgomery and of Sir James Simpson on intra-uterine amputations, and particularly by the latter author in his paper on the "Rudimentary Reproduction of Extremities after their Spontaneous Amputation." Further interest attaches to this description, as Sir James Paget has, with some slight reserve, adopted the theory put forward by Simpson in his lecture on the "Reproduction of Injured and Lost Parts," in his "Surgical Pathology." Later writers have held opposite opinions as to the explanation of the deformity. Mr. Annandale unhesitatingly adopted the views of Simpson; while Dr. Sturges, writing in 1880, opposes these. While many cases very similar in their external characters have been recorded, but few records of dissections of limbs so deformed have been published, the majority of observations having been made on the living. The present specimen, and that recorded by Dr. Cayley in 1865, have the merit of exposing the anatomical details, and these appear to be similar in all essential details. Dr. Bennett then detailed the facts of the case—viz., the left upper extremity of a young man which terminated at the middle of the forearm in a stump, well formed and plump; from the palmar aspect a knob projected which carried on its summit a row of five rounded tubercles; above the knob and its row of tubercles there was a circular scar on the limb; and at either side of the knob, opposite to the extremities of the bones of the forearm and within the circular scar, there were two minute depressions in which the ends of the bones of the forearm were attached to the skin. The results of the dissection showed that though atrophic in a high degree, the nerves, the bloodvessels, and the tendons, such as they were, passed along through the stump to reach and terminate in the knob and tubercles which represented the hand and fingers. This specimen furnished additional matter of pathological interest, for the brain, like the parts of the brachial plexus concerned in the supply of the hand and forearm, was atrophic at the region of the motor area of these parts. The brain will be photographed and figured by Professor Cuningham.—Dr. FRAZER referred to a remarkable case recorded by the late Dr. Adams, of a young boy who got a blow of an Italian iron which perforated his skull, and caused the escape through the wound of a considerable portion of his brain. His arm on the side opposite to the wound ceased to grow in proportion with his other arm.—Dr. BEWLEY said it was difficult to understand how the umbilical cord could amputate a limb by pressure without interfering with its own blood-supply.—Dr. PATTESON remarked that if the lesion in question had been produced by a constricting band it could only have acted by interfering with the blood-supply of the limb; and that being so, one would have expected to find the calibre of the arteries diminished. But it appeared that in the present instance they could be traced of full size down to the stump. It must have been caused by nerve disturbance; and if in this case there was a lesion of the motor cortex corresponding to the disturbance of the nerves leading to the part, he thought that what they had to deal with was, primarily, an arrested development of the motor area of the brain.

Notes on the Pathology of a Dentigerous Cyst.—Dr. A. W. W. BAKER made a communication on the pathology of a dentigerous cyst. A cyst about the size of a small pea was found attached to the palatine root of an upper molar tooth; it presented an unusual peculiarity in being lined with columnar ciliated epithelium, the occurence of such epithelium being accounted for by the fact that masses of epithelium are frequently seen in the root membrane of teeth, and are thought to be the remains or débris of the enamel organ, the development of the cilia being a subsequent process. The cyst gave rise to a good deal of pain, and had semi-purulent contents. The communication was illustrated with microscopic sections and photographs.—Dr. FRAZER exhibited a number of bones from the Irish elk, and made a communication thereon.—Dr. BIRMINGHAM submitted an example of Spontaneous Enterectomy.

Tricuspid Narrowing.—Dr. H. T. BEWLEY showed a heart, the subject of tricuspid narrowing. The heart was enlarged, weighing 23½ oz.; all the cavities were dilated and their walls hypertrophied. At the post-mortem examination they were all found full of blood. The tricuspid valves were adherent, the opening measuring 3 in. in circumference (normal, 5½–6 in.). The mitral valves were also adherent, the opening measuring 2⅝ in. in circumference (normal, 4½ in.). The aortic valves were extensively diseased. The heart muscle was healthy. Other organs healthy. Dr. Bewley called attention to the rarity of the lesion, and to the fact that with tricuspid narrowing mitral narrowing practically always coexisted, and aortic disease in about 50 per cent. of the recorded cases.

Scirrhus Cancer of the Male Breast.—Mr. PATTESON showed a specimen which had been removed in St. Vincent's Hospital by Mr. M'Ardle a few weeks previously. The patient was a strong, able-bodied man, sixty-seven years of age, with a good history, both family and personal. Mr. Patteson referred to the statistics of cancer, and found, as the result of a total of 1781 cases of carcinoma of breast, only 1·38 per cent. occurred in males. Billroth gives a somewhat higher percentage—2·77 in 252 cases. Sarcoma seemed to be more common in the male heart, but the available statistics are not sufficient to establish accurately the relative frequency.

Reviews and Notices of Books.

Notes on Typhoid Fever; Tropical Life and its Sequelæ. By JEFFERY A. MARSTON, C.B., M.D., M.R.C.P., F.R.C.S., Surgeon General, Medical Staff (retired). London: H. K. Lewis. 1890.

EVERY contribution to the natural history of enteric fever is welcome, more especially when it deals with its occurrence in tropical climates. There was a time when the greatest confusion existed regarding this subject, owing doubtless to the masked and modified forms under which this disease prevails in those regions. For this reason alone these "notes" from the pen of an officer of great experience and ripe judgment are sure to be heartily welcomed, but in addition he merits our thanks for the lucid manner in which he has dealt with the subject. The essence of his argument respecting the etiology of typhoid fever may be summed up as a plea against the too limited doctrine so admirably sketched by Budd—that, namely, of the specific nature of the poison, and the invariable dependence of one case of the disease upon a preceding one. This view, which is now so generally held, and is seemingly supported by the history of epidemics, is shown by Dr. Marston to be inadequate to account for the striking facts of the ex-

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treme vulnerability of the young soldier in India to the disease, the immunity of native troops, and the impossibility in many cases of tracing the disease to a contaminated source. We gather that he has been forced to the conclusion that altered conditions of climate, environment, diet, &c, operating on an organism at the time when the lymphatic and glandular systems are most active, may, without the introduction of any specific poison, initiate typhoid fever. This may be so, but for our part we should be inclined to regard all the attendant circumstances of the young soldier's life in India as so many factors disposing him to fall a ready victim to a poison which in many stations of that country may be considered to be indigenous. "Vulnerability" is a good term to express the condition induced in the organism by these climatic surroundings. However, Dr. Marston cites much evidence from his Indian experiences and from the Soudan campaigns which requires, and will be certain to receive, careful attention upon this much-debated question of the etiology of enteric fever. It is interesting to learn from him that the relapsing variety is not infrequent, but he expressly repudiates the distinction of a separate "typho-malarial" fever. He states, indeed, that the malarial stations of India do not furnish the chief number of cases of typhoid fever; and although, naturally, cases occur in which the typhoid phenomena are more or less modified by antecedent malaria, these cannot be regarded as forming a distinct third class of fever. Another interesting fact is the comparative frequency of ulceration of the large intestine in tropical typhoid fever—a dysenteric form. Dr. Marston speaks very confidently upon the occasional prolonged incubation of typhoid fever, citing cases from his own experience, and from the hospital returns of soldiers invalided home from Egypt for other complaints, and becoming attacked with typhoid fever after their arrival. The determination of this difficult point must, however, rest upon the absolute exclusion of any possible source of infection in the long interval that is here assigned to the incubation period. There is so much that is suggestive in the book that it is difficult to make selections. We may mention the hypothesis that the rose-rash is the result of an auto-infection—some absorption from the diseased intestinal glands; and that relapses are due to fresh action, possibly reinfection, of other glands that have previously escaped. The difficulties in the way of accurate diagnosis are illustrated especially by the cases of the "Mediterranean fevers,"—prolonged febrile diseases, non-malarial in character, and not accompanied by intestinal lesions. There is much to be learnt yet concerning the true nature of these obscure affections.

The pages devoted to treatment are written in a thoroughly practical spirit, and there is nothing to which exception can be taken. Indeed, the author's mistrust of antipyretic drugs, the use of which seems to him to be "unphilosophical" and "occasionally dangerous," is likely to be shared by others who, having abundantly tried them, have found them of doubtful benefit. An entire chapter is devoted to typhoid fever in India, with especial reference to its prophylaxis. Dr. Marston's injunctions may, we hope, attract the attention of those to whom the health of the army is entrusted. They comprise the avoidance of dispatching young or immature men to India; the sending newly arrived troops direct to the hill stations; the regulation of diet in accordance with the climatic conditions; the necessity of a pure water-supply; and the avoidance of undue and exhausting drills, especially in the hot season. The liability to enteric fever among soldiers newly arrived in India is greater than that of all other diseases, and the mortality is very high. To diminish this liability should be a foremost aim of army sanitarians. The little book contains also an instructive essay on Tropical Life and its Sequelæ, which will be read with as much interest and instruction as will those pages to which we have specially called attention.

The Geographical Distribution of some Tropical Diseases. By R. W. FELKIN, M.D. Edinburgh and London: Young J. Pentland. 1889.

THIS paper is reprinted from the Proceedings of the Royal Society of Edinburgh. It forms a *brochure* of fifty-four pages, to which are added sixteen maps. These maps are the great feature of the work; they have been carefully prepared, and form a very interesting and valuable collection. Each map is a chart of the world on Mercator's projection, and on it is shown in colours the extent of one or more tropical diseases, so that the area of distribution can be seen at a glance. The diseases treated of are:—(1) Malaria, (2) Dengue, (3) Asiatic cholera, (4) Yellow fever, (5) Oriental boil, (6) Endemic hæmaturia, (7) Beri-beri, (8) Oriental plague, (9) Dysentery, (10) Leprosy, (11) Yaws, (12) Fungus disease of India, (13) Elephantiasis Arabum, (14) Guinea-worm, (15) Filaria sanguinis hominis, (16) Scurvy, (17) Tropical abscess of the liver.

Thus, if we desire to know the distribution of dengue we have only to turn to Map 11 to see that this disease has visited Egypt, Tripoli, and the valley of the Nile; also Arabia, India, and Further India; and that it has affected some small islands in the West Indies, and a great part of the Southern States of the Union, as well as the northern shores of South America. In a footnote we are informed that it is "most prevalent in summer and early autumn," and that its incubation period is from five to six days. The other diseases are treated in the same way, and thus much valuable information may be obtained in a few minutes.

In the letterpress we also find much that is interesting. Each subject is treated on a definite plan. The name of the disease is first given and its various synonyms; secondly, a short definition of the disease, and a very brief description of it; the geographical distribution of the disease is then sketched out; and finally, its relation to various physical phenomena as affecting its causation, area, and its epidemic spread.

The author at the conclusion of the introduction says:—"I trust that this paper may be of special interest to members of my own profession, who will be able to see at a glance the diseases infesting the various districts in the tropics, and who will therefore be the more able to give the necessary advice to patients. It should be of special service to insurance companies, as indicating the areas of comparative safety or risk for the residence of their clients." In addition to these, we think that it would be extremely useful to medical officers in the army and navy and mercantile service.

We strongly recommend this work to all who are interested in tropical diseases. Though small in size, it contains a vast amount of information, and we heartily congratulate the author on the success of his labours.

The Twenty-fourth Report of the Trustees of the City Hospital, Boston, U.S. 1887.

THIS report, which is an annual one presented by the trustees in compliance with the ordinances, is accompanied with the reports of the superintendent and medical and surgical staff, rules for admissions and discharges, prospectus of training school for nurses, &c. It makes a small volume of about 100 pages, and gives the expenses incurred in working the hospital, repairing it, and the proposed expenditure in new buildings. During the year there were

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5577 patients admitted; of these 3113 were medical, 2382 surgical, and 82 ophthalmic. Of this number, 1742 were discharged well, 2903 relieved, 163 not relieved, 128 were not treated, 623 died (185 within forty-eight hours after admission), and 18 decamped. The net cost per head of each patient in the wards was 9·69 dols. During the year 14,318 out-patients made 48,534 visits for treatment. It was proposed to add 60 beds for contagious cases, when the number of beds will be 485 during the winter months, and 557 during the summer months, owing to the employment of tents; these had been specially utilised for typhoid fever cases. The number of typhoid cases was large. On Jan. 1st, 1887, there were 22 patients under treatment, and 245 were admitted during the year; of these, 188 were discharged well, 20 relieved, 5 unrelieved, and 43 died. The number of cases of diphtheria was also large; at the commencement of the year there were 7 under treatment and 184 were admitted, of which number 88 died, 2 were not treated, and 8 were discharged unrelieved. Referring to the table of surgical operations, we find that tracheotomy was performed for this disease on 26 males and 11 females; of these, 2 recovered, 4 were relieved, 1 not relieved, and 30 died. Intubation was practised on 20 males and 10 females; 3 were discharged well, 4 relieved, 1 remained under care, and 22 died. The causes of death after intubation are given as follows:—Sepsis, in from one to six days, 12; obstruction, from one to three days, 6; failure, from one to two days, 3. The causes of death after tracheotomy are given as follows:—Obstruction low down, from two to eight days, 13; general failure, one day, 2; general infection, from one to five days, 12; pneumonia, from two to eighteen days, 3. The medical and surgical reports have been carefully compiled. We think, however, that it would be well in compiling such reports that terms designating particular diseases or methods of operation by the name of the man who described the disease or practised a particular operation should be replaced by the clinical term. It is not necessarily evident that by "Rigg's disease" is meant a disease of the gums, or by "Heaton's operation" a particular method of injecting the hernial sac with twenty minims of white oak bark, thickened by the addition of fourteen grains of the solid extract of the same bark, with half a grain of morphia to relieve the pain. A return of the various out-patient departments is added, and the cases grouped according to the nature of the disease; many of these would probably be admitted. The report altogether is highly creditable, and would serve as a model for many others.

OUR LIBRARY TABLE.

A Handbook of the Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., B Sc., F.R C.P. Eighth Edition. London: H. K. Lewis. 1890.—The regularity with which fresh editions of this admirable text-book make their appearance serves to show that it continues to maintain its favoured position with the student, who finds it a safe and reliable guide. Apart from the clearness of style and its thoroughly practical character, a great feature of Dr. Roberts' work is the systematic method with which each subject is treated. The value of this kind of instruction is high, as it enables the student to marshal his ideas in an orderly manner and to assign to each part its special importance. The author has not been unmindful of the necessity of keeping his book "up to date," and he has evidently bestowed much pains on its revision. It is enough to say that it fully merits its popularity.

Studies from the Biological Laboratory of the Johns Hopkins University, Baltimore. Editor: H. NEWELL MARTIN. Published by John Murray, Johns Hopkins University. Oct. 1890. Vol. IV. No. 7. With 7 Plates.—This part is taken up with two memoirs: (1) Notes on the Anatomy of Sipunculus Gouldii Pourtalès (Phascolosoma Gouldii), by E. A. Andrews; and (2) The Relationship of Arthropods, by H. T. Fernald. Of the first paper we can only say that it gives a very complete and interesting description of the anatomical characters of a species that has not hitherto received much attention. Mr. Fernald's paper embraces a wider subject. He commences by a good account of the anatomy of Anurida maritima and with some notes on Lepisma saccharina, and then discusses the modern views as to the origin of the Arthropods, including that of Brauer and Lubbock, who hold that the insects are derived from a Campodea-like ancestor; that of Haeckel, that an aquatic zoëa-like form assumed a terrestrial habit and acquired a tracheal respiration; that of Gegenbaur, that the ancestors of insects were aquatic, breathing by a row of metamerically placed tracheal gills on each side of the body. This worm became terrestrial, the pairs of gills on the mesothorax and metathorax became greatly enlarged, and adapted for locomotion, while the others became torn off, leaving an opening where the tracheal trunk passed from each gill into the body, as the representative of the stigmatal opening. These and many more are referred to, and the author gives a scheme which represents his own view, the base or root of the Arthropods being represented by an unsegmented worm, from which, on the one hand, develop the crustacea, limulus, arachnida, and insecta, and, on the other, annelida and peripatus. The origin of the Myriapods he places doubtfully between the foregoing two groups, whilst Collembola represents a degraded member of the Insecta. There is an excellent bibliography.

The Practical Guide to Algiers. By GEO. W. HARRIS. London: Geo. Phillips and Son.—This is a handy little book, likely to render good service to those who winter at Algiers. There are some excellent phototype illustrations, and the practical information given is so disposed as to be readily accessible for reference. We are taught not merely how to travel, but how to travel economically. Mr. Harris very justly complains as to the paucity of trains. For instance, from Algiers to Oran there is but one train a day. It starts at six in the morning from Algiers, and reaches Oran at seven in the evening. This necessitates rising very early, which in dark winter days is not only unpleasant, but exposes invalids to great risks. It is the same at Constantine, where but one train per day starts for Biskra. This is the more unfortunate as Biskra seems to possess not merely the most remarkable climate of Algeria, but of Western Europe and Northern Africa. There is hardly any rain; in January the temperature ranges between 70° and 80° F. in the shade, and the Bureau Météorologique reports that, during the winter of 1889–90, the thermometer never registered less than 70° F. in the shade. This Desert City is warmer even than Malaga, where the sugar cane grows in the fields, and there is already fair hotel accommodation. Mr. Harris's book will doubtless embolden many invalids to venture out to these more distant winter stations.

Helbing's Pharmacological Record for January, 1891, is more therapeutical in nature than its forerunners, but the subjects touched on are relatively few. A brief note upon the ketone process for the preparation of chloroform is followed by a somewhat lengthy account of ichthyol, recent observations upon its uses in gynæcology, and as an anodyne, being summarised. Exception is taken to the Pharmacopœial name for lanoline, and the researches of Shoemaker and Unna are noticed. Mr. Helbing returns to the attack upon the work of Professor Dunstan and Mr. Block on salicylic acid, and gives numerous further observations

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which, in his opinion, outweigh "the one-experiment conclusion" of the physiological action of paracresotic acid. Demme of Berne recommends the medicinal employment of sodium paracresotate, and Carl Henne is of opinion that this salt is less toxic in action than the salicylates.

Proceedings of the Philosophical Society of Glasgow. Vol. XXI. John Smith and Son, Glasgow. 1889–1890.—This, which constitutes the twenty-first volume of the Proceedings, contains a good paper by Dr. James B. Russell on Sanitation and Social Economics. Another article is by Mr. Snodgrass, on Demonstration of Nerve-cells by pressing a cover-glass on a portion of the grey matter of the cerebrum on a slide, separating the two, and passing either the cover-glass or the slide over the flame of a spirit-lamp till faintly brown, when the form of the cells is well displayed.

New Invention.

AN IMPROVED DISINFECTANT DISTRIBUTOR.

THIS is an ingeniously constructed self-working apparatus which is intended to charge the cistern of an ordinary watercloset with a definite supply of a soluble disinfectant. It consists of a closed porous jar of the shape and size of a common gallipot. A leaden pipe of small calibre serves to convey the enclosed disinfectant by means of syphon action to the water in the cistern. The top of the distributor is provided with two small holes, one for the admission of water to dissolve the disinfectant and the other to act as a vent for the displaced air at the time of setting the apparatus. Obviously when the water is withdrawn from the cistern a supply of disinfectant (in this case permanganate) is syphoned over, and when the cistern is refilled the flow is gradually checked. The distributor is stated to contain sufficient disinfectant for a thousand flushings.

REFLECTIONS ON KOCH'S TREATMENT FOR TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—Reviewing all the phenomena that have been recounted as having been observed after the exhibition of this potent fluid, one is compelled to take serious counsel with oneself in response to the anxious queries of our patients, and to ask this question, Are we to take it as proven that we have here a specific remedy for the bacillus tuberculosis? It is to Professor Koch that we owe the generally accepted theory that tuberculosis is due to bacteria. On *a priori* grounds, therefore, we should expect the specific for the disease should be one that would destroy the cause. Professor Koch admits that the liquid does not kill the bacillus, but that it causes the death of the tissue in which the bacilli lie embedded—that is to say, it may remove the effect, or rather cause the death of the effect, and not that of the cause.

If one of many houses be infested and undermined by a horde of rats threatening the demolition of the building, it would not be a cure for rats to pull the walls down—the vermin would certainly betake themselves to other mansions. Professor Virchow's observations point the same moral with regard to the fatal cases that have had necropsies performed on tubercular patients who have been subjected to the liquid treatment. Another point: Are we to take it as proven that the liquid has a specific action on tubercular tissue? One of the arguments used is that lesions that before injection of liquid had been diagnosed as non-tubercular after an injection inflame and show signs of activity. Therefore the lesion is tubercular. Is not this begging the question, and an apt illustration of arguing in a circle? The onus of proof lies with the supporters of the theory that this liquid has a specific action on tubercular tissue in man. Therefore, if a competent observer diagnosed a lesion to be non-tubercular and the lesion reacts to the liquid, the evidence, as far as it goes, is heavily against the fluid having a specific action. One wants to know how many human beings with lesions of another sort have been injected, and what were the results. Also, will no other virus produce similar phenomena in tubercular human beings before we can say definitely that Koch's fluid has a specific action in man? Furbinger reports five cases where the fluid was unreliable in diagnosis. Is there no other explanation of the reaction induced by the liquid than that it is specific? Was it not a common phenomenon observed in surgical wards that a languid, non-healing wound took on a rapidly healing action after an attack of erysipelas? On the other hand, have we not all seen old cicatrices break down and wounds reopen during a violent attack of one of the exanthemata, or some chronic disorder entirely clear up after typhoid fever? In support of this view, I see that Dr. Laurence reports two cases of phthisis cured by an attack of small-pox. Yet we do not say that these viruses have a specific action. If a patient has a weak organ or any damaged tissue we expect that that organ or tissue will certainly be picked out, and apparently have to bear the brunt of the storm caused by any fever that may attack that patient; and we rather expect the cancer organism will attack a scar or mole in preference to more robust tissue. Koch's liquid is certainly a potent pyrogenic virus. Would it not be extraordinary if this virus did not pick out the markedly devitalised tubercular tissue—the points of least resistance? But it has not, therefore, necessarily a specific action, or affinity for it. It almost seems to me that the phenomena observed in connexion with this liquid in man may be explained on the theory of reactionary or substitutive fever—that is to say, if the organism is strong enough to respond to this powerful stimulus, under certain favourable conditions a healing process may be set up. Something similar on a smaller scale to what occurs when an indolent ulcer is blistered, or burnt, or better still, to the healing process that follows the inflammation produced by the ferment of the jequirity bacillus when applied in cases of granular lids, lupoid growths, and epithelioma. All the reserve vitality of the human organism is evoked to cope with this potent foe, and the weak places are made strong as the wave of inflammation passes over them—the after-glow that follows the storm. The legions summoned carry healing on their wings. But it sometimes happens that the weak places are so many, or the blood poison so powerful, that the patient sinks after the effort from exhaustion of the vital forces, or is poisoned by his own dead tissue.

To sum up: Can we be said to have a specific in Koch's liquid for the bacillus tuberculosis like we have in sulphur for the acarus scabiei, or in mercury for syphilis, or in quinine for the malarial organism? When the blood poisoning does good, is it not by rousing the system to increased cellular action, and then imitating nature's process by healing such, as has been observed under other modes of treatment, rather than by an action specific? We are none the less indebted to Professor Koch for his patient labours in adding to our knowledge and extending the limits of our healing and pathological vision.

I am, Sirs, yours faithfully,

A. H. BAMPTON, M.Ch., M.D.

Ilkley-in-Wharfedale, Jan. 26th, 1891.

STROUD HOSPITAL.—Prosperity has marked the condition of this hospital during the past year. Adequate funds have been raised to cover the cost of the additional buildings, and an increase in the receipts had enabled the committee to liquidate the deficiency left over from the previous year, and to carry forward a small credit balance. The endowment fund, which it was hoped would have reached £10,000 during the centenary year, remains at £9646 18*s.* 11*d.* In recognition of the prolonged and efficient services of the late Dr. Paine, the governors resolved to name the eight-bedded ward "The Paine Memorial Ward." A brass plate is to be put in the ward, surmounted by a portrait of the deceased, presented by his widow.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 7, 1891.

THOSE members of the Pathological Society who attended the usual fortnightly meeting on Tuesday night were amply rewarded by the very complete demonstration of the morphological varieties of the tubercle bacilli that was given by Professor CROOKSHANK. The specimens themselves gave ample evidence that Professor CROOKSHANK is a master of the technique of mounting and staining, and even the most unbelieving had evidence placed before them which must compel them to accept the fact that tubercle bacilli are undoubtedly associated with tubercle by that relation, accidental or causal. Turning from the microscope to the cultivation specimens, such observers would be equally impressed with the fact that, as the outcome of the experiments and observations of a large number of workers, we have at length gained a certain insight into the conditions that are necessary for the growth of the tubercle bacillus outside the body.

The paper itself is given in another part of our present impression, but it may be useful to indicate in brief outline the more important conclusions that are to be gathered from it and the discussion that followed. It is evident that, although chemists, bacteriologists, and pathologists are working to a common end, each emphasises somewhat different points. On the one hand, we have the bacteriologists taking up rather the botanical aspect, cultivating the tubercle bacillus in different media, obtaining different forms on these media, and retarding or increasing the rate of growth and development by the addition of certain substances. They, in fact, study the organism as a saprophyte, and are contributing most remarkable facts to our knowledge of the history of the organism outside the body. When, however, on the other hand, the chemist comes to consider the action of the organism as a parasite, the facts obtained by the botanist are for the moment of comparatively little value, as Dr. SIDNEY MARTIN indicated. All the knowledge that has yet been obtained in connexion with the action of the organisms on the animal economy points to the fact that they do not act in any way except through their poisonous products. These products are derived entirely from the breaking down of albuminoid substances. It may be, of course, that some of them are only one or two removes from the higher albumens; whilst others may be looked upon as the later products of the decomposition of this same material by special organisms. It is evident therefore that the specific toxic functions of a parasitic organism can only be brought into full play when it is placed in a medium that contains sufficient albuminoid material on which the organism may act to produce the specific material. Of course, it may be objected to Dr. MARTIN'S statement that alkali albumen (to which he would add the special salts required) is probably one of the best nutrient media for the growth of the tubercle bacillus in all its strength, and that alkali albumen does not occur as such in the body, just as fibrin does not; but to this may be answered that, although fibrin does not occur as such, the constant elements of which it is composed are undoubtedly present, and that the organism has therefore only a little more or a little less work to do to obtain the same results.

To the physician, however, who has to deal with disease in both its etiological and pathological aspects, something more than either the chemist or the bacteriologist tells him is necessary. He has not only to study the conditions under which the organism is developed outside the body, the method of invasion of the tissues by the tubercle bacillus, the local changes to which it gives rise, and the general or constitutional symptoms that result, but he has also, if possible, to trace the phylogenetic relations of the organism to see how its specific activity may be modified, and to apply the results of the experience already gained to the improvements of methods of treatment, whether by inoculation or by other means; in fact, nothing must escape his notice, and no means of increasing his knowledge of any phase of the life of the organisms that produce disease can be neglected or cast aside as unimportant. The tubercle bacillus within the next year or two will receive more attention than any other of the micro-organisms. It will be studied by competent and incompetent observers; the most contradictory results will be obtained; we shall be told that the tubercle bacillus forms enzymes, albumoses, tox-albumens and ptomaines. It will be argued that its growth takes place most luxuriantly under certain conditions, and that certain other conditions are absolutely inconsistent with any growth at all. Let all such very positive statements be taken with reserve, for it is becoming evident that if care is taken to make a transition by sufficiently easy stages, tubercle bacilli, like many other organisms, may be cultivated under very different conditions as regards soil, temperature, &c., and that consequently the resulting products are equally varied. Thanks to the younger workers in physiological chemistry in this country, a new school is gradually being formed, and it is evident that much more accurate and valuable data than we have hitherto possessed are being gradually accumulated. We may, in fact, look forward to a comparatively new development of bacteriological science as coming within the range of practical medicine—a development that, in its bearings on medical practice, must have most far-reaching results.

WINTER cruising for health, pleasure, or both objects combined would seem to be an increasingly popular custom. The number of shipping firms both in this country and elsewhere engaging in the traffic, the high class of ae vessels withdrawn from the more regular departments of trade for the purpose of meeting the new demand, and the variety and attractiveness of the programmes now issued in such abundance, all testify to the fact that winter cruising has, to use the stereotyped phrase, "met a felt want." We propose to inquire briefly into the utility of the custom, from the medical point of view, and to discuss

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the modes in which the winter cruise should be regulated in order that it may yield the maximum of advantage.

There is much on the surface of the matter to recommend the practice in question. It aims at withdrawing the individual from the British Islands at the most trying period of the year, and at affording him all the pleasure and variety of travel, with but a very small amount of its usual fatigues and discomforts. A well-appointed ship, handsomely fitted up and amply provided with both necessaries and luxuries, cruises in the Mediterranean or among the Canary Islands, touching at various points of great natural beauty or high historic interest, and thus affords the passenger rest, change, and mental stimulation in very agreeable combination. He can remain on board or within certain limits prolong his excursions on shore at will. He can benefit his health by the enjoyment of the tonic influences of sea air and the restfulness of life on shipboard, and at the same time gratify his artistic, literary, or antiquarian tastes. These advantages are so obvious that they need not be further dwelt upon. It will be more to our purpose to inquire for what classes of persons such trips are advisable and how they may best be regulated.

In the first instance, it is obvious that winter cruising is not adapted to serious cases of illness or to confirmed invalids. The English Channel and the Bay of Biscay are not very hospitable regions in winter for anyone suffering from a grave malady, and even the Mediterranean at that season will disappoint the over-sanguine person who looks for smooth seas and constant sunshine. The Mediterranean basin, from the fact of its narrowness and the proximity of great ranges of lofty mountains, is peculiarly prone to sudden and severe, if usually brief, storms. The winds, too, are frequently very chilly, and the cold will often surprise the traveller even as late as the month of April. In order to secure warm, smooth water and constant sunshine in winter we have to go further, and seek them in tropical or subtropical regions. Occasional storms and frequent cold winds, while a very grave hindrance to real invalids, need not act as a serious deterrent to those who are simply overworked and those who are already convalescent and seek only a little further recuperation. Cruises such as those we are considering are further ill adapted to real invalids from the fact that the mode of life on the ships employed in this way takes little account of the sick, and has almost exclusive regard to the pleasure-seeker. Diet, hours, amusements, and all the little trifles that go to make up the sum of daily life are not modified as the invalid would desire or require. It would be expecting too much to demand that they should be thus modified. Again, the calls and delays at the various points of interest in the cruise, while one of the principal attractions to the pleasure-seeker, are apt to prove either hurtful to the invalid or else wholly beyond his reach. A scamper through Pompeii or the ascent of Vesuvius would hardly be acceptable to anyone seriously ill, nor would it give him much satisfaction to remain on board his ship lying in the Piræus and lament his inability to undertake the fatigues of visiting Athens. It is to be feared that much mischief has often resulted from persons in precarious health eagerly availing themselves of these brief and precious moments ashore at some famous locality, and unwisely striving to include in a few hours an amount of sightseeing that would naturally require days.

On these and many other more or less kindred grounds we should deprecate the idea that the winter cruise is a therapeutic agent that can be safely and advantageously recommended to persons who are still the subject of serious disease. In such cases as phthisis, unless in the very earliest stage, we should not anticipate any considerable advantage from such cruises. The time is too short, the meteorological conditions encountered are too variable, the risks of trips ashore too serious, to permit us to expect that winter cruising would prove of much utility in cases of grave pulmonary disease.

But for that very large, and probably increasing class, who find frequent spells of rest and change indispensable for the maintenance of full physical and mental vigour, or for those who are well advanced in convalescence from serious illness, the winter cruise presents very great advantages and attractions. If wisely arranged, its risks and fatigues may be only nominal, while it may afford nearly all the gains which we usually anticipate from well-ordered travel. That these ends may be secured, the mode of life on board the ships employed for the purpose should be kept as simple as possible; the dietary should be ample and varied, but the multiplication of useless luxuries should be avoided, and some regard should be paid to the modifications which climate demands in matters of food and drink; late hours should be eschewed, and that serious form of gambling which is often so great an evil should be forbidden. The trips ashore should be so arranged that adequate time may be available for what it is proposed to accomplish, and the evils of hurry, hasty eating, and neglect of meals avoided. The traveller should remember that after days or weeks of luxurious ease at sea he is temporarily "out of condition" and unfit to undergo any feats of sightseeing that call for prolonged effort or great endurance. By such simple and obvious rules the winter cruise may be made not only delightful, but decidedly beneficial to health, and its dangers and disadvantages may be thus obviated.

A CASE of considerable medico-legal interest is reported in the *Journal of Mental Science* by Dr. ELKINS. The patient was a young married man of thirty-three, admitted to the Royal Edinburgh Asylum from the Calton Gaol, where he had been lodged on account of a homicidal attack made on a citizen of Edinburgh. The patient had only a few days previously been discharged from the asylum, of which he had been an inmate for three months. When admitted on that occasion he had just attempted suicide, and he had a history of having on at least two previous occasions tried to kill himself. He had also on one occasion been admitted to an asylum at his own request, because, as he said, he had "queer thoughts," and imagined that his wife was urging him to cut their child's throat. His attacks of mania seemed to bear some relation to drinking bouts, but he also had a history of slight "fainting fits," probably attacks of petit mal. It is also worthy of note that on the day before he committed the offence which placed him in the hands of the police he

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had gone to the asylum to ask to be readmitted, as he felt himself in a dangerous state. Unfortunately he did not see the superintendent; but on leaving the asylum he met a gentleman who had formerly shown him some kindness, and he conceived the idea of killing him. He bought for that purpose a clasp knife, and during that day he apparently watched his victim, and continued to do so until about the midday following, when, finding him alone in an unfrequented path, he rushed on him from behind, threw him over, and stabbed him twice. After inflicting the injuries and being disarmed, he quietly sauntered away, and when arrested was on his way to the hospital to have his hand, which had suffered in the struggle, dressed. To the police he gave a wrong name, but when taxed with the assault admitted it.

But for the previous history of this patient, the evident premeditation, the stealthy way in which the pursuit had been carried out, and the choice of a quiet unfrequented spot in which to commit the assault would all have been regarded as strong evidence of sanity. Homicidal impulse is perhaps too often supposed to evidence itself in a sudden burst of furious violence expending itself on the nearest and most convenient victim; but the case cited would seem to clearly show how erroneous such an idea may be, for the victim was selected, the weapon deliberately bought, and the assault planned and carried out with no little cunning. Yet in this case it is evident that the aggressor was no more responsible for his action than is a patient suffering from an acute illness who in an access of delirium throws himself out of a window. In his first attack of mental disturbance this patient attempted suicide by throwing himself overboard from the deck of a steamer; but it is quite conceivable that his mania might at that time have taken the homicidal form. In that case it would probably have gone hard with him before an ordinary jury, and we fear that any medical evidence in his favour would have had but little weight. But it cannot be too strongly insisted upon that such things may occur. Every asylum superintendent knows how dangerous and how untrustworthy epileptics are, how they may talk naturally and even jocosely, and all the time have some deadly weapon about them which they only want an opportunity of using, and how, when this attitude of mind has been replaced by another, they will in all good faith deny any knowledge of the weapon which has actually been found in their possession. And it must be remembered that epileptics are not found in asylums alone, that there are many going about their ordinary work in every way capable but for an occasional fit, and the fit may not be the severe and easily recognised convulsion with which all are familiar. It may be that a momentary "weird seizure," a staring into vacancy, a slight and transient pallor, may be the only outward and visible sign of the internal disturbance—a disturbance which may have as its sequel the most profound mental alteration.

In what we have written so far we have had in view chiefly the safeguarding of persons who while suffering from some temporary mental disturbance may have committed some criminal act. But what of the general community, who are, so to speak, at the mercy of such sufferers? How are they to be protected? It may be asked, From what is protection necessary? The case quoted above shows that personal violence is one thing, but there are others; for the post-epileptic disturbance may take the form of delusions leading to serious but groundless accusations against innocent persons. A case was lately published in the *North American Review* of a man who was admitted to hospital with paralysis of all four limbs, the result of a fracture of the cervical spine. To the house surgeon he recounted how he had been attacked by some men who, he said, had knocked him down and so maltreated him that he was now in the condition described. The patient died, and on the matter being reported to the authorities a searching inquiry elicited the fact that the whole story was a delusion; that the patient had been sitting on a wall talking to some friends when he suddenly became pale, fell off the wall on which he was sitting, and sustained the injury for which he was admitted to the hospital. In all probability he had an attack of petit mal, which had as its sequel the delusion which led him to make the above astounding declaration; and it is evident that but for the fortunate chance that the accident was actually witnessed by several people, more than one innocent man would have been in imminent danger of suffering much inconvenience, if not punishment, for a crime which had its only existence in the disordered mind of an epileptic.

Such a case shows one of the dangers to which the community is exposed. The previous case points to another, and it also shows how easy it would be for an irresponsible maniac to be treated as an ordinary criminal. What measures should be taken to obviate such dangers it is difficult to say, but in view of the occurrence of such conditions it is necessary that the greatest possible care should be exercised by all who have to do with criminal trials. Especially is this true in regard to anyone accused of an apparently motiveless crime; in such a case the possible occurrence of epilepsy should be kept in mind, and a careful and searching medical inquiry made into the previous history of the accused, and, it may be, of the accuser.

ALLUSION has been already made to the magnanimous attitude taken by the late Surgeon-General THE RIGHT HON. BALFOUR with regard to the Contagious Diseases Acts. Now that he is gone and his voice will be no more heard, and his pen no more wielded in their support, it will be well to produce his own words. As a member of MR. CHILD'S Committee he thus expressed himself: "I cannot concur in the recommendation to introduce a system of weekly examination of all known prostitutes." Four years later, however, he expressed a different opinion before the Royal Commissioners. In reply to the Chairman's question, "When the Act was first introduced, were you very sanguine in your expectation of success?" he answered: "I was not. I thought it would be almost a dead letter the first year or two. Taking all the general results, looking at all the venereal diseases, thought that it was likely to prove a failure. It was only when I came to go more minutely into the matter, and to get at the results by taking those two diseases which the Act was most likely

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to affect, that I came to see the important part that it was performing. Under the general head of venereal diseases there was such a large amount of secondary disease which would not be affected in the first instance by the Act, although ultimately the results on it would be shown; that the results appeared to be inadequate to the amount of expense and labour bestowed upon the working of the Act; but on coming to take out the two diseases which were likely to be affected by the Act, I changed my opinion completely as to its operation, and the more so as I found that the form of disease which had been reduced to under half of what it used to be was the only form of disease we know to be followed by severe constitutional affections—that is, the primary venereal sore." Further on he expressed himself even more strongly in their favour, and frankly admitted that the great reduction in primary sores among the men in the protected stations was due to the periodical examination of the women and the detection of primary sores at an early stage of their progress. He was convinced, against his previous conviction, by the returns sent to him, which were all on a uniform plan, the results of which as tabulated could not be known to the medical officers who sent them. He lived to see the beneficial results of the Acts shown still more strikingly before the Select Committee of the House of Commons, 1879 to 1882. For all this, however, he lived to see them repealed, not only in all the home stations, but in all the colonial stations, with one happy exception—Malta. He also lived to see the results of this repeal in the fact that the diseases which had been reduced to more than one-half in the protected stations returned to their former high ratio—that which prevailed before the Act of 1864, the first Act, was passed.

Feeling how very important it was that an authentic relation of these facts should appear in the journal of the Royal Statistical Society, since it was certainly an interesting experiment on public health, Dr. BALFOUR, who only vacated the presidential chair a short time before his death, invited Dr. ROBERT LAWSON, Inspector-General of Hospitals, to undertake its preparation. It could not have been entrusted to better hands. Inspector-General LAWSON has had large experience as an army surgeon, and his attention was directed many years ago to the great amount of invaliding among the troops caused by venereal diseases. He had formerly arranged the army statistics bearing on it for Mr. SLOGGETT, the inspector of certified lock hospitals under the Acts, and he gave evidence before the Commons Committee of 1879 to 1882. Besides possessing ample knowledge of all the details he is most scrupulously exact and accurate, taking an almost superstitious care to avoid any source of error, whether in favour of or against the Acts. This paper (an abstract of which will be found in another column), which was read before the Royal Statistical Society on the 20th ult., and will be duly published with an explanatory diagram, shows as plainly as figures and diagrams can do the whole history of the Acts, the fearful prevalence of disease before they were enacted, the gradual improvement as the first experimental Act of 1864 was amended and improved by the subsequent Acts of 1866 and 1869, the effects of the suspension of the periodical examinations in 1883, and of the final repeal of the Acts in 1885. Inspector-General LAWSON commenced his paper by indicating the forms of disease which came under the operation of the Acts, and the different manner in which separate bodies of men at the same place and at the same time were affected by these maladies. With regard to the first, he defended the classification of primary venereal sores under one heading instead of dividing them into indurated and simple sores, quoting Mr. JAMES LANE of London and Mr. RAWDON MACNAMARA of Dublin, two observers of great experience, to the effect that it is impossible to tell at the onset whether a primary sore is, or is not, the initial manifestation of syphilis. This is only what every practitioner of experience in venereal diseases knows perfectly well. The characteristic induration may be wholly absent, especially if the seat be cuticular, the inguinal adenopathy may be slightly marked or absent, both infective and non-infective sores may be single or multiple, the period of incubation may be most difficult, if not impossible, to verify—in short, it would be impossible to classify these sores at first, and the only certain diagnosis between them is the appearance of secondary symptoms. Inspector-General LAWSON gives an instance which came under his own observation in the west of Ireland in 1842 and 1843. The depôt companies of the 47th Regiment, with an average annual strength of 254 men, marched into Castlebar during July 20th and 21st in a healthy condition. In four months 90 men were admitted with primary venereal sores; from Nov. 24th to March 16th, 1843, when the depôt left for Boyle, fresh admissions had almost ceased, and after arrival at Boyle there were very few admissions of primary sores, and those of a mild description. From May 20th, 1842, to July 1st, 1843, there had been 27 cases of hard sores treated and 49 cases of secondary syphilis; so that, admitting that every hard sore eventuated in the constitutional affection, there were still twenty-two other instances following sores in which the induration was not observed. Indeed it was expressly mentioned in the notes made at the time by Inspector-General LAWSON that excoriated sores were more frequently followed by the constitutional disease than other forms. This shows the importance of both making and preserving carefully prepared notes of similar cases, and other army surgeons would do well to follow so good an example. That constitutional symptoms will follow "soft" or "simple" sores, and that well-marked induration may not be followed by secondary symptoms, are facts too well known to admit of dispute. The arrangement, therefore, of these primary sores is a perfectly scientific one, though in accordance with the nomenclature of diseases of the College of Physicians the simple sores are to be separated in future from the primary syphilitic. Great care will have to be taken, however, to prevent errors.

The next important matter is the variation of the frequency and intensity of disease among different bodies of men. Thus in 1864, among the cavalry, while the admissions for secondary disease (45·7 per 1000) were in the ratio of 1 to 2·6 cases of primary, in the infantry the secondary

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cases were 32, or 1 in 3·4 of the primary; and in the Foot Guards 33·5, or 1 in 4·6. The variations in simple sores were equally remarkable. Still more remarkable were the variations among the men stationed in different blocks at Aldershot. The ratios per 1000 were among the artillery—141·1 primary sores, 140·4 gonorrhœa. Among the men stationed in different blocks marked A to F, respectively, the primary sores ranged from 22·0 in F to 124·4 in C. Gonorrhœa ranged from 56·6 in E to 234·7 in C. This shows the importance of weighing every circumstance when examining statistics. It was impossible to account satisfactorily for these variations, and to a great extent they remain a mystery now.

We must reserve until our next issue further remarks on Inspector-General LAWSON'S interesting paper.

Annotations.

"Ne quid nimis."

A THREATENED STRIKE OF MEDICAL MEN IN SCOTLAND.

A LARGELY attended meeting of medical men, as reported in the *Edinburgh Evening Dispatch*, was held in Edinburgh, to debate the grievances of over-work and under-pay so long felt and hitherto so patiently borne. Practitioners from Rossshire, Argyleshire, Dumfriesshire, Inverness, Dundee, John-o'-Groat, Tobermory, as well as Edinburgh and the mining districts, were present, and eloquently revived the impressions produced by Sir Walter Scott in the "Surgeon's Daughter" of the inadequate pay and the incessant work of the Scotch country practitioner. Sir Andrew Clark has said he had heard the celebrated traveller Mungo Park, who had experienced both courses of life, rather give the preference as regards hardship to a discoverer in Africa than to wandering by night and day the wilds of his native land in the capacity of a country medical practitioner. Park mentioned having once upon a time ridden forty miles, sat up all night, and successfully assisted a woman under the influence of the primitive curse, for which his sole remuneration was a roasted potato and a draught of buttermilk. We had hoped that such descriptions were no longer true; but they were well matched by the graphic accounts which some of the speakers gave of their life work and its inadequate remuneration. One gentleman said he had been over fifty years in the profession. His working day was nearer twenty-four hours than eight or ten, during which he was either actively engaged in the service of the public, or in anxiety that he might be called forth to mount his horse, perhaps at midnight, and traverse in darkness paths dangerous in daylight, or perhaps to cross in a small boat the stormy waters of some arm of the sea. He received annually £40 from the parochial board, for which he was bound to give his skill and services to any poor person in his district, though his doing so might mean a ride of perchance twenty miles in the face of blinding snow or sleet! What was the result of half a century of such work? "He had earned a living, no doubt, but he had not saved one penny!" Another practitioner, from a colliery district, said that his life was the life of a dog, and his existence one perpetual worry from week's end to week's end. He received 1½*d.* a week from some hundreds of miners, and for this he was expected to be always ready. The other speakers bore similar testimony. A strike was advocated very plainly by some, but by others was discountenanced. In the end a committee was appointed to consider the grievances of Scotch medical men, and to report on remedies. We greatly prefer the committee to a strike. The inadequate payment of medical men is disgraceful—not in Scotland only. If this committee will really obtain sound and detailed information of the disproportion between the education and the work of medical men and their remuneration, they will do a great service, and may lead the public and the working-classes to see that medical labour will have to be differently valued. A strike of medical men is not to be thought of seriously. Apart from their number and their competition, there is something in the very nature and property of medicine to forbid it. But the public may be shamed into better recognition of our labours and our lives.

THE LUNGS OF LONDON.

THE latest report of the Metropolitan Public Gardens Association, which has just been published, will compare very favourably, as regards the importance of the work accomplished, with that of any previous year. Since its formation in 1883 the Association has added forty-three gardens and nine playgrounds to the open spaces of London, besides planting trees and placing seats at many convenient spots. During the last twelve months, moreover, it has been particularly successful in inducing Board School authorities to throw open to all children on Saturdays 166 playgrounds, amounting to an aggregate area of 100 acres. It has also effected the transfer of eight gardens and three playgrounds to the County Council, a step which leaves its own resources the more free for the execution of new work. Let us not forget to mention another noteworthy reform in which the hand of the Association has been usefully active—namely, the passing of the Open Spaces Act, 1890, which will assist local bodies in acquiring and maintaining open spaces as such for the public benefit. It is interesting to observe also that the wholesome example afforded by these various efforts has attracted the attention of city populations elsewhere, notably those of Philadelphia, Boston, U.S., and Copenhagen. The work of the Association, therefore, has not so far been allowed to languish, and the report before us contains a forecast of much further usefulness in the immediate future. Full details of that work, of its objects and its necessity in a population which becomes annually denser and more dependent upon the maintenance of all available healthy conditions, are well set forth in the report. The Association is not in debt, neither is it wealthy. Its ambition to do good is eminently worthy, and as yet there is ample opportunity for its exercise. We have, therefore, no hesitation in commending its generous energies to the helpful attention of all who rightly value health as a safeguard of national happiness and prosperity.

IMMUNITY OF ANIMALS FROM DIPHTHERIA.

IN the *Deutsche Medicinische Wochenschrift*, 1890, No. 50, Behring contributes a second article on immunity from diphtheria induced in animals, corroborating the experiments made by himself and Kitasato, an account of which has already been published. Behring's second series of experiments were supplemented by others on mice and rats, which enjoy a natural immunity from the disease. He states that he can produce this insusceptibility in five different ways. The first method is that introduced by C. Fraenkel (*Berliner Klinische Wochenschrift*, 1890, No. 49), in which the animals are inoculated with pure cultures which have been sterilised by heat. In the second process the animals are treated with injections which have been submitted to the action of the trichloride of iodine. Two injections are given, the first containing the chloride in the proportion of 1 in 500, and the second 1 in 5560. The third method consists in the injection of from 10 c.cm.

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to 15 ccm. of the transudation which is often found in the pleural cavities of animals suffering from diphtheria, this fluid having been proved to contain no bacilli. Many guinea-pigs, however, treated in this manner died with toxic symptoms, but those which survived were shown to be proof against further infection. Fourthly, the animals can be invested with an immunity by first infecting them with the disease, and then as speedily as possible (within six hours at the latest) staying the action of the poison by therapeutical means. The most successful treatment is by the chloride of gold and sodium, carbolic acid, and more especially by the trichlorides of iodine. Previous treatment with the last-mentioned drug is not sufficient to prevent the animals becoming affected with diphtheria. Lastly, the immunity may be conferred by means which have no connexion with the chemical products of the bacilli—namely, by treating the animals, previously to inoculation, with peroxide of hydrogen. It is singular that the use of this compound is of no value after the animals have developed the disease; on the other hand, a fatal result seems to follow more speedily when the drug is employed, and if it be mixed with the culture of the bacilli the virulence of the injection of such a culture seems to be increased. All the animals which enjoy an immunity from diphtheria, either naturally or artificially produced, also resist the action of the poisonous products of the bacilli, obtained either from cultures or from infected animals. That the acquired resistance to the action of the diphtheritic poison does not depend upon an accumulative tolerance is shown by the fact that mice and rats are naturally free from the disease, and also that Behring never succeeded in conferring an immunity by gradually increasing the strength of the injections. He considers that, as in the case of tetanus, the cause of the resistance is a special property of the living cells of the blood to destroy the diphtheritic poison. This theory is supported by the fact that the blood of rats which have been injected with the poison is not capable of conveying the disease, whilst that of other animals which are susceptible to the disease, and which have been inoculated, is capable of so doing; and also that the blood of guinea-pigs which have been rendered proof against diphtheria possesses the property of being able to render the poison harmless. On this latter point Behring promises more information.

CHANGES IN THE SPUTUM AFTER INJECTIONS OF KOCH'S FLUID.

IN Koch's paper of Nov. 14th of last year he described certain changes which the tubercle bacilli seemed to undergo after injections of his liquid had been administered. Since that communication was published various conflicting reports have appeared as regards the constancy of these changes, but no very exhaustive and reliable experiments have as yet been made public. Dr. J. Amann of Davos has had exceptional opportunities of observing these changes, and appears to have carried out his observations very carefully. His conclusions are published in the *Centralblatt für Bakteriologie und Parasitenkunde*, 1891, No. 1. He has examined the sputa from 198 patients, who were undergoing treatment by Koch's method; frequent examination of these sputa was made both before the treatment was commenced and during the course of the injections. The results are interesting, and may be summarised as follows: 1. The quantity of the expectoration is as a rule increased after well-marked reactions. 2. The tubercle bacilli are increased in number. In the sputa of seventeen patients, in which no bacilli could be detected before the treatment was commenced, on careful and frequent examinations after injection numerous rods were found. Dr. Amann considers that in this way the liquid is of much value in diagnosis. This increase of bacilli was found in about 70 per cent. of the cases; it is most probably only transitory, but as the patients in Davos had (when this paper was written) only been under treatment about three weeks no definite opinion on this point could be given. A decrease was only noticed in four cases. 3. The liquid has an undoubted influence on the form of the bacilli. There seems to be an active destruction of the rods, so that they appear as fragments, arranged together in small heaps. Sometimes this occurs to such a degree that no rods are visible. Dr. Amann mentions that he has noticed similar changes after the prolonged use of arsenic. 4. Another change that sometimes occurs is that after a few injections the bacilli seem to lose their characteristic resistance to the action of dilute acids, so that the stain is in great measure removed from them as well as from the general ground-work of the sputum; consequently, only a slight tinge of pink is left, or the bacilli are often completely decolourised. That this is the case is proved by adopting other methods of staining in which no acid is used, such as that introduced by Ziehl. Proceeding in this way, Dr. Amann was able, by preparing large glasses, to demonstrate the bacilli in one-half of the preparation, whilst none were to be seen in the other half; the former being prepared by Ziehl's method, and the latter by Neelsen's solution, and decolourised by dilute sulphuric acid. 5. In about 40 per cent. of the cases, some time after a reaction, the quantity of elastic fibres in the sputum was considerably increased, and exhibited a complete alveolar arrangement. It will be noticed in the above descriptions that Dr. Amann says nothing about the swollen state of the bacilli described by some observers.

THE VIRCHOW TESTIMONIAL.

THERE is no name that stands out more prominently in the history of medicine during the present century than that of Rudolf Virchow. The great exponent of cellular pathology, he has not only himself accumulated a large number of facts from his own observations, and been the means of a vast extension of our pathological conceptions, but he has by example and precept been the inspirer of pathologists all over the world. His influence, then, has been unbounded, and it is in recognition of this and of the unceasing labours of a lifetime devoted to the service of science that the opportunity of his seventieth birthday, which will occur on Oct. 13th, 1891, has been embraced to demonstrate the gratitude felt to such a man. The movement set on foot in Germany will doubtless spread to every country in the world, and we are glad to find that Great Britain will be represented. The nature of the proposed testimonial and the steps taken with regard to it so far in this country will be found set forth in another column. We heartily commend the movement to the notice of our professional brethren, and wish it every success.

KNITTED BANDAGES FOR ULCERATED LEGS.

STAFF-SURGEON PANNWITZ reports in a German military medical journal the success he has had in the treatment of obstinate chronic ulceration of the leg by using tubular bandages of knitted material. Decided improvement followed the first dressing, and by persevering with these bandages a complete cure was obtained. Ordinary antiseptics may be used at the same time, and of these he prefers iodoform. These bandages were also used in varicose veins and œdema of the leg in the place of the ordinary elastic bandages or stockings, and produced the best results, while even in valvular affections and Bright's disease considerable improvement followed their application. He thinks them sufficiently elastic for the lower extremities, and they do not cause an injurious constriction of the vessels as rubber

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bandages often do. Uniform pressure prevents a thickening of the margins of the ulcer and existing indurations gradually disappear. The greater porousness of the bandages is often also an advantage, as the function of the skin is not interfered with. The skin never becomes macerated, as is often the case when rubber bandages are applied, as through the great permeability of the knitted material part of any liquid discharged may be evaporated. The bandages are also easily cleaned and disinfected, and do not lose their elasticity for some time.

THE SALE OF TUBERCULOUS MEAT.

A BUTCHER at Landport was heavily fined by the Portsmouth Bench on the 2nd inst. for having in his possession, for the purpose of sale, six pieces of meat unfit for human food on Oct. 23rd, 1890. The animal yielding the meat was admittedly tuberculous, but there was a conflict of opinion as to the wholesomeness of the flesh between Dr. Mumby, the medical officer of health, and Dr. Maybury, who was called by the defence. Dr. Mumby's evidence was to the effect that all the pieces of meat gave marked signs of advanced tuberculosis, and that the flesh was decidedly unfit for human food. In answer to a question whether it could have communicated disease, he said that he thought it could, but that this question was still a moot one, and was being inquired into by a Royal Com ission. Dr. Maybury gave it as his opinion that it was a case of local and not general tuberculosis, but he admitted that he had not made so minute an examination as Dr. Mumby. At the same time, he thought it doubtful if the consumption of the meat would be dangerous in any case. The Bench decided against the defendant, who was fined £5 for each piece of meat, or £30 in all, and £7 18*s.* 6*d.* costs.

REMOVAL OF THE GASSERIAN GANGLION.

ON Thursday, Jan. 29th, Mr. Rose operated for the removal of the Gasserian ganglion in the theatre of King's College Hospital. The patient was a female aged sixty, under the care of Dr. Ferrier, who had suffered for many years from severe neuralgia affecting chiefly the superior maxillary nerve on the right side. Chloroform was given, and after stitching the eyelids together on that side in order to avoid any accidental injury to the eye, a flap of skin was dissected forward, the zygoma was exposed, and, after openings had been drilled with an electro-motor, divided and drawn down with the masseter muscle. The Coronoid process of the lower jaw was next drilled and divided in a similar manner, and turned up with the temporal muscle attached. The external pterygoid muscle was then cut through and the foramen ovale reached, into which the pin of a half-inch trephine was inserted, and a disc of bone surrounding it in this way removed. The bleeding was troublesome, and persisted for some time. The ganglion was seized by some specially constructed hooks, one of which had a cutting edge upon its concave surface; by means of these its attachments were loosened and divided. Perchloride of mercury solution (1 in 3000) was used during the operation. The bones which had been sawn were replaced and secured in position by wire sutures passed through the drill holes previously made, and a drainage-tube inserted. Cyanide gauze dressing was applied. The electric illuminator was found most useful during the deeper dissections. The patient has progressed most satisfactorily since the operation, having had no return of the neuralgic pain, although it is impossible to say at present that the whole of the ganglion was removed. The sutures were removed from the eyelids on the third day; the eye was healthy, but the conjunctiva insensitive. We hope to publish fuller details of this important case later. The operation, which was witnessed by a large number of members of the profession and students, occupied about an hour and a half in its performance. We are glad to be able to state that the patient on whom Mr. Rose performed the first operation for removal of the Gasserian ganglion in April last by a different method continues free from pain, and is in good health.

ANTI-VACCINATION ARGUMENTS.

LAST Tuesday, at the Woolwich police-court, a woman appeared in response to a summons relating to the neglect of vaccination of an infant. She explained that her husband objected to vaccination, and the grounds of his objections were stated by the vaccination officer. The argument of the husband was that "it is well known that bulls go mad every seven years, and that the cows make them mad;" and further, that "the same cows are used for vaccinating the children, and the children go mad." He says, observed the vaccination officer, that "the madhouses are full of vaccinated children." The conclusion of this man, that the insanity of these children is due to vaccination, is not different from that of other anti-vaccinationists, that every misfortune which follows vaccination must be due to it. The well-known parliamentary return enumerating the diseases to which an increased number of deaths have been attributed since vaccination was made obligatory is based on the same sort of reasoning. "It is of no use," said the vaccination officer at Woolwich, "arguing with a man like that." Is it, we may ask, any use reasoning with anti-vaccinationists generally? Every epidemic, every small-pox hospital gives evidence which ought to convince the most sceptical as to the value of vaccination, but this evidence has no value with some anti-vaccinationists. Nevertheless, there are many who are open to conviction, and it behoves every medical man who values the lives of his patients to do his best to make the actual facts as to vaccination known to them, that as far as possible the disastrous effects of small-pox may be escaped.

THE LINCOLN WATER-SUPPLY.

A GOOD deal of complaint is going on as regards the water-supply of the city of Lincoln. Even the medical officer of health writes to the public press recommending that the water should be first boiled, then allowed to stand until cool, and then filtered in a machine that will easily allow of cleansing. He then shows that some suggestions as to risk and unwholesomeness of the supply are not called for; but the fact of a public service needing before it is used all the manipulation to which he himself refers constitutes a quite sufficient justification for a condemnation of the existing state of things; and this especially so when he admits that the water has an unpleasant smell. True, this is also, he believes, solely due to a chemical decomposition; but his assurances are hardly calculated to restore confidence in this river water-service.

PROMINENT MUSCULAR FIBRES MISTAKEN FOR CALCULUS.

PROFESSOR ANTAL of Buda-Pesth describes in a recent number of the *Orvosi Hetilap* an interesting case of a traumatic affection of the bladder, where the cystoscope proved of great service. A railway guard received an injury from getting between the buffers of two carriages, which produced retention of urine. When catheterised no blood was found in what was drawn off, and therefore it was concluded that there was no rupture of the bladder, the retention, however, continued for some time, but ultimately passed off. Some two years after the accident, after a beer-drinking bout, retention again occurred, and the surgeon who was called in to relieve it, feeling a rough surface in the bladder with the catheter, thought there was a calculus, and sent the man into hospital. Professor Antal found that there was incom-

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potence of the bladder, and that the urine was free from any abnormal ingredient. On examination with the cystoscope the internal fibres of the detrusor, or muscular coat, were seen projecting above the surface enclosing irregular spaces. The mucous membrane covering the projecting fibres was of a pale yellowish-red tint, while that of the more deeply lying spaces was of a much darker red. The hyperæmia of the mucous membrane was by no means marked. The fundus of the bladder presented no abnormal conditions, those described affecting, however, all the rest of the internal surface. The catheter was passed twice daily, and in a very short time the incompetence was cured, and a subsequent cystoscopic examination showed that the trabeculæ had become very much less prominent. Professor Antal believes that the incompetence and "trabecularismus" which came on two years after the injury are to be ascribed to a disturbed condition of the innervation first of the detrusor, or muscular coat of the bladder, and afterwards of the sphincter.

ISOLATION OF TYPHOID FEVER AT LEICESTER.

AT last week's meeting of the Leicester Town Council what appears from reports published from time to time to be a vexed question between the Corporation and the Leicester Infirmary was under discussion. It appears that hitherto the infirmary has received and treated free of cost to the town the greater number of typhoid fever cases received into hospital, both the guardians and the Health Committee refusing as a rule to take these patients into the hospital under their charge. Latterly the infirmary funds have been at a low ebb, and the Infirmary Board therefore asks the Corporation to relieve them of the burden of treating enteric fever, which they maintain should be isolated in the public interest by the sanitary authority, and they threaten at a very near date to discontinue the reception of these cases from the town. The Town Council, however, seems to be divided upon the subject, some warmly advocating this course to be adopted, thus following in the wake of most other large towns, whilst the chairman of the Health Committee and others appear to be very reluctant to move in the matter. The whole question is now under the consideration of the committee. Probably one reason for hesitating to take patients suffering from this disease into the Corporation Fever Hospital, where hitherto only small-pox, scarlet fever, and erysipelas have been treated, is the fact that the hospital sadly needs reconstruction. If the buildings are the same as existed a year or two ago (when one of our commissioners visited Leicester to inquire into the "Leicester method" of dealing with small-pox), many of the wards are very little better than barns, and the like would probably be difficult to find to-day in any large town in the kingdom. Leicester is wont to pride itself upon its sanitary enterprise; the sooner it sets its house in order in this respect the better for its credit. To have no proper accommodation for the treatment and isolation of enteric fever is bad in the interests of the public health no less than that of the poor unfortunate sufferers therefrom.

HYSTERIA AND ORGANIC DISEASE.

As our knowledge of organic disease widens and deepens the number of cases relegated to the indefinite if convenient limbo of "hysteria" will no doubt become fewer and fewer. In a recent number of the *Charité Annalen* the details of a very instructive case in this relation are recorded. The patient was a woman of thirty-one, who, after an attack of typhus fever at the age of twenty-one, began to suffer from a gradually increasing anæsthesia, concentric contraction of visual fields, colour blindness, and disturbance of special senses. The patellar reflexes were present. The manner of the patient was marked by apathy, and sleep was induced by merely closing her eyes. There was much emaciation, the apathy became still more marked, and finally before death she was delirious, with hallucinations and delusions. The case was regarded clinically as one of hysteria, with subsequent mental disturbance, but at the necropsy an astonishing condition of things was found. There was tubercle in the lungs, the larynx, and the intestines, degeneration in the posterior columns of the cord, and myelitis in those columns in the cervical region. Such a condition with retained knee-jerk is certainly unusual. But there were also changes in Clarke's column, a congenital fissure in the medulla oblongata, and degeneration in the nuclei of the cranial nerves, the peripheral nerves showing no change. That so many changes in the nervous system should be present without obtruding themselves in such a way as to make possible a diagnosis other than the unsatisfactory one of hysteria is certainly strange. The case is of great importance, as affording a warning that hysteria is not to be diagnosed without the utmost care in excluding every possible form of organic disease.

THE NATURE OF SCIATICA.

THIS question is discussed at considerable length in the *Philadelphia Medical News* by Dr. Harrison Mettler, who points out that the nature of sciatica is shown in its etiology and symptoms to be that of a neuritis. Thus its most common antecedents are traumatism, exposure, gout, rheumatism, syphilis, and malaria. The occurrence of tender points in sciatica is accounted for by supposing that the tender points indicate the foci of inflammation. A similar explanation is given of the tenderness in the whole length of the nerve trunk. More unequivocal signs of neuritis are found in the wasting, the occasional reduction of faradaic excitability, long ago described by Anstie, and the altered trophic conditions, such as excessive perspirations and effusion into joints. Regarding the whole question, the author is strongly of opinion that sciatic neuralgia, without actual organic change in the nerve trunk, is a very rare condition.

THE LEPROSY COMMISSION.

INFORMATION has been received of the proceedings of the members of the Leprosy Commission, who have been busily engaged in pursuing their investigations since their arrival in India in November. They have visited the chief leper asylums in the Bombay and Madras Presidencies, especially at Bombay, Poonah, Belgaum, Hyderabad, Madras, Trichinopoly, Tanjore, Madura, Calicut, and Bungalore, and have examined a large number of cases in these institutions, as well as those collected for them by the civil surgeons in the districts visited. Dr. Rake and Surgeon-Major Thomson have proceeded to Rangoon to conduct inquiries in Burmah. Dr. Buckmaster, Mr. Kanthack, and Surgeon-Major Barclay have left Madras for Bombay. The members will subsequently meet in Calcutta.

THE TREATMENT OF SYPHILIS BY HEAT.

THE treatment of various forms of syphilis by heat has been advocated even in very early times, but no thoroughly scientific observations on the subject are to be met with in medical literature. This fact has induced Dr. Kalashnikoff, with the sanction of Professor Tarnowsky of St. Petersburg, to carry out some investigations on patients in the clinical wards under care of the latter. Several of these observations are described in the *Vrach*. The cases were all of skin affections of a papular or pustular character, due of course to syphilis, some of them having been treated in the ordinary way without result. Portions of the body affected were subjected to heat, and it was found that a

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marked improvement took place in those portions, and in those portions only. The time required for the purpose differed of course in different cases, and appeared to depend on individual idiosyncrasies. About a month was enough in several cases. Occasionally after a cure had been effected by heat a relapse occurred, but this was by no means more frequently the case than it is when a cure has been effected by ordinary antisyphilitic remedies. Dr. Kalashnikoff promises a further paper upon the physiological action of heat locally applied.

SALTS OF THE SEA AIR.

DR. EDMUND FRIEDRICH of Dresden, in a contribution to the *Deutsche Medicinische Zeitung*, combats the view that winds, especially easterly winds, cause the removal of the salts from the sea water and their more or less general dispersion. The author quotes in support of his own view a large number of old and modern works, and adds to these the results of his own experiments. From these it appears that sea air as such contains no salts at all, and that its saltness, both at sea and on the shore, results from infinitesimal particles of the water dispersed by the waves and tide, while currents of air cause the further distribution of the finest saline particles. He denies that evaporation contributes to the presence of salt in the sea air. The salt found in plants near the coast has the same origin as that in plants at some little distance. It is caused by meteoric water, which always contains chlorides. These chlorides are present in greater quantity on the coast because the humidity is greater and more frequent, and larger deposits take place. The value of the sea air for therapeutic purposes is also, he believes, not due to the presence of salt, but to the greater humidity, purity, and density of the air, as well as to its more uniform composition. In view of other observations, Dr. Friedrich does not dispute the favourable influence of the greater quantity of ozone, but he lays particular stress on the fact that, to be of good and permanent effect, the treatment of serious cases, especially of chest affections, must be undertaken in a suitable climate and a favourable situation. Even there a real improvement and permanent cure cannot be expected in from four to six weeks, but requires a repetition of the treatment or a stay of some months. The only islands in the North Sea which he considers appropriate health resorts in winter are Norderney and Foehr.

THE ETIOLOGY OF EMPYEMA OF THE ANTRUM.

SOME points of interest were raised in a "casual communication" by Mr. Sewill, at the last meeting of the Odontological Society, with reference to the etiology of empyema of the antrum. That the vast majority of such cases are due to dental disease was fairly well established in a paper read by Dr. Felix Semon at the same Society last year, an abstract of which appeared in our columns. The only pathological conditions of the teeth which in Mr. Sewill's opinion seem capable of exciting empyema of the antrum are such as are capable of causing direct purulent or septic infection—namely, inflammation, followed by gangrene of the entire pulp, or of that of at least one root of a molar; and suppuration around the apex of a root—peri-odontitis—which may be attended by necrosis or other morbid changes in the root end. Mr. Sewill had, however, lately seen a case in which dental disease seemed the only possible cause; and yet, although a decayed tooth was present, it proved on extraction not to be the seat of either of those pathological changes which have hitherto, in his opinion, appeared to be alone capable of giving rise to empyema of the antrum. The patient, a lady about middle age, had suffered from characteristic symptoms for about two months. Considerable toothache had been present, before and during the antral symptoms, in the second bicuspid of the affected side. Examination showed the other neighbouring teeth to be free from disease. The bicuspid was extensively carious. The pulp was exposed and about two-thirds destroyed, but the last third retained its vitality and was extremely sensitive. The tooth was slightly sensitive to percussion, but there was no other sign or symptom of periosteal inflammation. It being necessary in any event to open the antrum, the bicuspid was extracted. Examination showed that a portion of recent pulp occupied the upper portion of the canal; the external surface of the root exhibited but slight signs of inflammatory activity. A communication between the alveolus and the antrum, admitting a bristle-wire probe, was found. The opening was enlarged in the usual way, and the diagnosis confirmed, when a large accumulation of fetid inspissated pus was washed out by the syringe through the nose. The point of interest in the case was the apparently insufficient amount of dental disease; and it would lead Mr. Sewill in future more strongly than hitherto to insist upon the necessity of extracting teeth in every case of empyema of the antrum in which they might be suspected as sharing in its causation.

THE CROYDON DIPHTHERIA EPIDEMIC.

DR. PHILPOT reports that this epidemic, which occurred mainly in October last, attacked 191 persons and caused 38 deaths. He believes it was due to a special milk service, and he refers to the occurrence of an eruption on the teats of the cows which was detected by Dr. Klein. This is by no means the first time that such an eruption has been followed by the occurrence of diphtheria amongst drinkers of the special milk in question. It would be well if the veterinary authorities would investigate the subject more in detail than they have done as yet.

THE GERMAN HOSPITAL.

AT the general court of governors of this hospital, held on Jan. 30th, the question of giving the medical staff representation on the committee was again raised, as we intimated it would be. The committee proposed that the hon. senior physician and hon. senior surgeon should be appointed for this purpose. An amendment, to the effect that two members of the staff, not *ex officio*, should be elected in rotation, was defeated. We have already intimated our opinion that a better representation of the views of the medical staff would be secured by the rotation principle. Undoubtedly the senior officers of an institution are apt to become either too conservative, or too much occupied with outside matters, to feel much interest in hospital administration. Still, the principle of medical representation is conceded in the resolution of the committee, and reformers must not expect to carry all their views at once. We sympathise with those who would achieve a more complete representation of the medical staff, but we advise them to be content with the progress already made.

HYPERTROPHY OF THE PANCREAS.

PROFESSOR GENERISCH of Clausenberg recently found, on making a post-mortem examination of a middle-aged man, that a tumour which could be felt through the abdominal walls was the greatly enlarged head of the pancreas which embraced the duodenum. The latter was much contracted, so that it was only large enough to admit the thumb. The upper portion of the duodenum, however, was enlarged to about the size of the colon; the stomach was also dilated and the muscular coats of both stomach and duodenum were hypertrophied; the annular portion of the pancreas was

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found to be supplied by special arterial and venous twigs, and it was furnished with a special branch from the ductus communis choledochus. This combination of a ring-like pancreas surrounding a contracted duodenum has been occasionally noticed before in cases described by Symington, Ecker, and Aubery, and an approach to the same condition has by no means unfrequently been observed where there has been an abnormally developed pancreas partially surrounding the duodenum which even then is frequently found to be contracted. In both classes of cases there seems to be a tendency for the stomach and upper part of the duodenum to become dilated. This dilatation may be produced, when there is no contraction of the duodenum, by a "kink" being formed in the gut, owing to the fixation of the duodenum, the result being that the stomach and duodenum become distended with food, and permanent dilatation and hypertrophy are induced. This is interesting from a clinical point of view. Further, Prof. Generisch remarks that in cases of abdominal tumour it is well to remember that a hypertrophied head of the pancreas might convey much the same impression by the touch as a carcinomatous pylorus.

BERI-BERI AMONG FISHERMEN.

BERI-BERI has usually been regarded as a disease of the tropics, but its occurrence among those engaged in fishing on the Newfoundland banks, as described by Dr. Birge of Princetown, Mass., shows that northern latitudes *per se* do not secure immunity from the malady. In October, 1890, no less than twenty cases were landed from vessels which had returned from the fishing. Eleven of these were from one vessel, which had a complete crew of thirteen. Of these two died within twenty-eight hours, another died later of hydrothorax, and the rest recovered. One had died on the voyage home. The symptoms in all the cases were similar—viz., general œdema, breathlessness, numbness of limbs, shuffling gait, and inability to bend the knee. The knee-jerk was lost in two, and diminished in all the sufferers. The spleen was enlarged in three cases. Before the symptoms manifested themselves there were prodromata in the form of depression, weakness, and disinclination to work. The appetite remained good throughout. The condition is probably to be assigned to insufficiency and bad quality of the food, and it may be that there is some analogy to scurvy. In eastern countries it has been suggested that there is a close connexion between the prevalence of the condition and the rice diet so common, and almost universal, where the disease is endemic, and the success obtained in treating the disease by what are usually regarded as antiscorbutic remedies lends a considerable amount of probability to this explanation.

"REFLEX EPILEPSY."

IN the *New York Medical Journal* Dr. Byron relates a case of convulsions associated with herpes in the distribution of the upper superficial branches of the cervical plexus. The eruption was preceded by pain in the regions of the shoulder, neck, and upper part of the chest. The pain was increased by pressure. Simultaneously with the appearance of the eruption the patient began to suffer from convulsions. These were preceded by a warning in the form of a sensation in the cardiac region, the head and eyes were turned to the right, there was tonic followed by clonic spasm affecting the right side more than the left, with unconsciousness, lividity, and foaming at the mouth. The herpes was treated by an external application, and bromide and chloral were given internally. The case is described as one of epilepsy caused by the herpetic eruption. Considering how very reluctant our best authorities are in granting even the existence of purely reflex epilepsy, it seems to us that considerable assumptions must be made before such a case as that described is placed in this category. It is manifest that before classifying it at all fuller particulars should be furnished as to the likely cause of the eruption. That the convulsions should have been the result of the herpes is of course possible, but it seems more likely that both conditions may have been the result of some common cause. Nor is there any evidence that the cessation of the convulsions was due to the disappearance of the eruption. No doubt they disappeared simultaneously, but it must be remembered that not only was an external application used for the eruption, but two of our most valuable remedies for epilepsy were given internally. Even at the time at which the description of the case was written those drugs were still being administered, so that it is at least premature to cite such a case as an example of reflex epilepsy.

BANK NOTES AND INFECTION.

PASSING from hand to hand among all classes of the people, it would be strange, indeed, if money, and especially paper money, did not in its transit become from time to time the vehicle of infectious disease. Even the crisp "fiver" of the Bank of England no doubt has often borne the germs of fever in its folds, and how much more then the greasy, discoloured, and well-thumbed one pound note, or the paper fraction of some foreign currencies. Higher values have here a distinct advantage. Less common, less in keeping of the overcrowded poor, less handled and soiled therefore they may, perhaps, in many cases run their circuit without having done much mischief. There are, indeed, preservative circumstances which guard the sanitary credit of all paper currency. One is the very freedom of circulation and the ventilation this ensures. Smoothness of surface is another; and a third, which operates in a minor degree, is found in the fact that adults, not children, are chiefly concerned in the business of exchange. These qualifications may suffice to justify, at least by a negative verdict, the employment of paper money from a sanitary standpoint. Still, a certain risk remains, and careful persons will do well to note this, and on occasion to disinfect even their bank notes. The danger, such as it is, should also, in our opinion, be allowed some weight in deciding the question whether a small note currency hitherto not found to be indispensable should or should not be generally adopted.

THE TRAINING OF BLIND AND DEAF MUTE CHILDREN.

YEARS have elapsed since the authorities of the Education Department, following established usage in this and other countries, turned their attention to the school training of blind and deaf mute children, and already classes have been formed in various Board Schools for the instruction of these once neglected children. The circumstance is a practical recognition of the fact that, apart from the necessity of using particular methods, the condition of the mute and the blind places no exceptional barrier in the way of their instruction. A Bill which is about to be presented to Parliament, and which if passed will compel the attendance at school of such children, does not therefore come too soon. The poverty of parents will alone constitute an excuse. In this case the cost of elementary education, of industrial training, and (if needful) that of board and conveyance, will be defrayed by the department, assisted as far as possible by the parents. In the case of failure to educate from mere neglect the parents will be liable. Considerable latitude will be allowed in the selection of a school, so long as it furnishes reasonable guarantees of efficiency in teaching. If needful, power will be granted to enlarge any school under the control of the

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department, in order to meet the special requirements of this class of pupils. Unless it be in the matter of charge for maintenance and conveyance, it is difficult to see how exception can be taken to the provisions of the Bill. As regards this point, however, it should be remembered that the charge in question may sometimes be inevitable, since only a limited number of schools can, at least in the meantime, afford the special method of teaching which is called for, and also that such limitation is essentially economical. It is clearly impossible, moreover, for the department to transfer its teaching function to other bodies. The blind or mute child, if intelligent, has a right to elementary instruction by such methods as are suitable to the case, and should in time repay at least a part of the cost of training by discharging usefully the duties of citizenship.

THE WHITE INFARCT OF THE PLACENTA.

DR. FINZI, who has made a number of observations on placentæ in cases where the children were either stillborn or died shortly after birth, states, in a preliminary note published in *La Riforma Medica*, that the most frequent morbid condition found was the so-called white infarct. It is occasionally confined to the lacunæ, and is due to a thrombosis occurring in them, which is caused sometimes by a retardation of the circulation, at others by necrosis of the villi. In the latter case the villi may be seen to be invested with a very delicate mosaic of exceedingly minute polygonal transparent nucleated cells, which may be an atrophic condition of the normal epithelium. Generally the infarct is situated in the tissue of the decidua, and consists of an exudation rich in white corpuscles and in nuclear detritus, which elements are found infiltrating the basal layer of the decidua or collected in foci in certain points in the fibrous tissue. In other words, the so-called infarct is the result of a placentitis, and sometimes hæmorrhage may be seen to have occurred in the substance of the decidua, proceeding from the utero-placental vessels. Secondary thrombosis of the lacunæ, from retardation of the placental circulation, not infrequently follows this infarct of inflammatory origin; and when this is the case there will generally be discovered a history of syphilis, tuberculosis, or pelvi-peritonitis.

THE WORKING OF THE CANAL BOATS ACTS.

SOME interesting details relating to the Working of the Canal Boats Acts, 1877 and 1884, are to be found in the Annual Report of the Local Government Board for last year. It is satisfactory to learn from this source that the work of inspection has in many districts, though not in all, been carried out in a fairly efficient manner. As a rule it has not been opposed, but rather welcomed with intelligent interest by the boat population. There can be no question as to the good thus accomplished, though the evidence seems to show that abuses of a serious character have prevailed only in a moderate degree. In the majority of cases noted the contraventions of the Acts have not consisted in grave defects of hygiene or in moral delinquencies, but in such offences as omissions to register, to produce required certificates, and the like. Reported instances of overcrowding have been less common than might have been expected, less than 4 per cent. of the total number of infringements being classed under this head. In this connexion a suggestion by Dr. Collingridge, medical officer of health for the Port of London, that the registration of fore-cabins should be discouraged, is worthy of remark. These insignificant corners add little to the convenience of a boat. They are, moreover, close and apt to be damp, are commonly not used for sleeping, and serve merely to sanction overcrowding in the main cabin. As regards cleanliness, the boats afford proof of progressive improvement. Ventilation, since it can hardly be had without draught, still interposes a difficulty; but we note with satisfaction that infectious disease, thanks, no doubt, to the influence of a life in the open air, is rare among the canal population. In spite of the uncertainties of a nomadic existence, the education department has been able to secure a fairly regular attendance on the part of the barge children, and this is only one of several advantages resulting from a growing tendency on the part of married boatmen to place their homes on shore, and to use the boat merely as a means of transit for themselves and their cargo.

HEALTH OF PROFESSOR TYNDALL.

WE are glad to report a definite improvement in the health of Professor Tyndall, who has been confined to his bed for several weeks at Hind Head, Haslemere. Professor Tyndall had been prostrated by long-continued difficulty in obtaining sleep, and was gradually getting the better of this when he was attacked with inflammation of a superficial vein of one leg, which occasioned great pain, and of course rendered absolute rest essential. The vein has entirely recovered, and Dr. Tyndall would ere now have left his room but for an attack of congestion of the lungs, which, although very limited, has necessitated still further delay. This has now to a great extent subsided. The patient is under the care of Mr. Whiting of Haslemere, and Dr. Buzzard has been down to see him in consultation on several occasions.

THE NEW GENERAL HOSPITAL, BIRMINGHAM.

A VERY large and enthusiastic meeting was held on the 29th ult. to consider the proposal to rebuild the hospital on the site, in St. Mary's-square, chosen by the governors. The resolution to this effect was proposed by the Right Hon. Joseph Chamberlain, seconded by Dr. Wade, and carried unanimously. The sum of £75,000 has already been collected for the carrying out of the scheme. A fuller notice of this project will appear in our next issue.

OATH ADMINISTRATION IN COURTS OF LAW.

THERE are indications that attention is being drawn at last to the unsatisfactory mode in which the oath is administered to witnesses, jurors, and others, in all our courts of law, Scotland being excepted. At the last assizes Mr. Justice Hawkins remarked at a trial in Chelmsford how very unsuitable the words of the oath as usually administered were when the witness was a child who could not possibly understand them. He would substitute, "I swear that I will tell the truth," &c., as being more intelligible to such witnesses. It is unfortunate that the learned judge did not, while he was about it, take a wider view, and condemn the whole system—the administration of the oath by an officer of the Court, who gets into a very monotonous and unimpressive mode of recital, and the handling and kissing of a dirty, greasy book which has been in indiscriminate use for months, if not years. This has been frequently alluded to in the columns of THE LANCET during the last few years, and it is now high time that steps were taken to provide the remedy, which is extremely simple. In Scotland the presiding official, judge, or sheriff administers the oath standing, with the right hand uplifted; the witness, also standing with uplifted hand, repeats aloud the words of the oath, which are not only more solemn than that used in England and Wales, but so simple as to be suitable for witnesses of any age. A short Act providing a modification of the Scotch mode of adjuration would probably pass with little or no opposition. Our judges, coroners, and magistrates are already too overworked to have additional duties imposed upon them. But the repeating of the Scotch form of words from a card and the uplifted hand are reforms to which no reasonable

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person would object, and we commend the suggestion to medical and other members of the House of Commons. *A propos* of Mr. Justice Hawkins's remark, it is a fact, however paradoxical it may appear, that the words of the oath as translated to foreigners by an interpreter are much more intelligible to them than they are to English witnesses, though in their own language.

FOREIGN UNIVERSITY INTELLIGENCE.

Rome.—Dr. G. Colasanti has been appointed Extraordinary Professor of Materia Medica and Experimental Pharmacology.

Siena.—Dr. Aducco of Turin has been appointed, after competition, Extraordinary Professor of Physiology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Heinrich Obersteiner, who had been Body Physician to the Emperor Maximilian of Mexico. Dr. Obersteiner was Doctor of Philosophy as well as of Medicine, and was the father of Professor Obersteiner of Vienna. He was in his seventy-first year.—Dr. M. G. C. Gori, Professor of Military Surgery in the University of Amsterdam.

THE following lectures for the present year will be delivered at the Royal College of Physicians on each of the following Tuesdays and Thursdays at 5 o'clock:—The Milroy Lectures, by Dr. Thorne Thorne, Feb. 17th, 19th, 24th, 26th, on "Diphtheria; its Natural History and Prevention." The Goulstonian Lectures, by Dr. T. Oliver, March 3rd, 5th, 10th, on "Lead Poisoning in its Acute and Chronic Manifestations." The Lumleian Lectures, by Dr. Broadbent, March 12th, 17th, 19th, on "Structural Diseases of the Heart, from the point of view of Prognosis."

THERE has just died Alderman William Kirk, M.R.C.S., Mayor in 1890 of the borough of Hedon, Yorkshire. Mr. Kirk was said to be the oldest mayor and the oldest surgeon in practice in England. He was born at Kimberworth in 1807. He was for the first time Mayor of Hedon in 1870, and in all he held the office on five occasions. A few months ago his portrait was painted by Mr. T. Tindall, the funds having been raised by public subscription. It will be placed in the Hedon Town Hall.

DR. HENEAGE GIBBES, Professor of Pathology at the Ann Arbor University, Michigan, has recently been placed on the staff of the Harper Hospital, Detroit, as Consulting Pathologist, in recognition of his researches on the subject of phthisis. This appointment will enable Dr. Gibbes to prosecute his investigations into the nature and treatment of pulmonary phthisis on a larger scale than heretofore. In our issue of Jan. 17th we gave a brief outline of his views.

WE have received from the publisher, Herr J. Casper (14, Behren-str., Berlin, W.), a proof copy of a photogravure from a portrait of Professor R. Koch by Herr Hoffmann. The engraving is an excellent one, and the likeness very faithful. There may be many in this country who would wish to possess such a memento of one whose researches have aroused universal interest.

THE Czar has presented the Imperial Obstetric Physician, Professor Krasovski, with a gold snuff-box ornamented with the imperial monogram and crown set in brilliants.

SIR WILLIAM CAMERON GULL, Bart., the son of the late Sir William Withey Gull, formerly Senior Consulting Physician to Guy's Hospital, has founded a Gull Studentship in Pathology at Guy's Medical School, to commemorate the long and intimate connexion of his father with the hospital, and to associate the name of that eminent physician with the advancement of one of his favourite studies.

AT the meeting of the Medical Society of London on Monday evening next, Dr. Douglas Powell will read a paper on Angina Pectoris. The discussion thereon is likely to be of considerable interest and importance, and many London and provincial physicians are expected to take part in it.

DR. JAMES ANDREW has resigned the post of senior physician to St. Bartholomew's Hospital. The vacancy thus occasioned has been filled by the appointment of Dr. Hensley, and Dr. Ormerod has become an assistant physician.

WE are glad to see that a Select Committee of the House of Commons has been appointed to inquire into the hours of overtime worked by railway servants.

DR. WILLIAM RADFORD DAKIN, M.R.C.P., was on Feb. 4th appointed Obstetric Physician and Lecturer on Midwifery at St. George's Hospital.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE subject of Koch's remedy continues to be debated at the Berlin Medical Society.[1] We reproduce from the columns of the *Berliner Klinische Wochenschrift* the proceedings of Jan. 28th.

Dr. A. FRAENKEL exhibited microscopical preparations from the case of lingual tuberculosis mentioned by him a fortnight previously. A section of the margin of the ulcer showed moderate bacillary infiltration, whilst one of a miliary nodule, situated at least 3 cm. from the ulcer, showed giant cells, epithelioid cells, and a few bacilli. The ulcer had somewhat increased, and some of the nodules had ulcerated, others caseated.

Professor VIRCHOW first referred to a misinterpretation which had been made of his statement on Jan. 14th, that in a case (of suicide) of phlegmonous pneumonia in a phthisical subject the appearances were such as he had found in those injected with Koch's fluid. Although he was unable to affirm that this man had been so treated before he was brought to the hospital for his wound, he still adhered to that opinion. On the first occasion he had believed that the injections excited, among other changes, a characteristic or specific affection of the lungs which otherwise does not occur in phthisis; but on the next occasion he affirmed the possibility of such a change occurring apart from the injections. If so, it would be on a par with a caseous pneumonia, which he had shown might ensue on the injections. He had not meant to imply that a caseous pneumonia was directly caused by the injections, except in so far as this was supported by the history of the case. For instance, an individual who previously had shown nothing pointing to lung changes becomes attacked with fever and local lesions after being injected, eventually dies, and there is found recent caseous hepatisation to quite a "colossal" extent, which, as he had said, seemed explicable on the view that material from the ulcerated tracts had been aspirated into deeper parts of the lung, giving rise to multiple inflammation. He now showed a recent specimen illustrating such a consecutive non-caseous hepatisation. It was from a man twenty-six years of age, who had a large cavity at the left apex, the right

[1] THE LANCET, Jan. 31st, p. 271.

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lung being almost free. While he was in the Charité he had seventeen injections (amounting to 0·0635 grm.) from Dec. 14th to Jan. 11th, and death took place on the 24th. There was extensive implication of the lungs, including this hepatisation. The larynx and the trachea showed very recent changes. There were small ulcers on the epiglottis, and an older one between the anterior processes of the vocal cords. Below that, especially on the left side, was an extensive eruption of submiliary tubercle in the mucous membrane, whilst recent ulcers spread through the trachea to its bifurcation. Such changes could not possibly be older than the period of injection (twenty-eight days). Again the lungs and intestine exhibited recent as well as old lesions. In the ileum there were isolated, large, old tuberculous ulcers, around which the mucous membrane was markedly swollen and reddened—an appearance he thought to be in part ascribed to the action of the injections. In the cæcum and ascending colon were recent ulcers, evidently proceeding from follicular abscesses. So in the lungs: there was the large ulcerating cavity (as smooth as a bronchiectatic cavity) in the left apex, the wall formed of semi-cicatricial tissue, and presenting stumps of large arteries, which had been eroded. Around the cavity were some old indurations and bronchitic nodules. There were also two different kinds of pneumonic changes of recent date; in some parts a few foci of caseous hepatisation. A large area of the right lower lobe presented the form of hepatisation to which he had before alluded, clearly confined within the limits of the lobules, and presenting the peculiar smooth, moist, somewhat yellow character which, as the previous cases showed, usually preceded the breaking down into gangrenous foci. Professor Virchow added that not from any ill will, but solely out of regard for truth, he must hold to the opinion that this form of inflammation, which so rarely occurs in phthisis, has occurred in these cases with an unwonted frequency. Even if the case to which he first referred prove an exception in not having been previously treated by the injections (and this cannot be positively affirmed), it would prove nothing but that such forms of pneumonia which do arise in large numbers after injections, may also occur apart from them. He next brought forward a case with widely spread secondary lesions. The patient, a woman thirty-eight years old, was admitted into the Charité on Dec. 8th and died on Jan. 25th. She had altogether twenty-two injections (amounting in all to 0·28 grm.), the first (0·001 grm.) on Dec. 15th, the last (0·006 grm.) on Jan. 18th. It was a severe case, complicated with amyloid disease, shown in the spleen, liver, and intestine. There was no evidence of reaction about the amyloid spots, but there was widespread miliary tuberculosis. The liver was full of submiliary tubercles (in another case as many as five tubercles could be seen in the microscopic field of a section of a liver), and also a recent eruption in the marrow of the femur. There was also caries of the temporal bone. The lungs contained old smooth-walled cavities, and near them some quite recent caseous hepatisation. In the larynx there was a large deep but clean ulcer between the anterior extremities of the vocal cords. The case was also especially interesting from the marked lesions of Peyer's patches, which were swollen, medullary, with caseous patches here and there—in fact, tubercular. Lastly, Professor Virchow showed the lungs from a case which had not been injected. They contained very large cavities, which showed as complete smoothness of their walls as in bronchiectasis. This shows that not every such cicatrisation which occurs after the injections is to be positively regarded as a result of them.

Dr. LASSAR, in view of the statement made as to failures, brought forward a case which had apparently a favourable result, a girl, thirteen years old, who had had tuberculous disease of the hip, and later had a tuberculous ulcer on the extensor aspect of the thigh, not affected by other treatment. Treatment by Koch's fluid began early in December, and after a few injections, which excited marked reactions, the ulcer cleaned and then completely healed, after about four weeks' treatment (amounting to rather more than 0·1 grm.). Since then it had undergone no change, and the cure must be regarded as positive and solely brought about by the injections.

Dr. FLATAU exhibited a case of tuberculous disease of the larynx which had benefited by the treatment, but stated that he had occasionally observed the production of disease in new spots, and the occurrence of severe laryngeal phthisis in cases where the reaction was prolonged. He adduced the case of a young lady in whom there was only slight catarrh, besides a cicatrix from curettage; the injections were followed by extreme swelling over the arytenoids and aryteno-epiglottic folds, some perichondritis of the epiglottis, and recent tuberculosis of the tonsil. In another case, that of a man thirty years old, the eighteenth injection (of 0·06 grm.) was followed by the appearance of yellowish-white nodules around ulcers on the false cords and over the left arytenoid. These nodules became more numerous, the epiglottis became thickened, and a larger number of submiliary and miliary nodules appeared on its surface. This exhibited in the living subject what Professor Virchow had shown in his preparations. Laryngeal tuberculosis rarely has this complication and extent.

Dr. FÜRBRINGER said he had published in the *Deutsche Medizinische Wochenschrift* at the close of the year his experience of Koch's treatment for a period of four weeks, and now spoke of his further trials for six weeks. More had been learnt concerning the indications for the treatment, and he regretted to say that in twelve cases of pulmonary tuberculosis it had to be abandoned because no improvement took place, but the disease grew worse. The points in common among these cases did not refer to the late stage of the disease so much as to the relative acuteness of the process; and he had arrived at the conclusion that the more febrile and hectic the case—i.e., the more *florid*—so much the more is it unfitted for this treatment. A hectic temperature was then of more importance than the duration and extent of the lung infiltration. If, too, the temperature, after a treatment lasting at the most for four weeks, shows no tendency to become normal or subnormal, the injections must be given up. It is otherwise with cases where there is considerable infiltration with many bacilli in the sputa, so long as fever is abated. He thought it well not to disturb stationary apex disease by the treatment, except for urgent reasons. He had treated 100 cases where the lung disease was prominent, and of these would select forty which had undergone the treatment for from seven to ten weeks, the doses varying from forty to 100 milligrammes. He could now add a third case to the two of "relative recovery" previously reported, but whether the cure was definitive could not yet be said. Then there were fifteen cases of unusual improvement, in the sense that he had never seen such progress in cases treated on any other plan. They were in the first and second stages of the disease, one with commencing excavation. These cases were of greater value than the three "cures," which were in the first stage. There was increase in weight, and in most the process appeared to become more indurated and stationary. There was a partial clearing up of dulness; and with reference to Dr. Ewald's remark that complete disappearance of dulness does not mean cure, he said that the possibility of cure was compatible with persistence of dulness. This was illustrated in cases of "spontaneous" recovery associated with cicatricial formation. Ten cases were slightly or but little improved; they were in the first and second stage of the disease, and not more improved than they might have been without Koch's treatment. Seven patients had died, in four of whom the method had been abandoned a long time before death. Miliary tuberculosis was found in several, in others it was absent. In one case there was very marked caseous pneumonia, and in two an exceptional degree of acute catarrhal pneumonia. But he found it difficult to associate these lesions with the treatment, since they did not differ from those present in other cases of phthisis. On two occasions he admitted, not merely on anatomical but also on clinical grounds, that the process was strikingly made worse by the treatment; the change being so "drastic" as to leave no doubt of the relationship. They were cases in which the temperature, previously and for a long period normal, had become markedly hectic. From the anatomical appearances he had concluded that the more recent the tubercular tissue so much the more powerless is Koch's remedy to attack it; and that agrees with the statement that florid phthisis is unsuitable for the treatment, only that there we have to do with secondary pyogenic processes as well as with miliary deposits and caseous pneumonia. Referring to the statement made by Professor Virchow that acute pneumonic infiltrations were a direct result of the treatment, he (Dr. Fürbringer) observed that he could mention at least six such cases from his own experience. One of these he detailed. The patient, thirty-five years of age, with slight apex disease, who had spent three winters at

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Davos, and was much improved thereby, was submitted to injections. In the second week of treatment there developed signs of acute pneumonia, with moderate fever and albuminous expectoration. But these passed away in a week, leaving him much better than before. It seemed as if he had undergone a "perturbatio critica"; and the condition was probably one of catarrhal pneumonia. Such effects of the reaction should induce additional caution in dealing with the weakly and cachectic. Finally, he advocated the employment of small and not increasing doses, with long intervals—e g , a week,—having noticed that the patients were better for such a plan. Moreover, it reduced the possibility of the induction of a habit for the drug.

Dr. PAUL GUTTMANN, referring to the discovery by Dr. Liebmann of bacilli in the blood of subjects under Koch's treatment, said that he had, in conjunction with Professor Ehrlich, repeated these observations with every precaution in twenty-eight cases, and in not a single one of the specimens of blood were tubercle bacilli to be found. In reference to a remark by Dr. Ewald that the fact of fatal cases occurring at the Moabit Hospital showed that selection had not been limited to those in the earliest stage of disease, Dr. Guttmann admitted that it was not always possible from objective signs to be certain of the latter point; and in so large a hospital—containing more than 300 cases of phthisis—many patients advanced in the disease desired to be treated by the injections. But of course the question was as to what are the precise indications for treatment, and he adhered to his previous formula, that it should only be employed in early cases with limited apex infiltration. He had compiled fresh statistics of 164 cases, treated from three to eight weeks. Of these 63, or 38 per cent., had notably improved; and of 51 cases of early apex disease 41, or 76 per cent., were similarly benefited. Details of these cases and accounts of post-mortem examinations would appear in an official report to be published in the Clinical Year Book, together with the reports from the Prussian universities.

DR. APOSTOLI'S LATEST CONCLUSIONS ON THE CONSTANT GALVANIC CURRENT IN GYNÆCOLOGY.

THE following summary of Dr. Apostoli's conclusions in regard to the subject of which he is at present the greatest authority will be of interest to our readers:—

1. The constant galvanic current, he says, is indicated in gynæcology principally in endometritis and in fibroid tumours. It is very effective in abnormal conditions of uterine circulation (amenorrhœa and menorrhagia) as well as in painful menstruation; is a powerful aid in arresting the development of simple neoplasms and in facilitating the absorption of peri-uterine exudations. It exercises a salutary action towards resolution in many peri-uterine phlegmasiæ, and in certain forms of catarrhal ovaro-salpingitis; but it is powerless in suppurative inflammations of the appendages, nay, even it is injurious in strong doses, particularly if the intra-uterine pole be negative. The variable intolerance of the current which increases with the degree of the inflammatory action of the appendages serves as a valuable means of diagnosis in determining the existence and the nature of undetected or only suspected peri-uterine fluid collections, hæmic or suppurative, and in deciding the necessity for surgical interference or not.

2. The effects of the constant galvanic current are polar and interpolar. The interpolar action is trophic and dynamic, which increases as the square of the intensity of the current used, and is superadded to the polar action. The polar action is utilised for a different purpose according to the pole employed, as first shown by Apostoli himself. A calorific action is developed by the passage of the current which augments the interstitial circulation; and lastly, the antiseptic action of the positive pole has been recently demonstrated by Apostoli and Laguerrière.

3. Strong galvanic applications exceeding 50 milliampères, employed in a variable manner according to the tolerance of the individual patient and the special clinical indications form the basis of Apostoli's method, and find their justification in the circulatory depletion, "*drainage circulatoire*," a direct consequence of the calorific action due to the resistance offered to the passage of the current, and proportionate to the square of the intensity; in the antiseptic or germicidal action, which increases with the intensity of the current used; in the rapidity and efficacy of the effects produced, which are proportionate to the square of the electric energy, according to a formula analogous to that of the measure of energy in other natural forces: $Q = \frac{1}{2} m V^2$; in the easier generalisation of the method as applied to obstinate cases, as hard fibroids of the subperitoneal variety or fungous endometritis, and to conditions in young subjects; and in lessening the frequency of relapses, which, all other things being equal, are less to be feared the stronger has been the current employed.

4. If the vaginal application of the galvanic current (which is the method introduced by M. Chéron for fibroids only, and applied since by A. Martin, Brachet, Ménière, Onimus, Carpenter, Munde, and others) produces certain results, these are very inferior to those obtained by intra-uterine applications, which must remain the method of selection, because it utilises at once the maximum of the current expended and of its energy, and at the same time the antiseptic action of the positive pole, which is entirely local, and which disappears in the interpolar circuit and at the level of the negative pole. It also utilises the derivative and caustic action of the intra-uterine application, thus treating at the same time either a simple endometritis or, as is often the case, one complicating a fibroid or a peri-uterine inflammation, and ensuring thereby a more rapid, more complete, and more permanent cure. It also enables us better than vaginal applications to palliate pain, and to render the use of strong doses more tolerable.

5. The vaginal galvano-punctures to the depth of from two to five millimetres, by means of a filiform trocar made of gold, insulated in all its extent except at the point, form the complement of intra-uterine electro-therapeutics introduced by Apostoli as a more accurate means of localising galvanic action, and of increasing the efficiency in certain cases of the application of small or medium doses.

6. The innocuous character of his intra-uterine electro-therapeutics is demonstrated by comparing it with those of the chemical and operative intra-uterine methods of treatment, and particularly by comparative statistics. Dr. Apostoli made from July, 1882, to July, 1890, 11,499 galvanic applications, as follows:—8177 positive intra-uterine galvano-caustic, 2486 negative intra-uterine galvano-caustic, 222 positive vaginal galvano-punctures, 614 negative vaginal galvano-punctures. He has treated 912 patients, comprising 531 fibroids, 133 cases of simple endometritis, and 248 of endometritis complicated with peri-uterine inflammation.

Of these 313 fibroids, 70 cases of simple endometritis, 163 of endometritis complicated with peri-uterine inflammation occurred in the clinique, and 218 fibroids, 63 cases of simple endometritis and 85 complicated, with peri-uterine inflammation, occurred in private practice. He has had three deaths attributable to operative defects. Two galvano-puncture, of which one was for a subperitoneal fibroid, the other for an ovaro-salpingitis, and one galvano-caustic application for a cyst of the ovary, mistaken for a fibroid.

He has observed 30 cases of pregnancy which occurred after intra-uterine galvanic applications.

THE CONTAGIOUS DISEASES ACTS.

A PAPER was read before the Royal Statistical Society on Jan. 20th, 1891, by ROBERT LAWSON, LL.D., Inspector-General of Hospitals, dealing with the operation of the Contagious Diseases Acts among the troops in the United Kingdom, from their introduction in 1864 to their ultimate repeal in 1884, of which the following is a brief abstract. The first Act, passed in 1864, he said, merely provided for the treatment of such persons as applied voluntarily to have the advantage of it, or who were speedily reported to a magistrate, and, while undergoing this, they were at liberty to leave the hospital whether cured or not. The Act of 1864 was amended in 1866, and this again in 1869, the additions being calculated to render them more efficient in their operation. This state of things went on with little alteration until 1883, when personal examination was stopped, and in 1885 the Acts were repealed. The records of disease

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of this nature, both among the troops and the crews of Her Majesty's ships at the stations where the Acts were in force and at other points, are available to show its progress under the different conditions in which these men lived, and the whole may be regarded as a most interesting experiment on public health, in which we may see not only the marked improvement under the employment of measures favourable to that end, but the relapse to its former state on their abrogation. The President (the late Surgeon-General T. Graham Balfour) was desirous that an authentic relation of these facts should appear in the journal of the Royal Statistical Society, and had invited him to undertake its preparation, as he had arranged the army statistics bearing on it for Mr. W. H. Sloggett, Inspector-General of Hospitals, R.N., who was superintendent of the lock hospitals under the Acts at the time, and conducted their case before the Parliamentary Committee which sat from 1879 to 1882 to investigate their working. Before proceeding to the subject proper of this paper it was necessary to indicate the forms of disease which came under the operation of the Acts, the different manner in which separate bodies of men, at the same place and the same time were affected by these diseases; and a very remarkable fluctuation, of an epidemic nature, extending over several years in succession, quite as great as that of measles, and which occupied a very extensive area. Mr. Lane of the London Lock Hospital, and Mr. Macnamara, the medical officer of the Dublin Lock Hospital, stated in their evidence before the Committee that, in their experience, the constitutional affection did not follow the indurated sore exclusively, and that in most cases it was impossible to say whether any given sore would eventuate in the constitutional affection; but neither of them was able to give a numerical statement of the relative frequency in which each of these sources occurred. In support of this, Dr. Lawson mentioned the following striking instance which came under his own observation. A regiment, with an average strength of 254, came to Castlebar in a healthy condition in the year 1842. In 127 days ninety men were admitted with primary venereal sores. The depôt left some time afterwards for Boyle, where there were very few admissions of primary sores, and these of a mild description. From May 20th, 1842, to July 1st, 1843, there had been twenty-seven cases of hard sores treated, and forty-nine cases of secondary syphilis, so that, admitting that every hard sore eventuated in the constitutional affection, there were still twenty-two other instances following sores in which the duration was not observed. Practically, it appeared that it could not be shown with certainty that the constitutional affection would follow a given sore in any particular instance until the general system showed unmistakable signs that it was so affected. He had prepared tables which showed the very remarkable increase of admissions in the years 1860 to 1864 in all three descriptions of forces. In the cavalry, while the admissions for the secondary disease (45·7 per 1000) were in the ratio of 1 to 2·6 cases of primary in the infantry, the secondary cases were 32·0, or 1 in 3·4 of the primary; and in the Foot Guards 33·5, equal to 1 in 4·6. The effect of the establishment of lavatories in the barracks, where men might have the opportunity of washing after return to their quarters, showed that those barracks which had no night lavatory, yet had by far the lowest admission rate of all the barracks that were under observation. The intercourse was pretty general, and the fluctuation in the primary sores was evidence not that facilities for ablution were useless, but that in those barracks without night lavatories it was had recourse to immediately after exposure to infection, when it was much more likely to prove efficient. It was pointed out, however, that large numbers afforded a more reliable criterion than the investigation of its effects in several small detachments. From the records it was found that the statistics of syphilis fluctuate very considerably, just like other diseases. In 1860 the ratio per 1000 of admissions for primary venereal sores among the troops at the whole of the home stations was 140, and from this date there was a continuous fall, though with frequent minor fluctuations, till 1875, when the ratio was 46. A rise then commenced, and the ratio went up to 125 in 1884, since which it had fallen to 83·5 in 1889. The lecturer pointed out that these fluctuations might have arisen from the fact that when arrangements were made for the carrying out of the Act, fourteen stations were selected as "stations which came under the Acts"—namely, Devonport and Plymouth, Portsmouth, Chatham and Sheerness, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Winchester, Dover, Canterbury, Maidstone, Cork, Curragh, and fourteen others remaining at which an average strength of 500 or upwards was quartered annually, were chosen to compare with them. These were named "the fourteen stations never under the Acts"—namely, Isle of Wight, London, Warley, Hounslow, Pembroke Dock, Sheffield, Manchester, Preston, Edinburgh, Fermoy, Limerick, Athlone, Dublin, Belfast. When it was found that other stations never under the Acts had a considerable number of men distributed amongst them they were added to the fourteen, and designated "all the stations never under the Acts." This arrangement was undertaken with a view of showing the varying incidence of diseases from year to year at points where its progress was not interfered with by the operation of the Acts, so that it might be eliminated at the stations under them, leaving the changes due to the Acts apparent. The Act of 1864 provided in substance that on information being laid before a Justice of the Peace by a police superintendent or inspector, showing that he had reason to believe that a woman was a common prostitute and infected with venereal disease, the magistrate could order her to be taken to a certified hospital for examination, and on certification of disease the justice could issue an order for her detention in the hospital for a period not exceeding three months. By the Act of 1866 periodical examination of prostitutes once a fortnight was ordered, and the period of retention extended to six months if necessary. A woman on discharge from hospital well, after any period of treatment, was no longer subject to the order of periodical examination unless under a fresh decision of a magistrate. By the Act of 1869 it was provided that if the examining surgeon had reasonable grounds for believing a woman was affected with a contagious disease, but found that she was not in a condition that he could properly examine her, she might be detained in a certified hospital for five days to enable this to be done. In the end of 1873 an order was issued by Lord Cardwell, then Minister of War, stopping the pay of soldiers in hospital labouring under primary sores or gonorrhœa during the period of their treatment. This continued in force until 1879. In 1883 personal inspection was suspended, and in 1885 the division of military stations into those under the Acts and those not under them ceased. When the compulsory examination began to take effect in 1867, though there was an increase of the incidence of the disease in the country, as indicated by rises in the ratio of 17 per 1000 in both the "unsubjected" districts, that at the fourteen stations under the Acts was 4 per 1000 only, and from this year the ratios at the fourteen subjected stations were always much under those in the whole until 1884, the last year of the comparison.

The stoppage of pay showed its effects in 1874 by a fall at each class of stations, which was continued in 1875, and still traceable up to 1877, after which the advance of the epidemic wave caused a rise of forty at the fourteen "unsubjected" stations, while at the fourteen "subjected" it was only four. In 1880, with the cessation of the stoppage of the pay, there was a general rise, amounting to thirty-nine at the fourteen unsubjected stations, and to twenty-seven at the fourteen subjected stations. A portion of this was due no doubt to an increasing incidence of the disease over the country, and in great measure to the removal of the inducement to conceal primary forms of the disease by stoppage of pay. In May, 1883, the compulsory examination of women was abolished, and the last impediment to the increase of the disease at the fourteen subjected stations having been removed, the ratio of admissions at these increased 32 per 1000, against a fall of 2 at all the unsubjected stations, and a moderate rise of 9 at the fourteen unsubjected stations; and in 1884 there was a further rise of 28 at the subjected stations, against a fall of 8 at the whole of the unsubjected stations, and of 28 at the fourteen unsubjected stations. This extraordinary rise in the ratio of primary sores at the subjected stations placed them in 1884 at 138 per 1000, midway between those at the two sets of unsubjected stations, and 13 above the general mean for all the troops on the home station last year. It differed little from the state of things in 1860, and following, as it immediately did, on the removal of the last restriction on its propagation, there can be no doubt of its cause. Under the Acts the fall in primary sores was 60 per cent.; at the unsubjected stations the fall was 26 per cent., and taking this from 60 there remains a fall

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of 34 per cent. as due to the repressive action of the Acts. Proceeding in the same way, secondary syphilis showed a fall of 39 per cent., under the Acts, and in the case of gonorrhœa the fall under the Acts was 25 per cent.; at all the unsubjected stations it was 18, leaving an excess of 7 under the Acts; while at the fourteen unsubjected stations it was 36, or 11 more even than under the Acts. The question of relative frequency of infecting and simple sores could be ascertained only by finding how many cases of constitutional disease follow the primary sores noticed among a large number of persons under observation for a lengthened period. It was found in 1861 to 1872 inclusive the admissions showed 1 case of secondary syphilis to 2·95 primary cases. Subsequent returns gave 1 case of secondary per 3·27 primary sores. There were two sources of uncertainty—viz., the effect of treatment and the variation of the relative frequency of infecting and non-infecting sores from time to time. The lecturer, in conclusion, said gonorrhœa had been but little commented on during the course of this investigation; but in general terms it might be stated that, though responding readily to the preventive aid of the Acts, it nevertheless ultimately was materially reduced under their operation.

ARMY MEDICAL SCHOOL, NETLEY.

THE winter session of the Army Medical School was brought to a close on Feb. 2nd. His Royal Highness the Duke of Connaught, commanding the Southern District, had consented to deliver the prizes gained in the final examinations at the school, and, attended by his staff, arrived at Netley from Portsmouth on board the Royal yacht *Elfin*, shortly after twelve o'clock. The Duke was received on landing at the pier by the Director-General of the medical staff, W. A. Mackinnon, C.B., and by the Assistant Adjutant-General, Colonel Hanning Lee. Subsequently, attended by the principal medical officer, Surgeon-General Madden, and the medical officers of the hospital, his Royal Highness visited all the wards, inquiring into the nature and history of each patient's case, and afterwards went to the officers' quarters for luncheon in the mess-room. The proceedings in the lecture theatre of the school commenced about half-past three o'clock. The benches were occupied not only by the surgeons on probation who had been in attendance during the session, but also by a large number of officers and visitors. Conspicuous among the audience were a number of the nursing sisters in their distinctive uniforms. Sir Thomas Longmore, after obtaining the Duke's permission, read a brief summary of the results of the session, and the surgeons who had gained prizes being called to the front, the Duke delivered the prizes to them with a few words of congratulation to each recipient.

After distributing the awards,

His Royal Highness said: "Gentlemen,—I wish to express the pleasure it has given me to attend here to-day and to listen to what has been read to us, as well as to hand the prizes to those who have gained them. I congratulate you all on the good report we have just heard, and I especially congratulate the four gentlemen whose names have been several times mentioned in it. Gentlemen, you are entering upon a very important profession, and one to which I hope you will all do great credit. There is a great deal to be learned and seen by the medical officers of the army that must be new and interesting to them. Many of you may find yourselves placed in climates that are very trying, and in positions that will require the exercise of much tact and determination. I hope you will not be wanting in these qualities. My experience in the service has led me to become acquainted with a number of medical officers, for whom I have the greatest friendship and highest respect. You have chances of distinguishing yourselves in many ways. The only time I have had the high distinction of being commanded by Her Majesty the Queen to present the Victoria Cross was when I was commanded to present it to Surgeon Crimmin of the Bombay Medical Service. Rest assured that the officers of the army know how to respect their medical officers. It depends on themselves whether they will keep up a high professional standard, and I entreat you, gentlemen, to remember that while you are officers of the army, you are also medical gentlemen. You are representatives of a profession for which we naturally have the highest regard—one which is of the greatest importance to the efficiency and well-being of the army, and without which the best organised troops could do but little. I hope you will always set before you a high standard. You have to remember that you are officers and gentlemen, and, above all things, medical officers to whom the executive officers of the army look for support and advice. I know that you are just going on leave, and I have no intention of taking up your time with a long speech; I will only wish you all, therefore, every success and honour in the service into which you are now entering." The remarks of his Royal Highness were received with much applause.

The Director-General proposed, in some brief and appropriate remarks, a vote of thanks to his Royal Highness for the honour he had done to the Medical Department of the army in coming to distribute the prizes; and Sir Joseph Fayrer seconded the proposal, remarking that it was not only for his presence on this occasion that thanks were due to the Duke of Connaught, but more especially were they due for the very grateful and graceful terms in which his Royal Highness had expressed his appreciation of the medical service to which so many of those present belonged.

The Duke of Connaught honoured the Principal Medical Officer and Mrs. Madden by joining in afternoon tea at their quarters before re-embarking on the Royal yacht for return to Osborne.

THE OBSTETRICAL SOCIETY.

DISCUSSION ON THE MIDWIVES' REGISTRATION BILL.

ABOUT seventy Fellows were present at the annual meeting of this Society on Wednesday, Feb. 4th. The ballot for the election of officers and Council for 1891 and for the election of Professor Tarnier as an Honorary Foreign Fellow was taken. A number of specimens were shown. The reports of the treasurer (Dr. Herman), honorary librarian (Dr. Wm. Duncan), and the chairman of the Board for the Examination of Midwives (Dr. Watt Black) were read and adopted. The retiring President, Dr. Galabin, then delivered the annual address, in which he paid a graceful tribute to the memory of Dr. Matthews Duncan. The address was followed by a discussion on the question of the registration of midwives.

The PRESIDENT, in the course of his address, observed that the advice of the Council was asked by the promoters of the measure as to the provisions of the Bill, and the Council had spent much time in considering them. The view taken by them was that the prime necessity was to obtain efficient examining boards, and so to secure that none but well-instructed midwives should be passed and placed upon the Register. It was also thought that the election of examiners by the County Councils might cause the selections to depend upon general or local politics to such an extent that it would be difficult to maintain a uniform standard of efficiency in all of them. The Council proposed the establishment of a central examining board in London, with ten or twelve local boards in England and Wales in important towns, so that no midwife would have to travel more than sixty miles for examination. The Council also advised that there should be a central register which could be consulted like the Medical Register. Most of the suggestions had been adopted by those in charge of the Bill. In the present Bill he, personally, objected to the clause, "all midwives now in practice." A similar clause with regard to dentists and veterinary surgeons had been allowed to pass, and had led to much abuse. He thought it quite unnecessary in the case of midwives, and in the Bill drafted by the Council of the Obstetrical Society under the president, Dr. West, the assumption of the title "registered midwife" was made penal. The Bill was also open to criticism on account of its leaving the General Medical Council to settle various points which could with advantage have been defined in the Bill itself. Some of the objections to the Bill were obviously fallacious. It did not seek to legalise the practice of midwifery by women. That had been legal from time immemorial, and Parliament had invariably refused to render illegal the practice of midwifery by persons not on the Medical Register. At the present there is nothing to prevent any midwife from engaging in medical or surgical practice except the liability

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to an action if she injured her patient. If a midwife obtains the status which registration would give her, she must in return be ready to assume certain responsibilities; she ought to be made liable to be removed from the Register if she exceeds her proper functions. A memorandum, compiled from the minutes of Council and Transactions, had been circulated among the members of the Society, but it was not intended now to give any special opportunity for the discussion on this subject; as some Fellows, however, had expressed a wish to discuss the matter the constitutional opportunity followed on the President's address. As regards the Bill now before Parliament, the Council of the Obstetrical Society had nothing whatever to do with its provisions, and therefore, in criticising the action of the executive, it seemed to him the main question was not so much the provisions of the Bill now proposed as whether the principle of public and compulsory registration of midwives such as has been advocated for so many years by the Society was a good thing or not. He ventured only to express the hope that the result of any discussion may be that the opponents of the present Bill would devote themselves rather to devising proper safeguards than to opposing legislation, which, if carefully guarded, might be of great public benefit.

Dr. R. BARNES had been brought to the meeting chiefly by the extraordinary memorandum which had been sent round to the Fellows. He called special attention to its first paragraph, which contained, to his mind, one of the most extraordinary assertions ever put into a public document, and which ought not to pass without observation. It asserted: "The Obstetrical Society of London was the first in promoting the education of midwives." Could anyone possibly so far forget the history of midwifery as to assent to that statement? The education of midwives meant, in ordinary language, the training of midwives for their business, and does not necessarily imply even the granting of a diploma or certificate of any kind. He knew something of the history of midwifery, and he knew that in France and Germany midwives had been trained, educated, and diplomatised for more than a century, and also at the London Lying-in Hospital nearly one hundred years before the Society was instituted. The same thing occurred at the Royal Maternity Charity, where Dr. Hall Davies and Dr. Francis Ramsbotham lectured, demonstrated, and clinically educated midwives before the Obstetrical Society was in existence. The misstatement had either arisen through sheer forgetfulness or from admiration of the services of the Society, which caused the writer to forget the services of everybody else but those who drew up this paper. He recommended that the document be referred back to the Council for revision and reconsideration. He mentioned that the Midwives' Bill now before Parliament had been actually abandoned in deference to the opposing views of a large body of the profession, an opposition which he did not at all share. He thought the principle of registration was good and sound, and ought in some form or other to be carried out. But this Bill was full of faults, and was opposed by a large number of the members of the profession. The members of Parliament who had signed their names to the Bill had withdrawn them, and it would not come on again this session. Probably there would be a motion to appoint a committee to examine into the subject, but that was only a placebo. He thought the Council of the Society had been somewhat oblivious of their duty in not having called a meeting of the Fellows to discuss this matter fully. He had seen a great deal of the action of midwives and others, and, so far as his experience went, if properly trained, they formed an invaluable class of society.

Dr. AVELING had been interested in the subject for thirty-three years, and had forgotten neither what was due to the public nor to the profession. His notions were pretty well known, and he would not reiterate them. Midwives were in a far better position 150 years ago, when they used to be sworn by the bishops, than they were now. Since that time they had been left to their own devices to act as they pleased. Parliamentary action had begun with the Duke of Gordon's Bill in 1878. It was to amend the Medical Act of 1858, and Clause 23 of that Act contained a scheme for examining, licensing, and registering midwives. The profession was of opinion that it was not politic to unite the two subjects, and that midwives ought to be dealt with separately. The clause was consequently expunged from the Bill. In 1882 the British Medical Association drafted a Bill for the registration of midwives, which had never been submitted to Parliament. In 1890 the Midwives' Association had drafted a Bill to provide for the registration of midwives, and Clause 5 of it gave the midwife legal power to practise midwifery and to recover fees for the performance of any midwifery operation. Needless to say, a clause like that was objectionable, and the Bill was put before a select committee to be amended. This amended Bill is still alive, though Dr. Barnes said it was dead. He thought the memorandum, with the exception of the part referred to by Dr. Barnes, was too modest in its professions. The Council and subcommittee had worked very hard in connexion with the subject. A scheme had been drawn up by the Society in 1873, and submitted to the General Medical Council. He regretted that the Society had not drafted a Bill of its own, the expense of which might have been very properly defrayed out of the fees paid by midwives for examination. Very few people appreciated what details had been left to the Privy Council to decide. He maintained that in any Bill it was better to make the provisions general. They would notice that the Privy Council would make provision as to the admission of a midwife already practising, who would be required to produce "the prescribed evidence of her title" before being registered as a *bonâ-fide* practitioner. This gave the Privy Council the power to exclude women who were not suitable. Regarding the allegation that midwives would compete with medical men, he asked where the members of the profession were who received only from 2*s.* 6*d.* to 10*s.* as midwifery fees. They had never appeared to oppose this Bill. Those who had done so he was certain received no such fees, and he thought the class of men who did so was an exceedingly small one. The certificates granted to midwives were of an exceedingly unsatisfactory character. He quoted examples of bad certificates. He therefore proposed: "That the Fellows of the Obstetrical Society approve the policy pursued by the Society for the last twenty years, and respectfully request the Council to continue their efforts to obtain for these women suitable education and legal registration."

Dr. WALTER GRIFFITHS, in seconding the motion, said he did not wish to discuss the unsatisfactory Bill now in Parliament. Any Bill on this subject required much thought before it could be drawn up in a suitable form.

Dr. LEITH NAPIER moved: "That four Fellows of the Society be recommended by the Council to confer with the four Fellows nominated by the President of the College of Physicians, and that these gentlemen be deputed by us through the Council of this Society to take charge of the Bill, and to carry out the principle of registration in the best way that may occur to them."

Dr. LOVELL DRAGE charged the Council with having carried on legislation of which the Society was ignorant. The Council calmly said that the matter had been before the Society frequently. He would like to know when, during the last five years, the ordinary Fellows had had any opportunity whatever of discussing either the principle of the Bill or the Bill itself. No one had attempted to show that there was any necessity for legislation whatever. Surely it would have been easy for one of the members to put before the Society some facts and some figures upon which the Society could found a reasonable opinion. He observed that the Council were anxious to dissociate themselves from this Bill, which had been thoroughly knocked to pieces. He had heard recently one of the promoters of this Bill assert in a public meeting that the Obstetrical Society of London approved of the Bill, and had been consulted about it. Surely, in face of that statement, there must have been some communication between the Council of this Society and the promoters of the Bill. He thought it was useless to go on with a discussion unless the Council were prepared to give some idea of the lines upon which they proposed to legislate.

Dr. ROBERT BARNES asked the President, in his official capacity, whether the Council adhered to the first clause in the memorandum as a matter of fact.

The PRESIDENT pointed out that it simply meant that the Obstetrical Society was the first official body in this country to take active steps for the promotion of the education of midwives by public measures. The great question was the principle hitherto contended for by this Society, that there should be some measure enacted by Parliament for the examination and registration of midwives.

Dr. AVELING contended that it was not the fact that the majority of the profession were against this Bill. The

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question had been tested by the British Medical Association. Every branch had been communicated with, and the result was that 4000 were found to be in favour of the Bill, and 700 against it.

Dr. CULLINGWORTH supported Dr. Leith Napier's recommendation, and mentioned that the subcommittee appointed by the College of Physicians consisted of three general physicians and one obstetrician. That was not such a body as one would imagine to have the necessary knowledge of obstetric matters to give this Bill the consideration it deserves.

Dr. LOVELL DRAGE thought those appointed might run the risk of being told that the Royal College of Physicians did not wish to be biased by the members of this Council.

Dr. JOHN WILLIAMS said the question had frequently been before the Council, and it would be undesirable to bind themselves or to be trammelled in any way by having to act with any other body. He was extremely glad that the College of Physicians were going to consider the matter, and trusted that those appointed by that body would find out the real conditions which at present existed, and be able to supply the College with a valuable report. But the opinion of that body would not be of the same value as the opinion of the members of the Obstetrical Society. In any case he should deem it extremely undesirable for the Society to join any other body for the consideration of this matter.

Dr. Macnaughton Jones having made a few remarks, Dr. Leith Napier withdrew his recommendation, and Dr. Aveling's motion was carried almost unanimously.

THE GERMAN HOSPITAL.

THE meeting of the Annual General Court of the Governors of the German Hospital, Dalston, was held at Cannon-street Hotel on Friday, Jan. 30th, when the report and the financial statement were submitted. Count Deym was invited to become a vice-president of the hospital. In the absence of Baron von Schröder, Baron von Deichmann presided. After some general business had been transacted the rule regulating the formation of the committee was considered. A desire was expressed last year that two of the active members of the medical staff should be elected on the committee, and at the general court a resolution to that effect was carried by a majority of five votes. A poll was demanded, and it was found that 2879 voted against the proposal and 1040 for it, leaving a majority against it of 1839 votes. Acting on the advice and with the concurrence of his Royal Highness the Duke of Cambridge, President of the Hospital, the committee had unanimously recommended "that the senior hon. physician and senior hon. surgeon of the hospital" should be added to the number. This was moved by Mr. Arthur J. Allen. He regretted that Dr. Lichtenberg, who had been connected with the hospital for thirty-five years, and Dr. Tuchmann, one of the oldest surgeons, had found it necessary to move an amendment to this proposal. Dr. Lichtenberg's object and theirs was to do what was best for the benefit of the hospital, and he thought the matter should now rest. Mr. James Hasslacher seconded the motion.

Dr. LICHTENBERG moved as an amendment, "That instead of the words 'senior hon. physician and senior hon. surgeon of the hospital,' the words 'and likewise of a full physician and full surgeon of the hospital (not *ex-officio*) to be elected by rotation, according to seniority, every three years.'" In moving the amendment, he did not object to the senior surgeon and senior physician representing the medical staff on the committee *pro tem.*: but he was bound to oppose a system by which the medical officers, once elected to sit on the committee, would remain there for the rest of their official lives. He did not speak in his own interest, but in the interest of his successors. The present action would mean that the medical officers so elected would, besides following their private professional avocation and medical duties, be saddled for the next fifteen or twenty years with attendance on the meetings of the committee and board of management. They would have to be present at about forty extra meetings a year. He was afraid the duties would be too heavy to permit of their conscientious fulfilment for a term of twenty years at a stretch. The intended motion would soon become a dead letter. He had lately had an interview with several high authorities in the medical profession, who had pronounced against the action of the committee, but had spoken of his amendment in favourable terms; and THE LANCET, in last week's issue, objected strongly to the committee's resolution, whilst it was in full accord with the amendment now proposed. This mode of election would give freshness and interest to the medical representation, would be fair to the younger members of the staff, and enable a larger number of the medical officers to become acquainted with the actual work of the hospital. If the committee's proposal should now become law, he would be obliged, in order not to commit an act of illegality, to resign his position, a resolve which the committee had long been made aware of. In October last seven members of the staff requested the committee to allow them to be represented on the committee, and, he proceeded: "On Nov. 25th we informed the committee that we could not support the proposal now before the meeting. Mr. Gülich informed us two days later that the committee had decided not to alter their opinion. We then proposed election by rotation, but were again defeated, whereupon four of our colleagues retracted their former letter and agreed to abide by the original resolution of the committee." For himself he had not retracted his letter, and if the proposal should now become law, he as senior surgeon would *eo ipso* become a member of the committee, but as he declined this honour he could not legally remain on the hospital staff.

Dr. TUCHMANN, in seconding the motion, stated that, should the resolution be carried, he also would resign his appointment immediately. Their colleagues, with one exception, had condemned the resolution as highly distasteful, and they hoped that the resolution would be defeated. The committee appeared to act like kings, giving as a favour what belonged to the staff as a right. They seemed to forget that the staff did as much useful work for the hospital as did the committee. They were hon. physicians; nevertheless, they had not been shown much consideration or kindness by the committee. He could not believe that the committee were actuated by kind feelings in framing this motion; for what appeared to be a concession was simply a delusion and a snare. He pointed out that Baron von Schröder at the last meeting had said: "We want the subscribers assembled here not to accept the proposal, because the two doctors *ex officio* would have to be elected for life, and you could never remove them"; and when he was defeated he held a poll in order to exclude the medical men. Dr. Lichtenberg in a few years would cease to be senior surgeon, and consequently cease to be a member of the committee. On the other hand, Dr. Port was likely to remain twenty years or so in that capacity. He did not say a word against Dr. Port's professional abilities, but in this political question he had taken the part of the committee. He had never assisted the staff in the least.

The CHAIRMAN thought the matter could be discussed in a friendly spirit.

Dr. TUCHMANN: You are speaking friendly, but you are not acting so.

Dr. Hess, Mr. Pridham, and Mr. Sonnenberg supported the amendment.

Mr. GÜLICH said he was in touch with the committee and also with the hon. medical officers, and he saw no ground upon which the committee should alter their views. If the rule did not act suitably, it could be altered in three years by the governors. The majority of the medical staff was in favour of the resolution. He had five letters in his hand bearing this out. He thought the wording of the amendment was somewhat ambiguous, and would only lead to trouble if persisted in. He advised them to let the matter drop, and not to give the public the opportunity of saying that the German Hospital was in dispute year after year.

Dr. Hermann Weber supported the original motion, and on a show of hands it was found that 58 voted for the amendment and 103 against it. The motion of the committee was therefore declared to be carried.

Dr. LICHTENBERG announced that in consequence of the vote his written resignation, as well as that of Dr. Tuchmann, would be in the hands of the secretary.

THE MONTGOMERYSHIRE INFIRMARY.—The relief of much suffering and the good work accomplished in this institution during 1890 had been highly satisfactory. The annual subscription list had been substantially augmented, and a considerable reduction effected in items of expenditure.

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VIRCHOW TESTIMONIAL FUND.

A MEETING of the committee of the above-named Fund was held on Friday, Jan. 30th, at Sir Andrew Clark's house, in the unavoidable absence of whom the chair was taken by Sir James Paget. After the report of the preliminary proceedings and letters expressing regret from members at their inability to attend had been read by the honorary secretaries, it was unanimously agreed that Sir James Paget be asked to take the chairmanship of the Fund, and subsequently Dr. Lauder Brunton was elected honorary treasurer, and the secretaries were confirmed in their office. The subjoined application to the profession was then considered, and ordered to be issued:—

On Oct. 18th, 1891, Professor Rudolph Virchow celebrates his seventieth birthday. His pupils and admirers intend to commemorate this occasion by presenting him with a testimonial in recognition of his splendid services to medical science. A large and representative committee has already been formed in Germany with the view of collecting the necessary contributions, but it has been felt that this ought essentially to be an international movement, inasmuch as Professor Virchow's followers are not of one nation, but of all. In accordance with this view, the undersigned have formed themselves into a committee, in order to give Professor Virchow's British admirers the opportunity of testifying to the gratitude which every member of the profession feels towards the man whose work in "Cellular Pathology" has so vastly contributed towards the advance of modern medical science, and may fairly be said to have made every member of the profession his pupil. The form in which the universal feeling of gratitude is to find expression has been decided upon by the original German Committee. A large gold portrait medal is to be presented to Professor Virchow himself, and bronze replicas of the same to members of his family and to some scientific institutions. The surplus, which no doubt will be large, is to be handed over to Professor Virchow for the furtherance, subject to his decision, of scientific work. To carry out this project the undersigned cordially invite the coöperation of the profession in the United Kingdom. Subscriptions, which are not to exceed two guineas, may be sent to the hon. treasurer, Dr. Lauder Brunton, 10, Stratford place, London, W., and will be duly acknowledged in the medical journals. Cheques to be made payable to the Virchow Testimonial Fund, and to be crossed.

(Signed.)
JAMES PAGET, Chairman.
LAUDER BRUNTON, Hon. Treasurer.
FELIX SEMON, VICTOR HORSLEY, } Hon. Secs.

Contributions received at the meeting of the Committee.

	£	s.	d.
Sir James Paget, Bart. ..	2	2	0
Sir Richard Quain, Bart.	2	2	0
Sir Jos. Fayrer, K.C.S.I.	2	2	0
Clifford Allbutt, M.D., F.R.S.	2	2	0
Sidney Coupland, M.D., F.R.C.P.	1	1	0
Wm. Ord, M.D., F.R.C.P.	2	2	0
Seymour Sharkey, M.D., F.R.C.P.	1	1	0
F. W. Pavy, M.D., F.R.S.	2	2	0
J. Russell Reynolds, M.D., F.R.S.	2	2	0
Hermann Weber, M.D., F.R.C.P.	2	2	0
T. Lauder Brunton, M.D., F.R.S.	2	2	0
H. T. Butlin, F.R.C.S. ..	1	1	0
Victor Horsley, F.R.S. ..	2	2	0
Felix Semon, M.D., F.R.C.P.	2	2	0

Jan. 30th, 1891.

YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

AT the annual meeting of the above Association, held at Leeds on the 31st ult., Dr. McFadyean of Edinburgh gave a lecture on the Minute Anatomy of Tuberculosis and Actinomycosis,—diseases common to man and the lower animals, and liable to be communicated from one to the other. After describing the tubercle bacillus and its effects, he said that it was difficult to explain why the horse seldom contracted pulmonary tuberculosis, a disease so common in man and cattle. As regards actinomycosis, he said that it had been believed to be caused by animals feeding upon barley, and he thought this might have something to do with the liability to contract and develop the disease. Some reference was made in the remarks of speakers following the lecture to Dr. Koch's treatment of tuberculosis, but Dr. McFadyean said it was to veterinary surgeons a matter of little interest whether Koch's fluid was curative or not. The *rôle* of the veterinary surgeon was to endeavour to prevent tuberculosis rather than cure it, though he did not believe there was one in a thousand cases of consumption caused by infection from the lower animals. A discussion was raised as to whether the flesh of cows suffering from milk fever was fit for food or not, in the course of which Dr. Cameron pointed out that the term as used by cowkeepers embraced more than one disease, including puerperal apoplexy. The flesh of animals dying from that disease was certainly unfit for consumption. The discussion was eventually adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sheffield Urban District.—Dr. Theodore Thomson gives the pleasing news that never before have the public of this county borough exhibited so much interest in sanitary work. The labours of his department have been correspondingly increased, and he points out that this will involve some addition to his staff. The general death-rate for the district, with its population of some 327,000 inhabitants, would not be regarded as very excessive at 20·8, but the corrected rate raises it to 22·4, and this, with a zymotic rate of 3·39, indicates room for much improvement. Amongst the diseases included in the latter group, diphtheria shows distinct evidence of increase, and some typhus fever has occurred. The cause of this fever in Sheffield is involved in some obscurity, and Dr. Thomson discusses the possibility of a *de novo* origin in this connexion. The midden-privy system as carried out in Sheffield is strongly condemned, and it is evident that a complete change of administration in this respect is very urgently called for, trough closets being probably the best available remedy. Details of sanitary work include reference to disinfection, inspection of dairies, &c., slaughter-houses, and canal boats, and finally the question of an insufficient staff for the maintenance of a proper standard of health is referred to. Dealing especially with inspectors of nuisances, Dr. Thomson points out that in Sheffield there is only one for every 25,187 inhabitants and every 1511 acres. This is so obvious an absurdity, if any real attempt to promote and maintain a standard of public health is desired, that we feel certain it only needs to be brought forward in order to ensure an immediate increase of staff.

Birkenhead Urban District.—The annual death-rate for this district during 1889 was 17·8 per 1000, and the zymotic rate 2·6. The notified diseases numbered 1491, and only one case became known for the first time after registration of the death, as opposed to 18 in 1887 and 7 in 1888. These numbers, says Mr. Vacher, may be taken as representing proximately the extent of failure of notification; a result which can hardly be complained of. Amongst the sanitary operations carried on during the year it is explained, as regards overcrowding and cellar occupation, that the absence of a regular night inspector seriously interferes with this branch of the work; a complaint which, if we remember rightly, is not made from Birkenhead for the first time in this report. A good deal of attention is evidently given to the regulation of dairies, cowsheds, &c., and special care is taken that the ventilation, lighting, cleansing, draining, and water-supply of these premises are efficient. In one instance a case of typhoid fever was removed from a registered milk-house, the licence being suspended during the disinfection and cleansing of the premises. The infectious hospital now contains thirty-eight beds. But the institution is utterly inadequate to the requirements of the borough, and was never intended to be more than a makeshift. During 1889 only eighteen patients were admitted; but to know that no single death occurred throughout the year amongst the number who were received into the institution should certainly encourage the Corporation to provide and equip a suitable hospital.

Berkshire Combined Sanitary Districts.—This combination includes twelve sanitary areas, with an aggregate population of 145,655; and during 1889 there was a death-rate of 13·9 per 1000 on the total area, Maidenhead Urban District standing at one extreme with a rate of only 10·9, and Abingdon Urban District at the other with one of 17·5. Generally speaking, the rates are lower than any recorded before, and the fall in Maidenhead is so striking as to make one fear that it is also exceptional. Each district is dealt with separately by Dr. Woodforde, who explains in much detail the several occurrences of preventable disease. In dealing with the Windsor rural district a good deal of attention is given to the subject of diphtheria, of which disease fifty-two cases in forty-six families came under notice, twenty occurring in the neighbourhood of Englefield Green. In one instance special precautions as to disinfection were resorted to—bedding, carpeting, toys, &c., all being burnt, with the exception of a picture-book, which was saved and put away after fumigation. Three months afterwards it was taken out again, and given to a child of

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two years of age to play with. Five days afterwards this child, who had not been away from her home or otherwise exposed to infection, was attacked by diphtheria.

St. Pancras.—During 1889 the death-rate for St. Pancras district was 18·16 per 1000, and this is the lowest recorded since 1856; the zymotic rate was 2·04. In a number of instances Dr. Sykes is able to state that there has been diminution in the amount of death from the principal zymotic diseases; but this is not the case as regards diphtheria, which shows a tendency to increase here as well as in so many other large urban communities. A good deal of disinfection is now carried out, and a new high-pressure steam chamber has been provided by Messrs. Goddard and Massey of Nottingham. House-to-house inspections are still maintained, but of this most important branch of the public health department it is stated that it is diminishing on account of increased work in the department. This, we assume, is the official method of telling the ratepayers that the increase in question has not been met by a corresponding increase of staff, and that there is danger that the work which, of all others, tends to the good of individual householders is in consequence gradually being neglected. A considerable amount of work has been done in connexion with the dwellings of the poor, with a view to their amendment or their demolition. Attention has been devoted to the ventilation and flushing of sewers, to slaughter-houses, milk-shops, &c., and in a not inconsiderable number of cases successful proceedings were taken under the Sale of Food and Drugs Act.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6215 births and 4284 deaths were registered during the week ending Jan. 31st. The annual rate of mortality in these towns, which had declined from 28·7 to 25·1 per 1000 in the preceding four weeks, further fell to 22·3 last week. The rate was 22·1 in London and 22·5 in the twenty-seven provincial towns. During the past four weeks of the current quarter the death-rate in the twenty-eight towns averaged 25·7 per 1000, and exceeded by 2·1 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·2 in Nottingham, 13·6 in Derby, 16·1 in Hull, and 18·0 in Portsmouth; the highest rates were 27·0 in Salford, 27·9 in Manchester, 29·5 in Halifax, and 32·9 in Preston. The deaths referred to the principal zymotic diseases, which had been 404 in each of the preceding two weeks, declined to 379 last week; they included 113 from whooping-cough, 93 from measles, 45 from scarlet fever, 45 from diphtheria, 43 from diarrhœa, 40 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Plymouth, Wolverhampton, Brighton, and Portsmouth; the highest in Salford, Manchester, Bristol, and Preston. The greatest mortality from measles occurred in Birkenhead, Manchester, Bristol, Oldham, and Preston; from scarlet fever in Preston; from whooping-cough in Birmingham, Salford, and Huddersfield; and from "fever" in Birkenhead. The 45 deaths from diphtheria included 25 in London, 5 in Salford, 3 in Manchester, 2 in Preston, and 2 in Birmingham. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1387, and showed a further decline from recent weekly numbers; the patients admitted during the week were 112, against 112 and 103 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 1018 and 845 in the previous two weeks, further declined last week to 636, but exceeded the corrected average by 71. The causes of 78, or 1·8 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Sunderland, Cardiff, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Preston, Halifax, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 28·8 to 24·9 per 1000 in the preceding three weeks, rose again to 26·4 during the week ending Jan. 31st, and exceeded by 4·1 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 10·3 in Greenock and 16·5 in Aberdeen to 29·1 in Paisley and 35·3 in Glasgow. The 690 deaths in these eight towns showed an increase of 39 upon the number in the preceding week, and included 29 which were referred to whooping-cough, 10 to scarlet fever, 8 to measles, 7 to diphtheria, 7 to diarrhœa, 4 to "fever," and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against 53 and 76 in the preceding two weeks. These 65 deaths were equal to an annual rate of 2·5 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 16 and 27 in the preceding two weeks, further rose last week to 29, of which 22 occurred in Glasgow and 4 in Edinburgh. The deaths referred to scarlet fever, which had been 7 and 18 in the previous two weeks, declined to 10 last week, and included 6 in Glasgow, 2 in Aberdeen, and 2 in Edinburgh. The 8 fatal cases of measles exceeded by 1 the number in the preceding week, and included 6 in Glasgow. The 7 deaths from diphtheria were within 2 of the number recorded in the previous week; 2 occurred in Greenock and 2 in Paisley. Of the 4 fatal cases of "fever," 2 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 228 and 210 in the preceding two weeks, further declined last week to 207, but exceeded by 20 the number in the corresponding week of last year. The causes of 58, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding three weeks from 36·0 to 38·4 per 1000, declined again to 32·6 during the week ending Jan. 31st. During the first four weeks of the current quarter the death-rate in the city averaged 36·0 per 1000, the rate during the same period being 26·5 in London and 21·3 in Edinburgh. The 221 deaths in Dublin showed a decline of 39 from the number in the preceding week, and included 4 which were referred to different forms of "fever," 1 to measles, 1 to diphtheria, and not one either to small-pox, scarlet fever, whooping-cough, or diarrhœa. Thus the deaths from the principal zymotic diseases, which had declined from 15 to 8 in the preceding three weeks, further fell last week to 6; they were equal to an annual rate of 0·9 per 1000, the rate from the same diseases being 1·8 in London and 1·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 and 5 in the preceding two weeks, declined again to 4 last week. The 221 deaths in the city included 40 of infants under one year of age and 65 of persons aged upwards of sixty years; the deaths of infants corresponded with the number recorded in the preceding weeks, while those of elderly persons showed a considerable decline from the high numbers in recent weeks. Seven inquest cases and 5 deaths from violence were registered; and 65, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or nearly 11 per cent., of the deaths in the city were not certified.

THE SERVICES.

Deputy Surgeon-General Alexander Allan, M.D., who served with the Soudan expedition at Suakin in 1885, has been appointed to the post of Principal Medical Officer in Scotland, in place of Deputy Surgeon-General Irwin.

ARMY MEDICAL STAFF.—Surgeon-Major John Joseph Crean retires upon retired pay (dated Feb. 4th, 1891).

MILITIA MEDICAL STAFF.—Surgeon-Major W. S. Love, 4th Battalion, the Royal Inniskilling Fusiliers, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated Feb. 4th, 1891).

NAVAL MEDICAL SERVICE.—The Admiralty has, we

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understand, finally taken over the Naval Hospital at Gibraltar, which has for seventy-five years been occupied by the military authorities.—Staff Surgeon Herbert Mackay Ellis has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Jan. 26th, 1891).—The following appointment has been made at the Admiralty:—Staff Surgeon William B. Bruce, to the *Collingwood* (dated Jan. 30th, 1891).

VOLUNTEER CORPS.—*Rifle:* 1st Surrey (South London): John Hammerton Edwards, M.D., to be Acting Surgeon (dated Feb. 4th, 1891).—16th Middlesex (London Irish): Surgeon H. R. H. Bigg resigns his commission (dated Feb. 4th, 1891).—Acting Surgeon J. H. Griffin to be Surgeon (dated Feb. 4th, 1891).

Correspondence.

"Audi alteram partem.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—The recent discussions on the diseases of the uterine appendages at the Medical Society and elsewhere have brought this subject prominently before the profession. Affections of the uterine appendages are nothing new; they are comprised under the name pelvic peritonitis or perimetritis, and since the writings of Bernutz in 1860–62 it has been well known, though not till lately current, that in a large number the route and sometimes the focus of infection has been the tubes. A change in nomenclature has arisen, for words ending in "salpinx" have displaced the older and more general names. Yet further changes have arisen in practice in some quarters, in that these affections have become the objects of innumerable operations. Now, perimetritis is probably the very commonest of all the serious diseases of women. It is also perfectly certain that the great majority of cases get quite well without any operation. We are far from denying that exceptional cases call for surgical procedures, or that cases of prolonged suppuration in the pelvis are properly treated by the application to them of ordinary surgical principles. But this wholesale resort to a mutilating operation, advocated by several speakers at these discussions, calls for serious consideration by the profession. We have both been in charge for many years of the obstetric and gynæcological departments of two of the great general hospitals of London, besides private practice. During that time thousands of patients have passed through our hands, and a very large number of cases of pelvic inflammation. We have on the rarest possible occasions resorted to removal of the appendages, and never unless life seemed to be threatened, or the health had been greatly impaired for many months. We never have sent patients away after a course of Epsom salts, "and when this drug fails have folded our hands and expressed the deepest sympathy with the sufferer." On the contrary, our patients have generally got well by the use of patience on their part and on ours. If, after a long course of patient treatment, it has seemed to us imperative to operate, we have been ready to do so, and have done so in rare instances. Without patience, many women who have had matting of the pelvic organs for months, but who have perfectly recovered and have borne children, would have had their uterine appendages removed. Statistics on matters of this kind are often given in a manner which does not bring out important points. For instance, in the discussion at the Medical Society it would have been interesting to know: (1) the total number of women seen during the period embraced by the table; (2) the total number of cases of perimetritis or pelvic inflammation among them. Statistics without these facts may give information as to the chances of the operation; those indicated would give the chance of being operated upon.

A plea for patience is to be found in the declaration of the operators that the full benefits of the operation are not usually felt for months or years after. If the operator would exercise this patience before the operation, there might be the less need for its exercise by the patient after the operation. To operate after a "couple of months" is in our opinion quite unjustifiable in chronic cases, or in any except those of peril to life. To remove the ovaries in cases of congenital ill-development with dysmenorrhœa and sterility and anteflexion of the uterus is a proceeding we have never seen necessary to recommend. Death from disease of the appendages is of extreme rarity, but the mortality after the operation is considerable. It is inconceivable to us that this amount of operating is justifiable, and we beg to protest in the strongest manner against it. This particular operation has already furnished material for legal proceedings in a well-known case. It is conceivable that it might form the object of legislation. We cannot think that the good sense of the profession can fail to be roused against it. The sooner the better. There are several other questions requiring an answer, some of which have been referred to by others. For instance, what were the results in the unoperated cases? What are the dates of the reported cases? What were the results in general surgery at the Waterloo-bridge-road Hospital during the time of the unreported cases? These are questions concerning the authorities of that hospital. But we prefer to keep to our point, and to repeat our protest against the removal of the appendages whenever a tumour of them is found accompanied by pain and hæmorrhage; or a dilated tube; or affections of the tubes, with tender or even enlarged ovaries, after treatment has been tried for a couple of months; or when a woman suffers from pelvic pain, dysmenorrhœa, or dyspareunia, after one or more attacks of pelvic inflammation; or in cases of ill-developed ovaries with anteflexion and dysmenorrhœa; or in cases of cardiac dyspnœa; or of tubercular disease of the tubes associated with similar disease of other organs; or in neurotic women without disease of the appendages. We protest against the view that any one of the above conditions diagnosed before, or discovered during or after an operation, is in itself a justification for the removal of the uterine appendages, and such practice is in our opinion highly injurious to women and to the profession. In no other department of surgery is inflammation of an organ considered to justify its removal.

We are, Sirs, your obedient servants,

JOHN WILLIAMS,
F. H. CHAMPNEYS.

To the Editors of THE LANCET.

SIRS,—It is to be regretted that Mr. Meredith did not attend either of the meetings of the Medical Society when the above subject was under consideration, as then not only would those present have had the benefit of his opinions, but also he would have found it unnecessary to occupy your valuable space with the first half of his letter, which appears in the current number of THE LANCET. I explained that my thirty cases began from the time (end of 1888) when the obstetric physicians at the Middlesex Hospital obtained the right to perform abdominal sections, that prior to then I operated nine times, with one death from septic peritonitis, and that since the last case in the table I have operated ten times, with two deaths, one from hæmorrhage due to slipping of the pedicle ligature, and the other as a result of strangulation of a bit of omentum in the wound after removal of the drainage-tube. Since the meeting on Monday last there is another successful case to be added, just completing fifty, with four deaths, three being from accidents which I trust in future to be able to prevent a recurrence of. When I reach my hundredth case the whole shall be given with every possible detail. As, however, I did not profess that the thirty cases in my paper constituted my whole practice, I was perfectly justified in putting them forward. If Mr. Meredith chooses to consider them of not much value, by all means let him do so, others probably will estimate them differently. Coming now to the second and more important part of his letter, I would fain think he has not taken the trouble to read my paper carefully, as I am unwilling to believe that he would knowingly distort its contents. It is headed "On Chronic Disease of the Uterine Appendages," and in it I say: "It is obviously unnecessary to touch upon large tumours which rise up out of the pelvis ..... such, however, is not the case with diseases which give rise to small pelvic tumours or to none at all, &c." Now three of the cases in my table, Nos. 5, 6, and 17 (not two as stated by Mr. Meredith), were ovarian cysts *each the size of an orange*, and are so described. Yet Mr. Meredith and one or two speakers at

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the last meeting object to their being included. Surely they are examples of chronic disease of the appendages, and I defy even Mr. Meredith's skill to have diagnosed before operation whether they were distended tubes or ovaries. Again, he says three of my cases were incomplete operations (excluding Case 21, which was an exploratory operation); this I assert is absolutely false, for (except No. 21) all the others were perfectly complete—a complete operation being, of course, one where *all* the diseased parts are removed, but not necessarily the appendages on both sides. I ask whether that is a fair and honest or a carping criticism of my paper?

Mr. Meredith next goes on to compare the number of cases operated on by me and those operated on at the Samaritan Hospital respectively, and then tries to explain the increased number under my care by the astounding assertion that it is due to a "spirit of restless surgery now so prevalent that, unless restrained, will bring into disrepute an operation which when judiciously undertaken in *properly selected cases* may prove a most valuable means of restoration to health,"—that is to say, whilst the cases at the Samaritan Hospital are properly selected mine are not. Now, Sirs, in my paper I lay down seven propositions, two of which read as follows: "Sixthly, whenever on opening the abdomen the operator finds the ovaries and tubes fixed by adhesions, he should break down the latter with his fingers, and then, having brought the appendages into view, carefully examine them for any well-marked visible or tangible signs of disease. If no marked departure from the normal be made out, then it is the operator's bounden duty to stay his hand from removing the appendages. Seventhly, inasmuch as there is usually an absence of disease of the appendages in cases of ovarian neuralgia occurring in neurotic subjects, any local interference is not only unnecessary but absolutely unjustifiable." It must therefore be evident to any unbiased person who reads the foregoing remarks and those given in the table of cases, that not only am I strongly opposed to the removal of the appendages unless there be well marked disease, but also that in my cases they were matted down by adhesions, so that in most of the operations their removal was effected with much difficulty. Under these circumstances I cannot but feel that Mr. Meredith's remark is not only uncalled for, but is also totally unjustifiable. I gladly plead guilty to a "spirit of restless surgery" which will not permit me to condemn women to years of misery when I know I can cure them by operation after other means have proved useless. It will interest your readers to know that, with a view of safeguarding ourselves and our patients, my colleagues and I a year or two ago passed a rule (brought forward by myself) which ensures that in all cases operated upon for chronic disease of the appendages the parts removed are carefully examined by a subcommittee of three, and their report is read to the medical committee. Some such rule should be in existence at all hospitals. I wonder if there is anything of the kind at the Samaritan. Knowing the strenuous opposition met with by Sir Spencer Wells when endeavouring to establish ovariotomy as a proper procedure, I have hope that with increasing experience in cases of chronic disease of the uterine appendages even Mr. Meredith may become a supporter of operating upon them. It will afford me much pleasure to show him, at either of the hospitals to which I am attached, how these cases are being constantly met with and diagnosed, how the diagnosis is subsequently verified by abdominal section, and how the patients are cured thereby. Apologising for the length of this letter,

I am, Sirs, faithfully yours,

Harley-street, W., Jan. 31st, 1891. WILLIAM DUNCAN.

To the Editors of THE LANCET.

SIRS,—The first part of the letter addressed to you by my friend Mr. Meredith concerns Dr. W. Duncan individually rather than the operation he was advocating, so that I may leave Dr. Duncan himself to deal with it. But about the second part I should like to be allowed to say a word or two. It quite bristles with fallacies. The argument is that because the proportion of cases of diseased uterine appendages forms (in a given year) only 10 per cent. of the whole number of abdominal operations performed at the Samaritan Hospital, therefore either the operator who exceeds that proportion removes the appendages too frequently, or the staff of the Samaritan Hospital does not remove them often enough. In the first place, we do not know what the proportion is in Dr. W. Duncan's practice, for his paper took no account of cases in which there was a tumour rising above the pelvic brim. But even supposing it had been made out that his proportion considerably exceeded that of the Samaritan Hospital, no such inference, as Mr. Meredith suggests, could reasonably be drawn. The reputation of the Samaritan Hospital is based upon that of the great ovariotomists who have been or are connected with it, so that abdominal tumours constitute, and will long continue to do so, an overwhelming proportion of the cases seeking admission. This is not the case in the gynæcological department of a general hospital. There cases of pelvic inflammation, due to or complicated by Fallopian tube disease, are admitted in at least equal proportion with cases of ovarian tumour. The work in the one place cannot therefore be fairly compared with the work in the other. Again, application for admission into a special hospital generally means that the case has been already diagnosed. Now, abdominal tumours, if not always easy of diagnosis, are, at any rate, easy of recognition, so that we have here an additional explanation of the frequency with which these cases are sent to special hospitals, as compared with cases of diseased Fallopian tubes &c., which are difficult of recognition and diagnosis, are very rarely discovered before admission. My cases of diseased Fallopian tubes at St. Thomas's Hospital have, for the most part, been discovered either in the out-patient room or amongst in-patients admitted in the ordinary routine.

In the last sentence of Mr. Meredith's letter there is a dictum against which, as applied to the operation under discussion, I feel bound to protest. He ascribed the large number of cases reported by Dr. W. Duncan to the "spirit of restless surgery now so prevalent." This utterance breathes more of the spirit of the Pharisee than of that of the amiable Samaritan. It comes, too, somewhat incongruously from a disciple and successor of Sir Spencer Wells, the story of whose life-work ought to have taught an impressive lesson to all who are disposed to carp and cavil at operators a little more progressive than themselves. I am, Sirs, yours faithfully,

Brook-street, W., Feb. 6th, 1891. CHAS. J. CULLINGWORTH.

"FAILURE OR CURE?"

To the Editors of THE LANCET.

SIRS,—If Sir Spencer Wells would confine his criticism of those with whom he does not agree to open-air statements, such as are contained in his letter in your columns of to-day, they would be easily met. As they stand, they consist of a series of mutilations (of Dr. Ross's pamphlet and of my own statements), and of a series of assertions based on the inaccurate memory of the patient, most of them being wholly irrelevant to the issue. Her conclusion that her case is a "decided failure" will be altered by the lapse of time, and the removal of the hæmatocele which she now suffers from. She had one last May; I tapped it, and she was "all right" for five months. Such hæmatoceles interrupt the convalescence of such cases—everybody knows that who has had any experience of them, except Sir Spencer Wells. That the patient will recover and be an absolute cure in course of time is a conclusion that I am quite certain about; I can demonstrate the probability by many parallel cases. But it will serve no good purpose for your columns to be filled by reiterated assertions and contradictions between Sir Spencer Wells and myself. I have a mass of letters, telegrams, and notes about the case which may or may not establish Sir Spencer Wells' statements. I fear they will not. I fear his habit of keeping notes is not extensive, and I know his memory is not good. Recognising the importance of the discrepancies between his statements and mine, the Gynæcological Society has appointed a committee of investigation at the instance of the ex-President, who for many years has been a colleague of Sir Spencer Wells, and who certainly is no partisan of mine. I took no part in the selection of the committee, and Sir Spencer Wells can therefore have no possible objection to submitting his statement of the case and his proofs to this committee. This I now challenge him to do, as I shall do mine. If I have made a mistake in it or misrepresented any point on which the evidence is against me, I must make an apology to the Gynæcological Society and to Sir Spencer Wells. He, in his turn, will surely not discredit

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the dignified class to which he has been elected by refusing to do as much.

Meantime let me point out that Sir Spencer Wells has not made the slightest attempt to justify the conclusions he indicates that this was a case of neurotic ailment, and not one of incurable pyo-salpinx. Even if his own estimate were correct, if the case were a mere neurotic, why did he amputate the cervix in 1879? If the poor woman was suffering then from suppuration of the Fallopian tubes, and I think the evidence in my possession will prove that she was, a more unjustifiable operation, a more "deplorable and disastrous failure," a more "discreditable" result (to use Sir Spencer Wells' own words) cannot well be imagined.

In any case, Sir Spencer Wells, and he alone, was answerable for the operation which I performed in 1888, and this is proved by a series of telegrams which I have carefully preserved and which Sir Spencer Wells has apparently forgotten. To refresh his memory I publish the last of them: "Mrs. M. is very ill, and in my opinion the case is urgent. Wells has been communicated with and declines to advise. We have decided to operate this afternoon unless you come, in which case it shall be deferred till your arrival." If an operation in this case was unnecessary in Sir Spencer Wells' opinion, why did he not intervene to stop it, as he could have done, and as, if his statements are accurate, he ought to have done. I am quite prepared to submit evidence which will show conclusively that if any discreditable blunder has been committed the responsibility of the same is to be awarded to Sir Spencer Wells. At the same time I am satisfied that the right thing was done and that time will amply justify this conclusion.

I am, Sirs, yours truly,

Birmingham, Jan. 31st, 1891. LAWSON TAIT.

"FUCHSINE BODIES" IN TUBERCULOSIS OF LUNG.

To the Editors of THE LANCET.

SIRS,—Whatever may be the significance of Dr. Russell's fuchsine bodies in cancer, there can be no doubt that similar bodies occur in genuine tuberculosis of lung. During the Christmas vacation I was trying a method of staining sections of phthisical lung tissue which had been embedded in paraffin by a process which I need not here detail. Suffice it to say that I used fuchsine, to which a little carbolic acid had been added, as the primary stain, and methyl blue as the second, or contrast stain, when, to my surprise, I found in some of the cells which had been detached from the walls of the alveoli a red spot (more rarely two or three such spots) which occupied the centre of a clear transparent area on one side, but outside of this clear hyaline-looking area was seen the nucleus of the cell stained of a faint blue colour. I compared these spots with some of Dr. Russell's figures,[1] and could not detect any difference except that the fuchsine bodies in my section were not so deeply stained. I thereupon cut a few more sections from the paraffin block ($\frac{1}{100}$ mm. in thickness), and, having fixed each section to a cover glass with Schällibaum's fixative, I heated and dissolved away the paraffin in toluol (turpentine, benzol, or xylol will do quite as well) in the usual manner. I then proceeded to stain with Neelsen's fuchsine—which only differs from Dr. Russell's fuchsine in containing more carbolic acid (5 per cent. *plus* a little alcohol)—just as one does with a dried film of sputum on a cover glass. Of course I did not pass the lung tissue through the flame, nor did I at any stage use any acid decolourising agent, but simply, after the removal of the paraffin with toluol, place the cover glasses first into absolute alcohol for a few seconds and then into hot Neelsen for about ten minutes; after this I washed the cover glasses in water, placed them again in absolute alcohol from one-half to three-quarters of a minute, and then into a solution of iodine green, to which I added a little carbolic acid, according to Dr. Russell's directions, with this exception, that I did not actually weigh out the iodine green and carbolic acid after staining with the latter mixture for a little over five minutes. I proceeded very much in the same way that Dr. Russell has recommended, and mounted in xylol balsam. On examining some of my sections I found the following appearances:—1. Most of the nuclei of the cells were of a dark colour, looking more blue than green in ordinary gas light. 2. In addition, a few of the cells contained bright-red fuchsine bodies, as a rule a fuchsine body to a cell, the fuchsine body being surrounded by a clear transparent area, and what appeared to be the nucleus of the cell was pushed away to one side of it. 3. Portions of the walls of bloodvessels presented here and there a similar red colouration. 4. And last, but not least, there were seen large numbers of tubercle bacilli, diagnosed easily enough by their slender forms and characteristic arrangement.

I am, Sirs, yours faithfully,

GEO CARRINGTON PURVIS, M.D., B.Sc.

Edinburgh, Jan. 22nd, 1891.

[1] Brit. Med. Jour., Dec. 13th, 1890.

DEATH DURING CHLOROFORM ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—As deaths from anæsthetics are always of some interest, the following case may be worthy of record. On Dec. 7th, after consultation with Dr. Berry and Mr. Watson of Queenstown, Dr. Murray made an exploratory incision over the right hypochondrium of a lad aged seventeen years. Chloroform was administered by Mr. Watson on a small wire and lint mask, and was measured by drop bottle. The total quantity used from first to last was six drachms. Soon after the administration was begun there was a marked diminution in the number of pulse beats. Gradually, however, the pulse became stronger, and his breathing regular. In about twenty minutes the patient's face suddenly became pallid, the pulse stopped at the wrist, and the breathing became irregular and gasping. Respiration continued spasmodically for fully a minute, and then ceased entirely. Artificial respiration by Silvester's method was immediately begun, and continued for over half an hour. Ether hypodermically, inhalation of nitrite of amyl, and electricity were tried, but without success. Death seemed to have been instantaneous from reflex paralysis of the heart. His heart had been auscultated previously by several medical men, and by the anæsthetist prior to the administration, and nothing abnormal had been detected. For six months the lad had suffered from attacks of colic of uncertain origin, for which morphia had been used hypodermically and in increasing doses. No necropsy was allowed. We are, Sirs, yours faithfully,

JOHN K. MURRAY.
WM. B BERRY.

Whittlesea, Cape Colony, Jan. 8th, 1891. L. WATSON.

THE ROYAL COMMISSION ON VACCINATION.

To the Editors of THE LANCET.

SIRS,—In your zeal for vaccination you have allowed yourselves to state some curious things, when speaking of my evidence before the Royal Commission, in your issue of Jan. 24th. For instance, for the history of the last century, statistically, as regards small pox, I used Dr. Guy's paper. And you must know that he was not an authority to treat as "untrustworthy." Yet you say, so I read it, that these statistics of Dr. Guy are "untrustworthy." Your words are: "He [Mr. Wheeler] occupied several hours with inferences drawn from statistics of a past century and of distant countries, the former of which, at least, have been shown to be untrustworthy." Then you say that I forgot to name the best authorities who are agreed that in epidemic years small-pox is not diminished by vaccination or greatly affected by it. On page 62 of the third report you will find that there are names given; one only I will quote here—viz, the authority that I have already named, Dr. Guy, said that in epidemic years the barrier of vaccination was broken down, and the more and the less susceptible fell victims to the small-pox. Your own columns, after the great epidemic of 1871–2, were used to enforce the susceptibility of the vaccinated to the disease in epidemic years. My endeavour was to be clear in the statement of my claims and arguments, and I may have totally failed to be so, it is true; but when I had specially summarised my claims, it is a little hard, do you not think, that this summary should be entirely set aside by you for a statement of my case that is at what seems to me total variance with all the tenour of my evidence? Your six points—which, without "violence," you say may present my thesis—are opposed to it. Thus you say in No. 6 that human interference with small-pox has been made by vaccination. It must be perfectly clear to anyone who has done me the honour to read my evidence that that is a proposition that

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I did not permit to be put into my mouth, and combated all through.

If you will allow me, I will again state my conclusions here. They are: "I have found no reason for crediting vaccination with the lessening of the incidence of small-pox in the last 200 years. I believe it to be due, as I have endeavoured to show, to other causes. Nor do I find that, given the conditions suitable to its development, vaccination exerts any influence in preventing the extension of small-pox in modern communities, while I claim to have shown that the fatality is practically unaltered during the last 200 years. The great bulk of our hospital small-pox I have shown to be in vaccinated persons, and those persons I have shown to be bearers of every kind and degree of vaccination. I have shown that even good marks offer no protection from death by small-pox in its most loathsome and dreadful forms. That the marks classification is neither scientific nor true to the theory it is founded on. That the classification by marks sets aside entirely the legal vaccination imposed by law, and substitutes as the only valid vaccination something quite different, and only discriminated in a fever hospital, where it is to be tried and tested. That the unvaccinated are, in the confluent cases, often erroneously classed, and I have given grounds for thinking that this is done in thousands of instances. I have shown that the classification by eruption is still the only scientific classification of small-pox, and that the vaccinated appear in every shade of severity in this classification, and follow the usual expectation of the disease. It stands broadly confessed in official literature, and in evidence officially given here, that the youth and adult population who are vaccinated are severely attacked by small-pox. That the small-pox follows them further into life than the unvaccinated. I have shown that the saving of the small-pox among the very young lives in recent years is not due, as claimed, to their vaccination, but to the reduced birth-rate of children, lessening the infant mortality of which small-pox is one item. I have shown that the Public Health Acts are doing better work against disease in other forms than small-pox, the small-pox offering no superior instance of this. And I therefore conclude that the Vaccination Acts are a great legislative error and have been as unnecessary as they have been oppressive and cruel. I am convinced that it is the bounden duty of the State to repeal them entirely, and leave vaccination to private option alone." Permit me to say, in conclusion, that it is a great sorrow to me that Mr. Bradlaugh will not have a part in the further deliberations of the Commission.

I am, Sirs, yours truly,

Darlington, Jan. 31st, 1891. ALEX. WHEELER.

*** We have nowhere implied that Dr. Guy's statistics were untrustworthy, but we have stated that Mr. Wheeler's "inferences" were so. As to the past century records, if Mr. Wheeler will look at the index to the third report of the Commission, he will find many entries under "As to trustworthiness of the London Bills of Mortality," &c., and if he will also refer to his own cross-examination of March 19th, 1890, he will see how largely our view is shared by the Commissioners. Even when Lord Herschell drew the "general conclusion that you cannot arrive at any accurate estimate of the (then) population of London" Mr. Wheeler had to answer, "I cannot argue it." This persistent recurrence to ancient records for the purposes of 1890 "inferences" is more than significant. Then again, Dr. Guy does not state that which Mr. Wheeler asserts above. Not only is his whole contention in favour of vaccination, but even the quotation referred to only goes to the effect that in certain epidemic years, such as 1871, vaccination (which was then almost exclusively a single primary one) did not "act as a *sufficient* protection." Mr. Wheeler does not finish the sentence referred to, neither does he give Dr. Guy's opinion, expressed in the same connexion, that there is nothing even in the statistics of that epidemic "which ought to shake our confidence in the preventive efficacy of vaccination." On other points Mr. Wheeler announces that he has "shown" certain things. We admit the attempt; but whether he has succeeded or failed we are content to leave to the judgment of the Commission.—ED. L.

VACCINATION IN SKIN DISEASE.

To the Editors of THE LANCET.

SIRS,—As an old subscriber to your valuable journal I wish to call your attention to a paper of mine on Vaccination in Skin Disease which appeared in 1863.[1] As a London graduate myself, and interested in the stability and welfare of British institutions, I thought well that the subject matter of this paper should not sleep any longer. Evidently Koch is not aware of the facts, or some reference would ere this have been made.—I am, Sirs, yours truly,

Elgin-street, Ottawa, Jan. 12th, 1891. J. A. GRANT.

*** We have referred to Sir James Grant's communication to our contemporary nearly thirty years ago.[2] Four cases of cutaneous disease, described as "psoriasis palmaris of five years' duration," "tinea nummularis," "tubercular syphilide," and "psoriasis lepræformis," are said to have been cured by vaccination, and it is suggested that the vaccine lymph may neutralise the effects of "irritants" circulating in the blood. But we do not quite see the bearing of these (unconfirmed?) observations upon Professor Koch's work.—ED. L.

GENERAL PRACTITIONERS AND HOSPITAL ABUSES.

To the Editors of THE LANCET.

SIRS,—For many years past general practitioners in London have been loud in their complaints as to the abuses in connexion with the management of our medical charities, especially in regard to the out-patient departments. At length a Special Committee of the House of Lords has been appointed to inquire into the subject, but, strange to say, now that general practitioners have the opportunity to make their grievances known, they, for the most part, treat the matter with indifference. True a few general practitioners have given evidence before the committee, but it is to be feared that their personal views will have very little weight as against those of the officials and the eminent physicians and surgeons attached to the hospitals who agree in deprecating the slightest approach to State interference with our medical charities.

I would suggest that a Committee of General Practitioners, representative of every district in the metropolis, be at once formed to prepare such evidence as may be thought desirable to lay before the Lords' Committee now sitting, and also to formulate a scheme for remedying the abuses complained of. Now is the time for general practitioners to speak, or we may as well for ever hold our tongues. Should any of your readers wish to join the proposed committee, I shall be glad if they will communicate with me as early as possible.

I remain, Sirs, yours faithfully,

GEORGE BROWN, M.R.C.S. &c.

29, Threadneedle-street, E.C., Feb. 22nd, 1891.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Housing of the Poor in Newcastle.

THE rapid increase of the population of Newcastle and the progress of railway and other extensions have displaced a very large number of poor from their dwellings during the last few years, but it cannot be said that these poor people have found anything like equivalent accommodation elsewhere, their lodgings being, as it were, always on a down grade. It is true that over 8000 new houses have been built in Newcastle during the past eight years, but they have been at rents far above the means of the poor, and by the poor I mean the working men earning low wages. It is now proposed by the corporation to erect some large blocks of one-room tenements for, say, about 500 persons. This is to be of an experimental nature, and if fairly successful can no doubt be soon extended.

Newcastle Dispensary.

The annual meeting (the 113th) of this old charity has been held, and the resident medical officer, Dr. George W.

[1] Medical Times and Gazette. [2] Ibid., March 14th, 1863.

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Ridley, reported as follows:—That the total number of cases treated has been 25,573. There had been an increase in the home patients department which had made it necessary to increase the visiting staff to five, the city being now divided into five districts. In the early spring the wave of influenza, which had gradually spread over Europe, reached Newcastle. It spread very rapidly, and reached its climax about the middle of February; after that date it as rapidly diminished, and by the end of April had practically died away. At the same meeting it was stated that there was a prospect of an addition of £8000 to the capital of the dispensary during the next twelve months, and a committee was empowered to take into consideration the desirability of establishing an inland convalescent home for the use of the patients of the dispensary.

Newcastle Lying-in Hospital.

The annual meeting of the Newcastle Lying-in Hospital has been held, and the report presented stated that 231 cases had been attended to during the past year, and the committee rejoiced to say that in all this number no fatal case had occurred. This is all the more satisfactory as I understand that the city has been by no means free from puerperal disease.

The Modified Carriage Tax.

It is a good deal owing to the exertions of a Newcastle gentleman, Mr. John Philipson, J.P., that the modification of the carriage tax was brought about, so that we were pleased in the North to see that Mr. Philipson's work had been appreciated all over the country, and that he had been last week presented in London with an address, together with a cheque for 100 guineas.

Newcastle-on-Tyne, Feb. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Society of Edinburgh.

THE fifth meeting of the above Society was held on the 2nd inst., Sir Douglas Maclagan, President, in the chair. The whole meeting was devoted to an address on the Sense of Hearing, given by Professor Rutherford, F.R.S., at the request of the Council. He criticised Helmholtz's theory of the manner in which the cochlea is affected by sound vibrations, and showed the great anatomical difficulties of any theory that regards the basilar membrane as the transmitter of sound vibrations to Corti's cells, and as an analyst of complex sound vibrations. The basilar membrane is heavily damped by the cellular elements above and beneath it; and, in the case of the rabbit, by its division into two layers with a homogeneous tissue between them, and also beneath the lower layer—an arrangement that must greatly interfere with any localised sympathetic vibration of its fibres. The hair cells of Corti are the true nerve terminations, and are placed in a favourable position for receiving the sound waves transmitted to them through the superjacent membrane of Corti. The sound wave is probably considerably damped, and fine vibrations therefore destroyed, by the granular protoplasm at the lower ends of Corti's cells and the granular cement substance between their lower ends and the supporting cells of Deiter. He stated the arguments opposed to the theory of Helmholtz, and explained his own theory of sound-sensation suggested by the telephone, and communicated by him to the British Association in 1885. Although no theory is free from difficulty, he maintained that the most feasible theory is that the great extension of the organ of Corti in the mammal is for the purpose of increasing the number of hair cells, so that the appreciation of the qualities of sound may be more acute, and therefore more intelligent; that the hairs of all the cells of Corti are affected by tones of every pitch, and that the sound vibrations are translated by Corti's cells into nerve vibrations similar in frequency, amplitude, and form to those of the sound; and that the different sensations of tone are due to nerve vibrations of different frequency and form, periodic or aperiodic, arriving in the sensorium. He illustrated his address by numerous diagrams and experiments, and was awarded at the close a hearty vote of thanks by the Society.

Edinburgh Royal Public Dispensary.

The annual meeting of the managers of this institution was held in the end of last week. The report stated that 8296 persons had been treated during the year, this being an increase of 1072 cases as compared with the preceding year. The financial report was satisfactory.

Health of Edinburgh.

The mortality last week was 124, and the death-rate 23 per 1000. Diseases of the chest accounted for 46 deaths, and zymotic diseases for 9. The intimations for the week included 36 of typhoid fever, 14 of diphtheria, 55 of scarlatina, and 23 of measles. The number of patients in the city hospital last week was 230, 95 of whom were suffering from typhoid fever and 88 from scarlatina.

Scottish Universities Commission.

The Commission continues its sittings, and at their meeting on Monday Drs. Keiller and G. W. Balfour, examiners in medicine in the University of St. Andrews, and Dr. Sinclair and Professor Paterson, representatives of University College, Dundee, gave evidence regarding the schools they represented.

Edinburgh Royal Infirmary and Women Students.

The managers of the Royal Infirmary, at their meeting this week, resolved to admit women students of medicine, and it has been remitted to the medical and surgical staff to give effect to this decision. The conditions are that they are to be taught separately from the male students, that under no circumstances whatever shall any ward be utilised twice in the same day for clinical instruction, and that, as far as possible, no interference shall be attempted with ward clinics and lectures already arranged for male students. It is not yet known what the attitude of the staff will be towards this decision.

Death of Mr. Hector McColl, L.F.P.S. Glas.

The west of Scotland has sustained a serious loss by the death of Mr. McColl, which took place a few days ago. The deceased had reached the ripe age of ninety-one, having obtained his licentiateship of the Glasgow Faculty in 1829. Up to 1880 he carried on an extensive practice in the island of Mull, to which island, however, his professional services were by no means confined. The year 1847 was a period of great destitution on the island, and Mr. McColl was chosen to act as almoner for the administration of the measures of relief provided by the Government of the day.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

The Midwives' Registration Bill.

A PETITION has been forwarded to the House of Commons by the Royal College of Surgeons in Ireland against the Midwives' Registration Bill, pointing out that it is doubtful whether any portion of the community would be benefited by its provisions. The evils which are supposed to justify the enactment arise, the petitioners point out, from the want of proper means of educating midwives. They submit that all *bonâ-fide* midwives ought to pass such an examination as shall be considered necessary by the General Medical Council. The limitation of their work to cases of natural labour is spoken of as quite impracticable, and their examination by County Councils as likely to cause great variation in the standard of education required in the various counties. The petition further urges that the Bill should be referred to a Select Committee for consideration.

Monkstown Hospital.

The committee of this hospital in 1889, on the advice of the medical staff, determined to remove the bathrooms, lavatories, &c., from the main building, and to place them in a separate wing, and also to provide observation wards for the treatment of patients suffering from febrile affections, possibly infectious. Two sums of £1000, one a bequest and the other a donation, formed the nucleus of a fund for the required purposes, and last week the new wing was formally opened. The total cost of the new buildings is £3500, the balance still due being only £262.

Mercer's Hospital.

The unhappy litigation between members of the medical staff of this institution has not yet terminated, and last week, in the Queen's Bench Division of the High Court of Justice, before the Lord Chief Justice and three other judges, the case of Ward and Nixon *v.* Auchinleck

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was resumed. There was a motion on the part of the relators for a writ of *quo warranto* directed to Mr. Auchinleck, to ascertain by what authority he was appointed to, and continued to hold, the office of physician to Mercer's Hospital. Mr. Auchinleck had been elected by the lay members of the hospital board, and it was contended that the election rested altogether with the medical board who had appointed Dr. Cosgrave. The question raised involved the consideration of the Meath Hospital Act, the County Infirmaries Act, and other statutes. Mr. Justice Holmes observed that, regarding the office of physician as a public office created by statute, how could it be said that the person who gave a consideration for it, or paid for getting "in" to it, was legally in "possession" of it? Payment, he said, would not be illegal in the case of a private office, but it was a different thing in the case of a public office; and in order to lay grounds for granting a *quo warranto*, it should be shown that it was a public institution.

Ether Drinking.

A statement recently made by Mr. Ledlie to the Government in respect to the drinking of ether in several parts of Ireland shows that the vice is one which exists to a large extent in the counties of Derry, Tyrone, Armagh, and Fermanagh. About 100,000 people, it is estimated, indulge in the habit, and consume about 17,000 gallons of impure ether. Mr. Ledlie suggests as deterrents to the practice the mixing of naphtha with all ether except that used for medical purposes, so as to give it a nauseating taste; the reimposition of the prohibition tax, which was taken off ether by the Act of 18 and 19 Vic.; and the making of the practice of drinking ether or selling it illegal by all persons except chemists, and by them only for *bonâ-fide* medicinal or commercial purposes.

National Society for the Prevention of Cruelty to Children.

Branches of this Society have been formed in Cork, Belfast, and Dublin. In the last-named the branch has existed over two years, and last week, at a general meeting of the association, an address was delivered of a very interesting character by the Rev. Benjamin Waugh, hon. director. Funds are much needed, the London Society having to pay the Dublin branch about £100 a year.

Pharmaceutical Society of Ireland.

A *Dublin Gazette* of last week contains an Order in Council approving of the regulations relating to the School of Chemistry and Practical Pharmacy which have been adopted under the authority of the Pharmacy (Ireland) Act, 1875.

The Irish Cyclists' Association have resolved to hold an annual race meeting in aid of the Dublin hospitals.

Feb. 3rd.

BELFAST.

Koch's Method for the Treatment of Tuberculosis.

This method of treatment is now being tried at several of the Belfast hospitals, and at a meeting of the North of Ireland Branch of the British Medical Association, held in Belfast on Jan. 29th, patients were shown who had been or who were then under treatment. The inoculation fluid was sent in the first instance to the Hospital for Consumption and Diseases of the Chest, and last week it came to the Royal Hospital, where the medical staff are giving it a trial.

The Midwives' Registration Bill.

On Thursday, Jan. 29th, a resolution in favour of the principle of the Bill—viz., compulsory registration after due examination—was passed at the North of Ireland Branch meeting of the British Medical Association.

Hospital for Consumption and Diseases of the Chest.

The annual meeting of the friends and supporters of this institution was held on Jan. 30th. The hospital was opened for intern patients in October, and since that date seventeen cases have been admitted, while there were during the year 865 new extern cases. Koch's treatment has been tried in suitable cases. With the inauguration of the intern department the following additions have been made to the staff: Mr. Fagan, consulting surgeon; Dr. McKisack, surgeon; and Dr. C. E. Shaw, laryngeal surgeon.

The Belfast Hospital for Sick Children.

The supporters of this charity held their annual meeting on Friday, Jan. 30th. I find that the income (£977 18*s.* 2*d.*) for the year exceeded the expenditure (£960 6*s.* 9*d.*). The following members of the staff whose term of office had expired were re-elected: Dr. Byers, Dr. Nelson, and Mr. J. J. Andrew. Dr. John Campbell, assistant to Professor Redfern at Queen's College, Belfast, has been appointed assistant surgeon, in place of Dr. Boyd, resigned. The Queen Victoria Convalescent Home was opened in October, and since then children have been regularly sent to it from the Children's Hospital. Its existence renders the hospital complete. During the year there were 371 intern and 8536 extern cases at the hospital. Since the last annual meeting the Senate of the Royal University has placed the Belfast hospital for Sick Children in the list of institutions from which the University receives certificates for degrees in medicine, and in this way the hospital has become a part of the local medical school. During the present session a large number of senior students are in attendance.

The Samaritan Hospital.

From the report presented at the annual meeting of this charity, held on Jan. 26th, I learn that there has been no restriction in the free relief in the out-door department, but the expense attending in-door treatment, especially in operative work, prevents the receiving of all suitable free patients. Towards the end of the year the committee made an appeal in some districts to pay off the debt, the interest on which has for many years restricted the usefulness of this charity, and they hope that during the current year the appeal will be made over a wider area with a good result. Reference was made at the meeting to the illness of Dr. McMordie, the surgeon of the institution, and the hope was expressed that he would soon be restored to health, so as to resume his duties. In the meantime Dr. Boyd is acting as his substitute.

The Ulster Hospital for Women and Children.

From the report read at the annual meeting of the friends of this hospital on Jan. 29th I find that in 1890 190 children were intern patients and 2358 extern. In the women's department there were 64 intern and 265 extern cases. The committee have decided to hold a bazaar during December, 1891, with the object of raising funds to erect a new building for the Ulster Hospital. There is a balance of £80 14*s.* 11*d.* in the treasurer's hands to be carried forward to next year's account. The hospital is recognised by the Royal University as granting certificates to students.

The Royal Hospital.

For some time past it has been felt that the Royal Hospital has not kept pace in the accommodation it affords with such a rapidly increasing city as Belfast, and sooner or later it is believed that a new hospital will have to be built. The most desirable site for such a new hospital would be the place at present occupied by the Belfast Charitable Society's buildings. We understand that a small committee, composed of members of the boards of management of each of these institutions, has been appointed to consider the whole matter. It is stated that, in case an arrangement could be made, the inmates of the Belfast Charitable Institution (who consist of old people who have seen better days) could be housed as comfortably in a building in the vicinity of Belfast, where they would have the advantage of country air. We understand that in any case it has been decided to hold a centenary bazaar and fancy fair in November next for the benefit of the Royal Hospital.

Death of Dr. Higginson.

I regret to announce the death of Henry Talbot Higginson, M.D. Edin., which took place at his residence, Bangor, co. Down, on Friday, Jan. 30th. Dr. Higginson, who was the youngest son of H. T. Higginson, J.P., of Lisburn, and Carnalea House, Bangor, was born at Lisburn in 1841. Educated at the Royal School, Armagh, and in England, he was a pupil of the celebrated Dr. Thompson, of the co. Antrim Infirmary. Having graduated in Edinburgh in 1863, he became assistant to Dr. John Thompson of Whitehaven (brother of the late Archbishop of York). He soon went to America, and in the civil war there he was a medical officer in the United States army. At the close of the war Dr. Higginson returned home, and practised first at Donaghue, then at Lisburn, where he had a dispensary, and in 1870 he came to Bangor, where he has resided ever since and has practised. He was an Admiralty surgeon, and had charge of several of the coastguard stations. Dr. Higginson, who was a member of one of the most respected county Down families, was a man of very varied attainments. He was a good painter, sang well, and played several instruments.

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About a year ago he published a volume, "Notes by the Way," in which he gave a racy account of the various places which he had visited in his travels. His death is very much regretted by a large circle of friends. He leaves behind him two sons, his wife having expired seven weeks ago, a loss which he felt most keenly.

Feb. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Medico-legal Significance of the Gonococcus.

MOST experts would probably nowadays be inclined to interpret the presence of the gonococcus of Neisser in the purulent discharge of infantile vulvitis as convincing evidence of the gonorrhœal origin of the lesion. M. Vibert, one of Professor Brouardel's able coadjutors at the Morgue, tells us (*Société de Médecine Légale*, Jan. 12th) that, in conjunction with M. Bordas, he has instituted inquiries on this point in the case of six little girls affected with vulvitis, upon each of whom a criminal assault had been committed by men found to be absolutely free from any trace of gonorrhœa. In the vulvar discharge, in each instance, there were discovered gonococci which, morphologically and bacteriologically, differed in no respect from the micro-organism said to be pathognomonic of blennorrhagia. The importance, from a medico-legal standpoint, of this disappointing fact, already attested to by Fraenkel, cannot be exaggerated.

Etiology of Rickets.

The views of Parrot, attributing rickets to inherited syphilis, have met with but scant acceptance at the hands of clinicians. Nevertheless, any additional evidence in support of the generally accredited doctrine of the dietetic origin of what has been denominated the "English disease" is welcome, so important from a prophylactic and curative point of view is a right understanding of its causation. M. Pommay reports to the Société de Biologie (Jan. 17th) that he has succeeded in inducing characteristic rachitic lesions in the bones of the trunk, extremities, and skull, as also spontaneous fractures of the long bones, in jays a fortnight old, by feeding them exclusively on boiled meat deprived of its juices. The same pathological consequences were noted in young larks, linnets, and other growing birds by limiting their diet to bread crushed with yelk of egg.

Anhidrotic Properties of Tellurate of Sodium and Camphoric Acid.

Physicians are always glad to hear of any new remedies for the distressing sweats (whether nocturnal or diurnal) which add so greatly to the general discomfort in certain affections. If we may believe Dr. Combemale of Lille (*Bulletin Général de Thérapeutique*, Jan. 15th), such new remedies have been discovered in tellurate of sodium and camphoric acid. He states that the former drug, in daily doses of 5 centigrammes, infallibly controls the night sweats of phthisis, and that this effect is obtained at all stages of the disease. In the later stages, however, correspondingly increased doses will have to be exhibited. Dr. Combemale regards this salt as the best anhydrotic agent we possess. Camphoric acid he declares to be only a degree less powerful than sodium tellurate, two grammes daily rarely failing to arrest, or at least considerably diminish, night sweats. The efficiency of the acid is in inverse proportion to the progress the phthisis may have made. This observer asserts that pathological sweats other than phthisical, such as those of acute rheumatism, typhoid fever, syphilitic caverns, and dyspepsia, yield to the above remedies.

Inoculation of Dog Serum as a Remedy for Tuberculosis.

In a series of communications made in the course of the last two years to the Société de Biologie, MM. Héricourt and Richet have given the results obtained by the injection of the blood of an animal refractory to tuberculosis, such as the dog, into the economy of one susceptible to the onslaughts of the bacillus. They have demonstrated experimentally that such a proceeding exerts a retarding influence on the evolution of tuberculosis artificially communicated, without, however, stopping it altogether. With a view of intensifying these partially protective properties of canine blood, they inoculated the dog with a large dose of very active tuberculous matter, and one month later (the animal having lost flesh, and exhibiting manifest signs of ill-health) injected into the peritoneal cavity of three rabbits 70 cc. of the dog's blood. A week later these rabbits were, with three other test rabbits, inoculated with strong tuberculous virus, with the result that in twenty-five days two of the latter had succumbed, the rest surviving. Their ultimate fate is not recorded. Encouraged by these results, MM. Richet and Héricourt have extended the application of their method to tuberculous human beings, employing the serum only, and selecting the interscapular region as the seat of inoculation. M. Richet reports (Société de Biologie, Jan. 24th) that four phthisical men have, since the early part of December, 1890, been subjected to this novel treatment. The results obtained seem to warrant the assumption that the introduction of the serum of dog's blood into the human economy counteracts, to some extent at least, the noxious influence of Koch's bacillus. In all four cases (two being affected with pulmonary and two with concomitant laryngeal and pulmonary phthisis) eighteen days' treatment had the effect of suppressing the night-sweats, improving the appetite, increasing strength and weight (one patient put on flesh to the extent of over 9 lb.), and minimising the physical signs. In the two cases of laryngeal phthisis, the epiglottis, which was very swollen and motionless, became much reduced in volume, and regained its mobility, the distressing agony experienced during deglutition disappearing. The inoculations (dose, from 1 to 4 cc. every three or six days) are followed by neither local nor general reaction. On two occasions only was pain (lasting twenty-four hours) complained of. In all the cases the interscapular region became the seat of itching, developing some time after the operation, and attaining its maximum eighteen or twenty-four hours later.

Paris, Feb. 3rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch's Method.

DR. VON GOSSLER, Minister of Medical Affairs &c., has requested the heads of the clinics, policlinics, and pathological institutions of the Prussian universities to report their experiences of Koch's method. The first collection of reports will be published in a few days by Springer of Berlin. Professor Koch arrived in Vienna yesterday, on his way to Constantinople. Professor Brieger is to be head of the clinical department in Koch's new institute, and it is likely that Dr. Behring, whose valuable researches on the subject of immunity attracted much attention lately, will be head of the experimental department.

A New Method of Examining Sputum for Tubercle Bacilli.

Dr. Biedert of Hagenau, in Alsace, has devised a new and considerably surer method for the discovery of tubercle bacilli in sputum. He collects a tablespoonful or more of the sputum, mixes it well with a glass rod, takes some of it and stirs it together with two tablespoonfuls of water and four to eight drops of solution of caustic soda according to the density of the sputum, and then boils it, stirring it the while in a shallow cup, gradually adding four to six tablespoonfuls of water till he gets a pretty thin fluid mass. This he allows to stand for two hours in a high glass tapering as finely as possible downwards, and all the formed particles sink with the tubercle bacilli to the bottom. Then he pours off the fluid, retaining the sediment, parts of which he takes out with a platinum needle and rubs them fine on a cover-glass. When the preparation is dry he passes it through a flame, stains it with a carbolised solution of fuchsine, and then bleaches it with 25 per cent. sulphuric acid. If there are any tubercle bacilli they remain red, and are thus distinguishable under the microscope. Even a single bacillus is discoverable in this way, whereas the older methods yielded a positive result only if there were many.

Professor von Bergmann.

An injury sustained in the performance of his professional duties has compelled Professor von Bergmann to take leave of absence. The wound, which is on one of the fingers of the right hand, was not considered to be serious at first, but has rendered repeated operations necessary. The professor is confined to his room, and will probably have to wear his hand in a sling for some time to come.

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Wilhelm Knop.

Wilhelm Knop of Leipsic, who died the other day, was one of the oldest teachers of chemistry in Germany. The most valuable of his writings are his Investigation of the Relation of some Water Plants to Gases, his "Circulation of Substances," his "Text-book of Agricultural Chemistry," his "Arable Soil and Cultivable Plants," his essay on the "Valuation of Soil," &c. In his essay on the "Molecules of Bodies," he tried to prove that the molecules of modern chemistry can be imitated atomistically by the laying together of tetrahedrons and octahedrons."

Philip Carl.

Philip Carl, Professor of Physics, died the other day at Munich. He founded three periodicals, two of which attained importance—the *Repertory of Physical Technics or the Knowledge of Mathematical and Astronomical Instruments*, the *Periodical for Electro-technics*, and the *Repertory of Comet Astronomy*. He graduated in 1860, established himself as a private lecturer on physics in Munich University in 1861, and was appointed professor in the Academy of War in 1862. He was also Johann von Lamont's assistant in the Munich Observatory.

German Death-rates.

The death-rate of Aix-la-Chapelle in the week ending Jan. 17th was 26·7 per 1000; Altona, 22·7; Barmen, 18·6; Berlin, 19·9; Bremen, 19·9; Breslau, 28·5; Chemnitz, 30·4; Cologne, 31·6; Dantzic, 25·6; Dresden, 19·2; Düsseldorf, 23; Elberfeld, 21·5; Frankfort, 19·6; Hamburg, 22; Hanover, 17·2; Königsberg, 23·7; Krefeld, 31·4; Leipsic, 19·5; Magdeburg, 25·4; Munich, 21·5; Nuernberg, 26·8; Stettin, 23·3; Strasburg, 29; and Stuttgart, 13·6.

Berlin, Feb. 3rd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Malignant Tumours with Pyoctanin.

AT the last meeting of the Vienna Society of Physicians Professor Mosetig showed two cases of malignant tumours (sarcoma) which had been treated successfully by him some months ago with pyoctanin. In one of them, the patient being fifty years old, the sarcoma was situated in the inguinal region, and was considerably shrunken after repeated injections of solutions of pyoctanin into the tumour and its neighbourhood. The solutions were prepared from Merck's pyoctanin in the strength of 1 in 300 and 1 in 500 of water respectively. The lecturer said that he had made some years ago experiments with injections of solutions of carmine into malignant tumours, and later with aniline dyes, based on the idea that the further growth of the tumour might be prevented by the change excited in its histological elements by the staining reagent. It is probable that Stilling's experiments with pyoctanin in suppuration induced Mosetig to try this preparation in the treatment of new growths. In the discussion that followed, it was stated by Professors Reuss, Neudoerfer, and Lang that they had observed favourable results from the application of pyoctanin to suppurating surfaces. Neudoerfer said that he had under his treatment a case of ulcerating cancer of the breast, which became smaller after the use of pyoctanin poultices; and Lang has obtained favourable results in cases of cystitis and pyelitis, when the pyoctanin was also administered internally. It will be remembered that soon after Stilling's first publications, when his therapeutical experiments had been repeated by other workers, a series of papers were published in which the statements of Stilling with regard to the curative action of pyoctanin were very much disputed, and that they had been confirmed by but few observers. It seems to me that the treatment was not suitable for all the cases in which it was tried, and that the difference of opinions may also be due to the circumstance that solutions of pyoctanin are very liable to precipitation. Concerning the treatment of tumours with injections of pyoctanin, it is probable that such injections may act in a twofold manner; at first even injections of indifferent liquids (distilled water), when frequently repeated under aseptic precautions, may restrain the growth of the tumours by mechanical pressure on the histological elements and so lessening the vital activity of the cells by imbibition; secondly, the dyes contained in the solutions may exert a special action on the cell nuclei, which in selecting the particles of the dye may conceivably become less active, and even lose their property of cell division. On this ground it would seem advisable to try also injections of solutions of gelatine, collodium, &c., for the treatment of such tumours, as they would exert a more lasting mechanical effect; or, if dyes should be injected, those materials should be selected the particles of which are of greater weight—e.g., hæmatoxylin and the alizarin dyes, where the stain could be fixed by subsequent injection of an innocuous mordant. At the same time it must be remembered that any histological dye, when injected into the tissue, indirectly affects the vitality of the intima of the bloodvessels and of the lymphatics, so that local thromboses may occur and perhaps exert a beneficial effect. As the growth of the tumour takes place from the apparently healthy tissues in the vicinity, the injections should be made into them. It is to be hoped, also, that when the question of treating malignant tumours by the new method is taken up the histological aspect of the question will also be fully considered, and that histologists will not content themselves with preparing only small pieces of the morbid tissue, which only exhibit the complex structure of the tumour with its secondary changes, but will prepare a continuous series of specimens, in which the whole development of the tumour may be studied. In addition to the local treatment of malignant tumours, it will be certainly necessary to endeavour by general measures to prevent the occurrence of relapses and metastases.

Vienna, Feb. 2nd.

Obituary.

EDWARD JOHN WARING, M.D., F.R.C.P., F.R.C.S., F.L.S., C.I.E.

EDWARD JOHN WARING, born 1819, was the son of Captain Henry Waring, R.N., of Ford, near Shrewsbury, Shropshire. He received his early education at Lyme Regis under Mr. George Roberts (the well-known author of the "Life of the Duke of Monmouth"), and afterwards at the Ilminster Grammar School. His professional training was carried out in Bristol and at Charing-cross Hospital, London. In 1841 he was appointed surgeon to a ship sailing to Sierra Leone, and went thence on to Jamaica, where he commenced practice, and carried out the duties of medical officer of health. In 1842 he visited England, and took his M.R.C.S., but at once returned to Jamaica, where he remained for a year, and finally left that island to enter the service of the Emigration Commissioners. In the course of the duties thus devolving upon him he travelled to the United States, India, Australia, and Trinidad. In 1847 Dr. Waring again visited England, and married Caroline Anne, daughter of William Day, J.P., D.L., of Haddow, Sussex, and settled at Uckfield. Obliged by heavy losses to re-enter professional life, Dr. Waring in 1849 became assistant-surgeon in the service of the East India Company. He was, at the expiration of the probationary period, sent to Mergui, in the Tenasserim provinces (part of old Burma), where he remained throughout the Burmese war. For his services he was decorated with a war medal. It was at this time that he prepared the first edition of his well-known and highly popular "Manual of Practical Therapeutics," a work which saw several editions. Dr. Waring was also led to investigate the native remedies and resources of the forests as the drug supplies of Mergui became exhausted, and the war precluded any fresh supplies being obtained. When, in 1853, Dr. Waring was appointed to the office of resident surgeon at Travancore, he continued these researches and from time to time published his results. He also made some careful researches into the pathology and clinical characters of hepatic abscess, collating some 300 cases. When he succeeded to the post of durbar physician to his Highness the Maharajah of Travancore, he executed a most painstaking investigation into the etiology of elephantiasis, advancing arguments in favour of regarding the disease as essentially of a febrile nature. About this time, too, Dr. Waring prepared his "Bazaar Medicines," which was translated into several native languages, and exercised a great influence for good among native practitioners. While at Travancore he was also instrumental in establishing the first school for children of the slave class. Failing health drove Dr. Waring to England in 1863, and two

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years later, at the request of the Government, he undertook the responsible duties of editor of an Indian Pharmacopœia, which it was determined to issue upon the same lines as those of our own Pharmacopœia. In this great work Dr. Waring was associated with Sir J. Ranald Martin, C.B., F.R.S., Sir W. O'Shaughnessy Brooke, M.D., F.R.S., and other well-known men. For the succeeding years his pen was busy. "The Tropical Resident at Home;" his important but incomplete work, the "Encyclopædia Therapeutica," commenced in India, providing material for his "Bibliotheca Therapeutica," while several smaller works, some on medicine, some on devotional subjects, were also given to the world. Dr. Waring was among the first to advocate cottage hospitals, suggesting this title rather than village hospitals, as they were at first called. He threw himself warmly into the establishment of the London Medical Mission in St. Giles's, and was on the first committee. His pamphlet on "Spectacles Missions" drew attention to these useful works of charity. In 1887 Dr. Waring presented his almost unique collection of books on Pharmacology to the Army Medical School at Netley, eliciting from Sir Joseph Fayrer words of warm admiration and expressions of personal esteem. Dr. Waring's failing sight caused him for a while to give up reading, but happily the blindness was successfully treated, and up to his final illness he was able to read with tolerable ease. Dr. Waring's researches into the natures and uses of Indian drugs have won for him both an oriental and a European fame, and his gentle and stirling nature and kindly courtesy of manner earned for him a circle of friends who will feel that his, indeed, was a life well spent, his a rest well earned, and his a memory to be kept ever green. His public service was in 1881 recognised by the conferring upon him of the distinction of Companion of the Indian Empire.

DR. LOUIS PIACHAUD.

SWITZERLAND has lost one of her ablest surgeons in Dr. Piachaud of Geneva, who died there at the close of last year, aged sixty-six. A Genevese by birth, he distinguished himself in classics and philosophy at the Academie of his native city, and found time also to lay the foundations of scientific culture, particularly in botany. From Geneva he proceeded to Paris as a student of medicine in October, 1844, and in 1847 he was nominated *interne des hôpitaux*, taking the sixth place among forty-one competitors. In the following year he offered himself for examination at the École Pratique, and gained the chief prize—a gold medal—after a severe competition. Professor Orfila, in awarding the prize, took occasion to compliment the Geneva school for the brilliant students it sent up to Paris, among whom none had done it more credit than young Piachaud. Under Velpeau, and for a shorter time under Nélaton, Piachaud made admirable progress in surgery, for which the sanguinary events of 1848 yielded ample opportunity. In 1849 he was attached to the Hospital of Bon Secours, and there during the cholera epidemic he gave his services to the patients in the most courageous and at the same time scientific spirit. He had already made independent study in anæsthesia, and as early as Feb. 2nd, 1847, had experimented on himself with ether, at a time when such a proceeding was universally regarded as fraught with danger. This enterprising scientific spirit attracted the notice of the great Parisian consultants, Vulpian, Prélat, Verneuil, and Charcot, with whom he formed an intimacy and mutual regard only dissolved by death. In spite of all their solicitations, and of the prospects of a lucrative *clientèle* in the French capital, he returned to Geneva in 1852, bearing with him his diploma of Doctor in Medicine, a degree conferred on him for an exceptionally brilliant thesis.

For forty years Dr. Piachaud continued to practise in his native town, and to extend his knowledge by independent investigation in the laboratory and by observation at the bedside. Among the publications he put forth from time to time, his "En Attendant le Médecin" was at once successful, and remained long in favour. Another, entitled "L'Emploi des Anesthésiques dans les Accouchements," appeared in 1857, and embodied the results of those experiments which, as we have already seen, engaged his attention at the threshold of his career. It was as a surgeon, however, that he achieved his greatest successes, and his tenure of the post of "Chirurgeon en chef de l'Hôpital de Génève" was marked by singular skill as an operator and power as a lecturer. He had more than his share of academic and courtly distinctions, and, among other marks of recognition, was decorated in 1869 with the Legion of Honour and with that of Chevalier of the order of St. Stanislas of Russia. He was not without artistic accomplishments, particularly in music, and was, besides, an intrepid "Alpiniste." He was an especial favourite with his colleagues and his pupils, while as a public man Geneva mourns in him the loss of one of the most liberal and enlightened of her citizens.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen having conformed to the by-laws and regulations, and passed the required examinations, were, at a meeting of the College on the 29th ult., admitted Licentiates:—

Addison, W. Bragg, St. Bartholomew's and Cambridge.
*Adler, M., Guy's and St. George's.
André, J. E. Felix, St. Thomas's.
Austin, Reginald F. E., Bristol.
Barrett, A. Keppel, St Mary's.
Begbie, F. Warburton, St. Bart.'s.
Blakeman, C. J, St. Thomas's.
Blucke, H. F. S., Charing-cross.
Bowker, C. Stanser, Middlesex.
*Boyton, E. T. A., St. Bart.'s.
*Burt, Wm. Charles, Guy's.
Chambers, W. F., Univ. College.
*Chapman, G. W., St. Thomas's.
Chater, A. Reginald, St. Mary's.
Clark, Wm. Adams, St. Bart.'s.
Clift, Hugh, St. Bartholomew's.
Coombe, Thomas Sandby, Guy's.
Coventon, C. Arthur, St. Bart.'s.
Cowell, A. Rodgers, St. Thomas's.
Crosskey, Roger, St. Thomas's.
Curtis, H. Jones, Univ. College.
Daniel, W. P. Taylour, St. Mary's.
Dobbs, Matthew, Charing-cross.
Dow, J. Hardman, Manchester.
Drake, E. Charles, St. Bart.'s.
Dryland, L. Winter, St. Bart.'s.
*Duer, S. Unwin, Middlesex.
Duffy, P. Joseph, Univ. Coll.
Evans, Percy, University College.
Farquharson, W. G. Robertson, St. Mary's.
Field, Fredk. Arthur, St. Bart.'s.
Forde, T. A. Munro, St. Thomas's.
*Foster, Francis Wheldale, Guy's.
Freeland, Regd. Stilwell, Guy's.
Gamgee, L. Parker, Birmingham.
Gordon, Harry, Manchester.
Grabham, Michael, St. Thomas's.
Graham, J. H. P., St. Bart.'s.
Green, C. Albert, Birmingham.
Green, Percy Andrew, London.
Greenwood, R. E., Univ. Coll.
Griffiths, Gilbert H., Liverpool.
*Griffiths, John Samuel, Bristol.
Grimshaw, John, London.
Gyton, Walter Geo., Manchester.
*Hawarden, Samuel, Manchester.
*Haydon, Frank, Westminster.
Haydon, T. Horatio, St. Thomas's and Cambridge.
Hemming, Chas. Harold, London.
Hewitson, John Geo., Univ. Coll.
Hird, Frederick Robert, Leeds.
*Holland, E. Burke, Middlesex.
*Howard, A. Walters, Univ. Coll.
Kellock, Thos. H., St. Thomas's.
Kidd, Archibald, Middlesex.
Langston, T. A. O., St. Bart.'s.
Levick, H. Driffield, St. Thomas's.
Lewis, Frederick, St. Mary's.
Lovell, C. Petre, St. Thomas's.
Low, Vincent Warren, St. Mary's.
Mactavish, J. W., St. Thomas's.
Manwaring, E. E., St. Bart.'s.
Marder, Nicholas, St. Bart.'s.
Masterman, E. W. G., St. Bart.'s.
Mayor, John B., Manchester.
Mills, Yarnold Hubert, London.
*More, John, St. Bartholomew's.
Morris, Edwin Haigh Grant, Cambridge and St. Thomas's.
Morris, J. J. N., King's College.
Mulvany, Thomas E., London.
Norgate, Robert Henry, Bristol.
Nyulasy, Arthur J., Melbourne.
Ord-Mackenzie, S. A., Univ. Coll.
Penny, Herbert Lloyd, London.
Pernet, George, University Coll.
Powell, T. M. J., St. Bart.'s.
Pritchard, E. L., King's College.
*Quinby, Edward Melville, Liverpool and St. Bartholomew's.
Reeks, H., St. Bartholomew's.
Reynolds, A. E., University Coll.
Rogers, Leonard, St. Mary's.
Rogers-Tillstone, J. M., St. Bart.
Ronaldson, Robert Miller, Edinburgh and Charing-cross.
Round, John C., St. Thomas's.
Rows, R. G., University College.
Rygate, Henry Bertram, Guy's.
Samways, Daniel West, Guy's.
Senior, Arthur W., Manchester.
Senior, R. W., King's College.
*Shirtliff, E. D., St. Thomas's.
*Smith, Henry, King's College.
Soulby, Charles E., Middlesex.
Stalker, James, Leeds.
Stephens, R., St. Bartholomew's.
Sturdee, Alfred William, London.
Sturge, William H., London.
Summers, Thomas C., London.
Thompson, Arthur Hugh, Cambridge and London.
*Twyford, Walter, Manchester.
Tyler, E. J. C., St. Thomas's.
*Ward, John Alfred, Guy's.
Waring, J. A., University Coll.
*Weldon, Stawell, St. George's.
Whitfield, Arthur, King's College.
Wightman, J. P., St. Bart.'s.
Wilks, J. H., St. Bartholomew's.
Willey, T., St. Bartholomew's.
Williams, David J., Middlesex.
Winslow, Walter, Guy's.
Wyman, Cuthbert, St. Thomas's and Cambridge.
Young, John, Guy's.

* Candidates who have not presented themselves under the regulations of the Examining Board.

BRITISH MEDICAL SERVICE.—The following is a list of surgeons on probation of the Medical Staff of the British Army who were successful at both the London and Netley Examinations:—

	Marks.		Marks.
*Beach, T. B.	5927	Hardy, F. W.	5102
Powell, E. E.	5460	Clapham, J. T.	5035
Healey, C. W. R.	5325	Graham, W. Ap. S. J.	4995
Jennings, J. W.	5265	Shanahan, D. D.	4975
Williams, E. McK.	5197	Whitestone, C. W. H.	4940
Dowse, H. E.	5183	Pearse, A.	4880
Connor, J. C.	5118	D'Alton, C.	4643
Carter, J. E.	5106	Mason, H. D.	4640

* Gained the Herbert Prize of £20, with the Montefiore Medal and Prize of 20 guineas.

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INDIAN MEDICAL SERVICE.—The following is a list of surgeons on probation in Her Majesty's Indian Medical Service who were successful at both the London and Netley Examinations:—

	Marks.		Marks.
*Crawford, J. M. . . .	6100	‡O'Kinealy, F.	5580
†Wolfe, J. W.	5735	Cassidy, C. C.	5540
Singh, B. J.	5655	Murray, F. E.	5520
Whitcombe, E. G. R. .	5655	Buist-Sparks, A. W. T. .	5500
Barber, H. R. C. . . .	5645	Younger, H. J.	5490
James, C. H.	5638	Basu, B. D.	5160

* Gained the Prize in Clinical Medicine presented by Surgeon-General W. C. Maclean, C.B., with the De Chaumont Prize in Hygiene, and the Montefiore second Prize.

† Gained the Martin Memorial Gold Medal.

‡ Gained the Prize in Pathology presented by Sir William Aitken, F.R.S.

LINCOLN HOSPITAL.—At a meeting of the Hospital Board this week it was announced that Mr. J. Ruston had promised to supply the funds necessary for the addition of a children's ward to the charity.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—It was announced at the quarterly meeting of the governors held last week that Mr. W. D. Allen had given £1000, and the town trustees £5000, towards the building fund in connexion with the additions intended to be made to the present hospital.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Some time ago Sir Massey Lopes gave £4000 to this institution, which was partly expended in the erection of a Lopes ward. He has now announced his attention to give £5000, invested in the public funds, towards the maintenance of that and another ward.

THE ROYAL MATERNITY SOCIETY.—During the past year 3325 poor women were delivered by the midwives of 3400 children in the eastern and western divisions. Of the mothers only four died during the time they were under the care of the charity. Of the 3400 children, 74 cases were twins, 1 triplets; 50 boys and girls were still-born, and 77 cases were attended by the physicians or district surgeons; 18 children died immediately after birth.

BURIAL AND CREMATION.—Professor Flower, C.B., presiding at a meeting of the Church of England Burial Reform Association last week, said that the fallacy underlying most people's notions respecting death and burial was that their personal identity consisted in the particular material particles of which their bodies were constituted. Every attempt to preserve the dead body was a violation of the order of nature. To avoid injury to the living the body must be resolved into its component parts. Cremation was theoretically the most efficient means of accomplishing this; but the most practical was the "earth-to-earth" system of burial.

PRESENTATIONS.—The employés of Messrs. Henry Howell and Co., of City-road, have presented to Mr. Robert Bruce, of Milford-on-Sea, a handsome standard lamp, with an inscription expressing their appreciation of his work as surgeon to the firm for the last ten years.—Dr. J. Eadie of West Coker, Yeovil, has been presented by his friends in Yeovil and East and West Coker with a large black marble dining-room clock, accompanied with an illuminated address expressing their high appreciation of his character when his patience and courage were severely tested to repel, which he did successfully, a malignant slander. This testimonial has been purchased by the surplus left from a fund raised to defray the legal expenses incurred by Dr. Eadie by the prosecution referred to.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.—At a meeting of the Council held at St. Katharine's Royal Hospital on Tuesday, it was reported that Her Majesty had appointed the Marchioness of Lorne to be president of the Scotch branch and Miss Guthrie Wright hon. secretary of the Scotch branch, and Mr. C. E. D. Black to be an additional member of the Council. The following nursing associations are also reported to have been affiliated to the institute:—Liverpool, Haggerston and Hoxton, Chelsea, Hammersmith, Hampstead, Kensington, Newington and Walworth, Bolton (Lancashire), Westminster, Manchester, Worcester, Camberwell, Bangor, Glasgow, East London, Coventry, and the Rural District Nursing Association. Ninety-four nurses, whose names Her Majesty has approved of, have been entered on the Roll of Queen's Nurses.

A CENTENARIAN.—At Ballylinan, Queen's County, there died last week a woman named Dempsey at the extraordinary age of 110 years. Up to the time of her decease she was in the possession of her mental faculties.

A HOSPITAL BURNED.—Intelligence has been received that the hospital at Skopen has been entirely destroyed by fire and that fourteen of the patients were burned to death.

BEQUESTS AND DONATIONS.—Mrs. Helena Burnet has left £200 to the Adelaide Hospital, Dublin, and Mr. J. P. Law has given £50 to the same institution.—A donor last week anonymously forwarded £1000 each to the Essex and Colchester Hospital, and the Eastern Counties Asylum. We have recently announced in these columns similar anonymous donations to these institutions.

UNIVERSITY COLLEGE, SOUTH WALES.—Lord Tredegar, Lord Aberdare, Lord Kensington, and Mr. Arthur J. Williams, M.P., have each subscribed £100 to form the nucleus of a fund for the establishment of a department of medical science at the South Wales and Monmouthshire University College. A representative Welsh committee has been formed to meet in London, with the object of carrying out the project.

ROYAL EYE INFIRMARY, PLYMOUTH.—The record of the past year's work of this charity testifies that its long career of usefulness is fully maintained. The medical report for the year shows that during the sixty-eight years' existence of the institution 67,915 patients had been treated, of whom 66,586 were cured or relieved. In the past twelve months 1328 persons received treatment, 620 being cured, and 816 discharged benefited. The number of in-patients was 264, and 413 operations had been performed.

DENTAL HOSPITAL OF LONDON.—The following gentlemen have been elected to fill the five additional appointments of the Dental Hospital, Leicester-square, vacant in consequence of the committee having agreed to open the Stopping Department during the afternoons. The order of appointment is W. H. Woodruff, L.D.S. Eng.; A. C. Woodhouse, M.R.C.S., L.D.S. Eng.; F. J. Bennett, M.R.C.S., L.D.S. Eng.; J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S. Eng.; and C. F. Rilot, L.R.C.P., M.R.C.S., L.D.S. Eng.

NORTH WALES LUNATIC ASYLUM.—In consequence of the increase of inmates in the asylum, it has been decided to erect a new wing, and the special committee presented their report at the annual meeting recently held. It is proposed to erect a new dining-hall to accommodate 550 patients, and to supply sleeping and day rooms for 200 more patients. The committee approve of the purchase of twenty-five acres of land adjoining the asylum, but that awaited the sanction of the Commissioners in Lunacy, and suggest that prizes should be offered for plans for the proposed extension. The report was agreed to.

WEST CORNWALL DISPENSARY AND INFIRMARY.—The annual meeting of the subscribers was held on the 28th ult. The event of the year was the report of the sub-committee appointed to inquire into the abuse of the charity by well-to-do persons. The committee found that many such patients had taken advantage of the benefits of the institution. Several suggestions were advanced to remedy the abuse, which with two exceptions were adopted. Another noteworthy incident was the munificent offer of Mr. T. B. Bolitho to found a convalescent home in connexion with the infirmary (which has already been noticed in these columns).

HARROGATE ROYAL BATH HOSPITAL.—The Earl of Harewood presided at the sixty-fourth annual meeting, held on the 29th ult. The patients admitted to the hospital in the past year, including 152 readmissions and twenty-two who obtained extra extensions, was 812, and 118 were admitted into the convalescent home. The total number of baths given was 6399. The building fund debt upon the hospital and convalescent home was £11,397. His lordship, in moving the adoption of the report, which was carried, expressed regret that they had had to close the hospital during the winter for lack of funds, and he trusted a strong effort would be made to clear off the encumbrances which rested upon the institution. At the close of the meeting his lordship offered £100 as a donation to the committee.

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HOSPITAL FOR SICK CHILDREN.—The Duke of Fife, K.T., president of the hospital, will take the chair at the annual dinner, to be held on Wednesday, March 18th, at the Hôtel Métropole.

HUNTERIAN SOCIETY.—The annual dinner of the Society will take place at the Holborn Restaurant on Feb. 13th, at 7 P.M. The President (Dr. Stephen Mackenzie) will preside.

ROTHERHAM HOSPITAL.—The nineteenth annual report is of a gratifying and encouraging character. The total number of patients treated for the past year was 4708. The committee had again the satisfaction to state that, as in the previous history of the hospital, in proportion to its requirements the means for expenditure had been generously provided.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the next quarterly meeting of the Association, to take place on Feb. 19th, at Bethlem Hospital, London, at 4 P.M., Dr. Clifford Allbutt will give his "Observations on the San Clemente Asylum at Venice"; Dr. Savage will read a paper on "The Plea of Insanity"; and Dr. Baker will read some "Notes descriptive of a new Hospital-villa recently erected in the grounds of the York Retreat." Dr. Hyslop will show and describe pathological specimens.

THE HERTFORD GENERAL INFIRMARY. — The fifty-eighth annual report shows that the benefits bestowed by this charity are well maintained. During the past year 265 patients had been under treatment. In the out-patients' department the attendances numbered 7379. The income from all sources was £2537 5*s.* 11*d.*, and the disbursements (excluding the legacies, which had been invested) was £2412 11*s.* 7*d.* The building of a new lavatory and other improvements had involved an outlay of £229. The actual deficiency on the year was only £65 5*s.* 8*d.*

HALIFAX INFIRMARY.—The annual report for the past twelve months gives a good record of the work of this charity. The total number of persons treated during the year was 6247. There was a debit balance of £137 6*s.* 1*d.* on the receipts and expenditure, and the general investment account showed the sum invested was £26,099 14*s.* 3*d.* Improved and much needed accommodation had been provided for the nurses, and appreciable advantage had accrued by the appointment of the admission and discharge committee. The report was carried.

HOSPITAL SUNDAY FUND.—On Tuesday last a meeting of the Council of the Fund was held at the Mansion House, the Lord Mayor presiding. A donation of £500 from "E. A. H.," and one of £100 from Mr. Ludwig Mond, were announced. The following were reappointed as the Distribution Committee for the year: The Lord Mayor, Sir Sydney Waterlow, Sir Owen Roberts, Mr. J. D. Allcroft, Mr. Bonsor, M.P., Mr. Thomson Hankey, Mr. Herman Hoskier, Mr. F. H. Norman, Dr. Sedgwick Saunders, and Mr. Alfred Willett. The hon. secretaries, Sir Edmund Hay Currie and Mr. R. B. Martin, were reappointed, as also was Mr. H. N. Custance, the secretary, and a special resolution, appreciative of the services of the latter, was moved by Sir Sydney Waterlow and carried unanimously.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on February 3rd, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	242	46	2	53	2	345	442
North-Western Hospital*	259	38	..	7	..	304	443
Western ,,	155	16	..	13	1	185	224
South-Western ,,	162	12	..	5	1	180	340
South-Eastern ,,	228	13	..	37	2	280	462
Northern ,,	273	17	..	18	..	308	480
Gore Farm ,,	18	..	..	..	..	18	300
Totals	1337	142	2	133	6	1620	2691

* 1 infant with mother.

MEDICAL NOTES IN PARLIAMENT.

Dr. Koch.

IN reply to Colonel Nolan, the First Lord of the Treasury said it must be admitted that Dr. Koch did not stand alone as a learned, patient, and laborious investigator of the resources of nature for the benefit of mankind. His great reward is the evident appreciation of the value of his work by his own profession in all parts of the world, and the sense of the benefits he has conferred upon his fellow-creatures. I do not think any action of Her Majesty's Government could really add to the satisfaction Dr. Koch must feel at the reception given by the civilised world to his discovery, and he hesitated therefore to add a new function to the responsibilities of Government.

Metropolis Water-supply Bill.

Sir A. Borthwick has obtained leave to introduce this Bill.

Metropolitan Water Companies Bill.

Mr. Causton asked the First Lord of the Treasury whether he would give facilities for the passing of the Metropolitan Water Companies' Charges Bill, which contained provisions to prevent the companies from raising their rates through the quinquennial revaluation of charges, in prospect of the early purchase by the public.—Mr. W. H. Smith replied that it would be impossible for the Government to give facilities for such a Bill, as their responsibilities must be limited to finding time for Government measures.

Vaccination and the Factory Act.

On Monday, Feb. 2nd, Mr. Fenwick asked whether a lad named Arthur Brownjohn, who was engaged at the Clarendon Press, Oxford, with the view to his becoming an apprentice in the classical composing department, on making application to the medical officer for a certificate of physical fitness as required by the Factory Act, was refused such certificate on the ground that he had not been vaccinated; and whether the medical officer was justified in withholding the certificate on such grounds; and, if so, whether the Government were prepared to amend the law in this respect.—Mr. Matthews: No, Sir; the certificate was not refused by the medical officer, but signed in the usual way. It was stated in the "Remarks" column of the form that the lad was "unvaccinated." The controller of the Clarendon Press considered this to be an insufficient certificate, and refused to employ the lad.

Railway Servants and Hours of Labour.

Sir Michael Hicks-Beach moved that a Select Committee be appointed to inquire whether, and, if so, in what way, the hours worked by railway servants should be restricted by legislation. Mr. John Ellis said he did not see the necessity for the appointment of a Select Committee. Mr. Channing said he hoped that if the Committee reported in favour of legislation the right hon. gentleman would do all in his power to secure that the legislation should be introduced during the present session. Mr. M'Laren welcomed the proposal, and the motion was ultimately agreed to.

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday, Lord Sandhurst presiding.

St. Thomas's Hospital.

Mr. Robert Brass, the receiver of St. Thomas's Hospital, was the first witness examined. His salary, he said, amounted to £600, which represented his whole income from the hospital. He did not live at the hospital, and received no allowance for house accommodation. His duties were to receive the rents, examine all accounts presented for payment, make up the cash books, draw up a statement of receipts and payments every year, and generally to do the work of responsible accountant of the hospital. He submitted his accounts to the treasurer and almoners, who checked and criticised them. Last year they derived £14,481 from country estates, spread over ten counties. To all intents and purposes St. Thomas's Hospital was a free hospital. They had about 340 governors, but the cases recommended by governors were not necessarily admitted; the recommendation for admission was in fact disease. The worst case was the case which had the best chance of admission. There were two wards occupied by paying patients; the receipts from these wards last year amounted to £5600. Owing to want of funds they had two wards unoccupied; these wards had accommodation for sixty beds. They had to refuse a great many patients through lack of funds. They paid rates to the extent of £2308 per annum. As to their town property, they received in rental in 1889 from Southwark £11,980, the City £11,133, Hackney and Clapton £7146, and Wapping £1468. While their London property had increased in value during the past ten years, their country property had fallen in annual value from £17,367 to £14,481. The gross receipts for 1889 amounted to £67,000, and after paying all expenses he had £40,040 to bring down for hospital purposes. At the request of several members of the committee, Mr. Brass undertook to prepare a detailed statement accounting for the difference between £67,000 and £40,040.

Mr. Frederick Walker, steward of St. Thomas's Hospital, said he had held his present office for forty-three years. His salary amounted to £555, with a residence in the hospital. The present building was opened in September, 1871. For nine years previously the hospital was carried on at the Surrey-gardens, and prior to that at London-bridge. The cost of the present building and the necessary land was about £600,000, of which over £40,000 was laid out on foundations. They had to borrow £100,000 to meet the cost of the building. The out-patient department was absolutely free. The assistant physician selected from among the applicants those cases which were fit for admission. From among the others he selected the worst cases for regular out-patients. Of the remainder, a small number were prescribed for. A small proportion of cases were dismissed as too slight. All the surgical cases were attended. In midwifery cases they limited themselves to the area within a radius of one mile of the hospital. As matter of fact, they had at present eighty vacant beds. When the hospital was opened all the wards were free. On account of financial pressure they had to close five wards a year afterwards, and since then they had remained closed, with the exception of the two wards opened ten years ago, for paying patients. They would require an additional annual income of £6000 or £7000, to throw open all the wards. They had never appealed to the public in the ordinary way. They got

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no money from the Hospital Sunday Fund; they took cases of diphtheria into the hospital; they had eighty-eight such cases last year. Two nurses contracted the disease, but very slightly. They rarely took in cases of scarlet fever. It occasionally happened that scarlet fever developed in patients after they had been some time in the hospital; they put those patients into the infectious block. It was placed beyond doubt that the two nurses contracted diphtheria while attending the patients affected with that disease. The health of the officials and nurses was, on the whole, good. They could easily fill the hospital if it were double its present size. They had to turn away "many good patients." He concurred in the view that the hospital accommodation for the poor on the south side of the Thames was lamentably insufficient. The circumstances of the district had greatly changed in recent years. Complaints, no doubt, came from the wards from time to time as to the food. They were all investigated, and steps were taken to remedy any defects which might be discovered. The matron who had charge of the nurses was paid a salary of £200. The nurses were trained under the Nightingale Fund, which entailed residence in the hospital during the period of tuition. In the event of a nurse misconducting herself, she was suspended, and reported to the treasurer and almoners.

Dr. W. M. Ord, one of the physicians at St. Thomas's Hospital, said that for twelve years he held the office of dean of the Medical School connected with the hospital. In his opinion it was much better that the large general hospitals should have their own medical schools than that there should be one central university for medical education. As things advanced, it would clearly be his opinion that the smaller schools should be grouped for the earlier subjects. In fact, as an old hospital physician, he would not be sorry to see the whole of the teaching in the earlier subjects taken from the hospital schools and relegated to some central body. It would secure greater uniformity of study and tend to the employment of the best class of lecturers. A central system would give the greatest opportunity for practical study. If a place were starved and weak, its laboratories naturally became imperfect, and even the large hospitals in London, with all their funds, were not too rich. There were nearly 400 students in the medical school at St. Thomas's Hospital. The number had been on the increase during the last few years, although last year the increase was not so great as usual. The fee for the curriculum was 125 guineas. The income of the school last year amounted to between £8000 and £9000, and the expenses to about £3000. The profits, so to speak, were distributed among the staff and lecturers in certain proportions. He did not think that the presence of a medical school increased the expenditure of a hospital. The students performed gratuitously work which in other circumstances must be paid for out of the funds of the hospital. He was not there to advocate a central school; he merely stated certain advantages which appeared to him.

The Committee met again on Thursday, Lord Sandhurst presiding.

Mr. J. G. Wainwright, Treasurer of St. Thomas's Hospital, said that as superior officer he had control over all the other officers and servants in every department of the hospital. Any case of complaint or discovery of abusive conduct was reported to him. In the event of serious delinquency he would suspend the officer pending inquiry. He was an honorary official, with a residence at the hospital. The supreme authority was the full Court of Governors, of whom thirteen made a quorum. The minutes of the Grand Committee were confirmed by the Court of Governors. A final court of appeal to any officer who might be dissatisfied was afforded by the Court of Governors. The funds of the hospital allowed a maximum of 485 patients. In St. Thomas's Home they had paying patients who paid at the minimum rate of nine shillings per day. He calculated that every bed cost about £92 per annum. Want of funds explained the presence of paying patients and vacant wards. No doubt there was a want of hospital accommodation for the poor in the south of London. They had a large out-patient system. They made no special inquiry as to the circumstances of the patients. To appoint inquiry officers would be very expensive. He himself regarded that department very narrowly, and if he saw a person whom he thought ought not to be there he spoke to him. He did not think that any great amount of unfair advantage was taken of the hospital. The authorities did not bury the dead, but put them in shells.

By Earl Cathcart: He did not think that their income had been dissipated by erecting their present large hospital. It was certainly the case that they had borrowed £100,000 to meet the cost of building. At one time it was suggested that one block should be left unbuilt, but ultimately the governors decided to complete the plan. Out of their income they paid about £5000 a year to the capital account. He did not consider that the hospital was on too extended a scale.—Earl Cathcart: Do you not think it your duty to make an effort to accommodate the poor people who are clamouring for admission? You must remember you have five wards either vacant or occupied by paying patients.—Mr. Wainwright: We thought we were doing well when we opened these two wards for paying patients in order to obtain funds.—Earl Cathcart: But would it not be better to say to the public, "We have made a mistake in building this large hospital, and we have empty wards; won't you assist us with funds?"—Mr. Wainwright: Possibly it might be. On one occasion we appealed to the public. We placed the whole matter clearly before the public, and we had a great struggle to get £20,000, most of which was subscribed by our own governors.—Earl Cathcart: Was that because the public had not confidence in your management?—Mr. Wainwright: I don't know that.

Examined by Lord Thring, the witness said he knew of no economy which could be advantageously instituted in connexion with the hospital expenditure. The architect received a salary of £250 and 2½ per cent. on repairs. The average annual cost of repairs during the past ten years was about £3000. He did not regard that sum as too large, considering the nature and extent of the building. He was not aware that house surgeons were on duty for sixteen or seventeen hours at a time. They might be on duty for fourteen or fifteen hours, though not absolutely employed all that time. If the surgeons were overworked they would not have the same clamour, as he might call it, for the appointments.—Lord Thring: A man will work himself to any extent in order to get up in the world.—Mr. Wainwright submitted that the house surgeons were not overworked.—The Chairman: As to this deficit, surely you might appeal to the public?—Mr. Wainwright: We certainly might. The only thing against such an appeal is the chance of not getting a proper response.—The Chairman: Don't you think that hospitals are like places of business, they require a good deal of advertising? Mr. Wainwright: The hospital is fairly well known to the public. The building itself is a good advertisement.

Mr. Robert Brass, receiver of St. Thomas's Hospital, gave further evidence as to the funds and accounts of the institution. He explained that the building debt had been reduced from £100,000 to £33,000. In addition to the interest, they paid off £3300 a year of capital. They had no stock they could sell. They had capital in the Court of Chancery and with the Charity Commissioners, for which they received interest at the rate of 2½ per cent., while they paid 3 per cent. for their building loan. The capital in the Court of Chancery and with the Charity Commissioners would suffice to wipe off the building loan. The hospital buildings were rated at £8000, and were insured for £80,000.

Miss Entwistle, late nurse in St. Thomas's Hospital, said that in her opinion the hours of nurses in the hospital were excessive, and altogether their duties were too exacting. A sister went on duty at eight o'clock each morning and continued there until half-past ten o'clock at night, with two hours off duty and two half hours for dinner and tea. The nurses went on duty at seven o'clock in the morning. She considered those hours excessive, for they applied to all the seven days of the week. She made no complaint for this reason: that St. Thomas's Hospital was better off than any other in London. The nurses were better cared for, and their food and lodgings were better in St. Thomas's than in any other hospital in London. She would like to see the number of staff nurses increased. All the wards in St. Thomas's should have two staff nurses during the day and three probationers. On account of the nature of their work sisters required more rest and holidays than they now received. In her opinion the trained nurses suffered most from overwork. She had a high opinion of the general arrangements of St. Thomas's Hospital, but she considered that the work of the nurses was more arduous than women ought to undertake.

Miss Gordon, matron of St. Thomas's Hospital, explained to the Committee the arrangements which she controlled.

The Committee afterwards adjourned.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Koch's Remedy, in relation specially to Throat Consumption. By Lennox Browne, F.R.C.S. Edin. Illustrated. 1891. pp. 114.

BLACKIE & SON, Old Bailey, London.

An Elementary Text-book of Physiology. By Vincent T. Murche. pp. 202.

CHURCHILL, J. & A., New Burlington-street, London.

The Westminster Hospital Reports. Vols. IV. and VI., 1888 and 1890.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. X. Session 1889-90.

CORNISH BROS., New-street, Birmingham.

The Elements of Ophthalmic Therapeutics. By D. C. Lloyd-Owen, F.R.C.S.I. 1890. pp. 63.

DAVIS, F. A., Philadelphia and London.

The Daughter; her Health, Education, and Wedlock. By William M. Capp, MD. 1891. pp. 144.

HIRSCHFELD BROS., Bream's Buildings, London.

A Manual of Organic Materia Medica. By J. M. Maish, Ph.M. Fourth Edition. With Illustrations. pp. 539.

HOWE & Co., Paternoster-row, London.

General Booth and his Critics. By H. Greenwood, M.A., LL.D. 1890. pp. 128.

LEWIS, H. K., Gower-street, London.

The Action of Water on Lead. By J. H. Garrett, M.D. 1891. pp. 116.

LIPPINCOTT, J. B., COMPANY, Philadelphia.

Cyclopædia of the Diseases of Children. Edited by J. M. Keating, M.D. Vol. IV. Illustrated. 1890. pp. 1123.

LONGMANS, GREEN, & Co., London.

Outlines of Physiological Psychology. By G. T. Ladd. 1891. pp. 505. Price 12s.

MACMILLAN & Co., London.

A Series of Chemical Problems. By T. E. Thorpe, B.Sc. (Vict.), Ph.D. Revised and enlarged by W. Tate, Assoc. N.S.S. (Honours), F.C.S. New Edition. 1891. pp. 139. Price 2s.

Index Medicus: Authors and Subjects, Vol. XII., No. 12, December, 1890 (Trübner & Co., and Lewis, London).—Studies from the Physiological Laboratory of Owens College, Manchester, Vol. I. (J. E. Cornish, Manchester, 1891); price 10s.—L'Asepsie et l'Antisepsie à l'Hôpital Bichat; par Marcel Baudouin (E. Lecrosnier et Babe, Paris, 1890).—Traité Élémentaire d'Anatomie Médicale du Système Nerveux; par Ch. Féré (Lecrosnier et Babe, Paris, 1891).—East and West: a Weekly Newspaper and Review (Woodford, Fawcett, & Co., London, 1891); price 1d. — Paternoster Review. — Intorno alla Missione al Congresso Internazionale Medico di Berlino, nell' Agosto del 1890; rapporto del Dottore Felice Santini (G. Bertero, Roma, 1891).—Therapeutisches Lexikon für Praktische Aerzte; herausgegeben von Dr. Anton Bum; Lieferung 13—16 (Urban G. Schwarzenberg, Wien und Leipzig, 1890).—The London Smoke Plague, by B. H. Thwaite, C.E., A.M. Inst. C.E. (published by "Industries," Limited., Strand, London).—La Sanita Pubblica, dal Dott C. Ruata (S. Lapi, Città di Castello, 1891).—Magazines for February: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister), Boy's Own Paper, Grl's Own Paper (Religious Tract Society), Scribner's.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHDOWN, G. W. W., M.D., M.B. Edin., M.R.C.S., has been appointed Medical Officer to the Tetbury Cottage Hospital.

BLUMBERG, HENRY, M.D. Prague, L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Southport Hydropathic Hospital.

BOASE, R. D., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the West Cornwall Dispensary and Infirmary.

BULGER, M. J., Lic. Med. L.Ch. Dub., has been appointed Assistant Surgeon to the Richmond Hospital, Dublin.

BULLOCK, T. W., M.R.C.S., has been reappointed Senior Surgeon to the Warwick Provident Dispensary and Cottage Hospital.

CAMERON, JAMES A., M.D., M.B., C.M. Edin., has been appointed by the Joint County Councils of Banff, Elginshire, and Nairnshire Medical Officer of Health for the three Counties.

DAVIES, SYDNEY, M.D., M.B., M.R.C.S., has been appointed Medical Officer for the Parish of Plumstead.

DAGGETT, H. J., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Ripon Cottage Hospital and Dispensary, vice Buxton.

FOOTT, ST. JOHN T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Third District of the Hollingbourn Union, vice Langston, resigned.

FOX, J. A., L.R.C.P. Lond., has been appointed Honorary Surgeon to the West Cornwall Dispensary and Infirmary.

FRY, J. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First District of the Shepton Mallet Union.

GRANT, F. W., M.D., M.B., C.M. Edin., has been appointed Visiting Physician to the Gray's Hospital, Elgin, vice Galletly.

HUNTER, W. L., M.D., M.B. Dub., has been appointed Medical Officer of Health for the Pudsey Urban Sanitary District of the North Bierley Union, vice Wilson.

MONTGOMERY, H. M., M.D., M.B., C.M. Edin., has been reappointed Assistant Physician to the West Cornwall Dispensary and Infirmary.

MONTGOMERY, J. R., M.D. Glasg., F.R.C.P. Lond., M.R.C.S., has been reappointed Physician to the West Cornwall Dispensary and Infirmary.

PEARSE, THOS. FREDK., M.D., F.R.C.S., M.R.C.P., has been appointed Medical Examiner for the Gresham Assurance Company at Southsea.

PERKIN, R. F. T., L.R.C.P. Edin., M.R.C.S., has been reappointed Visiting Surgeon to the Warwick Provident Dispensary and Cottage Hospital.

POLLARD, REGINALD, M.B., M.R.C.S., has been appointed Honorary Surgeon to the Torbay Hospital, vice H. Gordon-Cumming, resigned.

POWERS, C. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Cumberland Infirmary, Carlisle.

SHARPE, WM. C., M.B., C.M. Edin., has been appointed Junior Physician (Resident) to Smedley's Hydropathic Establishment, Matlock Bridge, vice C. J. Whitby, resigned.

SHIMELD, JAS., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Ilford Urban Sanitary District of the Romford Union.

SMEETH, HENRY G., B.A., M.D., B.Ch. Dub., has been appointed Medical Officer to the Heaton Norris (No. 2) District of the Stockport Union, vice Bale, resigned.

STOPFORD, R., L.K.Q.C.P., L.M. Irel., has been appointed Honorary Medical Officer of the Southport Hydropathic Hospital.

SYMONS, J., M.R.C.S., has been reappointed Surgeon to the West Cornwall Dispensary and Infirmary.

TIBBITS, JOHN, M.D. St. And., M.R.C.S., has been reappointed Medical Officer to the Warwick Provident Dispensary and Cottage Hospital.

WAITE, HENRY, L.R.C.P., L.M. Edin., has been appointed Medical Officer for the Upper and Lower District of the Bramley Union.

WHITBY, CHARLES J., B.A., M.B. Cantab., has been appointed Resident Physician to the West of England Hydropathic Establishment, Limpley Stoke, Bath.

WILLIAMS, W. C., L.D.S. R.C.S., has been reappointed Honorary Dental Surgeon to the Warwick Provident Dispensary and Cottage Hospital.

WILSON, ANDREW, M.B., C.M. Glasg., has been appointed Assistant Surgeon to the Glasgow Eye Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BRIXTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House Surgeon. Salary £150 per annum, with furnished apartments, attendance, coals and gas. (Apply to the Secretary, Water-lane, Brixton.)

BROWN ANIMAL SANATORY INSTITUTION.—Professor Superintendent. Salary £250 per annum. (Apply to the Registrar of the University of London, Burlington-gardens, W.)

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser for the Asylum in Cleveland-street. Salary £100 per annum, with board and residence. (Apply to the Clerk to the Managers, Cleveland-street Asylum, Cleveland-street, W.)

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. No salary, but board and residence, and an allowance for washing provided. (Apply to the Secretary, 24, Finsbury-circus, E.C.)

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary £600 per annum, with £200 extra for travelling and other expenses. (Apply to the Deputy Clerk to the County Council, 40, St. Mary's Gate, Derby.)

COUNTY OF FIFE.—County Medical Officer for the counties of Fife and Clackmannan, to act also as Medical Officer for the four districts of the County of Fife and for the County of Clackmannan. Salary for the combined offices £600, with travelling expenses. (Apply to Mr. Patrick, County Clerk, Cupar Fife.)

COUNTY OF LANARK.—Medical Officer for the County. Salary £700 per annum, with travelling expenses &c. (Apply to Mr. Dykes, County Clerk, Hamilton.)

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House Surgeon. Salary £100 per annum, with board and residence in the hospital.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum, board, lodgings, and washing allowed. (Apply to the Secretary, Thorofare, Ipswich.)

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn, E.C.—Honorary Physician Accoucheur.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer as House Physician for one year. Salary £60 per annum, with board and residence in the hospital.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. No salary, but board and lodging provided.

NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—House Surgeon. Salary £50 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Salary £250 per annum, with furnished residence.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology. The stipend is £140 per annum.

PAROCHIAL BOARD OF FETTERCAIRN.—Medical Officer. (Apply to Dr. Prain, Fettercairn.)

SCARBOROUGH HOSPITAL AND DISPENSARY, Scarborough.—House Surgeon for twelve months. Salary £80 per annum, with board and lodging.

SECRETARY, LONDON SOCIETY FOR PROMOTING CHRISTIANITY AMONGST THE JEWS, 16, Lincoln's-inn-fields, W.C.—Medical Missionary to the Jews at Safed.

UNIVERSITY OF GLASGOW.—Examiners in Medicine. The annual fee to each of the Examiners is £30. Term of office in each case is four years.

YORK FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary £150 per annum, with an allowance of £20 for conveyances, and 7*s.* 6*d.* accouchement fee. No residence found. (Apply to Mr. Brown, 26, Markham-street, York.)

Births, Marriages, and Deaths.

BIRTHS.

COWARD.—On Jan. 28th, at Burdett-road, Limehouse, E., the wife of Christopher T. Coward, L.F.P. & S. Glas. and L.S.A. Lond., of a son.

DAVY.—On Jan 31st, at Welbeck-street, Cavendish-square, W., the wife of Richard Davy, F.R.S.E., of a daughter.

FRASER.—On Jan. 31st, at Drumsheugh-gardens, Edinburgh, the wife of Dr. Thomas R. Fraser, F.R.C.P.E., F.R.S., of a son.

RYAN.—On Jan. 27th, at The Limes, Northleach, Glosts, the wife of J. Ryan, L.K.Q.C.P.I., of twin daughters.

SHARPE.—On Jan. 29th, at Gloucester-crescent, Hyde-park, W., the wife of Wm. Salisbury Sharpe, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

SAMUELSON—GREY.—On Feb. 2nd, at Sydney, N.S.W., Gerard S. Samuelson, M.B., C.M. Edin., of Bourke, Australia, son of the late Alexander Samuelson, C.E., to Forrester Anne, daughter of the late John Edward Ogilvie Grey, of Moukton Hall, and Gilmore-place, Edinburgh. (By cable.)

TAYLOR—GOOD.—On Jan. 31st, at Christ Church, Woburn-square, W.C., Sydney Johnson Taylor, M.B., C.M., M.R.C.S., of Norwich, to Phyllis Kinsey Good, of Gussage Manor, Cranbourne, Dorset.

DEATHS.

BIRD.—On Jan. 31st, at San Remo, Peter Hinckes Bird, M.D., F.R.C.S. Eng., D.P.H. Cantab., aged 63.

COPE.—On Jan. 29th, at West Tarring, Worthing, Ricardo Cope, M.R.C.S. Eng., youngest son of the late Charles Henry Cope, of Birmingham, aged 69.

DAYMAN.—On Jan. 26th, at Milbrook, Southampton, Barnfield Dayman, L.R.C.P. Lond., M.R.C.S.

EVANS.—On Feb. 1st, at Bridport, Dorset, George Moule Evans, Surgeon, aged 54.

GEORGE.—On Jan. 30th, John Winnall George, M.R.C.S., L.S.A., of Malvern Link, aged 56.

HOLCROFT.—On Dec. 5th, 1890, at Bundaberg, Queensland, Henry Holcroft, M.R.C.S. Eng., son of the late William Francis Holcroft, of Sevenoaks, aged 35.

MENZIES.—On Jan. 25th, at his residence, Lothian-road, Edinburgh, William Menzies, M.D. St. And., F.R.C.S. Edin., aged 84.

TURNER.—On Jan. 31st, at Stockport, George Turner, M.D. Edin., M.R.C.S., aged 94.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, February 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: Cataract.—London Throat Hospital, Gt. Portland-st.: 3 P.M., Dr. E. Woakes: Tinnitus and Vertigo.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. Bland Sutton: The Value of Comparative Pathology to Philosophical Surgery.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Mr. Mark Hovell: Acute Inflammation of the Middle Ear, and its Treatment. (Post-Graduate Course.)
SOCIETY OF ARTS.—8 P.M. Mr. A. J. Hipkins: The Construction and Capabilities of Musical Instruments. (Cantor Lecture.)
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Professor H. Robinson: Drainage.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Douglas Powell will open a Discussion on Angina Pectoris.

Tuesday, February 10.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: General Paralysis of the Insane.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
SOCIETY OF ARTS.—8 P.M. Mr. Heywood Sumner: Sgraffito.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Sir Geo. M. Humphry: On Macrodactyly and some other forms of Congenital Overgrowth, and their relation to Tumours.—Mr. Barwell: Rachilysis, its Object and its Method.

Wednesday, February 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: The Diagnostic Indications of the Sputum, with Demonstrations.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. A. Quarry Silcock: Choroiditis.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. Bland Sutton: The Value of Comparative Pathology to Philosophical Surgery.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Norris Wolfenden: Cancer of the Larynx. (Post-Graduate Course.)
HUNTERIAN SOCIETY.—7.30 P.M., Annual Meeting. 8 P.M., Annual Oration by Dr. Fletcher Beach.
SOCIETY OF ARTS.—8 P.M. Sir Roper Lethbridge: The Proposed Irish Channel Tunnel.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Dr. Louis Parkes: Model Dwellings in London, and Overcrowding on Space. The paper will be followed by a Discussion.

Thursday, February 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. V. Horsley: Surgery of the Nervous System. Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Mr. B. Pitts: Selected Surgical Cases.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. McNeill Whistler: Phthisis as it affects the Larynx.
ROYAL INSTITUTION.—3 P.M. Professor C. Hubert H. Parry: The Position of Lulli, Purcell, and Scarlatti in the History of the Opera (with Musical Illustrations).
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens by Dr. R. T. Smith and Dr. F. Barnes, and Drawings illustrating Anatomical Peculiarities of a Symelian Fœtus by Dr. Bennington, with Notes.

Friday, February 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CANCER HOSTITAL (Fulham-rd., S.W.).—4 P.M. Dr. H. Snow: The Non-operative Treatment of Cancer; its Limitations and Fitting Scope.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: The Diagnostic Indications of the Sputum, with Demonstrations.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. Bland Sutton: The Value of Comparative Pathology to Philosophical Surgery.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Sanitary Building Construction.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hale White and Mr. W. A. Lane: A case of Stricture of the Pylorus following upon Hydrochloric Acid Poisoning in which a modified Loreta's operation was performed.—Mr. H. W. Allingham: A case of Removal of Suppurative Vermiform Appendix.—Mr. J. Bland Sutton: Cases of Excision of the Vermiform Appendix.—Mr. Andrew Clark: Two cases in which the Vermiform Appendix was excised.
ROYAL INSTITUTION.—9 P.M. Professor A. Schuster: Some Results of Recent Eclipse Expeditions.

Saturday, February 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: Seborrhœa and Allied Affections.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—9 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 5th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 30	30·03	S.W.	43	42	73	55	42	·22	Cloudy
,, 31	30·02	S.W.	47	46	78	55	43	·30	Cloudy
Feb. 1	30·05	N.W.	46	45	63	48	45	·06	Cloudy
,, 2	30·65	S.W.	35	34	60	50	34	..	Cloudy
,, 3	30·62	S.W.	46	45	57	51	35	..	Overcast
,, 4	30·64	W.	49	48	53	50	45	—	Overcast
,, 5	30·69	N.	42	51	57	49	40	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE VACCINATION COMMISSION.

Dr. E. Haughton.—We doubt whether our correspondent has fully apprehended the nature of the argument set out by Mr. A. Wheeler, and to which we adverted. The following question and answer explain it, perhaps, as well as any isolated statement can:—"Lord Herschell: You assume that if nobody had died of small-pox *that year* there would have been so many people, 7000, dying from something else?—Mr. A. Wheeler: Most decidedly....." The italics are ours.

B.—The fee seems a full rather than an excessive one. Probably the largest items are the two gold crowns, which are necessarily expensive, since their fitting and adjustment take up so much time of both operator and mechanic.

Mr. W. W. Jackson should put the question to his usual medical adviser.

Dr. Delépine.—Instructions have been given to the printer to forward a proof.

Mr. Sleman.—The paper has been received.

Mr. Denton.—Next week.

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A WEEKLY HOLIDAY FOR MEDICAL MEN.

B. S. strongly urges that medical men should take one day a week as a holiday, or one day a month, and thinks that both they and their patients would find benefit. No doubt there is need of more relaxation for medical men. Their anxiety is continuous in a greater degree than that of other callings. Abstractly the advice is good, and has our approval. There is just a dash of impracticability about it that detracts from its force. Even if there were no financial or professional difficulties in the way, there is often more disquiet of the mind produced by leaving anxious cases than relief by handing them over to another. But undoubtedly our correspondent is right in the main advice of a systematic and periodical break in the wear and tear of the life of medical men.

H. M.—Our correspondent does not say whether the patient to whom the circular was sent had been previously a patient of the author of the circular. This is a point of importance. It is not unreasonable that a practitioner retiring on account of ill-health should in a formal communication commend his successor to his own patients, or those whom he thinks to be so; but, of course, such a communication addressed to the patients of other practitioners would be highly unsatisfactory.

D. M. P.—A Manual of Nursing, Medical and Surgical; Dr. Cullingworth (Messrs. J. & A. Churchill, 11, Old Burlington-street). A Manual of Nursing, Medical and Surgical; Mr. Lawrence Humphrey (Messrs. Griffin and Co., Exeter-street, Strand). Nursing and Hygiene; Dr. Roberts (Mr. H. K. Lewis, Gower-street, London).

Mr. T. Atkinson.—1. Books upon the subject referred to have been published by Dr. Murrell and Dr. Stretch Dowse. It has also been noted in Dr. Hale White's Text-book of General Therapeutics.—2. Vacancies of the nature indicated are rare, but they are occasionally mentioned in our advertisement columns.

Dr. Nason (Nuneaton).—Yes, in an early number.

Dr. Prout.—The paper will be acceptable.

MEDICAL PRACTITIONERS AND CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—Some years ago, in a case of acute bronchitis which I had only seen once before death, but in which I was perfectly satisfied that there had been no neglect and that death was due solely to the disease, I wrote to the registrar stating the facts, and enclosing a certificate in case he should not deem it necessary to refer to the coroner. My letter was suppressed and my certificate forwarded to the coroner, who decided to hold an inquest. I was not summoned to give evidence, nor did I hear, directly or indirectly, from coroner or registrar. It was quite by accident that I came across a report of the case in *The Times*, and learnt that an inquest had been held, that the jury had censured me for giving a certificate, and that the coroner had applauded the censure. I wrote to the coroner for instructions to guide me in future. He replied that "in no case could *one* visit *only* be considered as attendance during the last illness, and that in all such cases I was to notify to the police or to him, and to receive his express sanction before certifying." He was good enough also to say that he was sorry for the censure passed, and that had he known of my letter to the registrar he should have taken an entirely different course in the matter. I was a little sore about it at the time. No man likes to be condemned unheard. However, that soon passed off, and I had a definite rule to guide me in future. I have followed it very satisfactorily ever since, and have always found the coroner's opinion and mine coincide as to the necessity or otherwise of an inquest. Where he has considered one unnecessary he has written to tell me to certify, or his officer has brought me verbal message to that effect.

Last Saturday week (10th inst.) I was called to a case of bronchitis, where death occurred a few hours after my visit. I told the relatives that the case must be referred to the coroner, and in due time his officer called upon me. He made no inquiries as to my opinion of the case, or as to whether I had formed one. He simply informed me, in a somewhat offhand manner, that of course no inquest would be held, and that "*We* [meaning, I presume, himself and his master] will give the necessary certificate." Well and good. It was a new method of procedure to me; but this was the first case I had had in this particular coroner's jurisdiction. Two days later the relatives applied to me for a certificate. They brought with them a printed notice from coroner to registrar, stating that an inquest was unnecessary; but the registrar, in addition to this, required *my* certificate. Bearing in mind my former experience, I refused to give this without the express sanction of the coroner. As time pressed, I wrote to the coroner for this on the 16th inst., and received the enclosed printed notice on the 19th inst. On that day also one of the relatives managed to see the coroner, and obtained his written sanction to my certifying. You will observe that the printed notice, even when it arrived, did not give what I asked for—viz., authority to certify. Meanwhile the funeral was arranged for the 17th inst. (Saturday). But the registrar still refused to give a certificate: "He had no authority to do so." The doctor still refused to give a certificate: "He had no authority to do so." The undertaker still refused to undertake: "He had no authority to do so." It was a case of "stick won't beat dog, dog won't bite pig, pig won't get over the stile," &c. The funeral was consequently postponed, at great trouble and expense to the relatives. I may mention that they also were informed by the coroner's officer that the necessary certificate would be given *by the coroner, not by the doctor.*

I enclose, *for* comparison, another letter from another coroner, in an exactly parallel case, in which all trouble was averted by a straightforward answer to a civil request.

I should be much obliged if you would give me your opinion as to my action in this case, and as to what it should be in future—where a coroner's officer tells me that I am not to certify, and a registrar tells me that I am to do so. I was very unwilling to inconvenience the relatives here, and very anxious not to put myself in the wrong with the coroner; yet I fear I have done both. The relative who saw the coroner on the 19th inst. was informed by him that I should have taken his note to the registrar as an instruction to myself to certify, notwithstanding his own officer's intimation to the contrary; and the blame for all the worry and delay is therefore placed upon my shoulders. With many apologies for troubling you with so long a letter,

I remain, Sirs, yours obediently,

South Hornsey, N., Jan. 20th, 1891. G. ANGUS HUNT.

*** A medical man must exercise his discretion as to giving a death certificate under circumstances similar to those detailed above. The wording of the certificate allows a certain amount of latitude by introducing the terms "to the best of my belief." If the case has only been seen once, or if the medical practitioner is called in after death, it is well for him to write to the coroner stating the facts and saying that he is or is not prepared to give a certificate. In this way the responsibility is left with the coroner. The registrar has no power to decide the matter. If he has reason to doubt the advisability of registering the doctor's certificate, he must refer the matter to the coroner.—ED. L.

L.R.C.P.—1. The Medical and Surgical Directory of the United States, published by R. L. Polk and Co., contains the medical laws of the different States and a variety of other information concerning American universities and colleges.—2. The *New York Medical Record*, *Boston Medical and Surgical Reporter*, *Gaillard's Medical Journal*.

F. W. should consult his usual medical attendant.

RETIRED ARMY SURGEONS AND MEDICAL HEALTH OFFICERSHIPS.

To the Editors of THE LANCET.

SIRS,—It may escape the notice of senior members of the Army Medical Department that at the present time appointments are being made in connexion with the Local Government (Scotland) Act for which retiring members of the medical staff would be admirably suited. Would you, therefore, admit to your columns this brief note?

With exceptions, of course, I cannot imagine any members of the medical profession better suited for such appointments than army medical officers retiring from the service by rotation, although still in robust health. The appointments to which I allude are briefly as follows:—Each County Council in Scotland is appointing a county medical officer, whose duties will be to attend to all the sanitary and other matters coming within the province of medical men, and within the jurisdiction of the County Council. The salaries are to be liberal, and graduated according to the importance of each county or district—liberal because such medical officers are to be debarred from engaging in private practice. The work is admirably adapted to the experience of Army medical officers, and County Councils would act wisely in selecting their medical officers from their ranks. Residing in the county, such officers would enjoy pleasant society, would be interested in their occupation, and would gain a substantial addition to their retiring pay, by no means to be despised.

I am, Sirs, yours truly,

JAMES JOHNSTON, M.D., J.P.,

Edinburgh, Feb. 2nd, 1891. Late Surgeon, 26th Cameronians.

*** We print the above letter, but think there is another side to the question—that, namely, from the point of view of those gentlemen who have made sanitary matters a special study, and have passed examinations in order to obtain a qualification guaranteeing fitness for the post of medical officer of health.—ED. L.

CONSTIPATION AND GASTRIC DISEASE.

To the Editors of THE LANCET.

SIRS,—Can any of your readers suggest a remedy or treatment in the following case:—The patient, a young lady aged twenty-four, has suffered from gastric ulcer and obstinate constipation for five years. At first the bowels responded to ordinary aperient remedies, now they with difficulty respond to large watery enemata. Aloetic preparations, cascara, and glycerine suppositories take no effect, it seems to be an atonic condition of the rectum; and solid food of any description cannot be borne on account of the gastric condition. She has been using of late injections increasing in quantity, decreasing in utility. So far as I can make out there is no obstruction. She has been treated in an institution by absolute rest and no food by the mouth for the gastric condition, but without benefit. Any suggestion as to treatment of the constipation will be gladly received.

I am, Sirs, yours obediently,

Feb. 2nd, 1891. RUSTIC, L.R.C.P.

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MEDICAL ADVERTISEMENTS IN THE LAY PRESS.

THE whole system of medical advertising in the lay press is open to criticism, but it is especially so when it has reference to certain cases and classes of disease, as in the following advertisement from the *Manchester Courier*:—

> Sterility in Women: its Causes and Cure. By J. B. Ryley, M.D., M.R.C.S., London. A new edition of this work is now ready. Price 3*s.* 6*d.*; post-free 3*s.* 8*d.* London: Henry Renshaw, 356, Strand.

Medico (Grimsby).—We regret we cannot assist our correspondent.

Fairplay has not enclosed his card.

"A MEDICAL HAT."

To the Editors of THE LANCET.

SIRS,—I think it would be a great advantage to many medical men if they adopted a medical hat. I have been saved many journeys in the country by the fact that my hat differs from that of other people, and I am recognised even on a dark night, and often saved the trouble of retracing my steps for several miles. The hat I have adopted is a hard felt, just the shape of an ordinary straw hat, with low crown and flat brim. Of course, the hat is easily changed when on pleasure bent, and the cost is half that of a silk one.

I remain, Sirs, yours obediently,

Bracknell, Berks, Jan. 1891. HENRY PARSON.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. C. H. Sers, London; Mr. J. Rutherford, Sheffield; Herr T. Zangger, Zurich; Dr. S. Mackenzie, London; Dr. Mortimer; Messrs. Bates, Hendy, and Co., London; Mr. A. Duke, Dublin; Dr. Caspar, Berlin; Dr. Dixon Mann, Manchester; Dr. Hewetson, Dunblane; Messrs Richardson and Co., Leicester; Mr. Hulke, London; Dr. De H. Hall; Dr. More Madden, Dublin; Mr. Parson, Bracknell; Messrs. Crossley, Moir, and Co., London; Dr. H. Port; Dott. F. Grollero, Doneille; Mr. Lawson Tait, Birmingham; Herr J. Springer, Berlin; Messrs. Cochrane and Walker, Liverpool; Dr. Shuttleworth, Lancaster; Messrs. Dawson and Sons, London; Dr. Brackenbury, London; Messrs. G. Street and Co., London; Dr. Nason, Nuneaton; Dr. Cullingworth; Dr. Burney Yeo, London; Mr. Feldman, London; Dr. Murray, Whittlesea, Cape Colony; Mr. J. M. Clark, London; Mr. G. Brown, London; Dr. A. de Giacomo, Napoli; Dr. J. Johnston, Edinburgh; Messrs. Blondeau et Cie., London; Mr. Feeny, London; Mr. Evans, Burma; Messrs. Lee and Nightingale, Liverpool; Mr. Kingsford, Clapton; Dr. Hingston Fox, London; Mr. J. W. Taylor, Birmingham; Messrs. Cassell and Co.; Dr. G. Lyon, London; Mr. A. H. Jacob, Dublin; Messrs. Gale and Co., London; Mr. Soutter, London; Mr. Thatcher; Messrs. King and Co., Cornhill; Mr. Stallard, Worcester; Mr. Musgrave, St. Jean de Luz; Mr. V. Horsley; Mr. A. Cooper, London; Messrs. Lumley and Son, London; Dr. Horrocks; Mr. Reeves, London; Dr. Fletcher Beach, Dartford; Dr. Williamson; Dr. Hargreaves; Messrs. Squire and Son, London; Dr. Cunningham, Sussex; Messrs. Mitchell and Co., London; Mr. Perry, London; Mr. Green, London; Dr. Hermann Beer, Vienna; Mr. Sisson, Newcastle-on-Tyne; Messrs. Wright and Co., Bristol; Mr. Hornibrook; Mr. Thorpe, Glasgow; Messrs. White and Son, London; Dr. Ashby, Manchester; Mr. Newbolt, Ellesmere Port; Mr. Baird, Mentone; Mr. Russell, Liverpool; Dr. Paris, Sierra Leone; Mr. Hammett, Taunton; Mr. Howe, Taunton; Messrs. Herts and Collingwood, London; Mr. Phillips, Birmingham; Mr. Mitchell, Washington; Mr. Anderson, France; Mr. Pentland; Mr. Birchall, Liverpool; Mr. Roland, Barcelona; Mr. Cooper, Bristol; Dr. Lanen, Hamburg; Mr. Vickers, London; Mr. Morton, Glasgow; Mr. Nance, Colchester; Mr. Wright, Penzance; Dr. Grollus, Italy; Mr. Piggott, Cambridge; Miss Willis, Plymouth; Mr. Frost, London; Mr. Shaw, Worthing; Mr. Warner, Sheffield; Mr. Clark, Doncaster; Mr. T. B. Browne, London; Mr. Armstrong, Newcastle-on-Tyne; Mr. Sargant, Ramsgate; Dr. Copeman, London; Messrs. Stern; Dr. Skrimshire, Monmouth; Messrs. Morley, London; Mr. Wolfenden; Mr. Roberts, Blaenau Festiniog; Mr. Clark, Doncaster; F. H., Hammersmith; Condor; L.R.C.P.; H. L.; X. Y. Z.; H. W. R., London; A Qualified Assistant; Iron, London; W. B., London; Probyn; Secretary, Queen Charlotte's Lying-in Hospital, Marylebone; Mason, London; *Mercury* Office, Leeds; A. E. B., London; Pericles, London; A. W. H., New Beckenham; Gamma, London; Statim; Secretary, Addenbrooke's Hospital, Cambs; Assistancy, Breewood; Medicus, London; Anchor, London; T. H. L., Brixton.

LETTERS, *each with enclosure*, are also acknowledged from—Messrs. Read and Co., Bristol; Mr. Lockwood, Huddersfield; Messrs. Maythorn and Son, Biggleswade; Mr. Tyte, Minchinhampton; Messrs. Hooper and Co., Pall Mall; Mr. Tully, Hastings; Messrs. Reade, Bros. and Co., Wolverhampton; Dr. Evans, Llanerchymedd; Messrs. Oliver and Boyd, Edinburgh; Mr. Burns, Carluke, N.B.; Mr. Nicholls, Bury St. Edmunds; Dr. Paterson, Stockton-on-Tees; Messrs. Wilcox and Co., London; Mr. Roberts, Sheffield; Messrs. Duncan, Flockhart, and Co., Edinburgh; Mr. Jackson, Workington; Mrs. George, Malvern Link; Mr. Sergeant, London; Mr. Wallace, Berks; Messrs. Carnrick and Co., London; Mr. Plummer, Newcastle-on-Tyne; Messrs. Harris and Son, London; Dr. Day, London; Mr. Hart, London; Mr. Sheen, Worcester; Mr. Saunders, Eton; Mr. Ritchie, Oxford; Dr. Harries, Sussex; Mr. Marshall, Suffolk; Mrs. Forrest, Blackburn; Mr. Blunt, Leicester; Mr. Howells, Aberdare; Mr. Mosse, London; Mr. Malone, Sheffield; Dr. Stanley, Sheffield; Mr. Prain, Fettercairn; Dr. Duke, Eastbourne; Mr. Davies, Pontypridd; Dr. Brown, York; Mr. Wylie, Petersfield; Mr. Ramsden, Halifax; Mr. O'Meara, Leicester; Mr. E. Foot, Pulborough; Rev. Mr. Wigan, Maidstone; Dr. Waters, Liverpool; Mr. Johnson, Leicester; Dr. Moorhead, Notts; Dr. Detmold, Bournemouth; Mr. Buller, Martley; Mr. Hay, Hull; Dr. Drysdale, London; Dr. Cripps, London; Mr. McLay, Rothsea; Messrs. Savory and Moore, London; Dr. Macnab, Portree, N.B.; Messrs. Greenberg and Co., London; Mr. Parsons, Hastings; Messrs. Schweitzer and Co., London; Miss Evans, Warwickshire; Mr. Williams, Regent's-park; Dr. O'Neill, Belfast; Mr. Wheeler, Manchester; Mr. Thin, Edinburgh; Mr. Colson, Lincoln; Dr. Ball, Hounslow; Mr. Crisp, Nottingham; Mr. Wyckoff, Brooklyn; Mrs. Theobald; Dr. Taylor, Nottingham; Dr. Thurstan; Mr. Harcourt, Shalford; Mr. Heywood, Manchester; Dr. Macintyre, Glasgow; Penshurst, London; C. J. P., London; Melville; Devon, London; Chiswick, London; York County Hospital; Viola, London; Delta, London; Maltine Manufacturing Co., Bloomsbury; A. B., Blackheath; Hon. Treasurer, Isle of Man Hospital, Douglas; G. B., London; M.B., Loughborough; Resident Medical Officer, Durham; H. P., London; Litera, London; Cromwell House, Yorkshire; Medicus, Sussex; Crux, London; A. M., M. B., London; L.D.S., London; Assistant, London; F. T., Devon; D. G., London; Experience, London; Culmer, Ashford; Anthracosis; M., Bolton; Sister, Manchester; G. G. R., Barnet; Gordon; Hamilton Association, London; Sigma, London; Alpha, Sheffield; Victoria Carriage Co., London; W. H. H., Ashton-under-Lyne; Dunmore, East Dulwich; Ebor, London; E. K. N., Brockley; W., London; T. N., London; Economist, London; F. Q. P., London; Vender, London.

NEWSPAPERS.—*Lincolnshire Chronicle, Yorkshire Post, Courrier de Dac, Bristol Times, Trade, Finance and Recreation, Madras Times, Cape Argus, City Press, Worcester Evening Gazette (Mass.), Leeds Mercury, Windsor and Eton Gazette, Architect, Scottish Leader, Reading Mercury, Law Journal, Spectator, Mining Journal, Surrey Advertiser, Public Health, Western Gazette, South Africa, Guy's Hospital Gazette, West Middlesex Advertiser, Bromley Journal, Daily Free Press (Aberdeen), Retford Times, Manx Sun, Rugby Advertiser, New Zealand Herald, Invention, Hawick Advertiser, Hygiene, Leicester Journal, Birmingham Daily Gazette*, &c., have been received.

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Clinical Lecture
ON
CHRONIC ULCER OF THE STOMACH.[1]

By ROBERT SAUNDBY, M.D., F.R.C.P.,
PHYSICIAN TO THE GENERAL HOSPITAL, CONSULTING PHYSICIAN TO THE EYE HOSPITAL AND HOSPITAL FOR WOMEN, BIRMINGHAM.

GENTLEMEN,—During the last five years I have had a number of cases of ulcer of the stomach under my care, whose progress has been so uniformly satisfactory that I desire to draw your attention to the treatment employed. By ulcer of the stomach I mean the round, perforating, simple ulcer which alone has gained the distinction of a separate place in clinical medicine. It is a disease which occurs most frequently in young women, and the series of cases taken from my hospital note-books for the last four years and a half consists, with one exception, of this class:—

No.	Name.	Age.	Occupation.	Duration.	Result.
1	Caroline H.	28	Jeweller.	4 years.	Cured.
2	Eliza H.	20	Penworker.	5 weeks.	,,
3	Emily A.	38	Housewife.	6 months.	,,
4	Ellen R.	20	Penworker.	2 years.	,,
5	Annie S.	20	Clerk.	18 months.	,,
6	Laura H.	22	Schoolmistress.	2½ ,,	,,
7	Emily W.	27	Cook.	6 ,,	,,
8	Florence T.	24	Penworker.	2 ,,	,,
9	Emma H.	32	Housewife.	1 year.	,,
10	Frederick H.	20	Gun-finisher.	3 years.	,,
11	Annie H.	32	Cook.	14 days.	,,

Thus there are ten females to one male, a much greater proportion than that given by Dr. Wilson Fox[2] (two to one). The first case on the list was in the hospital three times before she was finally cured, and Case 4 was in on two occasions, but in both these instances the symptoms had been of long duration before coming under treatment: one year in the first case and two years in the other. The prevalence of the disease amongst cooks has been repeatedly remarked, and in our little series this occupation has two representatives. It will be noticed that three of the girls were penworkers, but this is perhaps attributable to the neighbourhood of several large pen factories. The disease is one which may last many years, and it is quite possible that some of these cases may relapse. I show you here a museum specimen of ulcer of the stomach. The breach of surface is usually about the size of a shilling, with clean-cut edges, as if punched out, but funnel-shaped—that is, wider in the mucous coat than in the submucosa and muscularis. The edges are smooth and destitute of any sign of granulations. It is generally believed that the ulcer is due to thrombosis of a limited vascular area with secondary necrosis and digestion of the dead part by the action of the gastric juice. It is supposed that thrombosis occurs as a result of the state of the blood—e.g., in anæmia,—as the experiments of Silbermann have shown that gastric ulcers may be produced in animals rendered anæmic by artificial means. But it is also thought that localised inflammations may so destroy the vitality of parts of the mucous membrane that the same result follows, and the frequency of the occurrence of the disease in cooks has been attributed to their habit of tasting very hot portions of food. Mechanical injuries to the mucous membrane of the stomach of animals are followed by circumscribed ulcers. Another factor upon which much stress has been laid is excessive acidity of the gastric juice, but it has been pointed out that this is quite as likely to be a consequence as a cause of the ulcer. Tubercle appears to give rise to ulcers quite undistinguishable at least to the naked eye from the simple form. The most important clinical fact is that these patients are generally anæmic and ill-nourished, and this is of great importance when we come to consider the treatment, for the starving method now in vogue is calculated to maintain this unfavourable state of things; while I attribute the success I have met with to the energy with which I have endeavoured to remedy these conditions. Before proceeding to detail the symptoms of this disease I will read you the account of one of the last cases under treatment.

CASE 1. *Gastric ulcer, history of one year's duration with pain, vomiting, and hæmatemesis.*—Emma H——, thirty-two, laundress, was admitted into hospital on June 29th, 1889, complaining of pain in the right hypochondrium and below the left breast, of sickness and hæmatemesis, with cough and shortness of breath.

Family history.—Her father was ill with some chronic affection of the liver, suggesting malignant disease, and her mother had a cancer (?) of the breast. One brother was "consumptive," two were in good health, and one had died aged nine weeks of some wasting disease. A sister had died of consumption, three others were in good health, and one had undergone an operation, probably the removal of an ovarian cyst, at the hands of Mr. Lawson Tait.

Previous history.—She said she had never been strong. No history of acute rheumatism. Had had a bad attack of measles two years previously to admission. Had scarlatina when fifteen years of age. For the last two years had been short of breath on exertion. She had been married thirteen years, and had had three children, one of whom died at the age of two, having never been able to walk. From the age of nineteen to twenty-two she suffered from "fits," which she attributed to a fright. She had an enlarged thyroid, which used to get bigger at her monthly periods, but she did not think it had increased lately. For the last year she had not menstruated.

History of present illness.—About a year ago she had noticed a swelling on the right side of the abdomen, which caused her pain on sitting. One day she was seized with a sudden pain in the abdomen, and fainted. A doctor was sent for, and on recovery she was told that she had passed about a quart of blood from the bowel. The pain in the tumour continued, and a fortnight later she vomited blood, as much as a pint on one occasion and half a pint on another. For several months before this she had been sick at times. This occurred ten weeks before admission, and since that time she had vomited blood two or three times a week, and food continually.

Present condition.—She was a thin woman, with a fair amount of colour from dilated capillaries in the skin of the cheeks. She said she had been much stouter up to six months ago. Temperature 98·5°.

Alimentary system.—Teeth defective, more than half their number having disappeared. Tongue pale, flabby, with irregularly distributed fur on the dorsum. Appetite poor. Complained of pain in the right iliac region, which prevented her lying on that side. Pain after food, coming on at once, and lasting about an hour. Tenderness general over the abdomen, but most marked in the right iliac region and under the left breast. Vomiting not constant. No obvious dilatation of stomach. Bowels regular of late. Liver dulness in vertical nipple line two inches. No tumour to be felt anywhere in abdomen.

Circulatory system.—Impulse heaving, no thrill. Apex beat diffused, area of cardiac dulness limited by vertical nipple line to the left; a booming systolic murmur at the apex conducted into the axilla, with accentuation of the pulmonary second sound. Occasional palpitation and shortness of breath on exertion. Pulse small, regular, fair tension (72).

Respiratory system.—Respirations 24; percussion and auscultatory signs normal.

Urinary system.—No pain or discomfort or undue frequency in micturition. Urine, 40 to 50 oz. daily, sp. gr. 1015, acid, no albumen, sugar, or bile.

Generative system. — Had not menstruated for twelve months.

Treatment.—Milk and lime water, one ounce every hour. The following mixture was ordered: one drachm of sulphate of magnesia, five grains of sulphate of iron, ten minims of dilute sulphuric acid, to one ounce of peppermint water; to be taken three times a day.

Progress of case.—She did not vomit after admission, and the only alteration in her treatment was to adjust the quantity of sulphate of magnesia to the requirements of her bowels. July 6th: She was allowed bread-and-milk.—8th: Two eggs were added.—11th: A light pudding was ordered.—14th: Milk, boiled chicken, light pudding.—17th: Mutton diet. The mixture at this time caused

[1] Delivered at the General Hospital, May 21st, 1890.
[2] Reynolds' System of Medicine.

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rather profuse diarrhœa, which continued after it was stopped, but rapidly subsided on a diet of milk and lime water and the use of the bismuth mixture. She was only on this treatment for one day.—23rd: Discharged cured.

This case, although it presents some unusual features, perhaps not attributable to the stomach lesion, is, on the whole, a good example of the disease. What the "tumour" was must remain doubtful, as no tumour was found in the abdomen, and it is possible that there never was one. It is certainly most likely that the hæmorrhage was from the ulcer, and had nothing to do with any tumour, although she supposed it had. The chief symptoms by which the presence of ulcer of the stomach may be recognised are (1) pain directly after food, (2) vomiting soon after taking food, and (3) hæmatemesis. Unless these are present the diagnosis is doubtful, and of these the most important is hæmatemesis, which was absent in only one of the cases I have included in my list. Nevertheless, ulcer of the stomach may be present in a latent state without giving rise to any of these symptoms, and perforation may occur without any history of previous gastric trouble. We will look into these three cardinal symptoms a little more closely. Pain was present in all my cases. It was usually described as "burning" in character, sometimes as "sharp and piercing," or "dull and gnawing," but I think "burning" is to be borne in mind as the typical form of the pain. The pain can be localised by the patient, who can point out the precise spot. It was usually referred to the epigastrium or lower end of the sternum, less often under the left breast, or even in the right hypochondrium. I saw a case in consultation recently, proved by post-mortem examination to be one of ulcer of the stomach, in which the pain was referred to the region of the gall-bladder and passed down to the right. The pain was always worse after food in all but one case, and in that it was so sometimes; but in the case just referred to the patient, a gentleman aged fifty-three, expressed himself as invariably in less pain after taking food. This is quite exceptional, and only illustrates the difficulty that may occasionally occur in diagnosis. Vomiting after food with relief to the pain is not a very constant symptom, and is much more characteristic of hysterical gastrodynia. It was absent in five out of these eleven cases, and is only stated in one case to be frequent. This is a point well worth bearing in mind. Hæmatemesis was present in all but one case, Emily W—— (No. 7), and I attach so much importance to this symptom that I admit that the diagnosis of that case is doubtful. When the quantity is large the blood may be bright and unaltered, but when it is small in quantity and has remained some time in the stomach it becomes darkened in appearance, resembling coffee-grounds. Beef-tea, cocoa, and preparations of iron &c., may produce somewhat similar appearances. The distinction can only be made by the spectroscope or by testing for hæmin crystals. This is done by drying the material to be examined on a glass slide, powdering it, adding a crystal of common salt and a few drops of glacial acetic acid, and heating gently, when hæmin crystals will be discernible by the microscope if blood is present. It is, however, of the utmost importance that the actual fact of the blood coming from the stomach should be placed beyond doubt, for it is not uncommon to be told by hysterical patients or their friends that vomiting of blood has taken place, yet when carefully observed this resolves itself into blood-stained saliva caused by sucking the gums, from carious teeth, &c. It is a symptom of such importance that you should always see the vomited matter yourselves, and not trust to any report from attendants. If you are told that hæmatemesis has occurred recently, you should carefully examine the stools, because it is almost certain that some of the blood will have passed into the intestine, and will give rise to the characteristic tarry stools. Here, again, you must bear in mind that iron and bismuth blacken the stools, and if under treatment the patient may very likely have been taking one of these drugs; but the blackening from blood is far more intense than that produced by either of these metals, which are usually present in only small quantities. While in the absence of hæmatemesis the diagnosis of ulcer of the stomach is incomplete, it may also be said that where profuse hæmatemesis occurs ulcer of the stomach is almost certainly present. Such profuse hæmorrhage may, however, occur from (1) rupture of varicose œsophageal veins in cirrhosis of the liver, (2) rupture of an aneurysm into the œsophagus or stomach, and (3) cancerous ulceration of the stomach; but, as a rule, in cancer the hæmorrhage is not profuse, and gives rise to coffee grounds vomiting.

Those cases of cirrhosis of the liver in which profuse hæmatemesis occurs are not uncommonly just those which may have hitherto remained latent owing to the great development of the collateral venous circulation having prevented the occurrence of ascites. Under these circumstances the patient may appear in good health up to its occurrence, which may be at once fatal. The diagnosis must depend upon (1) the reduced size of the liver as made out by percussion, and (2) the absence of gastric pain, &c. The latter is of less value; for I remember a case in ward X of sudden fatal hæmorrhage from a gastric ulcer which had remained quite latent, the patient being under treatment for phthisis. There were tubercular ulcers in the intestine, and the stomach ulcer was probably tubercular in its origin, though it presented all the appearances of a simple ulcer. Assistance in diagnosis is also obtained from the sex and age and habits of the patient, though these are not entirely trustworthy. The rupture of an aneurysm is almost invariably immediately fatal; so that if it has not been diagnosed before, it will probably not be discovered, though it may be suspected where the hæmorrhage is very profuse. There is not a very uncommon position for an aneurysm behind the stomach arising from the abdominal aorta just as it emerges through the diaphragm, and such aneurysms are exceedingly difficult to recognise. A thoracic aneurysm rupturing into the œsophagus might be expected to have revealed itself beforehand by pressure and other signs; but it must be admitted that small aneurysms of the descending aorta may exist without giving rise to any symptoms by which they can be diagnosed; fortunately they are not very common.

Cancer of the stomach, if seated in the pylorus, causes a tumour which can be felt, while cancer of the cardiac end usually gives rise to symptoms of œsophageal obstruction, which, taken with the age of the patient, the cachexia, and the moderate nature of the hæmorrhage, will permit a correct diagnosis. Fortunately neither cirrhosis of the liver, aneurysm, nor cancer is liable to occur in young women; and it may comfort you to know that you may diagnose ulcer of the stomach in this class of patient from hæmorrhage alone, with little fear of making a mistake. But without hæmatemesis the difficulties are great, especially great in this very class, for it is among them that we meet with nervous vomiting and gastrodynia, symptoms which I am convinced are constantly incorrectly attributed to ulcer of the stomach. This is all the more unfortunate as these patients do not get well, but go from bad to worse, if starved and treated with bismuth and nitrate of silver. But I claim that my plan of treatment has the advantage in a doubtful case that it is applicable to either condition.

The following case is a good example of this affection:—

CASE 2. *Gastrodynia, pain, vomiting, anorexia; no hæmatemesis; history of hysterical fits; amenorrhœa.* — Edith M. J——, aged fifteen, admitted on Nov. 15th, 1889, complaining of pain in the stomach, sickness after everything she takes, even after water, for the last two years.

Family history.—Father, aged forty-seven, in good health; mother, aged forty-five, subject to "sick headaches"; one brother died in infancy; another brother and a sister living and healthy. Patient had a good home and plenty of food.

Previous history.—Had "low fever" when a child. Six years ago she broke her right humerus and dislocated the shoulder in a fall from a swing. A year later she dislocated her left elbow in a fall when walking; three years ago for six months she suffered from "struggling fits," without loss of consciousness, which occurred about every two weeks. In August, 1889, she was in Wolverhampton Infirmary with "inflammation of the right hip," but it got quite well six weeks after leaving that institution. She had been a total abstainer for six months.

Present illness.—Two years ago she began to suffer from vomiting and headache, without nausea or pain. There was never any blood. The vomiting generally occurred immediately after taking food. This lasted about a month, and three months later she had a second attack, followed by others at intervals up to the present time. This attack began two months before admission; but for the last three weeks she had suffered pain in the epigastrium, coming on directly she had taken food. There had also been some nausea. By lying down she had managed to control the vomiting to some extent.

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Present condition.—A well-developed, well-nourished girl, looking more than her age. Temperature 98·3°.

Alimentary system.—Lips pale; teeth, some molars decayed; tongue pale and moist; disagreeable taste in mouth; no appetite; marked thirst; complained of pain after taking two ounces of milk and lime water; the pain was increased by pressure and lasted a quarter of an hour. The pain was localised to a spot the size of a crown-piece, and the tenderness was manifested on very slight pressure. Bowels confined. Liver dulness, three inches and a half.

Circulatory system.—Apex beat in fifth left interspace, sounds normal. Pulse regular, rather weak, compressible (78).

Respiratory system.—Respiration 16; percussion and auscultatory signs normal.

Urinary system.—Urine 1012, acid, no albumen, sugar, or bile.

Generative system.—Has never menstruated.

Treatment.—Two ounces of milk and lime water, reduced next day to half an ounce every hour; the following mixture was ordered, to be taken three times a day,—five grains of sulphate of iron, one drachm of sulphate of magnesia, ten minims of dilute sulphuric acid, one ounce of peppermint water.

Progress of case.—This treatment was continued except that the dose of sulphate of magnesia was increased or diminished as found necessary, according to the state of her bowels.—Nov. 21st: No vomiting after the half-ounce doses of milk and lime water were instituted, but she complained of pain. One ounce of bread-and-milk every hour.—24th: Sick this morning; still in pain. A piece of lint soaked in liquor epispasticus applied to epigastrium.—27th: No more sickness; pain better. Ordered house diet.—Dec. 7th: Discharged cured.

The points in this case worth noting are—1. The history of other nervous affections. 2. The age of the patient, which is less than that at which gastric ulcer usually occurs. 3. The persistence and frequency of the vomiting, which followed everything, even water. As already pointed out, vomiting in ulcer of the stomach rarely occurs after every meal, and it is very exceptional to find the stomach so irritable as to reject all food. So much has this impressed itself upon me that I would ask you to pay special attention to this point. 4. The localisation of the pain, which is usually given as a sign of some value in ulcer of the stomach, but which evidently must not be too strongly relied upon. 5. The absence of hæmatemesis. 6. The beneficial effect of a small blister, so often observed in nervous pain. 7. The very rapid recovery of the patient under appropriate treatment.

If you will bear in mind the teaching of this lecture I have no doubt you will recognise the majority of cases of gastric ulcer that come before you, while you will also avoid the mistake of treating stomach neuroses too seriously; but I should not be doing my duty if I did not warn you that ulcer of the stomach may occur under quite different circumstances from those which I have told you are typical. About this time last year I saw with Mr. Pearse of Brierley Hill a gentleman who complained of pain in the right hypochondrium relieved by food. He was about fifty-three years of age, very careful in his habits, but a great worker and sometimes irregular in taking food. The pain was described as burning and as radiating down towards the anterior superior spine of the ilium. Physical examination revealed nothing. The case was regarded as one of gastrodynia, the diagnosis being based on the relief to pain by taking food and the absence of other indications. He improved greatly on a mixture containing hydrochloric acid and strychnine. During the winter he got very constipated, his pain returned and increased. Mr. Pearse saw him, and with some difficulty removed a lot of scybalous fæces from his bowel, but the pain continued, and he was said to have passed a gall-stone and to have been slightly jaundiced. When I saw him I heard this history, but I heard too that he had on two occasions vomited some coffee-grounds matter. I confess that I did not attach proper importance to this symptom. Relying on the history, I agreed in the diagnosis of biliary colic, and was greatly astonished to hear next day that he had died in the night, evidently from internal hæmorrhage. So far was I from recognising the true nature of the case, that I then believed that death was due to the rupture of an aneurysm which had previously leaked into the stomach. Yet a post-mortem examination showed that the hæmorrhage had come from a simple round ulcer on the posterior wall of the stomach, near the greater curvature and midway between the cardiac and pyloric openings. This case does not show the consultant in a very favourable light; but our failures are often the most instructive as well as the most impressive cases. The points of interest are: (1) the seat of the pain, which was not explained by the position of the ulcer; (2) the relief to the pain after taking food, so directly opposed to what we should expect from an ulcer, though I have already told you that we had the same statement in another case (No. 1 in list); and (3) the absence of hæmatemesis until within a few weeks of the termination of the case. I need hardly remark upon the difficulty created by the statement that there had been slight jaundice, followed by the finding of a gall-stone in the fæces. Altogether it was a very puzzling case, and I hope you may not have many such to deal with.

Finally, I must say a few words about treatment, though you have already heard the details in the accounts of the cases submitted to you. As a general rule, I order at first half an ounce of milk and lime water every hour as the only food, with the sulphate of iron and magnesia mixture in purgative doses three times a day. Ziemssen and Leube use sulphate of soda or Carlsbad salt in purgative doses, with the object of removing all remains of food from the stomach; but I use this mixture simply to remedy the anæmia and constipation so generally present. If hæmatemesis actually occurs, or the patient is admitted with a very recent history of it, I order ice to suck, and feed per rectum for a day or two, and then proceed as before. When, as usually is the case, vomiting and pain cease under this treatment I double the allowance of milk and lime water, then change the diet to soft bread-and-milk, getting on through pounded chicken and custard and eggs to ordinary diet as rapidly as possible. The good results are attested by the table. It may be objected that these cases are not cured, but that there is only a temporary remission of the symptoms. I do not think this is true, although one case did undoubtedly relapse three times, as all these patients were made out-patients under me, and attended for a longer or shorter time, continuing to take the medicine. Had they relapsed it is most probable they would have reapplied for admission to this hospital, where, according to the rules, they would have been placed under my care. It may be thought that there is danger by this plan of exciting hæmorrhage or causing perforation, but I think this fear is sufficiently answered by the record.

Lecture
ON
KOCH'S TREATMENT OF TUBERCULOSIS.[1]

BY THOS. WHITESIDE HIME, A.B., M.D., &c.

DR. HIME stated that he had felt great reluctance in accepting the complimentary invitation of the secretary to deliver an address to the Society on the above subject—first, because he hardly felt competent to deal with so important a matter in the brief time available; and secondly because, so far as he could ascertain, everyone he met seemed to have his mind definitely made up with regard to the whole question. He had heard many medical men in Berlin, who had been treating cases of tuberculosis by Koch's method ever since the liquid was in use, say that they must postpone giving a definite opinion as to its merits until sufficient time had elapsed to make it possible to speak with certainty. But he had met only very few persons who had never seen a case at all who had not made up their minds, and who were not generous in imparting their conclusions on the subject. Professor von Bergmann said in his last lecture at Berlin that it might be January, 1892, before he

[1] Delivered before the Bradford Medico-Chirurgical Society. The lecture was illustrated by photographs thrown on the screen by a magic lantern, showing patients at different stages of treatment; and two patients suffering from lupus were also shown, which were under treatment.

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would be able to pronounce his judgment, although he had treated a great number and variety of tubercular cases by Koch's method. But the writer in the *Eatanswill Gazette* was less timid. He did not hesitate to denounce the whole proceeding as a dangerous imposture, and to declare that where a person died under Koch's treatment the doctor who had employed it should be indicted for manslaughter! And such trash was read with avidity by the million, and unfortunately also by medical men sometimes. Was it any wonder that research in such departments of science was at the lowest conceivable level in this country when the press provided such instruction for the public? Even some medical men, after a day or two in Berlin, thought it becoming to write authoritatively to the lay press on the subject—some against it, others (equally incompetent) in its favour. However, as he had enjoyed special advantages for studying the whole subject while acting as Special Commissioner for THE LANCET, sent to Berlin to report, and had also had some personal experience in the employment of the methodof Koch in his own practice, he would endeavour to lay before them such points as seemed to him likely to be of interest and value. His knowledge of the subject was mainly due to the opportunities afforded to him by the physicians and surgeons in charge of cases in Berlin, and he wished to say how greatly he and thousands of other medical men were indebted to their German colleagues for their never-failing courtesy and kindness. There was, indeed, no limit to the cordiality shown and the opportunities afforded for studying this most interesting and novel subject; and although it might seem invidious to name anyone as more distinguished than his colleague for this good fellowship, still he thought it right to give utterance to the common feeling of gratitude felt to Professor von Bergmann for his lavish expenditure of time and attention on importunate, and often inconsiderate, foreign medical visitors. The importance of the problem which Koch had undertaken to solve none would deny. It is nothing less than that of victoriously assailing the microbe of the most deadly of all diseases, and rescuing its victims already enfeebled by its deadly assault. Undoubtedly tuberculosis is the most terrible of all the diseases in the nosology, not only from the great number of its victims, but also from attendant circumstances. It was estimated that one-seventh of the human race perished annually from this cause alone.[2] The death-rate in England (1888) per million persons from phthisis alone was 1540; from tabes, 236; and from "other tubercular diseases," 406; the actual deaths from phthisis being 44,248, and from "other tubercular diseases" 18,434, or altogether 62,682. Against this may be set the whole class of zymotic diseases, which only caused 40,000 deaths, in order to see the relative magnitude of the fatality from tuberculosis, which attracts very little attention, and from zymotic diseases, which seem to absorb the whole energy and attention of sanitarians and of the public. If a death occurs from diphtheria or typhus fever in a street, what an excitement! The inspectors even of the Local Government Board are immediately set in action, and a report is soon presented to the authorities. Yet the total deaths in England in 1888 from typhus fever were only 160, and from diphtheria 4815, as against 62,682 from tuberculosis. The columns of the leading papers are frequently filled with alarming letters as to the prevalence of diphtheria, as evidenced by perhaps a dozen cases within a few weeks, and a score of deaths in a year in some locality; yet during the same period thousands have suffered and died from tuberculosis without even a passing comment from anyone.

The magnitude of the evils arising from the prevalence of tuberculosis was greatly increased by the terribly long duration of the disease, which caused its economic importance to be so much greater than that of almost any other disease, and by the fact that adults, the most effective portion of the population, suffered so largely. It was cruel enough to see young children swept off rapidly by measles, whooping-cough, and other diseases, but it was far worse to see their parents and adult brothers and sisters slowly gnawed away by the relentless bacillus of tuberculosis. The modern discovery that the tuberculous patient is a source of infection to those around him during the long, weary years of his wasting disease, certainly has not robbed it of any of its terrors, although the discovery, no doubt, will ultimately lead to precautionary measures and protection for those exposed to the risk. Up to the present time it must be admitted that practically we had been helpless against tuberculosis. Medical science had devised little more than uncertain methods of giving general tone and vigour to the tissues of the patient by good food, air, tonics, exercise, &c., so as to assist it in resisting the inroads of the organism of the disease. It is unnecessary to particularise the extent of the success attained. But certainly no scientific method of contending against the disease had been even plausibly suggested until the present. Indeed, only a few years ago a distinguished authority gave a reason for the theoretical impossibility of devising a "protective" against tuberculosis—viz., the fact that one outbreak of tubercular disease does not protect against a second or further one.[3] Suddenly, it may be said, all theories and opinions on this subject have been subjected to a rude shock, and in a most unexpected manner. The excitement and enthusiasm aroused by the announcement that Koch had discovered a successful method of dealing with tuberculosis have surpassed all similar occurrences. Within a few days of the announcement of the discovery thousands of medical men, including many of the most distinguished in every land, had abandoned their professorial and private work, and in the depth of winter were pilgrimaging to Berlin to see with their own eyes the new method in operation, and with a vague hope of bringing back some of the liquid for use at home. The goal set before himself by Koch was one very different from the other "protective" methods hitherto in use. Jenner had introduced to the world a method of preventing small-pox, which consisted in giving to a person an attack of a mild disease, analogous to, and probably identical with, small-pox.[4] This artificially imparted disease protected against small-pox more or less completely, small-pox being a disease which rarely recurs in the same individual, and the preventive disease (vaccinia) having the same characteristic. The remarkable discoveries which were made by that great genius Pasteur in this realm of science depended for their success in protecting animals against certain diseases on the power to attenuate the virus of those diseases, to effect which he employed various means. The attenuated virus was sufficient, when inoculated on an animal, to give it a mild attack of the disease; and as it was one which did not usually recur, this one mild attack was found sufficient to protect the animal against a subsequent attack. The reality of the protection which Pasteur had been able to secure was indubitable, but it was not permanent in the case of all diseases. He had succeeded in attenuating the virus of fowl cholera by simply keeping it exposed to the air, while protected from other organisms. Inoculation with this attenuated virus was protective against the strongest virus. On March 21st, 1881, Pasteur, Chamberland, and Roux presented a memoir to the Academy of Sciences in Paris, showing how, by cultivating anthrax bacilli at 42° to 43° C. for a certain time, the culture might be inoculated on animals without serious danger, and afford them protection against the strongest virus. The animals became feverish and ill, but not seriously so except in a small proportion of cases. These great discoveries of Pasteur had been further worked out by others on the same lines, and "vaccines' had been obtained capable of protecting against several diseases. The duration of the protection obtained against rabies had been experimentally proved to be at least five or six years, as some of Pasteur's

[2] The commonly received opinion that generally phthisis kills most victims between the ages of five and thirty-five has been shown by Würzburg to be true only of the total number of deaths, but not true of the *proportion* of deaths to those living at various ages. He shows from large material that the highest mortality is of persons aged from sixty to seventy years (per 100 living of that age), and the lowest of persons from five to ten years (Mitt. aus d. Kais. Gesundheitsamt., B. ii.). In England (mean for 1871-80) the highest rate (3745 per million) occurred among persons of thirty-five to forty-five years of age; and the lowest rate (358 per million) among children aged five to ten years. Klebs (Allgem. Pathologie) considers this greater prevalence of phthisis in advanced age to be due to the generally diminished vitality of the cells, which yield to the attack of the tubercle bacilli more easily than at more vigorous ages.

[3] Zum derzeitigen Standpunkt d. Lehre von den Schutzimpfungen. Von Prof. Naunyn. Leipsic. 1886.

[4] There are the strongest grounds for believing that vaccinia may be imparted to the calf by inoculation of human small-pox. Hence vaccinia is to be regarded as variola modified by passage through a bovine; just as Pasteur and Thuillier attenuated the virus of swine Rothlauf by passing it through rabbits, whereby it was rendered harmless (and protective) to swine, though still continuing fatal to the rabbit. Similarly, Pasteur found that the virus of canine rabies passed through apes in series becomes gradually so attenuated as to lose the power of infecting dogs; while passage through rabbits in series greatly intensifies its activity.

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protected dogs have resisted repeated efforts to infect them either by subcutaneous, intravenous, or subdural inoculation within that period. The anti-rabic method differed from all the others in that there was no evidence whatever of a morbid condition being produced in either men or animals during the production of the refractory state.

Koch's anti-tubercular method was something different from all these. He did not endeavour to protect against tuberculosis by giving a mild attack of that disease; nor did he seek to cure the disease by injecting a different form of bacillus, as had been done successfully by Emmerich, who injected the streptococcus of erysipelas as a protective against anthrax; and by Pawlowski, who successfully injected the pneumococcus of Friedländer with the same object. Koch injected a liquid, the nature of which had not been made known by him,[5] subcutaneously, and produced an intense reaction thereby, but he certainly did not give the patient a mild attack of tuberculosis. The liquid contained no specific organism, certainly no living tubercle bacilli or their spores, attenuated or other. It undoubtedly did find out and produce a most remarkable series of changes in living tubercular tissue wherever it was visible, and there was every reason to believe that in other situations withdrawn from view the changes produced were similar to those seen in lupus, tubercular joints, and other more or less external forms of tuberculosis.

It seemed to be the general idea that Koch's discoveries on this subject were limited to having found out a substance for which he claims the power of destroying living tubercular tissue. But he has done far more than this. In the first place, in his address to the International Medical Congress[6] he claimed *not* to have discovered such "a substance," but "substances" which are capable of checking the growth of the tubercle bacillus not only in the test-tube, but also in the animal body, without injury to the latter. The importance of this fact, that Koch has discovered more than one substance endowed with this property, should not be overlooked. For we have thus the possibility of utilising other substances than that which is known as "Koch's lymph," and possibly with as good or better effects. But another great fact has been so overshadowed by the curative aspect of the discovery as to have also been lost sight of—namely, the fact that Koch has been able to render animals refractory to inoculation with virulent tubercle. This discovery would have immortalised any other man; but seeing that Koch has also discovered how to stamp out tuberculosis in animals suffering from that disease, and that his method was being employed with a view to save human beings suffering from the same disease, people have quite lost sight of this other great discovery. We may happily congratulate ourselves that Koch has declared that his "work is not yet finished," and hope that other great discoveries will result from his continued activity. The power of successfully "vaccinating" animals so as to render them refractory to subsequent inoculation with tubercle has also been claimed by Richet of Paris. He had obtained immunity by means of injections of culture media of tubercle bacilli which had been sterilised by heating above 100° C. From two observers, working manifestly in different ways, we had thus obtained the same great result, the possibility of rendering animals refractory to inoculated tubercle. As an illustration of one practical application of this discovery, he would mention that he had been consulted by a gentleman as to the desirability of employing Koch's method as a prophylactic in the case of two children. They were orphans, not obviously tubercular, children of parents both recently dead from phthisis, the mother having been in an advanced state of that disease during her pregnancy, shortly after the termination of which she died. The proposal was one of great importance and interest, but he had hardly satisfied himself as to the answer to be given, though at present he thought that he ought to yield to the request which had been put to him, as these poor orphans, according to all experience, are most probably highly susceptible to tuberculosis.

Koch's liquid had been so frequently described, correctly and incorrectly, that Dr. Hime would merely show it and let them judge of its appearance &c. The mode of its application was the same as that of any other subcutaneous injection. It was certainly desirable to use for this, as for all operations, sterilised instruments, and ones which were accurately graduated. Koch's syringe having no piston, was freed from one source of danger. The pistons provided with plugs of leather or other absorbent material were liable not only to retain dirt of various kinds, but also considerable quantities of potent drugs, such as morphia, which had been used. Further, everyone had found such pistons frequently dry and unusable when wanted. Koch's syringe was free from these disadvantages. It was important that the indiarubber ball should not be too thin and weak, and in using it one should be careful not to force air into the tissues; even if aseptic it might cause trouble. The accurate graduation of the syringe, when so powerful a substance as Koch's liquid was being injected, was a matter of the first importance. It was a tremendously powerful substance. An ordinary injection represented 0·001 mgr. of the liquid. He had it on the best authority that this probably contained only about one-thousandth part of active material, or about the fifteen-millionth part of a grain! Yet this infinitesimal fraction could set the whole body of a man weighing 15 st. in such a state of change that the whole was raised to a temperature of 104° to 105° F. The weight of the mass thus affected was infinitely greater than that of the active agent, the exact proportion being about 1 to 98,000,000,000! That extreme accuracy was needed in dealing with such a substance was evident, but the syringes in the market were certainly not all as accurately graduated as they should be. The lecturer could strongly recommend the syringe of Strohschein, which had no piston or indiarubber ball, and was a marvel of ingenuity and cheapness. It was a pity that two different ways of describing the quantity injected had slipped into use, some persons giving the volume, or portion of a cubic centimetre used; others the weight in milligrammes. The latter seemed the preferable standard. The place selected for the injection was a mere matter of convenience. Koch had suggested the loose skin between the shoulder-blades and the lumbar region as being almost painless and otherwise suitable.

The noticeable results following the injection have been grouped together under the term "reaction." The reaction is a highly complex combination of phenomena, some local, and affecting only parts which are infected with tubercle, others indicating more a general affection. It was quite erroneous to regard the temperature as constituting the reaction, or even as being its main feature. There is usually no reaction whatever at the site of the injection. Frequently, even in cases of strictly limited lupus, where the lungs are perfectly sound, the earliest indication of the system being affected is a short, dry cough, which may come on as early as half an hour after an injection, even in persons absolutely free from pulmonary disease. It is more like the attempts of a person to cough who has no cough than anything else. It may be pretty constant and annoying, but generally is not sufficiently accentuated to be so. It rarely lasts longer than two hours or thereabouts, and it gradually subsides before disappearing. On the other hand, the local reaction affecting the parts where there is living tubercular matter may come on before there are any decided indications elsewhere showing that the injection is taking effect. This observation of Dr. Hime's harmonised with that of Dr. Lindner of Berlin, who says[7] that general constitutional reaction is not always observed where there is local reaction. Dr. Hime had noticed very trivial general effects occurring long after the local reaction had come on, and when, in fact, it was passing off. Dr. Lindner is also of opinion that a general reaction never is observed in cases where there is no local reaction, but Dr. Hime could not confirm this. On the contrary, he had seen general, without local, reaction occur. It may happen, indeed, that no reaction, either local or general, will follow the first small injection. Again, there may be none until several and increasing injections have been given, and then rather suddenly and unexpectedly there may be a considerable general and local reaction. This non-occurrence of a reaction after one or two, or even more, injections must not be regarded as indicating either indifference to Koch's liquid or the absence of tubercle. It is possibly due to the fact that for some reason the tubercular deposits are so situated and circumstanced

[5] An account of its mode of production has been published by Koch since this lecture was delivered.

[6] Aug. 4th, 1890; translated by T. W. Hime, M.D., and published by Baillière, Tindall, and Cox. Koch's own words are: "Ich habe schliesslich *Substanzen* getroffen, welche nicht allein im Reagenzglase, sondern auch im Thierkörper das Wachsthum der Tuberkelbacillen aufzuhalten im Stande sind." He adds, further on: "Wenn man sie [meerschweinchen] der Wirkung einer solchen Substanz aussetzt."—U. S. W.

[7] Lecture delivered Dec. 8th, 1890, before the Gesellschaft. f. ö. Gesundheitspflege, Berlin.

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that the injected material does not readily act on them, and that the products of that action, when established, do not readily enter the circulation. For it seems probable that the fever and many other elements of the state known as the "reaction" are due to the absorption of tissue disintegrated at the seats of disease by the influence of the injected "lymph" and taken up into the circulation. That similar general symptoms are induced by such an occurrence is familiar under other circumstances, notably high bodily temperature being thus induced. Depage of Brussels assumes that the injected material contains an agent, ptomaine or other, which combines with the ptomaine of the tubercle in the blood of the injected person. The general phenomena of reaction he regards as being due to the introduction of this substance in the blood, and partially to its combination with the small quantity of tubercular ptomaine circulating in the blood. But only very exceptionally did the injected "lymph" produce reaction, except in tubercular atients.

FIG. 1.

J. C.: Lupus of the face of seventeen years' standing. Before injection with Koch's liquid. (Under the care of Dr. Hime, Bradford.)

FIG. 2.

J. C. at the height of reaction, seventeen hours after the first injection of Koch's liquid (0·001 mgr.). (Under the care of Dr. Hime, Bradford.)

The appearance of the reacting part is very peculiar and characteristic. In order to give those colleagues present who have not seen such as vivid an idea as possible of what great changes may occur, Dr. Hime produced on the screen two likenesses of a patient he was treating for lupus—one showing him before treatment, the other taken seventeen hours later, when he was in the height of local and general reaction, with a temperature of 103°. The features are greatly distorted, owing to the extensive swelling of the nose, upper lip, and part of the left side of the cheek, the eyelids, and the skin between the eyebrows, the parts affected with tuberculosis. The patient had been surgically treated for the disease at the Leeds Infirmary by the late Mr. M'Gill more than once. Under the right eye was a whitish scar, where he was last "gouged"; above the left side of the mouth was another cicatrix (neither very distinctly marked in the drawing). The two upper lids were red and puffed before treatment, and made him at first fear some kidney mischief might coexist, which was found to be the case. There was a roughened, reddish condition of the skin between the eyebrows, which, however, showed no specific characteristic whatever. All these parts reacted markedly to the first and several subsequent injections. The small scar under the right eye, however, only reacted at one point, which shot up red and swollen from the surrounding white tissue. This would suggest the almost complete success of Mr. M'Gill's attempt to eradicate the disease at this point. Several small spots on the right upper eyelid reacted, and have since sloughed out and apparently healed perfectly. The same has occurred at the spot above the left side of the mouth. The place between the eyebrows swelled and became red, and this was repeated after several injections; but there has never been any formation of scab, and Dr. Hime thought that the disease, though undoubtedly present, was very limited and superficial. There was no local reaction whatever in any part of the patient's body, except those connected with the face.

(To be continued.)

REMARKS ON

THE OPERATION OF ILEO-COLOSTOMY FOR ORGANIC DISEASE OF THE CÆCUM, CAUSING OBSTRUCTION.

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I WAS much interested in Mr. Bryant's able and instructive paper on "ileostomy" for organic disease of the cæcum, which appeared in the columns of THE LANCET of Jan. 15th. That such an operation as he describes may be the means of relieving some of the urgent and distressing symptoms of obstruction, as well as of prolonging life, cannot be disputed, but the question arises, by adopting such an operation, does the surgeon place his patient in the best obtainable position during the remainder of his life? It is on this point I wish to make a few remarks, and I

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shall endeavour to show that the operation of ileo-colostomy in all cases, excepting when the patient is so reduced and exhausted as to render such a measure undesirable, is preferable to ileostomy. The following case illustrates well what I mean.

On August 2nd, 1889, Dr. Hayes of Basingstoke asked me to see a gentleman with him suffering from a tumour which occupied the right iliac fossa, extending upwards to within two inches of the false ribs, and forwards to nearly an inch beyond the right linea semilunaris. The patient had suffered considerably from time to time from irritation and discomfort of the bowels. During the two months previously to my seeing him he had been much worse; he complained of constipation, alternating with irritating diarrhœa, general uneasiness, and great pain. He had been seen by a physician, who pronounced him to be suffering from epithelioma of the cæcum, with which diagnosis I fully agreed. The patient was a tall, spare man, over fifty years of age, with sallow complexion and good pulse. He had been losing flesh rapidly, and was very low. The bowels had not been opened for some days. The abdomen was somewhat tympanitic; but he complained of no tenderness excepting over the tumour. A tumour was discovered occupying the situation above described; hard and somewhat firmly fixed. As the symptoms were urgent, I suggested that the abdomen should be opened, and we should be guided by circumstances what operation should be performed to relieve the patient of his distressing symptoms. The removal of the growth appeared to be impracticable, and I explained to the patient and Dr. Hayes that I should be prepared to perform ileo-colostomy by implanting the ileum into the transverse colon, and by such means trusted that the remaining term of his life might at least be made more endurable. On August 3rd, with the assistance of Dr. Hayes and Dr. Purcell, Dr. English giving the anæsthetic, I opened the abdomen by an incision about three inches long over the right linea semilunaris, all bleeding points being caught with pressure-forceps. I opened the peritoneum along the whole length of the incision, and immediately came down upon a large mass of disease, extending from the cæcum nearly as high as the transverse colon. It being quite impossible to remove this I determined to divide the ileum and implant the proximal end into the transverse colon. Passing the index finger of the left hand along the inner side of the cæcum, a portion of ileum, close to the ileo-cæcal valve, was easily drawn out of the wound; I then passed two pieces of india-rubber cord lightly round the intestine, about four inches apart, the piece on the distal end being placed about two inches from the ileo-cæcal valve; I next divided the intestine completely across, between the two indiarubber ligatures, caught up and ligatured all bleeding points, and washed the divided ends thoroughly. The cut end of the distal part of the ileum was inverted and closed, by stitching together the peritoneal covering with a fine silk suture. The next step in the operation was to line the proximal end of the divided intestine with a thin band of indiarubber, about half an inch wide, which was fastened by a continuous catgut suture to its cut edge. Two chromicised catgut sutures about eighteen to twenty-four inches long, and armed at each end with a needle, were next passed through the indiarubber band and all the coats of the intestine from within outwards. The posterior threads were passed one on either side of the mesentery, and the anterior threads at equal distances apart through the convex surface of the bowel. A portion of the transverse colon was next brought out of the parietal wound and a longitudinal incision made in its convex surface; the long sutures connected with the ileum were then passed through the serous and muscular coats of the colon, the anterior threads about half an inch apart at one end of the opening in the colon, and the posterior threads at a similar distance at the other end. (Fig. 1.) The open end of the ileum was then thrust through the slit and the sutures firmly tied, thus preventing the possibility of the bowel slipping out; two Czerny-Lembert sutures, one on each side, were introduced, passing through the serous and muscular coats of the colon and small intestine, and tied firmly. An omental flap was finally fastened round. The parts were thoroughly cleansed and dropped back into the abdomen, and the parietal wound closed and dressed in the usual way. The operation lasted about one hour.

The patient stood the operation very well, and was returned to bed, and ordered to be fed with nutritive enemata and zyminised meat suppositories for the first twenty-four hours.

August 4th.—Motion passed naturally by the rectum to-day, and continued to do so daily. No tenderness over the abdomen, excepting over the original tumour, the outer and lower side of which is brawny, and had all the appearance of deeply seated cellulitis.—5th: I visited the patient with Dr. Hayes, and found the bowels had acted naturally and well and the wound looking healthy. A large abscess was pointing at the upper part of the thigh; this was freely opened, letting out a large quantity of stinking pus; this was kept syringed out and drained. The patient takes his nourishment well, and is kept up with brandy, champagne, beef-tea, &c. The patient had not sufficient vital

FIG. 1.

power left to resist the constant drain of the abscess, and died on August 16th, thirteen days after the operation.

Remarks.—Had this patient been operated on earlier I am convinced that his life might have been materially prolonged. So far as the operation was concerned, it was all that could have been desired. There was no peritonitis and fæces passed freely from the day of the operation until his death, nearly a fortnight after. This being the case, this operation must commend itself to all surgeons as being far preferable to any operation which has for its aim merely the formation of an artificial anus or a fæcal fistula. In my experimental research, published in July, 1889, I had not one death after the operation I have described, and the result, as may be seen in Fig. 2 (a specimen of which is now in the Museum of the College of Surgeons), is perfect, and I have but little doubt at no far distant date, in cases of obstruction of the bowels, from whatever cause, the continuity of the intestinal canal will be preserved either by a similar operation to the one described, or by means of approximation plates, as suggested and practised by Professor Senn, and that the only cases in which a fæcal fistula will be justifiable will be in cases in which the patients are too exhausted to allow of their taking an anæsthetic for a lengthened period.

FIG. 2.

Fig. 1 is only intended to show how the ileum is implanted into the colon, but in practice it is always desirable to divide the colon and invert and fasten up the divided ends, so as to prevent the possibility of fæces returning over the diseased surface. In the above case this was not done, as the patient was in a very low condition, and it was recognised that the operation was only a palliative one.

Upper Wimpole-street, W.

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SOME NEW MILK STERILISERS FOR DOMESTIC USE.

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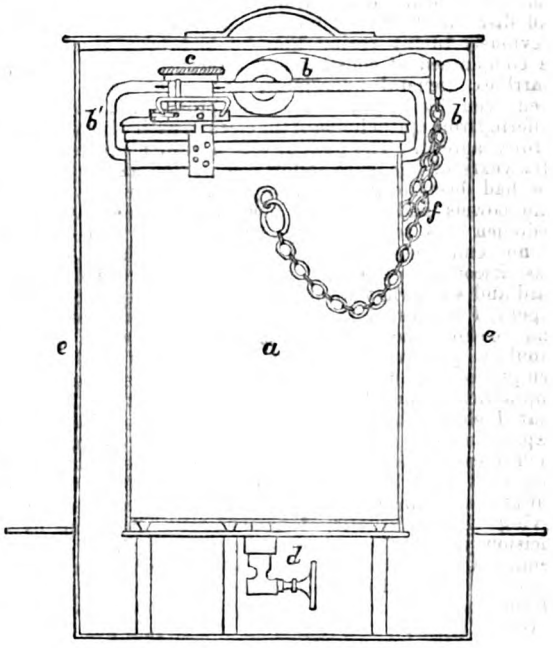
AT the present time we are only beginning to realise that one of the most important differences between human and cow's milk is that the former is free from living organisms, while the latter, by the time it is delivered to our houses, contains many microbes, and this is especially true of the cheaper classes of town milk. In such milks we have only to examine the sediment in the large milk-cans in order to detect matter foreign to the milk; thus we may find hay seeds, fragments of straw, fæcal matter, sand, dirt, epithelial scales, human and cow's hairs. And, if we further inspect the milking process and see the condition of the cows and cowsheds, we shall cease to wonder at the contamination present; especially if we bear in mind that in the winter months the cows are milked before daybreak and after sunset, so that the process goes on in the dark, or at best by a dingy light. In addition to these tangible impurities, bacteria in number from 20–100,000 per cubic centimetre may be found in milk (Escherich). The presence of bacteria in milk is evidence that decomposition changes are in progress which sooner or later, according to the temperature to which it is exposed, lead to its turning perceptibly sour to the taste, and curdling. It need hardly be said that the worse class of milk for an infant is that which "is on the turn," for not only is the curd rapidly thrown down in the infant's stomach, but the bacteria present are not destroyed, and, especially when the digestive juices are weak, continue to effect the decomposition changes which they have begun outside the body. The best cow's milk for an infant is that which is fresh and absolutely free from microbes. Of other dangers to the infant and others from taking uncooked milk there is evidence to show that milk may be the means of conveying the infective bacillus of tubercle, diphtheria, scarlet fever, zymotic diarrhœa, &c., from the farm to the household of the consumer of milk. In order to avoid these dangers, the advice to boil the milk has often been given. But boiling the milk over a fire has the disadvantage of running the risk of "burning" it; moreover, the taste is materially altered, and if the milk is only just brought to the boiling point, it is doubtful if all the bacteria which may be present are destroyed. To effectually "sterilise" milk Professor Soxhlet some three years ago devised his now well-known apparatus, but which in this country at least has not found its way into any great number of households. It is undoubtedly efficient, but it is somewhat complicated and expensive to work on account of the frequent breakages of the bottle.

More recently modifications of Soxhlet's apparatus have been made on the same principle, and if his original apparatus falls into disuse, we shall nevertheless be grateful to the Munich professor for having given an impetus to domestic milk-sterilisation. Of the more recently constructed apparatus which are now to be obtained none seem better adapted for either family or hospital use than the one devised by Professor Escherich of Graz. It consists of a cylindrical tin vessel, *a*, of some three pints and a half capacity. It has a removable lid at the top, which can be fastened on, hermetically sealing the tin by means of a lever and catch arrangement, *b b'*. When the lever *b* is raised the lid can be removed; when forced down, as in the engraving, the lid is secured. Fixed in the lid is a wool filter arrangement, *c*; the passage through the filter can be opened or shut by means of a stopcock worked by a stirrup or loop of wire. At the bottom of the tin is a stopcock for drawing off the milk. The tin fits into an outer vessel, *e*, which contains water and is placed on the kitchen range. To use the apparatus the infant's daily ration is prepared, or two days' rations may be taken. In the latter case two pints of fresh milk and one pint of barley-water and sugar are placed in the inner tin and the lid applied, the stopcocks both at the bottom and in the lid being turned off. The milk tin is placed in the outer vessel containing water, the outer lid closed and placed on the kitchen range, and the water is kept boiling for half an hour. The temperature of the milk is in this way maintained at 210° F., a temperature not high enough to risk an explosion, but sufficient to destroy the microbes in the milk, at least as far as all practical purposes are concerned. No marked change takes place in the taste of the milk. The apparatus is allowed to cool, the inner tin is hung up to the wall of the pantry or other cool place by means of the

FIG. 1.

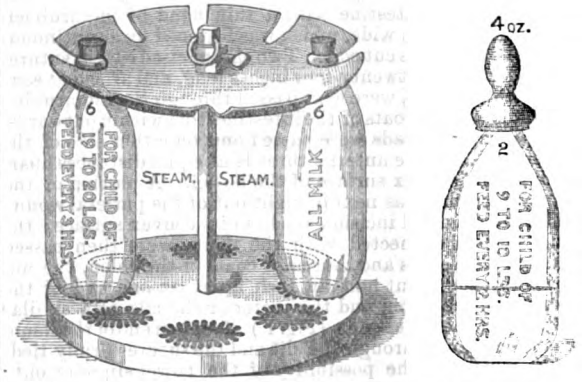


Escherich's milk steriliser. *a*, Tin containing milk. *b*, Lever; *b'b'*, catch for securing lid. *c*, Wool filter. *e*, Outer tin vessel containing water. *f*, Chain for hanging up milk tin.

chain, *f*, and the infant's food is drawn off through the stopcock as required; at the same time the stopcock in the lid is turned on, and as the air enters it is filtered through the plug of wool present in the filter. The food is of course warmed up before giving to the infant.

The feeding-bottle suggested by Escherich resembles in size and shape an ordinary eight-ounce medicine bottle, it

FIG. 2.



Seibert's milk steriliser, consisting of tin tray and series of feeding bottles of different sizes, according to weight of infant.

is graduated, and instructions concerning the amount and strength of the food to be prepared, and the amount to be given in each bottle, are engraved on the side. The maker is Theodor Timpe, of Magdeburg, North Germany. The price in Germany is 12*s.* 6*d.* It can be obtained in this country from A. Hailwood, St. Mary's-gate, Manchester.

Another simple form of milk steriliser is one devised by

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Dr. A. Seibert of New York. It consists of a tray (see Fig. 2) and eight feeding bottles, with special rubber stoppers and a nipple to fit on to the bottle when the infant is fed. There are six series of bottles, the smallest size being 3 oz. capacity, and the largest 8 oz., arranged for infants according to their weights. The bottles are filled up to a given mark with milk, and then up to the neck with barley-water or water, and sugar added. They are then fitted into the tray, and steamed for half an hour in a saucepan provided with a lid. During the steaming process, the rubber stopper is fitted loosely into the bottles, so that the steam escapes by two slots or grooves in the side of the stopper; when the steaming is complete, the stoppers are pressed into the bottles, so as to seal them up. When the infant is fed, a bottle is warmed up and the stopper withdrawn, and the nipple placed on the bottle.

Modifications of Soxhlet's original apparatus have been suggested by Prof. C. Flugge and several others. The most important change in Flugge's is that instead of rubber stoppers with small glass rods fitting into the stopper the feeding-bottle is provided with a loosely fitting glass cap, which he has proved experimentally to answer the purpose of preventing the microbes in the atmosphere entering the bottles. I have not had an opportunity of examining Flugge's apparatus, and I do not know if it is to be had. The systematic use of some efficient form of milk steriliser in the household, especially where infants are being artificially fed, is, I believe, of the greatest importance; their use will, I feel sure, tend to the diminished use of many of the patent foods now so commonly employed, and lessen infant sickness and infant mortality.

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FRANKLINISM IN DAMP CLIMATES.

BY JOHN FLETCHER LITTLE, M.B., M.R.C.P.,
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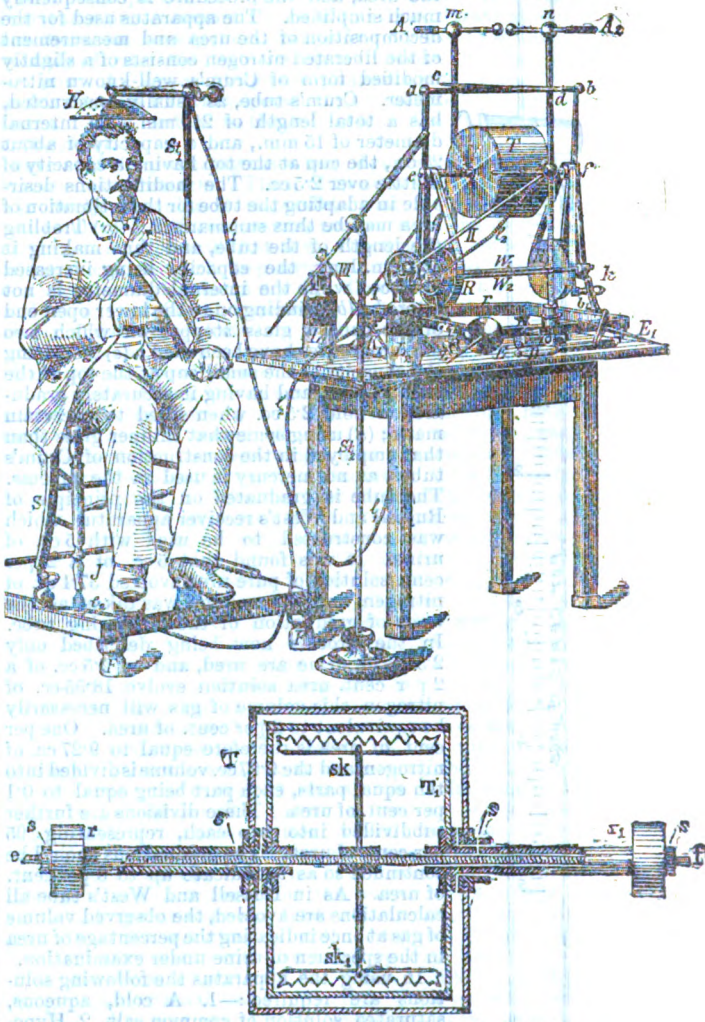
THE use of statical electricity in this and other countries where the atmosphere is often laden with moisture has been greatly hindered by the want of machines which are unaffected by hygroscopic conditions. No therapeutic agent which cannot at all times be turned to account is ever likely to come into common use. During certain seasons of the year, but especially during the spring months, frictional machines are uncertain in their action, and often fail altogether. This occurs even in the dry atmosphere of Paris, where every precaution has been taken, and much more so in our damp climate. Convinced of the value of this form of electricity, after having watched its application in Charcot's clinique at La Salpêtrière, I have long wished for an instrument which should always be available. There is now such a machine made by Gläser of Vienna. Its constancy also appears to be perfectly reliable. The electricity is generated by the rotation of two vulcanite drums revolving one within the other. The outer drum being air-tight, damp cannot affect the production of the electricity. Within the inner drum are two combs, and their position is indicated by a slit crossing the right end of the central bar, to which they are attached. The ends of the slit point in the direction of the combs. In order to excite the machine, a strip of vulcanite of the size of a paper knife is rubbed with a piece of new flannel, and held across the outer drum in a line parallel to one of the inner combs. Half a turn of the handle is sufficient to prepare the machine for use. During the first week in April, 1890, I commenced experimenting. The weather was so damp and wet that all my friends using other statical machines informed me that they found the greatest difficulty in getting their instruments to work, and sometimes failed altogether to excite them. The tests I applied were of the severest kind I could devise. The machine was placed in a room without a fire, and the windows left open night and day. The machine was never dusted, wiped, or protected in any way, and yet I was always able to evoke sparks two and three inches in length whenever I wished. Another advantage that I found it possessed was that there was no change of polarity. When I placed the strip of vulcanite over the upper internal comb and turned the handle to the right, the outer comb marked *Sk* in the illustration, became positively electrified, and remained so as long as the handle was kept in motion. The two electricities are collected respectively at the two external combs which are connected with the discharger. The positive comb is recognised by a hissing noise as of steam escaping in small jets, and by a bluish-purple phosphorescent brush extending in a sheet from the comb over the drum for several inches. This is best seen when the room is darkened. The negative comb is distinguished by a row of small, well-defined, luminous spots, and by a slight crepitant sound. The positive knob of the discharger is known by the purple colour of the phosphorescence when sparks are drawn by approaching the two knobs within an inch of each other. At the same time the negative knob is indicated by the brightness of its end of the spark. No attempt should be made to reverse the polarity of the combs by turning the handle in the opposite direction. When this is done, it often happens that the two ends of each external comb become charged with opposite electricities. This also occurs if the discharging rods are slowly separated until the sparks cease to be emitted.

I append an explanation of the letters in the illustration.



T_1, Outer drum. *Sk*, Sk_1, Outer combs. *r r*, Small wheels for leather straps. *R* R_1, Large wheels. *c f*, Ends of axis. *a b*, a_1 b_1, Iron frame and stands. *k*, Handle. A_1, A_2, Ebonite handles of discharger. *m n*, Knobs through which the handles glide.

Welbeck-street, W.

COLLIERY EXPLOSIONS.—It is announced that, on Mr. Secretary Matthews' recommendation, the Queen has approved the appointment of a Royal Commission to inquire into the effect of coal dust in originating or extending explosions in coal mines. The chairman will be the Right Hon. J. Chamberlain, M.P. The other Commissioners will be Lord Rayleigh, F.R.S., Professor H. B. Dixon, F.R.S., Sir W. Lewis, Mr. Emerson Bainbridge, and Mr. C. Fenwick, M.P.

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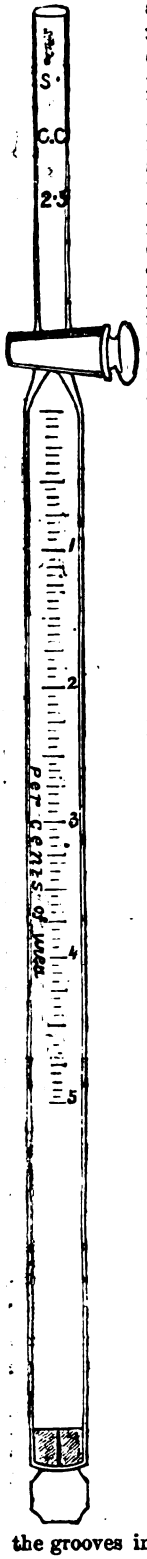
A RAPID METHOD FOR THE ESTIMATION OF UREA IN URINE.

By C. J. H. WARDEN,
PROFESSOR OF CHEMISTRY, MEDICAL COLLEGE, CALCUTTA.

As Sutton has remarked, the sodic hypobromite method of estimating urea in urine has given rise to endless forms of apparatus, the principle of construction being similar in all, with the exception, I believe, of Lunge's nitrometer, when it is used for the estimation of urea. In all the instruments hitherto proposed the decomposition of the urea, and by the hypobromite, has been accomplished in one apparatus, and the evolved gas measured in a separate tube. In the method now described the evolved nitrogen is measured in the same tube used for the decomposition of the urea, and the procedure is consequently much simplified. The apparatus used for the decomposition of the urea and measurement of the liberated nitrogen consists of a slightly modified form of Crum's well-known nitrometer. Crum's tube, as usually constructed, has a total length of 210 mm., an internal diameter of 15 mm., and a capacity of about 25 cc., the cup at the top having a capacity of a little over 2·5 cc. The modifications desirable in adapting the tube for the estimation of urea may be thus summarised:—(*a*) Trebling the length of the tube, and thus making it 630 mm. long, the capacity being increased to 75 cc., while the internal diameter is not altered; (*b*) grinding on to the lower open end of the tube a glass stopper on which two narrow grooves have been filed; (*c*) increasing the capacity of the small cup at the top of the tube to 5 cc., and having it accurately graduated to hold 2·5 cc. when filled to a certain mark; (*d*) using somewhat thinner glass than that employed in the construction of Crum's tubes, as no mercury is used in the process.



The tube is graduated on the principle of Russell and West's receiver apparatus, which was constructed to be used with 5 cc. of urine. It was found that 5 cc. of a 2 per cent. solution of pure urea evolved 37·1 cc. of nitrogen, and this volume was taken as the basis of graduation of the measuring tube. In the process now being described only 2·5 cc. of urine are used, and as 2·5 cc. of a 2 per cent. urea solution evolve 18·55 cc. of nitrogen, this volume of gas will necessarily be equivalent to 2 per cent. of urea. One per cent. of urea is therefore equal to 9·27 cc. of nitrogen, and the 9·27 cc. volume is divided into ten equal parts, each part being equal to 0·1 per cent. of urea. These divisions are further subdivided into two each, representing ·05 per cent. of urea. The graduations should be continued so as to indicate up to 3 per cent. of urea. As in Russell and West's tube all calculations are avoided, the observed volume of gas at once indicating the percentage of urea in the specimen of urine under examination.

In using the apparatus the following solutions are required:—1. A cold, aqueous, saturated solution of common salt. 2. Hypobromite solution, made by dissolving 100 grains of caustic soda in 750 cc. of distilled water, and adding 25 cc. of bromine; this solution should be freshly prepared in small quantities as required for use. To use the apparatus, the stopcock should be first slightly greased and closed, the tube inverted, and the grooved stopper removed. The hypobromite solution is then poured into the tube to overflowing, the stopcock opened to allow a drop or two to escape, and thus displace the small column of air in the base of the stopcock. The grooved stopper is then pressed home, the excess of hypobromite solution escaping by the grooves in the side of the stopper, in the same manner as the superfluous fluid escapes through the capillary orifice in the stopper of a specific gravity bottle. In this way the tube is filled with the hypobromite solution, all air being excluded. The tube is now inverted, held under a tap of water, and the cup &c. thoroughly washed, and then most carefully dried. The tube is now stood in a small trough of brine—a finger bowl answers very well,—and supported by a filter ring or clip. The sample of urine to be examined is then poured into the dry cup up to the 2·5 cc. graduation, any excess of urine accidentally introduced being removed by a fine fold of blotting-paper. The cup is then filled up with brine, which is well mixed with the urine by a small and slender glass rod. The object of diluting the urine with brine is to increase its density. If ordinary urine were introduced into the tube it would float upon the surface of the hypobromite, and only a slight reaction would immediately occur at the point of junction of the two fluids; but by increasing the specific gravity of the urine in the way indicated it flows through the hypobromite solution, and brisk effervescence ensues. If the urine solution were allowed to enter the tube while closed with the grooved stopper, a portion of the evolved gas would escape through the bore in the stopcock. In order therefore to avoid losing gas from this cause, the grooved stopper is first removed before urine is allowed to escape from the cup into the tube. In allowing the urine to enter the tube the stopcock should be opened sharply, and a small amount of urine in a full stream allowed to enter; decomposition of the urea at once ensues, and the gas collects at the top of the tube. When effervescence has ceased, more urine is introduced, and so on until the cup has been emptied. The cup is then filled with 2·5 cc. of dilute brine, and rinsed round by means of the glass rod. The whole of the brine is then allowed to enter the tube at one operation. The same amount of dilute brine is then again placed in the cup, rinsed round, and allowed to enter the tube. The tube is now grasped by the right hand, the thumb being tightly pressed against the open end and the contents thoroughly agitated. Lastly, the tube is placed in a vessel of water and the thumb removed, when the saline solution flows out and water occupies its place. If while the open end of the tube is below the surface of water, water from a tap be allowed to flow down the outside of the tube, the temperature of the gas will be rapidly reduced to that of the water. The remaining operation consists in marking the volume of gas with the usual precautions, the volume indicating the percentage of urea in the urine without the trouble of any calculation; corrections for temperature and pressure can, of course, be applied if necessary. In using the tube, if the evolved gas should exceed the volume yielded by 3 per cent. of urea, the urine must be diluted with an equal volume of water and 2·5 cc. of the diluted urine used in the manner already described, the percentage of urea as indicated by the volume of gas being doubled. The points to which special attention may be drawn in connexion with this method of estimating urea are: (1) extreme simplicity of apparatus, all the various operations of measuring the urine, decomposing the urea, and measuring the volume of evolved gas being performed with one instrument; (2) ease and rapidity of manipulation; (3) results as accurate as those afforded by any of the various modifications of Russell and West's original method.

Messrs. Cetti and Sons, of Brooke-street, Holborn, are prepared to supply these modified Crum tubes, and the well-known name of the firm is a sufficient guarantee that the graduations will be accurate.

ON SOME FORMS OF ABDOMINAL ABSCESS.

By G. A. WRIGHT, B.A. OXON., F.R.C.S.,
SENIOR ASSISTANT SURGEON, ROYAL INFIRMARY, MANCHESTER, &c.

(*Concluded from p. 302.*)

CASE 12. *Appendicular peritonitis cured by incision.*—On April 2nd, 1888, while down in the country, I saw a girl aged thirteen, a patient of Mr. Mercer, of Stanford, Essex, who fourteen days before had without known cause been seized with pain in the right iliac region. The pain and vomiting had continued ever since. There was great local tenderness; the pain intermitted; the bowels were usually constipated, but not constantly so; there was no great fever, the cheeks were flushed, and the abdomen becoming

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tympanitic. When I saw her I found a healthy-looking girl, with a flushed face. She complained of great tenderness in the right iliac fossa extending down to the knee on the same side. She could not extend or invert the leg; there were also pain and great tenderness in the loin. The skin was not very hot; the pulse was quick; the tongue coated slightly and somewhat dry. There was much tension and resistance in the right iliac fossa; not much tympanites. The diagnosis was appendicular peritonitis. I made an incision one inch and a half long, just internal to the anterior superior spine, and let out half a pint of fetid pus. I put in a tube and gave a good prognosis. She got well without any bad symptom, and remains so (1890).

CASE 13. *Typical fatal case of appendicular peritonitis.*—Willie S——, aged nine, a patient of Dr. Cox of Eccles, was a fairly healthy boy up till April 22nd, 1890, when he amused himself by eating a number of dried peas. He had never had any previous bowel trouble. Two days later he awoke with pain in the abdomen, which continued; the pain was chiefly in the right iliac region, and was accompanied by vomiting, a quick pulse, and a temperature of 100° to 101° F. The vomiting was not fæcal, there was no intestinal obstruction and no diarrhœa. There was some vesical irritation, causing frequent micturition. I saw him first on April 28th, 1890. He was then lying in bed with a thin, somewhat pinched face; the right leg drawn up; breathing almost entirely thoracic; abdomen moderately distended and tender, especially in the right iliac region. No distinct swelling in the iliac area was to be made out by palpation, but some dulness and increased resistance. There was slight tenesmus, but no blood was passed by the bowel, and there was no protrusion of any intussusception in the rectum, which was empty. Rectal examination revealed some fulness in the right iliac fossa. The sickness still continued, but was not fæcal. Our diagnosis was appendicular peritonitis, and extension to the general peritoneal cavity. Operation was advised. Two hours later I opened the abdomen over the cæcal area, and let out several drachms of thin pus. The cavity seemed to be shut off, but only by feeble adhesions. No attempt was made to find the appendix; a tube was inserted and the wound dressed. There was considerable collapse, which had begun before the operation. The next morning he had rallied a good deal; the abdomen was still distended, but somewhat less so; there was free discharge of foul sero-pus from the tube, and the edges of the wound were blackened; there was still tenderness in both loins; there had been much sickness and no sleep, and nutrient enemata had been given. After this he failed to get any sleep, became delirious, and sank exhausted before the next morning.—*Necropsy:* Dr. Wild, who kindly made a post-mortem examination for us, reports as follows: Abdomen much distended and dark-green in colour (thirty-seven hours after death). On opening the abdomen the entire peritoneum, from diaphragm to pelvis, was covered with layers of thick, yellow lymph, having a fæcal odour, but not stained by fæces. The intestinal coils were matted together and to neighbouring organs. The lymph was firmer and more abundant towards the cæcum, but no distinct cavity could be made out. The vermiform appendix closely adhered to the outer and posterior wall of the cæcum, was much bent on itself, and the terminal three-quarters of an inch formed a soft grey slough, while a perforation, involving about three-fifths of its circumference, was closed by yellow lymph. The proximal portion contained a hard fæcal mass the size and shape of a small bean, with a central brown fibrous body. There was no other intestinal lesion. This case illustrates the type of appendicular abscess in which, for some reason, no efficient barrier of adhesions forms around the irritating material.

CASE 14. *Fatal case of appendicular peritonitis, without operation.*—On April 15th, 1888, Dr. Bailey of Stockport asked me to see Mr. C——, aged twenty-eight. He had a phthisical family history, but his health had been fairly good till four or five weeks before, when he had an attack of generalised abdominal pain. Nothing local was found; there was no sickness or constipation. He got quite well, and went back to his work as an engineer. On April 11th he was seized suddenly during the night with epigastric pain. This lasted for twenty-four hours, and then became more generalised. There was no vomiting, and not much distension. The bowels acted on the 11th. He had no hernia, no history of any injury, and there was no known cause for the trouble, but he had had pain after food for some days previously. There was no hæmatemesis, and he was not a drinker. On the 14th he got worse, with apparently fæcal vomiting and collapse. A long tube had been passed into the bowel without result. The temperature ranged from normal to 102°; pulse 100, failing latterly. He had taken opium and bismuth. I saw him on April 15th, at 5 P.M. He was a thin man, and lay tossing restlessly in bed; the face livid and congested, hands and feet cold and clammy; pulse not very feeble. There had been no vomiting since the morning, and he had passed plenty of flatus and urine. The abdomen was uniformly distended. There were no visible coils. There was resonance everywhere, including the flanks. There was no tenderness on pressure except in the right iliac area and the right loin, where the pain on pressure was extreme. The skin was not œdematous. Per rectum there was tenderness and perhaps fulness in the right iliac area. The tongue was furred but moist; face pinched and haggard. The abdomen moved freely on respiration. We came to the conclusion that there had been an attack of appendicular peritonitis four weeks before, with recovery. That there was a second attack of five days' duration, and that there was now general peritonitis by extension and, probably during the last twenty-four hours, leakage of foul pus. An almost desperate prognosis was given, but the friends were told that operation gave one, though a poor, chance. They decided to think it over. The patient died in the night.

Several of the preceding cases are, of course, open to more than one interpretation. Thus, of those that I have classed as probably glandular, it is possible that some may have been connected with the cæcum, and even of those on the left side, it may be said that they were due to a lesion of a displaced cæcum, such displacement being by no means a rare occurrence, as shown by Mr. Treves. On the other hand, it is, I think, not improbable that some of the cases usually classed as typhlitic are really glandular, and this is probably true in the less severe instances.

CASE 15. *Localised peritoneal abscess, with abscess in intestinal wall.*—Harry P——, aged seventeen, was sent to me at the Royal Infirmary by Dr. Massiah on Jan. 19th, 1889. He was a healthy boy until a week ago, when he was seized with severe pain shooting across the abdomen; this soon became localised in the right iliac fossa. We afterwards obtained a history of his having been kicked in the abdomen by a man. There was constipation, which apparently had lasted the whole week between the onset and his admission. On his arrival at the infirmary the lad was evidently seriously ill, and complained of pain across the abdomen. On examination, a large, brawny swelling was felt in the right iliac fossa; the part was very tender and he was feverish (temperature 101°). I operated shortly after his admission, making an incision three inches in length a little above and internal to the anterior superior iliac spine. The peritoneum was found thickened, and on opening it and inserting a director a gush of sero-purulent fluid escaped. A part of apparently the small intestine, at any rate not the appendix, was seen presenting at the wound, and on it was a small, round, yellowish patch—an abscess in the intestinal wall. On puncturing this patch, a drop or two of pus escaped, and afterwards a little feculent material. The wound was drained freely; the bowel was as little disturbed as possible, no attempt being made to discover any further collection of pus, or to make out the relations of the parts, and the wound was dressed. The next dressing was three days later. He got steadily well; there was no further escape of fæces; and he was discharged on Feb. 13th, and, I believe, has remained perfectly well since. This was an interesting and unusual case. Whether the abscess in the intestinal wall was primary or secondary must remain doubtful.

CASE 16. *Local peritoneal abscess of obscure origin.*—On April 3rd, 1884, I was called by Mr. Power to see Miss A——, aged ten. On March 27th she had been seized with pain in the abdomen, followed the next day by vomiting, and on the 29th by purging. Since the 29th there had been vomiting and absolute constipation. No blood had been passed, except a little after administration of an enema; there was no tenesmus. She passed a fair quantity of urine. On inquiry, there was a previous history of occasional attacks of pain in the left side of the umbilicus. No immediate cause for the trouble, such as improper food, was known. There was no evidence of tuberculosis. I found the child emaciated, but with a fairly good pulse. The abdomen was moderately distended, not tender, and

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there was not much pain. Examination of the rectum revealed nothing except perhaps some fulness in Douglas's pouch; nothing local could be made out in the abdomen. The pain was a little to the left of the umbilicus. Belladonna was ordered internally. On the 4th I heard that she had had no vomiting till 10 A.M., but the abdominal distension had increased, as had also the fulness in Douglas's pouch. There was increased dulness in the left flank, shifting very slightly on change of posture. The obstruction was still complete. I then opened the abdomen below the umbilicus, and, passing in a finger, broke down some adhesions at the back of the abdomen and set free some pus. Some of the coils of intestine were collapsed, others distended. The pus was offensive. The child died the same night. No post-mortem examination was obtained.

CASE 17. *Tubercular peritoneal abscess.*—A little girl one year old, a patient of Dr. Massiah, came of a healthy stock, and had been well till about Jan. 10th, 1887. It was then dyspeptic, and was seen by Dr. Ashby, who thought it probably had enlarged mesenteric glands. It improved under treatment for a time. On March 8th, 1887, it began to vomit, and the bowels were constipated; all food was at once thrown up. Dr. Massiah examined the abdomen and found it full and tense, with some dulness in the hypogastrium. Nothing was felt per rectum, but while he was examining it some offensive fluid escaped, apparently from the vulva; it smelt of sulphuretted hydrogen, as did the vomit. The child was rapidly failing, and had a temperature of 100° to 101°. At 8 P.M. on the 10th I saw it with Dr. Massiah. The face was thin and pinched, with dark hollows under the eyes; the abdomen was very full and tense; there was some dulness in the hypogastrium, and greater resistance and pain in the left iliac fossa, and to the right of and above the umbilicus. On rectal examination, no sign of intussusception was found, but a mass which was thought to be matted coils of bowel was felt in the left iliac fossa. There was no tenesmus, but an enema returned at once; no blood or mucus escaped per rectum; there was no defined tumour to be felt in the abdomen. A diagnosis of localised peritoneal abscess and general matting of intestines was made, and a bad prognosis given. Abdominal section was advised as giving the only chance. The abdomen was opened below the umbilicus; the peritoneum was found to be thick and red, and the organs so matted together that no cavity could be found at first. After gently separating adhesions a gush of thin, flaky, fetid pus escaped, in quantity about half a pint; the swelling of the abdomen subsided. On passing a finger into the abdomen the intestines were found all matted together. A large cavity reaching from the left iliac fossa upwards to the right beyond the umbilicus was washed out and drained. The vomiting stopped at once. On the 11th some fæcal matter came away, and it was evident that the bowel had given way into the cavity, which was again washed out. 12th: Temperature 105°. Everything taken by the mouth comes away almost at once through the wound. Child sinking rapidly. The temperature rose to 106°, in spite of antipyrin, and the child died early in the morning of the 13th. Necropsy: General matting of the intestines was found, except that the colon was nearly free. There was general tubercular peritonitis. The abscess cavity was well drained, and it was evident that the lesions were of two different dates, there being old adhesions and recent abscess formation. The opening in the bowel was apparently high in the small intestine, but its exact site could not be made out. There were a few tubercles in the right lung. The bladder had no communication with the bowel, so the source of the fluid, which was thought to have escaped during the first rectal examination, was not made out. Localised tubercular peritoneal abscesses may probably arise in any one of three ways: (*a*) as a result of extension from a tuberculous mesenteric gland; (*b*) as a result of perforation of a tubercular ulcer; or (*c*) as a primary local peritoneal inflammation.

CASE 18. *Fibro-neuroma of a lumbar nerve simulating appendicular peritonitis.*—Dr. G——, aged forty, came to see me on Feb. 26th, 1889, and gave the following history. For two years he had suffered pain, or rather discomfort, in the right iliac region. The pain came on in attacks at intervals of about a month. His bowels were rather loose during this time, but this was not unusual. Twelve months ago the pain became more severe and the attacks more frequent, sometimes occurring almost daily. At this time the bowels were open twice daily, and there was no vomiting. In another six months the pain increased in severity and frequency, each attack lasting a few minutes. When Dr. G—— came to see me the pain was violent, and appeared daily; the bowels were moved once in two days, and the motions were either small scybala or loose; blood was occasionally passed in small quantity, but no pus. The largest motion was not larger than a little finger. Urine normal. Dr. G——'s family and personal history were both gouty. On examination I found the abdomen moderately full, but not distended; there were no visible coils, no resistance, no tenderness, except in the right iliac region, where a little above and internal to the anterior superior spine was a well-defined, very tender nodule the size of a small filbert and fairly freely movable. There was gurgling in the cæcal area. Liver dulness quite clear of area of pain; no history of gall-stone or jaundice. Sir William Roberts, who had sent him to me, had advised him to take olive oil, and this he had done. Any exertion greatly aggravated his trouble, and he was quite incapacitated from taking charge of his practice. I expressed the opinion that his trouble probably depended upon the presence of a concretion in the vermiform appendix, and advised him to take extract of belladonna internally and lie in bed for a week. If after that time there was no improvement, I recommended an exploratory operation.

After some delay, for reasons unconnected with his health, as no relief was obtained operation was decided upon. On May 2nd, 1889, I opened the abdomen a little below and internal to the spot where the mass was felt, and found that it was not appendix, but a fibro-neuroma lying in the subperitoneal tissue. The appendix was drawn up and inspected and found quite healthy. The tumour was removed and the abdomen closed. For some days he did not do very well, and had a little pneumonia, but this passed off, and he was very well when, on the tenth day after operation, he sat up and strained violently; the wound gave way, and a mass of omentum protruded. However, no serious symptoms followed, and a week later I removed the protruding mass. He then recovered without further bad symptom, and remains quite well and free from any sign of his former trouble. I have added this case to the others as bearing upon the diagnosis of appendicular mischief, which was certainly closely simulated in many points.

The cases here recorded consist of a selection of those that have been under my care in the last ten years, and might have been extended; but they sufficiently illustrate the types of case. Cases 2, 3, 4, 5, 6, and 9 were published some years ago in the *Archives of Pædiatrics*, in a paper I sent to that journal, on Some Forms of Abdominal Abscess occurring in Children.

Manchester.

THE CURE OF CHYLURIA, DEPENDING ON FILARIÆ IN THE BLOOD, BY THYMOL.

BY SURGEON-MAJOR E. LAWRIE,
RESIDENCY SURGEON, HYDERABAD.

IN an article on Chyluria by the late Surgeon-Major T. Lewis in "Quain's Dictionary of Medicine," this passage occurs:[1] "It cannot be distinctly stated that the course of the disease has been materially modified, much less cured, by any known remedy." It is, therefore, gratifying to be able to bring to the notice of the profession the following cases of chyluria which have been completely cured by the internal administration of thymol.

CASE 1.—Nazim Mahomed Beg, aged twenty, was admitted into the Residency Dispensary on Sept. 11th, 1889, on account of retention of urine. A catheter was passed and a small quantity of chylous urine withdrawn. The distension of the bladder was not relieved, and on Sept. 12th it was necessary to perform perineal section. A large quantity of white clot was removed, and a lithotomy tube was tied into the bladder, which was washed out with a solution of bichloride of mercury. At first quinine and various other remedies were employed without any effect; the urine continued chylous, the patient was never free from fever, and filariæ were always found in the blood at night. On Sept. 27th the administration of thymol in one-grain doses every four hours was commenced. On Oct. 12th the dose was increased to

[1] Vol. i., p. 253.

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two grains. On the 18th the symptoms began to improve, and by Dec. 14th, 1889, he was quite well, and there was no trace of filariæ in the blood. When the patient was admitted into hospital, he was emaciated and almost in a dying state. He is now (Dec. 11th, 1890) quite well and is fat and strong. The improvement in his condition might be thought to be due to the spontaneous cessation of the disease, but no treatment did the patient any good whatever until the administration of thymol was commenced, and then the improvement was steady and gradual, and may fairly be attributed to the action of the drug.

CASE 2.—Mahboob Khan, sepoy, aged twenty. Admitted into the Afzul Gunj Hospital on Oct. 1st, 1890, on account of stone in the bladder. The patient stated that he had suffered from symptoms of stone for ten years. On admission he was emaciated, his temperature was 102°, and there was a large stone in the bladder. The stone was removed by lateral lithotomy at 1 P.M. on the day of admission, and weighed five ounces and nineteen grains. The temperature remained high after the operation, particularly at night, and on Oct. 6th the urine was discovered to be chylous. Filariæ were found in the blood, and also in the urine. The administration of thymol was commenced in two-grain doses on Oct. 6th, and increased to three-grain doses on the 11th. On the 14th the patient was attacked with dysentery, and the thymol was replaced by scruple doses of ipecacuanha. On the 20th he had recovered from the dysentery, and thymol was recommenced. The dose was gradually increased to five grains three times a day, and the patient left the hospital cured on Nov. 23rd. He is now (Dec. 15th, 1890) quite well, and is fat and strong like the first patient. His urine is normal, and there are no filariæ in the blood.

The important practical point in the above cases is the fact they establish that thymol has the power of destroying organisms in the blood and tissues, which are actually the cause of a well-known disease. The destruction of the organisms cures the disease. On the other hand, I have tried it extensively in many diseases which are supposed to be due to organisms, such as leprosy, phthisis, and gonorrhœa, but without benefit. Either, then, thymol, which is such a deadly poison to the filaria, is not a poison to the bacillus, which is extremely unlikely, or bacilli are not the cause of the diseases I have mentioned.

It appears probable that thymol may prove useful in the elucidation of some of the intricate questions involved in the relations of micro-organisms to disease, and it is on this account to be commended to the consideration of bacteriologists.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF THE UTERINE APPENDAGES FOR THE CURE OF OVARIAN INSANITY.

BY EDWARD COTTERELL, M.R.C.S., &c.

THE treatment of cases of mental disease dependent upon some ovarian disorder by the removal of the uterine appendages has not been, as far as I am aware of, brought before the profession very frequently. The following case may therefore interest some whose studies lead them to investigate mental disorders, especially those disorders dependent upon some form or another of ovarian disease.

Mrs. Y——, aged thirty-seven, married nine years; has five children, eldest eight years, youngest eight months. She has always been depressed at her menstrual periods. When about eighteen years of age her father died of apoplexy. For some years after this event she suffered from melancholia, which was always much worse during the catamenial periods; at the same time she was firmly convinced that she had caused the death of her father by poisoning him with opium. However, she got over this fancy and married, after a somewhat prolonged engagement. Her husband informed me that after her marriage she at times suffered from lowness of spirits, and that immediately after the birth of her last child she became quite insane for about two months, requiring an attendant constantly with her, as she more than once attempted to commit suicide when left to herself. When I saw her for the first time towards the end of 1886, her condition was similar to that described above, her symptoms becoming much aggravated at each menstrual period; for though the acuter signs passed away after the menstrual flow had ceased, there still remained a good deal of melancholia during the inter-menstrual period, which became aggravated with hallucinations as the succeeding catamenia approached. The patient had an anxious look, was very restless, and slept badly. Menstruation very scanty, and attended with a good deal of pain. She was imbued with the idea that she had poisoned her father and had caused the death of one of her young friends. She frequently heard voices which urged her to make away with herself. The usual routine treatment having been tried with little or no effect, I suggested the removal of the uterine appendages as a means of alleviating the distressing symptoms. This procedure having been agreed to, I accordingly performed the operation on March 15th, 1887. The patient recovered quickly from the operation, but the mental symptoms were no better—worse, in fact, as the suicidal tendency became more pronounced. By my advice she was removed to an asylum, where she remained for about four months. On her return, I found her sane in every respect. She had quite recovered from the suicidal mania, and the hallucinations were gone. Since that time she has not had any return of the old symptoms, and as nearly three years and a half have now elapsed since she had any, I hope that she is cured. The removal of the uterine appendages brought on at first, in this case, an acuter stage of the mental condition, but this is, I think, what one would be led to expect as most likely to occur in a patient suffering from ovarian insanity. The mental symptoms being dependent upon the ovarian irritation, any operative interference with these organs is likely to aggravate matters until the artificial menopause has been thoroughly established. This is how I translate the sequence of events in the above case, so that if I am correct in my diagnosis—viz., that the mental symptoms were due, and due entirely, to the ovarian irritation—there will be no return of the insanity. I may remark that the ovaries were rather smaller than normal, whilst the Fallopian tubes were swollen to about twice their usual size, and very injected.

Weymouth-street, W.

SUGGESTIONS ON THE ANTAGONISTIC ACTION OF COCAINE AND CHLORAL.

BY EDWARD F. WILLOUGHBY, M.D. LOND.

SOME years ago, when suffering frequently from attacks of acute coryza, which while they lasted rendered me almost unable to write from the incessant sneezing and running from the nose, I found the greatest relief from nasal injections of a 2 per cent. solution of cocaine, from five to ten drops to each nostril at intervals of twenty minutes or half an hour. I could thus cut short an impending attack, or by using them even more frequently arrest—in fact, cure—one that had set in for some hours with the utmost intensity. But on several of these occasions I noticed that the use of the cocaine during the evening was followed by absolute sleeplessness, four consecutive doses of ten grains each of chloral inducing not more than two or three hours' light sleep, though ordinarily, when wakeful from mental overwork, five grains would have given a natural, and ten a sound and long night's sleep. Indeed I believe that I have, after the free use of cocaine, taken even more than the forty grains of chloral with but very moderate effects. Under these circumstances no sense of fatigue followed the sleeplessness, and no headache or drowsiness the sleep when obtained by these excessive doses of chloral. A lady for whom I prescribed cocaine pastilles for a painful neurotic condition of the glottis having sucked several in the course of the evening and gone to bed with two more in her mouth (each $\frac{1}{12}$ gr.), told me that she had been "wide awake" all night, without feeling tired next day; and in other cases I have observed the like wakefulness after the use of cocaine. But the evident antagonism in my own case between cocaine and chloral suggested to me the probability of its being found useful as an antidote in chloral poisoning. I applied for and obtained a licence for undertaking a course of experiments on the subject; but finding that I could not be absent from home for so many hours as the performance of these would require, I allowed

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the licence to lapse. The treatment of chloral poisoning hitherto has been eminently unsatisfactory. Chloral is a direct antidote to strychnine, antagonising the excessive muscular irritation of the latter; but the converse does not hold good, since the action of chloral on the sensorium or the mental functions has not its physiological counterpart in that of strychnine; strychnine, in fact, antagonises only the lesser half of the effects of chloral. I know that some extreme cases have been successfully treated by strychnine, galvanism, and artificial respiration, but the profound sleep has had to work itself off. Cocaine, which, if it were found expedient, in very severe cases might be supplemented by strychnine, would appear to me to be the antidote required, and, should an opportunity present itself, I shall not hesitate to try it subcutaneously, at least in the first doses.

I would invite anyone who may meet a case of chloral poisoning to do the same, and I shall feel greatly obliged if anyone having leisure would take up my licence and institute a course of experiments *in corpore vili* on the lethal doses of chloral and the efficacy of cocaine at various stages of the poisoning by chloral from the earliest to imminent death, with the single condition that he communicate with me, and give me the credit of priority of suggestion by associating my name with his.

Finsbury-park, N.

NOTES ON A CASE OF PUERPERAL ECLAMPSIA; TREATMENT; RECOVERY.

BY W. E. REDMAN, M.R.C.S. ENG.,
ADMIRALTY SURGEON AND AGENT AT BRIDLINGTON QUAY, ETC.

ON the evening of Christmas Day last I received an urgent message to attend a Mrs. S—— at once, as she was thought by the monthly nurse in attendance to be dying. On arrival, I found the patient, a stout, florid primipara, in a semi-comatose condition, delirious, and not recognising those about her. Both the upper and lower extremities were much swollen and œdematous. She had voided but a small quantity of urine during the day, and this, on heating, coagulated into a semi-solid, muddy-looking, gelatinous mass. Digital examination revealed an almost fully dilated os and a roomy pelvis; membranes not ruptured; cranial presentation; uterine contractions strong and frequent. Recognising the gravity of the case, and almost expecting the onset of convulsions in consequence of the premonitory symptoms at any moment, I at once ruptured the membranes, and sent for some chloroform. The labour now proceeded apace, the head rapidly descending; but before I received the chloroform the patient had a severe convulsive attack, characterised by violent general muscular contractions, her features became distorted, the globes of the eyes turned upwards, the white sclerotics only visible, and the mouth convulsively fixed; the face became cyanosed, and frothy saliva tinged with blood appeared at the mouth. The attack lasted about four or five minutes. The patient now recovered semi-consciousness, and by this time the chloroform arrived. About six or eight attacks of varying degrees of intensity now succeeded one another at frequent intervals; during these I administered chloroform freely with most beneficial results, the intensity of the successive attacks being greatly controlled thereby. As the head was now making but slow progress through the pelvis, and its pressure apparently acting as an irritant to the mother, and being also well within reach, I resolved upon instrumental delivery. Having first administered chloroform freely, I applied the long forceps, and delivered the patient without difficulty and without any return of the convulsions. The cord was twice round the child's neck. The after-birth rapidly followed the child, which was much cyanosed, and it was fully an hour before respiration was established in it. After delivery the mother had two more severe convulsive seizures, each of which was modified in intensity by administration of chloroform as before. From this time all proceeded well, the patient gradually recovering consciousness, but having no recollection of what had occurred for some hours previous to or during labour.

Certain points are worthy of note in this case—the premonitory symptoms, a history of mental trouble and distress a few days before confinement, the value of instrumental delivery under chloroform in certain cases of puerperal eclampsia, the great value of chloroform to control and cut short the attacks, and the further fact that the albumen completely disappeared from the urine two or three days after delivery. Further than this, I need only add that both mother and child have made uninterrupted progress towards recovery.

Bridlington Quay.

THE CHLORAL TREATMENT OF PUERPERAL ECLAMPSIA.

BY M. H. FEENY, M.R.C.S., L.R.C.P. LOND., L.M.

As the treatment of puerperal eclampsia is still an open question, opinions being divided between chloral, opium, or both combined, and anæstheticism, I send this case as an interesting contribution in favour of the former. And I take the occasion to express a long-formed conviction that it would be a wholesome practice, pregnant with much practical good towards the settling of such open questions, if all practitioners would publish their quota of evidence when such cases arise. Being happily of rare and unfamiliar occurrence, we naturally fly for aid to our most acknowledged text-books. From much observation in general practice, I find that the manifestations of disease are frequently at variance with the descriptions of books. Nor is this surprising, so much wider is the field of general practice than that of the specialist, no matter how numerous his hospital wards or how high his title. The most unerring of all guides are the symptoms of the disease and the constitutional forces of the patient. By treating the former under the guidance of the latter, a successful issue has often taught me that many a formidable and unpromising case can be thus brought to a happy termination.

L. C——, aged nineteen, seven months pregnant. Family history healthy. Father, mother, a brother, and sister living; no neurotic disease. Mother suffers from weak heart; no organic mischief. Patient commenced menstruating at fifteen; did so regularly for eight months, when she had her first fit. For the following three years the menstruation was irregular; general health fairly good. At eighteen she was treated for severe epileptic seizure, and made a good recovery. At the seventh month of pregnancy I was hastily called to see her at 11 A.M. I found her in a violent general epileptiform fit, grinding the teeth, which were firmly clenched. I ordered a mixture of bromide of potassium. The pulse was strong, healthy, varying irregularly with each paroxysm. Summoned again at 6.30 P.M. I was told the waters had broken and labour had commenced. The patient was in convulsions during the whole interval. On examination I found the os slightly dilated, membranes intact. She had passed a large quantity of hysterical urine. The case seemed desperate, and one for heroic treatment. Owing to the clenched teeth little of the mixture had been taken. On consultation, anæsthesia was suggested; but owing to the fixed condition of teeth and hard laboured breathing it was discarded. I quickly decided to make the pulse my helm and chloral my sheet-anchor. I mixed forty grains, forced the teeth open, and she swallowed it. At 10 P.M., convulsions still constant; os the size of a two-shilling piece, thick, and rigid. Ruptured membranes. I again gave forty grains of chloral; enema of one drachm of laudanum, which latter was immediately expelled. At 12 P.M. gave fifteen grains of chloral; fits ceased for half an hour. At 2 A.M. fifteen grains; had an hour's sleep. At 4 A.M. fifteen grains. Fits returned at 5 A.M., and labour was advancing. 6.30 A.M.: Child born during fit. 7 A.M: Fits ceased; placenta expressed; uterus contracted firmly. 11 A.M.: Sleeping quietly; had had three convulsions; was conscious during intervals. Ten grains of chloral to be taken every four hours. Had four seizures during twelve hours. Slept well during the night. Was quite conscious next morning, but knew nothing of what had happened. The child, as might have been expected, was stillborn. Ordered mixture of bromide and chloral. The patient made an uninterrupted recovery.

Lancaster-gate, W.

AN EASY METHOD OF FEEDING PER RECTUM.

BY Y. M. JONES-HUMPHREYS, L.S.A.

SOME months ago, having to treat a bad case of gastric ulcer by rectal feeding &c., I devised an apparatus consisting of a small funnel, a piece of elastic tubing ¼ in. in diameter, 1½ ft. long, about 4 in. of glass tubing (by which the de-

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scending fluid can be watched), and joined on to this an ordinary flexible catheter. The atmospheric pressure is sufficient to send any fluid into the rectum, and I have never noticed any return of the fluid, absorption being slow but efficient. The instrument is an improvement on the old enema apparatus in use. The claims for this method are—(1) It is extremely simple, the patient being able to pass the catheter into the bowel without experiencing any pain or unpleasantness; (2) it is cheap and easily made; (3) after once being shown, the most inexperienced person can use it, and thus we can be sure that our patient will have small quantities of nourishment at frequent intervals; (4) the fluid is slow in its passage, and thus nearly the whole quantity becomes slowly absorbed. In any case requiring rectal feeding I venture to hope that my professional brethren will find this simple method to be of use to them and a source of comfort to their patients.

Cemmaes, Montgomeryshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

INTUSSUSCEPTION IN A CHILD NINE MONTHS OLD; ABDOMINAL SECTION; RECOVERY; REMARKS.

(Under the care of Mr. HOWARD MARSH.)

WE have alluded in past numbers of THE LANCET to the various methods of treatment of intussusception of the intestine, and we now give a short account of the successful management of another case by reduction after opening the peritoneum. It is a further addition to the increasing list of cures after abdominal section, a method which is becoming more frequently resorted to, and at an earlier period, after failure of other procedures. In the recent discussion at the Clinical Society,[1] the question as to the best method of treating the bowel should the intussusception be irreducible was discussed, and Mr. Marsh refers to it in his remarks.

F. A——, aged nine months, was admitted into St. Bartholomew's Hospital on May 8th, 1890. The patient, a well-nourished child, was quite well until about 6 P.M. on the previous evening, when he began to vomit. The vomiting continued up to the time of his admission, and blood-stained mucus was passed per anum, but no fæcal material. On admission, between 12 and 1 P.M., the child was pale and collapsed; expression pinched and distressed; pulse quick and feeble. The abdomen was somewhat distended, and a sausage-shaped tumour could be felt extending across the abdomen, a little above the level of the umbilicus—that is, in the region of the transverse colon. The child's condition was so grave that it was determined to perform abdominal section at once, without resorting to either injection or inflation of the bowel. At 2 P.M. he was placed under chloroform, and an incision was made in the linea alba, midway between the umbilicus and the pubes, and the peritoneal cavity was opened. It was then found necessary to extend the incision upwards to half an inch above the umbilicus. When two fingers were introduced the intussusception was plainly felt, and a great deal of it was easily reduced by pressure on its sheath, immediately below its lower or advancing end. The tumour was then drawn into the wound, and reduction was effected, partly by pushing and partly by drawing the volvulus out of its sheath. The inversion of the gut had evidently commenced in the immediate neighbourhood of the ileo-cæcal valve. The abdominal cavity was washed out with plain water at a temperature of about 100°, and the wound was closed throughout with silk sutures. Salalembroth gauze was applied and covered with a bandage.

May 9th.—The child had passed a rather restless night, and two doses of a quarter of a minim of tincture of opium had been given. He was fed with milk and lime water, only a few drops being given at a time. He had not been sick since the operation, and had passed two motions free from blood.

10th.—Doing very well; no bad symptoms.

11th.—Seems quite well; playing with his toys. Cheeks full and rosy. Temperature normal.

12th.—Bowels have acted three times since yesterday. Wound dressed to-day. Sutures removed. From this date there was nothing calling for remark. The child was discharged with the wound quite healed on June 1st.

Remarks by Mr. HOWARD MARSH.—The rteatment of intussusception by operation is a subject that stands in need of further discussion. The estimate formed by different surgeons, as to the risk involved in the operation itself, is far from uniform. Some believe that, when resorted to under favourable circumstances, the operation is attended with no great risk, but with an amount of success which no alternative treatment can secure; while others regard it as a measure of such doubtful utility that it should be resorted to only after everything else has been tried and has failed. The experience I have had has convinced me that, when the operation is performed early, it is not in itself a proceeding that involves serious danger; and secondly, that it is followed by a very large proportion of success. And I believe that, in the future, we shall be able to point to the operative treatment of intussusception, even in young infants, as one of the most satisfactory developments of abdominal surgery. The grounds for advocating early operative interference seem obvious. The conditions present are very similar to those that exist in hernia. In both the intestine is threatened with strangulation, which, if left, will almost inevitably lead to a fatal result, and which can be removed only by mechanical interference. In hernia the course to be adopted is agreed to on all sides. The case is regarded as one of urgency. The necessary interference consists, first, in carefully applied taxis, and then, if this fails, in immediate operation. And the treatment of intussusception should be pursued on exactly parallel lines. A well-ordered attempt at reduction by what Mr. Hutchinson has termed "abdominal taxis," should be made without a moment of unnecessary delay; and if this fails (and it should not be continued for more than ten or fifteen minutes), operative interference ought at once to be resorted to. Fortunately the evidences of intussusception—griping pains, sickness, the passage of mucus and blood, and the presence of a sausage-shaped tumour[2]—are usually distinct, while often the intussusception can be felt by examination per rectum. Thus a correct diagnosis can in the majority of cases be made at once. When this point has been reached, the question arises, In what manner can abdominal taxis be best employed? For myself, I prefer the introduction, when the patient is under chloroform, of warm water, by means of a long, soft tube, with which a funnel is connected; but this apparatus must be used with great care. The amount of fluid that is being injected should be observed, and the height to which the funnel is raised above the patient must, owing to the fact that the pressure on the intestinal wall is rapidly augmented when the height of the column of fluid is increased, be carefully guarded. Neglect of this point will be attended with imminent danger of rupture of the intestine. The abdomen should be watched as to increasing distension and as to tension of the parietes. These symptoms, however, are not, it must be observed, always a sure index to the safety of further injection, for if the intussusception has descended low in the colon and become adherent there, no considerable distension can of course be produced. Should taxis fail to effect reduction, abdominal section should be at once performed. As distension is generally absent or only moderate, and there is little tendency to the protrusion of the intestines, an incision, three inches or more in length, should be made in order to facilitate manipulation and to save time—a matter of the highest importance in these cases. Reduction is best effected by taking the sheath *in situ* just below the advancing end of the tumour between the index and middle fingers and exercising gentle pressure upon it, and then shifting the fingers and repeating the pressure so as to lift the intussusceptum upwards and make it "back out." By this means the tumour may usually be quickly reduced until only the entering end remains. When this is the case the intussusception should be brought forward into the wound, so that reduction may be completed, partly

[1] THE LANCET, vol. i. 1891, p. 198.

[2] Examination under chloroform is often advisable to assist the diagnosis.

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by pushing the intussusceptum out by pressure on the sheath, and partly by very gentle traction upon it. It is very important that the parts should be well in view when the swollen head of the tumour is being returned, so that the amount of tension that is produced can be noted, and so that any laceration of the peritoneum, should it occur, may be detected and afterwards closed by suture. I am convinced that in the majority of cases reduction can be easily effected in the manner described, if the intussusception has not been strangulated for more than ten or twelve hours; but if strangulation has existed for eighteen hours and upwards, reduction is likely to be difficult and will often be impossible. In the case above related the age of the patient was nine months, and the intussusception had existed for about eighteen hours. In a successful case which I recorded in 1875[3] the child was seven months old, and the intussusception (which had apparently existed for fourteen days) had been strangulated for twelve hours. In both, at the time the operation was performed, the infants were in a condition of collapse; the one was pale, his face was pinched, his pulse quick and feeble, and vomiting was frequent; the other "lay in his mother's arms, vomiting every two or three minutes, with a pale shrunken face, half-closed eyes, a small and very rapid pulse, and shallow, hurried respiration." Yet both recovered without a drawback of any kind, and were convalescent on the third day; both, that is to say, notwithstanding their serious condition, bore the operation perfectly well, and rallied immediately after it. In the case which I published in 1875 the operation was performed in a labourer's cottage, with no antiseptic precautions. The intestines were for some minutes lying exposed outside the abdominal cavity, and the patient was subsequently nursed by its mother without skilled assistance. The facts observed in these two cases appear to constitute strong evidence that even young infants will bear the operation well. That failures have hitherto been frequent has been, I think, quite certainly due very largely to the circumstance that the operation has been delayed until the local conditions—swelling, inflammatory softening, and adhesions—have precluded success. These conditions are not usually present in the first twelve or even the first eighteen hours. I ought, however, to mention that in a case, under the care of Mr. Gay of Putney, in which I performed abdominal section about fifteen hours (so far as could be ascertained) after the occurrence of the intussusception, the volvulus had become universally adherent to its sheath, so that although the parts were well in view, and no inflammatory softening and only very limited swelling were present, it was impossible to accomplish reduction. The possibility of this rapid formation of adhesions is an additional reason for early interference. I have lately examined the specimens in the museum of St. Bartholomew's Hospital, with the view of ascertaining whether, when it is found that the head of the intussusception is so large and firm that it cannot be returned, it would be possible with safety to divide the sheath at the seat of constriction, and then, having effected reduction, to close the wound in the sheath by suture. The point, however, is one which I think can only be determined by trials made in what may seem to be appropriate cases at the time of operation. Other cases in which abdominal section for intussusception in young infants has been successfully performed have, I believe, recently occurred. Their publication, I may perhaps be allowed to say, would be a valuable contribution to this important subject.

[3] Med. Chir. Trans., vol. lix.

LIVERPOOL NORTHERN HOSPITAL.

A CASE OF INTRA-CRANIAL ANEURYSM SUCCESSFULLY TREATED BY LIGATION OF THE COMMON CAROTID ARTERY; REMARKS.

(Under the care of Mr. CHAUNCY PUZEY.)

INTRA-CRANIAL aneurysm of sufficient size to present symptoms permitting of correct diagnosis and the trial of surgical measures to effect a cure is rarely met with, and this account of a case of the disease will repay careful reading. The onset of an audible bruit immediately after the accident, fourteen months before admission, appears to accurately define the duration of the disease, and the symptoms of the condition were unusually well marked. Mr. Puzey refers in his remarks to Mr. Rivington's excellent article on Orbital Aneurysms, and we find there mentioned that in four traumatic cases, out of fourteen of which the post-mortem examination is given, there were arterio-venous communications between the carotid and the cavernous sinus. Mr. Rivington refers to thirty-two cases of pulsating exophthalmos of traumatic origin, twenty-seven of which recovered and five died after ligature of the common carotid artery. "Of the twenty-seven patients who recovered after ligature, only seventeen were cured of the aneurysmal affection of the orbit, additional methods being employed in the others. Ligature of the common carotid is at present the most successful and satisfactory means of treating orbital aneurysm. The percentage of absolutely successful cases or cures would be about fifty-five." We have recently referred to the high mortality met with after ligature of the common carotid, and it is possible that in this case the earlier compression of the vessel aided in the efficient blood supply found after the application of the ligature.

E. E——, aged thirty-seven, a farm labourer from North Wales, was admitted into the hospital on May 2nd, 1889, and gave the following account of himself. He had always enjoyed good health until fourteen months ago, when he fell off a horse on to the left side of his head. He was semi-conscious for a day or two, the only thing he remembers being that on the morning after the fall he noticed "a noise like a steam-engine puffing in his head," just above his left ear, and this has continued more or less ever since. Both eyes were swollen at that time, especially in the morning, the left being the worse of the two. Four or five days after the accident he went to work, though the noise in his head much troubled him. He was unable to see clearly unless he covered one eye. Six weeks after the accident he went to the Liverpool Eye and Ear Infirmary, and remained there under the care of Mr. Edgar Browne.

Mr. Edgar Browne's report.—E. E—— was admitted on May 4th, 1888, his condition being as follows: Right eye: V. = $\frac{2}{3}$, slightly myopic, with −0·50 V. = $\frac{3}{3}$, T. and appearance normal; pupil active; nystagmic jerkings on extreme lateral deviation to either side; ophthalmoscope shows shallow physiological pit. Left eye: V. = idem, slight proptosis; movements in all directions limited, pupil active, but rather less so than the other. Conjunctiva injected, very large, tortuous, episcleral veins at the outer side; a full cushiony feeling on pressing eyelids. Pulsation of eyeball distinctly felt on pressure. Ophthalmoscope shows marked physiological pit, with vessels crowded to one side, as in a glaucomatous disc, with pale halo, no pulsation of arteries could be produced even by firm pressure. There is a loud aneurysmal bruit on the left side of the head, loudest in the temporo-parietal region, immediately over the left ear, and extending forwards; the sound becomes fainter on approaching the vertex, again increasing towards the lower parietal region of the right side. It is stopped entirely by moderate pressure on the left carotid. Diplopia is marked, being due to the left eye, which is unable to execute conjugate movements with its fellow, in consequence of orbital swelling. No implication of any motor or sensory nerve was observed, mental faculties unaffected. The diagnosis of intra-cranial aneurysm was made, and the treatment was—rest, full doses of iodide of potassium, low diet, fluid restricted to one pint per diem, and digital pressure on the carotid. Steady improvement went on for some weeks, interrupted once by the patient rising. Great relief from the noise resulted on one occasion from epistaxis. The orbital swelling receded and the diplopia disappeared so long as recumbency was maintained. The advisability of ligaturing the carotid was mentioned to the patient, but he preferred going home. He remained away from July 26th, 1888, to April 26th, 1889, when he returned with an aggravation of all the previous symptoms. The operation was now strongly urged upon him, and he was transferred to the care of Mr. Puzey.

Condition on admission into the Northern Hospital.—There is a swelling in the left orbit about the size of a Tangerine orange, the eyeball in the centre of it being much protruded and congested, the cornea hazy, and at one point showing tendency to necrosis; the eyelids are red and œdematous. The whole swelling pulsates, and the pulsation can be controlled by pressure on the left common carotid; large vessels (apparently veins) can be felt pulsating no pressing lightly on the swelling between the eye and the

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upper part of the orbital cavity. A loud bruit can be heard all over the left side of the cranium, from the middle line as far back as the posterior parietal region; but it is loudest in the supra-orbital and anterior temporal regions. The sound is of a loud "swishing" character, although the patient describes it as resembling the booming noise or "thud" of machinery, which, he says, prevents him from sleeping, except when quite worn out by exhaustion.

On May 5th Mr. Puzey ligatured the left common carotid artery above the omo-hyoid muscle. The operation was conducted with full antiseptic precautions, and the artery was tied with stout chromicised catgut ligature; the wound was closed with silver sutures, a thin horsehair drain being laid from end to end, and a small india-rubber tube passed into the deepest part of the wound. Pulsation ceased in the swelling as soon as the ligature was tightened, and never reappeared. As soon as the patient became sensible he exclaimed with delight that the noise had gone. However, on listening through the stethoscope over the eyebrow or near the root of the nose, a faint bruit, continuous, but accentuated with each systole, could be distinctly heard. Next day the dressings were changed and the horsehair drain was removed. On May 8th the dressings were again changed and some of the stitches removed. On the 10th the man had been moving his head about and had displaced the dressings, which were found soiled, and that night his temperature rose to 101·2°. Next day there was some redness and swelling about the wound, and the man complained of slight pain in swallowing. It was evident that there was retention in the deep part of the wound. This was therefore reopened to some extent by probe and dressings forceps, and a small quantity of thick pus escaped. Next day all pain had gone and the temperature was normal, at which point it continued steady, except on June 2nd and 3rd, when it ran up again, probably on account of fæcal accumulation in the lower bowel. The cornea had by this time given way, and the iris was adherent. A troublesome sinus, resulting from the re-opening of the wound, caused him to remain in hospital for some weeks, although he was able to get up and walk about. He was sent to the Woolton Convalescent Hospital early in July, and returned to his home in Wales a few weeks later.

On July 7th, 1890, he wrote saying that the noise in his head had entirely gone, the swelling about his eye had completely disappeared, that he was quite comfortable in every way, and was actively engaged in his usual employment.

Remarks by Mr. PUZEY.—In the article on "Orbital Aneurysm," by Mr. Walter Rivington, in Heath's "Dictionary of Practical Surgery," it is stated that "beyond question the great majority of the traumatic cases have been instances of endo-cranial arterio-venous communication, due to wound or rupture of the internal carotid artery in the cavernous sinus." I believe that this case was an instance. There was, however, one point on which I could not satisfy myself—that was, as to the continuity of the bruit; if there was continuity, it was completely masked by the tremendous and prolonged "swish" during the systole. But I think that the remarkable dilatation and pulsation of the supra-orbital branches of the ophthalmic vein pointed almost conclusively to the nature of the affection. And, furthermore, the persistence of the bruit (as heard through the stethoscope) after the operation, long after the disappearance of the noise heard by the patient and of pulsation as felt by observers, seems to confirm that view of the case. Surely, if this had been a case of true aneurysm the bruit would have ceased simultaneously with the notable pulsation. Although ligation of the common carotid is forcibly urged by Mr. Rivington as the best treatment, this is not the opinion held by some surgeons of eminence. Hence it seems desirable that cases bearing upon this point should be recorded. Some time ago my friend Mr. George Walker brought before the Ophthalmological Society a patient suffering from (apparently) a similar condition of affairs. He proposed to tie the common carotid, but was dissuaded from doing so by the adverse opinion of two well-known surgeons, who considered the case one of arterio-venous communication. This patient was accidentally cured in a very remarkable manner. He was squeezed and much frightened (to the extent of fainting) in a theatre crush one night, and next morning found that the noise in his head had ceased. Gradually the other symptoms disappeared, and complete recovery took place.[1] It appears probable that some fibrinous clot must have become partly displaced in the affected part during the excitement and struggling to which he was subjected; and so a cure was roughly brought about in the same manner as by the late Sir William Furgusson's more delicate and deliberate method of "manipulation." But, as Mr. Walker observed, it is not advisable to trust to the chapter of accidents. Perhaps in the next similar case hemiplegia, or sudden death, might be the result. In my case, nothing could be more gratifying than the delight and comfort manifested by the patient from the time when he first regained consciousness, after the operation, up to the present. He came to see me some weeks ago (a year and a half after the operation), and there was nothing to be seen of the former trouble except a small leucoma occupying the lower quadrant of the cornea. The eye had regained its natural size and appearance, and the pupil was clear. But the sight was lost, no doubt from long-continued stretching and atrophy of the optic nerve,—surely an argument against delay in operation.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Macrodactyly and other forms of Congenital Overgrowth.

AN ordinary meeting of this Society was held on Feb. 10th, the President, Mr. Timothy Holmes, in the chair.

Sir GEORGE MURRAY HUMPHRY communicated a paper on Macrodactyly and some other forms of Congenital Overgrowth and their Relations to Tumours, of which the following is a brief abstract. An account was given of six specimens and casts of the affection in the museum of the University of Cambridge, and of nineteen cases published in various journals. The affection consisted in an overgrowth of all the tissues of the part—bones, ligaments, tendons, skin, and more particularly of the fat and connective tissue—these tissues usually presenting their normal characters. The overgrowth continued to proceed after birth, often at a rate exceeding that of the rest of the body, and so as to call for removal of the part. The hands and the feet were about equally liable, and the digits on the radial and tibial sides more than the others. In some cases the overgrowth showed a tendency to spread, more particularly along the sole. Now and then it was symmetrical, and occasionally it was associated with fatty growths in other parts. Reference was made to congenital overgrowths of like nature in lips, tongue, and face; and an analogy was drawn between these examples of intra-uterine insubordination to the laws of development and growth, and the growths or "tumours" of later life, all or nearly all of which—simple and malignant—were referable to an abnormal overgrowth of the normally existing tissues rather than to a starting into activity of latent embryonic germs.

Mr. R. WILLIAMS found that the arguments which Sir George Humphry had used were almost identical with his own. Changes of growth and development which commenced before birth continued during the whole period of life. The force in action was of the kind known as "integrating force," and the failure of this was the cause of all abnormal growths. He referred to hypertrophy of the breast as another instance of the kinds which had been mentioned, for in it there was not only enlargement, but also a repetition of the normal structure. If growths could arise in the way described from normal structure, they were even more likely to do so from "tumour germs."

Mr. MARMADUKE SHEILD was anxious to bring before the notice of the Society a class of cases which he believed had not as yet been described. It affected young adults, and was associated with flat and sweating feet. There was an enlargement of the great toe, and much pain and inconvenience were referred to the metatarso-phalangeal joint. The soft parts became very bulky, so that in an instance he exhibited the patient was discharged from the army because he could not pull his boots on. He had excised the joint, but found that both bone and cartilage presented simple overgrowth. He asked the opinion of the author as to the condition of molluscum fibrosum, where large flaps of skin

[1] Ophthalmic Review, vol. vi., p. 209, 1887.

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sometimes depended from different parts of the body. Patients in whom this occurred were occasionally also the subjects of bony and other morbid growths.

Mr. MACNAMARA referred to a case which had been under his care in 1881, in which the sclerotic presented a fibromatous growth; there was an exostosis of the lower jaw, and there were numerous elephantoid overgrowths of skin in various parts of the body.

Dr. ROBERT LEE, while congratulating the author on his paper, said that the propositions which had been advanced practically came to this: that congenital deformities were tumours and tumours were congenital deformities, and that all these changes and peculiarities were due to the same cause. But cases such as had been described differed both clinically and practically from tumours. He related a case which occurred thirty years ago of overgrowth of the arm of a girl, which began suddenly at seventeen. For this amputation was performed by Mr. de Morgan two inches below the shoulder and two inches above the diseased tissues. Immediately on removal he examined the arm, and found that there was a large cyst in the forearm connected with the radial nerve, and the latter was found to be degenerated even above the line of the healthy tissue. He held that cases of congenital overgrowth were essentially different from ordinary tumours, and to state otherwise was to go beyond facts. He had seen very many children with a congenitally enlarged eye or ear in whom no other peculiarities developed. Causes of a subtle nervous kind were probably often at work in producing these overgrowths, but these causes frequently remained unnoticed. The theory of "included germs" he imagined was not now believed in greatly by pathologists, and he concluded by expressing his conviction that these congenital intra-uterine departures from the normal were not tumours, though they might take on the same form.

Sir GEORGE HUMPHRY, in reply, said that he had of course met with many instances of hypertrophy of the mammary gland, though he did not remember any cases which had existed from birth. He had not endeavoured to collect the whole of the instances of those forms of congenital overgrowth which had been recorded, specimens of which existed in several London museums. Mr. Sheild's case was an instance of faulty arch with an elongated inner side of the foot, the great toe becoming more prominent, more liable to injury, and hence it became increased in size. He regarded the molluscous condition as one of localised hypertrophies taking place at the same time, but in different parts, in the same way that fatty tumours sometimes originated. He had not made the statement that these overgrowths were tumours, but he pointed out that there was a gentle gradation from simple overgrowth through nævi, warts, and polypi to the malignant tumours. A similarity of morbid phenomena appeared to produce both, and there was insubordination to the normal laws of growth. As in malignant neoplasms there was insubordination to the ordinary laws of growth of epithelium, so in the case of an enlarged toe there was insubordination to the normal laws of growth of the fœtus. Thus were brought into a like gradation those processes which seemed to be the most dissimilar. He could not agree that the theory of "tumour germs" had been given up; on the contrary, it was still commonly accepted, and it was this fact which had induced him to bring forward his remarks, in the hope of showing that the pathology of tumours might be attributed to another cause.

MEDICAL SOCIETY OF LONDON.

Debate on Angina Pectoris.

THE ordinary meeting of this Society, held on Feb. 9th, the President, Mr. Knowsley Thornton, being in the chair, was occupied with the discussion of a paper by Dr. Douglas Powell on Angina Pectoris. The debate was not concluded, and was adjourned for a fortnight.

Dr. DOUGLAS POWELL opened a discussion on the subject of Angina Pectoris, in respect of which he observed that there were many questions awaiting solution, and without which the most satisfactory treatment of this anxious and often deadly malady was hardly possible. He urged that the subject should be considered on a broader basis than had so far been accorded. It was not such a simple malady as had been thought. The characteristic symptoms ranged between the wide limits of remediable functional disorder on the one hand and fatal organic lesion of the cardio-vascular system on the other. He referred to the case of a lady aged forty-five, of neurotic temperament, who had complained of disturbed cardiac action for five years past. There was an old history of rheumatic fever fifteen years before; and five years ago, when riding hard across country, she was seized with severe cardiac pain which interfered with respiration. These symptoms recurred on subsequent occasions. The pulse was peculiar—it was small, cord-like, and of high tension. On using hard pressure with one finger the pulse was felt almost as well, if not quite as well, by a second finger placed further along the vessel. This phenomenon was due to a back wave from the periphery. The heart's action was somewhat laboured, intermitting twice in the minute; the first sound was muffled, but there was no distinct murmur. He then proceeded to give the definitions which had been proposed for this malady by various authors from the time of Heberden. The case above related he regarded as one of the first degree or one of vaso-motor angina in which the vascular system was unduly sensitive, the arterioles contracting suddenly under slight stimuli, thus raising the blood-pressure, which habitually ranged high and caused the heart to labour painfully. He observed that one noticeable feature in this variety of the disease was a kind of ambulatory uneasiness, the patient being fidgetty and restless. In regard to this vaso-motor form of angina, he remarked that it was of comparatively recent discovery, and the prognosis in such cases must necessarily depend largely upon the prior condition of the heart. He regarded the vaso-motor disturbance as an essential factor in the majority of cases of angina pectoris, just as bronchial hyperæsthesia was in cases of asthma. He believed it to be possible for the heart to succumb to these attacks without itself being affected with any obvious lesion. He referred to the case of a medical man aged thirty, who consulted him on account of paroxysms of breast-pang. He had recently lost his wife and had been much worried. On examination there was no evidence of enlargement or disease of the heart, and he regarded it as an example of vaso-motor angina. A six months' rest from work left him in a condition in all respects apparently sound. He referred to another case in a gentleman aged sixty-eight, who had long resided in the colonies, who could foretell these attacks by the pallor and deadness of his hands, and in whom a marked improvement in the general condition occurred after an attack of gouty eczema. He remarked on the rarity of a fatal issue in these cases, the attacks if unrelieved by art usually coming to a natural end, probably through the depressor nerve of the heart, and possibly through some analogous mechanism of the small vessels, under the stimulus of pressure, inhibiting and controlling cardiac and vaso-motor spasm. Cases were met with in which patients subject to this disease, having died of something else, exhibited no cardiac lesion. He agreed with Dr. Broadbent's suggestion that some cases of fatal cramp whilst bathing were probably due to sudden oppression of the heart from contraction of systemic arterioles; in fact, to vaso-motor angina of an intense kind, with perhaps a fatigued heart. Though physiologists maintained that when systemic arterioles were contracted by cold the visceral were dilated, and *vice versâ*, yet it was highly probable that under certain conditions of chill and emotion the whole arterial system might respond. He quoted cases which seemed to show that the right side of the heart had borne the brunt of the anginal attack. The persistent cardiac distress and rigid arteries of uræmia might almost be described as chronic persistent angina, though it was with the cases of so-called cardiac asthma in uræmia that the analogy with vaso-motory angina was strongest. He then passed on to discuss the angina pectoris gravior, where the vaso-motor disturbance was associated with degenerative cardiac disease. He questioned the view that the disease was necessarily caused by or associated with disease of the coronary arteries. The prognosis in the first group was favourable for many years, the probability being that death would ensue from some other cause, such as cerebral hæmorrhage, while in the last group an almost certainly fatal result might be anticipated within a short period. Both for prognosis and treatment it was important to make out the precise condition of the heart in respect of size, position of impulse, and power. For the treatment of these two varieties nitrite of amyl and nitro-glycerine were of great

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value, but far more so in the graver cardiac cases. In the first group they required to be associated with nervine tonics and sedatives, while in the second carminative stimulants were of special value. He compared the pain in sudden cases of death from angina to that associated with embolic gangrene in the limbs. Dr. Powell then described a syncopal variety of angina, which was rare except in persons over sixty-five, and was usually associated with gout, the subjects of it having a slow and irregular pulse. He suggested that some undue acidity of the blood might be concerned in its causation. The attacks were often associated with dyspepsia, and the treatment indicated was careful feeding, peptic tonics, and gentle exercise, with hot drinks and carminatives during the attacks. In conclusion, he said he regarded angina as a disturbed innervation of the heart and vessels associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety, and often amounting to a sense of impending death. The sub-groups were four in number—viz., angina pectoris vaso-motoria, angina pectoris gravior, primary cardiac angina, and syncopal angina. The first two forms bore a remarkable resemblance to their respiratory analogue, asthma.

Dr. ORD insisted on the remarkable parallel between asthma and angina, and he pointed out that the term asthma formerly comprehended a great number of varieties of difficulty of breathing. It had been pointed out by statisticians that in times past asthma was a very fatal disease according to the returns, its having become less so was probably due to better diagnosis. With regard, however, to angina the condition was rather different; at present people would have a larger range for angina than formerly, especially if they adopted Dr. Powell's conclusion. The old limited definition to which he alluded would certainly have to be extended to a larger number of cases in which one or two only of the constituent typical symptoms of the disease as first described would be present. Such cases might perhaps be termed "anginous" or "anginal." He then entered upon the consideration of the immediate causes of this condition, comprising vaso-motor disturbances, arterial tension, heart weakness, either of wall or of valve, or of both, and, lastly, those due to inhibitory and depressing influences. He pointed out that these anginoid attacks usually came on in the day-time, and the prognosis was notably aggravated when they occurred at night. He compared the two classes of cases, one in which the patient had angina on exertion as the consequence of sudden arterial tension; these patients very commonly had a weak heart, and so the extra strain thrown on the right side of that organ by the exercise precipitated the anginal attack. The other group was that of patients who had the attack independently of muscular exertion, and in these he thought the mechanism was probably through the nervous system, either emotionally or by reflex. He had seen illustrations of both classes. One of the aggravated conditions of attacks primarily anginous and determined by movement was the occurrence of these attacks by night. He insisted on the importance of dyspepsia as a factor in bringing about the attacks, and observed that if he were restricted to one remedy in the treatment of angina he would prefer sulphate of magnesia to nitro-glycerine. He mentioned the frequent coincidence of glycosuria with angina, which, he thought, authorised the inference that the visceral bloodvessels were dilated and not contracted, as the author seemed to suppose, along with the superficial vessels. He said that the connexion of gout with angina ought not to be forgotten, involving as it did a neurosis and changes in the chemical constitution of the tissues. Consequently treatment directed to the gout often relieved the angina. He insisted upon the fact that no sensations of anginous type were to be treated lightly, or the patient left without a proper explanation of the danger, with the precautions which became necessary.

Dr. BROADBENT said he had been unable to make up his mind as to the condition of the heart during the paroxysms. Sometimes the pulse was irregular and small, sometimes there was high arterial tension, sometimes not, and sometimes the pulse was practically unaffected throughout an attack even of great violence. The central fact, after all, in attacks of angina was that the heart was beaten, either by peripheral resistance or on account of failure of its own powers, and that fact fitted in very well with the author's classification. It was especially in those cases due to weakness of the heart that great danger arose. He pointed out that vaso-motor resistance alone would not be sufficient to determine the attacks. The proportion of cases of high arterial tension without angina pectoris was very much greater than the proportion of fatal cases of angina in which there was no disease of the coronary arteries. He presumed that disease of the coronary arteries acted by causing degeneration of the muscular fibres. It should not be forgotten that in bed and during sleep there was the upward pressure of the abdominal viscera and the curious running down of the cardiac powers to account for the supervention of the attacks. Some cases commenced with acute aortitis, leading to interference with the coronary circulation, causing a series of anginoid attacks, resulting in physical evidence of progressive cardiac failure. He pointed out that muscular exercise lowered very rapidly the resistance of the peripheral circulation, and the effects of exercise were mostly felt on the right side of the heart. With reference to the neurotic theory, he pointed out that the vast majority of anginal cases did not occur in the neurotic sex, for it was extremely rare in women. He bade them, therefore, beware of attaching too much importance to an unexplained neurosis. The occurrence of angina in gouty people he ascribed to its association with high arterial tension. He had also noted the existence of a myocarditis in patients suffering from glycosuria accompanied by high arterial tension, and this was usually associated with marked anginal paroxysms. He remarked on the fact that angina was seldom or never associated with mitral lesions, and anginal symptoms usually subsided on the supervention of a mitral lesion in a person subject to anginal attacks. His own experience seemed to show that the gravest cases of angina were those in which no reasonable explanation could be found to account for the symptoms.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

A MEETING was held on Friday, Jan. 2nd, Mr. John Poland, President, in the chair.

Supra-pubic Cystotomy.—Mr. W. JOHNSON SMITH, Seamen's Hospital, read a paper on this subject. Allusion was first made to the fact that not only in operation for free opening of the bladder, in which modern improvements, such as distension both of bladder and rectum, came into play, but also in simple puncture and aspiration, most surgeons at the present day operated above the symphysis pubis and not by way of the perineum. In cases of retention in which the bladder could not be relieved by way of the urethra, puncture above the symphysis and temporary retention of a fair-sized cannula would, it was held, be far preferable to repeated aspiration. Supra-pubic cystotomy was advocated as being a more beneficial procedure than the perineal operation in cases in which drainage of the bladder was indicated. After reference to the value of the high operation in the removal of certain forms of stone and of new growths from the interior of the bladder, more or less prolonged drainage by the supra-pubic method was commended as a valuable aid to the treatment of severe stricture, female fistulæ, and other affections of the urethra, especially in cases in which the urine had been rendered foul by chronic cystitis. Mr. Smith also showed two very large calculi he had removed by the supra-pubic method.

The Essential Principles in the Treatment of Constitutional Syphilis, of Soft Chancre, and of Gonorrhœa in the Male.—Dr. ROBERT S. WAINEWRIGHT, in a paper under the above title, gave three methods of treating the earlier stages of syphilis: 1. The radical cure, or Hutchinson's plan: small doses of mercury are given for a very prolonged period, with a view to prevent the appearance of tertiary and even secondary symptoms. 2 The ordinary London plan: treat the symptoms of syphilis as they arise by the internal administration of mercury. 3. The expectant, or Edinburgh plan: use only local applications to cure the earlier syphilitic manifestations, and avoid giving mercury internally. This he thought the best method of treatment. The tertiary stage of syphilis should be treated by very large doses of iodide of potassium (30 to 60 grains ter die). Soft chancre often produces a bubo, which should be treated as a soft chancre of the gland, not as a mere inflammation. Gonorrhœa in the male, if treated in the earliest stage by capsules of sandal wood oil (10 to 15 minims ter die), can often be cured in a fortnight or less, as the urine is thus rendered completely antiseptic.

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Reviews and Notices of Books.

A Guide to the Operations on the Brain. By ALEC FRASER. London: J. & A. Churchill. 1890.

BROCA'S discovery of the site of the faculty of articulate speech was first made public in 1861, and Ferrier's work on the Functions of the Brain was published in 1876. Many anatomists abroad and in this country have endeavoured to lay down rules for defining the situation of the more important fissures and convolutions. Foremost among our own countrymen have been Turner, Hare, Reid, Horsley, Thane, and Cunningham. The keystone of such work has hitherto been to define the position of the fissures of Rolando and of Silvius and of the convolutions that surround them.

The work before us is a fresh proof of the energy and thoroughness with which British anatomists are seeking to further the progress of surgery. Although professing itself to be a guide to operations on the brain, the plates are of such excellence and the dissections of such merit that no teacher of anatomy can afford to dispense with such a ready exposition of parts of the body which frequently vary, and concerning the relations of which much difference of opinion exists amongst writers.

The major part of the book consists of forty-two life-size plates in autotype, and this is preceded by a short but pregnant description of the mode in which the work has been accomplished, and of the serial dissections so far as they have been reproduced. There is no attempt to deal with the subject of localisation of function, but the method of demarcation is entirely different from that usually adopted in the text-books, in that the scalp is marked out by a series of tapes into sections with which the various areas of the brain are seen to correspond. This idea is probably a development of that of Hefftler, who drew his outlines with different coloured pencils. The tapes are placed in longitudinal and transverse directions, according to a prescribed system. It is to be regretted that the measurement adopted has been by inches, and not according to the metrical system. By means of composite views, the lines of these tapes are shown on the skull and their relations to the parts of the brain exhibited in the succeeding plates remain. The author finds that the pinna varies so much in size and position that any result based on lines drawn from any part of it is of little value from a practical or any other point of view. The divisions of the convexity of the brain have, with certain minor additions, been marked according to the widely-accepted description of Ecker. The plates which show the external surface of the brain are, perhaps, the most worthy of study of the whole series, not only for the artistic manner in which they are produced, but also on account of the extreme care and minuteness with which the dissection of the parts of the cerebrum, cerebellum, and of the cranial, dorsal, and cervical nerves has been carried out, though the latter are even better shown in some of the later pictures. The reproductions of the dissections of the interior of the brain are unequal, but all are of the greatest interest, and many display variations in the disposition of parts which have not hitherto been accepted. The practical value of these plates is well exemplified by the series exhibiting the course and position of the posterior horn of the lateral ventricle and the thickness of the hemisphere between it and the bone through which it may be reached from a spot behind the pinna indicated by reference to the tapes. In describing the relations of the deeper-lying structures to the surface of the scalp, the author points out that although the keynote of his remarks is, that for normal heads after birth the position of any structure of importance in their cavities varies proportionately with the variations of the circumference as given by the circumferential tapes of the respective heads, yet, as is mentioned later, when indicating the plates upon which the author would depend for guidance in opening the skull on account of lesions of various specified parts, that as the circumference of the heads illustrated varies from 20¼ to 23½ inches, after shaving the scalp, this being the average variation of adult heads, the surgeon may dispense with the rule and select the plate where the measurements are nearest to that of the patient. Furthermore, the relations of the cranial sutures to the scalp surface, both in the adult and the child, are shown to be indicated exactly by the disposition of the tapes, as are also the relations of the middle meningeal and its branches with the dura mater, though the plate illustrating this point is not so distinct as are most of the others.

The series of plates which will probably be of the greatest practical value are the composites showing the relations of the external surface of the brain to the scalp. These are from every point of view, and were taken from eighteen different heads. All the relations of the various tapes, as can be seen at a glance at the several heads, are the same in the young and in the adult, and exhibit in a very striking manner the proportional relationships of the external surface of the brain in heads varying in circumference from 14¼ in. to 23½ in.

The plates illustrating the central lobes and lateral ventricles and their relations to the scalp are less satisfactory than the majority of the series, but their practical utility is not diminished, since the relations of the island, the anterior horn of the lateral ventricle, the descending horn and the hippocampus major to the tapes and spaces can be seen at a glance, as well as those of the optic thalami, the caudate nuclei, and other parts in the lateral and third ventricle. The relations of the lower part of the lateral lobe of the cerebellum in the adult and in the child can be better appreciated from the system of demarcation here adopted than by any description, and these plates are of the most instructive value. By prolonging the median longitudinal tape to the lower part of the neck in the adult, and to the lumbar region in the child, a series of accurate guides are offered to the surgeon to reach every cranial and spinal nerve, of which the dissections are most carefully executed and beautifully shown. With regard to the plates themselves, which are reproduced from the negatives by some modification of the Collotype process, there is room for no comment but that of praise. The distinctness of detail and the expression of light and shadow leave nothing to be desired in almost every instance, and where these are deficient the fault was probably unavoidable, and lay in the negatives rather than in the reproductions. The photographs were taken from above with a camera having a draw of 4½ ft., supported on a vertical pillar of special construction, which can be raised if needed to a height of 10½ ft., so that the least distance between the lens and the object is 6 ft. After focussing with a No. 3 Waterhouse diaphragm, a special one is substituted, having a diameter of about one centimetre. It seems somewhat surprising that the author should have found it necessary to resort to this very elaborate mechanism to obtain his results. No pillar, however well constructed, can at such length be free from such vibration as must imperil the accuracy of outline, even in a long exposure such as is needed with so minute a stop, especially when the backs containing plates have to be changed. Again, the idea of making a different exposure for plates that have to be kept is contrary to the experience of all photographic artists, as there is no evidence of the continuing action of light upon the film; and even if this were

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proved, a very slight experience should allow of its accurate correction during development. With regard to the lens adopted—a rapid rectilinear of 29 in. equivalent focus,—it would seem preferable, upon purely optical grounds, to use one of very much shorter focus, and to obtain the diagrams upon a $6\frac{1}{4} \times 4\frac{3}{4}$ plate, from which they could be enlarged to the required size. This would give a considerable saving in time as well as in expense. Nor need the matter of registration be one of difficulty if a simple process well known to photographers be adopted. These, however, are details which the author has had to consider before finally adopting the process by which his results have been obtained; and when it is considered that the work before us represents only a modicum of the labour which has been undertaken, and gives no account of the many and inevitable failures which have been encountered, we must admire the more the patience and energy which have been bestowed upon it. The opening sentence of the preface gives hope that this volume is but the prelude to others, and surgeons and anatomists will alike look earnestly for every fresh series of such accurate delineations of human anatomy.

A Manual and Atlas of Medical Ophthalmoscopy. By W. R. GOWERS, M.D., F.R.S., F.R.C.P. Third Edition, Revised throughout, with numerous additions and additional Illustrations. Edited with the assistance of MARCUS GUNN, M.B., F.R.C.S. London: J. & A. Churchill. 1890.

THE appearance of a third edition of this work testifies to its continued appreciation by the profession. The present volume has not been materially altered from the form in which the book originally appeared. The most noticeable change is the omission of the appendices devoted to the use of the ophthalmoscope and to the descriptions of clinical cases, and the substitution of a brief but useful and practical account of methods for sketching the fundus oculi. The whole work has been subjected to a revision sufficiently thorough to involve additions and alterations on almost every page and in almost every paragraph, and an endeavour has been made to embody in it whatever of real value has been added to our knowledge since the appearance of the last edition. Considerable development is noticeable in connexion with the accounts of tuberculosis, malignant disease, gout, retro-bulbar neuritis, and the congestion and neuritis in alcoholism. A fuller account is given of the effects of poisons, and a separate paragraph is devoted to bisulphide of carbon as the apparent cause of peri-neuritis. On account of this extension the text now occupies 298 pages instead of 256, but owing to the omissions previously mentioned the entire book has thirty-two pages less than the second edition, and is altogether more compact.

In spite of the more widely extended use of the ophthalmoscope, with part of which former editions of this work may be credited, observations relating to the appearance of the fundus oculi in disease are still scattered and infrequent, and a complete account of the various changes is more than can be reasonably expected at the present time. The volume affords a ready means of reference, and forms a valuable compendium of such knowledge as we already possess on the subject. The microscopic figures that were represented on photo-lithographic plates in preceding editions, have been re-engraved as phototype blocks, and though they have lost somewhat in size, sharpness, and shade contrast in the transference, they undoubtedly are more conveniently placed in the text of the work in connexion with the subjects to which they refer. Other ophthalmoscopic figures prepared in the same way have also been added, noticeably sketches illustrating septic emboli and hæmorrhages in ulcerative endocarditis. The coloured plates have been judiciously left as in former editions. Admirably executed and taken from well-selected cases, they convey an excellent idea of the pathological appearances. The adoption of mono-chrome in the majority of them serves to concentrate the attention on the form and light and shade effects, and secures a more exact representation of delicate pathological appearances than can be obtained by chromo-lithography. The last edition is certainly an advance on the previous ones, and the book fills a useful place in medical literature.

THE LATE DR. MATTHEWS DUNCAN.

IN beginning his course of clinical lectures on Jan. 29th, at St. Bartholomew's Hospital, Dr. Champneys referred to his predecessor, Dr. Matthews Duncan, in the following terms:—

Gentlemen,—The same thought is probably occupying the minds of all of us to-day—the thought that a voice to which most of you have listened with pleasure and with great profit for many years no longer fills this theatre; that a presence embodying the dignity and the learning which was characteristic of its owner has disappeared from among us for ever. This would, in some sense, have been the position under any circumstances, for to each of your teachers, and to me in my turn, must come the time of retirement, when, in the words of the old Roman poet Ennius, he

"Senio confectu' quiescit."

And yet how different are the circumstances from what we might have hoped and should have chosen for him. A man of less indomitable will would perhaps have taken warning earlier, would have sought relief from some of the duties which were his greatest pleasure, as they were also his most engrossing work. But he would not yield; he struggled on in harness till, as you all know, and some of you saw, he broke down in the act of instructing you, and after a vain effort to tide over the few weeks which remained of last summer session he left the country of his adoption—to die. This great hospital has lost, the profession has lost, the country has lost, the world has lost—how much can I say? But you and I have also lost in a special way, for had his absence to-day been due merely to his inevitable retirement, it would have been my endeavour to try to prevent that retirement from being absolute; it would have been my endeavour to persuade him to come among us from time to time and to give us lectures, which I should have delighted to hear side by side with you, and which his great learning and rich experience would have made, I feel sure, no unpleasant task for him. But *dis aliter visum*, and that dream is over. But besides this I have lost a kind and dear friend, from whom I might have learnt very much regarding the management of this great department, the changes which have taken place during my absence of ten years, and the prospects of the future. These I must learn without this help. Gentlemen, I stand before you as a stranger, and yet the kindness which I have experienced on my return seems to forbid me to use such a term. Standing as I do in the place of the greatest obstetrician of our time, I ask you to continue to me the goodwill which I know from him that you never failed to show, and, as a motto for us all, I would say, "May the spirit of James Matthews Duncan preside over all our meetings."

THE CITY OF LONDON TRUSS SOCIETY.—The annual report of this Society was submitted to the governors at a meeting in Finsbury-square last week. The committee recorded the fact that the income of the Society had been fairly maintained. The total receipts for the twelvemonth amounted to £4698. The expenditure was £5030. The committee acknowledge the aid of the late Lord Mayor in presiding at the annual festival. The accounts which accompanied the report showed that, inclusive of the loan by the bankers, the balance in hand at the close of the year was £785. Mr. J. W. Long expressed regret that the committee had been obliged to recommend the sale of a further portion of the invested funds, but this had become necessary since they, as in the case of many other institutions, had been dispensing in the form of charity more than had actually been received.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 14, 1891.

THE "revised scheme" published by the Senate of the University of London in June, 1890, has provoked so much opposition from the provincial colleges, and proved so unacceptable to the Royal Colleges of Physicians and Surgeons —especially to the latter,—that its provisional acceptance by the Councils of University and King's Colleges has not been sufficient to induce the Senate to lay it before Convocation, which is the necessary preliminary to applying to the Privy Council for a new Charter on the bases laid down by the Senate. That scheme has now been withdrawn and replaced by another, which was passed by the Senate on the 4th inst., and it is understood that this will be the final attempt made by that body to solve the problem referred to it by the Royal Commissioners; but as it has hitherto proved so pliable in endeavouring to please everybody by departing from its old traditions, we should not be surprised, if any exception be taken to the provisions of this scheme, to see still another "latest revised" scheme forthcoming. We publish the scheme on page 391, and invite the careful attention to its clauses of those of our readers who are interested in university education in London, and in obtaining degrees for London medical students on similar terms to those on which they can be obtained in the other centres of medical education. Doubtless we shall soon be favoured with an expression of opinion from those bodies which are specially interested in this scheme of reconstitution.

We must first point out that the scheme differs in its very essence from that recommended by the Royal Commissioners. Their recommendation was, "that the teaching institutions of a University of London, in the proper sense of those words,—a university intended to have as to teaching a proper metropolitan character,—ought in our judgment to be in or near London. For other parts of the kingdom (as for the colonies) it is sufficient that there should be access, as heretofore, to examinations and degrees. To bring in from all parts of the kingdom teaching institutions having no special connexion with London might have results similar to those of the former system of affiliation, when in like manner extended. The powers which might be given to such institutions would greatly, if not wholly, neutralise the value of the share in them granted to the colleges in London. The university, so constituted, would not be what is wanted; it would not be a teaching university in and for London. On this point, therefore, our opinion is that the metropolitan limit should be adhered to." In the scheme of last year, which was accepted by University and King's Colleges, this recommendation was adopted; in the present scheme, influenced by the powerful opposition of the provincial colleges, it has been thrown overboard, and clauses are introduced providing for the admission of provincial Fellows on the Senate (3, vi. & viii.); for a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the provincial constituent colleges (14); for the admission of provincial colleges as constituent colleges (26); for the formation of provincial faculties (35), and of provincial boards of studies (44). Their duties and functions and their relations to examinations and degrees in science and arts will in every case run *pari passu* with those assigned to the London teaching colleges. To the principals and chief officers of these provincial colleges are allotted four seats on the Senate, six being given to University and King's Colleges, and to the provincial faculties four, against twelve to be elected by the London faculties. Two questions naturally arise from a consideration of this part of the scheme—(1) Will University and King's Colleges agree to this wide departure from the former scheme of June, 1890, and from the distinct recommendation of the Royal Commission, which is everywhere adverse to the admission of the provincial colleges as constituent colleges? If they accept a practical equality with the provincial colleges, any hope of a *real* Teaching University in London may be given up. (2) Will the provincial colleges and faculties be satisfied with a smaller representation on the Senate than that allotted to the two London teaching colleges and the London faculties? If not, the scheme, which is already enlarged to a Senate of fifty-two members, must be recast. The Royal Commissioners recommended the much more convenient number of thirty-eight, and the former scheme only formulated a body of forty-two.

We now turn to the provisions for facilitating the granting of medical degrees to London students on equitable terms. The words of the Royal Commissioners on this point are: "As to medical degrees, we think that a standard of attainment appropriate for honours ought no longer to be required by the University for an ordinary or 'pass' degree." To carry out this recommendation, a Standing Committee of the Senate for the Faculty of Medicine will be appointed, consisting of the Presidents of the two Royal Colleges, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, one Fellow holding a chair in a provincial constituent College of Medicine, and nine members to be elected by the Senate. (16.) The special clauses laying down the terms on which a "pass" M.B. degree is to be granted are the following:—

"47. The Senate shall have power to enter into arrangements with the Royal Colleges for conducting the examinations in anatomy, physiology, medicine, surgery, and midwifery, for the pass M.B. degree by a board of examiners, consisting of the examiners appointed by the University, and examiners to be appointed by the Royal Colleges, who shall join in the reports to the Senate on such examinations. The examiners appointed by the University may be called upon, if the Senate so think fit, to make in addition separate reports. These examinations may, if so agreed on, be conducted in combination with examinations for the Royal Colleges. The arrangements for giving effect to this clause shall be carried out under the direction of a committee to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine, and a committee to be appointed by the two Royal Colleges. Such arrangements to be subject to the approval of the Senate and of the two Royal Colleges. This arrangement for joint examination shall not lessen or interfere with the duty of the

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Senate to be satisfied as to the adequacy of the examinations in all respects.

"48. Candidates for degrees in the Faculty of Medicine to show that they have passed through the required courses of instruction in one or more of the constituent colleges in that faculty, or of the recognised medical institutions."

The latter paragraph corresponds word for word with that in the scheme of June, 1890, but in the former paragraph a most material alteration has been made. In the older scheme a board of examiners was to be formed for conducting the medical examinations for the pass M.B. degree, consisting of examiners appointed by the University and of examiners appointed by the Royal Colleges; but in the new scheme it is added that "the arrangements for giving effect to this clause shall be carried out under the direction of a committee, to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine and a committee to be appointed by the two Royal Colleges, such arrangements to be subject to the approval of the Senate and *of the two Royal Colleges.*" The Senate will therefore not only delegate the conduct of its pass M.B. examination to a joint Board of Examiners partly nominated by itself and partly by the Royal Colleges, but will give up the supervision of the arrangements for this examination to a joint committee of the University and of the two Royal Colleges. As the Standing Committee of the Senate for the Faculty of Medicine must largely consist of Fellows of one or other of the Royal Colleges, this arrangement will practically and definitely place the granting of the pass M.B. degree of the University into the hands of the Royal Colleges, whose approval of the arrangements, as well as that of the Senate, is requisite. Are the medical graduates of the University prepared for this transfer of the University privileges to the Corporations? Have the Royal Colleges altered the arrangements of their examinations on the lines laid down by the inspectors appointed by the General Medical Council, or have these recommendations practically been ignored? These questions will probably occur to the medical graduates when this scheme of the Senate for surrendering the real control over the most important part of its duties, so far as medical degrees are concerned, comes before them in Convocation for their consideration. The Senate has in this paragraph conceded the main point raised by the College of Surgeons in its contention with the College of Physicians, so that now both of the Royal Colleges will probably agree to the scheme. We cannot think that the Senate has behaved well to the Fellows of the Royal College of Physicians by ignoring their acceptance of the former proposal, which was undoubtedly the just one—i.e., that with due representation of the Royal Colleges on the Senate, the medical examinations should be placed under the direction of the Standing Committee of the Senate for the Faculty of Medicine, and not of a body partly under other jurisdiction and control. Even so late as Dec. 19th, 1890, the committee of that College unanimously resolved in favour of "a distinct standing committee, having special charge of the London work of the University in Medicine, analogous to the provision in arts and science"—that is to say, a standing committee of the Senate only. Now, apparently, that standing committee of the Senate as a whole is to have to do only with honours degrees, and the Royal Colleges are to have as much power as the Senate in granting pass degrees. There are two further questions which were mooted during the deliberations of the Colleges on the old scheme, which are not mentioned in this—viz., the *direct* representation on the Senate of the London medical schools, and the amount of fees to be paid by the candidates for the pass M.B. degree. Will the Royal Colleges persist in their former demand for direct representation of the London medical schools in addition to those proposed to be elected by the London Faculty of Medicine (3, vii.)? Will the Senate agree to the raising of its fees for the pass M.B. examinations in accordance with the existing scale of fees now charged by the corporations for their conjoint diplomas, £36 15*s.*—a larger sum than is charged by any other examining board, whilst its own honours degrees may be obtained at the moderate cost of £5 for each of the three professional examinations for the M.B. degree? The future decisions on these points will be awaited with great interest by the medical students and medical teachers of London. We cannot but direct attention to the clumsy arrangements by which the work of the reconstituted University is to be carried on. A Senate of fifty-two members is too large for the exercise of any real control, and hence the future prosperity and work of the University must depend on the wisdom and general agreement of no less than six standing committees, in some cases with opposed interests—viz., that for arts and science in connexion with London colleges, for arts and science in connexion with provincial colleges, for arts and science for non-collegiate students, in medicine, in laws, and in connexion with the Royal Colleges for the pass M.B. degree. This is the substitute for London which is proposed by the Senate of the University in the place of a real teaching university modelled on the lines of the Scotch Universities, the Victoria University, or the older Universities of Oxford, Cambridge, and Durham.

IN the last number of the *Annales de l'Institut Pasteur* there appears (from the Bacteriological Laboratory of Val-de-Grâce) a most interesting paper on tetanus by Drs. VAILLARD and VINCENT, which appears to throw very considerable light on the subject of tetanus, and to clear up a number of points and observations that have hitherto been enshrouded in obscurity. After describing the organism, and identifying it with that already made familiar through the papers of recent writers, the authors give it as their firm opinion that in cases of artificial inoculation of pure cultures it is always the poison introduced along with the bacillus, and not the organism itself, that acts upon the animal. This indeed seems to be probable, as they are able to prove that almost inconceivably minute doses of this poison, which they compare with snake poison, are quite sufficient to produce all the symptoms of most acute tetanus; in fact, it was almost impossible, from some of the cultures that they obtained, to administer a dose that was not lethal.

An exceedingly interesting feature brought out in the course of their work is that in no case was the poison developed as soon as the organism began to grow; in fact,

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gelatine cultures of the tetanus bacillus were never capable of producing toxic symptoms until liquefaction of the gelatine had commenced, when spores were demonstrated to have been formed, and when the peculiar disagreeable odour so characteristic of tetanus cultures had become perceptible. They associate both the odour and the peptonising power with the formation of the poison in the cultures. That it was not due merely to the presence of the spores that the material was poisonous they demonstrated by heating their cultures to a temperature of 62° C. for a short time (a temperature which is quite incapable of interfering with the vitality of the spores), when it was found that cultures so heated and introduced by inoculation into a rabbit or a guinea-pig failed to produce any tetanus, thus proving that although the spores are not killed the poison had been destroyed by the heat. The spores were proved to be living by making fresh cultures from them in artificial media; after a time they grew luxuriantly, and if left to grow for eight or ten days produced another crop of the poison. By simply washing away the poison from the spores with distilled water they also obtained similar results, for, although the spores could still develop and form the specific poison in artificial media, they were, when inoculated, incapable of giving rise to any symptoms of tetanus. From the reaction to heat of a substance they were able to separate, and from its resemblance to the diastases in other respects, they conclude that they have obtained from tetanus cultures the true tetanus poison, a poison, however, that cannot be formed by the tetanus bacillus in healthy tissues. The micro-organisms are here so rapidly attacked by the leucocytes that they are rendered *hors de combat* before they have time to form their poison.

It has for long been well known that the tetanus bacillus could not develop in the tissues except, apparently, in the presence of other organisms, and the suggestion is offered that these other organisms act in one of two ways: they either paralyse the activity of the leucocytes, or they draw off, as it were, their attention and activity from the tetanus bacillus, thus allowing it sufficient time to develop its characteristic products. It is interesting to note that Drs. VAILLARD and VINCENT consider that in many respects the tetanus bacillus is extremely like the diphtheria bacillus, the method of action on and in the organism being essentially the same in the two cases, the above factors in all probability playing a part in diphtheria much as in the case of tetanus; and it is evident that in studying the one poison much light may be thrown on the other. BEHRING and KITASATO appreciated this fact, and combined their forces to work out the question of immunity in these two diseases. It is obvious, however, from a consideration of some of the points that are indicated in this paper, that there are many sources of fallacy that will have to be eliminated before the ultimate explanation of the condition of immunity in protected animals can be given. The facts that this poison is active in such extraordinarily minute quantities, and that the micro-organisms are able to grow with such difficulty in the human tissues, allow us to hope that extremely minute changes in the blood may be quite sufficient to secure the alteration or breaking-down of the virulent poison, even when it has become diffused throughout the system. So long as the organism is localised to the wound, there is of course more chance of coping successfully with the disease, although here, as in other diseases, there always appears to be the possibility of the poison exerting such a paralysing influence on the cells that usually take up foreign substances, that secondary septic conditions may be liable to occur even when the action of the tetanic poison can be antagonised so far as its primary effects on the cells are concerned. One question appears to be set at rest, and that is, as regards tetanus and diphtheria, the ptomaines have had their day, whatever may become of the products of other organisms. It may be accepted that here, at any rate, we have some subtle poison which, although it has not yet been actually separated, has been so far isolated that it may be taken as proved that it is not an alkaloid or basic poison. A most remarkable feature is that, in peptonising gelatine with the filtrate from a meat-broth culture of the tetanus bacillus, the poisonous properties are lost to a certain degree in direct proportion to the amount of gelatine that is peptonised; this, taken in conjunction with the fact that the properties are not developed until the gelatine begins to liquefy, has led Drs. VAILLARD and VINCENT to suppose that the same agent that peptonises the gelatine is the active agent in bringing about the development of the toxic symptoms of tetanus.

A phenomenon that may give us some cause for concern, in considering the phase on which recent bacteriological research has entered, is that many of these poisons by their presence in extremely minute quantities in the fluids of the body may interfere in a very marked degree with the exercise of the functions not only of nutrition, but of those of excretion, by which it is possible that two sets of changes may be set up. Protected animals or individuals may die from septicæmia, just as they may succumb with symptoms of septic poisoning after the introduction of jequirity infusion or after mild snake-bites; we may, however, have a more chronic process similar to that sometimes described as resulting from the injection of sterilised tubercle products, a condition which has recently been described as a kind of marasmus. We shall no doubt pass through this stage of bacteriological inquiry to find that in some cases inoculation may be resorted to after the patient is actually attacked, as in PASTEUR'S treatment of hydrophobia, though scarcely as a preventive measure; whilst in other cases—those in which the immunity seems to be conditioned by other factors—protective inoculation will still be continued, and with excellent results.

One lesson to be learned from these inquiries on tetanus and its etiology is that we should be encouraged to continue the search for the vegetable or animal micro-organism that is probably the etiological factor in hydrophobia. Of course, it must never be lost sight of that the hydrophobic virus may be formed only within the body, and even by the cells of the body under the stimulation of the special poison or ferments produced elsewhere; but such a method of formation is so utterly different from anything that has yet been met with in the biological world that for the present the

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micro-organismal rather than the humoral pathology of rabies must be accepted, even though it has as yet not a single fragment of *direct* evidence in its favour.

AN article of more than usual interest and importance appears in the current number of the *Edinburgh Review* upon the recent progress of sanitary reform. The importance which the reviewer claims for his subject is by no means overstated, and his summary of the leading features of the history in this department of the past fifty years will do something, and should do much, to awaken and instruct the public appreciation, both of what has been done and what can yet be done to improve the conditions under which, especially in towns and unhealthy areas, human life has to be spent. The tone of the present article is none the worse for being a little optimistic; indeed, optimism is, and always has been, the inspiration of all successful effort for reform. It is, perhaps, not desirable that the public at large should look too complacently upon the existing organisation of what may perhaps be called the sanitary services, but a review of the work actually accomplished by what has, upon the highest estimate, been up to the present time a modest legislative enterprise, justifies the confident anticipation that well-directed effort in the future will yield results of inestimable importance to the community at large, and in particular to those classes which in the past have borne the brunt of bad sanitary conditions.

It is not, however, with the reviewer's summary of past events that we are chiefly concerned, although these are of sufficient interest, but with his suggestions for reform. Even here the field over which he ranges is too large for us to accompany him throughout its whole extent. And, indeed, his suggestions upon some parts of his topic are somewhat too vague for useful discussion in their present form. Thus, for example, it is by no means necessary that one should be an enthusiastic admirer of the existing organisation of the Public Health Department to refrain from discussing the creation of an independent Secretaryship of State charged with the exclusive care of sanitation. Such a reform may or may not be desirable in itself, but it is certainly not the most pressing matter connected with this subject at the present time. Nor is it even ripe for discussion. Similarly we may postpone the question, interesting enough from our own point of view, whether the medical profession could be relied on to furnish, if necessary, a succession of men fitted not only in a professional sense, but also in respect of statesmanship, to undertake the control of such a department. For the present it may be sufficient to say that we take a sanguine view of the matter, and that when the time comes we shall be prepared to support our opinion in discussion. The controversy is not, however, of a kind that we have any disposition to precipitate.

A matter of more practical importance is the suggestion conveyed in the present article that hospitals and medical charities should be brought under the efficient control of a Central Board of Health. This is a question not only of capital importance in itself, but one on which at the present time the public mind is more than usually exercised. The Committee of the House of Lords, however strictly limited may be the scope of its inquiries, can hardly construct a report which will not have a large significance in relation to institutions beyond the metropolitan area, and even within that area all the problems which hospital organisation presents have to be faced and dealt with. But it is above all things necessary, in attacking this subject, to remember that it is complicated by the fact that these institutions are very largely dependent upon voluntary public support. To deal with them in these circumstances is a matter of no ordinary delicacy. The stream of charity may easily be diverted by the advent of official directors and the circumstances of official control. The idea that he who "pays the piper" is entitled to call the tune is so ingrained in the mind of the modern Englishman that it would probably be found a perfectly impracticable project to combine official administration with voluntary support. Any scheme of control by Parliament or Parliamentary officers would need to be supplemented by a sufficient—that is to say, a complete—provision of Parliamentary funds out of which the institutions could be maintained. This is the *crux* of the problem, and it is well that it should be frankly stated and fully realised at the very outset of any attempt at solution.

But there is, short of public control, the wholly different matter of the full publication of statistics, sufficient to make it possible to establish instructive comparisons between various institutions, which is deserving of the most careful consideration. We do not discover in the article any indication that the writer has in view this very material consideration. It is open to doubt whether at the present time it would be possible to devise a perfectly satisfactory organisation of the medical charities upon a new basis. It may well be that a competent central authority would be able to effect a great, even enormous, economy of the present overlapping and badly organised work of these institutions. But he would be a bold man who should undertake to lay down the lines of any such scheme upon our present information. A decade spent in organising knowledge on such a subject would be time well employed; and although we confess to some diffidence in accepting what we understand to be the full meaning of the writer's somewhat indefinite suggestions, we shall cordially concur in any steps that may be taken to secure for the public full access to all the facts which tend to show how the field of charitable sick relief is occupied; to what extent the various workers in it are aiding, and to what extent they are impeding one another; where the work is most efficiently done, both in a professional and in an economic sense, and where and how failures in these respects are to be detected and remedied. It cannot be doubted that in the absence of organisation many errors of administration, and perhaps some of aim even, have crept in. As matters stand, that, even where most regrettable, should not be matter for reproach; and nothing would tend more both to soften the asperities of criticism and point the way of reform than the systematic collection and effective dissemination of authentic and exhaustive statements of fact.

BEFORE continuing our notice of Dr. LAWSON'S paper on the results of the repeal of the Contagious Diseases Acts it is desirable to correct an error into which we fell last week,

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It appears that the paper was prepared at the request of Dr. F. J. MOUAT, the present President of the Royal Statistical Society, and not at that of the late Dr. GRAHAM BALFOUR, who was too ill at the time to take any active part in the Society's work.

In the paper of Surgeon-General LAWSON the records of syphilis show very considerable fluctuations at various periods. Thus, among the Dragoon Guards and Dragoons in the United Kingdom annually from 1830 to 1837, and those of the same force and Foot Guards (chiefly quartered in London) from 1837 to 1847, with their millesimal ratios throughout; among the Dragoon Guards and Dragoons the mean ratio of primary venereal sores was 79·5 per 1000. It was 72 per 1000 in 1830, 96 in 1832, 80 in 1833, 95 in 1834; after which it went down to 63 and 62 in 1836–38. Similar fluctuations were observed among the Foot Guards, the ratio varying from 107 in 1837–38 to 217 in 1843–44. Similar fluctuations occurred in gonorrhœa, but in different years, and not quite so pronounced. All this was long prior to the year 1864, when the first Contagious Diseases Act was passed, hence the importance of these fluctuations when comparing different years with one another.

It is well known that, for the purposes of comparing stations under the Acts with those not under them, fourteen of the latter were selected for comparison, and were called "fourteen stations never under the Acts." These were: Isle of Wight, London, Warley, Hounslow, Pembroke Dock, Sheffield, Manchester, Preston, Edinburgh, Fermoy, Limerick, Athlone, Dublin, and Belfast. The fourteen stations under the Acts were Devonport and Plymouth, Portsmouth, Chatham and Sheerness, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Winchester, Dover, Canterbury, Maidstone, Cork, and Curragh. Besides these two sets of stations was a third, designated "all the stations never under the Acts." In 1860 at the fourteen stations which came under the Acts in 1864 and subsequently, the ratio of primary sores was 146; at the fourteen unsubjected stations 134, and at all the stations never under the Acts 131. From these points all fell, so that in 1862 they stood at 117, 103, and 99 respectively. In 1863 the admissions at the fourteen unsubjected stations rose to 117, while those at the fourteen subjected were 107, and at all the unsubjected 108. The compulsory examination began to take effect in 1867, and though there was an increase of the incidence of the disease on the country as indicated by rises in the ratio of 17 per 1000 in both the fourteen and whole unsubjected districts, that at the fourteen stations under the Acts was 4 per 1000 only; and from this year the ratios at the fourteen subjected stations were always much under those in the whole until 1884, the last year of the comparison. In 1871 the incidence of the disease on the country seemed at its lowest, being 93 for the fourteen unsubjected stations, 81 for all the subjected, and 51 only for the fourteen subjected. The stoppage of pay showed its effects in 1874 by a fall at each class of stations, which was continued in 1875, and still traceable up to 1877, after which the advance of another epidemic wave caused a rise at the fourteen unsubjected stations of 40 per 1000, at all the unsubjected of 20, while at the fourteen subjected it was 4 only. In 1879 there was a slight reduction of the ratio at both classes of unsubjected stations, but a rise of about the same amount at the fourteen subjected; but in 1880, with the cessation of stoppage of pay, there was a general rise, amounting to 39 at the fourteen unsubjected stations, to 37 on the whole unsubjected, and to 27 at the fourteen subjected stations; a portion of this was no doubt due to an increasing incidence of the disease over the country, but a large portion also to the removal of the inducement to conceal primary forms of the disease by stoppage of pay. The beneficial effects of the Acts will be seen by the following figures. In 1860 to 1863, when no Acts were in force, the ratio of primary sores at the stations subsequently protected by them was 129·8. In 1870 to 1873, the Acts being then enforced in all, it fell to 52·5. Secondary syphilis fell from 39·9 to 20·2; gonorrhœa from 134·6 to 100·3. At all the stations never under the Acts the fall in primary sores was from 116·3 to 86·0, in secondary disease from 30·5 to 27·4, and in gonorrhœa from 116·1 to 95. At the fourteen unsubjected stations primary sores fell from 120·6 to 107·9; secondary syphilis rose from 31·6 to 31·8; gonorrhœa fell from 112·1 to 71·6. In 1880 to 1882, stoppage of pay having terminated, the ratio of primary sores at the protected stations was 75·6, secondary syphilis 26·6, gonorrhœa 99·0. At all the stations never under the Acts the ratio of primary sores was 123·0; that of secondary syphilis 32·5; gonorrhœa 110·4. At the fourteen unsubjected stations the ratio of primary disease was 175·9, of secondary syphilis 38·9, and of gonorrhœa 128·4.

The Acts were suspended in 1883, and wholly repealed subsequently; the separation of the tables has not been continued since 1884. The ratios of disease among all the troops are as follows:—

	Primary Sores.	Secondary Syphilis.	Gonorrhœa.
In 1860, ratio per 1000 of admission	140	36	133
In 1885, ratio per 1000 of admission	127	27	121

From this it will be seen that the ratio of disease has returned to what it was in 1860 before the first Act was enforced.

There are many other interesting points in Inspector-General LAWSON'S paper which show immense pains, great research and a most thorough knowledge of the whole subject. Enough has been given to show the benefits of the Contagious Diseases Acts and the disastrous results of their repeal. We hope to give later on some statistics from Malta showing the benefits of this legislation there, and also some figures on the Royal Navy and the civil population of the stations under the Acts, which Dr. LAWSON was unable to adduce previously.

WE are informed that the electrical exhibition which is to take place at Frankfort-on-the-Maine will have a section devoted to illustrating the medical aspect of the subject. The applications of the constant and induced currents to the diagnosis and treatment of internal diseases will be demonstrated, and models of apparatus for electrolysis and galvano-cautery will be shown. Rheostats and other apparatus for the careful application of the current to medical purposes are to be exhibited. The value of the latest advances of electricity as applied to medicine will be shown by several exhibitors.

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Annotations.

"Ne quid nimis."

NEW SCHOOL OF HUMAN ANATOMY AT CAMBRIDGE.

THIS building, which is one of the finest and best suited for its purpose in the kingdom, with large dissecting room above, well lighted by northern skylights and side windows, spacious museum beneath, rooms for study for the students, rooms for the professors and other teachers, and various requisite appliances, was inaugurated on the 29th ult. by an interesting lecture on the History of Anatomy in Cambridge, delivered by Professor Macalister in the large lecture room. Beginning with Caius, who on his return from Padua, where he graduated as M.D., and where he was acquainted with Montanus and Vesalius, introduced the study of practical human anatomy into England, and provided for its being carried out in the College known by his name in Cambridge, which he founded in 1557, Professor Macalister referred to the probability that Harvey, who was a member of the College, here acquired his first knowledge of anatomy. He gave a short account of the works of Glisson, Wharton, and others, who had prosecuted the science of anatomy in Cambridge, and of the various persons who had held the chair of Anatomy from the time of its foundation in 1707 to Sir Busick Harwood, Clark, and Humphry. The lecture was greatly applauded by the large audience. At the conclusion Sir George Humphry congratulated the University on the fact of this spacious and well-arranged building being devoted to the study and teaching of human anatomy, on the interest shown in the event by the large audience assembled in that splendid theatre, and on the lecture they had just heard from one who to his many acquirements added that of as extensive a knowledge of the history of anatomy as that of any living man. He trusted that the classes might long remain as large as they now are, and that Professor Macalister might long be spared to teach and direct them.

THE LONDON WATER BILLS.

THE present session will have an especial interest for water drinkers in London, for the reason that the whole question of metropolitan water-supply will almost certainly be investigated by a Parliamentary Committee or by a Commission. Already three Bills relating to this subject have been published. One promoted by the City Corporation proposes to constitute a Water Commission to acquire the undertakings of the several water companies and to improve the water-supplies. The constitution of the Commission is deserving of notice, because, if the Bill become law, it will be representative of the London County Council, the City Corporation, and the several County Councils in the watershed of the Thames. The Corporation has shown considerable skill in thus bringing to its aid a number of Corporations and County Councils who may be expected to view with satisfaction a scheme which would place the London Council in a position very different from that it would occupy if the Corporation had to fight it single-handed. It cannot, however, be expected that the Bill will pass, nor is this probably anticipated by those who promote it; but it serves to show that the Corporation does not intend to sink permanently into the position of a district authority without some effort to prolong its existence. The Bill will probably not be regarded with favour by the sanitary authorities in the areas of the County Councils to whom this overture is made by the City Corporation, for it is obvious it would at once be the occasion of constant warfare between the councils and the sanitary authorities, for the latter would no longer be permitted, as now, to discharge sewage into the rivers. It remains to be seen whether the Corporation will get more good by the support of these councils than harm from the opposition of the sanitary authorities. The second Bill, which is backed by Sir Algernon Borthwick and other private members, proposes the constitution of a Water Trust, consisting of thirty-nine members; also for the purpose of acquiring the undertakings of the water companies. The members of the Trust are to be elected by the county electors of the water area. But their existence is not to be permanent, for the London County Council are to be empowered in 1892 to replace them. It remains to be seen whether the London County Council will be satisfied with this proposal, or whether they will not desire to deal directly with the water companies. The third Bill restricts itself to proposing that all water consumers shall, if they elect, be supplied by meter. This Bill is backed by private members, and will doubtless be considered by the same committee as that appointed to deal with the others. It cannot be expected that any of these measures will become law, but they will afford ample fighting ground for the several interests concerned, and it is probable that the number of such Bills will be increased before the session has terminated.

EDINBURGH UNIVERSITY CLUB.

THE quarterly dinner of this club took place in the Holborn Restaurant on Tuesday evening, the 10th inst. Before the dinner the annual meeting of the club was held. The reports of the secretary and treasurer for the past year were submitted, and showed the club to be in a most flourishing condition. Under the presidency of Dr. J. G. Glover, one of the direct representatives of the profession for England in the General Medical Council, a very pleasant evening was spent. In proposing the "Health of Alma Mater," in a most felicitous speech, Dr. Glover recalled the fact that this was not the first time that he had had the honour of presiding, and referred to the many distinguished men who had in his remembrance occupied the same position, such as Mr. Syme, Sir Robert Christison, and others. He pointed out various reasons or tests by which a University system can be judged. Thus a prominent feature ought to be the fact of exciting in her graduates gratitude and affection, which he said existed in all the graduates of Edinburgh University throughout the world. The very existence of this club was a standing proof of this sentiment taking hold of the graduates of Edinburgh. A University system ought also to stimulate the intellectual and educational ambition and ardour of the people of a country. This was eminently the case with the Universities of Scotland, which had succeeded in getting within the range of academic influence a large proportion of the people of Scotland. He also showed that the Universities of Scotland had produced great and exceptionally influential men, and enumerated many of their sons, as Hume, Cullen, Joseph Black, Dugald Stewart, and Lord Brougham, who was one of the founders of the London University, and many others who, as students and graduates of Edinburgh University, had been promoters of education—popular, professional, and scientific. Dr. Potter proposed the toast of "Our Guests," which was replied to by Mr. Thomas Wakley, jun., and Mr. Lamb. Dr. George Harley, in a eulogistic speech, proposed health, prosperity, and domestic happiness to the chairman, who suitably acknowledged the compliment.

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WORK IN DENTAL SURGERY.

IN his interesting inaugural address the President of the Odontological Society, Mr. S. J. Hutchinson, reviewing last year's work in dental surgery, said that there had been fruitful and instructive discussions on anæsthetics, and the introduction of gas and oxygen as a safe means of prolonging insensibility; cocaine had been found by many to be successful as a local anæsthetic, though he doubted whether it was as useful as nitrous oxide. He strongly protested against the aid of hypnotism being invoked for the purposes of dental operations as long as the present average of success with nitrous oxide was maintained; "the influence of 'gas' is purely toxic, whereas hypnotism calls into play both mental and moral phenomena, which are degrading to the patient and dangerous to the operator." The greater scientific knowledge of the power of antiseptic agents had rendered it possible to make healthy the roots of teeth which a few years ago would have been condemned as useless, and render them capable of carrying artificial substitutes. However, he had come across a French work dated 1816 which contains an illustration of a case of "bridge work." He thought it was cheering to watch the efforts which were being made to produce for incisors fillings and inlays which imitated the colour of the natural teeth rather than disfiguring them by elaborate and extensive displays of gold. Speaking of antiseptics, Mr. Hutchinson said he had been trying some experiments with compressed oxygen in the treatment of septic roots, and hoped that these experiments would be supplemented by those of others. Mr. Cartwright's words in 1856 with reference to the L.D.S. diploma were, he thought, fully realised, and it was in the hands of the dental profession to maintain the prestige of that diploma by constantly raising the standard of the examination.

OPPOSITION TO THE NOTIFICATION ACT AT LINCOLN.

THE Mayor of Lincoln lately convened a public meeting in compliance with a requisition largely signed by working men to discuss the adoption of the Notification Act. The following resolution was passed with only three dissentients: "That this meeting is of opinion that it is unnecessary to adopt the Notification of Disease Act, on account of the low death-rate in the city, and also undesirable on account of the very great expense it would incur on the ratepayers; and this meeting respectfully requests the members of the Corporation not to adopt it." We cannot congratulate the supporters of the motion on their arguments or even on their facts. The chief argument used was the invasion of private freedom involved in the Act, and the enormous profits that were to accrue to medical men. One of the speakers stated that one medical man had received for one week in notification fees £12 10*s.* in half-crowns, whilst another had notified fifty cases in one day. It produced no effect on this gentleman to have it explained that the fifty cases received in a day were not from one man, but for a whole district. He refused to withdraw his statement. He would have been still more incapable of perceiving that notification stops the occurrence of fresh cases, and so limits the work and profits of medical men. Another speaker argued that when an infectious case happened in a crowded house the healthy children should be all removed and the sick one left in charge of the mother. There remains the argument of the "Englishman's house is his castle." The answer to this is twofold. First, that notification is not necessarily any invasion, or leads to invasion. Secondly, that the castle is already liable to invasion for sufficient reasons, and that of all reasons none could be more sufficient than the welfare of the Englishman himself and his family, and of all the families round about him, and that the invasion will be conducted always in the most considerate manner. Dr. Lowe made a candid and powerful speech. He said that on first looking at the Act he was not in favour of it, but that since the subject had been completely thrashed out he saw a very great amount of good in it. His estimate of the cost of notification for Lincoln was £40 or £50 a year. For some time to come, however, Lincoln is to enjoy freedom to have and to harbour any amount of infectious disease.

UNREGULATED MEDICAL PRACTICE IN SIERRA LEONE.

WE have received from Dr. I. Nichol Paris, Secretary of the Sierra Leone Medical Association, a very unsatisfactory account of the unchecked quackery and irregular medical practice which obtain in the colony, and especially in Free Town itself. We regret not to have space for this letter. But we must point out that such a state of matters is discreditable to the Government of the colony. Sierra Leone is a colony of whose Government better things might have been expected. It must be well on to a hundred years since Winterbottom, the physician to the colony, wrote a classical book on the diseases of the natives of Africa. And there are now in Free Town a dozen well-educated and registered medical men. It is due to them, as well as to the population, which consists of 9000 Christians, 5000 Mahommedans, and 8000 Pagans, to enact a Registration Act by which at least the people may know educated men from bonesetters, herbalists, abortion-mongers, pill-vendors, and quacks of all sorts.

ACTION FOR MEDICAL CHARGES.

IN an action before Mr. Justice Stephen and a special jury, brought by Mr. O'Reilly of Highgate against the executors of the late Mr. Ernest Matthews, to recover the sum of £86 odd for medical attendance chiefly on Mrs. Matthews, the executors disputed the claim as excessive and paid £34 into court. Mr. Kennedy, Q.C., and Mr. T. Smith were for the plaintiff; Mr. Waddy, Q.C., for the defendant. The account was for about seventy attendances altogether. Mrs. Matthews died; also Mr. Matthews. The charges were justified by the plaintiff on account of the anxious nature of the case, taking up much time and involving the administration of chloroform. The jury found for the plaintiff for £60, including the sum paid into court. His lordship gave judgment accordingly, with costs.

THE MIDWIVES' BILL.

IT is remarkable that, amid the rending discords of the gynæcological and obstetric branch of the profession, there is one subject on which there seems to be comparative unanimity. The Obstetrical Society at one of the largest meetings ever held, while hesitating to endorse the present Bill, with all but unanimity affirmed the past action of the Society in the following resolution: "That the Fellows of the Obstetrical Society approve the policy pursued by the Society for the last twenty years, and respectfully request the Council to continue their efforts to obtain for these women suitable education and legal registration." The demand for some legislation to prevent incompetent women from practising midwifery is really all that is asked for. A correspondent in THE LANCET of to-day complains that the opponents of all legislation for the present have carried the war over the Bill into the quiet waters of the Medical Defence Union. This does seem to be a very questionable piece of judgment. The Medical Defence Union is doing admirable work now, with perfect unanimity in the society. It would be a misfortune if it were distracted from its own line of duty by being made the arena of every

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stray agitation that arises in the profession. But this is a matter on which the members of the Defence Union must make up their own minds. We content ourselves with pointing out the responsibility of those who endanger the peace or the efficiency of a society which was founded for very different purposes than that of supporting the present race of untrained and irresponsible midwives. We say irresponsible, for they commence and continue practice now, to the number of about 10,000, without anybody's leave, and, apart from the grossest misconduct or malpractice, are unhindered. Last week, again, a midwife was committed for manslaughter for her treatment of a case. But short of such terrible tragedies as this, the ten thousand go on with a sort of legal status, to the injury of women and of the profession alike. We revert to our suggestion of a select committee that should take evidence on this grave subject in all its aspects. The question must be disposed of. If the present state of the midwife class is the highest attainable in a civilised country, where thousands of women cannot afford the fees that any self-respecting medical man can take, the question will be set at rest, and the medical profession, which is now almost the only depository of knowledge on the subject, will have transferred to the Legislature its responsibility.

"THREATENED MEDICAL STRIKE IN SCOTLAND."

HOWEVER humiliating it may be for the countrymen of Sydney Smith to admit, we have to confess to being indebted to Scotch assistance, almost as severe as a surgical operation, for full perception that the account of a threatened strike among our brethren in Scotland is all a hoax. We will not begrudge our northern friends the sweet revenge they obviously feel in the success of their well-acted part. We may confess that we were not looking for jokes from that quarter. More remarkable than the *naïveté* with which we accepted as serious the description of hard work and scanty pay in Scotland, which really are serious in England, is the oversight with which, by an obvious *lapsus penna*, Sir Andrew Clark's name was inserted instead of Sir Walter Scott's. The quotation was actually made from one of the novels of Sir Walter Scott, who was a friend of Mungo Park. Sir Andrew Clark of course was not born at that time. It is gratifying to find that the grievances of unremunerated medical labour in Scotland are so slight as only to supply material for a joke. We may by our inadvertence emphasise the fact, and so suggest to some of our readers who find their work hard and unremunerative in England to try their luck in the more jocose part of the kingdom north of the Tweed.

THE NEW GENERAL HOSPITAL, BIRMINGHAM.

THE question of an appropriate site for the new hospital has caused considerable anxiety to the committee, and has also given rise to some discussion, or rather expression of opinion, in the local press. After much consideration, aided by the experience of two architects, Mr. F. Willmot and Mr. F. Osborn, the committee selected the site of St. Mary's-square as the most suitable, and have recommended it to the governors for adoption. In the face of the extreme difficulty in obtaining a sufficient quantity of land in a central position, this seems to be the most feasible plan presented. It is true that it is not an ideal site, but it is also true that it is the best which could be obtained under the circumstances. It is central, in the midst of a thick population, fairly near to the two railway stations, is 30 ft. higher than the present hospital ground, and is on a gravel foundation. The area obtainable under the promises of a good subscription list would be about three acres and a half, which would be sufficient for a hospital of 300 beds built upon modern principles. There is also free space around, which will serve the purposes of light and ventilation, and which might be available for recreation ground. The position would not interfere with the other large hospital—the Queen's—and would be undoubtedly favourable for the medical school. With the present project of a large central hospital, it is impossible to resist with reason the conclusions arrived at by the committee that this is the best obtainable site, and that it bids fair to answer the purposes for which it is intended.

EFFECT OF TEMPERATURE ON THE RESPIRATION.

DR. R. ODDI, who has been investigating the effect of external heat upon the gaseous exchange in respiration, has shown that the exchange is inversely proportional to the temperature, so that the lower the temperature the greater the elimination. This fact is by no means new, for Lavoisier was aware of it; though the interpretation he gave of it was incorrect, as respiration is not the simple act of combustion that he imagined it to be, but a highly complex series of chemical changes, which have for their object the nutrition of the cellular elements; for, as Luciani has shown, it is necessary that all substances should pass through the living cells of the body tissues in order to undergo change and decomposition. Hence it is impossible to have respiratory exchange without the cellular elements, and nutrition and the production of heat are not identical. Moreover, from Dr. Oddi's experiments it appears that there is no variation in the relative quantities of the different substances taking part in the respiratory changes, and that there is no special nervous mechanism employed, but that the nervous system as a whole takes part in it. The same may be said as regards the production of heat. The experiments alluded to were conducted on rats, but Dr. Oddi proposes to supplement them by observations on other animals.

THE LINCOLN WATER-SUPPLY.

THE subject of the water-supply of Lincoln is engaging much public attention. In 1885 Dr. Harrison, the medical officer of health, called attention to the defects attaching to the present system, and he now again urges that the matter ought not to be shelved, and this especially in view of the impurities reaching the service through the river Witham. Dr. Harrison's detailed account of the varying circumstances by which the present supply is injuriously affected should suffice to convince the Town Council and the inhabitants that his recommendation that the time has fully arrived for providing the city with a sufficient and wholesome supply is one that cannot be set aside with impunity.

"ASTASIA-ABASIA" IN GRAVES' DISEASE.

DR. EULENBURG of Berlin discusses in a neurological journal the state described by P. Blocq as "astasia-abasia." The author points out, first of all, that no consensus of opinion exists between Blocq and others who have written on the subject as to the true meaning of this morbid condition. Some consider it to be a mere symptom of a hysterical nature, while Blocq himself looks upon it as an independent morbid condition due to spinal lesion; Binswanger connects the symptoms with hypochondria, while Eulenburg observed a case of astasia-abasia during the progress of Graves' disease in an anæmic girl of eighteen, which shows that, apart from hysteria, a morbid condition may exist, not only comprising the symptoms represented by Blocq's description, but completely agreeing with their course and the effect produced on them by treatment. The girl had been treated for four months, and the goitre had not only considerably decreased, but the exophthalmos had almost entirely disappeared; palpitation and pulse became

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less frequent, and her whole nutrition had also considerably increased, when suddenly both her legs seemed to become paralysed. She thought she had caught cold in a draughty passage. No other symptoms supervened. On examining the patient as to her sensibility and power of walking, the author diagnosed astasia-abasia, with a kind of self-suggestion as cause, as the patient had been seized once during the early part of her treatment with a sudden fear and consequent inability to pass over bridges. Psychical treatment was consequently indicated. The author informed her that a very painful and powerful remedy alone could do her good, but that this would cure her with certainty in a very few days. He applied faradism for about ten minutes below the knee and on the leg and foot most energetically, with rubefacient and of course painful effect. He then recommended some indifferent liniment and proposed to repeat the application of the faradic brush on the next day. Improvement was observed the same day, and one repetition of the treatment entirely cured the astasia-abasia.

MEDICAL BIBLIOGRAPHY.

THERE is no lack of periodicals the purpose of which is to compile in a well-ordered way a list of the medical and scientific contributions to literature. Foremost among these stands the monthly *Index Medicus*, established in 1879, a work of the greatest value, and one which is deserving of more support than it receives. Of much older foundation, for it is now entering on its forty-fifth year, is the quarterly publication *Bibliotheca Medico-Chirurgica*, edited by Gustav Ruprecht (Göttingen), which, besides being fairly complete, is remarkably cheap. Then last year appeared M. Rouvier's *Revue Internationale de Bibliographie*, also established as a quarterly, and published in Paris and Beyrouth, but which with the present year comes out in altered form, as a monthly periodical in which abstracts, and not the mere titles of papers, are given. It can hardly, however, aspire to the position attained by the world-famous *Jahrbücher* of Virchow, Hirsch, and of Schmidt. Besides these and many annual publications in all countries devoted to the same object, some of the recently established weekly *Centralblätter* afford very copious bibliographies. Indeed, the keeping pace with the growth of medical literature, with a view to record merely what is being written, has become a distinct branch of itself.

THE BONDING OF SPIRITS.

SOME interesting evidence has already been given before the Select Committee of the House of Commons, which was appointed to consider whether it is desirable that certain classes of spirits, British and foreign, should be kept in bond before they are allowed to pass into consumption, and also to inquire into the system of blending British and foreign spirits in or out of bond. It may be assumed that the object held in view by the committee is to determine whether it would not be more desirable that new spirit should, by being held in bond for some time, become matured, or, in other words, that the fusel oil, to which are attributed the injurious effects of the new spirit, may, on keeping, become so changed or oxidised as to render the spirit more palatable and more wholesome. According to the evidence of one expert, the aroma and flavour of spirits, at least in the case of pot-still spirits, were dependent upon the character of its own peculiar fusel oil, so that if fusel oil of any other origin were added the character of the spirit became quite altered. But it seems very doubtful if fusel oil is ever purposely added to a spirit, and as it is invariably present in greater or less quantity in new spirit, the objectionable symptoms which are produced from drinking such spirit are assigned to the fusel oil which chemical analysis shows it to contain. The same witness tried experiments on himself. He consumed daily for nineteen days three fluid ounces of brandy to which had been added 0·60 per cent. of fusel oil. He declared that, apart from the nauseous taste, nothing objectionable was experienced more than would have followed from drinking ordinary spirit. Now, from the experiments made on animals and men by Eulenberg, fusel oil is held to be injurious in its action, if not poisonous, and a person taking two fluid ounces of a whisky which Dr. Dupré's analysis showed to contain 0·19 fusel oil to every 100 of alcohol (the whisky itself containing 54·5 per cent. alcohol) would swallow close upon a grain of fusel oil, and if it contained three times the quantity, then three grains, which, having in view also the active properties of ordinary alcohol, is the lowest amount with which distinct effects like dyspnœa and depression were obtained. Accordingly some authorities consider the presence of one grain and a half of amylic alcohol or fusel oil in one fluid ounce of spirit as likely to be injurious to health. It is well known, further, that men engaged in the manufacture of potato spirit suffer from headache and general nervous indisposition, unless very efficient ventilation is provided. Fusel oil is essential, it would appear, in the formation of certain aromatic ethers which give to spirits their characteristic flavour and aroma, and, in spite of the many modes of accomplishing this change artificially in a short time, it would be exacting, surely, to expect results as good as those obtained when a spirit is allowed to mature by ageing. Meantime the additional evidence which is to be heard and the decision of the Select Committee will be awaited with interest.

REOPENING OF THE LIVERPOOL LOCK HOSPITAL.

THE Liverpool Lock Hospital, which, though a detached and separate building, is a part of the Royal Infirmary, was erected in 1833. Originally it was intended to hold seventy-two beds, all on the ground floor, but for many years past the accommodation was fifty beds, twenty-five for each sex. During the rebuilding of the new infirmary it was used as temporary medical wards, and some difficulty was experienced in its reopening for its original purpose. It was built to receive the patients formerly admitted into the lock wards of the infirmary, thus securing at the same time the enlargement of the infirmary proper, the more perfect separation of this class of patients, and their treatment by two surgeons appointed for the purpose. For upwards of fifty years it has done a very useful work, since, as may be judged, there must always be in a large seaport like Liverpool many cases necessitating treatment in such a hospital. We learn that the difficulty in the way of its reopening has been overcome, and that the hospital is to be reopened at an early date.

THE SOURCE OF ALBUMINURIA.

DR. W. H. PORTER, in a paper on the Source and Significance of Albumen in the Urine,[1] sums up as follows:—1. That the albumen found in the urine, excepting that which occurs in the early stages of an acute exudative or diffuse nephritis, is a derived albumen, and not serum albumen. 2. In the early stage of an acute exudative or diffuse nephritis the albumen comes directly from the blood-vessels, due to the inflammatory alteration in their walls, and is of the serum albumen type. 3. That later in acute exudative or diffuse nephritis, when the vascular walls have partially recovered from the primary inflammatory damage, the albumen becomes more abundant in quantity, but now it is of the derived albumen type, and has been

[1] The Post Graduate, Jan. 1891.

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excreted by the damaged epithelial cells lining the uriniferous tubules. 4. That in all conditions, excepting the acute exudative or diffuse nephritis, where albumen is found in the urine, it is due to changes in the epithelium, by which it is unable to do the work properly and excrete, or allows a derived form of albumen to pass through into the urine. 5. That the quantity of albumen contained in the urine is always in direct proportion to the amount of retrograde change in the epithelial cells. 6. That this retrograde change in the epithelial cells is secondary to an impaired nutritive condition at large, together with an overworked state of the renal cells, without a compensatory nutrition being sustained. 7. Viewed in this light, if we direct our treatment to improving the general nutrition of the system, and at the same time decrease the amount of work to be accomplished by the kidneys, we shall see many cases of complete recovery which must otherwise remain cases of albuminuria.

BATHS IN CASUAL WARDS.

THE position of parish guardians with reference to the homeless poor is not without its peculiar difficulties. Charity, which is ever open to abuse, must especially in their case equally shun indulgence and hardness; and it would be remarkable if it did not err sometimes on one or other side. As regards the matter of baths in casual wards, which has lately created some discussion, it cannot be said that the fault of authority has favoured the bather. We read of several men in one bath at the same time with a natural feeling of doubt whether cleansing is, after all, the object of their immersion. If it is, then an ordinary bath is quite inadequate for the purpose. In so far it may succeed as to transfer the responsibility for dirt from one pair of shoulders to another, and with it the germ-carriers of disease, which form a part of its impurity. As for ablution the term is, under the circumstances, evidently out of place in a rational description. We may, therefore, without any abuse of charity, express a hope that more care may be taken in our workhouses to provide clean water for dirty inmates, and, if possible, even for separate individuals. The purpose to be attained is worth a reasonable expenditure of effort in the renewal of water, and might even justify, if needful, an additional bath or two, with cheap soap in sufficient quantity.

DECORATIVE PAPER ILLUMINATION.

THE growing tendency to make use of what we may call decorative paper illumination was again the cause of a somewhat serious fire in the Drill Hall, Cardiff, last Monday week. The occasion, it will be remembered, was that of a commemorative banquet given by Lord Bute. Floral paper and Chinese lanterns were freely distributed among gas and electric lights, and the immediate cause of much consequent damage was the contact of a stray lantern with one of the gas jets. But for the fact that the entertainment was of a kind which does not usually attract the company of ladies, we should probably have had to add the loss of human life to a serious amount of damage sustained by the hall itself and by a valuable collection of temporary furniture. Such an incident, occurring within a few weeks of the similar but aggravated disaster at Wortley, may well suggest a doubt in the most careless mind as to the propriety of thus freely using in close conjunction such obvious incompatibles as flame and tissue paper. This custom, however, is neither new nor unusual. In almost any house we may notice its prevalence, and every drawing-room and dinner table have witnessed its common result in petty fires created by some neglected candle or lamp shade. Happily, these are comparatively trivial, and have usually been early noticed and extinguished. At the same time they cannot fail to convey an uneasy impression that much worse consequences might follow if perchance a lighted shred were wafted towards some muslin dress or curtain. There are, of course, degrees of risk in proportion to the caution exercised in decorative arrangement, and we will not pretend that paper shades are inevitably and culpably dangerous. Their employment, however, must certainly weaken the guarantees of safety and increase the need of vigilance on the part of those who use them. As for the ordinary Chinese lantern, it scarcely needs the hard lesson of experience to show that its fittest place is out of doors. Even there perhaps it is not free from objection.

POSITION OF "OFFICIERS DE SANTÉ."

THE position of the French *officier de santé* must, we should imagine, be sometimes an unpleasant one, as his diploma does not give him the right to perform operations without the presence of a doctor of medicine, except in cases of great emergency where a doctor of medicine cannot be found. A case has recently occurred exemplifying this in the French courts of justice. A certain *officier de santé*, while attending a confinement, found that there was an arm presentation. Of course, he ought to have obtained the assistance of a practitioner of higher standing than his own, but instead of doing this he proceeded to pull upon the arm with such effect that the limb finally came off in his hand. Ultimately the services of a doctor of medicine were obtained. On his arrival he promptly turned and delivered, experiencing no difficulty in the operation. The next day the woman died, and the *officier* has been prosecuted for causing her death as well as for contravention of the law, which forbids *officiers* to perform operations and to practise outside the limits of the department for which their licence holds good. The result was that several fines were inflicted, and the offender was sentenced to three months' imprisonment for "homicide by imprudence." It is probable that the last has not yet been heard of this affair, as the prisoner has lodged an appeal to a higher court. It is, however, tolerably evident that the position of *officier de santé* is a most humiliating one, and that the present proposal to abolish that diploma has much to be said in its favour.

VACCINATION AND PROFESSIONAL COURTESY.

DR. EDMUND ROBINSON, the public vaccinator for Birmingham, sends us details of two cases which involve grave want of professional courtesy. A year ago he vaccinated a child, and not long afterwards he accidentally heard that an inquest was to be held on the child, because its death had been certified by another medical practitioner as due to syphilis from vaccination. The result was a verdict showing that the certificate had no foundation. Again, Dr. Robinson this month finds a report in a local paper as to a child whom he vaccinated some time back, and which, having been under the care of another medical practitioner, is alleged to have died of erysipelas associated with vaccination. The cause of death may, for all we know, be correct in this instance, and it is not this to which we desire to draw attention. But we feel very strongly that when a medical practitioner is called in to attend a child in connexion with its vaccination, which was performed by another practitioner, his obvious duty is to place himself at once in communication with his *confrère* who performed the operation; and it will be clear that no breach of ordinary professional courtesy such as is here indicated can possibly be justified because the case was one of vaccination, instead of any other operation, or because the medical practitioner who performed it happened to hold a public office. It may be some satisfaction to Dr. Robinson

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to know that all such cases as he refers to are being inquired into by the Medical Department of the Local Government Board.

MR. GLADSTONE AND GROCERS' LICENCES.

IT is unsatisfactory to find, among the various devices for abating drunkenness, so little attention by our public men to the subject of grocers' and confectioners' licences. Unfortunately, Mr. Gladstone is so occupied with other Parliamentary matters that he has no time to undo, or consider the undoing, of a system of licensing which does very much indeed to favour secret drinking among women in the better classes of society. He has excused himself of late for this disastrous piece of legislation by saying that he was advised in its favour by distinguished philanthropists since deceased. This is a poor excuse. They are dead and incapable of retrieving or correcting a great error. He has the power, and with him lies the responsibility of doing so. The furtive possession of drink in households should be made, not easier, but as difficult as possible. This is a most binding duty at present resting on Mr. Gladstone.

THE FEVERS OF CHINA.

DR. COLTMAN, writing in the China medical missionary journal upon the fevers of China, remarks that but little personal investigation on the subject has been made up to the present time, owing to the comparatively recent advent of foreign medical men, and to the want of confidence on the part of the natives to submit for any lengthened period to the treatment of a foreign physician, or in fact to any one physician, their rule being to change doctors two or three times a day if they can afford it. Again, there have been but small hospital facilities for studying fevers, and there is an impossibility of obtaining post-mortem examinations. Dr. Coltman considers that small-pox is the most common disease, nearly every person suffering from it at some period of his or her life. Vaccination, although practised, is done very carelessly. Measles appears to be common, but is somewhat milder than in Europe. Scarlet fever, although it undoubtedly occurs amongst the natives, is far less common than amongst Europeans. Erysipelas is rare. Typhoid fever is very difficult to diagnose in the short time that a foreign medical man is allowed to attend a case; but Dr. Coltman thinks that when more accurate reports are possible, this disease will be found to be more common among the natives than is now supposed. Typhus fever is met with all over North China, and as far south as Shanghai. Relapsing fever is found constantly associated with typhus. Dengue does not seem to be known amongst natives. Cholera occurs as an epidemic every few years, and is very fatal. Diphtheria is severe and frequently fatal amongst the natives. Whooping-cough has occasionally been met with. Rheumatic fever is very prevalent in some parts. Chronic muscular rheumatism is common all over China, but is unattended by fever. Malarial fevers appear to be common everywhere, though the prevailing type varies; thus, tertian is most common in Pekin, quartan in Foochow, Swatow, Shanghai, and Hangchow, and remittent in Chefoo and Tientsin. In Chinanfu Dr. Coltman has never seen a case of quartan ague; it is all intermittent of the tertian or quotidian type. The treatment, of course, of all malarial fever is by quinine or some other cinchona bark alkaloid. In Hangchow the carbolic acid and iodine treatment has been used successfully as a prophylactic; arsenic is recognised as valuable in the chronic form.

FOREIGN UNIVERSITY INTELLIGENCE.

Kieff.—Dr. Heubel, Professor of Pharmacology, has been made Emeritus Professor.

Moscow.—Dr. Babukhin, Professor of Embryology and Comparative Anatomy, has been made Emeritus Professor.

St. Petersburg (Medical Academy).—Dr. Mendelsohn of Warsaw is to be appointed *docent* in Physiology.

Warsaw.—Dr. Dobroklonski of St. Petersburg has been appointed Extraordinary Professor of Special Pathology and Therapeutics.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. H. Cohen, of Hanover; Dr. Carl Goebel, *docent* in Odontology in the University of Cracow; Dr. Bengelsdorff, *privat-docent* in Medicine in the University of Greifswald.

THE annual meeting of the Obstetrical Society of London which was held on Feb. 4th was remarkable in several respects. Eighty-five persons were present, including eleven visitors. When the President, Dr. Galabin, began an obituary notice of the late Dr. Matthews Duncan, in the course of his annual address, the members present rose and remained standing till the speaker had concluded his observations on the life, work, and character of that eminent obstetrician.

VISCOUNT CRANBROOK, Lord President of the Council, has consented to receive a deputation of members of the medical profession at the Privy Council Office, Whitehall, to-day (Friday), at 3 P.M., with a view to hearing the expression of opinion which exists in the profession against the Midwives' Registration Bill. The deputation will be introduced by the Attorney-General for Ireland.

SIR JAMES SAWYER has signified to the Council of Queen's College, Birmingham, his desire to resign the office of Professor of Medicine at the College at the end of the present session. Sir James Sawyer has held the chair since 1885, having previously occupied the post of Professor of Pathology.

WE are requested to announce that the next meeting of the Medical Society of London, on Monday, Feb. 16th, will be a "clinical evening" for the demonstration of cases, and that the adjourned discussion on Angina Pectoris will take place at the following meeting on Feb. 23rd.

WE learn that our announcement of the resignation of Dr. Andrew of the post of Senior Physician to St. Bartholomew's Hospital, and consequently of the appointments dependent thereupon, was premature.

ON Wednesday, the 4th inst., Mr. Sydney Jones was elected consulting surgeon to St. Thomas's Hospital.

PROPOSED NEW HOSPITAL DISTRICT FOR NORTH LONDON.—The Local Government Board have, in pursuance of the powers vested in them under the Public Health Act, 1875, issued a provisional order for the formation of a joint hospital board for the districts of Edmonton, Enfield, South Hornsey, and Tottenham. This order, which will be subject to the approval of Parliament, and in opposition to which four petitioners have lodged petitions, provides that the joint board shall consist of four *ex-officio* and twelve elected members; the *ex-officio* members being the chairmen of the local boards of health for the districts named, and the elected members being representatives from the sanitary authorities of the same districts, the members assigned to each being—five to Tottenham, three to Enfield, and two each to Edmonton and South Hornsey. The purposes for which this united district is formed are stated in the order to be "the provision, maintenance, and management of a hospital or hospitals for the reception of cases of infectious diseases for the use of the inhabitants of the constituent districts."

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THE LANCET
Analytical Sanitary Commission.

Results of the Microscopical and Chemical Analyses of the Solids and Fluids consumed by all classes of the public.

BISCUITS: THEIR MANUFACTURE.

IN resuming our Analytical Sanitary Commission on Food, and especially the more common forms consumed by the poorer classes, we may state that in the interval which has elapsed since the last report the laboratories have been entirely rebuilt and scientifically furnished with every requisite, both chemically and histologically, necessary for the elaborate investigations in which we are engaged. We shall continue the work now from month to month and as occasion may demand. We may mention, in order to give some idea of the labour and care which this department entails, that the results which appear in the following article on Biscuits are founded on eighty-four actual determinations successfully made by an expert staff, especially and wholly engaged upon this important department of THE LANCET. The subject of the analysis of food has not been neglected during the interim, as our results have been published in a briefer form every month in our "Analytical Records" column.

The manufacture of biscuits was at one time devoted exclusively to the preparation of the particular kind known as ship bread. Loaves of ordinary bread, by reason of the fermenting principle which they contain become sooner or later musty and unfit for food, and they are therefore ill adapted for use on board ship, while the preparation of bread at sea is found to be impracticable. The composition of ship bread is of the simplest kind. Flour is merely kneaded into a paste with water, cut into shape, docked, and then well baked in an oven of special construction. Free from ferment or leaven, the biscuits so prepared undergo very little alteration during the time occupied by a more or less extended voyage. The allowance of biscuit to each seaman in the Royal Navy is one pound per diem, which is equal to an average of six biscuits. The landsman can know very little of the real value of this kind of biscuit, but to the seaman it is the only form of bread which he has to rely upon, it may be, for months together.

Of recent years an enormous industry has developed in the United Kingdom in connexion with the manufacture of "fancy biscuits." Many firms are now exclusively engaged in this increasingly important branch, which in former times was almost entirely managed on a necessarily small scale by the pastry-cook and confectioner. Some idea of the extent of the manufacture of fancy biscuits may be gathered when the almost innumerable varieties which are made are considered. In the list of Messrs. Drew and Son, for example, which is before us, we observe the names of no less than 144 different kinds.

The introduction of machinery has done more to revolutionise the biscuit than the bread-baking trade. There are still many bakers who make their bread in a most primitive and unscientific manner. The ovens these men employ are of the simplest construction, and, so far as the consumption of fuel is concerned, about as wasteful as the coal or wood merchant could well desire. The dough is mixed by hand when it is not trodden down with the feet; the Scotch bakers very much prefer bread made by dancing on the dough. Formerly biscuits were also made by hand. This explained the irregular qualities of such biscuits, some being excellent, the others quite the reverse. Of recent years a certain number of large bread-making factories have sprung into existence where machinery is extensively used, but the whole of the biscuit trade is now dependent on machinery. With a few rare exceptions, biscuits made by hand could never find a market against the machine-made biscuit. This is, from the public health point of view, an important and beneficial change. Machinery reduces the danger of contamination to a minimum, and ensures greater cleanliness and uniformity in the quality of the article produced. Also machinery requires space, and could not be placed in the close, dark, unventilated cellars and other unhealthy places where biscuits used formerly to be manufactured. Thus the machine-made biscuit is a much safer article of diet than the old-fashioned biscuits that were mixed and shaped by hand. Of this our Commissioners were able to convince themselves by a visit to the works of Messrs. Drew and Son at Shadwell. Here an enormous hbusiness is done, especially in supplying hotels, public-houses, and ships with biscuits that are eaten for hunger rather than as a sort of pastime. We therefore determined to ascertain whether the process of biscuit-making at Messrs. Drew's factory was free from any danger of contamination. An examination of the process from the commencement to the end convinced our Commissioners of the great superiority over that adopted in an ordinary bakery where the quartern loaf is produced. As in the large bread factories, the ingredients—flour, lard, butter, eggs, and milk—are all brought to the upper floor of the factory. Here they are mixed, and by hoppers descend into the kneading machines, which are on a lower floor. These machines replace the obnoxious hand labour about which so much has been said. In large metallic drums arms, like the propellers of a screw ship, beat and stir the flour and the other ingredients till the dough is thoroughly mixed. Then the door of the drum being opened, the beaters in turning throw the dough out on to a tray, so that it need not be touched by hand, and can be conveyed to the next machine on the tray. This second machine replaces the housewife's familiar rolling-pin. It is not unlike a mangling machine. The paste or dough passes backwards and forwards between rollers till a smooth even sheet of paste is produced. Now this has to be transferred to a third machine, the cutting and panning machine which cuts up the paste into the size and shape of the biscuits, and stamps upon it the name of the firm or some suitable design. The biscuit now only requires to be baked, and as the amount of baking necessary changes according to the size and nature of the biscuit, no less than six different and very large ovens are employed for this purpose. The trays on which the paste, cut into the shape of biscuits. is placed travel through the ovens at a rate varying from five to twenty-five minutes. The heat registered in this journey through the oven amounts to 400° F. By machinery the whole works automatically. The biscuits are not touched till they reach the sorting and packing rooms. Here some thirty to forty young women are actively at work neatly placing the biscuits in boxes or tins. This packing room is lofty, with pointed roof, and a good light streaming in from all sides. The lavatories were very clean and well arranged at the time of our inspection.

The closets used by the men are well walled off from the bakery and amply ventilated on to the stable yard; also the bakery is abundantly supplied with fresh air. Some of the loftier parts are not walled in, so that the open sky is visible and the overheated air can always escape. Also there is a Blackman's air propeller, used to cool the biscuits in summer time, but which likewise serves to stimulate the general ventilation of the establishment. Altogether, it may be said that the biscuits are made under very wholesome conditions, and the workers engaged at this factory have a plentiful supply of air and light. The water, it should also be noted, is taken direct from the main, and is not stored in tanks, an advantage that all sanitarians will not fail to appreciate. Some of the paste used is in an almost liquid condition, it has at most the consistence of treacle. Even when in this condition it is dealt with by machinery. A receiver is perforated on the lower side with round holes. Pressure from above upon the receiver forces the paste through these holes, from which it flows in a thick cord-like stream. As it comes through, a knife or divider glides down the side of the receiver with the regularity of a clock pendulum. With equal regularity there pass underneath little tin pans, just in the very nick of time to receive each piece of paste as it oozes out from the receiver, and is cut by the blade. The little tins now loaded travel onwards to the oven, some perhaps receiving on the road a few currants, which form a little black cap for the forthcoming cake. All this works smoothly, automatically, and with marvellous precision. The good things that are thus made need not be touched, they have only to be watched. Altogether, the process demonstrated how much machinery can help to render the manufacture of food both economical and cleanly, for, needless to say, the machine did in a few moments

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what it would take a good baker or cook, working with his hands, many hours to accomplish. The rapidity of the process is in itself an important guarantee. The quicker the work is done, especially when the paste is in a moist condition, the smaller becomes the risk of any accidental contamination.

The ingredients of fancy biscuits differ from those used in the preparation of the plain ship biscuit only in that to the flour and water are added butter, milk, eggs, and various "flavourings," such as ginger, caraway, lemon, orange water, cinnamon, &c.; and, though they are characterised by differences in form, appearance, and taste, the greater number are practically made with the same materials. The variation in the composition, either as the result of a modified step in the process of cooking or in the addition of other substances, is fairly indicated in the following table of analyses which we have made of twelve varieties of biscuits manufactured by Messrs. Drew and Son Analyses of a sample of bread and flour have been appended, so that any important change brought about in the composition by the different methods of preparation may be recognised at a glance. The numbers represent parts per cent.

Albert.—The greatest amount of fat is, according to these analyses, contained in the Albert biscuit, whilst the nitrogenous matter is, with the exception of the ginger nut, lowest.

Arrowroot.—This biscuit is seen to contain a lower amount of starch, and the soluble dextrin and sugar are proportionally increased. The fat approaches the common average.

Bovril.—The chief point to be noticed in regard to the bovril biscuit is the high amount of nitrogenous substance (12·10 per cent.). This, like the name, implies the presence of meat extract. The mineral matter is high from the fact of its containing more phosphate, while the proportion of sugar is comparatively low.

Cornflour contains a large amount of cold water extractives, dextrin and sugar. The fat is less than the average. Microscopical examination confirms the presence of cornflour.

Cracknel.—This excellent biscuit shows a marked difference in composition. The amount of albuminoids, for instance, is highest, being as much as 14·24 per cent. This may be accounted for by the probable use of a larger quantity of milk in its preparation. The ash is proportionally higher from the increased quantity of phosphate, and the moisture is well above the average—a point curious to note, as the cracknel is commonly credited as a biscuit which is more than ordinarily dry to the taste, and the biscuit under examination was no exception to this rule. The microscope showed considerable distortion of the starch granules, and the dextrin is particularly high.

The Analyses of Various Kinds of Biscuits, showing the chief Variations in their Composition.

Designation.	Starch.	Cold water extractives.		Albuminoids, N × 6·33.	Fat.	Mineral matter.	Moisture.
		Dextrin.	Sugar.				
1. Abernethy	68·06	3·19	9·20	10·50	5·50	1·20	2·34
2. Albert	64·80	3·35	18·25	8·29	7·00	0·84	2·56
3. Arrowroot	62·11	2·30	14·20	8·10	6·10	0·85	5·64
4. Bovril	60·95	2·72	2·78	12·10	6·50	1·15	4·80
5. Cornflour	61·75	3·50	16·20	9·43	4·50	0·76	3·86
6. Cracknel	55·84	12·60	2·80	14·24	4·00	0·92	10·20
7. Digestive	61·87	5·10	11·40	11·57	5·00	1·94	3·12
8. Ginger nut	38·04	1·71	42·70	6·60	4·20	1·64	4·12
9. Marie	64·92	10·00	10·40	8·72	5·60	0·74	2·12
10. Milk	73·00	2·80	3·00	9·44	6·10	0·72	4·04
11. Osborne	63·28	2·60	16·20	10·32	5·20	0·96	2·04
12. Water	76·03	3·60	2·70	11·30	1·00	1·26	4·02
Wheat flour	69·60	2·75	0·71	12·89	1·22	0·73	12·60
New bread	4·30 (with dextrin)	—	3·08	7·76	0·12	0·81	42·03
„ „ dried	78·12	—	6·87	13·39	0·22	1·40	—

The difference between the composition of a biscuit and that of flour consists in the greater quantity of sugar and fat in the former article and the important formation in it of soluble dextrin, and not improbably sugar from the heating of the flour. The granules of starch, as indicated by the microscope are, moreover, set free from their cellulose envelope, and some of it is then no doubt rendered soluble by the same physical agency. The albuminoids of flour are albumen, gluten, mucin, fibrin, and the important substance cerealin, which corresponds in its action upon starch to the diastase of malt. In bread, and also in biscuits, the albumen and gluten are coagulated, and their solubility is consequently greatly diminished, although their value as flesh-forming substances does not appear on this account to be affected. New bread in its composition differs from biscuit chiefly in the large amount of moisture it contains, and of course in the fat and sugar, which in the biscuit are for the most part added ingredients. The mineral matter, with one or two exceptions, where common salt is present in small quantity, consists almost entirely of soluble phosphate, to which is assigned bone-forming value. Good biscuits are known by a delicate crispness, a fresh wheaten smell on fracture, a good flavour, and an absence of excess of moisture. The biscuits examined were in all these respects satisfactory—results which can only be attained when the finest flour is employed in their manufacture. This was further borne out by microscopical and chemical examination. It may be remarked that, although "fancy biscuits" do not enter largely into ordinary diet, yet for many purposes they afford a convenient and valuable form of food, containing, as appears from these analyses, all the elements necessary for the nutrition of the body. The points of interest attaching to each kind of biscuit may, in fine, be briefly indicated below.

Abernethy.—This biscuit is characterised mainly by the presence of caraway seeds, and probably on this account the mineral matter is comparatively high. Fat, most likely in the form of butter, has of course been added, flour containing not more than 1·22 per cent.

Digestive.—Microscopical examination showed the presence of a goodly proportion of husk, and on this fact claim to the title "digestive" is probably made. The nitrogenous matter, it follows, is therefore high, and the amount of mineral matter proportionately increased. This biscuit, in particular, testifies to the general excellence of the manufacture.

Ginger nut.—The analysis of this popular biscuit corroborates the idea of the composition which is suggested by the taste. Thus it contains the highest proportion of sugar (44·50 per cent.). The ash is accordingly increased, whilst the albuminoids and starch are diminished.

Marie.—The high proportion of dextrin in this biscuit is worthy of remark.

Milk.—Milk biscuit contains a larger proportion of starch, and the sugar and dextrin are low.

Osborne.—Like "Marie," this biscuit gives figures which may be regarded as average results.

Water.—From the fact that the amount of fat and sugar in this biscuit approximates to that contained in flour, it most probably consists of the simple materials which are used in the preparation of ship bread.

THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.—The library of the Royal College of Surgeons will be closed on Friday, Saturday, and Monday, the 13th, 14th, and 16th of this month. Should a reader, however, desire to work there on any or all of those days, he can do so by furnishing the librarian, before the 13th, with the names of the books which he wishes to see.

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Pharmacology and Therapeutics.

FERRIC BROMIDE.

DR. HECQUET, formerly physician to the Abbeville Hospital, very strongly recommends the perbromide of iron or ferric bromide in many affections in which it is desirable to soothe without depressing and to strengthen without exciting. Out of twenty-five cases of spermatorrhœa treated by this drug nineteen were completely cured, two only being unrelieved, and in these cases complications were present in the form of prostatic enlargement and stricture of long standing. The perbromide was frequently found useful in cases of chloro-anæmia, leucorrhœa, hysteria, amenorrhœa, hydræmia of pregnancy, chorea, epilepsy, diabetes, and tuberculosis. In conjunction with Dr. Vacossin a series of trials were made in the Abbeville Hospital on its action in cases of cardiac hypertrophy, with the result that Magendie's observations, made more than fifty years ago, were confirmed, the patients being strengthened and relieved by the calming of the palpitation and of the dyspnœa. This combination is well borne, even by irritable stomachs. It may be taken in solution, or in lozenges, the dose being from three to five grains. The action is more rapid than that of most iron compounds, as its good effects begin to manifest themselves in cases of chlorosis during the first week of administration, a complete cure being generally obtained in a month. Dr. Hecquet has found by experience that the ferric salt Fe_2Br_6 acts both more rapidly and gives more permanent results than the ferrous salt $FeBr_2$, and hence he has latterly confined himself to prescribing the former, which he does not hesitate to say is endowed with exceptionally valuable properties, and deserves to be far better known and more employed than it has hitherto been. There is a preparation of the ferrous salt in the Pharmacopœia of the British Pharmaceutical Conference, which, however, is not very largely prescribed. No preparation of the ferric salt seems to be known in this country.

CHLORAL AS A COAGULANT.

Though hydrate of chloral is generally used in medicine it is not without its advantages in surgery. According to Dr. Marc Sée it possess the property of coagulating blood and serous fluids, and may be made to replace the iodine solution generally injected into hydroceles. He himself has treated 200 hydroceles with chloral without the occurrence of any accident. He employs for this purpose a 10 per cent. solution, an ounce of which is injected all at once, or very slowly, into the sac. Two or three days afterwards a large effusion of fluid into the tunica takes place, but is soon entirely reabsorbed. Where the hydrocele wall is much thickened injections of chloral, or, indeed, of any kind, are useless, and recourse must be had to free incision. The chloral solution above referred to may be repeatedly injected, with advantage, into the neighbourhood of varicose veins, as it causes the blood gradually to coagulate, and the veins to contract. Some trials have also been made with chloral as an injection into vascular tumours, but hardly sufficient to warrant any definite report.

HYPNAL.

This new hypnotic—a compound of chloral hydrate and antipyrin—introduced in France by Blainville, has had considerable trial on the Continent, and the opinion of those who have used it is that it is an efficient sedative, that it is less depressing and more soporific than chloral, and that it has the advantage over both chloral and antipyrin of being tasteless. In the *New York Medical Record* Dr. Mattison relates his experience of the drug in sixteen cases. The patients had all been the subjects of the opium habit in some form. Ten out of the sixteen cases were successfully treated by it—i.e., each patient after his dose obtained from four to six hours' sleep; in two the success was partial, sleep being limited or delayed, while in four it completely failed to produce sleep, and in some gave rise to increased restlessness. It was given in doses of from fifteen to sixty minims by the mouth, double that quantity by the bowel, while fifteen minims were the hypodermic dose. In administering by the mouth it is advisable to give it with twice the quantity of alcohol, while it can be given pure by hypodermic injection. No inconvenience was found to attend its administration. It had apparently no effect on the heart or lungs, and it never produced relief from pain without sleep. As has been remarked in some cases in which it was unsuccessfully tried, it gave rise to an increased restlessness, which, however, was easily combated by chloralamide.

IODIDE OF IRON IN LEAD POISONING.

It is stated by M. Lavrand in a Lille medical journal that he has found iodide of iron in the form of pills, as prescribed in the French Codex, very efficacious in treating the lead poisoning which occurs amongst workmen employed in white-lead manufactories. Sometimes he gives the iodide of iron by itself, at others he combines with it phosphide of zinc. Under this treatment workmen who had already commenced to show signs of lead poisoning were enabled to continue their occupation; their general health also improved, and the amount of hæmoglobin increased.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THIS Congress, which is to meet in London in August next, is assuming proportions commensurate with the importance of the subject and the great city in which it is to be held.

The organisation of the Sections is now almost completed, and the list of presidents and secretaries which has been issued is calculated to enhance the success of the Congress.

Over the important section of Preventive Medicine Sir Joseph Fayrer will preside, and doubtless his wide experience in India and at home and his known ability as a linguist will tend to give this section a wide and practical basis. Dr. Seaton, Dr. Isambard Owen, and Dr. Sidney Martin will act as secretaries to this Section.

When we say that Sir Joseph Lister is President of the Section of Bacteriology, and that he has for secretaries men of such tried ability as Dr. Armand Ruffer, Dr. William Hunter, and Mr. Sherrington, the profession may feel assured that this important subject will meet with full justice.

The Diseases of Animals in relation to those of Man is the subject to which Section 3 is devoted. Sir Nigel Kingscote, one of the staunchest supporters of the Royal Agricultural Society, is to act as president, and Professor Brown and Dr. Klein have been nominated vice-presidents; while Dr. Sims Woodhead, Mr. Duguid, and Mr. Ernest Clarke, the secretary of the Royal Agricultural Society, will serve as secretaries.

The section devoted to Infancy and Childhood will be presided over by the Chairman of the London School Board, Mr. J. R. Diggle; while the secretaries are Dr. Warner, Dr. Pasteur, Dr. Wethered, and Mr. T. A. Spalding.

Naval and Military Hygiene, a subject of prime importance, will be presided over by Lord Wantage, a nobleman whose experience with the regular army, the volunteers, and the St. John Ambulance Society, coupled with his well-known philanthropic tendencies, gives him a singular claim to such a position. The Directors-General of the Medical Department of the Army and the Navy, Sir Lothian Nicholson, Surgeon-General Marston, and Professor Notter will act as vice-presidents. There are four secretaries to this Section — Fleet-Surgeon Macdonnel for the Navy, Brigade-Surgeon Hector for the Army, Dr. Collingridge, the medical officer of health for the Port of London, to represent the mercantile navy, and Mr. John Furley, to represent the interests of ambulance work.

Lord Basing, a past President of the Local Government Board, will preside over the Section of State Hygiene, and associated with him are Sir Albert Rollit and Dr. Thorne Thorne, with Mr. Lithiby, of the Local Government Board, Dr. Louis Parkes, and Dr. Whitelegge as secretaries.

The Section of Chemistry and Physics in relation to Hygiene has for its President Sir H. Roscoe, M.P.; that of Architecture is presided over by Sir Arthur Blomfield; and that of Engineering by Sir John Coode, the President of the Institute of Civil Engineers.

With such an organisation we cannot but regard the success of the Congress as assured.

At the last meeting of the organising committee Dr. G. V. Poore was nominated for the office of honorary secretary-general, while Professor Corfield was appointed honorary secretary for foreign correspondence. This is as it

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should be, for it is evident that a divided responsibility in the organisation of a great gathering is impossible.

The Reception Committee, which is presided over by Sir Spencer Wells, is making way with its arrangements for the hospitable entertainment of the foreign and provincial guests. The City have promised a reception at the Guildhall, the medical officers of health are, we believe, meditating a conversazione at South Kensington, the Zoological Society have agreed to make members of the Congress free of their gardens during the week of session, and Sir Spencer Wells has, with his usual hospitality, offered to receive the members at Hampstead on one of the afternoons. This is a very promising beginning.

PROPOSED NEW GENERAL HOSPITAL IN BIRMINGHAM.

A PUBLIC meeting at which most of the leading citizens of Birmingham were present was held in the Town Hall on the 29th ult., to consider the site in St. Mary's-square selected by the committee of the General Hospital for the building of a new institution which is to replace the old hospital in Summer-lane, now admittedly inadequate to the requirements of the city, and unsuitable from a sanitary point of view. The meeting was largely attended, and the chair was taken by the Mayor (Alderman Clayton). They had met, he said, to promote a noble object—the rebuilding of their old and much-loved General Hospital. He referred to the labours during fourteen years of Dr. John Ash to erect a hospital for the sick and lame, and how, in 1779, it was opened with only fourteen beds. From this small beginning it had grown until it possessed 275 beds. In reference to the new hospital, he believed the feeling in the town was this, that when the hospital was begun to be built it should be the best that money could produce, and that £5000, £10,000, £15,000, or £20,000 would if necessary be forthcoming to produce that result. The Mayor pointed out that already nearly a million and a half patients had gone through that hospital during the century and a quarter of its existence. He was sure, now that this scheme was before them, Birmingham would rise to the requirements of what was asked.

The Right Hon. Joseph Chamberlain then moved: "That the present hospital is inadequate to the requirements of the city on account of its sanitary arrangements, site, and surroundings; and that it is therefore desirable to rebuild the hospital on the site in St. Mary's-square approved of by the governors." He asked Birmingham to find in the shape of voluntary contributions a sum very little less than £100,000. The town during the last thirty years had grown in wealth and population and in public spirit, and a sense of the duty of public munificence, of which their ancestors had no conception. A great sum had been subscribed, but up to the present time the list of subscribers numbered only 320, out of a population of 450,000. Up to the present no general appeal had been made, and he was quite sure that the masses of the people would desire, when the proper time came, to contribute their mite, although they might not have cared to put it before the public when larger subscriptions were being announced. The General Hospital has waited for its turn of renovation. He thought it had waited too long. Now at last they had undertaken this task, let them make amends for the delay by the perfection and the thoroughness and the completeness of the work which they were about to accomplish.

Dr. Wade, in seconding the resolution, pointed out the prominent defects of the present hospital. There was no ward for the seclusion of noisy patients, and in a ward where there were twenty beds it was a very serious drawback to have a patient crying or moaning night and day. The ordinary sanitary arrangements of the hospital were defective, there was no ward for children, and there was want of sufficient air space for the number of beds which the hospital contained. The arrangements for the surgical department were also inadequate. It was important that the hospital should be arranged for medical study, because that had a bearing not only on the present patients, but on the well-being of patients in future years. The accommodation for officers was insufficient, and that for the servants was worse. Deficiencies of that kind could only be remedied by rebuilding the hospital. On the new site the hospital would have a lung in the shape of three acres and a half of open space in St. Mary's-square, an advantage that would more than outweigh many drawbacks. It was close to Corporation-street, the great artery of the town, and from every point of view it seemed the position in which to rebuild the General Hospital.

Mr. Oliver Pemberton, in supporting the resolution, maintained that the present building was absolutely incapable of further alteration with advantage. During the last forty years the governors must have expended something like £50,000 in their endeavours to keep pace with the demands of the age. The site proposed for the new hospital seemed, in his judgment, to answer all the requirements as to space and freedom from disagreeable surroundings. Some true friends of the charity had pictured to themselves rebuilding in the suburbs, but they had no right to take the hospital from the midst of the very people who required its daily and convenient use. On a well-drained gravelly site, with the applications of science, to ensure the health and comfort of the patients, it was possible to carry on to its highest perfection a hospital in the midst of the population who use it, equally as well as if it were placed on the downs of Brighton. Mr. Pemberton next quoted from a speech by Sir James Paget,[1] in which it was urged that a great hospital should be in connexion with a medical school in order best to fulfil its objects. "Nowhere is that union of service and charity more perfect, and nowhere does it bear better fruit than in the combination of a thoroughly scientific medical school with a thoroughly charitable hospital." He concluded: "Long as I have served, I trust it may be my good fortune to serve yet a little longer—though the senior member of your staff—to aid in the accomplishment of this great undertaking. And now let me express a hope that the 'New General Hospital' that is to be shall create the same amount of confidence, excite the same amount of gratitude in the hearts of this great community, that the old one has created and excited in its time and season; and that the committee of management and the medical staff shall be honoured and trusted in their future records as they have ever been in the past history of their responsible and beneficent undertakings."

Mr. J. C. Holder read a list of donations amounting to £75,000. Of this the Birmingham wholesale brewers had subscribed £15,000. He excused himself from occupying the audience with the whole of the list, but it was speedily discovered that with apparently undue modesty he had omitted to read the addendum of the brewers' donations, in which he himself headed the list with a donation of £5000. In obedience to the command of the Mayor, Mr. Holder completed his task amidst general plaudits.

Dr. R. W. Dale moved: "That the working classes of Birmingham and the neighbourhood be requested to assist the undertaking in such manner as may seem to them most desirable." He said, time was when it was imagined that the duty of supporting great charitable institutions rested exclusively upon the more prosperous classes. The working classes were to receive the benefits of the institutions; the richer people were to find the money for maintaining them. Thirty or forty years ago, had such a project as the present been before the town of Birmingham, the Committee of the General Hospital would never have dreamt of putting the resolution now moved into the programme of such a meeting; anyone who had predicted that the working people of the city would raise £10,000 a year for the support of the medical charities would have been regarded as indulging in the wildest of prophecies. The commencement of the change was evident when the new wing was added to the Queen's Hospital; the continued success of the Hospital Saturday movement indicated how far the change had extended. The great masses of the working people had practically come forward and said, "We have political power; on us in part depends the fate of Ministries; our voice is potent for peace or war; we have our share in the control of the destinies of this great empire; we, too, are citizens, with duties and responsibilities, and we are prepared to discharge those duties."

Councillor Ball seconded the resolution, and urged the working men to do their utmost to help the work. The resolution was carried with enthusiasm.

The Right Hon. Lord Leigh moved: "That the General Committee of the hospital, the Orchestral Committee, and the visitors of the hospital, be appointed a committee to

[1] THE LANCET, vol. ii. 1890, p. 705.

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carry out the objects of this meeting, with power to add to their number, and that Mr. J. Jaffray be requested to accept the office of honorary treasurer, and Mr. Walter N. Fisher that of honorary secretary," which was seconded by Sir Thomas Martineau, and carried.

The Rev. Canon Wilkinson moved a vote of thanks to the Mayor for presiding, and expressed his deep joy that the response to the appeal had been so generous. This was carried, and the meeting terminated.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE subject of Koch's remedy still continues to be discussed at the Berlin Medical Society every week, the proceedings on Feb. 7th[1] being as follows:—

Professor VIRCHOW exhibited the lungs from a case treated at the Augusta Hospital with twelve injections from Dec. 4th to Jan. 12th. In each lung, especially the left, were circumscribed areas of dense pigmented carnification, intersected by whitish bands of "dissecting pneumonia" or spaces filled with pus and caseous material. But there was no true caseous hepatisation. Another specimen, from a patient who had received thirty injections, illustrated the passage into gangrene of acute "smooth" hepatisation. There were large apical cavities, and recent as well as old pleurisy, whilst the lower lobes showed areas of recent catarrhal pneumonia already breaking down. There were numerous healing ulcers in the colon. A third case was one of phthisis complicated with syphilis and amyloid disease; only two injections had been given. The phthisis was acute, and there was extensive cicatrisation of laryngeal ulceration. Lastly, he exhibited specimens from a case of hip disease in a child, aged three years and three-quarters. The head of the femur had been recently excised, and prior to that the child had had five injections. Death occurred from acute miliary tuberculosis, tubercles being well seen in the bone marrow. They also occurred in the lung, and the rare (in child) complication of arytenoid perichondritis was present. Professor Virchow deprecated very strongly the statement that in many cases (especially the fatal ones) the injections had been made on experimental grounds and with no therapeutic aim.

Dr. P. GUTTMANN showed a case of inoculated tubercle on the ring finger, in which the diagnostic reaction of Koch's fluid had been confirmed by microscopical examination of excised portions. The "warts" were attributed to inoculation of an abraded surface from a corpse which the man (a hospital porter) was engaged in carrying. Under the treatment they much diminished.

Dr. GRABOWER had no doubt as to the supervention of fresh miliary nodules in laryngeal cases under treatment, but he did not think this serious; it rather showed that the treatment should be continued. In two cases, which he exhibited, such nodules appeared without any pre-existing disease of the larynx. He gave the details of these cases, both early pulmonary phthisis with bacillary expectoration. In the one laryngeal symptoms arose after the twenty-fourth injection, and examination showed swelling of the false cords and a profuse eruption of grey miliary tubercle. These nodules soon became confluent, but entirely disappeared during the continuance of the injections. The other case was very similar, except that the nodules had not been yet wholly removed. He had often noticed this rapid subsidence of laryngeal tubercle after a few injections, and without denying the possibility of infection by contiguity, he regarded their appearance as a direct indication for persevering with the treatment.

Dr. JOLLY, who resumed the debate on Professor B. Fraenkel's paper, directed attention specially to the mental disturbance excited by the fever caused by the injections in some cases, analogous to other febrile "psychoses." He mentioned two cases in Professor Leyden's wards, one a man who had pleurisy with effusion, and who had become depressed mentally by his long illness. The injections (2 to 7·5 mgr.) produced very notable febrile reaction (38·3° to 40°), during which he always became dull and confused. After five injections they were discontinued, and two days later he began to have delusions and was transferred to the insane ward, where his delirium continued to increase. However, these mental symptoms disappeared in a fortnight; they were compared by Dr. Jolly to the delirium of defervescence or post-febrile delirium, not infrequently seen. The man was predisposed by his former depression, and by the excitement attending the hopes of cure by the new remedy. The other patient was in an early stage of phthisis but very wasted, and much enfeebled mentally as well as physically. Although very little fever followed the injections there was severe headache on each occasion, so that after four had been given they were remitted for a time. Then they were again used, and he received fifteen more, always suffering severely from pains in the head. He also lost weight. He then lapsed into a state of melancholia with marked delusions. Mention was also made of a hysterical subject who became markedly delirious after each of three injections she received; she had been very delirious previously during the hectic fever of the phthisis from which she suffered. Although such symptoms might arise only in a minority and were seldom permanent, yet occasionally (in predisposed subjects) they initiated an incurable disorder. Hence the need to proceed very carefully with injections in such subjects.

Dr. HENOCH spoke unfavourably of the treatment in pulmonary tuberculosis of children, of whom he had treated twenty by this method. Three of these were in the "advanced" stage, but without fever; they were all made much worse, the fever induced by the injections persisting as hectic. Yet only ½ mgr. (at first he only gave $\frac{1}{10}$ mgr.) was given at the commencement of treatment, and the largest dose was 3 mgr. In one case there was temporary improvement, dulness disappearing, only, however, to return with increase of other signs on continuance of the injections. Another case illustrated Professor Virchow's statements. A girl eleven years old, whose mother had recently died from phthisis, had suffered from a cough for a year; but there were hardly any physical signs, except slight dulness near spine of scapula, prolonged expiration, and some rhonchus at apices. An injection of ½ mgr. gave no reaction. One of 1 mgr. produced next day a rise of temperature to 38·6°, and some râles appeared at the left base. Five injections in all were given, and a few days after the last, signs of extensive consolidation of the left lung appeared; and even after a month's interval they had very slightly decreased. Obviously it was not a mere transitory hyperæmia, but whether caseous or catarrhal hepatisation could not be determined. There was some suspicion of commencing excavation, for the breathing, which was intensely bronchial, had an occasional amphoric tone, and the râles were metallic. Professor Henoch attributed this change without a doubt to the injections. He said not one of his cases had been "cured," not one "improved" except the one which subsequently relapsed to a worse state; and he was embarrassed to decide if he should continue the treatment in children any longer. It would be ludicrous in the case of a child to follow the practice of some physicians who do not use the injections except at the patient's own wish. Bearing in mind the tendency for tubercle in children to be dispersed in many foci throughout the body, he felt one would be justified in only using it with the greatest reserve, and perhaps at no distant date in discontinuing the practice altogether.

[1] See Berliner Klin. Wochenschr., No. 6.

NOTE ON

ALDEPALMITIC ACID, THE RECENTLY DISCOVERED CHIEF COMPONENT OF THE BUTTER OF THE COW.

BY J. ALFRED WANKLYN,

CORRESPONDING MEMBER OF THE ROYAL BAVARIAN ACADEMY OF SCIENCES.

IT has long been known that the acids arising from the saponification of butter include small proportions of butyric, caproic, caprylic, and rutic acids. The larger proportion of the acids has, up to the present time, been held to consist of palmitic, oleic, and stearic acids, which are non-volatile and insoluble in water. In the course of investigations with which I have been engaged for a number of years I have arrived at the very unexpected result that the main acid is not palmitic acid, but an acid quite distinct from palmitic acid, both in composition and properties. On the 19th ult. I had the honour of reading a paper on the

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subject before the Society of Chemical Industry, and in due time the details will doubtless be published. In the meantime it may be of interest to mention that the new acid, which is so abundant as to amount to about half of the weight of the dry butter, differs from palmitic acid by containing less hydrogen, and that its formula is $(C_{16}H_{30}O_2)n$. The melting point of the new acid is about 50° C., whereas palmitic acid melts at 62° C. The new acid possesses the extraordinary property of consolidating or gelatinising alcohol. At temperatures below 5° C. it gelatinises more than five times its weight of alcohol. Part of the alcohol is held mechanically by a sponge-like action, and part is retained in chemical combination. Palmitic acid (as I have ascertained by experiment) possesses no such property; indeed, so far as I know, no other substance resembles my new acid in this particular.

MEDICAL TRIAL.

CHARGE OF BREACH OF THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

AT the Bolton County Police-court, on Monday, a case of interest to the medical profession was heard, Dr. Gilchrist, a local practitioner, being summoned at the instance of the Bolton Rural Sanitary Authority for an alleged breach of the provisions of the Infectious Diseases Notification Act, 1889. The case for the prosecution was in effect that the defendant failed to notify a case of typhoid fever in a young girl until after a knowledge that she had so suffered for about a fortnight, and evidence to this effect was given by the mother of the child and Mr. Barr, the medical officer of health for the local authority. The latter stated that when he received the notification from Dr. Gilchrist he visited the house, and found the child in a convalescent state, this being borne out by the testing of the temperature and the pulsation, both of which he found to be normal. Mr. J. M. Rutter, for the defence, submitted that Dr. Gilchrist had always shown himself willing to assist the local authority, and conformed with the requirements of the Act as soon as he had accurately diagnosed the case. Further, he said that typhoid fever might go on for even six weeks without a medical man being able to certify, and he called evidence in support of that statement. Mr. Wm. Court, L.F.P.S.G., said it might be possible to diagnose a case of enteric fever in four days, or it might never be ascertained at all. He had attended patients for four weeks before he was able to tell whether it was a case of enteric fever. Dr. Panton stated that cases of typhoid fever were exceedingly difficult to diagnose. In many cases three or four weeks elapsed before they could form an opinion on which they could certify. It was much more difficult in the case of children than grown-up persons. The Bench were satisfied without further evidence, and dismissed the case.

A similar case was withdrawn, but the clerk to the Rural Sanitary Authority later on gave notice of appeal.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6608 births and 3803 deaths were registered during the week ending Feb. 7th. The annual rate of mortality in these towns, which had declined from 28·7 to 22·3 per 1000 in the preceding five weeks, further fell last week to 19·8. The rate was 19·1 in London and 20·4 in the twenty-seven provincial towns. During the past five weeks of the current quarter the death-rate in the twenty-eight towns averaged 24·5 per 1000, and exceeded by 1·9 the mean rate in the corresponding periods of the ten years 1881-90. The lowest rates in these towns last week were 12·6 in Derby, 13·5 in Leicester, 14·7 in Hull, and 16·5 in Salford; the highest rates were 24·5 in Portsmouth, 26·9 in Blackburn, 30·2 in Plymouth, and 37·8 in Preston. The deaths referred to the principal zymotic diseases, which had been 404 and 379 in the preceding two weeks, further declined last week to 332; they included 84 from whooping-cough, 80 from measles, 58 from scarlet fever, 43 from diphtheria, 37 from diarrhœa, 30 from "fever" (principally enteric), and not one from small-pox. No deaths from any of these zymotic diseases were recorded in Derby, Hull, or Cardiff, while they caused the highest rates in Oldham, Blackburn, Preston, and Halifax. The greatest mortality from measles occurred in Bristol, Oldham, Preston, Halifax, and Blackburn; from scarlet fever in Bradford and Plymouth; and from whooping-cough in Salford, Huddersfield, and Halifax. The mortality from "fever" showed no marked excess in any of the large towns. The 43 deaths from diphtheria included 34 in London and 3 in Manchester. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1345, and showed a further decline from recent weekly numbers; the patients admitted during the week were 107, against 103 and 112 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1018 to 636 in the preceding three weeks, further fell last week to 428, and were 91 below the corrected average. The causes of 74, or 2·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Birkenhead, Manchester, and Cardiff. The largest proportions of uncertified deaths were recorded in Bradford, Bolton, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·9 and 26·4 per 1000 in the preceding two weeks, declined again to 21·9 during the week ending Feb. 7th, but exceeded by 2·1 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 9·7 in Greenock and 17·4 in Leith to 25·3 in Glasgow and 25·8 in Paisley. The 574 deaths in these eight towns showed a decline of 116 from the high number in the preceding week, and included 17 which were referred to whooping-cough, 12 to diphtheria, 9 to "fever," 7 to diarrhœa, 6 to measles, 6 to scarlet fever, and not one to small-pox. In all, 57 deaths resulted from these principal zymotic diseases, against 76 and 65 in the preceding two weeks. These 57 deaths were equal to an annual rate of 2·2 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had increased in the previous three weeks from 16 to 29, declined again last week to 17, of which 9 occurred in Glasgow, 4 in Edinburgh, and 3 in Dundee. The deaths from diphtheria, which had been 9 and 7 in the preceding two weeks, rose again to 12 last week, and included 4 in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 9 fatal cases of "fever" exceeded those recorded in recent weeks; 3 occurred in Edinburgh and 2 in Dundee. The deaths from scarlet fever, which had been 18 and 10 in the preceding two weeks, further declined last week to 6, all of which occurred in Glasgow. The 6 fatal cases of measles were within 2 of the number in the previous week, and included 2 in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 228 to 207 in the preceding three weeks, further fell last week to 161, and were slightly below the number in the corresponding week of last year. The causes of 55, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 38·4 and 32·6 per 1000 in the preceding two weeks, further declined to 26·6 during the week ending Feb. 7th. During the first five weeks of the current quarter the death-rate in the city averaged 34·1 per 1000, the rate for the same period being 25·0 in London and 21·0 in Edinburgh. The 180 deaths in Dublin showed a decline of 41 from the number in the preceding week, and included 3 which resulted from different forms of "fever," 2 from whooping-cough, 1 from scarlet fever, 1 from diphtheria, and not one either from small-pox or measles. Thus the deaths referred to the principal zymotic diseases, which

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had declined in the previous four weeks from 15 to 6, were 7 last week; they were equal to an annual rate of 1·0 per 1000, the rate from the same diseases being 1·5 in London and 2·1 in Edinburgh. The fatal cases of "fever," which had been 5 and 4 in the preceding two weeks, further declined to 3 last week. The 2 deaths from whooping-cough exceeded those recorded in recent weeks; and the fatal case of scarlet fever was the first recorded in the city since the middle of December last. The 180 deaths in Dublin last week included 33 of infants under one year of age and 58 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from those recorded in recent weeks. Three inquest cases and 3 deaths from violence were registered; and 41, or nearly a fourth, of the deaths occurred in public institutions. The causes of 25, or nearly 14 per cent., of the deaths in the city were not certified.

UNIVERSITY OF LONDON.

REVISED SCHEME.

[N.B.—*The clauses are re-numbered; to each clause is appended the number of the corresponding clause in the former draft.*]

I.—OBJECTS OF INCORPORATION.

1. The purposes of the incorporation of the University to be so defined as to include, in addition to the existing purposes, the promotion of regular and liberal education throughout Her Majesty's dominions, and especially in the metropolis and its neighbourhood. (1.)

II.—CONSTITUTION, &c.

2. The University to consist of—(i.) Senate, (ii.) Convocation, (iii.) Constituent Colleges, (iv.) Faculties, (v.) Boards of Studies, with the Queen as Visitor. (2.)

III.—SENATE.

Constitution of the Senate.

3. The Senate shall consist (in its final form) of the Chancellor and 51 Fellows to be appointed as follows:—(i.) The Chancellor and nine Fellows to be nominated by the Crown. (ii.) The Chairman of Convocation (*ex officio*) and nine other Fellows to be elected by Convocation, as follows: By the Graduates in Arts, 2; by the Graduates in Science, 2; by the Graduates in Medicine, 2; by the Graduates in Law, 2. In rotation by (1) the Graduates in Arts, and (2) the Graduates in Medicine, 1. Members of Convocation only to vote, and each member to be entitled to vote in respect of each of the said four subjects in which he holds a degree. (iii.) The President of University College, London (*ex officio*); the Principal of King's College, London (*ex officio*); and four other Fellows, two to be elected by each of those Colleges. (iv.) The Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England (*ex officio*); and two other Fellows, one to be elected by each of those Colleges. (v.) The President or Chairman of each of the following bodies—viz.: the Council of Legal Education and the Incorporated Law Society (*ex officio*). (vi.) To be elected by the Principals or Chief Officers of the Provincial Constituent Colleges. (vii.) To be elected by the London Faculties as follows: By the Faculty of Arts, 3; by the Faculty of Science, 3; by the Faculty of Medicine, 5; by the Faculty of Law, 1. (viii.) To be elected by the Provincial Faculties acting conjointly.

Retirement of Members.

4. The Fellows, other than the existing Fellows and Fellows *ex officio*, shall retire as follows:—In every year there shall retire one in each of the following groups—(1) Fellows nominated by the Crown; (2) Fellows elected by Convocation; (3) Fellows elected by University College; (4) Fellows elected by King's College. The other elected Fellows shall retire so as ultimately to give to each of such Fellows a three-years' tenure of office. The retirement of Fellows shall follow in each group the rule of seniority, or, failing seniority, shall be determined by lot, and any question as to the order of retirement shall be determined by the Vice-Chancellor, whose decision in writing shall be final. (10, 11, 17, 18.)

5. Any Fellow, other than the existing Fellows and Fellows *ex officio*, who shall not have attended any meeting of the Senate or of a Committee thereof during a consecutive period of two years, shall thereupon retire. (10.)

6. Power to the Crown and electing bodies to fill up casual vacancies occurring by death, resignation, or otherwise; but any person so appointed shall retain his office so long only as the vacating Fellow would have retained the same if no casual vacancy had occurred. (12.)

7. Power to re-nominate and re-elect. (13.)

Temporary Provisions.

8. The existing members of the Senate shall continue as at present. (14.)

9. No new Fellow shall be nominated by the Crown until the number of present Fellows appointed by the Crown not on the nomination of Convocation has fallen below nine, and then only so as to bring the number up to nine. (14.)

10. No new Fellow shall be elected by Convocation until the number of present Fellows appointed by the Crown on the nomination of Convocation has fallen below nine, and then only so as to bring the number up to nine. Until Convocation shall be in exercise of its powers to elect the whole nine Convocation Fellows, the election of Fellows shall be by the Graduates, as follows:—The first shall be elected by Graduates in Arts, the second by Graduates in Laws, the third by Graduates in Science, and the fourth by Graduates in Medicine, and so on in succession. (14, 15.)

11. The power of all other bodies to elect Fellows and the power of the Fellows *ex officio* to take their places as such shall take effect at once, or so soon as such bodies are constituted respectively. (16.)

12. The Senate shall have power to act, though not fully constituted.

Standing Committees.

13. There shall be a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the London Constituent Colleges in those Faculties. This Committee shall consist of the President and Principal of University and King's Colleges, of the Fellows elected by these Colleges, of the six Fellows elected by the London Faculties of Arts and Science, and of ten other Fellows to be elected by the Senate annually. The business of the Committee shall be to promote the organisation, improvement, and extension of University teaching in Arts and Science in and for London, including the establishment of professorships and teacherships in London, and to discharge such functions in relation to the said Constituent Colleges, and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them. (25.)

14. There shall be a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the Provincial Constituent Colleges, which shall discharge such functions in relation to the Provincial Constituent Colleges and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them. (27.)

15. There shall be a Standing Committee of the Senate in relation to the examinations in Arts and Science other than the examinations conducted under arrangements with the Constituent Colleges.

16. There shall be a Standing Committee of the Senate for the Faculty of Medicine. This Committee shall consist of the Presidents of the two Royal Colleges, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, and one Fellow, holding a chair in a Provincial Constituent College of Medicine, to be chosen by the Fellows elected by the Principals or Chief Officers of the Provincial Constituent Colleges, and the Fellows elected by the Provincial Faculties acting conjointly, and nine members to be elected by the Senate. The business of the Committee shall be to discharge such functions in relation to the Medical Constituent Colleges and the examination of students in Medicine as the Senate may from time to time delegate to them. (27*a*.)

17. There shall be a Standing Committee of the Senate for the Faculty of Laws. This Committee shall consist of the President or Chairman of the Council of Legal Education and of the Incorporated Law Society respectively, of the Fellow elected by the London Faculty of Laws, and of four other members to be elected by the Senate annually. (27*b*.)

18. The Chancellor and Vice-Chancellor shall be *ex officio* members of all Standing Committees. (28.)

19. The Standing Committees shall in all respects be subject to the control and direction of the Senate. (29.)

IV.—CONVOCATION.

20. All elections by Convocation under this Scheme shall be conducted in such manner as Convocation may from time to time determine. (31.)

V.—CONSTITUENT COLLEGES.

London Constituent Colleges.

21. The London Constituent Colleges shall be—In all the Faculties: University College, London; King's College, London. In the Faculty of Medicine: the Medical Schools of Charing-cross Hospital, Guy's Hospital, London Hospital, Middlesex Hospital, St. Bartholomew's Hospital, St. George's Hospital, St. Mary's Hospital, St. Thomas's Hospital, Westminster Hospital, and the London School of Medicine for Women. (33.)

22. There shall be determined by agreement between the Senate and each Constituent College, or, failing agreement, by the decision of the Lord President of the Council, the number and qualifications of the Faculty or Faculties for the College.

23. The Senate shall have power from time to time to admit as London Constituent Colleges such other Colleges, in or near London, as (1) give academical instruction upon a complete system and an adequate scale in all the Faculties, and prepare, or are intended to prepare, students for degrees in the University, or (2) give instruction upon an adequate scale in one or more, even though not in all, the Faculties, and prepare, or are intended to prepare, students for degrees in the University; but shall previously invite an expression of opinion from the Board or Boards of Studies interested. The Senate shall consider in respect of every institution seeking admission the following points:—(*a*) The character of the teaching and of the educational appliances. (*b*) The character of the foundation. (*c*) The average age of the students. (*d*) The number of students proceeding from the College to the University. (*e*) The relation of the College to any other University. (32, 35.)

24. On the admission of a Constituent College the following matters shall be determined by the Senate—viz.: (*a*) The Faculty or Faculties to which the College shall belong. (*b*) The number and qualifications of the Faculty or Faculties for the College.

25. The Senate shall have power, after consultation with the Board or Boards of Studies interested,—(*a*) To increase or diminish the number of the members of any Faculty or Faculties representing any Constituent College. (*b*) To remove any institution from being a Constituent College, subsequent to any appeal to Her Majesty in Council. (37.)

Provincial Constituent Colleges.

26. The Provincial Constituent Colleges shall in the first instance be such institutions situated in England or Wales, but not in or near London, as shall be determined by the Senate, having regard to the conditions and matters contained in Clause 23, and the determination to admit any institution as a Provincial Constituent College shall include the matters specified in Clause 24. In the case of any institution whose claim to admission as a Provincial Constituent College is not allowed by the Senate the determination of the Senate shall be subject to an appeal to the Lord President of the Council. (37*a*.)

27. The Senate shall have power hereafter to admit as Provincial Constituent Colleges other institutions situated as described in Clause 26, and to remove any institution from the number of Provincial Constituent Colleges; such powers to be exercised under the like conditions and limitations as are contained in Clauses 23, 24, and 25 respectively. (37*b*.)

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Present affiliated Colleges.

28. The affiliation of Colleges to the University as now existing shall cease. (38.)

Recognised Medical Institutions.

29. The institutions from which the University receives certificates for degrees in Medicine shall retain their right of giving such certificates, whether they be or be not Constituent Colleges. But the Senate shall have power, after consultation with the Board of Studies of the Faculty of Medicine, from time to time to revise or to add to the list of such institutions, and to determine in what branches of medical education the certificates of each of the said institutions shall be received. (39, 40.)

VI.—FACULTIES.

London Faculties.

30. There shall be in connexion with the London Constituent Colleges four Faculties—viz.: (1) Arts, (2) Science, (3) Medicine, (4) Laws. All departments of knowledge in which examinations may be held by the University, and which are not included in any other of the Faculties, shall be included in the Faculty of Arts. (41, 42.)

31. Each Faculty shall consist of the teachers of London Constituent Colleges, as determined under the foregoing Clauses 22 and 24. (43.)

32. The London Faculties shall elect members of the Senate, as provided in Clause 3. (44.)

33. Each Faculty shall elect members of a Board of Studies. (44*a*.)

34. The chairman for the time being of the Board of Studies shall be the chairman of the Faculty. (45.)

Provincial Faculties.

35. There shall be also in connexion with the Provincial Constituent Colleges Faculties in all subjects in respect of which such Colleges are respectively admitted. The provisions of the foregoing Clauses 30 to 34 shall apply to the Provincial Faculties, substituting the word "Provincial" for the word "London" in such clauses. (45*a*.)

VII.—BOARDS OF STUDIES.

London Boards of Studies.

36. There shall be for the London Faculties a Board of Studies in each Faculty. (46.)

37. Each Board of Studies shall consist of—(*a*) Such a number of members elected by the Faculty, being 4, 8, 12, or 16, as the Faculty shall from time to time determine. (*b*) Two members of Convocation, elected by the members of Convocation, who are Graduates in the subject with which the Board of Studies is conversant. (*c*) An examiner in each subject in the Faculty in which examinations are for the time being held in the University. (*d*) If the Board of Studies shall so think fit, such person, whether members of the University or not, eminent in the subject of the Faculty, not exceeding two in number, as may be from time to time elected by the Board. (47.)

38. One-fourth of the members of the Board elected by the Faculty shall retire each year. (48.)

39. Any casual vacancy among the members elected by the Faculty occurring by death, resignation, or otherwise, shall be supplied by the members of the Board; but any person so appointed shall retain his office so long only as the vacating member would have retained the same if no casual vacancy had occurred. (49.)

40. The members of the Board elected by Convocation and the co-opted members shall retire every four years. (50.)

41. Retiring members of the Board shall be re-eligible. (51.)

42. The examiners in each subject may, if more than one, agree upon one of themselves to be the member of the Board of Studies. In case they fail to agree, the examiner shall be nominated by the Vice-Chancellor in writing. (53.)

43. Each Board of Studies shall have the following powers and duties:—(*a*) To elect a chairman every year. (*b*) To consider and report to the Senate upon any matter referred to it by the Senate. (*c*) To represent to the Senate its opinion on any matter connected with the degrees and examinations and teaching of the subjects of its Faculty. (*d*) To deliberate, if so requested, in conjunction with the Senate or any committee thereof. (54.)

Provincial Boards of Studies.

44. There shall also be Boards of Studies for the Provincial Faculties so far as constituted, and the provisions of the foregoing Clauses 37 to 43 shall apply to such Boards of Studies. But it shall be in the power of the Senate, if they see fit, to constitute a separate Board of Studies for the Faculties belonging to any group of the Provincial Constituent Colleges. (46.)

General.

45. Boards of Studies shall, if so from time to time requested by the Senate, and may, if they shall from time to time think it desirable, meet and act concurrently on particular subjects. This provision shall apply to meetings of the London and Provincial Boards of Studies, as well as to the meetings between Boards of Studies in different Faculties. (55.)

VIII.—MATRICULATION AND DEGREES.

Matriculation and Degrees in Arts and Science.

46. The Senate shall have power to enter into arrangements with the Constituent Colleges in Arts and Science jointly, or any of them separately, upon the following basis:—1. The approval by the Senate of syllabuses of courses of instruction proposed to be given in the Colleges to candidates for Matriculation and for the Pass Examinations for the degrees of B.A. and B.Sc. 2. Production of evidence satisfactory to the Senate of diligent attendance at such College lectures, and for such times as may from time to time be prescribed by the Senate. 3. Examinations of students, being candidates for Matriculation and the Pass Examinations for the degrees of B.A. and B.Sc., by a College professor or teacher in the subject, or other person appointed by the College, and an examiner to be appointed by the Senate, with power to the Senate to make regulations or by-laws from time to time for dealing with any cases in which the examiners may be unable to agree upon their report. 4. The conferring of the degree on the foregoing conditions. (56.)

Degrees in Medicine.

47. The Senate shall have power to enter into arrangements with the Royal Colleges for conducting the examinations in Anatomy, Physiology, Medicine, Surgery, and Midwifery for the Pass M.B. degree by a Board of Examiners, consisting of the examiners appointed by the University, and examiners to be appointed by the Royal Colleges, who shall join in the reports to the Senate on such examinations. The examiners appointed by the University may be called upon, if the Senate so think fit, to make in addition separate reports. These examinations may, if so agreed on, be conducted in combination with examinations for the Royal Colleges. The arrangements for giving effect to this clause shall be carried out under the direction of a committee to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine and a committee to be appointed by the two Royal Colleges. Such arrangements to be subject to the approval of the Senate and of the two Royal Colleges. This arrangement for joint examination shall not lessen or interfere with the duty of the Senate to be satisfied as to the adequacy of the examinations in all respects. (59.)

48. Candidates for Degrees in the Faculty of Medicine to show that they have passed through the required courses of instruction in one or more of the Constituent Colleges in that Faculty or of the recognised Medical Institutions. (58.)

General.

49. With the exception of Examinations for Degrees in the Faculty of Medicine and of Examinations to be held under arrangements with Colleges under the powers hereinbefore contained, candidates shall be admitted to all examinations without regard to their place of education. (57.)

Honorary Degrees.

50. Power to be given to the Senate, with the consent of the Chancellor and Vice-Chancellor, to confer Honorary Degrees. (60.)

IX.—PROFESSORS.

51. Power to hold real property, and to accept grants, gifts, devises, and legacies for the purposes of the University, including the establishment of Professorships and Lectureships, whether attached or not to any particular College, and the furtherance of regular and liberal education and of original research. (61.)

52. Power to the Senate in the event of the establishment of Professorships or Lectureships to assign to the professors or lecturers a representation on the Faculties. (62.)

Correspondence.

"Audi alteram partem.

"FAILURE OR CURE?"

To the Editors of THE LANCET.

SIRS,—An important practical question is raised in a letter published on page 338 of your last number. The profession has been led to believe that when the ovaries and Fallopian tubes of a woman have been removed on account of symptoms supposed to be due to their diseased condition, if she is not killed by the operation she will be cured of her disease. Now we are told that hæmatocele may not improbably convert a cure into a failure. To quote the words in the letter I have just referred to: "Such hæmatoceles interrupt the convalescence of such cases. Everybody knows that who has had any experience of them except Sir Spencer Wells." I am free to confess that I never met with such an interruption to convalescence in my own practice, and the confession of its frequency in Birmingham practice may, it is to be hoped, exert a salutary influence upon the threatened dangerous epidemic of unnecessary mutilation. I have heard nothing from any member of the committee appointed by the Gynæcological Society to investigate the case which led to this correspondence; but I shall be glad to reply to any question they may ask, or introduce any one of them who may be selected by his colleagues to the patient, who is still in London. I may also add that I never spoke of the disease as a "neurotic ailment," but I do say that to call it a case of "incurable pyosalpinx" is as absurd as to assert that I was answerable for the performance of the operation at Birmingham in 1888 because a telegram is said to have been sent to somebody unnamed: "Wells has been communicated with, and declines to advise." I will only add that the publication in the medical journals and in the Transactions of the Gynæcological Society of the supposed fact that this lady had gonorrhœa some eighteen years before the asserted pyo-salpinx (although she had had two children and one miscarriage in the interval, had enjoyed seven years' good health after part of her cervix uteri had been removed, had travelled abroad with enjoyment for several months after her second marriage in February, 1888, and only after an accident in the autumn in Scotland was unfortunately induced to submit to an operation in Birmingham, from which she has never recovered, and for which we are told that I am responsible because I "declined to advise") is, in my opinion, a disgraceful breach of professional confidence. It

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is aggravated by the subsequent statement made at the last meeting of the Society that the case had been in the law courts, and was a *cause célèbre*. There is not a shadow of truth in this cruel calumny. It never was in any law court.

At page 294 of your current volume, it is stated in the report of a lecture delivered at Glasgow that I, who may be said to have been one of the earliest advocates of exploratory incisions, discountenance them because a young lady is said to have been brought to me in 1884 by her medical attendant (who is not named), and that I then discouraged operation. The tumour I then found is said to have increased afterwards, and to have been removed last year. It is not stated whether I saw the patient or not after 1884. If I knew the name of the surgeon who is said to have brought her to me, it is not at all improbable that the inaccuracy in the statements of the case brought before the Gynæcological Society would be equalled in the statement of the case of this young lady; and that the whole story, if not essentially fabulous, would still prove to be exactly such a "truth which is half a truth," as Tennyson has stigmatised in immortal verse.

I am, Sirs, yours truly,

Upper Grosvenor-street, Feb. 10th, 1891. T. SPENCER WELLS.

*** **This correspondence must now cease. We cannot afford further space for the prolongation of this unfortunate controversy.—ED. L.**

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—Some time ago Mr. James Chatham addressed a letter to THE LANCET, in which he showed that the mortality among medical men was far in excess of the expected number, as calculated by the Actuaries' Healthy Males Table. He took his data from the census returns of 1861, 1871, and 1881. His conclusions I by no means desire to call in question. They serve very pointedly to indicate in a sufficiently telling manner the sacrifices, even of life itself, which medical men are daily called upon to make, and which they cheerfully make, for the welfare of their fellow-men. But, from a life assurance point of view, it appears to me that this method of calculating the value of the life of a medical man is hardly a fair one; for it must be remembered that the mortality rate which Mr. Chatham worked out is obtained from the deaths of all medical men in the United Kingdom, at all ages, assured and non-assured. Now, it is well known that many of these die quite young, before they attain the average age at which medical men think it necessary to assure their lives, by reason of the peculiar risks and hardships to which their calling subjects them. Further, in common with all who desire to assure their lives, medical men have to submit to a thorough medical examination, and thus the unhealthy are excluded, and the company assuring them has to deal with selected risks who will be much more likely to fulfil their expectation of life than the general body of medical men. To some extent this is borne out by the investigation of the mortality statistics of the Scottish Widows' Fund and Life Assurance Society, on which I am at present engaged. The period extends over fourteen years, and the number of claims amounts to 5505. Of these, 248 are made by the representatives of medical men. (Under this heading I class physicians, surgeons, and dentists.) The average age at which they assured their lives was thirty-five, and their average age at death was fifty-six in round numbers. Their expectation, according to the Actuaries' Healthy Males Table, was thirty-one years, and of this they fulfilled, on the average, twenty-one years. Now, the average duration of the whole 5505 was only 20·790 years, in round numbers twenty-one years; and the average age at death of the total number was 57·633. It would thus appear that medical men are quite up to the average of assured lives in fulfilling their expectation of life. A further examination brings out the fact that they are a better class of lives than shopkeepers, engineers, architects, teachers, artists, and much better than bakers, butchers, masons, commercial travellers, clerks, and bookkeepers. Mr. Chatham showed that the lives of medical men, in the whole country, were shorter than those of coalminers. But, from the example I have been able to adduce, this does not seem to hold good for selected lives.

It may not be without interest to some of your readers to learn what are the principal disorders by which medical men are cut off. In common with other members of the Society, a large percentage die of heart disease and diseases of the nervous system. But, as might almost have been predicated, a large number succumb to pneumonia; nearly double the number died of this disease as contrasted with the other insurers. The same remark applies to enteric fever and other zymotic diseases, while more than the average come to an untimely end by violent or sudden death. These causes are manifestly incidental to their calling, and probably cannot be well guarded against. On the other hand, it is curious to note that consumption claims as its victims only about one-third of the total average of deaths from this cause, and no less than thirteen attained the venerable average age of eighty-four, and were justifiably classed as dying of "old age."

I am, Sirs, yours faithfully,

Edinburgh, Feb. 10th, 1891. CLAUD MUIRHEAD, M.D.

DR. KOCH'S FLUID.

To the Editors of THE LANCET.

SIRS,—In connexion with the action of Dr. Koch's fluid on lupus would you allow me to call attention to Dr. Fehleisen's experiments with pure cultivations of the micrococcus of erysipelas on this disease, to which I have not noticed any reference in discussions on the subject. The translation of Dr. Fehleisen's paper appears in the Sydenham Society's volume, "Micro-parasites in Disease," published in 1886. On page 272 of this volume, speaking of the curative effect of erysipelas, he says: "I shall also omit the descriptions of its curative effect in chronic joint affections and different forms of syphilis, although particularly in connexion with the latter many reliable accounts exist. The curative effects on lupus are, however, well guaranteed by a number of trustworthy and experienced observers, of whom I need only mention Helva." Further on, page 278, he gives the result of an inoculation in these words: "In order to exclude the objection that the cultivation was dead, a fifth patient, a girl twenty-nine years old, who was suffering from an extensive lupus of the face, was at the same time inoculated with the rest of the same cultivation. She had also recovered from erysipelas of the face in Dec. 1881. The rigor appeared forty-seven hours after inoculation, the temperature rose at once to 39·5° C. and reached the same day 40·1° C., and on Oct. 28th (i.e., four days after inoculation) it became normal. The disturbance of general health was in this case very marked. The short duration of the attack may be accounted for by the fact that the patient had had an attack of erysipelas of the same place ten months previously. The lupus healed as the result of the erysipelas with the exception of a few nodules in the neighbourhood of the nostrils." Dr. Fehleisen's paper and experiments open up many questions of deep interest to the profession into which I shall not now enter. In connexion with Dr. Koch's fluid they raise the question whether the action of this fluid on lupus (and possibly in chronic joint affections) has any specific relation to the tubercle bacillus from cultivations of which it is said to be produced.

I am, Sirs, yours truly,

Exeter, Feb. 9th, 1891. HENRY DAVY.

A PLEA FOR LIBERTY.

To the Editors of THE LANCET.

SIRS,—In the introduction to a collection of essays lately published, and entitled "A Plea for Liberty," Mr. Herbert Spencer says: "The root of all well-ordered social action is a sentiment of justice, which at once insists on personal freedom, and is solicitous for the like freedom of others, and there at present exists but a very inadequate amount of this sentiment."

In ancient Egypt, as Herodotus tells us (II. 84), the art of healing was distributed into several departments, each practitioner occupying himself with a single disorder, and no more. This subdivision, maintained from generation to generation, did, no doubt, for a time favour the attainment of personal knowledge and skill, but, by persistently contracting the intellectual sympathies, and circumscribing the range of observation, it ultimately defeated its own end. There was, however, a more pernicious influence at

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work. Under the tyrannical sway of the priest-physicians, every medical man was, according to Diodorus Siculus (I. 82), obliged to apply his remedies in conformity with rules laid down in certain books deemed sacred. If his patient died he was freed from blame, provided he had observed these rules, but if he had not, he was tried for his life. With precept and practice both penally prescribed, independent research and free inquiry were impossible; and it is not surprising, in spite of Homer's praise of Egyptian physicians as "skilled beyond all human kind," that theoretic medicine made so little progress.

Considering the temper and bearing of some of the so-called leaders of our profession, and the tone of several of the controversies that have of late been carried on in your columns, can we say that the spirit which animated the sacerdotal caste of ancient Egypt is yet extinct?

I am, Sirs, yours truly,

Feb. 7th, 1891. JOHN TWEEDY.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—Few things could be more personally distasteful to me than to find myself differing strongly in opinion from Dr. John Williams and Dr. Champneys. On this occasion, however, I should be false to my convictions if I did not express my dissent from their view. I deprecate as strongly as they the removal of healthy ovaries, whether ill developed or otherwise, simply for the relief of pain. The question on which we differ is the proportion of cases of actual disease of the appendages in which, "on ordinary surgical principles," operative interference is called for. I believe this proportion to be much larger than they seem prepared to admit. In a paper published five years ago[1] I wrote as follows: "I have now for some time been convinced that surgical interference affords us the best, if not the only, means at our disposal of relieving and curing a large number of women who have hitherto drifted on from year to year without sensible amelioration of their suffering, and who have long been the opprobria of our gynæcological out-patient and consulting rooms." This conviction, slowly and reluctantly arrived at, increased experience has but served to deepen. I hope before very long to bring before the Obstetrical Society the evidence furnished by my own cases. I shall then be prepared to discuss the subject fully, and to state the grounds on which my opinion and practice are based. I am, Sirs, yours faithfully,

Brook-street, W., Feb. 9th, 1891. CHAS. J. CULLINGWORTH.

To the Editors of THE LANCET.

SIRS,—Certain statements contained in the joint letter of Drs. John Williams and Champneys in your issue of Feb. 7th seem so widely at variance with the teaching of other gynæcologists that those who are still open to conviction, and desire to ascertain which creed is the true one, must be excused if they venture to seek for fuller information than the letter gives. Is it permissible to ask the authors of the letter to fulfil the same obligations to the profession as they require from those who differ from them—viz., (1) to state the number of women seen during the periods they refer to a little more exactly than by "thousands," and (2) the proportion of "tubal" cases among them. Further, it would be highly valuable to learn what proportion of cases of pyo-salpinx or suppurating ovary, or of tubercular, tubal, or ovarian disease, has been cured by patience? What is the average duration of such cases when treated by patience? How long is pelvic suppuration to be left uninterfered with after diagnosis and treated with patience? Is "patience" synonymous for purely expectant treatment, or what is meant? "Patience and resignation will lighten every difficulty," but it is just as true *non est vivere sed valere vita*. Will the authors formulate some more definite and precise rules for general guidance as to when it is "imperative to operate," when advisable? Such great advances have been made within the last ten years in cerebral, renal, hepatic, and splenic surgery, that one cannot help feeling that pelvic surgery also may be improved by a fair and exhaustive discussion without regard for aught but the best interests of humanity. *Pluris est oculatus testis unus quam auriti decem.* Five years ago I was prejudiced against tubal operations; since then, and particularly within the last year or two, I have seen a considerable number of such operations. The result has been that in practically every instance the pathological condition has amply proved the absolute necessity for surgical interference. I am, Sirs, yours truly,

Grosvenor-street, W., Feb. 9th, 1891. A. D. LEITH NAPIER.

[1] Brit. Med. Jour., Jan. 30th, 1886.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 17th (p. 145) my own opinions upon this subject will be found expressed in the summary of my paper, which was read in conjunction with Dr. William Duncan's. The moral that I meant to draw was more extreme than any included in the manifesto of two distinguished London obstetricians[1] and in a letter from a colleague.[2] Let readers of papers beware how they advocate the removal of appendages for chronic inflammation. Such is the warning note sounded by Drs. John Williams and Champneys. Let readers of papers beware how they advocate any active treatment of appendages affected with chronic inflammatory disease, say I. If an experienced operator writes about "successful cases" of oöphorectomy—which means cases that have recovered from the operation—only too many inexperienced men will be tempted to operate. We must beware, however, how we deprecate operations, for, unless we express what we mean very accurately, we may be misunderstood. I trust, Sirs, that in my paper I made myself clear. In warning men against abdominal section for the class of disease in question we must, as a bounden duty, remind them that unlimited "minor gynæcology" is yet more unjustifiable. For the inexperienced are easily dissuaded from operating; unfortunately they are apt to think that "minor" proceedings are safe and justifiable. Dilatation of the cervix and scraping, valuable in pure endometritis, are fascinating to the practitioner who may dread to open the abdominal cavity. Nevertheless, I know that "curettage" may cause even worse results than injudicious oöphorectomy. In short, I fear, or rather I know, that there is not only too much oöphorectomy, but also too much active treatment of chronic disease of the appendages by the curette and other appliances. Not only do I go further than the distinguished authors of the manifesto, but I also go as far if not further than my colleague. Mr. Meredith shows that but few oöphorectomies for chronic disease are performed at the Samaritan Free Hospital, where there is much operating for the removal of tumours. Dr. Cullingworth, in reply to my colleague,[3] remarks that at the Samaritan Hospital we receive an overwhelming proportion of abdominal tumours. On the other hand, at the general hospitals "cases of pelvic inflammation, due to or complicated by Fallopian tube disease, are admitted (*sic*) in at least equal proportion with cases of ovarian tumour." Dr. Cullingworth is labouring under a false impression, unless we dwell strongly on the word "admitted." The truth is that in the out-patient department of the Samaritan Hospital hardly a day goes by without cases of chronic disease of the appendages applying for relief. On the other hand, many weeks often pass without a single case of true ovarian tumour being seen. Mr. Meredith and myself have had ample opportunities for gaining experience of chronic disease of the appendages. We happen, however, to be in accord with the authors of the manifesto. We might admit many of these cases, until the number of oöphorectomies greatly exceeded the ovariotomies. We act otherwise, however, as we find that many cases of chronic disease get well when treated as out-patients. Some obstinate cases recover when admitted into the physicians' wards. There remains a "submerged tenth," as I may call it, where we consider that the sufferings of the patient "call for surgical procedures," as the authors of the manifesto say. My opinion as to the conditions which justify operation is expressed in my paper.—I am, Sirs, yours faithfully,

ALBAN DORAN.

Granville-place, Portman-square, Feb. 9th, 1891.

To the Editors of THE LANCET.

SIRS,—Holding such strong opinions on the above subject as apparently Drs. Williams and Champneys do, if we may judge from their joint letter which appears in THE LANCET

[1] THE LANCET, Feb. 7th, p. 337.
[2] Ibid, Jan. 31st, p. 276. [3] Ibid., Feb. 7th, p. 338.

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of to-day, it must be a matter of surprise to the profession generally, as well as to myself, that neither of them took the trouble to attend and express those opinions either at the debate held recently on Dr. Playfair's paper at the Obstetrical Society or at the Medical Society on the papers of Mr. Doran and myself. Now, Sirs, it is clear that if the views expressed in that letter be correct, all those who operate, except on the rarest possible occasions, on the diseases we are considering resort to a practice which is (in your correspondents' words) *highly injurious to women and to the profession*. As these operations are performed at several of the large London hospitals, as well as at others throughout the United Kingdom by men who also have thousands of patients pass through their hands, do your correspondents mean to assert that the obstetric physicians and the surgeons at those hospitals are less anxious than they to promote the welfare of their patients and to maintain the honour and dignity of the profession? It passes my understanding how anyone can cure or profess to cure except by operation patients with their Fallopian tubes full of pus or dilated with serum, or those in whom after recurrent attacks of pelvic peritonitis the ovaries and tubes are matted to the other pelvic organs by old adhesions, or how the conditions just mentioned can alter (except for the worse), even with years of rest and patience, which most of the women suffering in this manner are absolutely unable to take. I feel certain that those who operate on these cases, as well as those who are witnesses of the operations, are of the same opinion. The last sentence in your correspondents' letter reads thus: "In no other department of surgery is inflammation of an organ considered to justify its removal." Can it be possible they are so little cognisant of what goes on in the surgical world as to be unaware that the hip- and knee-joints, for example, are being daily opened in cases of chronic inflammation in order to remove the diseased parts, or that when, only a few years back, Sir Joseph Lister advocated and practised opening the latter joint antiseptically a well-known London surgeon threatened, in the event of a fatal case occurring, that the distinguished operator might find himself in the dock on a criminal charge?

By all means hedge round these cases by some such rule as that mentioned in my letter (which you publish to-day) as being in force at the Middlesex Hospital, so that both patient and operator may be thoroughly safeguarded; but, on the other hand, let us not be hampered in doing what we conscientiously believe to be the best for our patients by the statements of those who, on their own admission, have practically no experience whatever of the operation in question, and whose opinions cannot reasonably be expected to carry greater weight than the opposite views of others possessing as wide—or wider—acquaintance with the diseases of women. Doubtless, in years to come, your correspondents and those with like views will change round, but it is, to my mind, sad to contemplate the suffering which must meanwhile be endured.

When I said at the Medical Society on the 17th ult. that the results in my abdominal section cases at the Waterloo-road Hospital, before it was put in a good sanitary condition, were so bad, I did not of course mean in any way to reflect on the authorities, for immediately they were informed of the condition existing they had the drainage completely overhauled at great expense, with the result that since 1885 only five of my cases have died after abdominal section at that hospital. Where the surroundings are insanitary, to compare the results in cases in which the peritoneal cavity is opened with those of ordinary surgical operations (as your correspondents suggest), or even with ordinary gynæcological operations, would, as every medical man knows, be obviously useless and misleading.

The proper place for the discussion of an important subject is at a meeting of a learned Society, and not by letters in the medical journals. If those who object to operating in the treatment of chronic disease of the uterine appendages will bring the subject forward before any of the Societies, they may rest assured that not only I, but many others holding views similar to mine, will take care not to be absent. Meanwhile, I see no good likely to accrue from continuing a controversy in your columns, and, in concluding, must ask your correspondents to carefully peruse, not only my paper, but also a letter from me which you publish to-day.

I am, Sirs, faithfully yours,

Harley-street, W., Feb. 7th, 1891. WILLIAM DUNCAN.

To the Editors of THE LANCET.

SIRS,—I have to request that I may supply an omission in Drs. Williams and Champneys' letter. They say that "this particular operation has already furnished material for legal proceedings in a well-known case. It is conceivable that it might form the object of legislation." I find it to be generally accepted that their allusion is to an action which was brought against me four years ago. As I am unaware of any other case to which their remark can refer, I am compelled to remind these gentlemen that the jury, convinced by the evidence before them, gave a unanimous verdict in my favour without waiting for counsel's summing up, and that I won the action with costs. To omit any indication of the conclusion of these legal proceedings is misleading to the profession, to whose "good sense" the writers of the letter appeal, and is also injurious to me. They profess to accept Bernutz's pathological observations, which are based upon many fatal cases; yet they hold that "death from diseases of the appendages is of extreme rarity." This was not the opinion of the late Dr. Alfred Meadows, to whom we are all indebted for Bernutz's memoirs, and who had probably more practical knowledge of the pathology of these pelvic diseases than any of his contemporaries. So convinced was he of their gravity and of the need for surgical interference that he—a busy man—spent three days in Liverpool in order that he might add his testimony to the evidence of the many eminent witnesses who appeared in my behalf, and was only prevented from entering the witness-box by the law's delay and by urgent telegrams recalling him at the last moment to London.

Surgical treatment of the inflammatory diseases of the uterine appendages is now the accepted practice in Birmingham, Edinburgh, Manchester, Leeds, and other towns, and I fail to see the benefit of a reprint of ancient denunciations. It is certainly conceivable that it might form the subject of legislation. But Drs. Williams and Champneys themselves remove the appendages "when life is threatened" and "when the health has been impaired for many months," and probaby they wish to be free to continue these operations. But the threatened legislation may fail to make suitable provision for their wishes. In THE LANCET four years ago I called upon my critic to publish *his* cases, but they have not yet seen the light. Before the good sense of the profession is exercised upon Dr. William Duncan's cases, Drs. Williams and Champneys should publish theirs *seriatim* for comparison.

I am, Sirs, yours obediently,

Liverpool, Feb. 10th, 1891. FRANCIS IMLACH.

ERYSIPELAS AND TOTAL ABSTAINERS.

To the Editors of THE LANCET.

SIRS,—I think it may be interesting to note the fact that I have at present under treatment three Guardsmen suffering from very severe attacks of idiopathic erysipelas of face and scalp, contracted from exposure in the recent severe weather, and that in each of these cases the patient is a total abstainer. The men are strong, healthy-looking men in the prime of life. In one case the patient suffered from pneumonia as recently as last November, but in the other two cases no history of previous ill health existed. These men came from different regiments, and no insanitary conditions were observed in connexion with their cases. Alcohol is so often blamed as a predisposing cause to this disease, and no doubt is so when taken in excess; but is the temperate drinker in a better or worse position to resist extremes of temperature than the total abstainer? This occurrence of the disease among total abstainers may be only a coincidence, but it looks a significant fact that the only three cases at present existing in the London garrison (over 3000 strong) should come from a comparatively small body of men, such as the total abstainers are in comparison with the non-abstainer. Considering the value of alcohol as a heat-producing food, and that the probability that the disease in these instances was caused by extreme cold acting on tissues whose vitality was lowered, there seems some evidence of cause and effect. From my experience in hot climates I certainly think it is a very open question whether even there the moderate use of alcohol is not beneficial. I am inclined to believe that the stimulating effects of alcohol are most useful in producing digestion and proper nutrition. I would include in the term moderate

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drinkers only those who do not take more than two ounces of absolute alcohol in the day, and take that either with or just after their meals.

I am, Sirs, faithfully yours,

H. R. WHITEHEAD, F.R.C.S. Eng.,
Surgeon, Medical Staff.

Coldstream Guards Hospital, Jan. 26th, 1891.

INTESTINAL IMPLANTATION AND LATERAL APPOSITION.

To the Editors of THE LANCET.

SIRS,—In your issue of Jan. 31st my old friend Mr. Jessett suggests that ileo-colostomy, in the cases of cancer of the cæcum on which Mr. Bryant and I did ileostomy, would have been a better procedure, and his chief argument seems to be that the patients would then not have had fæcal fistulæ. I presume he means "artificial anus," as the object of the operation is to prevent any intestinal contents passing over the diseased surface, which, in the case of ordinary intestinal fistulæ, is not the result. But would the patients have recovered after ileo-colostomy by implantation or apposition? So much depends on the local conditions met with at the time of operation and on the patient's general state that no hard-and-fast rule of conduct can be formulated, and in cases of cancer where any operation except removal (which seems rarely to be indicated at the stage we see cases) can only be of a palliative nature, the simpler the method the more appropriate it appears to me to be. Enterostomy, if done in time, is simple, of rapid execution, and effective, and in another case I would make a free opening low down in the ileum *at the time of operation*, so as to ensure all intestinal contents passing at once through the incision. In these cases the sufferer has but a few months to live, and an opening low down in the small intestine provides for nutritive needs, and with the use of a properly fitting obturator and oakum or wood-wool pads life is very bearable, providing pain and irritation be abolished or much diminished. I would remind my surgical brother now in arms that the fault, or rather the misfortune, in the shape of illness which befel him prevented his accepting my invitation to be present. It is probable, had he been with me, that the operation he suggests would have been done. I think it our manifest duty to give our patients the benefit of experience greater than ours in any particular branch of surgery, and I have no personal knowledge of, or care for, jealousy of so-called specialists in any domain. The onus of showing the profession that the new intestinal operations introduced by Senn, and ably continued and advocated by Mr. Jessett, are of as easy execution and as safe in result as already accepted means rests with these gentlemen, and until this be done cautious surgeons will rely on older plans, except in such desperate cases as that on which I operated last Thursday. Boldness is not always synonymous with wisdom, nor is carefulness the necessary autotype of surgical cowardice or timidity. So far as is in my ken, there are no published records of sufficient successes of these new methods in human beings, but I trust that Messrs. Senn and Jessett will soon remedy this defect. Another argument for ileostomy is that ileo-colostomy would take longer to execute, and in order to make the opening in a healthy colon one would have to go at least three inches from the diseased part, since if the operation succeeded the liquid or semi-solid contents of the ileum would gravitate down to the cancerous part and irritate it. This, I fear, is another real objection; but it may be urged the implantation or anastomosis could be made at the transverse or descending colon, so as to avoid this backward flow. I can only reply with the request to be shown some successes before I adopt, in ordinary cases, new proceedings. There is another objection which, in the present state of our experience, is to me a very substantial one. It is that, I believe, no one is justified in making serious experiments on human beings, and I cannot think but that all surgeons would deem a *confrère* more than rash who undertook these novel proceedings without the aid of the only two men who, so far as I know, have any experience of these operations. I allude to Mr. Jessett and Mr. Horsley, though I believe only the former has operated on the human subject. The technics of these operations are rather complicated until done or seen done, and the least slip in any detail will certainly most seriously endanger the life of the patient; so that I would urge anyone contemplating them to practise repeatedly on the cadaver, and if possible to secure the aid of one or other of these gentlemen. If, now that I have had experience of one case, my services are considered worth asking for, I shall be most happy to render them. As stated in my last letter, operations and surgeons must be judged by results, and ileo-colostomy is no exception to this wholesome rule. I have recently practised what I preach, and have availed myself of Mr. Jessett's valuable aid, most willingly given, in a difficult and complicated case of ileo-sigmoidostomy, and as this is the third serious operation I have had to perform on the same patient, and, moreover, as the narrative of these operations will, I am sanguine, prove of interest and instruction to surgeons, I will, with your permission, publish the case, with illustrations, in THE LANCET, whatever may be the result of the operation.

I am, Sirs, yours obediently,

Grosvenor-street, W., Feb. 2nd, 1891. H. A. REEVES.

P.S.—The patient is now (eleventh day) ready to be sent into the general ward, and complete details will be furnished when the case is published. With regard to the case of digital dilatation I ought to state that I heard from the patient on Feb. 7th. He says he wrote under the influence of morphia, and seems to be much depressed through physical suffering and financial distress. I think it highly probable that the relief undoubtedly afforded by the operation has been replaced by pain caused by the growth of the irregularities which I felt, and which are most likely epitheliomatous. Taking into consideration the fact that the bowel above the stricture was very much distended and hypertrophied, it would have been very risky and difficult to have tried excision and enterorrhaphy or lateral anastomosis. There can be no question that life has been prolonged, but whether it is worth having under such conditions is not for surgeons to decide. Their clear duty is to prolong life if they can, and, as a matter of fact, the large majority of patients elect to run considerable risk and subsequent discomfort if a reasonable promise of longer existence can be offered them. The time will come when surgeons will see similar cases earlier, and as the technique of intestinal surgery improves they will be enabled to deal more radically and successfully with them. *Currente calamo* I omitted to mention that, if my memory be correct, the patient derived relief for a time from the treatment ordered by the eminent physicians experienced in intestinal diseases whose advice he sought.

Feb. 9th, 1891.

THE MEDICAL DEFENCE UNION AND THE MIDWIVES' BILL.

To the Editors of THE LANCET.

SIRS,—I am sorry to find that an attempt is being made to drag the Medical Defence Union into "political" controversies. It is greatly to be regretted that the line upon which the present executive have so successfully worked—viz., defence of the individual member against outside attacks—has been departed from by a small majority at the general meeting. Personally I have no opinion of the Midwives' Registration Bill, but I voted against Dr. Rentoul's motion as a protest against the attempted use of the Union by him and his colleagues as a political agency. It is perfectly true that one of the articles of association of the Union gives the company power "to consider, originate, promote, and support legislative measures likely to benefit the medical profession," but there is no necessity to carry out every article in its entirety, especially when there is so much difference of opinion about any particular subject. The Union is young; it has had a dangerous and almost fatal illness soon after its birth; recovery was slow, but under the treatment of its able President convalescence is now thoroughly established, and its strength is daily increasing. It would be a serious danger to it were it to be exposed to the risk of infection from "political fever," a disease which prevails in some of our provincial towns in far greater severity than we have it in London, but even in those places can be successfully resisted with the usual common-sense precautions. I do not wish to enter into any discussion with regard to the Bill in question. All I desire is to urge all members of the Medical Defence Union who value its work, and who look upon it as a practical insurance against individual attack, to protest against any attempt to divert its power and usefulness into the uncertain

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channels of politics. If such attempt is continued, as a member I shall propose to the executive that the articles of association shall be altered, and that the power to enter into such legislative action be taken away. A few members of strong political bias might resign, but I am satisfied that the loss would soon be regained by an accession of men who look upon the Union as a personal insurance company, and who object as strongly as I do to its being used for any other purpose which may be lawful, but is not expedient. I am, Sirs, yours faithfully,

Feb. 9th, 1891. A MEMBER OF THE UNION.

THE OBSTETRICAL SOCIETY AND THE MIDWIVES' BILL.

To the Editors of THE LANCET.

SIRS,—When the President at the annual meeting of the Obstetrical Society excluded all discussion on the merits of the Midwives' Bill or its details, I determined neither to speak nor vote on Dr. Aveling's resolution, which was simply a vote of confidence in the Council of the Society. Now, the Council of the Society having, both by circular to the Fellows and through the President in his address, disclaimed all responsibility for the present Midwives' Registration Bill, and the President having himself declared that he did not approve of certain of its clauses, and that this Bill, as amended by the Privy Council, does not contain the most important of the suggestions made by the Council of the Obstetrical Society, I saw no valid reason why I should vote for or against the resolution in the restricted shape in which it was put to the meeting. I went to the meeting under the impression that it would be open to any Fellow to give his opinion on the Amended Bill, and that we should not be restricted to a mere vote on the question as to whether any kind of legislative action was desirable. Many Fellows of the Society may approve of legislation, but they think they see such grave blots in the present Bill that no influential medical body, least of all an Obstetrical Society, should hesitate to express an opinion antagonistic to the Bill itself. When I found that all criticism on the details of the Bill was precluded by the President's ruling I merely protested against a vote on such a resolution as that of Dr. Aveling's being regarded as any expression of approval of the Bill itself. As a Fellow of the Obstetrical Society I feel, after the statement of the President, that the Society, through its Council, has been snubbed by the Privy Council, and that its suggestions have been ignored. When this occurred I am of opinion that the Council, in so important a matter, might have taken the Fellows into its confidence, and shown that the Bill was not constructed on lines approved by it, and thus much misunderstanding would have been avoided. It was widely circulated by the promoters of the Bill that it met with the approval of the Obstetrical Society. I was asked and pressed to add my name to a document on which appeared the names of many of the Council. This was an obliquely worded statement in which the desirability of legislative action was urged. When such documents, under the headings, "Registration of Midwives" or the "Midwives' Bill," are signed by influential members of the medical profession, they cannot be surprised if their signatures are used for the purpose of proving that they are in favour of the Bill itself. The Obstetrical Society by a vote has now deliberately pledged itself, and unconditionally, to the principle of legislation for midwives; legislation on what lines? Are the lines and limits to be those agreeable to and approved of by the medical profession and the Obstetrical Society itself, or on terms which will be forced on the profession and the Society by the Legislature. Certainly we must be prepared for this latter contingency if the Society, blindfolded, agrees to the principle of legislation, and calmly sits down while the safeguards it recommends are passed by and ignored. I say nothing of the standard of education adopted by the Obstetrical Society in granting midwives a diploma. It is to be hoped that a considerable alteration for the better in the conditions imposed for that diploma may follow should there be legislation on the subject. Meantime, I maintain that it is the duty of obstetricians to strive to prevent any Bill passing through the Legislature with such glaring defects as those existing in that one now before Parliament. Finally, I should have wished that, no matter how strongly pledged was the Council to the principles of legislation, the verdict of the Fellows should have been taken on the merits of the Bill itself. I am, Sirs, yours faithfully,

Feb. 7th, 1891. H. MACNAUGHTON JONES.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of to-day you do me the honour to report in an annotation a communication on the above subject which I made to the Odontological Society on Feb. 2nd. Judging from my own experience I should say this subject must be of greater interest to the medical than to the dental profession; for, although I have tapped the antrum in a considerable number of cases, in no single instance has a patient applied to me directly in my capacity as dental surgeon. The cases have all been brought to me by practitioners by whom a diagnosis had been made; but many of the cases had been going on for months, some for years, often undergoing treatment wrongly directed, before the true nature of the malady had been made out. Not only is our knowledge of empyema of the antrum far from complete, but the existence of such a disease seems by no means sufficiently well known. The subject, it appears to me, might therefore with advantage be fully discussed in THE LANCET; and I shall be glad if you will allow me to supplement my brief communication by a few further observations. First, as to etiology. I am satisfied that dental disease is by far the commonest cause. The roots of several teeth are separated from the cavity by merely a thin layer of bone; sometimes the roots of molars extend within, covered only by a thin osseous film beneath the mucous membrane. Periodontitis affecting such roots may give rise to suppuration, and this extending to the antrum may establish empyema; or pent-up discharges from suppurating or gangrenous pulps ("nerves") of the teeth may make their way through root foramina into the cavity and excite the disease. In the great majority of cases which I have seen, whilst no other cause has been discoverable, dental disease amply sufficient to account for empyema has existed; and in other cases there has been a clear history of dental disease. But the case narrated to the Odontological Society has left me somewhat in doubt as to what may form etiological factors in exceptional instances. The pathology seems simple. Pus once present in the antrum the cavity can never be completely emptied except by art. Pus flows out when it reaches the level of the ostium, or when the head is inclined forwards; but a residuum is always left on the floor of the cavity, and this becoming putrid, and often inspissated, the mischief is aggravated, and the area of inflammation and suppuration is gradually extended over greater part of the antral lining. The symptoms, which in simple cases are almost pathognomonic, include discharge of fetid pus from the nostril of the affected side only; and, be it noted, the discharge is not continuous, but occurs at irregular intervals, and particularly when the head is inclined forwards. The patient is conscious of a noisome odour; but this is not, as a rule, perceptible to others except at the moment when foul pus is flowing from the nose. There is usually pain, and this may be confined to dull local aching, or may take the form of severe frontal headache and neuralgia. It is not safe to pronounce a positive diagnosis without thorough rhinoscopical examination, as the disease may be closely simulated by pathological conditions of neighbouring parts. It seems commonly believed that distension of the antrum with bulging of the walls is a usual accompaniment of empyema; but this is a mistake; it only occurs in those rare cases in which the ostium is completely blocked. I have met with only one instance of the kind, and in that the patient suffered most from pressure on the floor of the orbit and ophthalmic troubles. Not to enter into minutiæ which might take up too much of your space, the treatment may be described as free drainage and antiseptic irrigation—sources of local irritation such as diseased teeth being, of course, removed or otherwise dealt with. Effectual drainage can only be ensured by tapping the cavity through the alveolar margin or through the socket of a tooth and inserting a gold tube extending well into the cavity, and held in position by a plate such as is used to support an artificial tooth. Further accumulation of pus being thus prevented, the antrum must be thoroughly irrigated once or twice a day with an antiseptic lotion. A syringe, such as that devised by Mr. Christopher

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Heath specially for these cases, must be used. It has a long, thin nozzle to pass well up the tube, and is capable, without exercising too much force, of throwing a continuous stream. The lotion should make its exit through the nose, the head being inclined forward. Cases of empyema, especially such as have been long neglected, often resist treatment for lengthened periods. Whilst care should be taken to ensure thorough irrigation, the danger of keeping up irritation by too much syringing and the use of unsuitable lotions must not be everlooked.

I remain, Sirs, your obedient servant,

Wimpole-street, W., Feb. 7th, 1891. HENRY SEWILL.

SHOULD ERYSIPELAS BE ISOLATED?

To the Editors of THE LANCET.

SIRS,—The above question has been brought prominently before the medical profession in Hull owing to a recent decision of the local sanitary authority refusing to admit erysipelas into their Infectious Hospital, and omitting to make any suitable provision for such cases. In 1888, thirteen deaths occurred in Hull from erysipelas; during the fortnight ending Jan. 2nd, 1891, seven cases were notified in the borough. One of these cases (facial erysipelas) was under my care. It was in a very populous district; several confinements took place within a few doors of the case, which was of a malignant type; neighbours and visitors could not be prevented from passing to and fro between the cases; a midwife was in the infected house one day and the next night attending a labour, though warned of the danger; the room in which the case lay was ill ventilated, and no skilled nursing was available. Under these circumstances I desired the medical officer of health to remove the case at once to the sanatorium, but to my surprise found that he was unable to do so because the sanitary committee had decided not to admit any cases of erysipelas. Under proper hygienic conditions and with trained nursing the patient would, I believe, have recovered. Under the prevailing unfavourable conditions he died.

I brought the matter before the local sanitary committee and was answered by one of its members (a medical man) to the effect that he had never known erysipelas infectious in a private house under the worst of hygienic conditions; that there was little to fear from it as a cause of puerperal fever; and that neither experience, statistics, nor humanity would justify them in admitting erysipelatous cases into the sanatorium. Now, seeing that erysipelas is a specific contagious fever scheduled under the Infectious Disease (Notification) Act, 1889; that it may and does prevail epidemically; and, further, that it may, if not isolated, cause a series of cases of puerperal fever, I propound the above question to the medical profession through the medium of your columns.

The following statistics may be found in the Manual of Public Health (Wynter Blyth), 1890:—"During the twenty-five years ending with 1886, 51,582 deaths in England and Wales are ascribed to this cause. The maximum number of deaths was in 1874, when 3358 deaths were registered; the minimum number was in 1886, when 1523 deaths were caused by erysipelas, the mean number of the whole being 2063 ..... If the deaths from erysipelas and those from puerperal fever be plotted out for a sufficient number of years in a curve, according to season, the curves very fairly coincide."

I should be glad to receive any communication on the matter, privately or through your columns, from any members of the profession who may be interested in the subject.—I am, Sirs, yours truly,

Hull, Jan. 9th, 1891. EDGAR DU CANE, B.A., M.B.

DEATH CERTIFICATION AND LIFE ASSURANCE.

To the Editors of THE LANCET.

SIRS,—I shall be glad of your comments upon the following:—

A man, aged fifty-five years, was admitted, without any history, into the Crickhowell Workhouse Infirmary on Jan. 13th, 1891. Upon a superficial examination, he was emaciated to a frame, pulse very feeble and intermittent, but still conscious; a dislocation of the right knee backwards, and two bedsores over the tuberosities of the ischium. I ordered him brandy every hour, with a milk and beef-tea diet. I had known the man a year or so previously as one of slightly feeble intellect, but otherwise strong and in robust health. By repeated and careful examinations I could discover no disease to account for his condition, but he died six days after admission. As affording a possible clue to his treatment before he came under my notice, the nurse, three days prior to his death, having fed him, remarked that he "had taken more then than he had done at all since he came in." His reply, "Ha! they would have grudged me it at home," was to my mind suggestive in dealing with a man in his condition. I refused to certify as to the cause of death for the reason that I had been unable to find one, and reported such to the police authorities. The coroner was communicated with. This officer, however, came to the conclusion, from inquiries made, that the deceased died from exhaustion due to natural causes, and that an inquest was unnecessary. Now, I have never known in my experience a man fifty-five years of age die of "exhaustion" without being able to find a primary disease to account for it. Senile exhaustion would not apply in this case. Within a few hours after the coroner had given his certificate the friends of the deceased called upon me for a death certificate for an assurance office, in which the deceased's life had been insured, offering to "pay me anything" for it. I, however, declined, and referred them to the coroner. I may add that I never refuse a death certificate except upon what I consider strong ground, as any medical man would who had been told—as I myself have been—by a member of a Board under whom I serve that I withheld certificates in order to obtain fees for evidence at inquests! I am, Sirs, your obedient servant,

PHILIP E. HILL.

Crickhowell, Jan. 24th, 1891. Medical Officer Crickhowell Workhouse.

P.S.—I may add that, as far as I was able to ascertain, the dislocation was of nine months' standing, and had not been seen by a surgeon.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary.

THE annual meeting at the Royal Infirmary was held there on Saturday, the 31st ult. It was hoped that there would have been a good attendance of the trustees and general public, who would thus have the opportunity of seeing the splendid new pile which now occupies the former site, and is one of the greatest improvements which the city has had for a long time. Unfortunately the hour chosen, 11 A.M., was not a happy choice; had it been 3 P.M. or 4 P.M. there would in all probability have been a much better attendance. The new infirmary has been in full working for some time now, sufficiently long to show its many and great advantages. The cost of maintenance will probably require an increase to the income of £3000 a year, which ought not to be very difficult to obtain in so large and wealthy a city.

The Police-court and its Ventilation.

The ventilation of our police-court, like that of so many law courts, is very defective, and the air at times is so foul as to make a compulsory attendance there for any length of time a very serious matter to persons not used to a close atmosphere. The late Mr. Raffles, after nine years' experience of it, had a severe illness and was compelled to go away for some months. He fortunately recovered, and was enabled to discharge his duties for many years afterwards, but frequently complained of the state of the court. It is greatly to be hoped that some means will be found to secure a more wholesome atmosphere for those whom necessity compels to breathe it. The great defect is that of so many similar buildings—viz., an insufficient egress at the top for the foul air which is always ascending. There is no difficulty in securing the ingress of fresh air from outside and from the lobbies.

A Temperance and Purity Crusade.

In deference to a strong expression of public opinion, proceedings have been taken against all the keepers of brothels known as such to the police, and within the last few weeks nearly two hundred persons, mostly women, have been summoned, have pleaded guilty, and been fined £5 and costs. For a second offence one woman was fined £10,

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or one month's imprisonment. Similar proceedings are going on daily, the total of cases to be dealt with being between 300 and 400. Besides these, many publicans have been summoned for serving drunken persons, for allowing their houses to be the habitual resort of prostitutes, and for permitting the latter to remain longer than was necessary. While it is gratifying to see that so much is being done to repress intemperance and vice, the ill effects of which are only too well known to medical practitioners, it would be contrary to all previous local experience to expect much good from this raid. As was remarked in THE LANCET some time ago, the "social evil" shows a terrible persistence, and a similar remark might be made of intemperance.

The Disposal of the Dead: Burial or Cremation?

Dr. Hope, the assistant medical officer of health, will to-morrow bring before the members of the Medical Institution the important question of the disposal of the dead, and will move a resolution in favour of cremation. A very interesting discussion may be expected. Apart from other considerations, it must be remembered that Liverpool contains a very large number of foreigners, who are favourably disposed towards cremation, and as Englishmen have always been permitted to have burial grounds and facilities for burial in foreign climes where cremation is the mode of disposal of the dead, it is only right that in this matter there should be reciprocity.

Liverpool, Feb. 11th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Hospitals.

MANY of our local hospitals have lately been holding their annual meetings. At the Clinical yesterday it was reported that additional land had been obtained adjoining the hospital, upon which it is proposed to erect extensions if the necessary funds (some £2000 to £3000) can be obtained. Increased number of patients treated and lack of funds were reported here as elsewhere. The Mayor of Manchester referred to the fact that hospital managers, in their reports, always appeared to dwell with satisfaction upon the increase in the number of patients. He was inclined to take another view of the subject, and to submit whether it might not be a source of satisfaction if the numbers diminished. Hospitals were not business concerns flourishing in proportion to the amount of work they did. The same gentleman, recently speaking at the annual meeting of the Children's Hospital, when the chairman took rather a gloomy view of the increased demands upon them and their shortness of funds, declared himself quite willing to face the possibility of hospitals being in part subsidised out of the rates in the same way that fever hospitals pretty generally are now. At the Eye Hospital a satisfactory state of the finances was reported for the year, and here, contrary to the usual experience, there has been a little diminution in the number of patients under treatment. At the annual meeting of the Victoria Dental Hospital funds for providing a new hospital at an estimated cost of £6000 were pleaded for. The *pourparlers* are still going on between the Infirmary and Owens College authorities respecting the proposed new hospital in connexion with the College and the extension of the present infirmary, but nothing of a definite nature has yet been resolved upon. In the face of a possible new hospital the need for any great extension of the present infirmary has scarcely yet been demonstrated. One very philanthropic proposal made by the Whitworth Trustees in connexion with their splendid gift to the College is to establish a special wing or pavilion for cancerous diseases, with a threefold object in view—to provide treatment for these sufferers, to afford opportunities for scientific study of these ailments, and to provide a permanent home for incurable cases amongst persons above the pauper class.

Hospital Collections.

Last Sunday was Hospital Sunday, and Saturday next is set apart for the collections from workshops &c. Last year showed a slight falling off in the Sunday collections, but a more than corresponding increase in the Saturday ones. In face of the almost universal cry of lack of funds, it is hoped that this year contributions may show a considerable augmentation.

Medico-Ethical Society.

This society, of which Dr. H. Ashby is the president for the current year, has mapped out for its consideration a special subject for the coming year—i.e., the causes of the high death-rate of Manchester. A series of papers have been arranged for by those of its members specially qualified to deal with such matters as infant mortality, cremation, influence of drink on the death-rate, unhealthy dwellings, &c., and it is also organising a staff of lecturers to go out among the masses of the people and deliver popular lectures upon sanitary matters. This is a somewhat new departure, but possesses potentialities of great usefulness.

Diphtheria in Salford.

Mr. Paget, the medical officer of health for Salford, has prepared a report upon the increased prevalence of diphtheria in that borough last year, and even at the present time it is far from having disappeared. He speaks very cautiously as to the actual causation, but exonerates the milk supplies from any suspicion of being concerned in it. He thinks the schools may have contributed to the spread of it after it was established, and he more than hints at the possibility of a polluted soil by the privy-midden system &c. as an important factor to be considered in connexion with it.

Housing of the Poor.

An interesting scheme is being set on foot, upon philanthropic-commercial principles, for providing cheap and healthy tenement homes for the poor. A number of well-known gentlemen interested in this social problem have formed themselves into a limited company to raise a capital of £20,000 for promoting the above object. They have acquired a large disused factory in Ancoats (one of the poorest districts of the city), and propose converting it into about 150 separate tenements, to be let at a rental of two shillings per week and upwards. The scheme appears to have been well thought out, and, if the expectations of its promoters are realised, will yield a dividend of 4 or 5 per cent. upon the outlay.

Fatality at the Prestwich Lunatic Asylum.

An unfortunate and happily unusual occurrence took place last week at this asylum. After some altercation with an attendant one of the male patients became very violent, and in the struggle which ensued a table fell upon him and caused such injuries as to result in death. At the coroner's inquiry the attendant was acquitted of blame.

Municipal Sanitary Work.

Our local parliament continues to direct its attention to insanitary districts of the town, and at the last council meeting two more smaller blocks of property were condemned on the certificate of the medical officer of health—one area in Hulme, containing nearly 7000 square yards, and another somewhat larger area in Ancoats. At the same meeting the Public Health Acts Amendment Act of 1890 and the Infectious Diseases Prevention Act, 1890, were adopted. This latter will give increased powers in dealing with infectious diseases, premises, &c. With all our powers and appliances, it would seem that we make but little real progress in the diminution of scarlet fever, typhoid fever, and diphtheria. During the last month of 1890 something like a hundred new cases of scarlet fever, forty of diphtheria, and nearly fifty cases of typhoid fever were reported. More than a thousand cases have been sent into the Corporation Fever Hospital at Monsall since June last, and this is only a small part of the total number reported.

Manchester, Feb. 11th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Royal Infirmary.

THE annual meeting of the Newcastle Royal Infirmary has been held, and the report gives evidence of a very large amount of work having been done in this great institution during the past year. The number of in-patients treated was 3328, which was more by 208 than that received in the previous year. The number of deaths had been 277, giving a death-rate of 8·32 per cent.; of these, however, 53 died within twenty-four hours of their admission, and may be regarded as moribund, and beyond the reach of medical skill,

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when they were admitted. Deducting these, the number of deaths may be stated as 224, giving a death-rate of 6·73 per cent. The number of casuals and out-patients had been 13,216, giving an amount of relief of incalculable value. The number of eye cases had been 1120; the dental cases were 808. In regard to the recent application of the Koch treatment, it was stated that in the lupus cases a marked improvement took place from the very first, and it is fully expected, by a continuation of the remedy, that health will be restored. As regards the two cases of phthisis, no decided opinion can at present be formed, a sufficient period not having elapsed to say what the result may be. The Mayor, in speaking to the adoption of the reports, said that one of the most gratifying things in the finances was the large amount subscribed by working men, amounting as it did to £3201. I mentioned in former notes the completion of the beautiful little chapel, St. Luke's, in the infirmary. It was stated at the meeting that a lady had presented an organ for the chapel.

Newcastle Health Society.

The inaugural lecture of the new Society (established on similar lines to that in Edinburgh and other large centres) was delivered on Saturday last by Dr. William Murray of this city, to a very large and appreciative audience. Dr. Murray's subject was Eating and Drinking, and he treated it in a masterly yet attractive manner, showing the errors of various classes of the community as to diet, the injury to health from neglect of physiological laws, and the baneful effects of bad customs as to quality and quantity of food for the various ages. Dr. Murray also very clearly showed that with proper organisation an amount could be saved to the working man's household equivalent to an important rise in wages, yet this aspect of economy is rarely taken up by reformers. The course which has been so well commenced is to be followed by various medical men and others distinguished in their various departments. The Health Society supplies a want, and supplies it well, for the north of England, with its dense population.

The Children's Hospital (Fleming Memorial), Newcastle.

The annual meeting of the Fleming Memorial Children's Hospital has been held, and the report stated that the in-patients had been 201 and the out-patients 3390, showing a considerable increase in both departments. The committee hoped that on the receipt of a munificent bequest of the late Mr. Fleming, the founder of the hospital, who had also left £25,000 to it, they would be in a position to open all the beds in the various wards.

Alnwick.

The Duke of Northumberland has offered the local board of health the sum of £1000 to help them in carrying out some sewage works necessary for the town of Alnwick, also land for purification works near the town.

Newcastle-on-Tyne, Feb. 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Prevalence of Infectious Diseases in Edinburgh.

AT the Town Council meeting last week the Convener of the Public Health Committee drew attention to the fact that the City Hospital was more than full. There were in the hands of the towns no fewer than 286 people affected with fever—99 being cases of typhoid fever, 11 of diphtheria, 111 of scarlet fever, 6 of measles, 10 of whooping-couph, 12 of erysipelas, and 13 in quarantine. From this it appeared that their hospital accommodation, while sufficient for ordinary occasions, was insufficient for a large epidemic. Although the intimations of infectious disease seldom exceeded twelve daily, from Jan. 24th the intimations had gone up considerably. So many of the cases in hospital were typhoid fever cases, which required very careful nursing, that they were in straits to provide accommodation, not only for the patients but for the nursing staff. Questions were asked whether the officials of the Public Health Committee had traced the source of an outbreak of scarlet fever in a district of the city, and when it was intimated that they had not succeeded in doing so it was stated there was a complaint that the matter was not being investigated as carefully as it might be. Since the meeting, a notice has appeared that the milk supply from a dairy has been stopped. Open criticism seems to have a stimulating effect on the official mind.

Demonstrations of Sick-room Cookery.

A short series of demonstrations of sick-room cookery have been given during the past few weeks in the Edinburgh Royal Infirmary for the instruction of medical students, similar to those given on former occasions. The demonstrations are given by ladies from the Edinburgh School of Cookery, and their value to the medical student is apparent.

Health of Edinburgh.

The mortality last week was 91, and the death-rate 17 per 1000. Diseases of the chest were accountable for 50 of these, and zymotic diseases for 9; of these, 2 were due to typhoid fever, 2 to diphtheria, 1 to measles, and 4 to whooping-cough. The intimations for the week comprised 19 cases of typhoid fever, 8 of diphtheria, 63 of scarlatina, and 9 of measles. In Leith the death-rate was at the rate of 18 per 1000.

The Edinburgh Medico-Chirurgical Society.

At the meeting of this Society last week Dr. J. Berry Haycraft gave an able paper with demonstrations of the cardio-pneumatic movements. He first dealt with the views of Voit, the discoverer of these movements, and gave a demonstration of the method he had used; then he considered and demonstrated the opinions and experiments of Ceradini and Landois, and from these went on to detail his personal observations, and showed that the movements are really inverted cardiograms, and due to the movements of the heart upon the lungs; that they occur equally well in the freely opened chest, but cease when the heart is lifted away from the lungs. The views advanced were illustrated by carefully planned experiments, and by projections of tracings. This was followed by "Notes on a Case of Hereditary Optic Atrophy," by Dr. W. G. Sym.

Royal Infirmary, Perth.

The annual report for the past year shows that the work of the institution had been efficiently carried on, and that all the demands of the sick poor upon its resources were fully and adequately met. The ordinary income amounted to £2487 19*s.*, and the expenditure to £3125 18*s.* 5*d.* During the year £1009 had been received as legacies.

Feb. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal University of Ireland.

A MEETING of the Senate was held last week, when it was decided that henceforth the examination for the diploma for proficiency in the treatment of mental diseases shall be held every year. His Excellency the Marquis of Dufferin and Ava, Chancellor of the University, having offered for competition a gold medal for the best English essay on a subject to be named by the Senate, they have arranged that for 1891 the subject for the essay shall be "Edmund Burke," and for the following year, "Colonies, Ancient and Modern." The following examiners have been appointed:—Chemistry, E. A. Letts; Biology, L. E. Klein; Anatomy, A. E. Birmingham; Materia Medica, F. Quinlan, William Whitla; Medicine, Joseph O'Carroll; Surgery, Thornley Stoker; Midwifery, J. W. Byers, A. J. Smith; Medical Jurisprudence, C. Pearson, M. F. Cox; Ophthalmic Surgery, H. R. Swanzy; Sanitary Science, Sir Charles Cameron.

Royal College of Surgeons.

An election for a member of council, in the room of the late Mr. Corley, will be held on Monday, the 23rd inst. It is expected that there will be two candidates, Messrs. William Frazer and Austin Meldon, each of whom has already served as councillor. On the same day an election of an examiner in law will take place to examine candidates for the diploma in State medicine, granted conjointly by the Royal College of Physicians and Royal College of Surgeons.

Royal Academy of Medicine in Ireland.

The eighth volume of the Transactions of the Academy, that for the Session 1889-90, has been issued. There is in the Medical Section an excellent paper by Dr. Foot on

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Morphinism; and in that of Surgery the following among others are of interest—viz., A Successful Case of Batty's Operation, by Mr. J. K. Barton; Supra-pubic Lithotomy in relation to the Treatment of Encysted Calculus, by Mr. McArdle; and One Hundred Cataract Extractions, by Mr. Swanzy. In the Section of Obstetrics Dr. Macan describes a case of successful Cæsarean Section. In the Section of Pathology Professor Bennett has a paper on Typical Fractures, which is of great practical value; and Mr. Franks describes a renal calculus where the nucleus was formed by a foreign body, a needle which had been swallowed seventeen years previously. In the same Section there is a short note by Dr. McWeeney on Diphtheritic Micro-organisms; and in the Section of Anatomy and Physiology there is an elaborate paper by Mr. Alec Fraser on Operations on the Brain. The volume is edited as usual by Mr. Thomson.

Artisans' Dwellings in Drogheda.

The necessity for providing improved dwellings for the working classes in this town has engaged the attention of Mr. J. P. Cairnes, J.P., who, anxious to make some practical effort towards supplying this want, has proposed to place a sum of £5000 in the hands of trustees for this purpose. This offer has been made to the Corporation of Drogheda by Mr. Cairnes, who has requested their friendly coöperation, and that body has passed a vote of thanks to him for his generous offer, and have appointed a committee to wait upon him in reference to the matter.

South Dublin Union.

An election for a medical officer to Canal-street Dispensary took place last week to fill the vacancy caused by the death of Dr. J. A. Byrne. Considerable interest was felt in the proceedings, eighteen candidates having forwarded applications for the post, of whom sixteen were in attendance. Dr. Herbert Byrne, son of the late medical officer, however, distanced all competitors and obtained the appointment by a large majority.

Midwives' Registration Bill.

When this Bill comes on for second reading its rejection will be moved by Mr. Macartney, M.P. The chief medical corporations have made arrangements for their representatives to wait as a deputation on the Lord President of the Council with reference to the proposed enactment.

Address to Mr. F. Foster Brady, L.R.C.S.I.

Mr. Brady, since his appointment as medical officer to Carnew Dispensary, co. Wexford, now some four years since, has made many friends, and the occasion of his recent marriage was taken advantage of to show their esteem and regard. Last week he was the recipient of an address and presentation as a token of the kindly feelings towards him which existed in the district in which he practises.

University of Dublin.

On Tuesday, at the spring commencements of the University, the honorary degree of LL.D was conferred upon the Right Hon. A. J. Balfour, M.P., Chief Secretary for Ireland. Mr. Balfour received an enthusiastic reception, and after leaving University Hall delivered a short speech to the undergraduates.

St. Vincent's Hospital.

Dr. A. Smith, ex-assistant physician Rotunda Lying-in Hospital, has been appointed gynæcologist to this hospital, in the room of the late Dr. J. A. Byrne.

Feb. 10th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Drug Treatment of Chorea.

THE drug in contradistinction to the moral and dietary treatment of chorea has up to the present given rise to a vast amount of discussion. It still rests on very debateable ground, some extolling one drug, some another, a clear proof that no one drug is ever found to be universally efficient. Others, again, maintain that drugging in this affection is quite as, if not worse than, useless. The writer recollects being once up for an examination in medicine in which the learned examiner, with decided views, scouted drugging in chorea, and informed his uncomfortable candidate, in the dogmatic tone peculiar to not a few examiners, that when next questioned as to the best treatment of chorea to reply: "Six to eight weeks, combined with peppermint-water thrice daily." Judging, however, by the recorded results obtained in recent years by competent observers in this country and elsewhere in the treatment of chorea by antipyrin and its allies, there would appear to be a consensus of opinion that in the therapeutics of chorea a step has been made in advance. Amongst the observers who have exhibited this drug with success is Dr. Moncorvo. He found, however, that large doses were necessary before any decided effect was produced even in the case of children, and that although when polyuria and nocturnal incontinence existed these were appreciably diminished, they were not entirely suppressed; these and other considerations led him to try exalgine, and from the very first he records that the benefit which attended its administration was decidedly encouraging. The polyuria and nocturnal incontinence, which the antipyrin had only served to check, were completely arrested by exalgine. Again, while the effective dose of antipyrin was found to be three grammes a day that of exalgine only amounted to thirty centigrammes. Moreover, Dr. Moncorvo says that when treated by antipyrin the average duration of the disease is one month, while in those cases in which he has tried exalgine a cure has been effected under three weeks. He finds that the drug is well borne by children, and has never observed any unpleasant effect follow its use. Seeing how common and distressing an affection chorea is, and the uncertainty, if not impotence, of therapeutic efforts hitherto, the observations of Dr. Moncorvo are worthy of note, and his practice of more extended trial.

Intestinal Antisepsis and Drug Tolerance.

Every observer has from time to time remarked the intolerance manifested against some drugs, the administration of which, while absolutely necessary for the amelioration or cure of the patient's affection, is rendered difficult owing to this intolerant idiosyncrasy. M. Féré finds that, by practising intestinal antisepsis by means of such substances as naphthol, patients who were intolerant of small doses of bromide of potassium or borax in epilepsy will, when naphthol and salicylate of bismuth are exhibited at the same time, bear perfectly well as much as seventeen grammes a day of bromide without any inconvenience. The eczema and psoriasis which sometimes appear in the train of borax will also disappear if the intestines be rendered antiseptic. M. Féré adds that it is quite possible that intestinal antisepsis may be found to check intolerance of drugs other than those directed against epilepsy.

Dogs' Serum in Tuberculosis.

At a recent meeting of the Biological Society, M. Charles Richet recorded the results so far obtained by the injection of the prepared serum of dogs' blood in cases of tuberculosis. In one case, where the injections were practised regularly since the beginning of last December, the patient had gained in weight as much as four kilogrammes and a half. In another, whose condition was so pronounced that he suffered from bedsores, a marked amelioration was reported; and in a case of laryngeal phthisis the progressive improvement in the ulcerations was plainly visible. M. Richet does not go so far as to assert that these improvements may be permanent, but he has demonstrated at least the main effects of the injections made with this prepared serum. The injections are made at first every third day, then every second, the amount injected being two centigrammes a day.

The Obstetric Forceps and Paralysis.

In the English works on obstetric medicine within my reach I cannot find that paralysis of the upper extremities, following the use of the forceps and the performance of other obstetric operations, is duly insisted upon. That it is by no means uncommon is evidenced by the fact that M. Comby reported three cases at the last meeting of the Hospitals Medical Society. In the case of the forceps, the paralysis is brought about by undue stretching of the brachial plexus when considerable traction is used. In cases of contracted pelvis it may also follow version or violent traction on the shoulders with finger or crochet. In many of the recorded cases the paralysis was permanent; in others faradisation and galvanism were of benefit. In two of the three cases seen by M. Comby, he believed the prognosis was good, but in the third he did not think a cure possible.

Paris, Feb. 10th.

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BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Diagnosis of Bovine Tuberculosis.

THE German Imperial Office of Health is testing the value of Koch's fluid as a means of diagnosing tuberculosis in cattle. The result of the preliminary experiments was favourable.

Mikulicz on Koch's Method.

Professor Mikulicz of Breslau declares that the hope of obtaining brilliant results by Koch's method has not been fulfilled. This is due, however, he adds, solely to the circumstance that in their first enthusiasm people hoped too much, for all that Koch said in his first publication is still valid. Mikulicz admits the dangers pointed out by Virchow, but hopes to diminish them by surgical treatment.

Virchow's Answer to Professor Neisser.

With reference to Professor Neisser of Breslau, who wrote that Virchow's observations of the effect of Koch's fluid had been made on cases in which the injections had not been made for therapeutic reasons, "but in order to study the effects of the fluid at the autopsy of patients who would have died at any rate," Virchow repeats that he chose by preference cases in which the bad symptoms had developed after the injections.

The Free Association of Berlin Surgeons.

The Free Association of Berlin Surgeons discussed the treatment of lupus by Koch's method yesterday evening. Professor Sonnenberg showed a female patient who had been almost entirely cured of extensive lupus. She has been treated by Koch's method since October. She had been treated without success before by other methods. Professor Hahn said that he had found it advantageous to puncture the parts affected by lupus during the administration of Koch's fluid. Dr. James Israel reported a case of indubitable lupus, in which there was no local reaction whatever. Dr. Lindner of the Augusta Hospital has in most cases observed no reaction, either local or general, or hardly any after the injection for lupus, but has nevertheless obtained favourable results. Professor Bardeleben declared it a great mistake to pronounce a final opinion upon Koch's method yet. Dr. Koerte of the Hospital am Urban stated that in most of his cases the morbid phenomena altered only a little under Koch's treatment, but he too has seen isolated cases of improvement. Dr. Bartels raised the question whether general miliary tuberculosis had been observed in patients with surgical tuberculosis after Koch's injections. None of the surgeons present had seen any such effect. Professor Bardeleben said there was no doubt that general tuberculosis and tuberculous meningitis might set in during the application of Koch's method, but it was hard to say whether they were due to the injections. The argument *post hoc ergo propter hoc* might easily mislead. If, for example, one resected a tuberculous joint in children, the operation was sometimes followed by general miliary tuberculosis. It was natural to suppose that tubercular particles got into the bloodvessels during the operation. It was found, however, that general tuberculosis sometimes broke out in such children before the operation. If the miliary tuberculosis had followed the operation in these cases, it would have been erroneously attributed to it.

The Cremation Society.

The Cremation Society held a general meeting here on the 4th instant. The number of its members is considerably above a thousand. Professor Freire of Rio Janeiro lectured on the danger of burying persons who die of yellow fever in South America, and declared the introduction of cremation to be the only preventive of epidemics there. The income of the Society last year was over 19,000 marks—i.e., shillings; its expenditure over 17,000.

Hermann von Helmholtz.

Helmholtz will complete his seventieth year on Aug. 31st next, and preparations are already being made to do him honour on that occasion. Contributions may be sent to Mendelssohn and Co. here before the end of April.

Death-rates of the Week ending Jan. 24th.

Aix-la-Chapelle, 23·7 per 1000; Altona, 30·8; Barmen, 16·3; Berlin, 17·2; Bremen, 18·2; Breslau, 24·9; Chemnitz, 25·6; Cologne, 25·7; Dantzic, 33; Dresden, 16; Düsseldorf, 16; Elberfeld, 23·1; Frankfort, 24·5; Hamburg, 18·4; Hanover, 20·1; Königsberg, 26·7; Krefeld, 28·9; Leipsic, 18·8; Munich, 22·6; Nürnberg, 21·8; Stettin, 28·2; Strasburg, 30; Stuttgart, 15·5.

The further application of Koch's fluid in the Warsaw hospitals has been officially forbidden.

Dr. Julius Lazarus has been appointed head of the medical department of the Jewish hospital here.

Berlin, Feb. 10th.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Wm. Duncan, M.D., F.R.C.S. Eng., having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers (dated Feb. 12th, 1891); Acting Surgeon John Hubert Griffin, 16th Middlesex Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated Feb. 11th, 1891).

YEOMANRY CAVALRY.—Middlesex (Duke of Cambridge's Hussars): William Duncan, M.D., to be Surgeon (dated Jan. 25th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Surgeons: Wm. Bett to the *Stork* (dated Feb. 11th, 1891); Octavius S. Fisher to the Plymouth Division Royal Marines (dated Feb. 11th, 1891); George A. Waters, M.D., to the *Boomerang;* Walter J. Bearblock to the *Hearty;* Thomas Austin to the *Karrakatta;* and George M'Shane to the *Seagull* (undated).

VOLUNTEER CORPS.—*Infantry:* Mersey Brigade: Surgeon and Surgeon Major T. M. Wills, 4th Volunteer Battalion, the King's (Liverpool Regiment), to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Feb. 11th, 1891).—*Rifle:* 21st Middlesex (the Finsbury): Acting Surgeon E. W. F. Stiven, M.D., to be Surgeon (dated Feb. 7th, 1891).—1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade): Geo. Gunnis Ferguson, M.B., to be Acting Surgeon (dated Feb. 7th, 1891).

Obituary.

FREDERICK SIMMS, M.B. LOND., M.R.C.P.

WE regret to announce the death of Dr. Simms, of Mandeville street, Manchester-square, and Yew Cottage, Twickenham, which occurred unexpectedly on Friday, Feb. 6th, at the age of fifty-six. He was seized with apoplexy, from which he never rallied, and passed away in a few hours. For some time he had been in delicate health, but nothing to make his friends in any way prepared for so sudden a termination to the life so dear to them. Dr. Simms was born at Greenwich, his father being a civil engineer who had attained eminence in his profession, and to whom his son was tenderly attached, retaining to the last a most profound reverence for all that pertained to his father's memory. He was educated at the Rochester Grammar School, and subsequently at King's College, London. Everything connected with the sea possessed a great charm for him, and shortly after graduating he had the opportunity of indulging this taste, in conjunction with his medical duties, by taking charge of troops to India. Subsequently, Dr. Simms settled at Twickenham, where he engaged in general practice for eight years, when failing health induced him to relinquish the work, to the great regret of his patients, amongst whom he was deservedly popular. After this he commenced a consulting practice in London, applying himself with special interest to dermatology. He was appointed consulting physician to the Twickenham Provident Dispensary and John the Baptist Hospital, where he enjoyed the esteem and respect of his colleagues. By his generous, courteous, and loveable disposition, Dr. Simms won the hearts of all with whom he came in contact; his high sense of justice and strict adherence to professional etiquette were very noticeable traits in his character. The good exercised by the quiet, kindly influence of such men is deep and wide-spreading, and in many places, especially in Twickenham, where he lived so long, the memory of this true Christian gentleman, "who wore the white flower of a blameless

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life," will be long cherished. Dr. Simms was twice married; he leaves a widow and several sons and daughters. His only published work with which we are acquainted is "A Winter in Paris."

CHARLES RICHARD CROSSLEY, M.R.C.S., J.P.

LEICESTER and its vicinity have suffered a severe loss by the death of this esteemed surgeon, which took place on Jan. 9th last, after a prolonged and painful illness. Mr. Crossley occupied the post of surgeon to the Leicester Infirmary for a quarter of a century, and in the discharge of the duties of that office displayed remarkable dexterity, conjoined with sound judgment. In his private practice the confidence of his patients was secured by the firmness and transparent honesty of his advice, whilst his sympathy with the suffering readily obtained for him the position of family friend. Mr. Crossley took a great interest in political and municipal affairs, and in the exercise of his magisterial functions he commanded the high respect of his colleagues on the bench. He died at the age of sixty-six, leaving a widow, one daughter, and three sons, two of whom were his partners in practice. A notice in a local newspaper of the decease of Mr. Crossley closes with these words:—"We cannot in our sadness forget that Charles Richard Crossley, whose name will always be uttered by his fellow townsmen with respectful pride, was one of those who leave behind them examples of devotion to duty, of love for noble aims, and of manly goodness which the world must be better for striving to follow."

PROFESSOR GAETANO LEOPARDI.

THIS able consultant and estimable citizen died at Florence on the night of Jan. 17th, leaving a blank not easily to be filled in the roll of Tuscan physicians.

Gaetano Leopardi was born at Jesi on Sept. 17th, 1830, and was early marked out by intellectual gifts and moral predilection for the medical career. Like all his contemporaries, with few exceptions, he took an enthusiastic part in the struggle for national unity and independence; and if in his case, as in that of others, academic study had for a time to be postponed to patriotic service, the loss to special education was made up for by the moulding of character in the ennobling school of generous aspiration and self-sacrificing discipline. He entered heart and soul into committee work among his fellow-students for the organisation of volunteer forces, and when that was done he served fearlessly in the ranks against the common enemy. He suffered exile with others of his young compatriots, till at length the events of 1859 and 1860 made Italy, with the exception of Venetia and the States of the Church, mistress in her own household.

Leopardi resumed, with characteristic ardour, the studies so frequently interrupted, and by sedulous work at the schools of Pisa and Florence made ample reparation for the time and opportunity he had lost. He graduated with distinction in 1860, and on May 23rd of that year was nominated assistant to the celebrated Florentine consultant and teacher, Professor Cipriani. Florence, always the city of his predilection, had now become his home, and he rose rapidly in the esteem of his colleagues and in the confidence of an ever-widening *clientèle*. Once and again, however, he allowed his patriotic sympathies to carry him outside the professional pathway, and in 1866 and in 1867 he aided with all the means at his command the movement which led in the former year to the cession of Venetia, and in the latter to the temporary defeat of Garibaldi at Mentana. But when three short years thereafter the flag of united Italy was hoisted in the Capitol, no Italian reverted with greater devotion to special work than Gaetano Leopardi. Academic promotion now came to him rapidly. In 1878 he had risen to be clinical professor and lecturer on Pathology in the Florentine School, and in the following year accepted the post of Professor of Clinical and Pathological Medicine in the University of Cagliari in the island of Sardinia. In 1882 he was transferred to a Professorship in the same subjects in the University of Siena; but Florence once more asserted her old charm for him, and he returned to her school to fill the post of "Extraordinary Professor of Special Pathology, Medical and Propædeutic." This chair, in his hands, became extremely attractive, and he discharged its duties with progressively increasing acceptance, in spite of the calls of a widely extended practice, which summoned him in consultation to all parts of Italy, especially to Milan, Rome, and Naples. His power of inspiring confidence at the bedside was by general admission remarkable, assisted as it was by the "light address," the "*hilaris vultus*" of Celsus, and by the impression he conveyed of being something more than a practitioner—an illustration, in fact, of the memorable saying that "a great physician is a great artist." Benevolence, shown in a thousand distinctive traits, was another note of his character which the patient intuitively felt, and whether in the ward of the hospital, the dwelling of the poor, or the mansion of the grandee he exemplified the beautiful Indian proverb: "Is a man ill? The physician is his father. Does he recover? The physician is his friend. Is he convalescent and fully restored to health? The physician is his guardian." In keeping with his great popularity as a professional man and citizen, his funeral was one of the most impressive ever witnessed in Florence—neither Puccinotti, nor Bufalini, nor Cipriani having been followed to the grave by a more numerous or a more distinguished train of mourners. Though an advanced Liberal in politics and a non-Catholic in religion, men of all parties and creeds joined in paying the last tribute to his memory, and, round his grave in the Protestant cemetery of the Allori, were represented by their several spokesmen in *oraisons funèbres* inspired by a common sympathy as by a common sense of loss.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday last the minutes of the quarterly Council on the 8th ult. were read and confirmed. The minutes of the Museum Committee on the 6th inst., as the report from that Committee, were also read and confirmed. A further report was read from the Committee on the Extension of the College premises, adopted, and entered on the minutes.

A report was read from the Laboratories Committee and adopted. There are now fifteen Fellows or Members of the College engaged in various researches in the new laboratories.

A letter of the 6th inst. from Mr. Arthur Milman, Registrar of the University of London, forwarding by direction of the Senate copies of the Revised Scheme for the Reconstitution of the University, upon the basis of which the Senate propose to invite Convocation to concur in applying for a New Charter, was read. The scheme was approved and entered on the minutes.

A letter was read, dated the 11th inst., from Mr. Ernest J. Wilde, with reference to the "meetings of Fellows," enclosing an opinion by the Attorney-General and Mr. Paget, to the effect that the Council have the power to summon meetings of the Fellows independently of the Members. We propose to give the text of this opinion in the next issue of THE LANCET.

Dr. Liveing reported the proceedings of the Royal College of Physicians with respect to affairs concerning the two Colleges.

Mr. Hill moved and Mr. Macnamara seconded the following resolution, which was carried—"That members of the Council who desire to nominate Members of the College of twenty years' standing for election to the Fellowship by ballot in April shall submit such names at the meeting of the Council in December in each year, and that such names be circulated among the members of the Council before the meeting in January."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examinations, have been admitted Diplomates in Public Health:—

Braga, Joao Francisco, L.S.A., King's College and Edinburgh.
Brodie, William Haig, M.D. Edin., Edinburgh University.
Cropley, Henry, F.R.C.S. Eng., London Hospital.
Dyer, Sidney Reginald, M.D. Brux., L.R.C.P. Lond., M.R.C.S., Middlesex Hospital.
Field, Oliver, M.D. Edin., L.R.C.P. Lond., M.R.C.S., Edinburgh University.
Firth, Robert Hammell, F.R.C.S. Eng., University College Hospital.
Hart, George Henry, M.R.C.S., L.R.C.P. Edin., Birmingham.
Haslip George Ernest, M.D. Brux., L.R.C.P. Lond., M.R.C.S., London Hospital.

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Hichens, Frank, M.D. Lond., M.R.C.S., London Hospital.
Holroyde, John, M.R.C.S., London Hospital.
Hussey, Edward, M.D. Durh., L.R.C.P. & S. Edin., Sheffield, Edinburgh, and Charing-cross Hospitals.
Kenwood, Harry Richard, M.B. Edin., L.R.C.P. Lond., London Hospital.
McGachen, Frederic Wm. Dobson, L.F.P.S. Glasg., London Hospital.
Mallins, Clement, M.D. Dub., Dublin.
Norton, John, M.D. Durh., M.R.C.S., Westminster Hospital.
Roughton, Walter, L.R.C.P. Lond., M.R.C.S., St. Bartholomew's Hospital.
Stirling, Alexander Williamson, M.D. Edin., Edinburgh and University College Hospital.
Tebb, Wm. Scott, M.D. Camb., L.R.C.P. Lond., M.R.C.S., St. Thomas's Aospital and Cambridge.
Wilde, Leonard, M.D. Durh., L.R.C.P. Lond., M.R.C.S., St. Thomas's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having passed the necessary examinations, and having attained the legal age (twenty-five), was at an ordinary meeting of the Council on the 12th inst., admitted a Fellow of the College:—

Deanesly, Edward, M.D. Lond., University College Hospital. Diploma of Member dated June 24th, 1887.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the First Examination in January last in the subjects indicated:—

Chemistry.—D. Berne, R. B. Greaves, E. Grange, T. L. Johnston.
Materia Medica, Botany, and Pharmacy.—E. Dodds, T. H. P. Peers.
Materia Medica and Botany.—K. M. Hunter, F. K. Rider.
Pharmacy.—F. R. Rouse.

The following candidates passed the Second Examination:
Anatomy and Physiology.—W. Ashby, G. H. Baird, G. W. Brabyn, E. S. Chilcott, S. A. Clarke, T. S. Collin, F. A. Cregeen, A. B. Franey, A. H. Grace, G. Higginson, H. Howells, A. S. F. Hudson, W. A. King, A. E. Marwood, S. R. Merry, J. C. Netherton, C. St. H. Robinson, J. D. Seller, J. R. Shotton, J. Stott, R. W. F. Welch.
Anatomy.—C. Bayley, G. E. Douglas.
Physiology.—A. Baldwin, H. C. Venis.
Surgery.—T. H. Adams, W. L. W. Buss, R. A. Earle, E. J. Finch, R. A. Irvine, A. E. Mayner, B. F. Parish, G. J. Rutherford, S. C. Smith, J. D. H. Smyth, G. R. F. Stilwell, J. F. Twist, E. B. Wrench.
Medicine, Forensic Medicine, and Midwifery.—C. A. Beck, L. J. Minter, R. B. Morris, G. Wilkinson.
Medicine and Midwifery.—G. C. W. Williams, E. H. Willock.
Medicine.—P. G. Laver.
Forensic Medicine.—H. C. Coopland.

To Messrs. Adams, Beck, Buss, Finch, Irvine, Morris, and Wilkinson were granted the diploma of the Society, having passed in all the subjects required for registration.

UNIVERSITY OF DUBLIN.—The following degrees have been conferred by the Vice-Chancellor:—

Bachelor in Surgery.—Percival Cecil Ryan.
Bachelor in Medicine, Surgery, and Obstetrics.—George Percival Adamson, Michael Joseph Bulger, George Cole-Baker, Francis William Dobbin, Robert Marshal Going, John George Moyles, John Ryan, Terence Woulfe-Flanagan.
Doctor in Medicine.—Charles Ecroyd McNaught, Henry McQuade, William Andrews Morton, John Ryan, Perceval Cecil Hardinge Ryan.

CONJOINT SCHEME OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND.—The following have passed their Final Examination:—

J. A. Burland, T. G. Dillon, A. N. Heron, A. H. Jacob, John Mackenzie, G. H. Moorhead, G. N. D. Oakes, Joshua Pim.
Passed in Medicine.—M. F. Cahill, Harry Cullinan, J. C. Ryan.
Passed in Surgery.—H. Cullinan, Michael G. Dobbyn, W. L. Fisher, J. C. Ryan, J. A. Thompson.
Passed in Midwifery, &c.—M. F. Cahill, M. G. Dobbyn, W. Smartt.

ROYAL STATISTICAL SOCIETY.—At the ordinary meeting of the Society, to be held on Tuesday next in the lecture-theatre of the Museum of Practical Geology, Jermyn-street, at 7.45 P.M., Dr. Arthur Newsholme, D.P.H., will read a paper on the Vital Statistics of Artisans' Dwellings.

WIGAN MEDICAL SOCIETY.—The following office-bearers have been elected for 1891:—President: C. M. Brady, Esq., L.R.C.S.I. Committee: Messrs. M. Benson, G. H. Monks, jun., W. C. Barnish, J. B. Stuart, J. A. Marsden, and N. Hannah. Treasurer: G. H. Monks, jun., L.R.C.P. & S. Ed. Secretary: Wm. Berry, F.R.C.S.I.

THOMPSON MEMORIAL INSTITUTION FOR INCURABLES, LISBURN.—The annual report for 1890 shows that at the end of the previous year there were fifty-four patients in the home, and that eleven had since been admitted. Only six deaths had occurred during the twelve months. The death of Dr. H. S. Ferguson, one of the trustees, is recorded with regret. The general statement of accounts shows a balance in hand of £628 5*s.*, and the investments (including £334 2*s.* 8*d.*, at interest at banker's) now amounted to £54,308 16*s.* 1*d.*

ST. THOMAS'S HOSPITAL.—We are informed by the authorities that at a Court of Governors of the hospital, held on the 4th inst., Dr. Felix Semon, Assistant Physician for Diseases of the Throat, was granted the title of Physician.

SEAMEN'S HOSPITAL SOCIETY.—At the meeting of the Society to be held at the P. & O. Company's offices on the 17th inst., Sir Thomas Sutherland, K.C.M.G., M.P., Lord Brassey, the Danish Minister, and the Austrian Consul-General are expected to be present.

SUICIDE OF A MEDICAL PRACTITIONER.—Mr. A. Braxton Hicks held an inquest on Feb. 5th on the body of Edmund Wollaston Parkinson, M.R.C.S., L.R.C.P. Edin., aged forty-six, who committed suicide by taking prussic acid on Jan. 31st, at the residence of Mr. Boyd, L.S.A., of Lavender-hill. On Saturday Mr. Boyd discovered the deceased lying on the couch, pulseless and breathing heavily, and a bottle which had contained prussic acid was found near the couch.

THE OLDHAM MEDICAL PRACTITIONERS AND DR. NIVEN.—The outcome of a recent meeting of the members of the profession in this town, who deputed Dr. Niven to visit Berlin for the purpose of investigating, on the spot, Professor Koch's discovery, is the offering by the subscribers to the Berlin fund, for Dr. Niven's acceptance, a cheque for £70, to defray the expenses of his visit, at the same time conveying to him their thanks for going to Berlin on their behalf, as well as for the information he has given them on the whole subject of tuberculosis, and the ready assistance he has rendered in adopting Koch's treatment.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—Dr. B. W. Richardson, the president, occupied the chair at the eighth annual dinner of this Association, held on Saturday evening at the Holborn Restaurant. A large assembly attended. The chairman, in a vigorous speech, proposed the toast of the evening, "Success to the Association of Public Sanitary Inspectors." He said it was to prevent avoidable causes of death that the Association laboured. With them everything was from the first a question of dealing with primary causes of disease and taking them away. Other toasts followed, and the festival terminated.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—The sixty-third annual report, just circulated, is of a very satisfactory character. The work accomplished during the past year has been attended with marked success. The rebuilding of the front, or fourth side (now the only remains of the old building), has become a pressing necessity. The estimated cost of the reconstruction, with other necessary improvements, will be about £20,000. A special fund for this purpose was opened in January, 1890, and £2291 16*s.* 5*d.* has been received. It is proposed to hold a festival dinner in the approaching spring on behalf of the hospital, and the committee invite the coöperation of subscribers and friends of the charity to render the festival a success. During the year the in-patients numbered 2138, the out-patients 17,263, and casualties 10,894.

GUY'S HOSPITAL.—We learn that the Court of Governors of Guy's Hospital have acceded to the request of the staff for increased accommodation in the Medical School. The existing carpenters' shops within the hospital grounds had fallen into such a dilapidated condition that it was necessary either at once to undertake very costly repairs or to rebuild them, and the latter alternative being preferred, the Court decided to combine with it a considerable extension of the hospital and school. The proposed buildings comprise a dental department consisting of a conservation room 110ft. long and 24ft. wide, with space for fifty operating chairs. The room, which has a northern aspect, will be constructed upon the model of the existing conservation room, which, though erected no longer ago than 1889, is already too small for the needs of the rapidly increasing dental school. Beneath the conservation room will be the dental laboratory, measuring 65ft. by 24ft., in which thirty students can work at one time; and beneath the laboratory will be the waiting rooms for male and female patients, with the necessary conveniences. The total cost, inclusive of the hospital workshops, is estimated at £10,000, and the architects are Messrs. Woodd and Ainslie, of 35, New Bond-street, who lately designed the residential college.

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VACCINATION GRANT.—Mr. Beaven Rake, M.R.C.S. Eng. and L.S.A., has, for the ninth consecutive time, received the Government grant for efficient vaccination in the No. 2 District of the Fordingbridge Union.

MIDWIVES' REGISTRATION BILL.—The following resolution has been passed by the Board of the Medical Department of the Yorkshire College:—"The Board considers that there is great need for improvement in the education of midwives, and recognises the necessity for legislation in order to provide for their efficient training, their examination, registration, and subsequent supervision. It does not, however, approve of the Midwives' Registration Bill now before Parliament, which it believes to be imperfect in detail; and is of opinion that it would be inexpedient to pass it in its present form."

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting of the Society, to be held at 25, Great George-street, Westminster, on the 18th inst., at 7 P.M., the following papers will be read: "The Great Frost of 1890–1891," by Charles Harding, F.R.Met.Soc.; "On the Variations of the Rainfall at Cherrapoonjee in the Khasi Hills, Assam," by H. F. Blanford, F.R.S.; "The Problem of Probable Error as Applied to Meteorology," by T. W. Backhouse. The twelfth annual exhibition of meteorological instruments will be held at the same rooms from March 3rd to 19th.

CITY OF LONDON LYING-IN HOSPITAL.—Mr. Charles Gordon presided at the 140th annual meeting of this hospital, which was held on Wednesday at the institution, City-road. The report, which was adopted, showed that 423 poor women had been assisted in their hour of trial during the past year. In addition, 1331 mothers had been attended at their own homes by the medical staff. Out of the whole number, only four women had died. In the course of the speeches delivered by the various governors present, gratifying reference was made to the continued light mortality, the medical officer attributing it to the excellence of the sanitary arrangements at the hospital.

FRENCH HOSPITAL AND DISPENSARY.—The twenty-third annual dinner in aid of the funds of this charity took place at the Hôtel Métropole on Saturday evening last, the chair being taken by his Excellency the French Ambassador, supported by the Lord Mayor and the Sheriffs of London, the Italian Ambassador, the Persian Minister, and representatives of the diplomatic corps of a large number of foreign countries, being present, the total number of guests being little short of 250. The report, read by the honorary secretary, Mr. Ruffer, showed that during the past year the institution has afforded relief to 14,873 out-patients and to 496 in-patients, belonging to no less than twenty different nationalities, for although French in name the institution prides itself upon being essentially of a cosmopolitan character. Subscriptions were promised during the evening amounting to nearly £2500. The usual toasts were drank, musical interludes being provided under the able direction of Cavaliere Tito Mattei, with the gratuitous assistance of Mdlle. Trebelli, Mr. Orlando Harley, and Mdlle. de Bono. The committee and the assistant secretary, Mr. F. Sorel, are to be congratulated upon the success of the evening, which surpassed all its predecessors.

ST. MARTIN'S-IN-THE-FIELDS FREE PUBLIC LIBRARY.—A large and influential assembly met in the reference room of the library on the 12th inst. on the occasion of the opening of this institution by the Right Hon. W. E. Gladstone. Mr. Gladstone was received by the Commissioners, and after signing the visitors book was presented with a very handsome, inscribed silver key. The Rev. John F. Kitto, the Vicar, presented a catalogue of the library to Mr. Gladstone. In declaring the library open, the right hon. gentleman referred specially to Mr. Ewart, the author of the Public Libraries Act. During the last year over seventy new libraries had been opened, and the time was approaching when they would be strewn over the land in cities and in villages, and thus provide means of healthy recreation for the youth of the country. A vote of thanks to Mr. Gladstone was proposed by the Right Hon. W. H. Smith, M.P., member for the borough, and seconded by the Right Hon. Lord Kinnaird, senior church warden of the parish, and carried with acclamation.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on February 10th, 1891.

Hospital.	Beds occupied. Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	Total accommodation.
Eastern Hospital	237	50	1	48	2	338	442
North-Western Hospital	250	30*	..	9	..	289	443
Western ,,	160	24	..	13	1	198	224
South-Western ,,	158	14	..	5	1	178	340
South-Eastern ,,	196	15	..	30	4*	245	462
Northern ,,	276	15	..	23	..	314	480
Gore Farm ,,	9	..	..	..	..	9	300
Totals	1286	148	1	128	8	1571	2691

* Infants with mothers.

MEDICAL NOTES IN PARLIAMENT.

The Indian Hospital Corps.

IN the House of Commons on Monday evening Sir W. Foster asked the Under-Secretary of State for India whether it was the case that the men of the Indian Hospital Corps and bearer companies in war time received less rations than the Sepoy; were allowed only 10 lb. weight of kit against 33 lb. allowed to the Sepoy; were entirely unarmed when in the field; and were rewarded only by a bronze medal, while the Sepoy received a silver one; and whether anything could be done to remedy these conditions.—Sir J. Gorst: The statements in the question are substantially correct. The arrangements referred to are made by the military authorities in India, and the Secretary of State sees no ground for interfering with them.

New Bills.

A Bill to make better provision for the regulation and control of cemeteries was brought in by Mr. J. W. Sidebotham, and was read a first time.

Mr. Matthews.—A Bill to amend the law relating to factories and workshops.

The Leeward Islands.

On Tuesday Baron H. de Worms, in answer to Sir T. Esmonde, said the medical officer of the public institutions in Dominica had been instructed to inquire into and report upon the progress and treatment of the disease of "yaws" in the Leeward and Windward Islands. During his mission he would be relieved of the duties of his office. The expenses of the inquiry would be paid out of the funds of the several islands in which it would be held. The inquiry had not been instituted in deference to any demand of the medical faculty or people of any of the West Indian colonies. Notice was given in February, 1890, in the Federal Council of the Leeward Islands of a resolution in favour of providing for a portion of the cost of such an inquiry, but the resolution was withdrawn.

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday, Lord Sandhurst presiding.

St. George's Hospital.

The first witness examined was Mr. C. L. Todd, the Secretary of St. George's Hospital. In reply to the chairman he stated that his salary amounted to £400. He had held his present office for twenty years. The hospital was founded in 1733. It was practically a free hospital. Of the 4466 patients last year only 840 were admitted on subscribers' letters. They had no paying beds, and no charge was made upon out-patients. The beds numbered 256, and the average number daily occupied was about 335. In the early part of last year they had to close several wards because of the nurses being affected with influenza. If two cases were alike in point of urgency and gravity the case with the subscriber's letter would have the first admission. It would only be in such circumstances that any distinction would be made. As matter of fact the subscribers' or governors' letters were of little use. At one time a provision existed against receiving patients with an income of £10 a year or more. It was thought to be too hard a rule, and was soon withdrawn. Of the patients admitted, 15 per cent. were domestic servants, 6 per cent., however, being out of situations. The masters of servants never paid anything for the treatment of their servants, but they often made contributions to the funds of the hospital afterwards. The hospital was most frequented by the labouring classes. They drew patients from the Battersea, Fulham, Putney, Wandsworth, and other districts. Some wards had accommodation only for twelve beds, others accommodated twenty-three or twenty-five beds. In the new wings the space was 1500 cubic feet per patient, and in some of the other wards the space was only 1000 cubic feet per patient. Some of the doctors would like to see a few beds removed from some of the wards. The matter was under the consideration of the Board. A great many of their patients belonged to the very destitute class. They had often to give relief to wives and families while the husbands were in the hospital. They did this work through the Samaritan Society. Only a very few of their patients could afford to pay for medical treatment. They had often, especially in winter, to send away

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people who sought admission to the hospital. Every now and then the house physician or surgeon went round to see if there was a patient fit to go home, in order that room might be found for a new case. He agreed in thinking that intercommunication between the different hospitals might be advantageous. They frequently sent patients on to Westminster and St. Thomas's, having no room for them at St. George's; and it often happened that those two hospitals were filled, and the patients came back to St. George's, when they were sent home. The accommodation for the sick poor was certainly deficient in their district. He imagined that the same state of things existed in other districts. No out-patient received assistance till a satisfactory report had been received from the Charity Organisation Society or the chaplain of the hospital. The total expenditure of the hospital last year amounted to £28,316. They derived their income from subscriptions, donations, dividends, legacies, and rents. The buildings were rated at £1584. They had about 1090 governors, all of whom might attend the Weekly Board. It was this Board which, with the aid of a number of committees, managed the institution. Any complaints with reference to nursing were brought before the Nursing Committee. Complaints as to the patients' food came before the witness, and if they were worth reporting he reported them to the Board. Such complaints were very few. Their hospital being very centrally situated, they had constant visits from the governors. It was therefore not difficult to get the opinion of a governor in matters of complaint. They had four or more governors every month whose business it was to go round the wards day or night and make all manner of inquiry and report to the Board. They inquired with special care as to the food of the patients. This inquiry gave patients an opportunity to make complaint if they desired. They called their head nurses in St. George's Hospital not sisters, but head nurses. There had been great improvement in their nursing department during the last ten years. Each nurse had now a separate room; at one time two nurses occupied each room. The head nurses came on duty at seven o'clock in the morning, and were relieved at ten o'clock at night. They had breakfast, lunch, and supper in their own sitting-rooms, and went down for dinner to the nurses' dining-room at four o'clock. They had two hours' leave every day from five to seven or from seven to nine o'clock. Each head nurse had two rooms. The day nurses breakfasted at half-past six o'clock, and were on duty in the wards at seven o'clock. They dined from half-past twelve till one, and were allowed half an hour for tea. They had supper at half-past nine o'clock, and when supper was over their duty for that day ceased. They were off duty every other day from 6.45 till 10 o'clock. They had two weeks' holiday and one day off every month. For a long time they had had no nurses who died from typhoid or diphtheria. The matron had power to suspend, but not to dismiss the nurses. In the event of any of the nurses being taken ill, they were placed in the nurses' sick room, where they were attended by the resident medical officer. They engaged a large number of nurses for special cases. The night nurses went on duty at half-past nine o'clock until nine o'clock the next morning. The hours of the nurses consequently overlapped at the time of day when most work had to be done. Their head nurses remained a long time with them, one nurse having been twenty years and another fourteen years. The ward nurses engaged to stay three years, and often stayed longer. The pupils in the hospital were under the Medical Committee. Any case of misconduct would come before the Board for investigation. The idea of transplanting St. George's in the country had never been seriously considered, although it had been talked of in the neighbourhood.—By Lord Saye and Sele: The mortuary was beneath one of the wards. The present dingy appearance of the hospital was due to contemplated alterations. In all probability the building would be painted this year.—By Lord Cathcart: The surgeons could not obtain any new appliances without the assent of the Board. There was no undue expenditure for novelties in the way of surgical appliances. Naturally they got the best system of treatment they could for the patients. The probability was that if the surgeons asked for a thing they got it.—By Lord Zouche: They did not take cases of scarlet fever. Last year they had fifty-four cases of diphtheria.—By Lord Thring: They were anxious to increase their nursing staff, and only want of accommodation prevented them doing so. At present they were engaged in negotiations for the acquisition of certain houses in which to accommodate nurses.—By the Earl of Lauderdale: The stock held by the hospital amounted to £441,000, and yielded an annual return of £12,642.—By the Chairman: Some years ago, when they were in low water, they sold off stock to the extent of £3000 or £4000 yearly; they appealed to the public several times. In recent years, through the receipt of large legacies, their circumstances had improved, and appeals to the public had not been found necessary. Their collector received 4 per cent. on all money he collected, and 1 per cent. on money sent through the bank.

Mr. H. H. Clutton, senior assistant surgeon to St. Thomas's Hospital, gave evidence as to the out-patient and particularly the surgical out-patient work in connexion with St. Thomas's Hospital. No surgical cases, he said, were refused. He found that surgical cases were not attended by general practitioners, and were sent by them to the hospital. General practitioners appeared to have less facility in treating surgical than medical cases. They had not the appliances for the former. He entirely dissented from the view that so far as surgical cases were concerned the hospitals starved the general practitioners. The hospitals were of advantage to the general practitioners as affording a consulting authority. The cases sent by general practitioners for consultation were very often the best cases for teaching purposes. They usually possessed most scientific interest. He was strongly in favour of the out-patient system from every point of view. The loss of the surgical department would be most serious to general practitioners. He believed there was more outcry against the out-patient system than the facts justified.—By Lord Cathcart: He held very strongly that the large medical schools were better with the hospitals. He thought the present schooling was better than could be got at a large central institution.

Dr. Whipham, dean of the medical school of St. George's Hospital, said there were about 142 students in the school, the fee paid for the whole curriculum being £125. The income of the school amounted to something under £5000, and the expenses to about £2000. The balance went to the lecturers and officers. As to the general question of education, he thought the practical part of the profession must be taught at the hospitals. The scientific part might be better taught at a great central institution where first class appliances would be found. Under the present system the medical school and not the hospital paid the cost of the apparatus.

Dr. Isambard Owen, senior assistant physician at St. George's Hospital, gave evidence as to the remuneration of the lecturers and clinical teachers. At the present time no one in the St. George's Hospital Medical School received more than £100 or less than £30 out of the school. He could not describe their out-patient department as crowded. He did not think there were too many medical schools in London. If it were found desirable to take away certain subjects from the hospitals, he thought they could be taken out of London altogether to the provincial colleges, where he believed they could be better taught than in any crowded institution in London. He thought there would be no difficulty in obtaining first class teachers in those provincial colleges.

The Committee then adjourned.

The Committee met again on Thursday.

Mr. Robert Brass, receiver of St. Thomas's Hospital, attended for the third time, and gave further evidence as to the finances of that institution.

Middlesex Hospital.

Mr. F. C. Melhado, of the Middlesex Hospital, examined by the Earl of Kimberley, said he was secretary and superintendent, with a salary of £300, and board and residence. The hospital was managed by a weekly board, which met every Tuesday, and a board of governors. The institution was founded as long ago as 1745. There were 307 beds, and the daily average of patients was between 250 and 260. Only 290 beds were devoted to medical and surgical cases; that number included 34 beds for cancer cases. Their funds did not permit of all the beds being occupied, although they did not refuse patients when they had vacant beds. Last year the income of the hospital was derived in this fashion: Dividends, £6367; annual subscriptions, £2851; donations, £6538; alms boxes, £234; Hospital Sunday Fund, £2083; Hospital Saturday Fund, £411; rents, £1951; and incidental receipts, £196; total, £20,634. Their average income was about £15,000 or £16,000, last year being a specially good year. Their disbursements last year amounted to £27,117, which included an extraordinary expenditure of £2584. Their average expenditure was about £23,000. The apparent deficit had been met by the legacies. It was their habit to carry all the legacies to capital account, from which they drew as they required. As matter of fact they had no deficit last year, but a considerable surplus. The Middlesex was practically a free hospital. Any sick person might apply for admission. The applicants were seen by one of the admitting officers, who passed them on to the resident medical officer. The cases were selected according to their urgency. Last year they admitted 3109 patients. The sisters received £30 a year, with board and lodging, and they were entitled to pensions after twenty years' service. Three nurses at the present time received pensions. The staff nurses were also entitled to pensions. In the hospital there were lady probationers, who paid one guinea a week. The sisters came on duty at 8 A.M. and left at 11 P.M. They were actually on duty about eleven hours daily. They had passes for two hours during four days of the week. No sisters were employed during the night, but a night superintendent was constantly going round the wards. The sisters had three weeks' holiday each year, and a day off each month. The staff nurses came on duty at 7.30 A.M., and remained on duty till 9 P.M. The actual hours on duty were about ten per day. They had passes for three hours during three days of the week. They had sixteen days' annual holiday, and one day off in each alternate month. The ordinary probationers worked under the same conditions as the staff nurses, but the lady probationers had shorter hours. The probationers received no holiday until they had completed one year.

The Earl of Kimberley: Is that reasonable? We have been told that nurses new to the work are less able to bear the strain than experienced nurses.—Mr. Melhado: It has not been considered necessary to give them a holiday.—The Earl of Kimberley: Have you found many probationers break down in health?—Mr. Melhado: I cannot say that we have. The average number of nurses off duty on account of sickness was a little over two, and of lady probationers, less than one daily. During the last twenty years they had only had nine deaths among their nurses.—The Earl of Kimberley: What is the ground on which you don't employ your most responsible nurses or sisters during the night?—Mr. Melhado: There is never so much to do during the night.—The Earl of Kimberley: Do you think it satisfactory to hand over the patients during the night to what may be termed second-class nurses?—Mr. Melhado replied that the senior nurse was responsible during the night. They had not accommodation for a double supply of nurses. The sisters lived on the same floor as their ward, and were aroused during the night if occasion demanded it. They supplied the public with nurses who had been at least three years in the hospital. Since 1887 the Nursing Institute had been carried on and had been attended with the best results. The authorities of the hospital were perfectly satisfied with the working of the institute. The profit derived from this department went to the funds of the institute, not to those of the hospital.—By Lord Sandhurst: If they had more accommodation it would be desirable to have more nurses in the hospital.—By Lord Cathcart: Tea and sugar were not included in the diet of the hospital; patients had to pay for those commodities. If they could not pay they were supplied gratuitously.—Lord Cathcart: Then your position is different from that of the London Hospital, where the tea is put into one lot and there is a common brew.—By the Earl of Lauderdale: Their gross capital amounted to £252,786 on Jan. 1st of this year. Ten years ago it amounted to £172,000. The increase had been very recent. For many years the capital was a decreasing amount.—By Lord Monkswell: His inquiry as to the means of an applicant was limited to personal interrogation of the applicant. They had no regular system of inquiry which he could put in force.

Mr. Edward Fardon, the resident medical officer at the Middlesex Hospital, said he received a salary of £200, with board and lodging. He had general medical supervision of the hospital so far as the sanitary arrangements were concerned, and was responsible for all the admissions. Within a radius of one mile of the Middlesex Hospital there were eight general hospitals and a large number of special hospitals. In this area there were over 2900 beds in thirty-four hospitals and seven dispensaries. Those figures did not include poor law infirmaries and dispensaries. The out-patient department of the Middlesex Hospital was inconveniently crowded. Occasionally he had been impressed with the appearance of a patient as indicating his ability to pay for medical treatment, and he had made inquiry, and in the majority of instances, when he had done so, he found they were deserving cases. It rarely happened that he detected any case of gross

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abuse of the charity of the institution. He did not think that an inquiry officer would be worth his pay.—By the Earl of Kimberley: On an average 300 out-patients were examined each day. A much smaller number would suffice for instruction. The treatment of the surplus could only be defended on the ground of charity. He regarded it as unfortunate that people should accept hospital relief without feeling that they were paupers. None of the slight cases at the Middlesex Hospital were handed over to advanced students.

Mr. A. Pearce Gould, Dean of the Medical School at the Middlesex Hospital, said that last year they had 127 new entries, including 55 general, 7 dental, and 65 occasional students. On an average there were between 250 and 300 students in attendance. For the full curriculum the fee was £100 if paid in advance, £110 if paid in instalments. The fees yielded about £5000, and the expenses of the school amounted to over £2000.

The Committee afterwards adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDREW, HENRY, M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Devon and Exeter Hospital.

ARBUCKLE, H. W., M.D. Aberd., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Thorne, Doncaster.

BANBURY, G. R. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the North Tawton District of the Okehampton Union.

BLACKLEDGE, W. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Nassington District of the Oundle Union.

BRUNSKILL, R. R., M.B., B.Ch. Dub., has been appointed Medical Officer at the Carlisle Dispensary, vice Graham, resigned.

COLLINGRIDGE, W., M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health for the Port of London.

CRAWFORD, JAMES, M.D., M.R.C.P. Lond. & Irel., L.M., has been appointed Honorary Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity, vice J. Tanner, M.D., resigned.

CRITCHLEY, H. G., M.B., C.M., L.R.C.S. Edin., has been appointed Senior House Surgeon at the Ipswich and East Suffolk Hospital.

FRASER, P., M.D. Edin., has been appointed Medical Officer of Health for the Llangefni Urban Sanitary District of the Anglesea Union.

GABE, J. R., M.D. Brussels, M.R.C.S., has been reappointed Medical Officer for the Third District of the Holborn Union.

GÜNTHER, T., M.D. Tübingen, L.R.C.P. Lond., has been reappointed Medical Officer of Health for Hampton-Wick.

HYATT, J. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Workhouse, Shepton Mallet Union, vice B. N. Hyatt, deceased.

JOY, F. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Thetford and Rural District.

MADDEN, T. MORE, Obstetric Physician and Gynæcologist to the Mater Misericordiæ Hospital, Dublin, has been appointed one of the Masters of the National Lying-in Hospital.

MARRINER, W. H. L., M.B. Lond., M.R.C.S., has been appointed Medical Officer to the Bourne Valley and Districts Dispensary.

MILBURN, F. I., M.R.C.S., has been reappointed Medical Officer for the Fourth District of the Holborn Union.

MILLIGAN, WILLIAM, M.B., C.M., has been appointed Honorary Assistant Physician to the Manchester Hospital for Consumption.

NAPIER, A. D. LEITH, M.D., F.R.S. Ed., M.R.C.P., has been appointed Physician to Out-patients, Chelsea Hospital for Women, vice H. S. Rutherfoord, M.B., M.R.C.P., resigned.

PIKE, THOS., M.R.C.S., has been appointed Medical Officer for the Kingscliffe District of the Oundle Union.

PUGH, J. W., M.R.C.S., has been appointed Medical Officer for the Eastern District of the Parish of Brighton.

READ, M., M.D. Camb., M.R.C.S., has been appointed Medical Officer of Health for Worcester, vice Strange, deceased.

SAUNDERS, W. S., M.D. (U.S.), L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health and Public Analyst for the City of London.

SOUTHWELL, C. H., has been appointed Public Analyst for parts of Holland, Lincolnshire.

SUTTON, F., M.R.C.S., has been reappointed Medical Officer of the Reynard Hospital, Willingham.

WHITCOMBE, P., M.R.C.S., has been appointed Medical Officer of the Hospital at Gravesend.

WRIGHT, T. P., M.R.C.S., has been reappointed Medical Officer of Health for St. Neots, Hunts.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CAMBRIDGE.—Assistant Medical Officer for the Cambridge Friendly Societies' Medical Association. (Apply to the Secretary, 20, Mawson-road, Cambridge.)

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and apartments.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House Surgeon. Salary £100 per annum, with board and residence in the hospital.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer. Salary £130 per annum, with residence, board, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—A Casualty Officer, who will be required to act as Registrar and Assistant Anæsthetist. Honorarium at the rate of 50 guineas per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Surgeon to the Out-patients of this Hospital.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Westminster, S.W.—Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Surgical Registrar for one year. Honorarium of £40 at the end of the term.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Junior House Surgeon. Salary 60 guineas per annum, with board and residence.

LUTTERWORTH UNION.—Medical Officer for No. 6 District. Salary £20 per annum, with the usual extra medical fees as allowed under the orders of the Local Government Board. (Apply to the Clerk to the Guardians, Lutterworth.)

NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—House Surgeon. Salary £50 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Salary £250 per annum, with furnished residence.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. No salary, but board, apartments, and washing provided.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology. The stipend is £140 per annum.

PAROCHIAL BOARD OF FETTERCAIRN.—Medical Officer. (Apply to Dr. Prain, Fettercairn.)

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Assistant House Surgeon. Salary £30, with board and washing.

ROYAL SOUTH LONDON DISPENSARY.—Surgeon in Ordinary. (Apply to Dr. Nundy, at the Dispensary, St. George's-cross, S.E.)

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon and Secretary. Salary £80 per annum, with board.

SALFORD UNION.—A Visiting Medical Officer. Salary £150 per annum.

SALFORD UNION.—Two Resident Assistant Medical Officers for the Union Infirmary, Hope, near Eccles. Salary £130 per annum each, with furnished apartments in the infirmary.

ST. THOMAS'S HOSPITAL, Westminster.—Surgeon.

UNIVERSITY OF GLASGOW.—Examiners in Medicine. The annual fee to each of the Examiners is £30. Term of office in each case is four years.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

HEWITT.—On Feb. 8th, at Oakleigh, Northwich, Cheshire, the wife of Dr. David Basil Hewitt, of a son.

NEWBOULD.—On Feb. 5th, at Abbots Bromley, Staffs, the wife of Newton J. Newbould, L.R.C.S., L.R.C.P. Edin., of a daughter.

STONER.—On Feb. 6th, at Rio Lodge, Brighton, the wife of Charles Berrington Stoner, D.D.S., L.D.S., of a son.

TERRY.—On Feb. 3rd, at Hope House, Tangier, Morocco, the wife of C. L. Terry, B.A., M.B., C.M., of a son.

MARRIAGES.

BULLIVANT—BUTLER.—On Feb. 4th, at St. John's, Mansfield, Samuel Bullivant, M.R.C.S., L.R.C.P., youngest son of Mr. J. T. Bullivant, of Ashgrove, Edwinstowe, to Ethel Mary Godber, younger daughter of Mr. Arthur J. Butler, Dale Close.

MORTON—GOODCHILD.—On Feb. 7th, at St. Mark's Church, Hamilton-terrace, by the Rev. Canon Duckworth, D.D., assisted by the Rev. G. Ward Saunders, B.A., and the Rev. Edward Bate, B.A., Edwin Morton, M.D., of Redditch, son of the late Vicar of Welton, Staffs, to Anne Emily, youngest daughter of the late John Goodchild, Esq., of Chelsea and Barwell Court, Walton-on-Thames.

SCHACHT—CHAPMAN.—On Feb. 10th, at St. Jude's Church, South Kensington, Frank Frederic Schacht, M.D., to Agatha Louisa, eldest daughter of Robert Barclay Chapman, C.S.I.

DEATHS.

DAWSON.—On Feb. 6th, at 9, Arundel-terrace, Brighton, Richard Dawson, M.D. Edin., L.R.C.P. Lond., M.R.C.S. Eng., aged 75.

MARTYN.—On Feb. 9th, at Ashleigh, S. Columb, Cornwall, Thomas Darke Martyn, M.R.C.S. Eng., aged 81.

RAYNES.—On Feb. 7th, at Church-street, South Normanton, S. H. Raynes, L.R.C.P. Lond., M.R.C.S.

SAWTELL.—On Feb. 4th, at Villa Espérance, Costebelle, Hyères, France, Tom Henry Sawtell, M.D. Lond., M.R.C.P., aged 39.

SIMMS.—On Jan. 6th, at Twickenham, suddenly, of apoplexy, Frederick Simms, M.B. Lond., M.R.C.P., of 6, Mandeville-place, Manchester-square, aged 56.

STORER.—On Feb. 6th, at Lowdham Grange, Notts, Charles Storer, M.D., J.P., aged 78.

STRICKLAND.—On Feb. 8th, at Royal Naval Sick Quarters, Portland Henry George Travers Strickland, M.B., Staff Surgeon R.N., aged 38.

TURNER.—On Feb. 6th, at Egremont, Thicket-road, Anerley, S.E., Dr. Arthur Newman Turner, aged 49.

WARREN.—On Jan. 31st, at Exmouth, S. Devon, Henry Charles Warren, M.R.C.S. Eng., L.S.A. Lond., aged 63.

WOTHERSPOON.—On Feb. 10th, at Brampton, Cumberland, Thomas Allan Wotherspoon, M.D., L.R.C.S. Edin., and J.P., aged 43.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 12th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 6	30·64	W.	41	40	53	49	39	..	Overcast
,, 7	30·55	S.W.	46	45	--	48	41	..	Foggy
,, 8	30·42	N.E.	42	41	..	45	41	--	Overcast
,, 9	30·40	E.	38	38	..	42	37	..	Overcast
,, 10	30·39	W.	35	34	59	44	34	..	Overcast
,, 11	30·35	S.W.	35	34	76	51	34	..	Hazy
,, 12	30·32	N.W.	45	42	66	47	35	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PERSISTENT DANDRUFF.

A CORRESPONDENT writes from the General Hospital, Madras: "Seeing an article on 'Persistent Dandruff,' by Dr. Blake, in your issue of Dec. 27th, 1890, it may interest you to know that a perfect cure has in my case resulted from following the directions given in your correspondence columns more than eleven years ago. The letter I allude to was signed 'Purnell Purnell,' and dated from Streathamhill, May 6th, 1879. I have always felt most grateful for the relief obtained."

Mr. W. J. Evans.—1. A first-class Leitz microscope, with 12th oil immersion, a 7th and a 2-3rd inch, with Abbe illuminator, nose-piece, &c. (an excellent instrument for bacteriological work) may be obtained for £17 10*s.*—2. Reichert's and Leitz's microscopes are good.

Dr. A. F. Elliott.—The Society for the Relief of Widows and Orphans of Medical Men, 20, Hanover-square, W.; British Medical Benevolent Fund, Secretary, Mr. E. East, 16, Upper Berkeley-street, W.

HARD TIMES IN THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I must apologise for trespassing on your valuable columns for the purpose of dealing with so long-vexed a question as the above; but having seen some correspondence on the matter a short time since, I should just like to say a few words.

That the medical profession is both an honourable and charitable calling cannot be denied, the large numbers that are constantly enlisted into its ranks being the sole cause of its present unhappy state. Whilst travelling through various parts of England I have had repeated opportunities of observing the various devices of the so-called "penny doctor" of obtaining practice. One gentleman, who holds the M.D. degree of a Scotch university and was lately house surgeon of a provincial hospital, has a huge signboard on the front of his house, stating that he treats free of charge to the poor on certain days all diseases of the lungs, blood, liver, kidneys, and many other ailments which are too numerous to mention. To those who are in better circumstances he makes the modest charge of 2*d.* for advice and medicine. In another district is to be found the doctor who rents a shop with two large plate-glass windows elaborately painted in gold letters, stating that it is a "Hospital for Women and Children, free to the deserving poor" on certain days. So long as we have this sort of man amongst us we need never hope to keep up the dignity of the profession or abolish the quack with his various forms of unskilled practice, and hard times will still remain among some of us who try to work conscientiously and with all decorum due to our learned profession.

I am, Sirs, yours obediently,

February, 1891. AN OBSERVER.

EXPLOSION OF RELIGIOUS MANIA NEAR PALERMO.

A TRAGEDY, unique (say our Italian contemporaries) in the annals of criminal lunacy, has just been enacted at Mezzoinso, in the province of Palermo. On the night of the 21st ult. the family of a peasant named Carnesi, consisting of three young women and two boys, became suddenly maniacal, and left their home in a wild storm, vociferating loudly, in quest of the nearest church. The village authorities immediately put the unhappy creatures under restraint, the boys being closely guarded under their father's roof, while the young women were watched by the relatives to whose charge they were entrusted, and the preliminaries to their all being sent to the Manicomio of Palermo were at once proceeded with. On the evening of the 22nd one of the young women, a fine girl of eighteen, rose from bed, and, having awoke her relatives, assured them that the Lord had worked a miracle on her brother Biagio. She took off her earrings, suspended them from a crucifix on the wall, and by dint of entreaty prevailed on the superstitious elders to accompany her to her father's house, where Biagio was being guarded. Arrived there, she got the whole household to kneel down, and then, without a note of warning, she seized a heavy piece of wood, and dealt a series of violent blows on her brother's head, her strength appearing to be redoubled at sight of the blood that flowed freely from his wounds. In a few minutes the wretched boy was a corpse, whereupon, with the cries and gestures of an infuriated beast of prey, she set upon his lifeless body, and with hands and teeth emasculated him (*evirò il cadavere*). The relatives and guardians of the boy, paralysed with superstitious fear, looked on at the horrid deed without raising a hand to prevent it. The village authorities, on being informed of the occurrence, put the girl into confinement, and all those who witnessed the scene under arrest. *Tantum religio potuit suadere malorum!*

Brux. might make application to the Secretary of the Brussels Medical Graduates' Association—Dr. Steele, 1, Florence-terrace, Ealing.

"CONSTIPATION AND GASTRIC DISEASE."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Rustic L.R.C.P.," who, in your last issue, asked for suggestions for treatment, I beg to submit the following, and shall be glad to hear if it has been of any service:—

As this is a chronic case and apparently due to torpidity of the muscular coat from over-distension &c., I think the rational indications would be the use of nervo-muscular intestinal stimulants, preceded by complete evacuation as by colocynth and blue pill (unless contra-indicated, or by injectio glycerini c. res. jalapa (Hockin), so as to thoroughly empty the gut, and repeated every few weeks for a time. Then a mixture of belladonna (for its action on the inhibitory intestinal nerves), strychnia (to relieve spasm, &c.), and if anæmia be present ferrum tart. or ferri et ammon. cit., with or without bismuth. subnit., twice a day. A pill containing pepsin. sacch., gr. i.; bismuth. subnit., gr. iss.; strych., gr. $\frac{1}{20}$; ext. belladonn. tr., gr. $\frac{1}{10}$; ipecac., gr. $\frac{1}{10}$. One or two of these pills at midday. Leave out ipecac. if any special cardiac weakness exists. A pill containing aloin, gr. $\frac{1}{2}$; strych., gr. $\frac{1}{30}$; belladonna, gr. $\frac{1}{4}$; cascara sagrada, gr. $\frac{1}{2}$; every night, or one of the simplest and best senna and sulphur in the form of the p. glycyrrhizæ co., German Phar. If aloin and cascara in combination or senna and sulphur be unsuitable or fail, try the simple soda bicarb. exsic. and p. rhei, gr. iii. of each every day before the midday meal. Encourage a regular habit; diet, digestion, and liver attended to; and ensure sufficient muscular exercise, mental relaxation, and other hygienic provisions. Avoid hot fluids, tea and coffee, and stimulants, excepting, if necessary, very dry iced champagne.

I am, Sirs, yours truly,

Feb. 10th, 1891. VON.

DIABETIC MYOPIA.

Ophthalmologist.—Dr. Hirschberg has recently pointed out that diabetes, when it occurs in old persons, frequently induces changes in the lens which, though not sufficient to cause a cloudiness, are nevertheless capable of inducing a very perceptible degree of myopia. In some cases where this myopia exists the commencement of lenticular cataract may also be detected.

Cyclops.—By law the coroner is obliged to pay the fees of medical witnesses as soon as the inquest is over. In the event of his refusing to do so he could be sued, or the matter might be referred to the Home Secretary.

"'FUCHSINE BODIES' IN TUBERCULOSIS OF LUNG."

To the Editors of THE LANCET.

SIRS,—I observe a few printer's errors in my letter on the above subject published in your impression of last week. The errors, though they may appear insignificant, yet alter the meaning considerably. They are:—1. In line 13, the misplacement of the comma, which ought to come between the words "area" and "on" in the line above. 2. In line 29, the substitution of the word "place" for *placed*. 3. In line 36, omission of a comma between the words "acid" and "after," and the placing of a period after the word "minutes."

I am, Sirs, yours faithfully

Feb. 9th, 1891. G. CARRINGTON PURVIS.

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A QUESTION OF PRIORITY.

UNDER the heading "The Truth at Last" the *Times and Register* (Jan. 29th) maintains that Dr. Dixon's discovery of the prophylactic value of sterilised cultures of the tubercle bacillus is a clear anticipation of Prof. Koch's work. But Dr. Dixon did "not consider his lymph an agent that could be usefully and safely employed on man, and this is his opinion to-day." It is concluded that "Koch deserves great credit for his acuteness in recognising the importance of Dixon's work, and for his boldness in extending the use of the lymph to the treatment of tuberculosis in man."

Mr. F. Sánchez.—1. Any of the large general hospitals to which medical schools are attached.—2. Surgery—Erichsen; Operative Surgery—Stimson, Heath; Practice of Medicine—Hilton Fagge; Therapeutics—Ringer, Hale White.

"A MEDICAL HAT."

To the Editors of THE LANCET.

SIRS,—It seems to me that the suggestion of your correspondent in to-day's issue, that medical men should wear a distinguishing hat, is one which commends itself to everybody. I would, however, suggest that as conspicuousness seems to be an object of your correspondent, it is a pity to adopt a hat with a low crown. Why not have one with a decided length of cylinder—let us say three feet long? It would be so readily discerned at a distance. Further, in order to render the doctor still more easily recognised, I would propose to have the tile painted sky-blue and varnished, or decorated in any other manner to suit the taste of the wearer, after the style of the gentlemen of the ring on the racecourse. And while on this subject, why limit oneself to a hat? A fancy dress or a Pickwickian costume would look picturesque, and, I am sure, would not fail to attract the attention of strangers and others who might be requiring the services of a medical man. The subject is one that is capable of vast extension, and I doubt not would be readily adopted if properly brought to the notice of the leading members of the profession.

I am, Sirs, yours faithfully,

London, Feb. 7th, 1891. G. W.

SELF-MUTILATION BY AN IMBECILE.

THE *Revista Médica* mentions that a short time since a poor half-witted man walked into the hospital of San Vicente de Paul, in Santiago (Chili), carrying his testes wrapped up in a piece of paper. No information could be obtained from him or from other sources as to how he had been mutilated. On examination a small aperture was found in the left side of the scrotum, through which both testes had apparently been dragged, and separated from the cord and vessels as high as possible. Notwithstanding some hæmorrhage and other troubles the man did well.

M.R.C.S. will see that the hard times in Scotland are all a joke. If he will alter his letter to suit the circumstances as explained elsewhere, we shall be glad to insert it.

Enquirer.—Heidenhain's "Animal Magnetism," Charcot, Bernheim, Liebault, Lloyd Tuckey.

A WARNING.

To the Editors of THE LANCET.

SIRS,—I shall be glad if you will allow me, through your columns, to warn others against a person calling himself a medical man and former student of St. Thomas's, under the name of Charles Huthwaite. I cannot find that name in any of our books; and the only medical man of that name to be found on the Register or in the Medical Directory died in 1883. I think it right to trouble you with this letter because the person I refer to is in possession of a sheet of note-paper from my waiting room, stamped with my address, on which he appears, after leaving me, to have written my name, and the names of some of my colleagues previously visited, together with an exaggerated statement of the sum given to him by each (in reality only a few shillings). This paper he has, as I have since learned, been using in order to extort larger gifts from another colleague.—I am, Sirs, yours faithfully,

Wimpole-street, W., Feb. 11th, 1891. E. NETTLESHIP.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, London; Dr. Cullingworth; Dr. W. Duncan; Sir Spencer Wells, London; Mr. Tweedy, London; Dr. Althaus; Mr. Braxton Hicks, London; Dr. Steavenson, London; Dr. J. H. Garrett, Stoke Newington; Mr. J. H. Morgan, London; Mr. Parker; Dr. Stopford Taylor, Liverpool; Mr. Armstrong, Pontesbury; Dr. Macnaughton Jones, London; Dr. Lowe, Lincoln; Mr. Cautley, London; Mr. Greig Smith, Bristol; Dr. D. E. Anderson, Paris; Dr. Lange; Mr. Clement Lucas, London; Dr. Scattergood, Leeds; Mr. Mugford; Mr. Reginald Harrison, London; Mr. Warner, Sheffield; Messrs. Smith, Elder, and Co., London; Messrs. Livingstone, Edinburgh; Messrs. Blondeau et Cie., London; Dr. McEwan, Prestonpans; Mr. Hordley, Stoke-upon-Trent; M. Berthier, Paris; Mr. Hornibrook; Mr. Hunter, Edinburgh; Mr. Bladen, Staffordshire; Dr. Cobbett, Beckenham; Dr. C. Boyd, Denmark-hill; Mr. Cheesbrough, Brampton; Dr. E. Robinson, Birmingham; Mr. Burdett, London; Mr. Jessett, London; Dr. Little, London; Dr. Leeson, Twickenham; Dr. Andrew, London; Dr. Nias, London; Dr. Muirhead, Edinburgh; Mr. Coles, London; Dr. Imlach, Liverpool; Dr. Snow, Bournemouth; Dr. Charlotte Ellerby, London; Dr. Harrison, Lincoln; Dr. Grün; Mr. Truman, Reading; Dr. Mayo Robson, Leeds; Mr. W. A. Lane, London; Messrs. Richardson and Co., Leicester; Mr. H. Sewill, London; Dr. C. Purvis; Mr. Alban Doran, London; Mr. Dickinson-Leigh, Jarrow; Messrs. Walker and Weller, Malvern; Dr. J. B. Harris, Norwood; Dr. Hamilton, East Dulwich; Mrs. Scott, Madras; Mr. Cauty, Liverpool; Messrs. Keene and Co., London; Mr. Sanchez, Norwood; Messrs. Greenberg and Co., London; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Roberts and Jones; Mr. Cavendish, London; Dr. Smellie, Jarrow; Messrs. Elton and Co., London; Dr. Drummond, Newcastle-on-Tyne; Dr. Keith Napier, London; Surgeon-Major Parakh, Bombay; Messrs. Reid and Donald, Perth; Dr. R. J. Lee; Dr. H. Davy, Exeter; Messrs. Crossley and Co., London; Mr. W. Gardner, Adelaide; Messrs. Cassell and Co.; Dr. Rentoul, London; Dr. Blake, London; Dr. Paris, Sierra Leone; Dr. Towers-Smith; Dr. Ashby, Manchester; Mr. Laban, West Bromwich; Dr. Steele, Algeria; Mr. Hawkes, London; Dr. Ziffer, Budapest; Mr. Considine, Ennis; Mr. Bryant, London; Mr. Gurner, Pall Mall; Mr. Stiff, Birmingham; Mr. Girling, Halifax; Dr. Giffard, Brighton; Mr. Carter, Liverpool; Mrs. Shipley, Stockton; Mr. E. Nock, London; Mr. Morillier, Rotherhithe; Mr. C. Müller; Dr. A. Mills, Brussels; Mr Nettleship, London; Mr. F. J. Davies, Abercarn; Mr. Hope, London; Mr. Woodcock, Bradford; Dr. Sutherland, Whitehall; Dr. Favrat, Madeira; Miss Davies, Liverpool; Mr. Sell, London; Mr. Aveling, London; Mr. Marsden, Hornsey; Mr. Merck, Darmstadt; Mr. Mungall, Glasgow; Mr. Gravatt, London; Mr. C. J. Bond, Leicester; Mr. Feeny; Mr. C. G. Campbell, Saddleworth; Mr. P. Parker, Bradford; Astragalus, London; Secretary, General Hospital, Cheltenham; M.R.C.S.; G. W.; R. H. F.; Secretary, Royal Victoria Hospital, Bournemouth; Enquirer; Anthracosis, London; A. R. Z., London; M.B., C.M.; M.D., Hampstead; M.A., London; Assistant, London; Secretary, Cambridge; Delta, London; D., London; M.D., London; Astonished; Surgeon; A.; Bachelor, London.

LETTERS, *each with enclosure*, are also acknowledged from—Messrs. Lee and Nightingale, Liverpool; Dr. Marsden, London; Messrs. Sharp and Co., Glasgow; Dr. Jennings, Manchester; Miss Rogers, Colwyn Bay; Dr. Duke, Eastbourne; Dr. Owen, Gloucester; Messrs. Slinger and Son, York; Mr. Mitchell, Taunton; Messrs. Hazell, Watson, and Viney, London; Dr. Giacomo, Naples; Messrs. Richardson Bros. and Co., Liverpool; Mr Lockwood, Huddersfield; Mr. Garlike, Ealing Dene; Dr. Pogson, Durham; Mr. Tully, Hastings; Messrs. Wyleys and Co., Coventry; Mr. Cross, Ormesby; Miss Montgomery, North Wales; Mr. Bush, Bath; Mr. Howells, Aberdare; Messrs. Findlater and Martin, Edgeware; Dr. Harries, Sussex; Messrs. Burroughs and Co., London; Col. Dashwood, Loughboro'; Messrs. Woolley, Sons, and Co., Manchester; Mr. Mackenzie, Musselburgh; Mr. Aspinall, West Kirby; Mr. Duncan, Aberdeen; Mr. Cook, Totnes; Mr. Craig, Wick, N.B.; Mr. Cooper, Bristol; Mr. Pickett, Notting-hill; Mrs. Godfrey, Northampton; Dr. Ritchie, Otley; Mr. Butlin, London; Mr. Tyte, Minchinhampton; Mr. Chapman, Horsley; Mr. A. C. Coles, Bournemouth; Mr. J. Carter, London; Mr. McLay, Rothesay; Mr. Brice, Scarboro'; Mr. Hammett, Taunton; Mr. Twyford, Hanley; Mr. R. Davis, London; Mr. Philips, Windsor; Mr. Crisp, Nottingham; Mr. T. Smith, Fleet-street; Dr. E. B. Reckitt, Boston; Mr. Brown, Highgate-hill; Mr. Griffiths, Cambridge; Mr. Owen, Fishguard; Mr. Trimble, Ennfskillen; Mr. Atherley, Rhyl; Mr. Grote, Cardiff; Mr. Clowes, Colchester; Dr. Windle, Halifax; Mr. Baker, London; Messrs. Mann and Son, London; Mr. Cochrane, Wigtonshire; Messrs. Perkins and Co., London; Dr. Hooper, Ripley; Mr. O'Neilly, Tuam; Dr. Fox, Child's Hill; Mr. Hoffmann, Swansea; Mr. Sargant, Ramsgate; Dr. Leckie, Pontypridd; Mr. Piggott, Cambs; Dr. Gordon, Witheridge; Mr. Thin, Edinburgh; Mr. Brown, Streatham; Mr. Heywood; Mr. Kelvin, Manchester; Davies, Pontypridd; B., London; M.D., London; Hackney Furnishing Co.; General Hospital, Birmingham; Jeyes' Sanitary Compounds Co., London; W. B., Finsbury-circus; Secretary, Western Medical School, Glasgow; Assistant, London; V. V. V.; St. John Ambulance, London; Irrigation, London; A. C. E., Southport; Nurse Farrington, Ireland; Delta, London; Vere; Manager, *Leeds Mercury* Office; M.D., Bideford; Graduate, London; R. A., London; Sister Musgrave, Bolton; C. S., Manchester; Chiswick, London; J. L. K., London; Cromwell House, Northallerton; Country, London; E. B., Southampton; J. A. B., London; X. Y. Z., London; C. B. O.; A. C. G., London; Secretary, Deaconesses' Institute, Tottenham; Medicus, Leicester; Mr. D., Earl's-court; Malton, London; Hon. Sec., Kenilworte; Medicus, Clapton; Thane, London; E. A., London; Index, London; Beta, London; B., London; Z., Manchester; A. W. H., Norfolk; T. H. L., Brixton.

NEWSPAPERS.—*Lincolnshire Chronicle, Birmingham Daily Post, Bristol Mercury, Scottish Leader, Yorkshire Post, Dundee Advertiser, Northern Whig, Liverpool Courier, Leeds Mercury, Eastern Press (Norwich), Bath Gazette, Sussex Advertiser, Montreal Herald, Lincoln Mercury, Windsor and Eton Gazette, Hertfordshire Mercury, Insurance Record, Reading Mercury, Mining Journal, Windsor and Eton Express, West Middlesex Advertiser, Architect, Law Journal, Spectator, Surrey Advertiser, West Middlesex Standard, Berwickshire News, Westminster Times, Pioneer, Birmingham Daily Gazette, Lincoln Gazette, Bury Post, East Anglian Times, Observer, Leicester Daily Post, Oldham Standard, Hastings Independent, Dewsbury Reporter, Essex Standard, Grantham Journal, North Devon Herald, Cheltenham Examiner, &c.*, have been received.

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Medical Diary for the ensuing Week.

Monday, February 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Diseases of the Iris.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. W. R. H. Stewart: Otorrhœa.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. J. W. Bond: Post Nasal Growths. (Post-Graduate Course.)
SOCIETY OF ARTS.—8 P.M. Mr. Gisbert Kapp: The Electric Transmission of Power. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. Herringham: Asthma in a Boy.—Mr. Paget: Strangulated Hernia, Gangrene of Bowel, recovery with a fistula.—Dr. Ewart and Mr. Bennett: Dexio Cardia (without transposition of other viscera) and Bronchiectasis, pulmonary incision and resection of rib for the latter.—Dr. Rivers (for Dr. Jackson): A case of Treadler's Cramp.—Mr. Edmund Owen: Amputation of Both Mammæ for Scirrhus.—Sir Hugh Beevor: (1) Malformation of Heart, Defect of Ventricular Septum; (2) Defective Development of Abdominal Parietes, Respiration entirely Costal.—Dr. Ewart: A case of Situs Inversus Viscerum.—Mr. Sheild: Loose Body in Knee-joint of unusual size.—Mr. Allingham: Case after Trephining.—Dr. Campbell: Lupus cases under Koch's Treatment.—Dr. de Havilland Hall: (1) Raynaud's Disease; (2) Addison's Disease; (3) Bronchocele.

Tuesday, February 17.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: General Paralysis of the Insane, Epilepsy.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
SOCIETY OF ARTS.—4.30 P.M. Commander V. Lovett Cameron: Chartered Companies in Africa.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention.
ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, Jermyn-st., S.W.). 7.45 P.M. Dr. Arthur Newsholme: The Vital Statistics of Peabody Buildings and other Artisans' and Labourers' Block Dwellings.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Professor W. H. Corfield: Sanitary Appliances.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Job Collins: Hypertrophied Kidney, with Dilated Pelvis.—Mr. S. Paget: Imperforate Rectum.—Dr. W. Ord: Aneurysm of the Aortic Arch opening into the Superior Cava.—Mr. Bland Sutton: Cervical Teeth.—Mr. B. Pitts: Columnar-celled Carcinoma of Humerus Secondary to Carcinoma of Rectum.—Mr. J. R. Lunn: Carcinoma of Kidney.—Mr. J. J. Clarke: Effects of Intra-uterine Pressure on the Fœtus.—Mr. W. G. Spencer: Exophthalmic Goitre in a Girl, causing death by Asphyxia. Card Specimens by Dr. W. Hadden, Mr. G. H. Makins, and Mr. S. G. Shattock.

Wednesday, February 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: The Pulse, with Demonstrations.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. J. B. Lawford: Optic Atrophy.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Greville MacDonald: Neuroses of the Larynx. (Post-graduate Course.)
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. Louis C. Parkes: The Relations of Saprophytic to Parasitic Micro-organisms.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. W. B. Benham: Emtaia Equatorialis, a New Earthworm from Equatorial Africa.—Mr. T. B. Rosseter: Cysticercus of Tænia Coronula Duj.
SOCIETY OF ARTS.—8 P.M. Col. Sir Charles Wilson: Methods and Processes of the Ordnance Survey.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Dr. Louis Parkes: Model Dwellings in London, and Overcrowding on Space. The paper will be followed by a Discussion.

Thursday, February 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Buzzard: Selected Cases.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. M. Lubbock: Anomalies of Speech in Children and their Treatment.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. G. Stoker: Chronic Glandular Disease of the Pharynx and Naso-pharynx.
ROYAL INSTITUTION.—3 P.M. Professor C. Hubert H. Parry: The Position of Lulli, Purcell, and Scarlatti in the History of the Opera (with Musical Illustrations).
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention.

Friday, February 20.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Dr. F. A. Purcell: Cancer of Tongue and its Treatment.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: Pulmonary Cavities.
SOCIETY OF ARTS.—4.30 P.M. Capt. Abney: The Science of Colour.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. Wright Clarke: Details of Plumbers' Work.
ROYAL INSTITUTION.—9 P.M. Dr. E. E. Klein: Infectious Diseases, their Nature, Cause, and Mode of Spread.

Saturday, February 21.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Different Forms of Lupus.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

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ABSTRACT OF THE

Hunterian Oration.

Delivered in the Theatre of the Royal College of Surgeons, Feb. 14th, 1891,

BY JONATHAN HUTCHINSON, F.R.S., LL.D.,

EX-PRESIDENT OF THE COLLEGE.

[AFTER paying a tribute to the memory of the late Dr. Matthews Duncan and the late Professor Marshall, Mr. Hutchinson said]: The Hunterian Oration might with propriety be given in honour of the Hunter family, rather than of one of its members. I may go further, and say that it should not forget the Paul family either, for Paul was the maiden name of the mother of William, James, and John Hunter, and of the grandmother of Joanna and Dr. Matthew Baillie. May I venture on the practical suggestion that it would be a matter of social convenience, great help to bibliographists, and at the same time a mere act of justice to the maternal parentage which we all share, if the maiden name of the mother were always prefixed to that of the father? Thus, for one generation at least, we should recognise that our mothers have, with our fathers, an equal share in the credit accruing to the family name from the deeds of their children. Under such a plan we should have a William Arden-Shakespeare, a John Jeffrey-Milton, a John Paul-Hunter, and a Matthew Hunter-Baillie. John Hunter's brother William was exactly ten years his senior, and died ten years before him, each having enjoyed a life of sixty-five years.

William Hunter, when quite a youth, pledged himself to his friend Cullen that he would make his home, Long Calderwood, famous. He nobly fulfilled his promise, but he yet failed of the reward, simply because a brother, ten years his junior, of whom at the time he made no account, outstripped him and did it first. John was the first to be elected into the Royal Society, yet had there been no John Hunter, William would have been accounted a genius. His fame was and is deservedly very great, but his brother has eclipsed it. The similarity in the tastes and endowments of the two brothers was indeed remarkable. Both were resolute to base practical knowledge upon anatomical and physiological research. Both zealously taught anatomy. Both were indefatigable collectors of facts, and both made large museums. That got together by Dr. Hunter, and which he bequeathed to the University of Glasgow, is probably, as the work of an individual, second in value only to that which is our priceless possession here. If William displayed, perhaps, less of concentration of aim, it was possibly due to yet wider universality of tastes. He collected not only specimens in pathology and anatomy, but pictures, coins, and curios of all kinds. For some of these John also had desires, but as compared with his brother his energies were much more nearly restricted to biological objects. It must, perhaps, also be admitted that, although of almost equal energy and industry, William enjoyed, in somewhat less vigour, that faculty of insight which was the secret of much of John's success. It is not enough, however, to claim that part of the credit which attends the manifestation of genius should be given to the parents and predecessors of the individual concerned. Biology knows but little of hero worship, and all departures from her fundamental truths are unwise and mischievous. In proportion as we lose sight of the means by which really great men became what they were do we fail to learn the full lesson of their lives. To take a great man and treat his career not as representative but as phenomenal, to place him on a pedestal and claim for him the almost exclusive plaudits of his successors, is to rob his life of half its usefulness. The domain of science, as that of letters, is a republic. We crown no kings, we know nothing of oligarchs.

It has been too much the custom of Hunter's biographers—not, I gladly admit, of all—to represent him as the uneducated and uncouth son of a Scotch farmer, and as having been brought up for the trade of a cabinet-maker. Mr. Luther Holden, in his excellent Oration ten years ago, did much to correct these misapprehensions. Briefly, his maternal grandfather was the treasurer of Glasgow, and his father was of an old family—the Hunters of Hunterston. Here, again, biology may come to the aid of history. Surely it was not without its meaning, in reference to hereditary descent, that both the Hunter brothers suffered in early life, and through life, from that disease which has been named not only the *Dominus Morborum* but also the *Morbus Dominorum*, and of which it has been well said that it destroys more wise men than fools. Surely we may take the inheritance of gout thus strongly manifested as more conclusive proof of gentle blood than any which parish genealogies could possibly offer. I may add, in support of what I have just said as to the importance of not forgetting our mothers, that it was perhaps as likely that the inheritance came from the Glasgow treasurer as from the owner of Long Calderwood.

[Mr. Hutchinson proceeded to point out the historical events which occurred in the lifetime of William Hunter and the personages who were his contemporaries. He said]: Amongst those whom Hunter may have met in London were Wesley and Wilberforce, Adam Smith, Benjamin Franklin, Reynolds, Johnson, Grose the antiquary, Erasmus Darwin, Priestley, Banks, and Benjamin West. With the last two there is reason to think he was intimate. The French naturalist, M. Buffon, was born in 1707, and died in 1788. He began the publication of his great work on Natural History (forty-four volumes) in 1749, and the first thirty-five volumes were accessible to Hunter before the year 1788. In them the dissections and anatomical descriptions were chiefly by Daubenton. Whether Hunter possessed Buffon's works, or had even seen them, I do not know. Valuable as they unquestionably are, they do not display any material traces of that genius for systematic observation and scientific grouping of facts which is the special glory of Hunter's work. Hunter's true competitor in these respects was undoubtedly Cuvier, who visited London in 1813, and saw Hunter's museum after its removal to our College. He investigated its treasures with delight, and took back with him to Paris drawings of many of the specimens. To this list of botanists and naturalists who were Hunter's contemporaries the name of Linnæus must be added. He was Hunter's senior by twenty years, and died fifteen years before him. Whatever may be our conclusion as to his descent, it is, as has been pointed out by several of my predecessors in this function, a great mistake to class Hunter amongst self-taught men. From the time that he came to London, when scarcely twenty-one, he occupied a position in his brother's home and anatomical school, which afforded him unequalled opportunities. It is possible, but not certain, that before coming to London he had wasted two or three years by working as a cabinet-maker in Glasgow. There is no doubt that in boyhood he had received a good Scotch education in elementary matters, and that during his Glasgow life he must have had fair opportunities for its further development. I find it incredible that a brain so active, with such a thirst for knowledge and such a love of thought, could have been guilty of any material self-neglect during boyhood and adolescence. The child is father of the man; and I cannot doubt that John Hunter, as a boy at home and as a youth in Glasgow, displayed similar tastes and like aptitudes to those which attained such splendid development in his after life. He may have earned his wages in his brother-in-law's work-room, but he never was and never could have been a carpenter only.

Hunter was, we may suspect, not a great letter-writer, and his correspondence was probably as nothing compared to that which constitutes the burden of life to many of us in these days of the penny post. If we may take as an example his curt references to a case of fungus cerebri respecting which Dr. Jenner had consulted him, he did not enter into much detail in reference to the patients concerning whom he gave advice. Three letters contained scarcely as many lines each to the boy's case, whilst whole pages are devoted to questions about cuckoos, hedgehogs, and experiments on the heat of trees.

One of Hunter's secrets of strength was his patience. He speaks of having listened for an hour to the complaints of a gentleman who consulted him for impotence, and of having spent a whole night in thinking over a case of fractured patella. At another place we find him alluding to the thoughts which came to him at the fireside. He was not one of those who drew a strong distinction between business and pleasure, and who regard all that relates to the pursuit of professional knowledge as belonging to the former. I suspect, rather, that his times of highest enjoy-

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ment were those in which he was most keenly in pursuit of surgical investigations. These were not to him merely the means of earning money—they were matters of the most real and deep interest, and, excepting from sheer fatigue, they were never laid aside, whether on holiday or at work.

I have not found any evidence that Hunter himself possessed artistic skill. He was fond of pictures, and valued himself on his appreciation of them. He possessed at the time of his death a very fair collection, one which sold for nearly £2000. It contained works by Hogarth, Reynolds, Loutherburg, and others, and it would—according to a valuation which one of Christie's firm gave to Sir James Paget, from whom I take these particulars—at the present time have been worth at least £10,000. There are hints in some of his letters that he not only bought pictures, but sometimes sold them again; and he several times alludes to their price and to the state of the art market. Those who occasionally frequent picture auctions, and are fond of cheap bargains, have at any rate a right to plead that in this weakness John Hunter gave them example. His brother William of course bought much more expensively, being a far richer man. A point which interests us much more deeply is to note the value which both the brothers set upon artistic illustrations of anatomical and pathological subjects. Dr. Hunter's splendid plates of the gravid uterus are well known. In the early editions they were executed without regard to expense, and they are but a small part of what had been executed under his direction of a similar kind. John Hunter never published a single paper or book the subject of which would admit of illustration, without accompanying his letterpress with a liberal supply of plates. He clearly regarded a drawing as coming next in value to the preparation itself, and as being essential to the full instruction of his reader. Our College possesses, in three large volumes which are now before me, the original drawings from which most of the illustrations published in his works were taken, together with many others. Most of them were probably from the pencil of Mr. Bell, an artist whom Hunter engaged to live with him in the house, so as to be always at hand. The original engagement was for twelve years, but was subsequently prolonged to fourteen. Bell was not an educated man, but was very skilful and painstaking in the kind of art which Hunter wanted. He was not by any means the only one who was employed for this purpose. I find that not a few of Hunter's best plates are signed by Reemsdyck, an artist who published, on his own account, a valuable folio illustrating some of the contents of the British Museum. We can understand the pleasure with which Hunter would have hailed the introduction of photography in aid of scientific illustration. His zeal in these matters was caught by his nephew Baillie; and even up to the present day, with all our successes in colour-printing, no more valuable illustrations of morbid anatomy exist than the series of engravings which Dr. Matthew Baillie published during the first years of this century. I cannot let the occasion pass without the remark that, were Hunter with us now, he would take a foremost part in the scheme which the Council of this College has in hand, to supplement the noble collection of anatomical and pathological preparations, of which his museum at present constitutes the centre, by an equally extensive collection of drawings and casts in illustration of those departments of surgical knowledge which cannot be displayed by other methods.

In connexion with the Medical Society, which held its meetings in Hunter's rooms, permit me to remark upon the zeal which he always displayed for the record in print or, at any rate, in manuscript, of all observations. He was a prolific author, and he left behind him many volumes of notes. It is said that a cart-load were destroyed by the unfortunate proceedings of Sir Everard Home.

It may seem a bold step to seriously compare Hunter with Aristotle. Unquestionably our countryman was far behind the Greek in the breadth of his attainments and sympathies. He could make no pretension to the encyclopædic range of knowledge and of insight which was the glory of the son of the Stagira physician. The one was at home in the study of the deepest problems of metaphysics; the other, much the reverse. Whilst the one carried habits of impartial investigation into all departments of knowledge, the other, when he left his own domain, sometimes exhibited only the strength of prejudice. We have recently been reminded, by a fortunate discovery, that Aristotle had drawn up for comparison sketches of the constitutions of various cities and nations, and was bent upon forming his opinions on political as on other subjects, by processes of careful induction. Hunter, on the other hand, expressed his vehement desire that those who were not satisfied with their own country would be good enough to leave it, and vowed that he would rather his museum and all its contents were burnt than show them to a Democrat. In spite, however, of these differences, it may be reasonably alleged that, where they met on common ground, the two showed similar habits of thought and intellectual powers not very unequal. Both were systematic and enthusiastic zoologists in times when the study of zoology was the pursuit of very few. Both saw clearly that advance in natural history knowledge could be made only by the collection of facts, and realising that such advance was well worth the effort both set themselves zealously to work. It is probably not possible to mention a third name which can be placed in any sort of competition with either in respect to originality of effort in this direction. It has been asserted, by one well able to form an opinion in this matter, that between Aristotle and the German Kant no metaphysician of original power has appeared. In like manner we might say, in reference to scientific zoology, that there was no one between Aristotle and John Hunter. There were of course many who made meritorious efforts with more or less success, but none whose achievements can in the least compare with Aristotle's account of the parts of animals or with John Hunter's museum. During the long twenty centuries that were passed through between these two men, there did not appear anyone so capable of applauding Aristotle's work as Hunter—not one who would have contemplated Hunter's preparations with more true interest than Aristotle. Nor must we, in admitting Hunter's inferiority in scope of attainment, forget the great difference in their occupations. Aristotle, although the son of a doctor, did not practise physic himself, and he was throughout liberally provided with funds. During the most prosperous part of his career his pupil, Alexander the Great, not only supplied him with money, but collected specimens for him in distant lands. As it had been remarked by Sir Alexander Grant, never before or since was the endowment of research on so liberal a scale. It is only justice to our own countryman to remember that no such fortune had fallen to his lot. He had to earn every pound that he expended in zoological science by the practice of a toilsome profession, to which also he was compelled to devote the better half of his thoughts. He, like many other devotees of science, was under the compulsion to earn a livelihood in other pursuits—a position not wholly unlike that of the Jews of old, of whom it is recorded that they rebuilt the walls of Jerusalem with a trowel in one hand and a sword in the other.

I have ventured to make a halting comparison between Hunter and Aristotle, but I have omitted to mention one characteristic in which they greatly differed. Aristotle earned for himself, in Plato's school, the cognomen of the "Reader," on account of his appetite for books. Hunter acknowledges that he did not read much, and we may well believe it. His whole library sold for only £160, and it is stated that it consisted chiefly of presentation copies. His writings are all from his own observation. He scarcely ever makes a quotation, and rarely mentions a name. As to how far this neglect of professional literature was an advantage, and how far a loss, there may possibly be some difference of opinion. That to a vigorous mind like his the knowledge of the opinions of others may sometimes be a hindrance to original thought will easily be conceded, to say nothing of the loss of time incurred in the acquisition of such knowledge. It has been well remarked that a man who does not know the conventional explanation is more likely to devise a new and perhaps a better one than he who sees the whole subject already explained by others' minds. On the other hand, it is unquestionable that ignorance of what others have done may lead not only to much waste of work, and to the rediscovery of that which was already known, but may obviously result in a comprehension of the subject less adequate than that already in the possession of others. Were I to venture an attempt to estimate the value of Hunter's work on the venereal diseases—one which some of his eulogists claim as a masterpiece,—I should be compelled in all honesty to declare that it was in many respects behind the knowledge of the day. It abounds in sagacious thought, but yet, on not a few matters of detail, those who had written before him

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entertained opinions which to me seem more accurate. It betrays too great confidence in the author's own opinions and a want of respect for those of others, which could only come from want of knowledge and of facts. In dealing with the life of a man whose whole career was one of outspoken truthfulness, I too must use candour. We know that praise is pleasant even to the wise, but never was there a man who, less than John Hunter, could have patiently endured the language of indiscriminating panegyric. Exposed to such a trial, I can imagine him breaking out with some similar rejoinder to that which he addressed to Dr. Garthshore, who styled him "My *dear* John Hunter," and got for his pains "My dear Tom fool." In his efforts to make a scientific collection, he was not content with zoology, but took in botany also, and finally included fossils and mineralogy. Everyone has heard stories of his zeal as a collector—how he begged, bought, and bribed, in order to enrich his collection. To induce the keepers of travelling menageries to let him have their dead animals, he used to buy living ones, and loan them out, to be returnable at death. At Earl's Court he had a little private menagerie, and also a farmyard. To a large extent he dissected and mounted his preparations with his own hands. Sir Everard Home records of him that he excelled in the manipulative parts of his work, and greatly enjoyed them. That his industry knew no bounds, and that it was invariably well directed by previously acquired knowledge, we have abundant evidence. Some of the stories which have found their way into print are, however, in all probability, great exaggerations—such, for instance, as the price which he is said to have paid for O'Bryen's body, and the account of his having driven tamed buffaloes through the streets of London. These stories reach their climax in the statement of one writer that he kept a number of dwarfs and giants living on his establishment, in order to make sure of their skeletons.

It was for the apprenticeship with Dr. Cullen that William Hunter derived his zeal and devotion to the scientific aspects of medicine. It was the sight of the museum collected by Boerhaave and his pupil Albinus that fired Dr. Hunter with the desire to make one like it. He returned to London and set to work. His brother John joined him as his assistant, learned his methods, shared his schemes, and kindled at his enthusiasm. Are we right, then, in saying that we owe our Hunterian Museum—one which, let me assert, has no equal in the world—to John Hunter? Yes, certainly, it was his work. There is, however, good reason for widening the basis of our gratitude, since had it not been for Dr. Cullen and Dr. William Hunter, for Boerhaave and Albinus, no such museum would ever have come into existence.

It is, perhaps, not generally known that John Hunter's Museum contained a valuable collection of fossils. There were nine hundred specimens, and to a catalogue descriptive of them Hunter had written, by way of introduction, a most valuable essay on the general facts of geology. With unconscious courage, worthy of either of the Darwins, the fact that enormous periods of time must have elapsed in order to permit of those changes is simply taken for granted. The expression "many thousands of centuries" slips from Hunter's pen as if the duration of life on this planet were as much a mere matter for research as is the life duration of an elephant. How far he was in advance of his age in this matter may be gathered from a letter which our great geographer, Major Rennell, wrote to him. Hunter appears to have asked Rennell's criticism of his essay, and the following is a paragraph from an interesting letter which he received: "This leads me to remark that, in page 3, you have used the term 'many thousand centuries.' Now, although I have no quarrel with any opinions relating to the antiquity of the globe, yet there are a description of persons, very numerous, and very respectable in every point but their pardonable superstitions, who will dislike any mention of a specific period that ascends beyond 6000 years. I would therefore, with submission, qualify the expression by 'many thousand years' instead of 'centuries.'" What Hunter thought of this proposal that he should deliberately sacrifice truthfulness of expression to the prejudices of others may be easily conceived.

The great question now lies before us, In what did Hunter's strength consist? His well-known reply to Dr. Garthshore when saluted with "Well, John Hunter, still at work?" was "Yes! and when I am gone you will not easily find another John Hunter!" He was quite right. For more than half a century no one appeared who was in the least qualified to take up his work.

It has been said many times that the source of Hunter's success lay in his combination in one person of the qualities of thinker and observer. Undoubtedly he did combine them in a way which few others have ever done. He tells us that it was his delight to think, and he alludes fondly to ideas which came to him in his armchair by the fireside, thus proving that under conditions of ease his mind reverted with pleasure to his pursuits. That he was an observant man, one who not only availed himself of all opportunities which came before him, but sought them out and made them for himself, every page of his writing goes to prove. "Don't think, but try," was one of the now celebrated sentences in which he inculcated upon one of his friends the duty of experiment and observation. In it the word "think" must of course be understood in its lower sense, as applied to an untested belief or supposition, a sort of taking for granted. Never in his life did Hunter utter one syllable in disparagement of careful thinking. Never, perhaps, was his special strength in relation to others more accurately estimated than in an exclamation of Sir James Paget's in this theatre nearly forty years ago. The occasion was the production of one of our museum specimens which Jenner had obtained, of which Cavendish had made a chemical examination, and which finally Hunter had described. Well do I remember the bursts of applause which followed the declaration: "Surely never were the elements of an inductive process combined in such perfection—Jenner to observe; Cavendish to analyse; Hunter to compare and to reflect."

There were, however, other qualities of great importance which were elements in Hunter's character, and to which those who wish to train others to emulate his career will do well to give attention. First among them I will place his insatiable thirst for knowledge. Another of Browning's vigorous lines occurs to my memory which is descriptive of Hunter's habitual state in this respect, and as it includes a medical—I might say a pathological—image I have the less hesitation in quoting it here. It is from the "Grammarian's Funeral," and it declares—

> "Back to his studies fresher than at first,
> Fierce as a dragon,
> He, soul-hydroptic, with a sacred thirst,
> Sucked at the flagon."

Whence, then, in Hunter, came this "sacred thirst," and how shall we as parents and as teachers seek to develop it in our children and our pupils? It was, as I have already argued, innate. It was born with him, just as much as were the colour of his hair and the form of his features. Let us, however, as teachers, feel no discouragement in acknowledging the truth that the John Hunters of the future must be bred, and cannot be possibly obtained by mere training. Rather let us take courage in the thought that much that may for the present seem to be seed scattered to the wind, and from which we see but little hope of a crop, is certain in the future to produce a harvest.

If we turn now from what Hunter inherited to the influences brought to bear upon his personal life, to the circumstances which either favoured or hindered the development of that appetite for knowledge and aptitude in its acquisition which he displayed, we must cousider first his early education. Was it an advantage to him or a reverse that he was brought up on a farm, and all the tuition he got was at the parish school? To this we may reply that probably his country pursuits not only favoured his physical development, but were useful to him in the formation of his powers of observation and self-reliance. As to the school, very much would depend upon the schoolmaster, and on this matter I believe we have not the smallest fragment of information. That Hunter was, however, fairly well versed in the elements of school education is, I think, unquestionable. He mixed as an equal in London with men of high training, and was a prominent Fellow of the Royal Society, earning for himself the title of "Cerberus," given possibly in recognition of his zeal in exposing false pretences to knowledge. He never had any fear of taking the pen in hand, but wrote at great length, and often with much vigour of expression. That his orthography was not perfect, and that his style was sometimes slipshod and obscure, may be admitted. It must be remembered that in his day much wider liberties in these respects were permitted and taken than now. It must be remembered also that much of what he wrote was composed

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under very disadvantageous circumstances—when wearied in the evening, for instance, or at odd hours amid the distractions of practice; and, further, that he usually wrote by dictation, and employed as his amanuenses his artist, Mr. Bell, who was uneducated, and sometimes even his coachman. Further, too, it must be borne in mind that several of his publications did not receive his final corrections, but were published with but careless revision after his death. His obscurity is also to some extent due to the fact that he was dealing with thoughts which went deep, and for which as yet there was no familiar vocabulary. To these facts, as well as to his defective education, we must attribute the circumstance that he but too often permits himself the use of vague and metaphorical expressions.

Hunter, although speaking with strong disparagement of the definitions, saying of them, "That of all things on the face of the earth they are the most cursed," could not help recognising that they are essential to exactitude of thought and clearness of description. He is, therefore, constantly attempting them, and with that candour of mind which is one of his characteristics, as constantly admitting the inadequacy of his efforts. Thus he ingeniously defines the word poison so as to exclude arsenic on the one hand, and the small-pox virus on the other, and he calls the reader's attention to the fact that it does so. His definition of a "morbid animal poison" takes in cancer and the itch. Respecting the latter, and its supposed association with an animalcule which could be seen by the microscope, he suggests "that particles of matter may have been floating in the poison which a lively imagination might suppose to be animalcule;" and adds, "but that these animalcula are necessary to the existence of the disease I totally deny."[1] Definitions, indeed, appear to have exercised a sort of fascination over Hunter's mind. He is much puzzled by the difficulty of so defining the terms "shrub" and "tree," as to distinguish the things. Throughout his most interesting essay on Geology he is plagued by doubts as to the legitimate use of the word "fossil;" and for the first and only time, so far as I have noticed, he betrays some anxiety as to what the critics may say.

If, however, from internal evidence, we may venture to contend that it is certain that Hunter's education in boyhood was far from neglected, what shall we say as to the important years which elapsed between school and the commencement of his London career at the age of twenty-one? We know that, some years later still, when his brother entered him at Cambridge with a hope of repairing the half-wasted opportunities of youth, Hunter himself peremptorily put an end to the plan, and declined "to stuff Latin and Greek." That he was in the right then few will doubt, for he was advancing in years, and his tastes for anatomy and zoology were in full force. It would have been a mistake then to fall back upon the classics. This does not, however, by any means prove that University training at the proper time would not have been very useful to him. We know what Hunter, unaided by this training, did actually accomplish; but we shall err, I think, very seriously if we conclude that he would probably not have accomplished so much had his youth been spent at a University instead of in a cabinet-maker's shop. The subject is too large a one for discussion here, but we may remember that the possession of classical knowledge did not encumber the minds of Bacon, of Harvey, or of Newton. I will ask your permission to record my own conviction that, had Hunter obtained it at the proper time, it would have been greatly to the advantage both of his readers and himself.

For those of us who are placed in positions of responsibility as regards the future training of the medical profession important lessons are to be obtained from Hunter's life. In the first place, let us impress ourselves with faith in the power of that innate desire for knowledge which is the inheritance, if not of all, at any rate of all in the least fitted for our pursuits. We have seen what it effected in Hunter's case. Hunter was not alone in its possession. "Who loves not knowledge?" It is not that its possession is not a delight to all, but that the toilsome methods by which it is acquired, and the difficulty with which it is retained, disgust the idle and sometimes dismay even the zealous. Let us adopt Hunter's methods, and take our students more directly to Nature herself. Let our education become more objective, and concern things rather than books. Let us renounce utterly all remnants of the methods by which the pedagogues of the past so often succeeded in making the very name of education distasteful. Let us trust to the intrinsic attractions of our subjects, and resort as little as possible to compulsion in respect to methods of study. Let our examinations become more objective and less merely verbal, and the examiner will soon be recognised as the friend and not the torturer of the candidate. Above all, let us avoid the error of trying to make all minds fit into one and the same mould, and, whilst doing all we can to encourage breadth in preliminary study, let us remember that there have, from time to time, arisen men who without its aid have brought gain to Science and credit to themselves and their profession. Lastly, in reference to our University schemes and curricula of education, let us remember Hunter's aphorism, that life precedes and causes organisation, not organisation life; and beware lest by the premature imposition of a too artfully contrived organisation we hinder the development of life.

[1] From Parkinson's Reminiscences, p. 157.

ABSTRACT OF

The Milroy Lectures,

ON

DIPHTHERIA, ITS NATURE, HISTORY, AND PREVENTION.

Delivered before the Royal College of Physicians of London,

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.

LECTURE I.

DR. THORNE THORNE commenced these lectures by recalling the labours of Bretonneau, and his desire to attach a specific name to a specific phlegmasia which should be anatomically distinct, as also Hirsch's criticism, that the identity or otherwise of two or more diseases in a group could only be determined by having regard to their anatomical, clinical, and, above all, their etiological aspects. He then referred, first, to the failure from the anatomical point of view to differentiate between the several membranous affections of the throat, next to clinical medicine as not supplying the means of distinguishing between the infective or the benign character of throat diseases; and whilst claiming that great advances had in recent years been made as to the etiology of the disease, he admitted that in this respect, too, we had many of the former difficulties still to deal with. It was next shown by reference to statistics that during the last decennium there had been a substantial increase of diphtheria mortality in this country, and that a very significant portion of this increase had taken place in the metropolis. This increase was the more remarkable because whilst it had been in progress the zymotic group of diseases, and notably those causes of death which are amenable to sanitary administration and public health measures, had undergone steady diminution. He next referred in some detail to the statistical researches of Dr. G. B. Longstaff, and to his comparisons of the relative diphtheria mortalities in districts that are divided into dense, medium, or sparse according to the density of their populations, and from these statistics it was shown that whereas antecedent to 1860 the diphtheria rate for the sparse districts was double that for the dense districts, the rates during the period 1871–80 for these respective districts had come to be nearly equal. In short, the incidence of diphtheria was undergoing a change, and the preference which it had formerly shown for rural areas was being transferred to dense communities. Indeed, the increasing excess which he had referred to in the case of London was found to extend to the large towns and cities as a whole; these urban districts having in 1889 a diphtheria mortality of 0·26 per 1000 as opposed to one of only about one-half—namely, 0·14—in 1881. The circumstances detailed were, it was alleged, such as to call for a searching inquiry into the natural history of the disease, especially as regards its causation and prevention.

Turning next to the historical aspect of diphtheria, it was

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shown that a disease indistinguishable from it, and this even as regards its paralytic sequelæ, was known before the Christian era, and as to this country the quaint writings of Noah Webster were quoted in which comets, meteors, and other phenomena were conjured up to account for epidemics of throat disease other than scarlatina, which vividly recalled the several features of diphtheria prevalences in our own day. The first recognised prevalence of diphtheria in England, alleged to have been imported from Boulogne, was discussed in connexion with the writings of Simon, Greenhow, and Burdon Sanderson; and then the general distribution of the disease in different parts of England and Wales was considered in some detail by the aid, in the main, of Dr. Longstaff's statistics. The broad geological features of the country were shown to have no direct influence on diphtheria mortality, and as to attacks apart from death no sufficient data are available. Some areas in the same geological formations exhibited the most striking contrasts in this respect; but at the same time Dr. Thorne differed from other authorities who had declared that soil, and this even when altitude and dampness were also in question, had no concern in the development or diffusion of the disease. The two areas in our own country where diphtheria had caused the highest rates of mortality were shown to lie along our exposed north-eastern and eastern coasts, and in the mountainous districts of Wales, and this especially in the damp valleys so abundant in some Welsh counties. Clays, as such, were shown not to have excess of diphtheria death; indeed, the great stretch of the Oolite from the borders of Lincolnshire into Dorset, where clays abound, was the line of England's greatest immunity from diphtheria, a circumstance which was largely attributed to the facilities for drainage afforded by the flow of the great rivers which drain that area. On the other hand, where water was upheld in clays or in gravels, and where to the resulting dampness was superadded a cold, bleak air and vegetable decomposition, there it was held that conditions favourable to diphtheria existed. But at the same time other conditions favourable to the disease were shown often to outweigh all considerations of climate and of soil. These points having been somewhat fully discussed by the aid of charts and diagrams, Dr. Thorne further illustrated them by somewhat detailed references to epidemics which he and his colleagues at the Local Government Board and various local health officers had investigated. And as to the influence of soil-wetness, it was suggested that whilst stagnant water, like stagnant air, was conducive of ill-health and probably of diphtheria, the result of moving water, as in the drift along the beds of great rivers, was probably in no such way injurious.

The influence of season was next considered, and it was shown generally that over a long period of years excess of diphtheria mortality had occurred during the fourth quarter of the year, a circumstance that had in some respects been held to favour the view of a fungoid origin of the disease. Comparison between attacks and deaths from this disease was not possible in the case of the large towns where compulsory notification had been adopted, and the records as to this, which had been compiled owing to the initiative of Dr. John Tatham, were referred to in this connexion, with the result of showing that a striking rise in diphtheria mortality takes place in the month of October, that this hardly abates during November, but that after this it shows a tendency to diminish. But with regard to attacks it was evident that diphtheria increased at an earlier date, the month of September showing a marked number of attacks. And, on the other hand, the January deaths from diphtheria were, in not unimportant amount, due to attacks commencing in December. How far these urban statistics could be held as applicable to rural areas Dr. Thorne did not feel able to say, but the urban experience was stated to be generally the same as that observed in prevalences, that had been carefully investigated in the country, as a whole.

Coming next to the question of sex, some of Dr. Thorne's experiences were referred to, and this especially where he had expressed the opinion that the excess of diphtheria in females over males during the first fifteen years of life was probably due to the fact that female children are likely to be brought into closer contact with the infected sick than is the case with boys. This had been generally accepted by Dr. Downes as applicable to females who had passed the age of childhood, but the latter observer had brought forward a number of statistical and other considerations which he thought tended to show that there was also some physiological proclivity amongst females to take the infection beyond that which attached to males. Dr. Thorne, on the other hand, gave his reasons for believing that in girlhood, as in early womanhood, there was in females opportunity for greater and more sustained exposure to infection than in males.

The question of age incidence as a predisposing cause was also fully discussed. The greatest proportion of total diphtheria deaths was shown to fall on the period three to fifteen years; a still greater incidence was found on the period three to twelve years, and a further excess on the period two to five years. The comparative scarcity of diphtheria mortality was referred as related to such circumstances as avoidance of exposure to infection, the use of breast milk and of milk preparations practically sterilised in process of manufacture, as possibly also to the rudimentary character of the tonsils at a period of life associated with the functional obliteration of the thymus gland. But this question of age incidence was found to be much involved in other considerations. Thus, the age three to twelve years is essentially the school age, and so-called school influence here comes into operation; it is the age when diphtheria is a much more recognisable disease than at some later ages, and in rightly appreciating how far question of age may be one merely influencing the clinical features of the local affection, much was held to depend on the right interpretation which ought to be put on the term "diphtheria" as used both in mortality and in sickness returns.

ABSTRACT OF THE ORATION OF THE HUNTERIAN SOCIETY FOR 1891,

ON PSYCHOLOGICAL MEDICINE IN JOHN HUNTER'S TIME AND THE PROGRESS IT HAS SINCE MADE.

Delivered at the London Institution,

BY FLETCHER BEACH, M.B., F.R.C.P.,

MEDICAL SUPERINTENDENT, DARENTH ASYLUM; HONORARY SECRETARY, MEDICO-PSYCHOLOGICAL ASSOCIATION.

MR. PRESIDENT AND GENTLEMEN,—When you did me the honour to request that I should undertake such an important duty as the delivery of the Hunterian Oration, I had some difficulty at first in deciding upon what subject to address you. The life of Hunter has so frequently been dwelt upon by brilliant orators, such as Paget and others, that it is impossible to bring before you any facts that are not already perfectly well known. On reading an account of his life, one cannot but be struck with his marvellous power of work, his untiring energy, and his complete devotion to science in so many departments. Lawrence truly said that "he was the greatest man in the combined character of physiologist and surgeon that the whole annals of medicine can furnish." Physiology, surgery, and the formation of his museum did not take up the whole of his time, for, on looking through the first volume of his "Essays and Observations," arranged and revised by Sir Richard Owen, I was surprised to find that he was also a psychologist. Hunter was eminently a practical man, and, had he lived long enough, he would no doubt have applied his psychology to the elucidation of many points in surgery and medicine. It therefore occurred to me that the condition of psychological medicine in Hunter's time and its subsequent progress might be a profitable subject whereon to discourse to you.

It appears that during the earlier years of Hunter's life the belief that the insane were possessed of the devil had not entirely passed away, and ignorance and superstition guided the treatment. Ducking the lunatic was practised in some parts of Cornwall, while in Scotland lunacy healing wells and superstition survived as late as 1793. In Ireland the most important of the many stories connected with the treatment of the insane is that concerning the Valley of the Lunatics, in which are two wells, to which lunatics used to resort, drink the waters, and eat the cresses growing on the margin; the firm belief being that the healing water, the cresses, and the mysterious virtue of the glen would

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effectually restore the madman to mental health. In asylums at this time manacles were applied to the arms and legs of the patients, who were often confined in dark chambers and lay on straw. Many others were kept in gaols and served as sport to visitors at assizes, fairs, and other places. The patients in private asylums were no better off, and matters at length became so bad that a committee of the House of Commons was appointed to inquire into the state of the private asylums of the kingdom. In 1774 an Act (14 Geo. III., c. 49) was passed, by which five Fellows of the College of Physicians were annually elected Commissioners in Lunacy for granting licences in London, Westminster, and the county of Middlesex. In the provinces, houses were licensed by the justices of the peace. The medical treatment at this time consisted in bleeding, purging, and giving emetics, probably with the idea that insanity was due to excess of bile in the blood. The views of the medical authors of that day are interesting. Drs. Fallowes, Pargeter, Cullen, Arnold, and Mason Cox all wrote on the subject. The latter was the first to lay much stress on *moral* as accessory to *medical* treatment. Management he looks upon as of the highest importance, and he observes that it partly consists in address, but principally is displayed by making proper impressions on the senses. He distinguishes between the sthenic and asthenic forms of insanity, and sees very clearly that, though it is usual to pursue the antiphlogistic plan in the former cases, it is highly improper in the latter, in which a generous diet, bark, and port wine are indicated. Altogether he is much in advance of the treatment of his time, though he believes that bleeding, blistering, and the promotion of vomiting and purging are necessary.

In the year 1792, a year before Hunter's death, an important event occurred which proved to be the beginning of the reform that ultimately took place in the condition of all British asylums. It seems that there was in York at this time an asylum which was a frightful abode for lunatics, and owing to the supposed ill-treatment of a patient confined there, William Tuke, a citizen of the city, proposed the erection of an institution where there should be no concealment, and where patients should be humanely and kindly treated. His proposition was adopted, funds were provided, and in 1796 the York Retreat was opened and the experiment started. The institution was made as much as possible a home with cheerful surroundings, and the patients were encouraged to work in the open air. The compassionate treatment of the insane also commenced in France about this time, for Pinel, in the year 1793, had freed the lunatics at the Bicêtre from their fetters, although he did not know until 1798 that the same humane treatment was pursued in England. It is generally understood that he did not liberate them for medical reasons, but chiefly from the compassion which he felt for their pitiable condition.

Having given you an account of the condition of psychological medicine during the life of Hunter, I now proceed to point out the progress which has since been made. The system of treatment pursued in the Retreat was not followed for some time. Its success excited the jealousy of the superintendent of the York Asylum; discussion followed, and eventually an investigation was set on foot which necessitated legislation. Various Acts of Parliament have from time to time been passed, and the result has been the humane treatment of lunatics as seen at the present time.

In 1815 a select committee was appointed to consider provisions for the better regulations of asylums in England. Evidence was taken from various witnesses relative to the condition of patients in the York and Bethnal-green Asylums and Bethlem Hospital, then near Moorfields. The treatment at Bethlem was atrocious, and the case of William Norris, who was confined there in a barbarous manner, made a great impression upon the public mind. At the York Asylum cells were discovered, four in number, eight feet and a half square, perfectly dark when the door was shut, and the stench almost intolerable; in these cells thirteen women slept. At the Bethnal-green Asylum several of the pauper women were chained to their bedsteads, naked, and only covered with a hempen rug. The effect of this Parliamentary inquiry did not then bring about a new statute, and no less than thirteen years elapsed before a radical alteration of the law took place.

In 1829 further impulse was given to the humane treatment of patients initiated by Mr. Tuke; for, according to Conolly in his "Treatment of the Insane," in that year a patient in Lincoln Asylum had died "in consequence of being strapped to a bedstead during the night. This accident led to the establishment of an important rule—that whenever restraints were used in the night an attendant should continue in the room." In the year 1834 it was found that this principle, which acted so well at night, was also applicable by day, and the result was that the necessity for restraint became less frequent. In 1835 Mr. Gardiner Hill was appointed house surgeon of the Lincoln Asylum, and from this date a new era—that of non-restraint—was inaugurated in the treatment of the insane. Although the experiment was a success, yet the remote position of the institution and the want of authority in its author would have prevented its acceptance for many years if Dr. Conolly, on going to Hanwell in 1839, had not set to work to carry it out in the then largest asylum in the kingdom.

In 1877 a feeling of uneasiness arose in the public mind, in consequence of an impression that patients were too easily admitted into asylums, and when there could only with difficulty get out. A select committee was appointed to inquire into the subject; many false charges were made, but on strict investigation they fell to the ground. Various proposals were suggested, which were embodied in a Bill introduced into Parliament by Mr. Dillwyn in 1881. The Bill never reached the stage of the third reading, but after being introduced in successive Parliaments finally received the Royal assent in 1889. A consolidation of this and previous Acts was passed last year. The chief objects of it are to furnish safeguards against the improper confinement of persons as lunatics, to secure speedy treatment, and to protect medical practitioners and others in the performance of their duties, to amend the law as to single patients, to give increased power for administering the property of lunatics, to check the establishment of new licensed houses, and to enable public asylums to receive private patients. With regard to the classification of mental diseases various systems and principles have been laid down. All of them, as Dr. Blandford says, "are based upon one or other of three principles: either they are framed according to the mental peculiarities of the patient, his exaltation, his depression, his imbecility; or they point to a disorder of one or other portions into which the human mind is by some authors divided; or, the mental symptoms being put entirely aside, the malady is classified according to its pathological cause and its relations to the bodily organism." I will not weary you by recounting them, but will simply remark that the division into mania and melancholia adopted by the old writers is the foundation of the whole system, and that later advances have, as time has gone on, been due to a more scientific study of mental disease.

Great progress has been made in our views of the nature of insanity. The old writers were of opinion that it was due to excess of bile in the blood, and hence the bloodletting, purgative, and emetic treatment. It would take too much time to study the various doctrines that have been held, but there is no doubt that the views of Laycock, Carpenter, Munro, Anstie, Thompson Dickson, and others have all contributed to make more clear to us that insanity is due to depression of the higher centres and excessive action of others. Dr. Hughlings Jackson, adopting the hypothesis of evolution as laid down by Herbert Spencer, thinks that cases of insanity may be considered as examples of dissolution. According to this view, insanity is dissolution beginning at the highest nervous centres, and this is the doctrine usually held by the more advanced scientists of the day. The pathology of insanity has of late years made great strides, and I think we have reason to hope that as time advances we may be able to establish a relation between the physical appearances seen after death and the lesion of intellectual functions observed during life. Excluding the more recent cases of acute insanity, Bevan Lewis tells me that even now he can do this in epilepsy, alcoholism, general paralysis, idiocy (in this I agree with him), chronic melancholia, senile dementia, and a large group of consecutive dementias, including "organic" dementia. That so much can already be accomplished is a result of which we may justly be proud.

Coming now to the treatment pursued at the present day, we find the wards in asylums well furnished and made cheerful looking. In some parts of the country the tendency has been to do away with the huge buildings charac-

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teristic of the old asylums, and to build cottages, or, in higher class asylums, villas upon the estate. The conditions of life more nearly resemble those of home, and it is found that patients can be just as conveniently classified and treated. In Scotland the most important change has been to allow greater liberty to the patients. In some asylums the airing courts have been abolished, locked doors have to a great extent been disused, and many quiet harmless cases are boarded out under medical supervision. Industrial occupation, especially in the open air, is of great use. Mechanical restraint, no doubt, in some cases can never be abolished; indeed, this is recognised by the Lunacy Act of 1890, and the Commissioners acknowledge that cases will occur in which it is necessary for the safety of the patient or of others, or is beneficial to the patient, that restraint should be applied. Combined with the moral treatment, which comprises the personal influence of the physician upon the patient, is the medical, which includes the hygienic treatment. Diet and regimen are of the highest importance. Fatty foods, easily digested animal and farinaceous food, and nourishing ale and porter are useful, and though the patient may be too weak for out-door work, yet exercise, or even sitting out in the open air, is now insisted upon. The state of the bowels should be attended to, and tonics, diuretics, the use of the Turkish bath and wet pack, and the bromides, chloral, sulphonal, and paraldehyde, are often beneficial. For the carrying out of this treatment, good attendants, who possess some knowledge of mental disease, and are acquainted with a few simple rules in nursing, are essential. Many such are found in all our asylums at the present day, but the Council of the Medico-Psychological Association have elaborated a scheme by which attendants, on going through a prescribed course of lectures and instruction in the wards and on successfully passing an examination, may obtain a certificate, which will not only be of use to them in passing from one asylum to another, but will be a guarantee to the general public that the possessors of these certificates have attained proficiency in nursing and attendance on insane persons. The Council of the same association is also now engaged in formulating resolutions, directing attention to what is known as the hospital treatment of insanity. Nor should I omit to mention in connexion with the subject of treatment that a Society for the After-care of the Insane has for some years been at work. In summing up the difference between the old and new treatment, I cannot do better than quote the words of Dr. Hack Tuke, who says: "The old system believed in harshness and darkness; the creed of the new is sweetness and light."

Passing now to that department of psychological medicine with which I have for many years been closely connected—viz., the treatment of idiots and imbeciles,—I would remark that the idiot was a being not unknown to Hunter. Although the definition he gives, in the volume of Essays and Observations before referred to, is not quite correct with respect to all classes of idiots and imbeciles, yet, as little was known about their treatment at the time when he wrote, it is sufficiently good as a general statement. The first idiot who attracted the attention of scientific men was the savage of Aveyron. He was a child about eleven or twelve years of age who had lived for some time in the woods of Caune in France, where he subsisted on acorns and roots. He was eventually taken to Paris, where he arrived in the year 1799, under the care of a poor but respectable old man, who soon after had to leave him. Pinel, physician-in-chief to the insane at the Bicêtre, declared him to be idiotic; while Itard, physician to the Deaf-mute Institution, asserted that he was simply wild and untaught, and undertook his education. At the end of five years, although he had immensely improved the boy, Itard was convinced that Pinel was right, and gave up his task in disgust. His labours were, however, not so barren as he anticipated, for the principles of training and treatment which he adopted still remain, but have been further perfected by others, and by none more than by the late M. Seguin, whose treatise on Idiocy and its Treatment by the Physiological Method is still a standard work on the subject. The pathology of idiocy is still in its infancy, but progress is being steadily made. Mierzejewski has written an important paper on the subject, which is also being worked at by Dr. Wilmarth, pathologist at the Philadelphia Training School for Imbecile Children. He has collected 100 brains, and has noted the peculiarities met with in each. One important conclusion has been reached—viz., that the convolutions of brains of idiots and imbeciles often closely resemble those found in the brains of criminals. There is a tendency of the principal fissures to run into each other, forming what Benedikt calls a "confluent fissure type." Those who are interested in the pathology of idiocy may be referred to an article of my own which will appear in the forthcoming Dictionary of Psychological Medicine, edited by Dr. Hack Tuke.

Much improvement is gained by treatment. We have, firstly, to strengthen the body and alleviate its defects, and, secondly, to undertake the special training of the mind. Having placed the patient in as good hygienic conditions as possible, the physical training is commenced. As a result the muscular system becomes strengthened, the hands have less difficulty in performing any simple act, locomotion is improved, the dribbling from the mouth met with in low-class cases is less evident, the eyes wander less restlessly, and listlessness and inertness to a great extent disappear. The moral training has to go on side by side with the physical and mental treatment. Obedience must be taught, and efforts made to impart good temper and affection. The intellectual training in the lowest class of idiots commences by the cultivation of the senses, and as the tactile function is the most important, we begin by educating the sense of touch. The senses of sight, hearing, taste, and smell are awakened by a series of experiments, in every case proceeding from the simple to the complex, instilling ideas by the use of concrete forms and not by abstract notions. Having educated the senses, we proceed to higher branches of learning, and when some progress is made instruction is given in tailoring, shoemaking, &c., to the male patients, while domestic work and sewing prove useful for the females.

On glancing at the future, we are led to inquire whether there is any hope that the progress which has already been made in every branch of psychological medicine will be maintained. I am of opinion that there is good ground for such a hope, for as science advances more and more will be known of the structure and functions of the brain. The labours of Gaskell have already thrown light upon the origin of the brain and nervous system, and those of Betz, Bevan Lewis, and a host of others have given us much knowledge with reference to the structure of this important organ. Who, many years ago, would have thought that the brain would be laid open, and pus and tumours removed from it, as is now done from day to day? The labours of a noble band of workers have enabled this to be accomplished, and science looks forward to still greater conquests. To stimulate inquiry in this important branch of medicine, the Medico-Psychological Association has for some years given a prize, which is open to all assistant medical officers of asylums, for the best dissertation on any clinical or pathological subjects relating to insanity. Three essays were sent in last year, and two of them possessed so much merit that the examiners were obliged to award two prizes. As long as this spirit is at work in our younger brethren, we can with confidence look forward to future discoveries. The knowledge of psychological medicine should, however, be still more extended among all branches of the profession, so that those to whose lot it may fall to treat mental diseases at its commencement, when remedial measures are most valuable, may be able to apply their knowledge with benefit to the patient and advantage to themselves. Inquiries into the causation of insanity should be pushed still further, more attention should be paid to the laws of inheritance, endeavours should be made to impress upon those who are the subjects of this *damnosa hæreditas* the utmost importance of paying attention to the laws of health, and teachers should be warned against unduly pressing and overworking the brains of growing children. Let us remember the old maxim, "*Ars longa, vita brevis*," and, whatever our medical path in life may be, let us see that we hand down the flaming torch of knowledge pure and undimmed to our successors.

"Let us then be up and doing
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait."

THE EASTERN HOSPITAL.—Dr. Bridges and Mr. R. Hedley have been appointed by the Local Government Board to hold an official inquiry on oath into the complaints against the management of the Eastern (Homerton) Hospital of the Metropolitan Asylums Board.

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PULMONARY PHTHISIS;

SOME REMARKS AS TO ITS PATHOLOGY AND ITS CURABILITY IN EARLY STAGES, PARTICULARLY BY THE USE OF HOT AIR INHALATIONS.

BY T. CRANSTOUN CHARLES, M.D.

AT the meeting of the British Medical Association in Leeds two years ago I read a paper on the hot air treatment of pulmonary phthisis, and as it so happened that all the cases I had had under treatment were in an early stage of the disease, I had only a series of very successful results to communicate. Since then, however, my experience of the method has been greatly extended, and I have come to the conclusion that only in very early cases can any benefit be expected from it. A great amount of interest is now being directed towards the cure of this disease, particularly owing to Dr. Koch's valuable endeavours in this direction; and should his efforts be crowned with success, not only in early but also in somewhat advanced cases, then a great and good work will have been accomplished, and Dr. Koch will truly deserve to be ranked as one of the greatest benefactors of the human race.

The apparently essential characteristic in the pathology of phthisis consists, it is believed, in a caseous necrosis, the typical phenomena of the disease being produced as the result of the influence of a special morbid poison. Its starting point seems to be the lodgment of a few tubercle bacilli in the finer bronchial tubes or in the alveoli of the lungs, leading to the development of the miliary tubercles, and a consequent inflammation of the bronchioles extending to the proper parenchyma of the lungs. The caseous necrosis, therefore, depends on the growth and development of these special tubercle bacilli; indeed, every form of tuberculosis of the lung may be said to have received its first impulse from the tubercle bacilli. In their growth these bacilli evolve certain chemical products which are highly injurious to the tissues with which they come in contact—products also which are not of necessity confined in their action to the surfaces and canals where they are generated, but may extend to other parts of the organism, and excite there inflammatory changes of different kinds. The lesion, however, is not usually a penetrating one, at least in the early stages, but rather tends to spread superficially along the air passages and lymphatics—a progressive infection accordingly depending upon the multiplication of the bacilli. It is further known that the character of the disease depends in part on the quantity and quality or degree of virulence of these bacilli, and partly on the susceptibility of the lungs of some individuals to their lodgment and development, while a progressive infection is due to their multiplication. Where, for example, the normal tissue resistance is too great, these organisms can obtain no resting place, or, if they do, their development is of short duration. In some individuals, however, the tissue resistance is less powerful, and accordingly a morbid tubercular process is set up, leading to the condition known as fibroid phthisis. In this variety the tissue resistance is greater than in the next, and accordingly its course is not so rapid; the patients also are generally males, and their age more advanced. Where, again, there is still less of this tissue resistance, the ordinary caseous phthisis is established, an exceptional form occasionally occurring—the so-called "acute general tuberculosis,"—where the susceptibility is very great, or, in other words, the tissue resistance very feeble, and in which the bacilli develop freely, make their way in great numbers into the blood, and by its means effect a lodgment in many organs simultaneously, leading to the outbreak of innumerable tubercles. Upon the degree of virulence of these bacilli, owing chiefly as it does to their quantity and quality, depends the type of tubercle produced; for Baumgarten has shown that while inoculation of animals with pure cultivations of tubercle bacilli induces the development of the lymphatic tubercles, inoculation with bacilli whose virulence has been weakened by the action of heat will only lead to the development of the epithelioid tubercles—that is, an abundant impregnation with the active bacilli tends to the building up and rapid degeneration of lymphatic tubercles; whilst an impregnation with a small amount of bacilli whose vitality has been impaired will lead to the formation of epithelioid tubercles, with the accompanying formation of much connective tissue, and its subsequent shrinking as the result of the irritation.

As Dr. Coats puts it, in his admirable lectures on the Pathology of Phthisis, to which I am much indebted, pulmonary consumption is a disease of surfaces, channels, and tubes. Beginning in the finer bronchial tubes, the disease may extend by the air passages or by the lymphatics, probably by both, but chiefly, probably by the air-passages in the caseous form, and by the lymphatics in the fibroid. A certain susceptibility, we have said, must be present to admit of one or other of these diseased processes, and this susceptibility, there is every reason to believe, may be hereditary or it may be developed. The pre-existence of certain affections of the lungs, for example, we know undoubtedly plays an important part in bringing about a greater liability to the invasion of these bacilli, particularly when the vitality of the tissues is already lowered by the respiration of vitiated air.

Different methods have been employed to destroy these tubercle bacilli, and it is a very fortunate thing that they have comparatively little vitality and offer little resistance to the action of reagents. They are easily destroyed, for instance, by such bodies as carbolic acid, corrosive sublimate, salicylic acid, acetic acid, &c., and accordingly various attempts have been made to kill them in the lungs. All these attempts, nevertheless, it must be confessed, have proved more or less futile, so far, at least, as the cure of the patient was concerned. With the same object in view Dr. Louis Weigert of Berlin some years ago introduced the inhalation of hot air. Koch and other observers had shown that tubercle bacilli are specially sensitive to the influence of temperature. They develop best about 37·5° C., while their growth is weakened at 38·5°, and ceases at 42°, and at any higher temperature than this their vitality is quite destroyed. Dr. L. Weigert finding that it was possible to sterilise these bacilli by means of the discontinuous periodic action of heated air, and that a man could breathe very hot air for prolonged periods without suffering any injury, then convinced himself of the possibility of effecting a sterilisation of the bacilli in the lung substance itself. This is done by the daily inhalation of heated dry air at a temperature of 200° to 250° C. for about two hours at a time, and for a lengthened period extending over several months.

Without going into the question of the temperature of this heated air when it reaches the lungs, I shall confine myself to saying that in early cases of pulmonary phthisis its use certainly caused the number of bacilli in the sputum to diminish greatly, and even in a few cases to disappear entirely. But undoubtedly another great advantage noted was the forced exercise of the lungs induced by it. This lung-gymnastics proves of essential service not only to the lungs, but to the well-being of the body generally, for collapse of the pulmonary lobules, with its attendant evil consequences, is thereby prevented, while, at the same time, the inspiratory muscles undergo a marked development. I therefore attempted to sterilise or destroy the tubercle bacilli by the inhalation of hot air, and at the same time made an effort to check any further invasion of the tissues by the bacilli by improving the general tone of the tissues. It is to be carefully borne in mind that a susceptibility exists, and that every means consequently must be adopted to lessen or remove this as far as possible, as, for example, a good and varied diet, moderate exercise in the open air, and change of air where possible—the more elevated and drier the situation the better,—plenty of sunlight also, massage, cold douches, and the like. In connexion with the function of digestion in my phthisical patients, I should mention that whenever I found it impaired at all, as the result of a catarrhal condition of the stomach—which is so frequently the case,—I made a point of beginning the treatment by washing out that viscus, employing in succession for that purpose a warm saline, a warm alkaline, and, lastly, a warm acid solution. To this I attach some importance, as it is essential to success that the stomach be in a condition to perform its duty in digestion. The decided and often immediate improvement I obtained in this way was sometimes remarkable. Some patients require this washing process repeated several times, but others do not. And not only is it of importance that the stomach should be able to digest the food, but its activity also serves as a safeguard to the intestines; for it is the passage of the tubercle bacilli through the stomach that precedes the intestinal ulcerations; but as long as the gastric juice is possessed of

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its normal acidity, the bacilli in passing through have their vitality destroyed or greatly inhibited. Where, however, there is much gastric catarrh, the mucous membrane being thickly covered with mucus, and the hydrochloric acid greatly diminished in amount, as I have frequently observed, then the bacilli in the swallowed sputum may pass safely through and reach the intestine, there to effect lodgment in the gut, and bring about tubercular ulceration—a condition of things of much too frequent occurrence, seeing that it is present in from one-half to two-thirds of the fatal cases of pulmonary tubercle.

As I have already stated, the only success I have obtained by the use of the hot-air treatment has been in early cases of the disease. It is therefore of importance to begin it as early as possible. By doing so we may probably prevent any marked invasion of the blood by the bacilli, with the acute tuberculosis consequent thereupon, as also the possibility of the stomach and intestines being affected with the disease, as referred to above. I shall enter into no description of the apparatus employed for heating the air, but shall limit myself to stating that it has been used by healthy men for prolonged periods without producing any bad results, while in early cases of pulmonary phthisis I have noted the following after its prolonged use: An increase in the vital capacity of the lungs, with a considerably increased expansion of the thorax, varying from an inch to three inches; a gradual disappearance of the atrophic condition of the external thoracic inspiratory muscles, the diaphragm also becoming more vigorous in its action, the inspirations accordingly being rendered deeper and more powerful; a diminution in the bronchial catarrh, the expectoration, though increased at first, being afterwards diminished, and the cough finally disappearing; and a general improvement in the appetite and health, and an increase in body weight. The bacilli, although considerably increased at first, undergo a marked diminution with the continuance of the inhalations—indeed, they may finally disappear entirely. This examination for bacilli in the sputum should never be overlooked, as their presence is one of the most, if not the most, important sign of the disease, and not one, but a series of examinations of the same sputum should be made, of which a considerable quantity should be collected and mixed thoroughly. I generally direct the patient to make a practice of spitting into a small wide-mouthed bottle containing a few drops of chloroform or a piece of menthol. Indeed, I think the sputum of phthisical people generally should not be distributed broadcast, as is the usual habit, but ought to be collected in some such way as I have suggested, and afterwards destroyed by fire or antiseptics.

The method I pursue in the examination is generally the following. A little of the mixed sputum is spread out between two thin cover glasses, which are then separated carefully and passed several times through the flame of a spirit lamp, so as to coagulate the albumen and fix the sputum to the glass. The staining fluid I prefer is Neelsen's: magenta, 1; carbolic acid (5 per cent.), 100; absolute alcohol, 10. A little of this fluid is heated in a small porcelain dish till steam rises, when the cover glasses with their adherent sputum are immersed in it, the dish covered and laid aside for three minutes. The cover glasses are now lifted out and placed at once in a 25 per cent. solution of sulphuric acid, in which they are to be moved about freely for a short time so as to decolourise all but the tubercle bacilli, when they are to be placed finally for a couple of minutes in a dark-blue solution of methylene blue so as to obtain a contrast stain, and lastly washed in distilled water, dried, and mounted in thick balsam. It quickens the process somewhat to dissolve the methylene blue in the sulphuric acid. In cases of fibroid phthisis there is often some difficulty in discovering the bacilli. Here, as well as in cases where bacilli are suspected to be present but cannot readily be found, several examinations require to be made; but I find that by spreading out a considerable quantity of the sputum between two clean sheets of plate glass little translucent masses may often be noticed, which when carefully removed and examined will usually show the presence of bacilli.

The experience I have had with this method of treatment disposes me to recommend its use only in the early stages of pulmonary phthisis—cases where the pulmonary tuberculisation is not far advanced, and the lung substance only slightly involved, and not at all broken down; where, in short, the bacilli are most recently deposited, and accordingly most superficial. Indeed, where there is a strong suspicion of tubercle setting in, although no positive physical signs of tubercular deposit may be capable of detection; where, for example, there is hæmoptysis which we cannot refer to any other source—as from the nose, mouth, gums, throat, larynx, trachea, stomach, or from structural alterations in the terminal pulmonary bloodvessels of elderly people with an arthritic diathesis (Clark); or during severe attacks of acute bronchial catarrh with violent coughing, or after severe bodily exertion or the inhalation of highly irritant gases,—then, all these probable causes being cautiously eliminated, it would be advisable to adopt its use.

That a bronchial catarrh, particularly if confined to the apex of the lung, or spreading there and inducing a catarrhal pneumonia—a pneumonia localised in the upper lobe, or a catarrhal pneumonia in the lower lobe—may often be followed by tubercle, we have unfortunately too many examples. Now it so happens that this hot-air method provides us with an admirable means of treating many obstinate forms of bronchitis; and I have frequently used it in such cases with the most marked benefit. No doubt many of the milder cases of pulmonary phthisis may eventually recover of themselves, particularly if the conditions are at all favourable; but the course is necessarily very slow, and liable to many accidents.

(To be concluded.)

RHINOPLASTY.

BY SURGEON-MAJOR D. F. KEEGAN, M.D. DUB.,
RESIDENCY SURGEON, INDORE, CENTRAL INDIA.

THE conditions under which the surgeon in India performs rhinoplasty differ somewhat from those under which he does the same operation in Europe. In Europe, in the majority of cases, rhinoplasty is performed in order to repair the ravages and disfigurement caused by lupus or tertiary syphilis, and it is but seldom that plastic surgery is called upon to make good the damage done to a nose by accident or mutilation. In India, on the other hand, in the vast majority of cases, rhinoplasty is performed to hide the ghastly disfigurement caused by mutilation, and our patients are almost invariably young, healthy, and robust. During my service in India I think I must have performed between forty and fifty rhinoplastic operations, and in every single case they were undertaken to repair the damage inflicted by mutilation. It will be conceded by most surgeons who have had considerable experience in rhinoplasty that the Indian method of operation possesses many advantages over both the Taliacotian and the French plans of procedure. The French method I need hardly say consists in fashioning a new nose by means of flaps taken from the cheeks. The Indian operation, as described and figured in English surgical text-books, is, however, susceptible of much improvement, and it is with the object of bringing this improvement to the notice of the profession in India and in this country through the medium of THE LANCET that I write this short paper. The operation which I have performed of late years as the outcome of considerable experience of rhinoplasty is, however, only applicable in its fullest extent to those cases of loss of nose in which the skin and tissues which clothe the nasal bones have been left undamaged. All surgeons who have had much experience in making new noses are, I think, agreed, that the principal difficulties and drawbacks of the operation centre in the formation of the columna, and in obviating the continued tendency to contraction in the anterior nares of the newly fashioned nose, a tendency which continues for several months after operation. The flap which I raise from the forehead differs considerably in outline from that which we see generally figured in English surgical text-books, and although German surgeons have to some extent adopted the same method of obviating the contraction of the anterior nares as we have pursued for some years at Indore, still I feel I need not offer any apology for bringing the subject to the notice of my English readers. This method of forming new noses has been worked out independently by my assistant, Mr. Gunput Singh, and myself, but we disclaim for it any title to originality, for he would be bold indeed who would assert that he had devised a perfectly new operation in the changeful field of plastic

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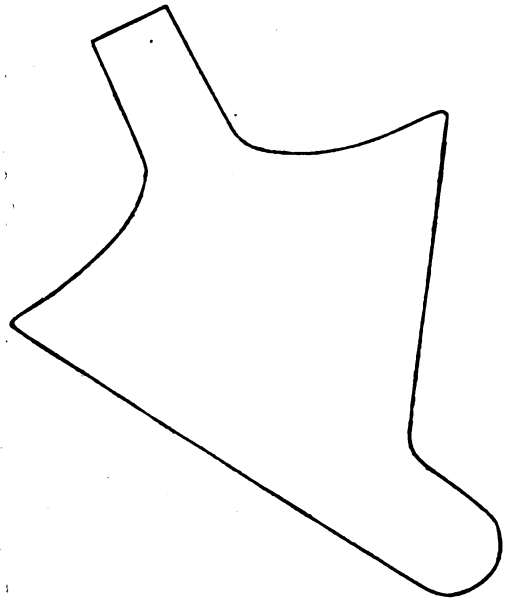
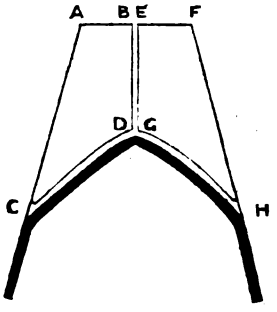
surgery. Annexed is an outline of the flap which I take from the forehead. It will be remarked that it differs considerably from that which we see generally figured in English surgical text-books. Nevertheless, it is the shape of flap which the surgeon should raise from the forehead when he has to deal with a case of lost nose, in which the entire cartilage, both alæ and the columna, have disappeared. The size or superficial area of the flap, as distinguished from its shape or outline, will, of course, depend a good deal upon the make or cast of face of the patient with whom we have to deal. If the patient's nose was originally a long one, then the forehead flap must be cut proportionally longer. That the annexed outline indicates the shape of flap which should be aimed at I have proved again and again to demonstration by mapping the outline of several noses cut off from subjects in the dissecting room. Should portions of the patient's alæ nasi and columna be left intact, then, of course the shape of the forehead flap must be modified to suit the requirements of the case. The root or pedicle of the forehead flap should occupy the internal angle of the eye, and care should be taken that the angular artery which supplies the root be not wounded. The forehead flap should be mapped out obliquely, and not perpendicularly, to a line connecting the eyebrows. In Eastern women, who frequently have low foreheads, I have often



been obliged to encroach on the scalp to provide for the columna; and, although under such circumstances hair grows on the newly formed columna, still I think that this is preferable to deforming the mouth by taking the columna from the upper lip, as the hair can be kept clipped with scissors.

Now I must describe the steps of the operation, and I shall endeavour to make as clear as I possibly can, without the aid of a coloured drawing, the device for obviating the contractile tendency of the anterior nares of the newly formed nose. I generally allow a fortnight or three weeks to elapse after the mutilation before attempting to restore a new nose. The patient having been fully anæsthetised, the cavities on both sides of the septum nasi are plugged with pledgets of cotton-wool, to which strings or sutures are attached. We will suppose that we have to deal with a case in which both alæ nasi, the entire cartilage, and the columna have been cut away. The operation is begun by carrying two converging incisions from two points slightly external to the roots of the alæ nasi to two points about three-quarters of an inch apart on the bridge of the nose, where a pair of spectacles would rest. These two points on the bridge of the nose are now joined by a horizontal incision. This horizontal incision is bisected, and a perpendicular incision is drawn downwards from the point of bisection nearly as far as where the nasal bones join on to the cartilage of the nose. In other words, this perpendicular incision follows the course of the junction of the nasal bones, but is not carried down as far as their inferior borders. The skin and tissues are now dissected cautiously from off the nasal bones from above downwards in two flaps, ABCD and EFGH, as in the appended diagram.

The two inferior borders of the flaps—viz., C D and G H—are not interfered with, and constitute the attachment of the flaps to the structures and tissues which clothe the inferior borders of the nasal bones, where they join on to the cartilage of the nose. If these two flaps are reflected downwards, so that their raw surfaces look forwards and their cuticular surfaces look backwards, it will be found that they overlap in the centre. The surgeon has therefore a redundancy of flap to deal with, a redundancy which he can utilise a little later on when he has raised the flap from the forehead. He now proceeds to do so in the usual way. A piece of stout brown paper rendered adhesive and corresponding in outline with the flap, considered suitable to the case in hand, is stuck firmly on to the forehead in a slanting direction. And then a very sharp knife is run round the border of the paper. The paper is now removed, and the flap is quickly raised from the forehead. This flap should embrace all the tissues down to the periosteum, and should be subjected to as little handling as possible. The sides of the gap now left in the forehead are approximated as quickly as possible by means of horsehair sutures, and it is surprising how small a raw surface is left behind on the forehead if the approximation of the sides of the gap be judiciously and expeditiously carried out. Attention is now directed to preparing a nidus or bed for the reception of the columna, and this does not require any description. The two flaps, ABCD and EFGH, which have been



already raised from off the nasal bones, are now reflected downwards, and, as they overlap in the centre, two triangular-shaped pieces are cut away, and placed in the middle of the gap left in the forehead, in order to expedite the process of cicatrisation in the frontal scar. The forehead flap is now brought down over the nasal bones, and rests inferiorly on the two reflected flaps, ABCD and EFGH, taken from off the nasal bones. The raw surface of the frontal flap, inferiorly, lies on the raw surfaces of the two reflected nasal flaps, and the nostrils of the newly formed nose are therefore lined inside with the skin or cuticular sides of the reflected nasal flaps. The free inferior margins of the forehead flap and the nasal flaps are now brought together by horsehair sutures. The columnar portion of the forehead flap is now fixed in the bed prepared for it by sutures, and the two original incisions drawn from the root of the alæ nasi on either side to the bridge of the nose are now deepened and bevelled off for the reception of the sides or lateral margins of the forehead flap. The sides or lateral margins of the forehead flap are most accurately attached by means of horsehair sutures to the bed prepared for them. Two pieces of drainage-tubing are inserted in the newly formed nostrils. Strips of lint on which some boracic ointment has been smeared are placed over the junction of the lateral margins of the new nose to the cheeks, and also on the gap left behind on the forehead, and cotton-wool is applied over all. If the root or pedicle of the new nose is sufficiently broad, and is not dragged upon and the angular artery has not been wounded, then all will go well, and there need be no fear of sloughing. Indeed, it will be generally found that, if due antiseptic precautions have been taken during the operation, the new nose will have adhered in a very large extent by first intention. I allow a fortnight to elapse before dividing the root or pedicle of the new nose, and in

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doing so I cut a wedge-shaped slice out of the root so that the new nose may not be parrot shaped. As the inside of the nostrils are clothed with skin, the drainage-tubes may be discarded after ten days, for if the operation has been properly performed there can be no contraction of the nostrils. I know how extremely difficult it is to make the steps of a plastic surgical operation perfectly clear and intelligible without the aid of coloured plates; but if the reader will bear in mind that the object of raising the flaps from off the nasal bones is to clothe the newly formed nostrils with skin, and so counteract their tendency to contraction, which is one of the great drawbacks to success in rhinoplasty, he will, I think, be able to follow the steps of the operation. It should also be mentioned that the utilisation of the nasal flaps gives strength and support to the new nose, and counteracts its tendency to flattening. Appended are eight engravings, taken from photographs of four patients out of a large number on whom I operated during the past three years at Indore. They speak for themselves, and show plainly how much plastic surgical art can relieve the ghastly disfigurement caused by the ruthless knife of the mutilator.

BEFORE OPERATION.

AFTER OPERATION.

BEFORE OPERATION.

AFTER OPERATION.

BEFORE OPERATION.

AFTER OPERATION.

Here, as the alæ nasi had not been cut away, I modified the shape of the forehead flap to suit the requirements of the case.

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BEFORE OPERATION.

AFTER OPERATION.

This man's nose was cut off by order of Tantia Bhil, a notorious Dacoit or highwayman and robber, three months before Tantia was captured. My patient was a respectable Mahratta Brahmin, and was one of the principal witnesses in identifying Tantia when the latter was brought into Indore. Tantia's surprise, when confronted with the Brahmin whose nose had been restored before he entered the witness-box, was very amusing.

NARRATIVE OF

A CASE IN WHICH AN ENLARGED SPLEEN ASSOCIATED WITH A LARGE INCREASE OF THE WHITE CORPUSCLES DISAPPEARED UNDER TREATMENT.

BY ALFRED G. BARRS, M.D., M.R.C.P.,

SENIOR ASSISTANT PHYSICIAN TO THE GENERAL INFIRMARY AT LEEDS; LECTURER ON MATERIA MEDICA IN THE YORKSHIRE COLLEGE OF VICTORIA UNIVERSITY.

MR. ——, aged twenty-three years, came to me on Sept. 23rd, 1889. He said at once that he was suffering from albuminuria, which had been discovered by a medical man whom he had seen in Paris in the June previous. From Mr. ——'s age and appearance I at once suspected that he was suffering from a functional form of albuminuria. He gave the following history of his case:—In September, 1888, two teeth were extracted by his dentist and there was bleeding from the gum for seven days after each separate extraction. (Previous tooth extraction had not been followed by bleeding.) He was in good health up to the date of the extraction. The bleeding pulled him down a good deal, and he has felt more or less feeble ever since. In Jan. 1889, eight months before I saw him, he had been in Spain on business, and had had there diarrhœa and a very bad cold. (No malarial cause for this was known.) On his return home he looked ill, and had lost some weight. In June, 1889, still feeling ill but able to travel in connexion with his business, he was seen by a medical man in Paris, who found albumen in the urine. On one occasion the albumen was found to be absent after exercise at 1 P.M. At this time (in Paris) there was a copious sediment of urates. There was no known increase in urine, no nocturnal micturition. His general condition had improved since the beginning of 1889. He had never passed any black urine, but he had been subject to chilblains when a boy. I made a rapid examination of the chest, and found no sign of cardiac or pulmonary change, so that the case seemed only to require the evidence to be found in the urine to confirm my suspicion of functional albuminuria. Accordingly I asked Mr. —— to send me specimens of his urine, taken at different times, for the following four days, which he did. I need not detail the results of these examinations. All the specimens examined were loaded with urates, a fact, I need scarcely say, practically negativing organic renal disease. All were highly albuminous, and—a point particularly worthy of note—the morning urine (that is, the urine passed on rising) was always more albuminous than the urines passed before and after dinner. In all forms of functional albuminuria the morning urines are generally free from albumen, or at any rate are always markedly less albuminous than those passed after exercise and after food. In this case we had a urine loaded with lithates, and containing more albumen in the morning than at any other time in the day. This at once made me suspect that I had overlooked some important point in the case through accepting too readily the statement of Mr. ——'s medical attendant in Paris. At the end of four days I saw Mr. —— again. On examining the abdomen I was surprised to find an enormous enlargement of the spleen, of which I took the following two measurements:—The lowest point of the free edge was 6½ in. below the costal margin in the nipple line, and its extreme right limit was easily defined at 3½ in. to the right of the middle line. The liver could also be felt about 1½ in. below the right costal margin. There was no lymphatic enlargement. On examination of the blood, the white corpuscles constituted at least 25 per cent. of the former elements seen in a field of the microscope. On being questioned, Mr. —— said that he had known that his abdomen had been increasing in girth for perhaps twelve months, but he had thought it was nothing more than an ordinary stoutness, though he also knew that he had not increased in weight. After a careful consideration of the facts so far as I could ascertain then, I came to the conclusion that, in spite of the almost absolute certainty that the patient had at some time been exposed to malarial influences, for he travelled during the greater part of the year, and mostly in Southern Europe, the case was a well-marked example of simple splenic leucocythæmia. This opinion I expressed to his friends, and told them that the average duration of life in such cases was about two years for persons of Mr. ——'s age. A report of the facts of the case, drawn up by myself, was submitted to Professor Virchow, who confirmed my opinion as to the nature of the disease, but gave the patient longer to live than I had done, and suggested some unimportant details of treatment. The urine continued albuminous until Jan. 6th, 1890, when all the specimens examined were found to be normal. Through December, January, and February, the spleen gradually retired towards the left hypochondrium, and in March it could no longer be felt. At the same time the increase in the white corpuscles became less and less marked until March 21st, 1890, when examination showed them to be not more numerous than normal. From the time I first saw him till April, 1890, Mr. —— had systematically taken arsenic and iron, the former in increasing doses, until he was able to take nine drops of the liquor arsenici hydrochloricus three times daily without inconvenience.

I think anyone who had seen the case would have concurred in my diagnosis of splenic leucocythæmia. Certainly, all the cardinal signs of that disorder were abundantly manifest. A malarial influence has been always mentioned as one of the exciting causes of splenic leucocythæmia; but, so far as I know, whether of malarial taint or not, such cases as that I have narrated have always ended in death. There could be no doubt that Mr. —— had been in malarial districts over and over again, but he had never had any recognised malarial manifestations. The case, whatever its intimate nature, shows that a marked leucocytosis and

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an enormously enlarged spleen may disappear under treatment by arsenic and iron—the only method of treatment, so far as I know, which has ever achieved any reputation in the betterment of any of the members of the group of blood disorders to which splenic leucocythæmia belongs. The occurrence of albuminuria in leucocythæmia has been recorded, but this case is the first example of it that I have seen. At present, I cannot of course speak to the permanency of the recovery, for, as is well known, at least one member of the family of blood diseases—namely, idiopathic anæmia, has periods of improvement, if not of absolute recovery, followed at length by fatal relapse.

Leeds.

A CASE OF HERNIA CEREBRI ACCOMPANIED BY MOTOR PARALYSIS; PARTIAL RECOVERY.

BY A. G. CREAGH, M.R.C.S. ENG., L.S.A. LOND.

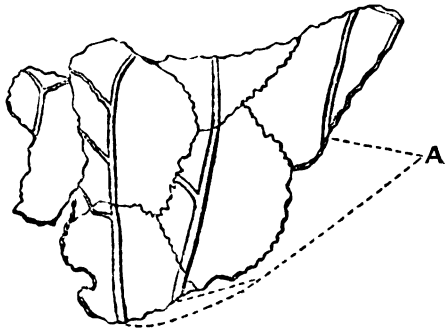
ON June 20th a Hottentot lad, aged seventeen years, was brought to me with a compound comminuted and depressed fracture of the left parietal. Under chloroform I removed from the substance of the brain twelve fragments of bone, which pieced together would correspond to an aperture in the skull cap measuring on the inner surface 2¼ in. by 1¾ in. The dura mater was extensively rent and the cortical matter protruding. Hæmorrhage from a branch of the meningeal artery was controlled by sponge pressure, the scalp brought over without sutures, and the wound dressed with lint and carbolised water applications. The following extracts from my note-book will show the progress of the case:—June 21st, noon: Sponge removed, head dressed, drainage-tube inserted in anterior angle of wound; pulse 90; temperature 99·8° F.—22nd: Considerable discharge from wound, which was dressed with carbolic lotion (1 in 40) and iodoform wool; diet, milk, and beef-tea.—24th: There was noticed for the first time total abolition of voluntary movements in the right arm and hand and leg of the same side. The injury to brain substance with reference to external landmarks was situated in a perpendicular line with the right external auditory meatus, and at a distance of 5½ in. from it; distant in a straight line from the nearest point of middle line of head, 2¼ in. The cerebral lesion would therefore correspond to the posterior part of the superior frontal convolution, together with the upper portion of the ascending frontal, upper extremity of ascending parietal and part of superior parietal convolutions—i.e., the circle of injury would, roughly speaking, correspond to Ferrier's centres for movements of right arm, hand, and leg. The general condition of the patient is dull and apathetic, and there is considerable difficulty in expressing ideas. Pulse 84; temperature 100°.—26th, 12.30 A.M.: Called to patient, whom I found suffering from epileptiform convulsion. Noon: during the night the patient passed fæces in bed; answers questions with difficulty, but understands easily when spoken to.—29th: Some sloughy brain substance was removed from the wound. General condition brighter.—July 1st: There is considerable bulging of reddish brain substance through the wound aperture, cerebral hernia to the size of a large walnut being present. For the past forty-eight hours the patient has passed urine in bed, and the bowels have acted without his knowledge; he is unwilling to be disturbed. Pulse 86; temperature 99·5°. The hernia was treated by bandage-pressure over the dressings.—3rd: The tongue when protruded is drawn to the right side of the mouth. Pulse 80; temperature 98·6°.—16th: The hernia equals a fowl's egg in size and bleeds freely when touched. Paralysis of right arm and leg still complete. Pulse 100; temperature normal.—22nd: The cerebral tumour has increased to the size of a tangerine orange, and there is œdema of both eyelids; urine free from albumen. The accompanying engraving from a photograph shows well the size and position of the hernia at this date. The small diagram (Fig. 2) of the portions of the inner table of skull removed illustrates the size and shape of the aperture in the calvaria.—Aug. 26th: Under continuous pressure, applied daily, the tumour has become almost level with the scalp.—Sept. 1st: There has been a considerable gain of power in arm and leg, hernia level with scalp and skinning over.—Oct. 30th: With the aid of a crutch the patient walks fairly well, and can approach the right hand to within six inches of the face.

Remarks.—I think the progress of this case is worthy of consideration, as illustrating several points and giving food for reflection as to the causes of some of the symptoms and their *modus operandi*. The injury was inflicted with an iron rake during a drunken quarrel, a corner of which caused a tripartite scalp wound of a not very important appearance. In the words of Hippocrates, no head injury is so trivial as to be despised or so serious as to be despaired of. The patient was suffering from the combined effects of concussion and alcohol

FIG. 1.

when first seen, and had the precaution of passing the finger into the wound been omitted, severe encephalitis might have supervened from irritation of the broken fragments of bone. In two other cases of fracture of skull vault which came under my notice at short intervals, the patients, in whom there was reason to suspect only a slight laceration of cerebral cortex, suffered from violent maniacal delirium, requiring restraint. These latter were white men. Possibly the more lowly organised brain of the Hottentot may be more tolerant of injury; but may not its absence in this case be due to the freedom of drainage, and impossibility of compression and irritation, by inflammatory effusion on the substance of the brain? If so, is not the question of active surgical interference by trephine suggested as a more frequent

FIG. 2.



Six fragments of inner table of skull removed.
A, Grooves of meningeal arterial branches.

dernier ressort in those cases of acute encephalitis and meningitis which are tending to a fatal termination? Nancrede says that 70 per cent. of the cases of hernia cerebri terminate fatally. May not compression and antiseptic cleanliness hold out hopes of more satisfactory results? With reference to the cause of the motor paralysis, if arising only from the destruction of the cortical centres, how can we explain the return of muscular power? On the hypothesis of Exner's theory of absolute and relative centres, it might be suggested that the functions of the destroyed absolute centres have been taken up by the corresponding relative centres. On the other hand, if we suppose that a certain amount of inflammatory effusion took place in the cerebral substance, interfering with its functions, it is possible that the resolution might be followed by the return of motor power, only those centres entirely destroyed by laceration remaining useless. In any respect, as the fact stands it has an important bearing on prognosis in similar cases,

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Ganglionic nerve-tissue is generally supposed to have almost no capacity for restoration, consequently I fail to see that the return of motor volition can be explained except by one of the foregoing surmises. I regret that, my battery being out of repair, I was unable to test the electrical reactions of the muscles in the paralysed limbs.

Port Nolloth, S. Africa.

DIFFICULTIES CONNECTED WITH THE USE OF NITROUS OXIDE BOTTLES IN THE HORIZONTAL POSITION.

BY C. E. SHEPPARD, M.D., B.S. LOND., F.R.C.S.,
ANÆSTHETIST TO GUY'S HOSPITAL (DENTAL SCHOOL), AND SECOND CHLOROFORMIST TO THE MIDDLESEX HOSPITAL.

THE horizontal steel bottles now so largely used for the storing of liquid nitrous oxide have, in respect of convenience, many advantages over their vertical predecessors, advantages which are so well known and appreciated that it would be superfluous for me to specify them in detail. A wide experience of their use has, nevertheless, demonstrated that there are many grave objections to be overcome before they can be pronounced perfect in their action. The objections to which I allude may be briefly enumerated as follows:—1. The supply of gas is fitful and irregular, necessitating the greatest care in the use of the foot-key. 2. There is a want of correspondence between the amount of passage way allowed by the screw tap and the quantity of gas liberated. 3. The screw is liable to "set" whilst in use, so that the tap can be turned neither on nor off. 4. As a consequence of this condition the flow of gas becomes absolutely arrested, often to be re-established with surprising suddenness and violence. 5. The metal unions and indiarubber conducting tube after a time become frozen, so that the latter is often found hard and frosted to a distance of some feet from the bottle. It is needless to point out that any one of these difficulties occurring in the course of an administration may and does constantly give rise to the greatest inconvenience; it therefore seemed to me of considerable importance to determine the exact conditions upon which they depended, and if possible to devise some remedy. Experiments conducted with the same bottle, placed alternately in the horizontal and the vertical position, but under similar conditions in other respects, demonstrated conclusively that the above-mentioned difficulties occurred only when the bottle was horizontal. It seemed, therefore, probable that the main cause of the trouble was associated with the actual entrance of the liquefied gas into the channels of exit, and for the purpose of confirming this supposition, the actual position occupied by the liquid was theoretically determined in the following manner. On taking the inside measurement of one of Barth's fifty gallon bottles, the total capacity was found to be about 50·5 cubic inches. The weight of liquid nitrous oxide with which these bottles are supplied, and which is reputed to yield fifty gallons of gas, amounts to fifteen ounces, so that, taking the specific gravity of this liquid as 0·908 (at 45° F.), the space occupied by it would be 28·6 cubic inches, which is roughly three-fifths of the total capacity of the bottle. From these data it appeared that in the horizontal position the orifice of exit would be situated about a quarter of an inch *below* the surface of the liquid, whereas in the vertical position it would be entirely *above* it; and furthermore, at a distance of some three and a half inches. In order to test the influence of mere proximity, an experiment was then made with the bottle placed in an oblique position, so that although the orifice of exit was above the surface of the liquid, it was not more than half an inch distant from it. On allowing ten gallons of gas rapidly to escape, no difficulties of any kind occurred, thus proving beyond a doubt the correctness of the original supposition. Further explanation is amply yielded by the consideration of facts already well known. Nitrous oxide gas requires for its liquefaction a pressure of fifty atmospheres at 45° F., and this pressure being removed, the liquid at once resumes the gaseous form. In so doing an enormous quantity of heat is absorbed, and as a result the temperature at the surface of the liquid may fall as low as −150° F., at which point freezing occurs and a portion becomes converted into a snow-like solid. There can be little doubt that it is to the formation of this solid material, consequent on the rapid conversion into gas of the liquid which has gained access to the interior of the valve, that the complete fixation or "setting" of the screw is to be attributed; whilst the widespread freezing of the conducting tube &c. is to be similarly explained, small liquid particles being in all probability projected to some distance by the pressure of gas within the bottle.

Having satisfactorily determined the cause of the difficulty, there remained nothing further but to devise some simple mechanical means whereby the escape of liquid should be prevented when the bottle was used in the horizontal position. That which has been finally adopted consists of a small piece of metal tubing, screwed firmly into the entrance of the valve, and projecting from it into the interior of the bottle; it is curved in such a manner that its open end is directed upwards, and stands about one inch above the surface of the liquid. I have had several bottles fitted with this tube, and on subjecting them to numerous experiments, both clinically and otherwise, find that they fully come up to my expectations, their action in every way being as perfect as when used in the vertical position. In external appearance and weight, as may be gathered from the foregoing description, they are indistinguishable from the horizontal bottles hitherto in use.

The advantages secured by this simple contrivance will, perhaps, be best realised if I relate the details of my last two experiments, made a few weeks ago during the prevalence of a keen frost, and under conditions considerably more severe than are ever likely to occur in actual practice. In the first experiment a fifty-gallon bottle, containing fifteen ounces of liquid nitrous oxide, was connected by means of five feet of rubber tubing with a gasometer capable of holding three gallons. The screw tap being opened, gas was allowed to escape as rapidly as possible, three gallons passing into the gasometer in about five seconds. This operation was then repeated at short intervals, until, in all, thirty gallons had passed over. During the whole course of the experiment the flow of gas was uniform and free, corresponding accurately to the amount of passage way allowed by the screw valve; there was not at any time the slightest trace of sticking or "setting" of the tap, and at the conclusion the indiarubber tube, even close to the bottle, remained quite supple and felt barely cool to the hand. The total duration of the experiment was seven minutes. It should be added that after the liberation of fifteen gallons of gas a slight frost appeared on the brass union, and that after the escape of another ten gallons the bottle itself was slightly coated. This occurrence was evidently due to the condensation and freezing of ordinary atmospheric moisture and interfered in no way with the results obtained. In the second experiment the remaining twenty gallons were allowed to escape freely into the open air, the bottle being empty at the end of two minutes. As before, the flow of gas was practically continuous, and the screw tap remained throughout perfectly free in its movements. I venture to think that by means of this simple device the horizontal bottles are now brought as near perfection in their action as we can wish, and I feel sure that no excuse is needed from me in bringing this improvement before the profession, which numbers amongst its members many who take the warmest interest in any means whereby the administration of this valuable anæsthetic is facilitated. In conclusion, I would add that the new valves are made by Messrs. Barth and Co. of Poland-street, who very kindly assisted me in several of my experiments.

Welbeck-street, W.

CONSERVATIVE TREATMENT OF ADHERENT BUT FUNCTIONALLY ACTIVE OVARIES AND FALLOPIAN TUBES.

BY A. C. BUTLER-SMYTHE, F.R.C.S. ED.,
SURGEON TO OUT-PATIENTS, SAMARITAN FREE HOSPITAL FOR WOMEN, AND SURGEON TO THE GROSVENOR HOSPITAL FOR WOMEN.

IN this short paper it is not my object to discuss the treatment of those cases in which the ovaries and Fallopian tubes are obviously diseased, nor do I wish anyone to imagine that I advocate attempting to save those organs where they are completely matted together or embedded in

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inflammatory tissue. But there are many cases where on opening the abdomen the operator finds that the ovaries and tubes are only partially adherent, and where no visible or tangible signs of disease can be discovered in these organs. Moreover, it is not always easy to decide, even when the abdomen is opened, whether an ovary is healthy or not. It appears to me that not infrequently it is the presence of adhesions of the ovaries and tubes, and this alone, that is the cause of the pain and other symptoms which have been complained of, and which have led to an intra-abdominal examination of the parts. Simple adhesions of these organs are not dangerous to life, nor do they necessarily destroy the functions of the ovaries and tubes. Why, then, should these organs be extirpated? The removal of the ovaries and tubes for such adhesions has always seemed to me an unnecessarily severe, almost an unwarrantable, proceeding; and I feel confident that the profession will welcome as an important improvement any method by which the conditions under consideration may be cured without resorting to such extreme measures. I hold that in such cases the separation of the adhesions and freeing of the ovaries and tubes can be accomplished, and is frequently sufficient to restore the patients to health, and, what is more to the point, the operation leaves them with functionally active organs. This treatment seems to me a most rational one, and I have operated in this way on three occasions, the results being most encouraging. I therefore venture to lay them before the profession, in the hope that the operation may be given a more extended trial. I am quite aware that the results of three cases are insufficient to prove the worth of this treatment; but I am convinced that in other hands than mine the operation will be productive of much good. However, if it but tends to limit the number of "spaying" operations, I shall be more than satisfied.

CASE 1.—C. N——, aged thirty-six, unmarried, came to me in 1887, complaining of dragging pains in the lower part of her abdomen, sickness, severe headache, and painful menstruation. She had been ailing for some years, but of late had become so ill that she had to give up her work and take to her bed. Bimanual examination revealed a fixed tender swelling, situated behind the uterus. Pressure on the swelling caused much agony and a feeling of faintness. The uterus was somewhat enlarged and retroflexed. I diagnosed adherent ovaries, and advised operative treatment. The patient, being most anxious to obtain relief, willingly agreed, and a few days later I opened her abdomen. The organs on both sides were found to be adherent. Without much difficulty I succeeded in freeing the left ovary and tube, and the right ovary also, but the Fallopian tube on that side was spread out and intimately adherent to the cæcum, and its separation gave some trouble and occupied much time. Sponges were packed down into the pelvis and left there until the sutures were inserted and the wound ready to be closed. By that time the bleeding had ceased. The patient recovered without a bad symptom, and returned home at the end of a month, relieved of her troubles. The next period was almost natural, and she soon regained her strength and resumed her work. Six months later she had an attack of inflammation in her abdomen, followed by rheumatism, which confined her to bed for some weeks. Since then she has been in poor health, and her heart is permanently affected. Her uterus is movable, and the fixed lump behind it is absent, but one could, at her last examination, trace the remains of an old cellulitis, the result of her attack of inflammation in 1888.

CASE 2.—R. M——, an unmarried lady, was sent to me in 1888. Her history was as follows: Menstruation began at the age of ten and the periods were irregular for some years. She suffered from pain before the flow, and her losses were excessive, lasting as a rule eight days. She was strong and healthy up to her twenty-fifth year, but about that age caught cold when menstruating, and her illness dates from that event. Between her twenty-fifth and twenty-seventh years the periods became increasingly painful, and she complained of backache and dragging pains in her abdomen when standing or walking. For close on two years before she came to town most of her days had been spent in bed. Attacks of vomiting came on, rare at first, but increasing in frequency till they recurred at all hours. Her appetite failed, emaciation set in, and she rapidly got too weak to leave her bed. During her long illness every possible treatment had been tried, but without success. Her friends therefore advised her to come to London for further advice. On examining bimanually I found the uterus tilted forwards, and behind it a fixed swelling, pressure on which caused exquisite pain and a sensation of sickness. She was seen in consultation by two eminent specialists and the diagnosis made was "adherent ovaries." It was decided that the organs should be removed, but the patient strongly objected to have her ovaries taken away. I therefore proposed to open her abdomen, and attempt to separate the adhesions and free the ovaries and tubes, as I had succeeded in doing in a former case. At the same time I reserved to myself discretion to remove the appendages if I found them diseased. This being agreed to, the operation was performed about a week later in the following manner:—The abdomen was opened in the middle line, the incision being nearly three inches in length. Introducing two fingers of my left hand, I ascertained by touch the extent of the adhesions on both sides, and having satisfied myself that the ovaries and tubes could be freed, I proceeded to separate the adhesions on the right side, taking care to keep my finger-nails as much as possible away from the ovary, so as to lessen any chance of injury to it. There was free hæmorrhage during this part of the operation, but the bleeding was controlled by packing sponges down over the abraded surfaces. The released ovary and tube were then brought to the abdominal opening and inspected, both for the purpose of noting any diseased condition, and of seeing if they had sustained any injury during the separation of the adhesions. A small flat sponge was then placed beneath the tube, which was then straightened out by running it between the fingers from the uterus towards the fimbriated extremity, the reasons for doing so being to break down any small adhesions between the ovary and tube, and to expel any fluid that might be contained in the tube; also to force open the ostium tubæ, should it be closed, as is frequently the case under such conditions. The fimbriated end was then well cleaned with a sponge steeped in corrosive sublimate solution (1–1000). The ovary and tube on the left side were then treated in a somewhat similar manner; but in this instance there was troublesome bleeding from the surface of the ovary, pressure in a hot sponge, however, quickly controlling it. The deeply packed sponges were left *in situ* till the last moment before closing the wound, as in my former case, and when they were removed the wound was closed, the ordinary peritoneum toilet being dispensed with in order to avoid any chance of setting up fresh hæmorrhage. No drainage was employed. The wound was dressed with carbolic gauze, and the patient was put back to bed within an hour. She made a good recovery, and gave me no trouble whatever. There was a little ether sickness, but when that passed off there was no return of the vomiting. The period came on a week later, without pain, the flow lasting six days. At the end of four weeks she was out of bed, and two weeks later went to the country quite relieved of her aches and pains, and able to take care of herself. Previously to her departure a careful examination was made of the pelvis, and the contents were found to be in a normal condition. Six months later the patient reported herself "much improved in every way. No return of sickness or pain, and able to take lots of exercise without feeling fatigued." In 1889 she wrote saying, "My health is excellent. I have gained 28lb. in weight, and can walk miles without feeling overdone. The periods are almost painless, and I have had no sickness." In April, 1890, I examined her pelvis, and found the contents in a most satisfactory condition. She was then in excellent health and spirits, and informed me "that she was organist at an institution, and had been playing twice a day for months." Two years ago she was an emaciated creature racked with pain and confined to bed, and now she is a robust young woman, well able to enjoy life.

CASE 3.—S. S——, aged thirty-seven, was sent to me for operation in 1888. She had been married four years, but had no family. Her illness dated from a miscarriage in 1886, and since then she had been getting worse and worse, the chief symptoms being sickness, backache, and dragging pains in her abdomen. The vomiting recurred at all hours, day and night, and was always preceded by sharp pains in the lower part of her abdomen. She was much worse immediately before her periods, and had to lay up at those times. For six months before I saw her she had been unable to work or attend to her household duties, and had been more or less confined to bed. She was much emaciated, and looked careworn and depressd. On examining the

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pelvis I found the ovaries prolapsed, adherent, and exquisitely tender on pressure. The uterus was somewhat enlarged but movable. I was requested to remove the ovaries, but suggested that the adhesions might be separated and the organs released with a fair chance of relief and possibly of cure. The patient and her husband agreeing, I opened her abdomen and without much difficulty released the ovaries and tubes on both sides, the only trouble throughout the operation being rather free hæmorrhage during the separation of the adhesions, which was, however, completely controlled by sponge-packing. The operation lasted about an hour. The patient did remarkably well and went to her home in about six weeks, relieved of her sufferings and in capital spirits. From the date of the operation the sickness stopped entirely for two months. Her periods were almost painless and unaccompanied by vomiting. On examining the pelvis previously to her departure, the ovaries were found to be free, and the uterus movable, but enlarged. She has remained fairly well ever since. In September, 1890, she was in good health, had grown very stout, and declared herself free from her old troubles. Her uterus was then enlarged, and her ovaries could be mapped out free in her pelvis.

N.B.—Since writing the above cases, I have assisted at two operations of a similar nature, where the ovaries and tubes on both sides were dexterously and quickly freed. Both patients have done well so far. In one case the peritoneal cavity was flushed out after the operation and a drainage-tube inserted; in the other, drainage was employed without any washing out of the abdomen.

Brook-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TRAUMATIC CEPHAL-HYDROCELE.

By R. CLEMENT LUCAS, B.S., F.R.C.S.,
SURGEON TO GUY'S HOSPITAL.

THE advantage of a term lies only in the correct grouping of things it may indicate, and it would be a misfortune if the interesting case reported by Mr. Burton in THE LANCET of Jan. 10th under the title of "Traumatic Encephalo-meningocele" were to be mislaid through a title which might divorce it from its natural associates. Traumatic cephal-hydrocele is not a term of my invention, but it has the advantage of implying nothing more than can be proved clinically, and I am therefore in accord with Mr. T. Smith in a desire to adopt it. The only difference between Mr. Burton's case and many others now collected rests in the fact that the fracture was at first compound, but the primary union of the wound left the condition of parts precisely as if the scalp had been untorn. It is altogether a gratuitous assertion that "absorption of a necrosed circular portion of the bone occurred, and the meninges and brain substance were gradually protruded through the wound." There is no proof whatever of the meninges having protruded, whereas damaged brain substance is not unfrequently met with in severe penetrating fractures. I am afraid Mr. Burton will think me over critical if I object also to the term "necrosis" in relation to the case. The absorption of osseous tissue which takes place in these cases is one of their most remarkable phenomena, and it is not preceded by necrosis, but is comparable rather to the pressure absorption brought about in bone adjacent to an aneurysm. That the aperture should close by fibrous tissue and leave no prominent tumour is again in accordance with the experience of the majority of cases which have recovered. The author farther volunteers the remark: "I do not think the fluid communicated with the ventricles," but this is a mere speculation; and if I were to say, judging by the experience of other cases, that I have little doubt that the lateral ventricle was opened, I should appear guilty of a direct contradiction; so I prefer, in the absence of a post-mortem examination, to leave the matter open.

Finsbury-square, E.C.

A CASE OF SPINAL HÆMORRHAGE.

By R. REGINALD SLEMAN, B.A.CANTAB., L.S.A.LOND.

I WAS some time since called to see J. A. G——, aged twenty-eight, a clerk, single. He had been unable to pass his urine for twelve hours, and had sent for me to draw it off for him. Finding the bladder distended, I passed a full-sized catheter and drew off a considerable quantity of urine, noting at the time a urethral discharge due to gonorrhœa, which at first sight might have accounted for the retention. However, it was noticed that the patient had great difficulty in adjusting his position for catheterisation, and on my remarking this, he said that during the day he had "felt his legs drag," and although he had managed to get to business, had experienced great difficulty in getting home again. This condition of affairs culminated at night, when I found the patient in the following condition: Total loss of power and sensation in both lower extremities; reflexes absent entirely. Temperature normal. Loss of power over bladder and rectum. There was also an absence of pain in any situation. This condition of affairs continued with little or no amelioration of the symptoms. Loss of power in the rectum was somewhat less after a time, but bedsores developed over the buttocks, which, however, the patient did not feel much inconvenience from, as there was little or no sensation in the part affected. Cystitis had soon set in, the temperature varying from 102° to 100°; and although the extremities were manifestly hot to the touch, yet coldness was felt in them—another instance of perverted sensation. Six months later there was a slight improvement in the condition of the left leg, which had recovered some power. This proved to be transitory, and secondary degenerative changes in the cord and muscles rapidly followed, and with them markedly increased reflexes and spastic rigidity, the latter condition deriving some benefit from hypodermic injections of hyoscyamine; when last seen the patient had relapsed into his former condition. The usual remedies, such as iodide of potassium, galvanism, &c., were tried, but without any good result. I believe this to have been a case of spinal hæmorrhage, the sudden invasion, the temperature (which was normal at first), and the symptoms generally, point to this diagnosis, especially the total loss of power and sensation in such a very short time. The family history showed that there was phthisis in two of the patient's sisters, but the parents were living, and in good health; there was also a very doubtful history of syphilis, which disease was said to have been contracted by the patient six months previously to the onset of the symptoms here recorded.

St. Benet-place, E.C.

CASE OF MEASLES: OBSCURE SYMPTOMS.

By J. B. HARRIS, M.D.

THE following interesting case so baffled diagnosis for some days that I think it worth recording.

On Feb. 3rd I was called to see a lad who had been suffering from diarrhœa for ten days. I found on my arrival that the motions were reduced in number to three in the twenty-four hours. These were described as simply coloured water, and were discharged with great force. The boy was in bed looking extremely ill, but in no pain anywhere, and said he felt "all right." The temperature was 102°, tongue covered with a white fur; the abdomen exceedingly distended and tympanitic. On pressure gurgling was produced everywhere except in the right iliac fossa. The pressure did not cause any pain. The next day he was much worse; abdomen still more distended. The gurgling now occurred at intervals without pressure, and was so loud at times that it quite startled the nurse; when this happened the child felt pain, but none on pressure. The temperature was 104·4°, and there was well-marked opisthotonos. In the evening Dr. G. F. Barnes saw the case with me. As we could not obtain any evidence of the patient having had a proper motion for over ten days, only what was described to us as "water," the question was discussed as to whether it was a case of partial intussusception; but there had been no vomiting, no passing of mucus or of blood. Examination per rectum revealed nothing. We were therefore bound to make the unsatisfactory report to the parents that the child was in a most critical state, but that the cause of the dangerous symptoms

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we were at present unable to discover. Early on the following morning I received a telegram, "Harold has a rash." I found on my arrival the patient much better. Temperature 103°; abdomen smaller; no opisthotonos; but he undoubtedly had measles. The next day the temperature was only 101°, and on the following normal. All catarrhal symptoms had been absent.

West Norwood.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GREAT NORTHERN CENTRAL HOSPITAL.

A CASE OF ASTHMA, WITH POLYPI AND HYPERTROPHY OF THE TURBINATED BODIES; OPERATION; CURE.

(Under the care of Dr. CHOLMELEY and Mr. SPENCER WATSON.)

IN this case the relationship between disease in the nose and asthma, as cause and effect, appears to have been clearly established, the paroxysms having ceased after effectual treatment of the nasal disease. Other and varied treatment had been tried ineffectually for many years. Dr. Bosworth[1] considers that in view of the results of treatment it may be fairly claimed that of the three elements which enter into the causation of asthma—viz., a neurotic habit, the nasal disease, and atmospheric conditions—the nasal disorder outweighs in importance the other elements of causation. Of eighty cases under his care, forty-two had been cured and thirty much benefited by nasal treatment. He[2] recommends the use of cocaine in the nose during the exacerbation, and, from the benefit which he obtained, even where no definite disease could be found, considers that there is usually some lesion present, though it may be obscure. Dr. Ayres[3] has given a series of ten; in the majority it was of old standing, and the disease yielded only and at once to well conducted cauterisations of diseased portions of the nasal cavities. Cases of a similar kind are recorded by others,[4] which only recovered after treatment of some affection of the nose. In a discussion at the Berlin Medical Society[5] in 1887, the general opinion appeared to be that the number of these cases benefited by cauterising the nasal mucous membrane was small. The view on the question held by Dr. West,[6] and expressed by him in a recent paper read at the Medical Society, will be still fresh in the memory of our readers.

Mary B——, married, aged thirty-five years, admitted in September, 1890, was a stoutish, fair-complexioned, and well-nourished woman, with somewhat short breath and an occasional livid look about the lips. She had suffered from asthma for eighteen years, and at the time of her admission the attacks came on about 12 P.M. every night. They were very violent, and caused much distress. She had been under treatment at hospitals and in private, but with no benefit. She stated that she had twice contracted some disease from her husband. The nostrils were obstructed, but not completely. Mucous crusts covered the turbinates. The thorax was very emphysematous and hyper-resonant, and with very limited expansion; heart sounds regular, but feeble. On anterior rhinoscopy a roundish, grey, pendulous mass was seen in the right nostril, attached to the anterior end of the inferior turbinate bone. In the left nostril were several translucent polypi. The breath channel was not completely obstructed, but breathing through the nostrils was very laboured and difficult. After treatment by various medicines, of which the most successful was nitrite of amyl, the patient was transferred on Oct. 10th to Mr. Watson's care, and now the solution of cocaine (20 per cent.) was applied freely in both nostrils, with some temporary relief.

On Oct. 15th, under the influence of cocaine, some of the masses of hypertrophied tissue were removed by the snare, and on the 23rd further portions of the fringe and the lower turbinate of the right side were removed by the ring knife, the same instrument being used for the removal of several polypi from the left nostril. This was done under chloroform. There was a slight rise of temperature (100·4°) on the day of this operation, but it speedily became normal and the asthmatic paroxysms have almost entirely ceased.

Jan. 8th, 1891.—Though some slight threatenings of asthma have once or twice shown themselves, they have always subsided under the application of cocaine. The patient is now in perfect health and considers herself cured.

Remarks.—The rapid and persistent recovery after asthma with emphysema of eighteen years' duration is very noteworthy. The operation chosen—viz., by the ring knife under the influence of chloroform—seemed to Mr. Spencer Watson the preferable one in this case, as the clearing of the nostrils by means of repeated operations with the snare would have caused a less relief of the nasal breathing and would have failed in giving a sudden blow to the morbid habit which has so much to do with the persistence of asthmatic seizures. Many cases of relief of asthma by intra-nasal operations have now been put on record by recent authors, but few can compare with the above as to the completeness of relief after the long period of eighteen years of confirmed asthma.

[1] New York Med. Journ., vol. ii. 1889, Sajous.
[2] Amer. Journ. of Med. Sciences, Sept. 1888.
[3] New Orleans Med. and Surg. Journ., vol. ii. 1888.
[4] Medical Record, July, 1888; Bristol Med. Chir. Journ., March, 1888.
[5] Berl. Klin. Wochen., 1887.
[6] THE LANCET, vol. ii., 1890, p. 1100.

NORTH RIDING INFIRMARY, MIDDLESBROUGH.

A CASE OF OSSIFYING MYOSITIS; OPERATION; REMARKS.

(Under the care of Mr. F. MUNRO.)

AS a result of chronic inflammation true bone formation may take place in muscle, and this development may be either localised or general. In the localised variety the inflammation of the connective tissue is usually the result of repeated slight injuries; here there appears to have been no such cause, for apparently the bony tumour was found five weeks before admission in consequence of the part having received a knock, which first attracted attention to it. The case of a boy is given by Abernethy, in whose muscles bony tumours developed after blows or other injuries. These bony plates may require removal on account of their interference with the movements of a part, either from their size or position. Hayem considered that there was a close relation between the generalised disease and some nerve lesion. We have not now under consideration the occasional ossification of muscle as a consequence of syphilitic myositis, the developments of bone found near a joint the subject of Charcot's disease, or that found in close proximity to exuberant callus. The condition of which a description is given below, the formation of a large isolated plate of bone in a muscle not subjected to pressure, in a patient presenting in other respects no evidence of disease, belongs to a different class. For the following account we are indebted to the house surgeon, Mr. G. Victor Miller.

J. A——, aged twenty-four, was admitted into the North Riding Infirmary on May 15th, 1890, suffering from the effects of a blow on the right thigh. The patient stated that he had been playing football on Easter Wednesday, when he came into collision with another player, whose knee struck him on the front of the right thigh, incapacitating him from work for three days. A week after the accident he noticed a hard swelling an inch and a half above the outer side of the knee-joint. It got larger, and five weeks after the accident he sought medical advice at the above institution. On examination, there was found what seemed to be a lump of bone lying loose in the muscles of the outer side of the thigh. It was about eight inches long, narrow and projecting at its lower end and approaching the surface, but broadening out as it passed up the thigh and lying more in the muscles. It was slightly movable except at its upper end. The patient could walk about fairly well with assistance of a stick, but was able to flex his leg only very slightly; and his occupation—namely, that of a moulder—being one in which there is a good deal of kneeling, the inability to flex the leg on the thigh, along with some

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pain, caused him great inconvenience. Diagnosis was difficult, and after a fortnight's rest in bed with the leg on a splint it was decided to cut down on the mass. Accordingly, on June 1st an incision, three inches long, was made over the projecting portion. On feeling the mass through the wound, it was found to lie in the substance of the vastus externus, being separated from the femur by a sheet of fibres. The muscle covering it was raised bluntly with the handle of the knife, and it was then seen that we had to do with a slightly curved plate about eight inches long, arising from the origin of the vastus and the linea aspera. It was fully a quarter of an inch thick at its origin, thinning out as it passed outwards and forwards. The broadest part measured about three inches. Nearly the whole of it was removed with bone forceps. The wound was sutured, two large-sized drainage-tubes inserted, then covered with wood-wool pads. It closed without a bad symptom, and the patient left the hospital quite well on July 6th.

Remarks.—This was without doubt a case of ossifying myositis of very large extent. A somewhat similar case, but not nearly so large, has been recorded by Orlow, as cited by Virchow in his Annual for 1889, from which we here quote:—"Orlow had the opportunity of examining an osteoma of the adductor longus which had developed in a cavalry captain. The captain, in setting his horse to leap a ditch, suddenly felt a severe pain in the inguinal region. For five months after he had constant pain, and at the end of that time he remarked a growth of bony hardness. About five and a half or six and a half centimetres below the left inguinal fold there was a small elevation in the skin of the inner side of the thigh. This was caused by the sharp end of a bony plate fastened to the pelvis, but movable. It was superficial, and the skin was movable over it. When removed, it was found that the connexion between the bony plate and the pelvis was completely movable. The fibres of the adductor longus were attached to the whole inner margin of the bony plate. The development of bone had taken place at the upper end of the muscle. The longitudinal section of the growth showed medullated bone of a dark-red colour without any distinct cortical substance. On microscopic section it was seen to be composed of nests of bone cells separated from each other by fibrous tissue. The base of the growth was covered by a firm pale lamina resembling cartilage. The medullary spaces were filled with a delicate tissue consisting of irregularly branching fibres and different kinds of cells (round and spindle) of various sizes. A great part of the spaces were occupied by bloodvessels crammed with blood-corpuscles. The cartilaginous connective tissue layer of the tumour was composed of a fibrous stroma containing spindle cells. Distributed in this lamina were remnants of cartilage with a delicate fibrous stroma, round or oval cells enclosed in a distinct capsule. Orlow assumes that both periosteum and intermuscular tissue took part in the process." Portions of the growth removed from our patient's leg were sent for examination to Professor Greenfield, of Edinburgh University, along with an account of the history of the case and that of Orlow. He has very kindly sent us the following report, along with sections for the microscope:—"The case is one of great interest and rarity, and corresponds in almost every respect to that of Orlow, quoted by Virchow, to which you referred, the chief difference being the absence of such marked vascularity and also the absence of cartilage. I think the case is one of typical ossifying myositis." In conclusion, it may be added that the patient was seen recently and the leg examined. It is as well as ever it was. There is no pain, no sign of any return of the growth; he can flex the leg fully, and has not lost a day's work since leaving the hospital.

HORTON INFIRMARY, BANBURY.

GENERAL EMPHYSEMA AFTER FRACTURE OF THE RIBS.

(Under the care of Mr. C. L. H. PEMBERTON.)

EMPHYSEMA of traumatic origin is very commonly met with as a result of fracture of the ribs with wound of the lung, and from that point of view the following case presents nothing unusual. But if we consider the great extent of the emphysema met with here and the serious state induced by the distension of the subcutaneous tissue, and that asphyxia was only prevented by the multiple punctures made, we have an unusual condition and one alarming both to the patient and surgeon. The risk of cellulitis after incision for general emphysema being considerable, resort is only had to it in extreme cases. For the account of this case we are indebted to Mr. Herbert Kershaw, M.R.C.S., L.R.C.P., house surgeon.

A. G——, carpenter, aged forty-four, was admitted on Sept. 26th, at 5 P.M. A few minutes previously he had been working on a ladder, when he slipped and fell a distance of about five feet, pitching with his right side across a log, the blow being received over the sixth, seventh, and eighth ribs in the mid-axillary line. He was collapsed, cyanosed, pulse hardly perceptible, respiration quick and noisy, and complained of difficulty of breathing. A swelling extended over the whole of the right chest and back; the skin where the blow was struck was slightly bruised; the swelling rose and fell with respiration. A crackling sensation of emphysema was found over the middle of the swelling, and occasional crepitus from the broken ribs. A loud vesicular murmur was heard over the swelling, as though the stethoscope was in contact with the lung. Hot brandy-and-water was given, hot bottles were placed around him, and he was covered with blankets. When he rallied he complained of dyspnœa, and was much cyanosed. His breathing was noisy, and he spat dark blood. Two hours after the injury the man was of enormous size; very emphysematous all over. Crackling was felt on the scalp, soles of the feet, and tips of the fingers. His features were entirely obliterated, and he was quite blind; neck distended, level with chin, and sloping towards shoulders; scrotum the size of a football. The man was crying out that he was suffocated. A large aspirating needle was thrust in over the seat of injury, the air being expelled with great force through it. Some dozens of punctures were made in the cellular tissue, the noise of the air rushing out resembling a swarm of bees. Relief was immediate, the man holding his breath and expiring with great force. At 10 P.M. it was necessary to puncture the skin again, especially around the neck, the air having accumulated to an enormous extent; relief was as marked as on the former occasion.

Sept. 27th.—2 A.M.: He was fairly comfortable, but expectorated blood freely, the exertion and pain of expectoration exhausting him somewhat. 10 A.M.: Pressure was tried over the injured side. 1 P.M.: The emphysema again increasing, punctures were again resorted to, the man urgently requesting that it might be done.

28th.—2 A.M.: He commenced to spit blood freely again. A hypodermic injection of morphia was given. He remained in a dozing condition all day, but became restless again at night; expectoration was now only slightly tinged with blood. Temperature 103°.

29th.—2 A.M.: Hypodermic injection given; result good.

Oct. 1st.—Emphysema subsiding, so that he was able to see out of his eyes. Needle removed from chest.

2nd.—Temperature normal; general condition good. An extravasation of blood under the skin extending from the right to the left side of the chest. This was quickly absorbed. Respiration only slightly increased. Slight pain on coughing. He says he is quite well. He never had any further trouble except that of his attendants impressing upon him the necessity of keeping still.

On Oct. 13th he left the hospital at his own request, and a week later he went to work.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hypertrophied Kidney with Dilated Pelvis.—Imperforate Rectum.—Aneurysm of the Aortic Arch opening into the Superior Cava.—Cervical Teeth.—Columnar-celled Carcinoma of Humerus secondary to Carcinoma of Rectum.—Carcinoma of Kidney.—Effects of Intra-uterine Pressure on the Fœtus.

AN ordinary meeting of this Society was held on Feb. 17th, the President, Dr. W. H. Dickinson, in the chair.

Dr. JOB COLLINS read a paper on a case of Hypertrophied Kidney with Dilated Pelvis. It was taken from the body of a man aged fifty, who died in the London Temperance Hospital from malignant disease of the œsophagus. It was situated in the usual position in the left loin, weighed 5½ oz., was rough on the surface, evidently hypertrophied or unusually large, had greatly dilated pelvis opening into

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ureter, which readily admitted the finger. The vesical orifice of the ureter was stated to have been valvular; the bladder was dilated, the mucous membrane injected, at the base some dark puncta. The right kidney was noted to have been represented only by "a small dark flaccid mass, little more than 1 in. in length"; a ureter the size of a lead pencil, however, led from this to the bladder. There was apparently no true renal tissue in the mass representing the kidney. The rapidly fatal termination of the case appeared to have obviated any clinical examination of the urine. The case appeared to be one of asymmetrical hypertrophied kidney, the result of destruction of the opposite kidney, probably from a completed hydronephrotic atrophy, a similar earlier condition of dilated pelvis and ureter occurring in this kidney also. It was, therefore, not one of the exceedingly rare cases of single kidney from congenital absence, but of the less rare, but still rare, variety of asymmetrical kidney from atrophy of its fellow. The important bearing of the occurrence of such cases was sufficiently obvious in cases where nephrectomy for hydronephrosis or tubercle of kidney was contemplated.

Mr. STEPHEN PAGET showed three specimens of Imperforate Anus. The first was from a very small, feeble infant, a thirteenth child, never at the breast. He did a left inguinal colotomy, and ten days later he passed a director down the bowel, and was able to evert the cul-de-sac and push it out at the anus and open it easily. But the baby did not thrive, and died at five weeks old. The second came from a small, feeble infant. He found the bowel at the depth of an inch, opened it, and dragged it down. The child died at six days old, and was found to have only one kidney, the right being undeveloped. There was ulceration of the opened bowel. The third specimen was from an infant that had gone thirteen days unrelieved. Mr. Paget failed to open the bowel in the cul-de-sac, and passed instead into the peritoneal cavity; he therefore made a small median incision above the pubes, and attached the dilated bowel here and opened it; but the infant never rallied, and died the second day after the operation. At the necropsy some peritonitis was found round the wound, but there was no extravasation or giving way of the bowel. A Meckel's diverticulum from the small intestine was found. Mr. Paget called attention to the coexistence of other malformations in these cases and to the difficulties of operating on them.—Mr. BLAND SUTTON had examined post-mortem several fœtuses with imperforate rectum, and in five of these he had found the kidneys abnormal. In one, the kidneys and ureters were represented by mere fibrous tissue; in the others, the kidneys were sacculated. The rectum in these cases occupied the cavity of the pelvis, and was in each case much distended. The pressure of this over-distended rectum was doubtless the cause of the obstruction to the ureters, with subsequent saeculation of the kidney.—Mr. BOWLBY understood Mr. Paget to say that he had not found a ureter in connexion with the kidney which he had described, and Mr. Paget said that this was so.—Mr. SYMONDS of Oxford referred to two cases of imperforate rectum. In one, after endeavouring to reach the rectum from the perineum—unsuccessfully, however—he had performed colotomy. After some time the rectum burst on to the surface of the body at the proper place. In a second case also he had been obliged to perform colotomy, after endeavouring to reach the rectum from the perineum. The operation was a difficult one in many instances, and in this case was not successful.—Mr. W. G. SPENCER thought that Mr. Sutton's suggestion, that the conditions found in the kidneys in these cases was due to over-distension of the closed rectum, was difficult to understand.

Dr. W. M. ORD described a case of Aortic Aneurysm communicating with the superior cava, taken from a police constable aged forty-three, admitted to St. Thomas's Hospital, Nov. 14th, 1890. Patient had been a constable for thirteen years, and previously had led a life of very hard work; no history of syphilis or intemperance. Five months before admission he began to experience a pricking sensation in the right side of the chest, accompanied by dysphagia and inability to lie on the left side. When first seen he showed marked lividity of the face and ears, and the right side of the neck and chest was œdematous, with turgid superficial veins. No tumour of the chest was visible, but there was marked dulness from the right border of the sternum outwards between the upper border of the second and the upper border of the fourth ribs. There was pulsation, but no thrill over this area. On auscultation there was a long-continuous humming murmur, never ceasing, but varying in intensity, being more sonorous during cardiac systole, fainter during diastole, conducted into the neck and heard over the whole of the right side of the chest posteriorly. The cardiac area of dulness was increased, and there was a musical apical systolic murmur, distinct from the continuous murmur. The radial pulses were equal, the arteries were thickened; no ascites or anasarca. For the first ten days in hospital patient improved decidedly, but on Nov. 26th there was marked increase of the facial œdema and sharp dyspnœa; signs of pressure on the upper part of the right lung developed, and the patient died somewhat suddenly on the night between Dec. 3rd and 4th. On post-mortem examination the right pleura contained about eight pints of fluid and clotted blood; a small perforation opening into it was found in the sac of the aneurysm near the root of the lung. The aneurysm began two inches from the aortic valves, but the first part of the aorta was atheromatous; the sac was about the size of an orange, and, except for a little pale adherent clot, was empty. In the interior a small slit in the sac, about half an inch in length, opened directly into the superior vena cava, two inches below the union of the innominate veins. Reference was made to two cases occurring under Dr. Bristowe in St. Thomas's Hospital, which presented similar physical signs.—Mr. RAYMOND JOHNSON mentioned a case that had been described by Dr. Arkle at the Clinical Society, which agreed almost exactly with Dr. Ord's case, both clinically and pathologically.—Dr. SEYMOUR TAYLOR thought the chief interest in the case under discussion was in connexion with the characters of the murmur that had been present during life. He had listened both to this and also to Dr. Bristowe's cases. The late Dr. Murchison had shown that there were four signs indicative of aneurysm, and to these he thought a fifth might be added—namely, diastolic shock, the importance of which Dr. Ord had previously pointed out. A murmur in the sac of an aneurysm if produced by the contraction of the wall of the sac would be synchronous with the cardiac diastole. A musical humming murmur would be the kind of murmur likely to be produced by the contraction of the sac wall, and it might be compared to that heard in cases of congenital heart disease in which there was an imperfect ventricular septum.—Dr. EWART referred to a specimen in St. George's Hospital museum in which there was a communication between an aortic aneurysm and the superior vena cava. During life there was very great pressure on the veins at the root of the neck. In order to try and give relief, venesection had been performed and the blood had escaped from the open vein in jets as though from an artery. Although he had not recognised the full significance of this at the time he felt that it was a point of much importance, and asked Dr. Ord if he had noticed any venous pulsation in his case.—Dr. HADDEN had seen Dr. Ord's case during life and also the two cases of Dr. Bristowe's that had been mentioned. He would prefer to describe the murmur as a continuous one with a wave of greater intensity in it. A murmur of this character was not absolutely diagnostic of aneurysm, as such murmurs had been known to occur in very vascular sarcomata, and, indeed, murmurs had been heard in sarcomata situated in the thorax and elsewhere.—Dr. ORD, in reply, stated that no pulsation could be detected in the veins of the neck owing to the œdematous condition of the parts, and that there was no pulsation in the veins of the arm. Dr. Hadden's remarks with reference to sarcomata were very important; he had himself occasionally heard murmurs over sarcomata which were of much the same quality of tone as the one in the case under discussion, but varied in time by not being so continuous.

Mr. BLAND SUTTON first showed a Sheep's Ear in connexion with which was a persistent second branchial cleft, and attached to it was a flap of skin known as a cervical auricle. The edge of this flap was covered with papillæ like those found on the lip of a sheep, and in the cleft there was a tooth somewhat similar to a sheep's incisor. The second specimen was a tooth which had been removed from a persistent second branchial cleft in a horse. Teeth had been found in connexion with the petrous bone in oxen, and two cases had been described by Magittot, which were preserved in the Veterinary Museum at Alfort, near Paris. Teeth had occasionally been found in the second branchial cleft in man, and he mentioned one case in which a tooth was cut behind the angle of the jaw in the neck, in the usual position of the second branchial cleft; this had been

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erroneously supposed at the time to be a wisdom tooth which had wandered.—Dr. ORD asked whether the teeth conformed to the mammalian type, or approached that of some of the lower vertebrates, as some fishes had teeth on their branchial arches.—In reply, Mr. BLAND SUTTON stated that the teeth were of strictly mammalian character. He then referred to dermoid cysts, the contents of which also conformed to the type of the animal in which they were found. It was, however, interesting that teeth had only been found in dermoid cysts, which were connected either with the ovary or the neck.

Mr. BERNARD PITTS showed a specimen of Columnar-celled Carcinoma of the Humerus secondary to Tumour of the upper part of the Rectum, which was removed from a woman aged thirty-two, who was admitted into St. Thomas's Hospital in February, 1890, with obstruction of the bowels, caused by a large growth in the upper part of the rectum. Symptoms dated from her last confinement eighteen months previously. For the last year she had been losing flesh, and suffered from profuse and offensive diarrhœa. The distension of the abdomen was so great on admission, and the rectal examination revealed such a hard and fixed growth of the bowel, that he performed left lumbar colotomy, and opened the bowel at once. After the abdominal distension had subsided, a hard mass could be felt through the abdominal wall in the left iliac region, but from its extent and its attachments it was not thought advisable to attempt excision of the growth; so she left the hospital on April 6th, having gained flesh greatly, and she was in fair general health. She was able to do ordinary household work, and suffered comparatively little inconvenience from the artificial anus. Early in November, whilst making her bed, she felt her arm suddenly snap, and was unable to use it afterwards. She was admitted again into hospital, under Mr. Pitts, in December, in an emaciated condition, suffering great pain from a large tumour of the right humerus, with a fracture about the middle of the bone. The rectal tumour had increased somewhat in size, but there was no evidence of further growth within the abdomen or elsewhere to be detected. On Dec. 24th, 1890, he amputated at the shoulder-joint by skin-flaps, having first ligatured the vessel in the axilla. The patient made a rapid recovery, and left the hospital on Jan. 14th, 1891, with a perfectly healed stump, and having gained flesh and strength in a surprising manner. The tumour of the humerus shown was of large size, and in appearance very like an ordinary subperiosteal sarcoma which had infected the medullary cavity. A microscopic examination of the tumour made by Mr. Shattock showed it to be, as expected, a columnar-celled carcinoma, so perfect in character that it would be impossible to distinguish it from a similar growth in the rectum. Mr. Pitts in his remarks stated that he could find no reported cases of such a growth in bone secondary to tumour of bowel, but referred to a similar case which involved the humerus, recorded in the Pathological Transactions for 1886 by Mr. J. Hutchinson, jun., where, however, no primary bowel tumour had been found during life, and no abdominal symptoms had been present. Unfortunately in this case a post-mortem examination had not been allowed. In the present case it was quite clear that the tumour could not be described as a cylindrical sarcoma, and the specimen showed how closely in general appearance a carcinoma of bone might resemble a sarcoma. The life-history of columnar carcinoma of bowel had not been satisfactorily determined, for the growth was often present for a long time without giving rise to any direct symptoms. It might remain local for a year or two, not even implicating surrounding structures. So few of these tumours had been removed at an early period that it was impossible to form an estimate as to the prognosis in early and complete excision, but it must be more hopeful as regarded life than in carcinoma in most other places.—Mr. STEPHEN PAGET read the following statistics which he had collected:—Out of 40 cases of cancer of the rectum, in only one had there been secondary deposit in bone (femur). In 291 cases of cancer of the alimentary canal from the lip to the anus, only 3 presented secondary deposit in bone; one (the one mentioned above), one from the lip, and one from the cheek, both the latter with a secondary deposit in the fifth rib. In cancer of the uterus, out of 200 post mortems, no bone was secondarily affected, whereas in cancer of the breast, out of 205 cases, the humerus had been affected 6 times, the femur in 11, and many other bones. Of German statistics Gussenbauer had collected 903 cases of cancer of the stomach, and no mention was made of any bones having been affected. Sprengel, in 131 cases of cancer of the breast, showed the femur affected four times, and the cranium and other bones somewhat frequently. Torok, out of 336 cases of cancer of the breast, found the humerus affected in 5, the femur in 3, and many other bones. In malignant disease of the thyroid secondary deposits in bone were particularly liable to occur. Out of 24 cases which he had collected the bones were affected in 16. It did not appear to be a mere question of embolism, for particular parts of bones, such as the upper half of the femur and of the humerus, were especially liable to be affected. He asked Mr. Pitts if in his case any other bones had been affected. He said that Torok had found that in many cases there was an unusual brittleness of bone.—Mr. R. WILLIAMS said that fragilitas ossium in cancer was quite distinct from metastatic deposits. Secondary deposits in bone were found in several cancers besides those in the breast, and he believed sometimes with uterine cancer. He considered secondary deposits in bone to be undoubtedly embolic; in Mr. Pitts's case it was interesting that so large a tumour must have grown from a single cell, as he had no belief in any spermatic influence.—Mr. R. JOHNSON mentioned a case that was in University College Hospital about two years ago in which there was secondary growth in the humerus. It was thought at first to be a sarcoma, but on examination was found to be carcinomatous, though no primary deposit had then been found, but later a small ulcerating growth in the cervix uteri was discovered. The case was interesting from the large size of the secondary deposit, as compared with the small primary growth. He mentioned another case of squamous epithelioma with secondary deposits in the ribs. Mr. Shattock remarked that secondary deposits in squamous cancer other than glands were almost unknown. This he thought might be explained mechanically, as the cells, owing to their large size, were filtered off in the glands, whereas the small cells of scirrhus not uncommonly had secondary deposits in bone.—Mr. SYMONDS related the case of a lady who had persistent pain in the neighbourhood of the left shoulder. She was under the care of Mr. Bryant, who found the coracoid process to be enlarged by a cylindrical-celled epithelioma. No primary growth could then be detected, but she afterwards died of carcinoma in the neighbourhood of the liver—probably of the gall-bladder.—Mr. BOWLBY said that bones generally escaped unless the growth was widely disseminated. Vertebræ were most commonly affected, and this was generally due to a local cause. He mentioned a case of recurrent scirrhus of the breast which had directly infected the ribs and thence the vertebræ. In connexion with the commonness of tumours of bone secondary to growths in the rectum, he mentioned two cases, one with secondary deposits in the femur and the other in the humerus. All would agree with Mr. Pitts as to the comparative innocence of growths in the rectum.—Mr. PITTS, in reply, thanked Mr. S. Paget for his statistics. It was wonderful the way in which spontaneous fractures of the humerus would unite. The fragility of the bones was generally due to secondary deposit, and he mentioned a skeleton in St. Thomas's Hospital museum in which nearly all the bones had been fractured and many were reunited, the union being by growth. The primary disease was scirrhus of the breast.

Mr. LUNN showed a Tumour of the Right Kidney, which was removed from the body of a man aged fifty-seven, who was admitted into St. Marylebone Infirmary on Sept. 18th, 1890. He stated that he had enteric fever thirty-six years ago. Had never had syphilis, gout, or a blow in the region of his kidneys, and had always enjoyed good health since his enteric fever until six years ago, when he had an attack of hæmaturia, the blood passing in clots, which at first was followed by clear urine. This lasted a few days, and then ceased for four or five months, when a recurrence took place. Whilst passing the clots he suffered from sharp shooting pains in his right side, down to his penis. No calculus was ever passed. Some months before admission his hæmaturia got more frequent, and his feet began to swell three weeks before admission. He had an attack of retention, and was obliged to have his urine drawn off at a hospital. On admission the patient was a strong and well built man, though pallid from the loss of blood. He had incontinence following retention. The urine was drawn off with a No. 10 silver catheter; it was acid and contained blood, as shown by microscopical examination. His tongue was moist

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and furred. Bowels open; pulse quick and small, arteries very rigid. Temperature 101·4° F. On examination of the abdomen a large tumour was found occupying the right renal region. It appeared fixed, and on deep pressure doubtful fluctuation was to be felt. An exploring needle was inserted into the swelling, but nothing was withdrawn. Two days after admission the patient passed some very large clots of blood by the urethra, which did not cause him much pain. The urine was obliged to be drawn off twice a day. Four days after admission the patient became very collapsed from loss of blood, he had several rigors, temperature 103·4°, after which he gradually sank and died on the sixth day following admission. At the post-mortem it was noted after opening the abdomen the liver appeared enlarged and pushed forwards by some tumour behind, which was slightly adherent. The liver was easily removed, and a large tumour was seen occupying the right kidney region, which was removed. Mr. Target had kindly examined the tumour and gave the following account:—The tumour had replaced the right kidney, and in shape resembled it. The mass weighed 4½ lb., and measured 7½ in. in length, 5 in. from side to side and 3½ in. in thickness. It had a definite fibrous capsule like that of a normal kidney. On longitudinal section it was found that the whole of the kidney structure had not disappeared, for at the upper extremity a small triangular area of normal renal tissue could be recognised. For the rest, the surface of the section had a spongy appearance, and was very soft, yielding an abundant juice on scraping. The pelvis of the kidney had for the most part disappeared, except at the upper end in the neighbourhood of the normal kidney structure, where one or two calyces remained and were much dilated. Their outlet, however, was blocked below. Examination of the hilum showed that the renal vein was completely filled with a plug of new growth, which had extended onwards towards its opening into the vena cava. The funnel-shaped portion of the pelvis was similarly blocked with growths and blood-clot. The growth did not appear to have perforated the capsule anywhere except at the hilum, and there were two bossy projections, which seemed to have commenced as intravenous extensions. The opposite kidney (left) weighed eight ounces, and contained one secondary deposit about the size of a walnut. Neither kidney showed amyloid changes. The urinary bladder was rather thickened but otherwise normal. The prostate enlarged. The liver weighed four pounds and a half, soft and friable, no deposits. The other viscera were normal. The heart was much dilated, and the left ventricle thickened; it weighed twenty-six ounces four drachms. Valves healthy. The growth appeared to be a soft form of carcinoma.—The PRESIDENT mentioned the rarity of primary carcinomata of the kidney, and the specimen was then referred to the Morbid Growths Committee.

Mr. J. J. CLARKE brought before the Society specimens of deformities in two new born children which were born at full time. In both cases there was good evidence of the conditions at the time of labour; the first case was brought to the author by Mr. Degui. The mother had previously attended at St. George's Hospital for pelvic pain, and after delivery Mr. Degui had found four fibroids, the quantity of liquor amnii in this case was small. The second specimen was given to the writer by Mr. H. S. Collier and was a monster. The mother had previously borne six healthy well-formed children; the labour was slow, and no liquor amnii had been present. The following points of interest were present in the deformities. In the first there were membranous fenestræ in the cranial bones, particularly in the parietal bones; in the second case there was complete encephalocele, the cranial bones being entirely absent. In the first there was a myelocele, and in the second a spina bifida occulta. In the second case, owing to the thighs having been pressed close to the groins, the descent of the testes had been interfered with, and in this case also there was a small caudal appendage. The deformities in these fœtuses he attributed to excessive pressure on the developing embryo due to the absence of liquor amnii.

The following card specimens were shown:—

Dr. B. W. HADDEN: (1) Carcinomatous Ulceration of Œsophagus opening into Aortic Arch and Trachea; (2) Patent Foramen Ovale in an Adult.

Mr. G. H. MAKINS: Spinal Meningocele Excised after Morton's Injection.

Dr. H. D. ROLLESTON: A Rupture of the Right Bronchus and Fracture of the First Rib.

Mr. S. G. SHATTOCK: Genu Recurvatum.

Dr. WYATT WINGRAVE: Lungs and Larynx from a case of Tuberculosis after Koch's Treatment. (Recent specimen.)

CLINICAL SOCIETY OF LONDON.

Modified Loreta's Operation for Stricture of the Pylorus.—Cases of Appendicitis.

AN ordinary meeting of this Society was held on Feb. 13th, the President, Sir Dyce Duckworth, in the chair.

Dr. HALE WHITE and Mr. ARBUTHNOT LANE related the details of a case of Stricture of the Pylorus following upon hydrochloric acid poisoning, in which a modified Loreta's operation was performed. The patient, a man aged forty-three, seven weeks before admission into Guy's Hospital swallowed some hydrochloric acid, whether intentionally or accidentally could not be made out. This was followed by a sharp attack presenting all the symptoms of acute irritant poisoning, but at the end of a few days he was better and seemed all right. At the end of a month severe hæmatemesis and pain set in, for which he was admitted seven weeks after he took the acid. He was wasted and weak, and had hæmatemesis and melæna. He was allowed an ounce of milk every hour, and in a few days appeared better, but a fortnight after admission it was obvious that the stomach was dilated and the vomiting returned. By careful dieting and washing out the stomach he improved considerably, but he again relapsed and became so weak and collapsed that death seemed close at hand. Three diagnoses were possible: either it was severe traumatic chronic gastritis, or there was ulceration with cicatrisation near the pylorus, or he had some tumour of the pylorus independent of the poisoning. On Oct. 6th Mr. Lane, having washed out the stomach and left the tube in as a guide, made an incision through the right rectus muscle and exposed the stomach, which was found to be a little dilated and much hypertrophied. At the pylorus and the stomach close to it was a firm, hard mass, not presenting any sign of malignant growth; it was so firm that it was thought that it would be impossible to dilate the pylorus rapidly, and so the stomach wall was attached to the edges of the abdominal wound, and the patient was fed with nutrient enemata for forty-eight hours, at the end of which time the stomach was opened and it was found that the pylorus would only admit a No. 4 catheter. Through this the patient was fed every two hours for three days; he seemed to be doing well, but he died suddenly seventy-six hours after the stomach was opened. The necropsy showed no cause for death; there was no peritonitis, no pulmonary embolism, nor was there any ulceration of the stomach to account for the pyloric obstruction, which existed only at the pylorus, the cardiac end being normal.—Mr. BOWREMAN JESSETT asked what made Mr. Lane perform the operation he did rather than do gastro-enterostomy; the latter was very easy of performance if done with Senn's plates, and it was likely to lead to permanent good in cases such as that described. He had performed gastro-enterostomy on five cases of cancer of the pylorus; three at the present time were as well as they could be, and were going about, and one of them had been done five months. He thought that in the case under discussion, if the patient had not died, there would have been great difficulty in maintaining the dilatation, and when the external wound had closed the stricture would have recurred. In a large number of Loreta's cases there had been recurrence of the stricture.—Mr. TREVES felt sure that most surgeons would endorse the treatment which had been carried out in the present case, and Loreta's operation was certainly better than the establishment of a gastro-enterostomy. With reference to recontraction, so far as he knew, only two cases of Loreta's operation had been done in this country; one had been performed by Mr. Hagyard of Hull, and the other by himself. The former of these, which had been done two years ago, was still well, and in his own case, which had also been done for two years, good health was likewise continuing. There was therefore in this country no evidence whatever of recontraction after the operation. In reading Loreta's account one could not help being struck with the enormous number of fibrous strictures that seemed to occur in Italy. He referred to a case of indefinite stomach trouble in a woman in whom that organ reached to

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the groin. In order to discover the cause he opened the abdomen and the stomach, and hoped to find and dilate the pylorus; but in spite of twenty minutes' careful search he failed to discover the pyloric orifice. The woman appeared to be much benefited by the operation, but she came back again in nine months with a recurrence of her trouble. Loreta in his account said that he introduced two or three fingers into the pylorus in order to stretch it, but it should be remembered that that orifice normally had a circumference of only 16 millimetres, which was about equivalent to that of a sixpenny-piece. He concluded by referring to the remarkable improvement which took place in many patients simply after the opening of the peritoneal cavity, and he quoted cases of his own and one related by Mr. Annandale in support of this, which he believed to be only capable of explanation by an alteration of the intra-abdominal pressure.

Mr. HERBERT W. ALLINGHAM read notes of a case of Excision of the Vermiform Appendix. The patient, a boy aged fifteen, walked into the Great Northern Hospital, bending forward considerably and complaining of pain in the abdomen, said to have been due to a fall the day before. The previous history was that he had been quite well up to the time of the fall, but that three months back he was ill for a week with constipation. On admission the temperature was 100·6°, pulse rather feeble, tongue furred and a little dry; he complained of pain like knives cutting him in the lower part of the abdomen just below the umbilicus in the median line. Respiration was chiefly thoracic, but the lower part of the abdomen was partly used also. The abdomen below the umbilicus was tense and tender, but not to any great extent. There was no marked tenderness, fulness, or pain as over the region of the cæcum. The urine was drawn off by a catheter; it contained no blood, and was clear. He saw him about twenty-four hours after the accident, and, as his symptoms were obscure, desired to make an exploratory abdominal incision. This was made in the median line, as a careful examination of the abdomen while under chloroform revealed nothing. On opening the peritoneum pus welled up into the wound, and there were evidences of commencing peritonitis. The intestines were found not to be wounded, so he at once turned his attention to the cæcum and appendix vermiformis. When the appendix was found he observed it to be perforated by a ragged ulcer, and by it were two fæcal concretions. The appendix was closely adherent to the cæcum. The appendix was separated from the gut and ligatured with fine silk at its base and cut away. There were no evidences of previous inflammation about the cæcum. The abdomen was carefully washed out with warm water and a glass drainage-tube inserted, and the abdomen closed with silkworm-gut sutures. After a rather protracted convalescence the boy made a complete recovery, and had been at work four months. The boy, a specimen of appendix, and fæcal concretions were shown.

Mr. BLAND SUTTON read notes of four cases of Appendicitis, which he had successfully treated by appendectomy. Case 1: This patient, a man aged twenty-four, was under Dr. Sidney Coupland's care, with unmistakable signs of appendicitis. The cæcum was exposed by a lateral incision, and the appendix found lying adherent to its anterior aspect. The middle third of the appendix had sloughed, and an abscess, containing several ounces of pus, had formed in consequence. The appendix was removed, the stump sutured, and the peritoneal cavity flushed with warm water. The patient made an uninterrupted recovery.—Case 2: A groom, aged twenty-two, came under Mr. Sutton's care as a case of renal colic. The patient had had three attacks previously, the first, two years ago, diagnosed as "typhlitis," the second as "ruptured muscle," the third as renal colic, and the last remained undiagnosed. On careful examination it was clear that the disease was "relapsing appendicitis." Mr. Sutton exposed the cæcum by a lateral incision and found the appendix slightly adherent to the brim of the pelvis. Its lumen was obstructed. The appendix was cut off, the end carefully sutured, and the muscles drawn together by gut sutures, and the skin closed in the usual manner. The appendix below the stricture was filled with pus. The patient left the hospital convalescent on the fourteenth day.—Case 3: This patient was seen in consultation, and regarded by the practitioner in charge as a case of renal colic. After examination under chloroform Mr. Sutton came to the conclusion that the patient had a post-cæcal abscess, probably secondary to inflammation of a vertical retro-cæcal appendix. The parts were explored, and this diagnosis verified. The appendix was lying vertically behind the cæcum, and its middle third had sloughed. The pus was washed away, the stump of the appendix sutured, and a drainage-tube inserted. Convalescence was interrupted by an attack of pleurisy, which suggested that the trouble in the tube was tubercular. Sections of the appendix were examined for tubercle and tubercle bacilli, but with negative results. The wound granulated and the patient left the hospital convalescent.—Case 4: A shoemaker, aged nineteen, was admitted under Dr. Finlay's care with typical signs of typhlitis. Under medical treatment he seemed to improve, but in the course of three weeks the presence of pus was clearly indicated. Mr. Sutton operated by a lateral incision and evacuated a large quantity of pus from the iliac fossa; the tip of the appendix had sloughed. As the rest of the appendix was dilated, it was cut off, its end closed by three gut sutures and the wound stuffed with iodoform gauze. On the eighth day a small fistula formed in the colon, allowing gas to escape. This, however, became closed as the wound cicatrised, and the patient left convalescent. Of these four cases, three were examples of acute and one an example of chronic relapsing appendicitis. The smooth and rapid convalescence in Case 2, in which the operation was performed for chronic appendicitis, formed a striking contrast to the risk, danger, and anxiety in the acute cases. All the cases illustrated the importance of early operation, which was simple enough to surgeons acquainted with the practical details of abdominal surgery. Case 3 suggested that an abscess secondary to appendicitis in a vertical retro-cæcal appendix might invade the peri-renal tissues and set up a peri-nephritic abscess. It was also curious that an abscess due to appendicitis, though very fetid, failed to conduct itself in an orthodox manner and indicate its presence by rigors. It must also be remembered that in many cases of typhlitis, which presented abdominal distension, pain, and the characteristic symptoms of infective peritonitis of sudden onset, these ominous signs were due to the escape of septic material from a latent abscess into the general peritoneal cavity. In such cases surgery could do little good.

Mr. ANDREW CLARK read notes of two cases of Typhlitic Abscess in which the vermiform appendix was removed. In the first the patient had general peritonitis when he was first seen, and, although he improved after the operation, he died of peritonitis on the fourth day. In the second case, where the attack was the third, the appendix was found bound down by adhesions and sloughing. It was removed, and the patient made a good recovery. He had had at present no recurrence of symptoms.

The PRESIDENT said that these cases of appendicitis presented great interest for every physician. Until the recent triumphs of abdominal surgery the majority of them used to die a miserable death. The more he saw of these cases the more he was convinced that it was the duty of the physician to transfer them without delay to the care of the surgeon; indeed, long delay was positively criminal. Yet it was very important to distinguish between cases of inflammation of the appendix and instances of trouble in the caput coli. The latter had a milder character and a less grave aspect, and it was a grave error to operate on them. Though a concretion was not always to blame, yet in the majority of cases one was to be found. It should, however, be remembered in connexion with this that the appendix normally contained some feculent material.—Mr. TREVES observed that Mr. Sutton's remark that one of the cases had "been treated by the methods ordinarily adopted by physicians" had called forth what was almost a smile on the faces of some of the audience. Yet it should be remembered that the "medical" treatment of typhlitis was successful in very many cases, and to treat all these cases surgically would only lead to disaster. The great majority of cases which had come into the London Hospital during the last ten years had recovered under medical measures, and there was no doubt that the epidemic of removal of appendices which had prevailed in some quarters had been extreme. If mere acuteness of symptoms were a guide to operation, many cases would be dealt with where no disease of the appendix would be found; on the other hand, he had known of cases where the patients had continued at their work till the bursting of the appendix. A very valuable means of distinguishing diseases of the appendix from trouble in the cæcum was examination per rectum, from which position it was often easy to distinguish the outline of the appendix.

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Then, again, reflex pain in the testis or in the neck of the bladder should be looked for, the frequent apposition of the appendix to the ureter being remembered. Though there were cases where one should clamour for early interference, yet in many meddling would be disastrous. The use of needles for exploration was bad practice, and it had yet to be shown that operative interference before the fourth or fifth day was ever called for; it was certain that very few had died before the third or fourth day. Though it was only in 1887 he timidly made the proposal (which was not very cordially received) that in cases of relapsing typhlitis the appendix should be removed in the lucid interval, yet at the present time the number of appendices crowding the shelves of museums was enormous. Mr. Sutton seemed to have laid stress on the fact that a fourth attack would be fatal, but he knew of patients who had had twelve or even twenty attacks. Again, the same surgeon appeared to hold that the disease must either lead to operation or to death, but he had found a number of cases where destructive inflammation of the appendix had led to spontaneous cure. He repeated that the greatest care should be exercised in the selection of cases of relapsing typhlitis to be operated on. It might be found impossible to remove the appendix when cut down on; he himself had had to abandon the operation, and on one occasion had been more than an hour in effecting its removal. The ureter often lay curved and twisted in the region of the appendix, and he felt sure some day that a piece of that tube would be removed in mistake. He pointed out that the normal position of the appendix was behind the cæcum, that it frequently lay in a vertical axis, and trouble in it was a well-known cause of peri-nephritic abscess. He had known the pus spread up even to perforate the diaphragm. He observed that in Mr. Allingham's case the abdominal cicatrix had yielded. In spite of the greatest care and method, yielding of the cicatrix at the seat of operation was exceedingly common, and a method of suturing the abdominal wall to prevent this had yet to be demonstrated. The wisest place to make the abdominal incision was over the adhesions and not into the peritoneal cavity, and from there into the abscess. The former was a little more tedious, but was decidedly the better practice. Cases in which the appendix was found sloughing and lying in an abscess cavity were not those in which to attempt to carry out a plastic operation. After opening the abscess the less that was done the better, beyond putting in a drainage-tube. Certainly the results had been best where the interference had been least, and even if a fæcal fistula resulted, it should be remembered that in this region they frequently underwent a spontaneous cure. He agreed that in many cases approximation of the serous surfaces was impossible, and that where the operation was done in the absence of pus the stump should be fixed to the neighbouring peritoneum.—Dr. CAYLEY, as a physician, asked for guidance on one or two points. In the first of the two cases of Mr. Clark's, which had been under his care, general peritonitis had developed; and in the second case, in which the patient made a good recovery, it had already set in. Should the operation be done when general peritonitis was present, or how long should medical treatment be continued before operation was advised?—Dr. COUPLAND said it was quite refreshing to hear a surgeon approving of medical methods, for physicians had been taunted over and over again with persevering in the medical treatment of these cases. His own observations had led him to believe that trouble in the cæcum itself was extremely rare. He admitted that many cases recovered, but in those he thought the mischief was also in the appendix, and he knew of no sign or symptom which would differentiate one class from the other. He believed that in no case which had been operated on had the cæcum been found to be demonstrably affected, and pathologists had not met with the condition in the post-mortem room, except in cases of obstruction beyond the cæcum. Dr. Cayley had put the question strongly: What were the indications which justified the calling in of the surgeon? Where young subjects were admitted with acute peritonitis of short duration—"fulminating cases"—with no previous history of bowel trouble, such formerly commonly found their way to the post-mortem room; but now, in the probability of the case being one of perforated appendix, one would call in the surgeon. Such a diagnosis was made in a similar case in his own practice a short time ago, but on exploration the opinion proved to be an erroneous one. The patient was a lad aged nineteen, who had strained himself; symptoms of cæcal inflammation and of general peritonitis developed. The abdomen was opened and peritonitis found, especially in the pelvis, but there was no disease of the appendix and the patient made a good recovery. It was difficult also to decide what to do in cases where suppuration was supposed to be present. In the first case which Mr. Sutton had related, which had been under his care, he waited because he thought at first the case would prove a simple one; but as soon as he could make up his mind that suppuration was present he secured the aid of the surgeon. It was certain that in some cases suppuration would go on round the cæcum to an extreme degree without showing signs, and he had certainly seen cases of extensive abdominal suppuration where the source of the mischief had been an unsuspected inflamed appendix.

On the motion of Mr. LANGTON, seconded by Mr. PEARCE GOULD, the debate was adjourned till the next meeting.

MEDICAL SOCIETY OF LONDON.

Raynaud's Disease.—Addison's Disease.—Transposition of Viscera.—Cystic Bronchocele.—Fistula after Strangulated Inguinal Hernia.—Asthma in a Boy.—Simultaneous Amputation of both Breasts for Cancer.—Dexio-cardia and Bronchiectasis.—Situs Inversus Viscerum.—Treadler's Cramp.—Congenital Malformation of Heart.—Deficient Development of Abdominal Wall.—Trephining for Head Injury.—Lupus treated with Koch's Fluid.

A "CLINICAL EVENING" of this Society was held on Feb. 16th, the President, Mr. Knowsley Thornton, in the chair.

Dr. DE HAVILLAND HALL brought forward a case of Raynaud's disease in a labourer aged thirty-one, who was also suffering from pulmonary phthisis. He had an attack in December, 1889. The ears became blue, but not painful; the fingers and great toes were then affected. The present attack began in December of last year. The ears were very painful; hands and feet not affected. Skin of the helix of both ears had necrosed. No pain since the patient had kept the ears covered up and taken five minims of tincture of opium thrice daily.

Dr. HALL next showed an instance of Addison's disease in a man aged thirty-five, who was a night attendant at a cabstand. The pigmentation was extremely well marked in the lips, buccal mucous membrane and tongue, the colour being bluish black. There was also increased amount of pigment in the skin of the face about the areolæ, and in the axillæ. On the trunk and extremities there was a pigmented rash. Vomiting commenced seven weeks ago, but had ceased the last three weeks. The patient had angular curvature of the spine, the result of a fall in childhood.

Dr. HALL also exhibited a man, a porter, aged forty-six, whom he had shown to the Society on Feb. 7th, 1876, as an example of Complete Transposition of Viscera. Since then the heart had suffered considerably from the effects of acute rheumatism. There was a systolic murmur, heard loudest in second left interspace, and conducted to the sterno-clavicular articulation; a diastolic murmur, heard loudest over the sixth right costal cartilage, and conducted towards apex. There was a systolic murmur at apex, conducted into axilla and faintly audible behind. The apex was three inches below right nipple, and one inch to the right. The liver dulness could be detected on the left side.

Dr. HALL lastly showed a woman aged fifty-three in whom enormous masses of what appeared to be Thyroid Gland were to be seen on both sides of the neck, with greatly dilated veins over the chest. Twenty-one years ago a cyst on the right side of the neck was tapped and a seton put in; there was great increase in the growth afterwards. She has had no treatment for the throat since. Except some little difficulty in swallowing fluids, and some dyspeptic symptoms, she complained of nothing abnormal.

Mr. STEPHEN PAGET exhibited a man aged twenty-four on whom he had operated for Strangulated Left Inguinal Hernia. Finding the gut gangrenous, he fastened it outside the abdomen and opened it at once. The man did well, the bowel skinning over and receding, till there remained only a minute fistula from which a drop of mucus exuded once or twice a week. Mr. Paget urged that it was not justifiable in such cases to perform primary resection or to adopt Helferich's suggestion of making an anastomosis

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above the gangrenous bowel.—Mr. H. ALLINGHAM had met with a similar case in a woman; he opened the gut freely and fixed it at the abdominal wall. Several sloughs came away, leaving a fistulous opening, which at the present time had entirely closed.—Mr. BALLANCE, referring to the question of the treatment of the gut in cases where it was found gangrenous in strangulated hernia, agreed that no attempt at resection was justifiable at the time of the first operation for the relief of the symptoms, and complete resection attempted at that time was almost invariably fatal. If it were at all desirable, it might be done subsequently; but the less disturbance there was at first the better, a free incision into the gut and one or two stitches being quite enough.

Dr. HERRINGHAM showed a boy aged ten who was the subject of Asthma. When he was three years of age he had suffered from scarlatina, and after that he had pneumonia and his feet swelled. Dyspnœa also developed, which had since become more frequent and severe, and was worse in summer. The attacks were typical ones of a spasmodic asthma, ending with a severe coughing fit, and bringing up a quantity of muco-pus. There was no sign of bronchiectasis, though the boy was suffering from emphysema and bronchitis. He had found that the compound lobelia powder, when burnt and inhaled as the dyspnœa came on, completely relieved the attacks.—Dr. HALL had seen great benefit follow the use of the powder referred to.—Dr. HERRINGHAM replied in the negative to Mr. SPENCER WATSON'S inquiry if there were any obstruction in the nostrils. Mr. Watson related a case in which a woman had had asthma for eighteen years, who also had several nasal polypi together with turbinated hypertrophy. These nasal troubles being removed, she was completely relieved and had remained free from symptoms for more than a year.—Mr. BALLANCE stated that he himself had suffered from only two attacks of asthma in his life, and both had been induced by the presence of cats in the house.

Mr. EDMUND OWEN showed a married woman, aged forty-nine years, who came into St. Mary's Hospital last October with Scirrhus of each Breast. On neither side was the skin adherent, or the breast attached to the pectoralis. She had had a child ten years ago, but there had been no trouble with either breast, nor was there any history of injury. Two years before her admission she had first noticed a hard lump growing in the right breast, and a year and a half later a similar growth on the left side. The growths, though of no great size, were extremely hard and nodular. Under an anæsthetic, Mr. Owen removed the right breast, whilst his house surgeon, Mr. W. J. Foster, amputated the left; each axilla was also cleared of enlarged glands. The patient showed no particular shock after the operation; the wounds healed by first intention, and her present condition was eminently satisfactory. It was formerly taught that operative treatment was contra-indicated when both breasts were the seat of malignant disease, and in the last edition of "Erichsen's Surgery" this statement recurred. To this, however, Mr. Owen took exception. In the early stages cancer was a local disease. The fact of one breast only being almost invariably the seat of the disease was evidence of its local nature. When both breasts were affected, the condition might be regarded as accidental. It by no means followed that the bilateral occurrence indicated constitutional implication; and the fact of both breasts being scirrhous might actually be a double reason for advising prompt operative interference.—Mr. BALLANCE had seen a woman nearly eighty years of age suffering from cancer of both breasts and of the axilla, of ten years' duration. In spite of this she had not lost flesh or strength, and she illustrated the truth that in old people the cancerous disease did not kill the patient.—The PRESIDENT referred to two cases on which he had operated in 1889, and in both he had removed the breast and glands. They had both recently returned to him with recurrence in the opposite breast, the recurrence in one being in the mammary scar, and in the other in the axillary glands. In one of them he had removed the opposite breast. In the only case of symmetrical disease of both breasts which he had seen the patient, an old lady, died of shock from removal of both the organs.—Mr. OWEN, in reply, said there had been no accident to the breasts and no eczema about the nipples. He agreed that an opposite breast should be removed for recurrence, though this, again, was against a general surgical principle which had been laid down, but which, he felt sure, was wrong.

Dr. EWART and Mr. BENNETT showed a case of Dexiocardia without transposition of other viscera, and bronchiectasis in which pulmonary incision and resection of the right ninth rib had been done for the latter. The patient was a groom aged twenty-eight, who had suffered from cough since his infancy, and latterly had expectorated much pus. Three years ago he suffered from hæmoptysis, and last year from influenza and bronchitis. In July he had high fever with pneumonic signs at the right base, followed next day by the development of pneumonia on the left side also. The heart on examination was found to be out of position, and at the right base later there was pectoriloquy and ægophony. The base of the right lung was explored, and a drainage-tube left in for a week without evacuating any pus. At the present time the pulmonary symptoms remained the same. He was unable, from the examination he had made, and from the history of the case, to decide whether the displacement of the heart was congenital or due to the traction exerted by the contracting right lung. He referred to another case at present under his care which presented similar symptoms

Dr. EWART also showed a woman, aged forty-eight, who was the subject of complete Situs Inversus Viscerum. The abdominal organs had been mapped out by percussion. The patient was right-handed, and complained of nothing but palpitation and dyspepsia. He had met with another similar case in a child, and had also seen a case of situs inversus of the heart alone associated with malformation of that organ.

Sir HUGH BEEVOR pointed out that the pleurisy and bronchiectasis had both been of long duration, and, as the right side was little or no smaller than the left, the heart had probably been dragged over by the contracting lung.

Dr. RIVERS showed for Dr. Hughlings Jackson a case of Treadler's Cramp occurring in a man who, after having been a hand-loom weaver for thirty years, began to make mistakes in his work owing to defective treadling with the right leg (the one principally used); later the right leg became lame, and after using the left leg for some years this became weak, rendering him unable to follow his occupation. The spasm occurred at the commencement of the flexion movement which accompanied the upward motion of the treadle, the extension or downward movement being well performed. The spasm was of the combined movement of the hip and knee, each joint being moved freely by itself; the difficulty was referred by the patient to the gluteal region, and both the gluteal and hamstring muscles on the right side showed decided diminution of faradaic and galvanic irritability. The right leg was held stiffly in walking, the case then agreeing with other occupation spasms in which large movements were concerned, and in which the affected limb was more or less generally disabled.

Sir HUGH BEEVOR brought forward a case of Malformation of the Heart for diagnosis. The patient, a man aged thirty-three, had a loud systolic murmur; the point of maximum intensity was at the left fifth cartilage close to the sternum, whence the sound faded away in an equal degree towards base and apex, in a less degree towards the epigastrium and across the sternum. He said he could never run like other boys, and his lips and fingers gave evidence of long-standing feebleness of circulation. There was no evidence of regurgitation into the veins of the neck. These symptoms were best explained on the presumption that there was a small communication between the two ventricles, due to a congenital deficiency in the septum of the wall of either ventricle.

Sir HUGH BEEVOR also showed a case of Defective Development of the Abdominal Wall. The diaphragm was inactive; there was a musical systolic murmur audible only over the sternum opposite four ribs. On throwing the muscles of the abdomen into action a swelling the size of the fist appeared high in either loin; it was tympanitic, and the condition had existed since infancy. On deep inspiration the recession of the abdominal wall was marked; the liver dulness had its upper limit, however, slightly depressed.

Mr. HERBERT ALLINGHAM showed the case of a man who in 1865 had a severe accident to his head on the left side, and was insensible for ten days. Since that time on and off he had suffered from giddiness and head symptoms, with loss of memory and a sense of pressure over the frontal region. In February of last year Mr. Allingham trephined the skull over the seat of the old injury. The bone was greatly in-

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creased in thickness, and the dura mater was also thickened, but the brain appeared normal. The patient was better for a time, but of late the sensations of giddiness had returned, with a sense of pressure over the other side of the skull.

Mr. SHEILD showed a man of stout appearance who had a huge Loose Body in the Right Knee-joint. It was larger than a walnut, had so increased in size as to give the patient no inconvenience, and it was therefore decided not to recommend operative treatment.

Dr. C. M. CAMPBELL showed two cases of Lupus which had been treated by injections with Koch's fluid. The first was a female aged twenty-three, in whom lupus appeared at the age of seven on the left cheek, and had been repeatedly treated locally. Fifteen injections had been given, the dose being gradually increased up to a decigramme. Forty-sixty days had elapsed since the commencement of the treatment; the patient had ceased to react, but the lupus, although somewhat attenuated, was certainly not eradicated. The second case occurred in a married woman aged forty-five, in whom the lupus had existed for twenty-eight years, involving the nose, fauces, and ary-epiglottic folds. Fourteen inoculations were given. The throat lesions appeared to have been nearly, if not quite, eradicated; the nose was distinctly improved, but the disease was not extirpated.

OBSTETRICAL SOCIETY OF LONDON.

The President's Address.

THE annual meeting of this Society was held on Feb. 4th, Dr. A. L. Galabin, President, in the chair.

The report of the auditors of the accounts of the treasurer for the year ending Dec. 31st, 1890, was read. It was proposed by Dr. Champneys and seconded by Dr. Gow, and carried, that the report be received, adopted, and published in the Transactions. The report of the honorary librarian was read and adopted. The report of the chairman of the Board for the Examination of Midwives was read and adopted. The President laid upon the table the new volume of the Transactions.

The PRESIDENT, in his address, congratulated the Society upon a prosperous year. The most notable event had been the removal of the Society to its new premises in Hanover-square. The losses by death, though in one sense heavy, had not been great in numbers. William Butler Young, M.R.C.S., L.S.A., had practised in Reading; he was a man of high principle and great uprightness of character; he died on March 22nd, 1890, at the age of sixty-eight. William Pollard, F.R.C.S. Eng., L.S.A., was a descendant of Sir Hugh Pollard; he had practised in Torquay, where he was respected and beloved both socially and professionally; he died on March 29th, 1890, at the age of seventy. G. Sirignano, M.D., practised in Naples. He died suddenly on March 7th, 1890. Frantz Christian Faze, M.D., was born in 1806. In 1850 he went to Christiania, where he became Professor of Midwifery in the University. He wrote several works on obstetric subjects. He was physician to King Oscar I., as well as to his son Charles XV. He was Knight of the Swedish North Star in Diamonds. He was fond of the English, and travelled much in England, Scotland, and Ireland. He was elected an Honorary Fellow of the Obstetrical Society in 1863. He died, at the age of eighty-three, on May 9th, 1890. Montagu H. C. Palmer, M.R.C.S., practised in Newbury. Besides being a successful practitioner, he was an excellent antiquarian, a good natural historian, and a botanist. He was Mayor of the borough. He died, at the age of thirty-nine, on May 22nd, 1890. James Matthews Duncan, M.D., was born in April, 1826. He studied in Edinburgh and on the Continent. He was assistant to Sir James Simpson, and was the first person ever rendered insensible by chloroform, Simpson and Keith subjecting themselves to the same experiment on the same night. He rapidly established a reputation as a great teacher in obstetrics. His published works soon became widely known. In 1862 he was elected an Honorary Fellow of the Obstetrical Society. A similar honour was conferred upon him in later years by a large number of societies on the Continent and in America. On the death of Sir James Simpson in 1870, it was generally expected that Dr. Matthews Duncan, who had already a European reputation as one of the greatest obstetricians of any time, would succeed to the chair of midwifery in the University of Edinburgh. The choice of the electors, however, fell upon Dr. A. R. Simpson. This event had doubtless much to do with the result that he accepted the post of obstetric physician and lecturer on midwifery at St. Bartholomew's Hospital, when it was offered to him on the retirement of Dr. Greenhalgh in 1877. The debates of our Society gained an added interest from his presence and constant participation, and he occupied the chair as President in the years 1881 and 1882. In 1860 he married Miss Jane Hart Hotchkiss, of Castlewick, Dumfriesshire. He had in all thirteen children. Mrs. Matthews Duncan and five sons and four daughters survive him. In the spring of last year his health began to fail. He suffered from gouty eczema and from attacks of angina. He died on Sept. 1st at Baden Baden. He was buried at East Finchley Cemetery; most of the leaders of the profession who were not out of town at the time were present, and Sir Richard Quain was deputed to represent the Queen. John Armstrong, M.D., M.R.C.S., L.S.A., was born in 1805. At first he practised in Sligo, and afterwards in Gravesend. In 1873 he retired from practice and went to live at Green-street-green, Dartford, Kent. He was held in great respect by his fellow-townsmen, and was highly esteemed by his professional brethren. He died on Nov. 20th, 1890. The President then entered upon the subject of the midwives' education and registration, and a discussion followed which has been already reported.—Dr. JOHN WILLIAMS moved a vote of thanks to the President, which was seconded by Dr. POTTER, and carried unanimously. During the meeting the officers for the ensuing year were elected.

The following specimens were shown:—

Mr. ALBAN DORAN (for Mr. ERNEST HART): Ancient Gold Ornament from Crete, representing a woman in labour in the upright position.

Dr. HANDFIELD JONES: Ovary from a case of Hæmorrhage after an Accident.

Dr. RUTHERFORD: Uterus removed by Vaginal Hysterectomy.

Dr. WHEATON: (1) An Ovary containing Three Dermoid Cysts; (2) Early Tubercular Disease of the Uterus.

Mr. MALCOLM: The Uterine Appendages, showing small multilocular ovarian cysts.

Dr. HERMAN: (1) Case of Submucous Fibroid, presenting at os uteri ten days after delivery; (2) a case of Cancer of the Uterine Body, illustrating the difficulty of diagnosing between this disease and senile endometritis.

Dr. HERBERT SPENCER: Congenital Diaphragmatic Hernia.

Dr. J. PHILLIPS: Blighted Ovum, with fleshy condition of the decidua.

HUNTERIAN SOCIETY.

A MEETING was held on Jan. 14th, Dr. Stephen Mackenzie, President, in the chair.

Hydronephrosis.—Tubercular Lesions in Alcoholism.

Mr. C. J. SYMONDS read a paper entitled "Three Cases of Hydronephrosis and their Treatment." Case 1 was that of a girl aged seventeen, with a tumour in the right loin. She was aspirated four times within three months, nine pints in all being withdrawn. She remained well, but came three years after with a very large tumour. The kidney was laid open and drained, no calculus was found, but the ureter was greatly dilated. The permanent sinus was a cause of distress, and some months later the kidney was removed. The operation proved very simple, the scar tissue being readily dissected off, and the organ enucleated; recovery was good. In Case 2 a housemaid had a recurring renal tumour, filling and emptying of its own accord. The kidney was incised, no calculus being found; but a dilated pelvis and the orifice of the ureter contracted. The third case was that of a boy aged nine. As regards the treatment of hydronephrosis, spontaneous evacuation cures some cases, and may be assisted by posture or manipulation. Aspiration proves curative in a few, but need not be repeated more than three or four times. If the canal is contracted, and cannot be dilated, remove the kidney. The existence of a sinus did not in these cases increase the difficulty of performing nephrectomy. The abdominal method of operating offers advantages in some cases; the condition of the other kidney can be ascertained, and a calculus in the ureter detected and removed. — Mr. R. CLEMENT LUCAS having made some remarks, Dr. NEWTON

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PITT referred to some specimens, showing how the disposition of vessels along the pelvis of the kidney and the ureter may give rise to a kink in the latter, and thus cause hydronephrosis.

Dr. G. NEWTON PITT read some notes on the post-mortem appearances in Chronic Alcoholism. In thirty cases in which phthisis was present, a dense fibroid pigmented change was almost invariably present in some portion of the lung, far more frequently than in other cases of phthisis; grey or yellow tubercles were less common, and caseous bronchopneumonia was quite the exception. The prevalence of these fibroids, and to a certain extent reparative changes, appear to be associated with the taking of a large amount of alcohol. *Primâ facie*, the chronic dyspepsia and irregular habits, the lack of food, and the gross improvidence and recklessness of these patients would lead us to expect that their mortality from phthisis would be high. The Registrar-General's reports, however, show that the mortality from phthisis of publicans and others whose occupations expose them to special temptations to drink is rather below than above the average. But acute tuberculosis and pneumonia are very liable to occur in such patients, and the tubercular nature of the disease may often be overlooked during life. It is noteworthy that about three-fourths of the cases of alcoholic neuritis, and about a fifth of those of alcoholic cirrhosis of the liver, are found post mortem to have also tubercular lesions. The association of such lesions with cirrhosis is seldom insisted upon, but is of importance. Out of 110 cases of alcoholic cirrhosis, in twenty-three there were tubercular lesions, phthisis most commonly, but in some acute tuberculosis or tubercular peritonitis. Dr. Pitt's conclusions were that tubercular lesions in the lung in alcoholic subjects generally take a fibroid form, and that tubercular lesions are not infrequently associated with alcoholic neuritis and hepatic cirrhosis.—Drs. F. J. Smith, Turner, and Gilbert, and the President discussed the paper, and referred to cases illustrating and confirming the conclusions arrived at.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

THE ordinary meeting was held on Wednesday, Jan. 21st, Mr. C. H. White, President, in the chair.

Tuberculous Meat.—Dr. BOOBBYER exhibited the lungs, heart, liver, spleen, and some lymphatic glands from a cow which had recently been seized, slaughtered, and destroyed by the town authorities on its exposure for sale in the fat stock market of the borough. He pointed out the very extensive infiltration of tuberculous matter and comparatively small amount of necrotic action. All the internal organs, excepting the heart, were more or less invaded. The left lung was affected in almost every part with miliary tubercle, and the liver was thickly studded with deposits of various sizes, some as large as oranges. He showed that the physical signs and special symptoms in so pronounced a case as this almost necessarily implied a guilty knowledge on the part of the vendors, although the magistrates before whom the case was taken declined to accept this view. The general emaciation, arched back, retracted abdomen, and staring coat, together with the frequent cough, jerky respiration from pleuritic adhesions, and continuous diarrhœa, were indications the import of which could not well be mistaken. Dr. Boobbyer briefly drew attention to the experiments of Toussaint, Bouley, Chauveau, Cornil, Arloing, Nocard, Peuch, Gerlach, Johul, and others, with the flesh or juices of tuberculous animals upon others in a previously healthy condition, both natural ingestion and artificial injection being used, which all went to show that great risk of infection attended the use of the bodies of tuberculous animals as food for the healthy. Dr. Boobbyer described the attitude of the home and some Continental Governments and local authorities with respect to the important question of how far tuberculous disease in animals should be considered as rendering them unfit for food, and said that the Sheriff of Glasgow probably erred, if he erred at all, on the right side when he gave it as his decision, after hearing a large amount of evidence, that the simple presence of the disease, however slight its development, was in itself a disqualification.

Mr. BELCHER showed a case of Erythema Iris in a man aged forty.

Notes on Cancer of the Breast.—Mr. HATHERLY read notes of some cases of cancer of the breast which had occurred in his practice. He accepted unreservedly the doctrine of a pre-cancerous or local stage of cancer, and dwelt upon the difficulty of recognising with any certainty the exact period when a non-malignant growth might become malignant. The microscope even was of little assistance, as the cell degeneration characteristic of cancer is not a sudden but a gradual process, the same specimen often showing cells varying within wide limits as to the degree of degeneration. He referred to Mr. Jonathan Hutchinson's doctrine, that cancer was not due to any special material introduced from without, but that it was simply a modification of that which occurred in chronic inflammation. Mr. Hatherly was strongly in favour of early operation, even in cases where there might be some doubts as to the diagnosis; in doubtful cases the patient should have the benefit of the doubt, otherwise the most favourable period for operation would be allowed to slip, and an early return of the disease would be highly probable. He advocated free removal, and thought too much attention was paid to union by first intention. In one case in which he had amputated the breast in a rather advanced case, union took place by first intention, but there was ominous induration of the scar within a fortnight after the wound had healed. A second operation was performed, and the whole scar was freely excised; the edges of the wound were nearly four inches apart; healing by granulation was rapid, and the patient had no return of the disease for several months. He attached the greatest importance to any brawny condition of the skin, and thought it even of more unfavourable import than induration of the axillary glands. He gave notes of some interesting cases in support of his view of the necessity of free excision, and thought that in the large majority of cases, however little advanced they were, the most promising course was to remove the whole gland. He thought that in dealing with malignant disease conservative surgery was a mistake. — The PRESIDENT directed attention to the importance of excising cancerous growths freely, and condemned cheese-paring with a view to obtain rapid healing and neat cicatrix.—Dr. CATTLE quoted a case in which a tumour, after twenty years of imperceptible growth, had assumed malignant characters and caused the patient's death. He thought such changes in the character of new growths occurred at a period of life when there was a general tendency to degenerative changes.—Messrs. BLURTON and WRAY also spoke.

Specimen.—Dr. CATTLE showed for Mr. Chicken a Cystic Sarcoma of Testis removed by castration from a man aged twenty. The diagnosis from hydrocele, hæmatocele, and encephaloid was discussed. Dr. Cattle showed a microscopical section of the tumour.

Reviews and Notices of Books.

National Health. Abridged from "The Health of Nations." A Review of the Works of Sir Edwin Chadwick, K.C.B. By B. W. RICHARDSON, M.D., F.R.S. Pp. 320. London: Longmans and Co. 1890.

THE author informs us in the preface that this volume was prepared to meet the request on the part of the public for an abridged and less expensive edition of his original work, and may be considered an abridgment of the most popular and practical portions of it. Introductory to the part relating to National Health is a biographical sketch of Sir Edwin Chadwick. Born at Lysaght, near Manchester, in 1800, he received his education entirely at private schools and by private tutors. After passing some time in an attorney's office as a pupil, he enrolled himself as a student of the Inner Temple, and was called to the bar in November, 1830. While carrying on his studies he supplied reports to the *Morning Herald* and the *London Review*, and contributed to the latter two papers in 1829, one on Preventive Police and the other on Public Charities in France. In 1828 he

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wrote for the *Westminster Review* an essay on Life Assurance. He resided for some time with Jeremy Bentham, to assist him in the compilation of his Administrative Code. In 1832, upon the formation of the Poor-law Commission, Mr. Chadwick became one of the assistant commissioners, and in 1833 was appointed a member of the Royal Commission to inquire into the subject of the employment of children. The Report of this Commission, which was drafted chiefly by Mr. Chadwick, led to the appointment of Government inspectors, and eventually to the Ten Hours Act, and in it he brought forward the subject of the "half-time system of education." In 1834 Mr. Chadwick was installed as secretary to the new Poor-law Board, and continued to hold that appointment till 1846. In 1838 the Board, on his recommendation, instituted a Medical Commission to inquire into the causes of a severe epidemic of fever in Whitechapel, which brought to light the disgraceful character of the water-supply, and the large extent to which it contributed to the disease and death-rate of the metropolis. He was also instrumental in inducing the Government to introduce the Bill for the Registration of Births, Marriages, and Deaths, which led to the formation of the office of Registrar-General. In the same year he was nominated one of the members of the commission to inquire into the best means of establishing an efficient constabulary force in the counties of England and Wales, which reported in the following year. In 1839 (by a misprint stated 1829) the Poor-law Commissioners were ordered to institute an inquiry into the health of the labouring classes of England and Wales, and they instructed their assistant commissioners to report upon such parts of the subject as came under their observation. At the request of the commissioners, from the papers thus obtained and from other information sent to them, Mr. Chadwick prepared the report which was presented to Parliament in 1842. In the following year, as a supplement to it he drew up a report on the subject of interment in towns. In 1845, consequent upon an inquiry into alleged abuses and illegal practices in the administration of the Poor Law, at which Mr. Chadwick gave important evidence, the Poor-law Board was abolished, and his career as chief secretary ended. In 1847 he was appointed member of a commission to inquire into the sanitary condition of the metropolis, and in 1848 a commissioner of the first Board of Health, a post which he held till 1854, when the Board was merged into the Local Government Board. In 1848 he was created a Companion of the Order of the Bath (incorrectly stated Commander), and in the same year was appointed one of the members of the Consolidated Commission of Sewers. The abolition of the Board of Health terminated his official public life, from which he retired with a pension of a thousand pounds a year. After his retirement into private life he continued to work zealously in the cause of sanitation and of reform in the public service. In the latter he strongly urged the adoption of competitive examinations as tests of qualification for all primary appointments in the various Government departments. In 1877 he presided at Stafford over the Congress of the Sanitary Institute, and in 1881 at Brighton over the Public Health Section of the Sanitary Congress. In 1885 he was elected President of the Association of Public Sanitary Inspectors, and in 1889, on attaining his ninetieth year, was entertained at a banquet arranged by the Association. At the same time he was promoted to the rank of Knight Commander of the Order of the Bath.

The biography is interesting as the career of an energetic worker in the interests of the public, but it has the fault of being entirely one-sided. While Dr. Richardson has given full credit for the undoubtedly valuable service rendered by Mr. Chadwick in his official capacity, he has omitted all reference to any shortcomings which may have arisen, in a great measure, from his energetic temperament, and he has in some instances claimed for him an undue amount of credit. As regards the first of these points, he has overlooked entirely the opinion expressed by Lord John Russell that as a member of the Board of Health he had been an injudicious administrator. Sir John Simon, in a highly appreciative notice of Mr. Chadwick's rare abilities as an original investigator in matters of social pathology, and as one having absolute rectitude of intention towards the public in every line of conduct which he followed, states that he "seems not to have been gifted with the quality [of judicial patience] in degree sufficient for official success. The faults which were imputed to him in his official relations—a tendency to build overmuch on foundation of small experience, a liability to one-sidedness on questions of science and administration, a failure to listen duly to dissentient voices, a deceptive trust in central dictation as the short and ready road to success, and a too despotic tone in affairs of local and personal interest—all these, so far as they were Mr. Chadwick's faults, may be generalised as faults of over-eagerness." He subsequently says: "Whatever may have been Mr. Chadwick's administrative unsuccess, and however severely the unsuccess may be attributed to errors of judgment on his part, nothing therein lessens by a tittle the value of what he had previously achieved." As regards the second point, Dr. Richardson claims that by a paper on the "huge mortality of our troops in India" Mr. Chadwick led the way to the formation of the Indian Sanitary Commission. We believe this to be quite a mistake, for it was really an outcome of the Barrack and Hospital Commission appointed in accordance with the recommendation of the Commission on the Health of the Army, over which Mr. Sidney Herbert so ably presided. Again Dr. Richardson says that in 1871 Mr. Chadwick suggested a plan for the drainage of Cawnpore, but we leave it to those practically acquainted with the subject to say how much or how little value should be attached to such a plan drawn up by a man who had never been in India.

The volume consists apparently of extracts from the published works of Sir E. Chadwick "without comment." These are grouped under the heads of: (1) Health in the Dwelling House—Domestic Health; (2) Health in the School—Educational Health; (3) the Health of the Community—Social Health; (4) Health in the Future—Progressive Health. Some of the views expressed in the last section, progressive health, are very imaginative, especially his health remedies for Irish discontent and his ventilation from cloudland. He suggests to M. Eiffel that if he "will provide in his high place a shaft by means of which he can supply Paris with breath from cloudland, his temporary idea will become permanent, and he will be known for generations to come as the celestial ventilator, the bringer of the pure air of the skies into the dwelling-places of men." These extracts are interesting as an exposition of Sir E. Chadwick's views on many important subjects relating to the health, comfort, and well-being of the people, and also as showing the gradual progress which has been made on these subjects during the last half century. Another point struck us in our study of the book—the entire absence of any acknowledgment of assistance or coöperation in any of Sir E. Chadwick's works. That he must have received much valuable assistance is undeniable, but where is the acknowledgment? The contrast in this respect with at least as great a sanitarian, Sir John Simon, is noticeable. Entertaining as we do a high appreciation of the services of Sir E. Chadwick, we cannot but regret so unsatisfactory an omission on his part.

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OUR LIBRARY TABLE.

A System of Oral Surgery. Being a Treatise on the Diseases and Surgery of the Mouth, Jaws, Face, Teeth, and associate parts. By JAMES E. GARRETSON, A.M., M.D., D.D.S., President of the Medico-Chirurgical Hospital &c. Illustrated with numerous woodcuts and steel plates. Fifth Edition, thoroughly revised, with Additions. Philadelphia: J. B. Lippincott Co. 1890.—As the title of this work shows, the writer deals with a rather wide range of subjects. The anatomy of the head is first considered, with special reference to the muscles, vessels, nerves, and glands. The teeth come in for a large share of attention, and their diseases and irregularities, and the treatment required, are discussed in detail. But, in addition to all this, not only are diseases and injuries of the jaws and antrum described, but also those of the tonsil, tongue, pharynx, larynx, nose, lips, and cheek are dealt with. The author has managed to write more than 1300 pages of letterpress, and this is the most noteworthy fact about the book—its size. Our readers will appreciate the value of Dr. Garretson's teaching if we give them a few selections in his own words: "Study of Cancer: We pass to the study of cancer. Every tumour is a cancer that is not something else." "Ability to diagnose is proportional with knowledge. What an eye sees it sees. With not less certainty does judgment understand what it comprehends. Understanding is resultant of experience. Thought and experience are one. . . . To comprehend is to be able to say exactly what a thing is." With extracts of this kind we might go on almost indefinitely. As this is the fifth edition of this work we suppose Americans appreciate it. We think we can confidently state that Englishmen will not.

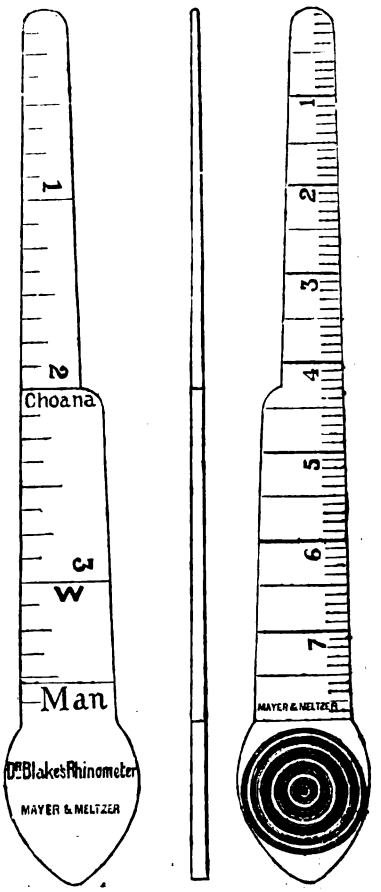
Law and Practice of Lunacy. By H. M. R. POPE, M.A. Second Edition by J. H. BOOME and V. DE S. FOWKE, Barristers-at-law. London: Sweet & Maxwell, Limited.—This book contains in a very accessible form a large body of matter relating to the law of lunacy, and will be found of the greatest service to those who are entrusted, especially in a professional capacity, with the management and custody of the property of persons mentally unsound. As to those parts of the law which are of especial interest to medical practitioners, it is, however, somewhat deficient. In the first edition an appendix gave a synopsis of the law relating to institutions for the treatment of the insane and their management, but this has been omitted from the present work; and as the health rather than the property of a lunatic forms the distinctive care of the medical practitioner, our readers will for the most part find this book less adapted to their purposes than some other treatises upon this branch of law. By readers whose interests lie within the range of the work as now defined, the work in its present form will be valuable.

In the *Veterinarian* for this month the most important contribution is a correspondence, taken from the *North British Agriculturist*, between Professors Williams and McCall on the question of "Are Blisters Hurtful or Beneficial?" Professor Williams, whose wide clinical experience gives him the right to speak with some confidence, declares against blisters; whilst Professor McCall gives his opinion that blisters are useful, though he does not approve the use of cantharidine. The latter promises a lecture "on the action and beneficial effects of counter-irritation in chest affections." Notes on influenza, strangles, and sand cracks, with long extracts from the medical journals bearing on Koch's treatment and an account of the meetings of the veterinary societies are given. At the meeting of the Border Counties Veterinary Medical Society, Dr. Fleming gave an interesting paper on Influenza in Horses. The first, a catarrhal form, he says appears to be very like the broncho-pneumonia of human beings; the second is an intensely febrile form in which the lungs are extensively involved, a condition which, he thinks, might be termed "epizootic pneumonia of equines," in which there appears to be infiltration of the air vessels, and in which also a septic or gangrenous condition of the lungs may supervene. A third, like the second, also a sporadic form, appears to affect the skin specially, being, in fact, a kind of erysipelas.

New Invention.

THE RHINOMETER: A NASO-PHARYNGEAL SOUND.

THIS simple little instrument consists of a tapering spatula of flexible metal. Readily introduced into the nostril, it diagnoses rapidly the various obstructive diseases of the naso-pharynx. Measuring about four inches in length, and only half an inch in width, it can be carried easily in the waistcoat pocket. In these days of countless and cumbrous appliances, portability is in itself no mean recommendation; besides this, the nasal sound is always at hand. The method of use is as follows. Ten minutes after spraying



the carefully cleansed nostrils with ten grains of boric acid, five grains of chloride of sodium, twenty-five grains of muriate of cocaine, to one ounce of camphor water, the rough part of the sound is grasped lightly between the finger and thumb. The smaller end is then passed very gently along the floor of the suspected nostril, carefully preserving the horizontal position. A rounded shoulder indicates when the choana is reached. It is well to keep the sound parallel with the vomer, but not touching it. The septum readily bleeds, even in health, and, owing to its free nerve supply, it is exquisitely sensitive. When the posterior

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pares are passed and the sound enters the pharynx its course should be turned outwards to the Eustachian orifice. If at this point its passage be obstructed and the tip return stained with blood, then Eustachian adenoids are probably present. An engraved line indicates when the posterior pharyngeal wall ought to be reached; this point varies, of course, with age and with sex. The smaller end of the instrument is now raised by depressing the handle. A doughy sense of resistance suggests the presence of adenoid hypertrophy of the pharyngeal tonsil at the roof of the vault. The existence of a neoplasm here is further confirmed by blood stains on the tip of the probe. The point should be withdrawn very slowly along the cribriform plate in order to detect the presence of deviating septum, fibroma, hypertrophic rhinitis, polypus, or septal bridge. Owing to the taper edge of the sound, it serves not only to diagnose abnormal pressure on the Vidian branches on the naso-palatine (nerve of Cotunnius) or on the olfactory filaments, but it gives a rough approximation to the amount of pressure exerted. Besides its more ostensible use, this handy probe, being divided into small parts of an inch and of a centimetre, provides for strict and accurate measurements, so often needed by the surgeon; when reversed, it makes a capital tongue depressor, and is in addition a convenient paper cutter. The use of this instrument, it will be quite understood, is not intended to supplant nasal illumination, but to supplement it, and to sift out the cases that call for visual examination.

Berkeley Mansions, Hyde-park, W. EDWARD BLAKE, M.D.

THE ORIGIN OF SPECIES OF DISEASE.

To the Editors of THE LANCET.

SIRS,—Many recent events have contributed to revive interest in the old, yet ever new, question of the origin of specific disease. Among these the addresses of Koch and Lister at Berlin last summer on the biological and practical aspects respectively of the bacterial hypothesis, the more recent announcement of the "cure of consumption," with all the collateral questions of inoculability, immunity, vulnerability, and the rest, and the brilliant display of the morphology, culture, and products of the tubercle bacillus at the Pathological Society last week, may be reckoned as of the first importance.

It is becoming increasingly evident that any approach to a satisfactory solution of the enigma propounded by the bacteriological sphinx requires a knowledge of the physical and biological sciences, which it has been fashionable of late to regard as superfluous acquisition to a medical man. It is not less evident that, as with the sphinx of Thebes, many reputations and lives are likely to be sacrificed in the process of solution. Two deductions, however, appear to be coming to the front amid the tangled skein of researches innumerable, and a perfect maze of fanciful theorising, based upon the slenderest substratum of fact, or none at all, or, worse still, upon erroneous observation, often dominated by a pre-existent idea. One of these deductions is that bacteria are not outside the pale of evolution, as seems to have been imagined by the specifically minded, but that among them, even more markedly than among higher and more fixed species, the adaptation of internal to external relations is powerfully at work, and correspondingly that a relatively slight variation of the medium or soil may profoundly influence their morphological characteristics. Ten years ago, in your columns,[1] I ventured to plead for a recognition of evolution of morbid species as modifying the rigid specificity preached by Sydenham, and later by Bretonneau and Trousseau, and urged that the "common ancestry of specific disease once recognised would do much to remove the hard-and-fast line so often drawn between disease and disease in text-books and dissertations, but of which nature knows nothing." Your columns, as well as the whole trend of modern pathology during the past decade, bear fruitful witness to the truth of this view; the doctrine of the plasticity of the germ in obedience to environment which is now to the fore is corollary to this contention.

The other and possibly more important truth which is immanent in most of the best of modern work in the field of the pathology of infective disease is that, after all, the morphology of the micro-organism—nay, its presence—may be but subsidiary to the chemico-physical conditions which pre-exist, or which it may be a part cause in initiating. It hardly needed the demonstration of the Prussian-blue test to feel convinced that in the toxic products of the tubercle bacillus one was dealing with derivatives of the deadly cyano group. Here we touch the big topic of chemical constitution and physiological action, and the question arises how far the *materies morbi* of so-called bacterial diseases is not chemical after all, its modification the result of slight variation of molecular structure, its virulence varying with intra-molecular condensation. Beyond all this the question irresistibly forces itself upon the mind, How far is the *rôle* of the bacterium merely that of an unorganised ferment akin to the curious contact actions of platinum and palladium, obscured rather than explained by being called catalytic? May not the effect of the bacterium be relegated to the relatively humble part of providing a ready initiative for a chemical explosion which might possibly, but less readily, have been effected without it? In this case the relation of the bacillus to the morbid process would be no more than, but as marked as, the relation of a lighted lucifer to the explosion of a barrel of gunpowder. The tendency appears to be to regard it as probable that an alkaloid rather than an albumose is the effective proximate cause in such case, and that its amount and presumably its nature is conditioned by the pabulum at hand. In either case we see that here, as it has been elsewhere remarked, the atomically inert nitrogen appears to supply the deadly pivot on which the lethal quality turns. Anyway, it would appear that the evolution of specific disease is a notion consistent with either the bacterial or chemical hypothesis. As I contended in 1884, "for panspermists to reconcile their views with this, it is only necessary for them to believe that organisms of an indifferent nature are capable by cultivation on suitable soil of taking on noxious and specifically noxious properties. For those who hold the chemico-physical theory, it is only necessary to regard the process of evolution of disease after the fashion of the construction of a complex organic compound, perhaps of an alkaloidal nature."

The question, however, cannot long remain where it is. The relation of bacteria to morbid processes effected by chemical products of their activity leads inevitably to a reconsideration of the supposed settled question of abiogenesis. The possibilities of environment are not exhausted by glycerine agar-agar in a test tube, nor even by alkali-peptone broth gelatine on glass plates. The problem of the origin of life is not solved by a reference to a remote epoch during the cooling down process, which bears a suspicious resemblance to the fairy tale explanation of "Once upon a time, in a country by the sea"; neither can a leaf torn from the Mosaic cosmogony suffice any longer (apart from its "gratuitous malevolence") to support a special creation theory for specific disease; nor can a belief in the predestination of bacteria to the service of man, a relic of the old anthropocentric notions, excuse us from studying the lowly cocci and bacilli in the light of their own life histories apart from their fortuitous and most unfortunate contact with mankind.

I am, Sirs, yours faithfully,
W. J. COLLINS, M.S.Lond., F.R.C.S. Eng.

Albert-terrace, Regent's-park, Feb. 9th, 1891.

[1] THE LANCET, May 14th, 1881.

HUNTERIAN SOCIETY.—The annual general meeting was held at the London Institution on Feb. 11th, when the following officers were elected:—President (second year): Stephen Mackenzie, M.D. Vice-Presidents: E. G. Gilbert, M.D., F. Charlewood Turner, M.D., C. J. Symonds, M.S., and R. G. Tatham. Treasurer: F. Charlewood Turner, M.D. Librarian: Arthur T. Davies, M.B. Orator for 1892: C. J. Symonds, M.S. Secretaries: John Poland and R. Hingston Fox, M.D. Council: S. H. Appleford, M.D., T. Lloyd Brown, G. A. Carpenter, M.B., J. S. E. Cotman, T. Rowing Fendick, J. Langton Hewer, M.D., T. Mark Hovell, R. Clement Lucas, B.S., T. Horrocks Oppenshaw, M.S., G. Newton Pitt, M.D., W. Percy Reynolds, and F. J. Smith, M.B. Dr. Fletcher Beach then delivered the annual oration, an abstract of which is published in another part of our present impression. The Fellows and friends dined together at the Holborn Restaurant on Friday, the 13th inst.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 21, 1891.

THE issue by the Medical Officer of the Local Government Board at the close of last year of a new Memorandum[1] on the closing of elementary schools, or the exclusion therefrom of children, with the object of preventing the spread of infectious diseases, deserves notice by public health and school officials from several points of view. These two sets of officers might, in one sense, be regarded as antagonistic; the one has the prevention of disease mainly before him, the other labours for the promotion of education, and he feels that any limitation in the number of school attendances for health purposes tends to some extent to defeat the progress of education. It is true that, according to the Education Code, allowance is made, as regards the pecuniary grant, for any properly authorised school closure; but nothing really makes up for the failures at examinations which such closures involve; and as regards mere exclusion of particular scholars, it has not been found practicable to make any corresponding arrangements as to the pecuniary grant. For these reasons there is a natural disinclination on the part of school authorities to be interfered with, unless, indeed, they are made to understand the necessity of the action contemplated. On the other hand, medical officers of health are coming to understand more and more the important part which is played in the diffusion of certain of the infectious fevers by the aggregation of children in elementary schools, and they are naturally anxious to act with discretion, and yet with promptitude, in respect of school operations. Having regard to these conflicting interests, it is most important that all action taken should be well considered, and that it should be effected strictly in accordance with the provisions dealing with this subject. Those provisions have in recent years undergone some modifications, and for this reason alone there will be advantage in recalling the powers which sanitary authorities possess in the matter, and the principles by which they should be guided in acting upon them.

In the first place, we would point out that the medical officer of health has not, as is commonly supposed, the actual power to interfere with any school processes. The sanitary authority are alone empowered to interfere in this matter; but at the same time it is the duty of the health officer to advise them when to act and how to act, and he should always be prepared to set out the grounds on which his advice has been based. This is the more important because school authorities have the power of appealing to the Education Department against any interference with their school attendances, and such appeals generally involve the matter being referred to the Local Government Board, with a view to a report being obtained from the health officer. Indeed, the latter is now required, whenever a school is closed on account of infectious disease, to report the circumstances to the Central Board.

But perhaps the most important part of the memorandum issued relates to the principles that should guide a medical officer of health in advising whether actual closure of a school should be resorted to, or whether mere exclusion of scholars from infected houses or localities will suffice; both these methods being authorised provided the order of the sanitary authority distinctly specifies the period during which they are to take effect. The exclusion of particular scholars is, of course, a much less severe measure than actual closure, and it is one that should be attempted more often than it is, provided the early attacks of infectious diseases are heard of. The compulsory notification system, now so largely resorted to, should materially aid in securing such success, from the process of exclusion, as to render complete closure unnecessary. And, even when disease is actually epidemic, Dr. BUCHANAN urges that closure, which involves a serious interference with educational work, should not be resorted to as a mere matter of routine. The medical officer of health advising it should be satisfied that minor measures will not suffice, and that some clear prospect of good is likely to arise from the step he advocates. During actual epidemics, for example, it may be that children will have a greater opportunity for mingling with infectious convalescents if they are out at play all day in the streets and courts of crowded neighbourhoods than if they were kept at school during the greater part of the day. Besides which there are epidemics in which school attendance plays but an unimportant part in the distribution of the infection, and in such cases it would be unjustifiable to impose on the school managers restrictions that would gravely affect their school attendances. On the other hand, where prompt exclusion of particular scholars has been followed either by no lessening or by actual increase of the epidemic, there would often appear grounds for closing a school; and even though the period to which the exclusion relates has not expired, a second order may properly be issued requiring complete cessation of school attendances. In some instances, when disease has broken out in a single school, sanitary authorities have been advised to close all the schools in the district. This is a step that can rarely be justified, and its adoption, except on grounds that would bear strict investigation, tends to bring this power of interference with school operations into discredit.

On the whole, we rather gather from the tenour of the Memorandum that school closure is not unfrequently advised without sufficient grounds, that exclusion of scholars from particular houses or localities is not resorted to with sufficient promptitude to ensure success and render closure altogether unnecessary, and that when disease spreads in consequence of tardiness to adopt reasonable measures of restriction, school closure is at times resorted to when it can do but little good. And even as to the results, conclusions are not infrequently drawn very hurriedly. Diphtheria, for example, is spreading in September and October; it continues through November into December, and the schools are suddenly closed until

[1] Memorandum prepared in the Medical Department of the Local Government Board on the Closure &c. of Elementary Schools. Eyre and Spottiswoode, Ld. 1890.

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the end of January. The disease then practically ceases—a result which is held to justify the former proceedings. But it is forgotten that diphtheria is largely influenced by season, and that the prevalence in question might, apart from the school closure, have been expected to follow the precise course which it did follow. From these and other points of view the Memorandum deserves the careful attention of medical officers of health, and of others who are concerned in the control and management of our elementary schools.

THE schemes for the reconstitution of the University of London, following on the lines of the Royal Commission, embrace two distinct questions—the best means for the promotion of higher education in London, and the necessity of granting pass degrees in medicine on equitable terms to London medical students. In the scheme of June, 1890, the clauses dealing with the former question were provisionally accepted, with some reservations, by the Teaching Colleges which have been agitating for a local metropolitan University comparable to the Scotch Universities or to the Victoria University, because a large amount of power was given therein to a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the London Constituent Colleges in those faculties. On this Committee these Colleges were largely represented, and it was specially formed to deal with the regulations concerning the courses of study and the examinations for pass degrees in arts and science at those colleges, and with the extension of University teaching in London. The regulations concerning the pass M.B. degree, however, were not accepted by the Royal Colleges, although the Fellows o the Royal College of Physicians were more nearly inclined to agree with them than was the Council of the Royal College of Surgeons. In this new scheme of February, 1891, the position is exactly reversed. The two Royal Colleges have now accepted the scheme because of the alterations in the clauses dealing with the medical degrees, whilst the professors of the Teaching Colleges unanimously decided, at full meetings held simultaneously at University and King's Colleges on Monday last, to reject it as not meeting their requirements, and as altering the position given to them in the former scheme; and we suppose the Councils of the two Colleges will, at their respective meetings to-day (Friday) and on Friday next, come to the same conclusion. The reasons for this double change of front are easily seen if the clauses dealing with the two questions are considered. The Teaching Colleges maintain their demand for a local metropolitan University as recommended in the strongest terms by the Royal Commissioners, or for one in which they can exercise such powers as practically will make it a Teaching University, and they are given instead a certain, but in their opinion inadequate, influence in a large heterogeneous body centralised in Burlington-gardens. The Royal Colleges, on the other hand, practically find themselves in the position of being able to grant a pass M.B. degree under the ægis of the Senate of the University of London, and over which the Senate has reserved only a minimum of control. The examinations, except those for matriculation and in preliminary science, are now placed under the direction of a committee, equally composed of nominees of the Senate and of nominees of the Royal Colleges, and as the first cannot but largely consist of Fellows of one or other of the Royal Colleges, into their hands the control of medical training and of the examination standard for the pass M.B. degree will necessarily fall. These bodies also arrange the curricula and define the examinations for their combined diplomas at the Conjoint Examining Board, so that they will exercise an almost complete monopoly—except so far as the L.S.A. is concerned—over every London pass medical student's education and career. Would the University of Edinburgh so abdicate its functions in favour of the Scotch corporations? Have not objections to many details in the present system of examinations at the Conjoint Board in England been unavailingly pointed out by independent visitors, and is not the scale of fees charged by the Board a very excessive one? The new scheme of the Senate of the University will, if adopted, take away the only means by which any effort at reforming the examinations of these corporations could have been effectually exerted. A fair pass M.B. degree must, as the Royal Commissioners report, be accessible to London medical students, but it would be preferable if it were one really granted by a university authority, and not one actually given by the corporations under the sanction and label of a university.

A further question arises as to the terms on which this degree will be given should the scheme be passed. It must be clearly understood that it is only the pass M.B. degree which is under consideration. The Standing Committee in Medicine of the Senate will fix the honours examinations for the M.B. degree, and determine the conditions of the M.D. degree, so that the Colleges will have no power over the M.B. (honours) or the M.D. degree. Moreover, the difficult matriculation and preliminary scientific examinations will (except in the case of matriculated students at constituent colleges) be also under the sole control of examiners appointed by the Senate, and we hear of no intention to mitigate their severity. Either, then, the Royal Colleges hope to whittle down these examinations, or the proffered boon to the average London medical student will prove a delusion. Let anyone examine the questions set in experimental physics at the Preliminary Scientific M.B. Examination for many years past, and he will soon see that they are so high in range as to be beyond the capacity of any average medical student without a prolonged first-class mathematic training, and offer a test of knowledge which he is hardly likely to need in his future medical career. Again, if the pass medical aspirant wishes to call himself "Dr.," against such a use of a mere M.B. degree he is studiously admonished by the authorities of the University. Will they relax this admonition in favour of the new graduates? or will these be confronted anew by that old, ever-recurring difficulty? Will the fees be fixed on so excessive a scale as to invite an unfavourable comparison with the fees for degrees in the other faculties, in the Scotch and provincial universities, and even in the other medical corporations, as we fear will be the case if the Royal Colleges have as much success in further influencing the Senate as they seem already to have obtained? The inclusion of the provincial colleges affects the medical corporations and schools of London but little,

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for only one provincial Fellow out of a standing committee of nineteen is suggested. The provincial medical schools should have a fair representation or none at all. But the arrangements for the provincial colleges in Arts and Medicine are so elaborate as to seem to us absolutely unworkable. How are these to have a due representation when four nominees of their principals or chief officers and but four nominees of the provincial faculties, acting conjointly—i.e., from such centres as Birmingham, Newcastle, Leeds, Sheffield, Manchester, Liverpool, Nottingham, Cardiff, Bristol, Bangor, and Aberystwith, for these will all be constituent colleges,—are allotted to them out of a Senate of fifty-two? How can a standing committee, which must meet in London, regulate the courses of study and the examinations in Arts and Science best adapted for such different institutions? Is a peripatetic examiner in every subject to attend at each College in turn, and act as assessor to the professor in that subject? for the Senate proposes to make such an arrangement with these Colleges, jointly or separately, for such examinations. To other examiners, or to the same, must be given the task of conducting the examinations in London on this plan, and also those fixed for non-collegiate students. Will the syllabuses of the courses of instruction in these different Colleges, which have to be approved by the Senate, be made similar or be allowed to differ? In the one case, any chance of local development would be destroyed, and in the other every pass B.A. and B.Sc. degree would have a different meaning and value. How can the provincial faculties and provincial boards of studies from so many centres be made fairly representative, or be assembled sufficiently often to make their work of any value? These are the practical points suggested by the new clauses in the Charter, which those who drafted it—who surely could have had no experience in University teaching or acquaintance with modern collegiate aims and thoughts—seem to have overlooked.

The scheme would appear to aim at centralising all London and provincial arts and science teaching under the control of Burlington Gardens, and to relegate the routine but practical work of examining for a pass medical degree to the Examination Hall on the Embankment.

IT may be remembered that on July 2nd, 1889, WILLIAM KERR was tried before Mr. Justice STEPHEN at the Carlisle Assizes, convicted of the crime of having murdered a single woman named SEBRA TROUGHEAR, aged about fifty, and sentenced to death. This sentence was commuted to penal servitude for life, and subsequently to a term of fourteen years. The offence was what is called "constructive murder"—i.e., killing not with intent to murder, but through the commission of an unlawful assault. The convict was charged with having ravished the deceased, who through his violence was caused to vomit, and was suffocated by the impaction of food in the larynx. We have carefully studied copies of the depositions made before the coroner and the magistrates, together with a report of the evidence given at the trial, and also a quantity of correspondence derived from various sources. It has never before been our lot, in studying the history of a trial for the capital offence, to meet with evidence so equivocal, such one-sided interpretation of the facts, and with a defence so lamentably lacking in support that might and ought to have been forthcoming.

On June 2nd, 1889, at 11.30 P.M., the dead body of SEBRA TROUGHEAR was discovered by two men lying in the supine position, distant only 160 yards from a roadside inn. The woman had been on a visit to some friends and was returning to her home. Beside the body, piled in a heap, and in the following order, were her umbrella, dress skirt, tippet, false hair, and hat. Her handkerchief was lying near. There had been a heavy thunderstorm the same day, which had washed the roads, and left the gutter surface, over which the legs of the woman lay, in a state extremely favourable to receive impressions of objects. In fact, casts of such marks were actually taken, which represented the ribbed pattern of the deceased's stockings, together with other marks; but—and this is deserving of great weight—nothing that corresponded with the boots worn by the accused, nor impressions of his knees or toes as at first surmised. A quarter of an hour previously the same men had met KERR walking in the direction of his home and away from the place where the body lay. It was proved in evidence that KERR must have taken about forty-five minutes to traverse the distance of 557 yards from the place where he was previously seen, and that no other person was noticed to pass by the same road. It was further shown that the deceased would arrive at the place where her body was found at a time when KERR would have met her. Here was strong presumptive evidence that if a crime was committed KERR was the agent of it. There can be little doubt, however, that he was intoxicated; for not only was he seen to be "staggering," but one witness saw him fall down in the road. On the police being fetched, the corpse was removed on a ladder to a neighbouring inn, where on the following day Dr. BARNES and Dr. MCLAREN made an examination. They found that death had resulted from asphyxia. Hypostatic congestion was strongly marked. On the front of the abdomen was a small abrasion, which did not appear to have bled. "Blood was seen smeared over the genitals, and fæces had escaped. Distinct marks of bruising were seen just within the genital passage, and these showed recent effusion of blood. A small tear was noticed near the right side of the orifice, and a larger tear, about three-quarters of an inch long, a little further in. There were several small effusions of blood in the lining of the passage beyond the tear. The uterus contained no blood. There were no seminal stains. There was a bruise of the scalp and temporal muscle on one side, which might have been caused by a blow or fall. The heart and kidneys were diseased. There was mud on the thighs. There were slight blood-stains on the chemise and handkerchief, and vomited matter on several articles of dress. There was a smear resembling blood on the face, but no wound." It has been suggested that the extravasations and rents in the vagina were caused by manipulation on removing the pelvic organs, but it would be manifestly unfair to Drs. BARNES and MCLAREN to suppose that they would commit such a blunder. On the same day the prisoner was examined. He had slight abrasions on both cheeks. Several spots of blood were found on his vest and trousers, and the fly of the latter had a blood-smear on it. His clothes were smeared

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with mud, and adherent to the mud on the knees were red woollen fibres. There was vomited matter on the waistcoat, back of the coat, and back of the coat collar. There were no seminal stains on the prisoner's clothes, or blood or marks of injury upon the genital organs.

Two questions present themselves for inquiry—(1) Had the woman been ravished? (2) If so, did KERR commit the offence? In our opinion the former theory is quite unwarranted by the evidence. Assuming sexual intercourse to have happened, there is nothing to show it was not by consent. If it did take place it is by no means certain that it was at the spot where the body was found, since such marks as would be expected on the ground were absent. Against the theory of rape, too, was (1) the orderly disposition of the woman's clothes by the side of the body, (2) the proximity to a dwelling-house, (3) the fact that no one heard sounds of alarm, (4) the absence of seminal stains, (5) the absence of signs of rough handling of the woman's clothes. We cannot subscribe to the argument of the medical witnesses that the injuries to the vagina were greater than could have been inflicted had there been consent to intercourse with a drunken man. In a London hospital museum is a preparation showing complete rupture of the vaginal wall caused by the act of intercourse with an adult. The bruise on TROUGHEAR'S head might easily be accounted for by a fall; moreover, there were no stones about, and KERR was not seen to be carrying a stick.

It is surprising to us that this, by far the most assailable part of the case for the prosecution, should have been made so little of by the defence. Many of the marks found upon the body and clothes of the prisoner were certainly consistent with his innocence. The vomit on his vest and coat was not sufficient to prove that it came from the deceased. The spots of blood on his vest and trousers may have been derived from blood-spitting. Whilst in custody he remarked, "I have been spitting blood again," and in the basin a police officer noticed streaks of blood. The mud on his clothes and the abrasions on his cheeks may be accounted for by his falling down, which he was seen to do. The red woollen fibres on the knees of his trousers may have got there from another source than the petticoat of the deceased. It was not tendered in evidence, but it has since been alleged that on the night in question his trousers were thrown across the same rail as his sister's red flannel petticoat. Besides, there are so many ways in which so common a fabric as red flannel may have come in contact with his trousers. Also the death took place on June 2nd, and these woollen fibres were not detected until June 25th, although an examination of the mud on the trousers had been made in the interval. It was suggested to the jury that the little blood on the woman's face might have come from the abrasions on KERR'S cheek, but surely this is very problematical. It was said that in the mud on the knees of his trousers were fragments of beech leaves and scales of beech leaves, and that the mud was different in character from that on the ground where he was seen to fall. This may be so. But if he fell at one place he might well have fallen at another, so this counts for little where so grave an issue is involved. We cannot but believe that had the prisoner been assisted by skilled medical evidence, and had all the facts and their possible interpretations been placed before the judge and jury, there would have been a more favourable charge and a different verdict. Exception must be taken to Mr. Justice STEPHEN'S remark, that walking in the cool of the evening would tend to dissipate the effects of drink; the result is often just the reverse. It is better that twenty guilty persons should escape punishment than that an innocent man should suffer. We commend the above comments to the notice of the Home Secretary, in the hope that he may find the crime of which KERR lies convicted was "not proven."

THE report of the proceedings on the occasion of a deputation to the Lord President of the Council on the Midwives' Registration Bill will be read with interest by all parties in this controversy. They may be surprised at the keen interest, in a Bill affecting England alone, of Irish officials and representatives of Irish Corporations or Societies; they may question the authority of Dr. RENTOUL to tell a high member of Her Majesty's Government that many medical practitioners are ready to go to a confinement for 7*s.* 6*d.*; they may be struck with the fact that Dr. GILBART SMITH was able to anticipate the report of a committee of the Royal College of Physicians, which at that moment had scarcely met, and to convey to the Lord President that it would content itself with opposing this Bill; and they may be struck by some of the arguments advanced by other members of the deputation. But, nevertheless, they will be interested to see how differently things that are perfectly obvious can be stated, and how they seem for the moment to have impressed an able and practical statesman. The deputation received an assurance from Lord CRANBROOK—of what has been well known to our readers for some time—that the Government would not support the present Bill. It is under no particular obligation to do so. It is not a Government Bill. It is drafted with no degree of care. It takes no precautions against admitting the unfittest persons now posing as midwives to the Register. The Lord President spoke of "pressure of immediate legislation." Of all suffering creatures lying-in women are the most patient, and the least likely to bring any pressure to bear on Parliament; it is the last thing they will think of, and the last place they will appeal to. There will have to be a good many more verdicts against midwives by coroners' juries before pressure on Parliament from those immediately affected is enough to move that body, which is so absorbed in other questions. These facts do not seem to us a reason, however, for acquiescing in the present state of things. Few persons of any experience can share the perfect satisfaction which Dr. DRAGE expressed to the Lord President when he said that for his part he knew of no necessity for legislation. It requires little imagination and less experience to understand what evils must arise for the want of a little sound training in ordinary cases and in the management of ordinary labour. It remains to be seen how far the deputation, whose speeches to the Lord President we report to-day, represent the profession. They were not altogether harmonious, and the Lord President might well feel "somewhat puzzled." Mr. CROLY, representing the Royal College

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of Surgeons of Ireland, said that the Council of his College would be quite agreeable to accept the Bill if adequate guarantees of education and competency were given. Dr. MACNAUGHTON JONES was in favour of legislation for securing "a high type of obstetric nurse," which seems to us very much the same thing as "a midwife." Dr. JACOB properly dreaded the wholesale admission of thousands of ignorant women to a Register. None of these deliverances are opposed to reasonable legislation to stop incompetent midwives from practising. It would be strange indeed if the chief spokesmen for Ireland, the country of SINCLAIR and HAUGHTON, who have done so much to educate midwives, had spoken otherwise. Dr. RENTOUL seemed to be the most "puzzling" speaker to the Lord President. Whereas the other speakers were proud of Irish examinations of midwives, "on the other hand, Dr. RENTOUL was rather for ending the midwives than for mending them. He said that unless they became qualified in medicine and surgery, as well as in midwifery, they should not be taken any notice of, and I understand from that that he would rather things were left as they were." It is very unlikely that things will remain as they are. It will be a pretty business if Dr. RENTOUL succeeds in getting us a race of inferior female practitioners, educated in *medicine*, *surgery*, and *midwifery*. Such a class of persons would indeed be a veritable blow at the medical profession. If these are Dr. RENTOUL'S views, we deny that they represent those of the profession any more than his remark that medical men were ready to attend midwifery for 7*s.* 6*d.* Neither the health of medical men nor their self-respect can be maintained on such fees. The lowest Poor-law fee for midwifery is 10*s.* 6*d.* Does Dr. RENTOUL mean to drag the profession lower than this? The Lord President will receive the thanks of the profession for promising not to support the present Bill. But, in the name of the profession, we protest without delay against a Midwives' Bill that contemplates creating a race of something more than midwives for attendance on ordinary cases of labour among the poorer classes.

THE recent correspondence between Sir ANDREW CLARK, President of the Royal College of Physicians, and the Secretary of State for War, must indubitably prove of great interest to all concerned. There is no need to enter into any detailed history of all the occurrences out of which has arisen the present unsatisfactory state of feeling on the part of army medical officers in regard to their present position and privileges. There would appear to have been a dissatisfaction among them for years past regarding rank, even when relative rank was believed to have some value. Whether the abolition of the latter were the cause or not of all that has since taken place, it certainly was the occasion of an almost universal feeling among medical officers that they had been deprived of any rank they had, except departmental. There were other grievances no doubt, some recent, some old; but the main, the corner-stone grievance, was that of rank, without the possession of which medical officers alleged that they had neither, on the one hand, an assured position, nor, on the other, the authority and independence to which they were entitled, and which they deemed essential for the satisfactory performance of the numerous and mixed duties and responsibilities that have of late years been imposed upon them.

Mr. STANHOPE appointed a committee of investigation, and that being so it was naturally felt that he should carry out its recommendations. But a good deal has happened since then. Once started, the subject was bound to grow and develop. Medical officers were led to study the constitution and organisation of the medical services of other nations, and to consider well that of their own in relation to the army generally. In this way they came to appreciate and understand what was really meant by army rank as distinguished from departmental rank, and military titles or professional ones. The able representation of Sir ANDREW CLARK to the War Minister embodies their present views.

The medical officers now not unjustly contend that things have vastly changed of late years, and that only those who have had working experience of the service know where the shoe pinches. In order to avert future discontent, and to place them in a proper position, they maintain that substantive army rank is necessary for the medical officer, and that the Medical Staff Corps should be welded into one body like the Royal Engineers, the officers being lieutenants, captains, majors, &c., of that corps, with limited command. It is obvious that so long as the medical service forms part of the army machine, its officers should occupy a well-defined, recognised, and assured position, and that they should not have to be asserting themselves or be compelled from time to time to fight for precedence, rights, or allowances. If army rank be necessary, we certainly do not see why the principle of command it carries with it cannot be limited in character, and restricted, as at present, to the sphere of the medical officer's responsibilities and functions. We are quite sure that no army medical officer would desire to exercise command outside the limit of his own duties. The terms used in a medical officer's commission define his position and powers in this respect.

But rank is one thing, title is another. We confess that we have always regarded the retention of some professional title as right and consistent with proper self-respect, to say nothing of the practical utility of distinguishing a medical officer in some way from other officers. The substitution of purely military titles for professional ones, so that the latter become altogether submerged and lost, does not appear a dignified course to be adopted by University graduates in Medicine or Fellows of a Royal College of Surgeons, for instance. We do not think, however, that Mr. STANHOPE'S concessions as they stand will prove satisfactory to the medical service, seeing that he grants them the composite titles recommended by Lord CAMPERDOWN'S Commission, but does not touch the question of substantive rank, which is, in the opinion of the medical officers, the pivot of the whole subject.

Although it may be true that to reduce the term of foreign service to what it was would be productive of increased expense, it must be remembered, on the other hand, that the sickness and mortality among medical officers are already unduly large; and extended foreign

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service means increased inefficiency from sickness and invaliding, with attendant monetary loss to the State.

We are glad to observe that, with respect to the conditions of sick leave, Mr. STANHOPE is willing to meet the medical officers' wishes.

Annotations.

"Ne quid nimis."

VITAL STATISTICS OF IMPROVED DWELLINGS.

DR. NEWSHOLME, the medical officer of health for Brighton, read before the Royal Statistical Society, on Tuesday morning last, an interesting and useful paper on the Vital Statistics of Peabody Buildings, and other Artisans and Labourers' Block Dwellings. The paper was mainly based upon the careful statistics that have been collected in recent years by the secretary of the Peabody Trust Fund, and which had been placed at the disposal of Dr. Newsholme for the purposes of his paper. The Peabody dwellings have had for some years a practically stationary population somewhat exceeding 20,000 persons. The population and the ages of the inmates of these buildings are annually enumerated by the superintendents, and the returns of deaths occurring among this population are specially obtained from the local registrars. Dr. Newsholme has thus been able not only to calculate the recorded rates of mortality from all causes and from certain classes of diseases, but also to correct these rates for the disturbing influence of the abnormal age-distribution of the resident population. The paper was well received by the Society, and was very generally acknowledged to be a good example of careful and sound statistical work. It shows that, notwithstanding the high birth-rate, the age-distribution of the Peabody population is less favourable to the rate of mortality than that of all London; that notwithstanding the fact that the population is a working class population, and that the population shows a high proportion of density per acre, the mean death-rate during the twelve years ending with 1885 was 2 per 1000 below the mean London rate during the same period; that the mean rate in the Peabody buildings is at each age group below the mean rate for the whole of London, excepting only the age groups 0 to 5, and 15 to 35 years; that the rate of infant mortality (the proportion of deaths under one year to births) is considerably lower in the Peabody buildings than in the whole of London, whereas among children aged between one and five years the rate in the Peabody buildings shows a marked excess; that the excess at these ages is mainly due to the high rate of mortality from the diseases more immediately due to direct infection, notably scarlet fever, diphtheria, whooping-cough, and measles; and lastly, that what has been called Dr. Farr's law of density—that is, the existence of a constant relation between increasing density and increasing mortality—receives no corroboration from the results of Dr. Newsholme's analysis of the mortality of the Peabody buildings. An interesting discussion followed the reading of the paper, in which the President (Dr. Mouat), Sir Rawson Rawson, Dr. Adler, Dr. Sykes, Dr. Longstaff, Mr. Lovett, Mr. Noel A. Humphreys, and others took part. While the statistical merit of the paper was fully and freely admitted, it was asserted by some of the speakers that the very abnormal character of the Peabody population was not sufficiently recognised by Dr. Newsholme, and that too much importance was attributed to the comparison of the Peabody rate with the rate for the whole of London. The practical impossibility of constructing thoroughly trustworthy statistics for groups of houses or blocks on account of the shifting character of the population and the grave difficulty in the way of debiting to such population the number of deaths really belonging thereto and occurring in workhouses was urged by many speakers. Dr. Farr's formula for ascertaining the effect of density upon mortality was frequently referred to, and it was generally admitted that while the so-called "law of density" was in force during the thirty years 1840–70, dealt with by Dr. Farr, it is no longer strictly applicable on account of the marked reduction of the general death-rate of the country since the passing of the Public Health Acts of 1872 and 1875, and especially on account of the far greater reduction of the rate of mortality in town than in country districts. It is quite possible that in some towns, or in some parts of some towns, the effect of density is nearly as fatal now as it was when Dr. Farr constructed his formula, but one of the most marked results of sanitary improvements has been to render possible the constant increase of density of towns without a corresponding increase of mortality, and even coincidently with a continued decline in the rate of mortality.

EPIDEMIC OF ERGOTISM.

DR. REFORMATSKI has published an account of a somewhat serious epidemic of ergotism, or, as he calls it, "pernicious spasm," which occurred during the latter part of 1889 and the early months of 1890 in the Nolinski district of the province of Viatka in Eastern Russia. The number of persons attacked is given as 2749, of whom 535, or nearly 20 per cent., died. Men, women, and children all suffered, especially the poorer classes, who, having no store of flour, had to use the product of the harvest of 1889 as soon as the corn was cut. Soon after eating bread made from the diseased corn persons were affected with vomiting and sometimes diarrhœa, and complained of pain in the epigastrium or over the whole abdomen. This was followed by headache and giddiness, also by great prostration or by a condition similar to that produced by alcohol, and by a great desire to sleep. Sometimes vision was disordered, temporary blindness occurring in some cases. After these symptoms, convulsions and tonic spasms frequently came on, and from this, which of course was one of the most prominent features, the name "pernicious spasm" arose. The spasm affected different groups of muscles, especially the flexors of the limbs, those used in mastication, and the throat muscles. Loss of consciousness or epileptiform fits followed, and many of the patients suffered from mental disturbance. A good many suffered from gastric symptoms and trophic changes, affecting the hair and nails. A table is given of cases treated in a certain hospital, showing the number admitted each month and the frequency of the different forms of the disease; 55 per cent. suffered from spasms, 18 per cent. from mental disorder, 6 per cent. from fits, 8 per cent. from fits combined with spasms, and 12 per cent. from fits, spasms, and mental disorder. In some villages a somewhat different form of the disease presented itself in cases where barley or oaten sour bread had been eaten, the symptoms being headache, prostration, and drowsiness. These cases were all of a mild description, and the patients recovered completely after a prolonged sleep. In one of the post stations the thirteen ostlers belonging to it were all affected some twelve hours after eating some hot cake. Though they were very weak and sleepy the exigencies of their situation compelled them to harness and start the horses. Three of the men had as much as they could do to attend to a single pair of horses, and one man was so overcome by drowsiness that he fell from the coach box. The next day there was less traffic and they were able

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to rest, but having eaten some more of the deleterious material they suffered as before. The third day they recovered. Dr. Reformatski discusses the prophylactic measures which should be taken in order to prevent a recurrence of these epidemics. Of course, instruction should be given to peasants generally as to the dangers of ergot, but Russian peasants are apt to be obstinate. A still better and more efficacious plan is to inform them of the great value of the diseased corn and to take care that there are ready means open to peasants of disposing of any that may be in their possession at, say, 6*d.* per pound. Something, too, may be done by watching the corn as it is brought to the mills to be ground.

ONE OF THE LATEST NOVELTIES.

IT is not often that medical or surgical inventions are capable of exciting amusement. Such, nevertheless, appears to have been the effect produced by one of the latest of their class—that suggested in our issue of Feb. 7th by a correspondent who advises the use of a distinctive "medical hat." In justice to the originator of this novel idea we must recall the fact that he is evidently guided by a more practical and a more professional motive than the mere desire for self-advertisement. The hat in question is not of the same family as the curious robe and wand of the ancient charlatan. It has more affinity with the clerical broad brim or the barrister's wig and gown, and the chief purpose of the inventor, a practitioner in the country, evidently is to facilitate recognition and thus reduce the fatigues of the daily round. Viewed in this light, the proposal is not perhaps so laughable as some have imagined. Knowing, however, the aversion of medical men in general, and especially of rural practitioners, to anything like a stiffly professional fashion in dress, we are not surprised that the proposed hat has been somewhat battered by its contact with freely expressed opinion. The horse and carriage, the still approved surtout, and the inconveniently convenient bag may be considered to give enough of the professional aspect without the added bondage of a peculiar headdress. Any who may still desire to increase the number of their accoutrements have of course the option of adopting the newest fashion in medical dress.

ENLARGEMENT OF THE SPLEEN IN INFECTIOUS DISEASES.

AN interesting series of researches have been carried out by Martinetti and Barbacci (*Morgagni*, September, 1890) with reference to the enlargement of the spleen which frequently occurs during the course of the acute infectious diseases. Twelve guinea-pigs and six rabbits were inoculated with anthrax. In half the number of the animals the spleen had been extirpated before inoculation. The absence of the spleen seemed to have no effect on the course of the disease. The temperature was taken in eleven of the cases, and exhibited at first a slight rise, but at a certain stage of the disease the temperature fell suddenly, this corresponding with the appearance of bacilli in the blood and a considerable decrease of the red blood-corpuscles. This was accompanied by an increase of white cells, most marked in those animals in which the spleen had been removed. The changes which occurred in the spleen were noted in those animals which had not been previously operated on and also in thirty-six white mice. The alteration was not apparent until the bacilli appeared in the blood. The first changes observed were that in various parts of the organ, and especially around the Malpighian corpuscles, the cells became granular and their nuclei stained more deeply; the spaces between the cells became wider and appeared to be filled with a homogeneous substance. In addition yellow pigment and red blood-cells were found in the interstices of the tissues. At this period, also, in the spleens of mice and in the parts not affected by the above changes, large cells were seen with irregularly shaped nuclei, similar to those which occur in the marrow, spleen, and other organs during the embryonal state. Anthrax bacilli were also demonstrated. In the further course of the disease the spleen substance became more and more infiltrated with blood, and the large cells just described underwent a regressive metamorphosis; so that finally there was an appearance as if gangrene had commenced. In contrast with the passive processes taking place in the pulp, more active changes were occurring in the Malpighian corpuscles, in spite of the almost complete absence of bacilli. The follicles increased in size, and there was rapid increase of nuclei. As regards the lymphatic glands, no difference was appreciable between the animals which had had the spleen removed and those which had not. Changes were first observed in the medullary substance, and these were principally disorders of circulation — hyperæmia followed by stasis and thrombosis. In the cells rapid cell proliferation took place, but no bacilli could be demonstrated. In some of the guinea-pigs the bone marrow was examined. In those in which the spleen had been removed there was an increase of pigment, both free and in the cells; giant cells were also more numerous. In all the animals there was an increase in number of the red and white blood-cells, and larger cells of unknown nature were also noticed. In the giant cells, contrary to what has been stated by most observers, undoubted signs of karyokinesis were noticed. The large cells which were found in the spleen during the first stages of the disease, and in the bone marrow during the whole course of it, were considered by the authors of the paper to stand in some relation to the source of the red blood-cells, and to be an effort on the part of the organism to make up the loss of these cells by fresh elements.

COTTAGE HOSPITALS.

AT the recent annual meeting of the subscribers to the cottage hospital at Mold a resolution was passed limiting the medical staff of the institution to two legally qualified and registered surgeons, to take duty on alternate weeks. An amendment to the effect that any practitioner should be allowed to attend his own patients was not carried. Seeing that there are about six practitioners in the neighbourhood, it seems unfortunate that the staff should be limited, since this might make the practice of the institution too exclusive—a most undesirable thing in our opinion, and one not tending to the furtherance of the spirit of goodwill and fellowship that should obtain amongst professional brethren. The conditions under which a cottage hospital in a comparatively small district is best carried on are those which involve the mutual coöperation of all the medical practitioners in its vicinity.

THE RESULTS OF ENTERIC FEVER AT SOUTHEND.

WE have more than once commented on the doings of Southend in connexion with the recent widespread epidemic of enteric fever in that place. But the last news surpasses much of the former action adopted. According to local statements, the medical officer of health, Mr. Albert Morris, submitted to the local board of health a statement as to the causes of the disease, which report was strongly condemnatory of the existing sanitary administration, and from the local press we learn, on Mr. Morris's authority, that his statements, whatever they were, were fully confirmed by Dr. Thresh. This report has never seen daylight, although the authority are challenged to produce

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it. The other day, the date on which the re-election of Mr. Morris came due, he was quietly passed over, and his predecessor in office, who resigned his office after having some years back "told the Board what he thought of them," was again elected to the office. We can only repeat that the authorities of Southend are not going the way to restore that confidence in the sanitary administration of their "health resort" on which success must necessarily depend. Mr. Phillips, the re-elected officer, may be trusted to advise rightly in the difficulty; but some ratepayers would have been more satisfied if they had seen Mr. Morris's report before its author was shelved. Since Mr. Morris was doubtless under the obligation to transmit every "special" report to the Local Government Board, a copy of the document might possibly be procurable through that department.

THE DIAGNOSTIC VALUE OF FLUORESCËIN DYE IN DISEASES OF THE EYE.

DRS. FROMM and GROVENONN, assistants in the eye clinic at Breslau, publish in the *Archiv für Augenheilkunde* an account of some experiments with fluoresceïn. They experimented with the potash salt of fluoresceïn and the soda salt of fluorescin, preferably with the former in a 2 per cent. solution. One drop of this liquid is dropped on the conjunctiva; it is well afterwards to wash the conjunctiva with water or any indifferent liquid. The normal cornea is never coloured, but if it is anywhere denuded of epithelium such spots and the whole region near them become stained of a diffused green colour, which generally disappears again in from two to three hours. The corneal substance is deeply impregnated with the colour, but the epithelium is only slightly tinged on each side of the defect. Practised observers have confessed that by no other means were they able to detect and map out a corneal lesion so well as with fluoresceïn. This chemical is most valuable for the diagnosis of superficial injuries which are often difficult to recognise, as if these do not take the stain a fresh injury may certainly be excluded. Particles of rust which often remain after the removal of foreign bodies, and are difficult to recognise, are plainly distinguished from their green base. Every ulcer is of course coloured, and a green colouration is seen over every abscess and infiltration. Opaque spots, however, do not stain, and so are distinguished from fresh lesions. In the conjunctiva the localities of any loss of substance are coloured yellow, and injuries become visible which otherwise could not have been discovered. In conjunctivitis only phlyctenulæ become coloured, and by this means they are distinguished from other nodular prominences. The deeper parts of the eye are not affected.

THE NEUROPATHIC ELEMENT IN SPASMODIC ASTHMA.

ALTHOUGH the general explanation of the asthmatic paroxysm is that it is due to bronchial spasm, which may often be excited by peripheral nervous irritation—a view that has received much attention of late in respect to the causal relationship of nasal polypi and asthma,—nevertheless there have not been many attempts to demonstrate the existence in the asthmatic of an underlying state of nervous instability. This lacuna is in a measure filled by a paper by Professor E. Brissaud (*Rev. de Méd.*, Dec. 1890), in which he collates a considerable amount of evidence to show that the (true) asthmatic may be regarded as a neurotic; and hence the removal of the supposed exciting cause (e.g., nasal polypi) can hardly be expected to be curative. Indeed in many cases, he avers, the asthma has recurred some time or other after the patient has undergone prolonged treatment at the hands of the rhinologist. The probability of some inherent nervous defect in a disease like asthma, the periodical recurrence of which reminds one of the epileptic nerve-storms, seems so self-evident that it is singular so little attention has been paid to it, even by such a strenuous advocate of the nervous theory of the paroxysm as Hyde Salter, for instance; but the fact is that attention has been fastened too much on its alleged diathetic relationships, and also to the existence of local organic disease, of digestive, respiratory, or generative organs as possible sources of reflex irritation. On the other hand, the association of asthma with insanity and alternation of attacks of the mental affection with those of the respiratory apparatus, has been noted by several alienists, and Professor Brissaud quotes in this connexion the writings of Savage, Kelp, and Conolly-Moore. Cases are given of asthma associated with hypochondriasis, melancholia, and hysteria, or combined with some mental disturbance or other nerve disorder, as neuralgia or epilepsy. The general conclusion is that asthma is only one manifestation of the general neuropathic tendency, and that an inheritance of nervous disorder is a main predisposing factor in the affection. Like migraine, which once was considered in France to belong to the "arthritic" group, but which is incontestably regarded now as "neurotic," asthma, too, has relationships far more close with the neuroses than with any diathetic state. Of course, it is not implied that in the same subject other nervous manifestations must necessarily occur, even in their slightest form, for this is not essential to any single neuropathic affection. It is only that the asthmatic belongs to the group of neuropaths, and that his special affection may be the sole expression of his alliance therewith. Hence it is explicable how comparatively slight peripheral irritation of sensory nerves—e.g., of the nasal mucous membrane, or odours, or even simple mental apprehension or dread of attacks supervening under certain circumstances—may suffice to induce the asthmatic paroxysm in the individual of nervous constitution. Nor, as stated, can the cure of spasmodic asthma be reasonably expected to invariably occur after the removal of the supposed exciting cause.

METHOD OF ADMINISTERING SULPHONAL.

EVERYONE who has used this drug must have noticed how much it varies in the rapidity with which its effects are produced according to the method of administration. Given in powder on the tongue its action is much delayed, and is occasionally only produced in its greatest intensity on the day after its administration. Given, however, with, for example, some hot soup, an hour or two before bedtime, its effect is not so long delayed and is more certain. Dr. Stewart of Philadelphia has found a simple and satisfactory method of using the drug, which he describes in a recent number of the *Medical News*. He directs that just before retiring the dose of sulphonal should be placed in a tumbler, which is then filled two-thirds with boiling water. This dissolves the powder. The solution is then stirred until it is sufficiently cool for drinking, or cold water is added to reduce it to a suitable temperature. Such a temperature is reached without causing any precipitation of the drug. To insure success the sulphonal must be taken wholly dissolved, and the hotter the solution is when taken the better. By this method the period of so-called therapeutic incubation is done away with. Sleep results in most cases in a very few minutes, and is said to be sound and dreamless. Another advantage which this method of administration is said to possess is that it is not followed by the annoying drowsiness so often present on the day after the administration of the dose of sulphonal. The taste of the solution is said to be a little

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unpleasant, but this is easily overcome by the addition of some flavouring substance. Undoubtedly its insolubility is the great objection to sulphonal, and if it can be administered in this simple way, so as to produce its effect promptly and efficaciously, its value will be much increased.

ALLEGED BREACH OF THE NOTIFICATION ACT AT BOLTON.

A MEETING of the medical men of Bolton and district was held last week to consider the recent prosecution of Dr. Gilchrist by the Bolton Rural Sanitary Authority for an alleged breach of the Infectious Diseases Notification Act, 1889 (reported in our last issue). There was a large attendance, and Dr. Smith was voted to the chair. After a general discussion upon the merits of the case, it was unanimously resolved that it be a recommendation from that meeting to the Parliamentary Committee of the British Medical Association, local members of Parliament, rural sanitary authorities, and other public bodies, that steps be taken to get inserted in the Act a clause whereby the defendant in such cases may give evidence in his own defence. There was a general feeling expressed also that it was undesirable for a medical officer of health to make a clinical examination of a patient upon notification, as in this case.

TUMOURS OF THE BRAIN.

A PAPER on this subject was read a short time ago before the Boston Society for Medical Observation by Dr. Stedman, and several cases of so-called cerebral tumour were related. The cases are very interesting, and, as each of the five dealt with is completed by a necropsy, they ought to be a valuable series. But unfortunately their value is not so great as might be expected, because while some of the cases are no doubt what would be strictly described as tumours, others are, so far as the evidence in the paper at least can inform us, cases of cerebral softening, the result of embolism or of thrombosis. It is also unfortunate that the ophthalmoscope should not oftener have been called into requisition. We only find it mentioned as having been used in one case, and in that case apparently but once, and with a negative result. Considering how obscure the causation of optic neuritis is, and how important it is to make quite certain of its presence or absence in a given case of suspected cerebral tumour, no apology is needed for insisting upon the importance of such an examination in these cases; and, while acknowledging the interest and value of Dr. Stedman's cases, we can only regret that imperfect examination renders them less valuable than they might have been made.

THE GERMICIDAL PROPERTIES OF BLOOD.

A GREAT deal of important information has lately been obtained on this subject, and von Fodor, who has already contributed some useful papers, publishes in the *Centralblatt für Bakteriologie und Parasitenkunde*, vii., No. 24, some further experiments which he has made, especially directed to ascertain under what conditions the germicidal properties of the blood are at their highest, and in what way the composition of the blood affected these properties. The first series of researches had reference to the composition of the blood, and proved, in the first place, that arterial blood has a more destructive action on the bacteria than venous, and also that fresh blood has a more powerful action than that which has been shed for some time. Again, the germicidal power of the blood was weakened in an atmosphere consisting entirely of oxygen or carbolic acid; on the other hand, the removal of gases from the blood had no appreciable influence. The blood of rabbits which had been poisoned by carbolic acid gas was not fatal to the bacteria. As regards the influence of the movement of the blood (circulation), experiments were made by placing the blood of rabbits, which had already been inoculated, in small globes, some of which were kept in constant movement and others quite stationary. No appreciable difference was observed. Some very interesting results were obtained in reference to the temperature of the blood. From these it would seem that the germicidal power of the blood increased with the rise of temperature, reaching its maximum at 38° to 40° C., and then again gradually diminishing. The author mentions an interesting fact—i.e., that the individual predisposition of any animal to an infectious disease seemed to stand in direct relationship with the germicidal power of its blood. The second series of researches was directed to the influence of drugs on the power of the blood to destroy germs. Hydrochloric acid had no effect. After treatment by tartaric acid a marked decrease was noticed, and the same result was produced by quinine. Common salt and carbonate of ammonium caused a slight increase of the power, the phosphate of sodium a more marked effect, whilst the carbonates of sodium and potassium produced a very remarkable increase. From the experiments the author concluded that any drugs which cause increased alkalinity of the blood considerably raised the resisting power of the organism against the inroad of bacteria. The third of this series of experiments corroborated this supposition. Of eight rabbits inoculated with anthrax all died, whilst of nineteen which had been previously injected with soda solution only three died, thus proving the efficacy of the alkalisation of the organism. Of the remaining sixteen cases a few were affected at a later date, but the majority remained perfectly free from disease.

ROYAL COLLEGE OF PHYSICIANS.

A COMITIA of the College was held on the 18th inst., the President, Sir Andrew Clark, Bart., in the chair. It had been specially convened to receive a communication from the Registrar of the University of London, transmitting, by direction of the Senate, a further revised scheme for the reconstitution of the University. The communication was read, and the President explained the tenor of the scheme so far as it related to the College and the faculty of medicine. A recommendation from the University Committee to the effect that the scheme be accepted by the College was read, and its adoption moved by Sir R. Quain, and seconded by Sir Risdon Bennett. Dr. Sansom moved an amendment to defer action on the part of the College till the opinion of Convocation had been taken on the scheme. This was seconded by Dr. N. Moore. Drs. Bastian, Allchin, and Sir R. Quain having also spoken on this amendment, it was put and lost by a large majority. After some further remarks by Drs. Pye-Smith and Lionel Beale, the original resolution was carried *nemine contradicente*.

NEW CLOTHES A VEHICLE OF CONTAGION.

THERE is probably no custom which lends itself more readily to the propagation of infectious disease than the household manufacture of certain goods, especially of articles of clothing. Every practitioner whose duty calls him to the homes of the working poor must have been struck with this fact. In many cases it could not well be otherwise under existing conditions. The two or three available apartments are occupied by a fairly numerous family, and a separate workroom would be regarded not unreasonably as a needless concession to personal comfort. Thus it happens that the same chamber, nay, the same bed, often contains or bears the sufferer from scarlatina or measles, and the jacket or gloves which to-morrow will adorn the window of some city clothier. Disinfected? Probably not, unless it be under pressure of some external

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authority, for the class of workers to whom we have referred too often exhibit a surprising ignorance or carelessness with regard to the properties of contagion. The advantages conferred by the Notification Act may not be equally apparent among better educated and more scrupulous persons. These are commonly a law to themselves. To the home of the poor worker it comes as a purifying force, and ensures as far as medical and sanitary supervision can the observance of such rules as are needful to prevent the spread of disease. In the present connexion these must imply the effectual purification of all clothing before it leaves the infected house, and the refusal to the inmates of any more work of a like sort during the prevalence of the illness.

THE MECHANISM AND TREATMENT OF IMPACTED SHOULDER PRESENTATION.

DR. C. A. HERZFELD of Vienna upholds, in a most interesting contribution to Holder's *Sammlung Medicinischen Schriften*, Dr. C. Braun's key-hook as the gentlest, most rational, and most successful of all instruments indicated in impacted shoulder presentation. The author has carefully studied the whole reference literature, and has observed twenty-five cases in Braun's clinic. These cases offer strong evidence of the simplicity, suitability, and safety of the application, as in none of them did the decapitation of the child lead to any injury of the mother.

TESTIMONIAL TO MR. GANT.

AT a meeting of the Committee of the Royal Free Hospital, held on Jan. 15th, 1891, Mr. Gant was presented with an illuminated scroll by the committee on the occasion of his retirement after a period of thirty-seven years' service on the surgical staff of the hospital. The committee desired "to place on record their high appreciation of his very valuable services, which, together with his well-known works on Surgery, have reflected the very greatest credit upon him and the institution with which he had been so long and so honourably connected." Mr. Gant was also appointed a consulting surgeon to the hospital.

ORGANIC HEART DISEASE AT DIFFERENT ALTITUDES IN SWITZERLAND.

TAKING as a basis the statistics of Switzerland for the years 1876 to 1886, recording 25,500 cases of death from organic heart disease, Mdlle. N. Iwanoff has written an essay on the question whether mountaineers suffer more frequently from that disease than the inhabitants of the plains. The writer has constructed a table in which all the localities of Switzerland were divided into four categories, according to their altitudes. In the first, situated from 200 to 400 metres above the level of the sea, there was a mortality from organic heart disease of 102 per 100,000 inhabitants; in the second, situated from 400 to 700 metres above the level of the sea, the mortality was 92 per 100,000; in the third, from 700 to 1200 metres above the level of the sea, 82 per 100,000; the last category, comprising all higher altitudes, had a mortality of only 47 per 100,000. These numbers show plainly that the mortality of organic diseases of the heart decreases as the altitude of the habitation increases. As a secondary result of the inquiry, it was found that this mortality is higher in towns than in the country. These results are all the more interesting, as formerly all eminent physicians, excepting perhaps Stokes, forbad their patients all unnecessary exertion, and even now Oertel's treatment meets with considerable hostile criticism. Professor A. Vogt of Bern adds several statistical remarks to the essay, from which it appears that if the population were strictly divided into agricultural and industrial districts the law of decrease of organic heart disease in proportion to the higher altitude would be more marked in the agricultural districts. The statistics of the industrial districts seem, on the other hand, to refute the law. Considering, however, that the mountaineers are mostly watchmakers or machinists, while in the plains there are more builders and other artificers, whose work requires uninterrupted motion of the body, Professor Vogt concludes that this deviation from the rule is only apparent. This conclusion seems justified by the fact that, of 100,238 recruits, the proportion of heart disease amongst those of sedentary occupation far exceeded all the rest.

POOR-LAW MEDICAL OFFICERS AND THEIR DEPUTIES.

A DISPUTE has been going on lately between the Holborn Guardians and their medical officers in reference to the appointment of deputies. The guardians have passed a resolution forbidding their medical officers to appoint deputies amongst themselves, though the plan is pretty generally adopted, and also works well, both as regards the patient and the medical officer. It is an arrangement, too, which is sanctioned by the Local Government Board. Moreover, it is to be remembered that the difficulty of finding outsiders is very great unless the medical officers devote the greater part of their salary to remuneration for such service. The best advice we can give to the medical officers who have appointed their deputies is to comply with the standing orders and let the guardians and Local Government Board fight out the matter amongst themselves.

THE DRINK BILL FOR 1890.

IT is appalling to find that the Drink Bill of 1890 amounts to £139,495,470, an increase of £7,282,194 over the sum of the previous year,—all common sense and medical science notwithstanding. It is said to be equal to one-twelfth of the estimated income of all persons, to one-fifth of the National Debt, and to be eight times more than the income of all the Christian churches. It is not our business to moralise on this expenditure. To us it means so much cirrhosis, Bright's disease, gout, rheumatism, insanity, &c.,—disabling employment, taking the pleasure out of the life of families, and bread out of the mouths of children. The Drink Bill for last year is larger than for any year but that of 1878, when it was more than 142 millions of pounds.

OVERCROWDING AND OPEN SPACES.

IN a paper on overcrowding in towns, the first part of which has just been published, Mr. C. Roberts discusses the density of population in the zone of parishes immediately surrounding the City district of London. His estimate of an ideal density is by no means unreasonable. It is already realised in certain parishes, notably in that of Islington. It allows a population of 108 persons to the acre, and eight persons to each house within this area. The death-rate under such conditions, it is interesting to note, is in Islington as low as 13·3 per 1000. A table of statistics, founded on information derived from reports of medical officers of health and other sources, proves that this proportion represents the exception, and excess the rule, throughout the circuit of the "Greater City" above mentioned. A higher death-rate recorded in these cases might be regarded as a significant accompaniment, were it not that its prevalence in other less crowded parishes asserts the active influence of other causes. As regards the important subject of open spaces, Mr. Roberts' views may well satisfy the most liberal of his readers. They are as comprehensive in scope as wholesome in purpose, and their accomplishment cannot

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certainly be the work of a day. Among other prospective changes he proposes that the grounds of Lincoln's-inn-fields, the Foundling Hospital, St. Luke's Asylum, the Artillery Ground, and various neighbouring almshouses should be utilised in this way, the dispossessed occupants of the foundations above named being transferred to the country near London. To do all this of course implies no trifling cost in effort and in money. The execution of a similar but more limited scheme might, however, be accomplished without much difficulty, and the free enjoyment of even one of the considerable areas mentioned would greatly increase existing facilities for physical recreation.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Dr. Bumm of Erlangen, who was offered the chair of Mental Diseases, has declined to leave his present chair.

Erlangen.—Dr. F. Hermann has been promoted to an Extraordinary Professorship of Anatomy.

Heidelberg.—Dr. T. Hoffmann has been promoted to an Extraordinary Professorship.

Leipsic.—Professor Sattler of Prague has been offered the chair of Ophthalmology, vacant by the death of Professor Coccius.

Munich.—It is now stated that Professor Angerer is to be appointed to the chair of Surgery recently left vacant by Professor von Nussbaum's death (i.e., *not* Trendelenberg, as in THE LANCET of Jan. 31st).

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Bousouet of Marseilles, suddenly, while bending down to examine a patient.—Dr. Michaelis of Berlin, formerly in large practice as an ophthalmologist.

THE Parliamentary Committee of the London County Council have recommended the adoption of the following resolution: "That a petition be presented to Parliament by the Council in opposition to the Metropolis Water-supply Bill; and that the Council do oppose each of the following Bills, against which they have presented petitions: The London Water Commission Bill, the Southwark and Vauxhall Water Bill, and the Croydon Water Bill; and that the costs and expenses incidental to the said petitions and the proceedings consequent thereon be charged to and paid out of the county fund." It was pointed out that it was necessary to have a majority of the Council in favour of the resolution to make it effective, and, the show of hands showing only sixty supporters, a division was demanded, when the numbers were: For the resolution, 75; against, 17; majority, 58.

SIR G. M. HUMPHRY, F.R.S., has, we understand, accepted the invitation of the Cambridge Medical Graduates' Club to a congratulatory dinner to be held at the Marlborough Rooms, Regent-street, on the 24th inst. Sir George Paget, K.C.B., is to preside. Invitations to the dinner have been accepted by Sir Joseph Lister, Bart., F.R.S.; the Provost of King's College, Cambridge; Sir Alfred Garrod, F.R.S.; Mr. Bryant, President of the Royal College of Surgeons; Dr. Priestley; Mr. Hutchinson, F.R.S.; and other leading members of the medical profession.

THE death is announced at Potsdam of the well-known optician, Professor Edmund Hartnack, with whose microscopes everyone is familiar. He commenced his manufacture of optical instruments in Berlin, but subsequently removed to Paris. Political feeling there, however, drove him out of France in 1870, and since that time he has been living in Potsdam. The University of Bonn conferred an honorary doctor's degree on him in 1868, and the Minister of Education granted him the title of professor in recognition of the invaluable services he had rendered to science.

THE second lecture of the course of Ingleby lectures now being delivered by Mr. Jordan Lloyd, M.B., M.S., F.R.C.S., in the Examination Hall of Queen's College, Birmingham, will be given on the 26th inst. The course will be continued on the following five Thursdays, the subject being "Practical Observations on the Surgical Diseases of Children."

WILLIAM R. HUGGARD, M.A., M.D., M.R.C.P. Lond., Prakt. Arzt, Schweiz, has been appointed British Pro-Consul at Davos-Platz, Switzerland.

DR. DAVID W. FINLAY has been appointed Extern Examiner in Medicine to the University of Durham for the current year.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.[1]

THE proceedings of the Berlin Medical Society on the 11th inst.[2] respecting Koch's remedy were of considerable interest, Professor Virchow again intervening in a long speech.

Dr. SILEX showed a case of lupus of the face, nose, and conjunctiva, which reacted well to the injections. After 120 milligrammes had been given the lupus appeared to be healed; but within ten days it reappeared, and in from two to three weeks the nodules were as large as ever. The effect on the conjunctiva was less marked; indeed, the whole of the left cornea became covered with pannus. He added that but few cases in the eye clinic had been treated by the remedy.

Dr. A. FRAENKEL reported on the sixty-one cases of lung disease treated at the Urban Hospital for at least four weeks; forty-eight had been treated for more than seven weeks, and some even for as long as eighty days. He divided the cases into slight, moderately severe, and severe. The "slight" comprised those of moderate infiltration of one apex; the "moderately severe" those with infiltration of a whole lobe, or of both sides, or complicated with pleural effusion or slight laryngeal tubercle; and the "severe" those with indubitable signs of excavation, or complicated with intestinal tuberculosis or advanced laryngeal affection. Of the total eighty-three cases (including those treated for less than four weeks) there had been two deaths. One was a woman who, together with manifest pulmonary signs, had paralysis of the left sixth nerve; and after the third injection of 0·001 grm. she had headache and other signs of tuberculous meningitis, from which she died in a week. The other was a man aged fifty-one, with marked affection of both lungs. He received five injections, the last being 0·005 grm., which was followed by severe dyspnœa and death in three days. But there was no evidence of acute congestion or pneumonia—only old caseous foci and some large cavities in the right upper lobe. In seven cases the treatment had to be suspended—in three on account of hæmoptysis, in one after a week's injections, which had reached 0·1 grm., and the hæmoptysis lasted for twenty-four days. In four cases an aggravation of symptoms caused the suspension of injections. In one, a case of double pleurisy, with unilateral phthisis, severe dyspnœa; and in three, persistent fever with increase of local signs. One of these was especially remarkable—the changes in physical signs being very striking, and attributable to severe catarrhal

[1] See THE LANCET, vol. i. 1891, pp. 215, 271, 328, and 389.

[2] Considerations of space compel a considerable curtailment of this report, which occupies sixteen closely printed columns of our contemporary, the Berliner Klinische Wochenschrift, No. 7.

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pneumonia. One case of lupus of the soft palate, pharynx, and larynx, together with renal tuberculosis, was treated with great caution; but no reaction was observed, although as much as 0·07 grm. was reached. Still latterly there seemed to be some melting down of the tubercular growth on the epiglottis and false cords. As to the pulmonary cases, he held that, whatever the value of physical signs, one could not speak of a relative cure so long as the sputa contained bacilli; and, indeed, he did not think the time had yet come to speak of absolute cures. He mentioned a case in which bacilli had been absent for nine weeks, when hæmoptysis supervened, possibly from a small, not recognisable, cavity. Of the sixty-one cases, there were three in which bacilli were absent for from seven to nine weeks, and the physical signs, always slight, had subsided. In no fewer than fifteen of the slight cases no change as regards amount of bacilli could be noted; and yet these were cases with the very slightest physical signs, including some which for two months had been receiving 0·1 grm. twice a week. Bacilli may spontaneously disappear from the sputum for some time. Twenty-eight cases (thirteen slight and fifteen moderately severe) might be described as improved; not as regards the bacilli, but subjectively, and in aspect, in diminution of sputum, and in increase of weight. He had often remarked a notable increase in weight of such patients before the introduction of Koch's treatment, but nevertheless the general improvement under the influence of the injections was very striking. In twenty cases (three slight, thirteen moderate, and four severe) no change had been observed. Lastly, nine cases (six moderate and three severe) had got worse, showing that it could not always prevent extension of the disease. He summed up his experiences as:—1. A limited number, especially of slight cases, undergo a marked change for the better, bacilli disappearing from sputa and general nutrition improving, this being apparently due to the melting down of caseated infiltration. Yet such a result cannot always be predicted, even in the mildest cases. 2. In a large number (about one-half) there is improved nutrition, which may be due to Koch's method or to tonic and dietetic treatment. 3. In no small percentage the moderately severe cases grow worse, and sometimes from conditions attributable to the treatment. 4. Severe cases ought to be quite excluded from the treatment.

Dr. JULIUS WOLFF spoke of the treatment in joint disease, detailing two cases in which marked extension of the tubercle took place. He did not think the original hope, that the presence of "dead tuberculous tissue" would more clearly define the parts to be excised, had been fulfilled, nor that the general and local reactions were at all proportionate to the extent of the local process. But in not one case had the general condition of the patient been unfavourably influenced by the remedy, nor in the cases operated upon had it had any bad effect on the course of the wound.

Dr. FLATAU referred to two laryngeal cases shown by him a fortnight back, in which, during marked improvement, there suddenly arose a fresh outbreak of miliary tubercle in the larynx. In the one, where there was nothing in the larynx at first but a small cicatrix, and where marked improvement took place in the pulmonary signs, there was a further extension of disease in the larynx, and appearance of tubercle in the tonsil, which had disappeared; and no further extension occurred, although the injections were pushed as far as possible. In the other patient, where weakness precluded continuance of the injections, more nodules had appeared, the older ones becoming more opaque.

Professor VIRCHOW spoke at considerable length upon the question of the cure of tubercle, so variously interpreted; and in the first place he inquired what was precisely meant by the term "tuberculous tissue" used by Dr. Koch. The conception of "tubercle" had undergone so many changes that it was difficult to be sure of the meaning now conveyed by it; but it was clear that the tissue referred to by Dr. Koch was not the circumscribed granulation, but a diffuse infiltration. It had been objected that too much attention had been paid to anatomical facts, but only in that way could certain information be obtained. No one doubts that in a tubercular inflammation—e.g., arachnitis tuberculosa—there are two factors: inflammation, producing an exudation; and tuberculosis, a tissue. So in the lungs, besides the true tubercle or tissue, there is in the course of phthisis the occurrence of a quantity of inflammatory processes which are not tubercle, such as the smooth, soft, catarrhal form, and the hard caseous form of inflammatory change. The difference is as great as that between the exudation and the tubercle in a tuberculous arachnitis or pleuritis. In the lungs there are inflammatory processes filling the alveoli, producing hepatisation &c., and another process excited by true tubercle, which forms a tissue. A like diversity is to be seen in the processes in tuberculous arthritis. In reference to the action of the injections, he wished the distinction could always be borne in mind between (1) the tissue strictly tubercular, (2) the tissue which arises near to or precedes the tubercle, and (3) the mere exudation products. One asks—Does Koch's remedy act on all three? Possibly, but the ostensible action is certainly not shown to an equal extent on all three. Deferring consideration of the point raised by Dr. Flatau as to the production of tubercle by the injections, there is no doubt that an immediate action of the remedy on tubercle as such is by no means uniform and constant. This may depend in part on the site of the tubercle—e.g., in liver, or mucous or serous membrane, &c., differences in physiological conditions. By the "cure" of tubercle in a mucous membrane is meant its breaking down into an ulcer, and the ultimate cicatrisation of the latter, all the tubercular matter having been got rid of. In a serous membrane, such ulceration, which so rarely occurs there, leads to fatal issues, and cannot be regarded as a curative process. Laryngeal tubercle differs from intestinal in rarely caseating (on this ground Louis denied the existence of laryngeal tuberculosis); the ulcers it excites are more superficial and earlier formed. As to the effect of the injections, it is of course impossible to determine whether certain tubercles were present or not before these began; but it is clear that the remedy does not act on all tubercle, for often no indications of degenerative change or of their resolution are visible. Tubercle tends rather to be encapsuled than removed by absorption; and he had not seen any more evidence in favour of the latter process in the present than in the past. Dr. Koch had said the bacilli were unaffected by the remedy, and if it were true that the tuberculous tissue were dissolved and rendered capable of absorption, the bacilli might be absorbed too, with considerable risk. Professor Virchow thought rather, from the clinical and anatomical facts, that the remedy acted upon the tissue around the tubercle, which might beneficially lead to its extrusion, but also imperilled the patient from its extent and intensity. In his previous statements he had only referred to conditions which had occurred, and thence left it to be inferred what were the risks involved; but the determination of the relative frequency of these dangers can only be made after prolonged investigation. The severe changes excited in the vicinity of the tubercle, as seen in cases of lupus and of laryngeal tuberculosis, are probably reproduced in lungs and brain, producing conditions of acute swelling, hyperæmia, œdema, hæmorrhagic infiltration, leucocytal emigration, and, later, new formation of tissue. Then there is the question whether Koch's method does not hasten disintegration processes. It might be affirmed positively that the remedy does not excite any process which cannot occur apart from it. Apart from cases showing extreme increase of a phlegmonous process, all the changes induced are those previously known as forms of inflammation or mortification. But their progress is hastened, so that in a couple of days as much destruction is brought about as might perhaps have otherwise taken a month; and under certain conditions this is a great gain, for the more rapid removal of the noxious matters acts prophylactically against further infection of neighbouring or remote parts. The "clearing up" of affected parts of the lungs noted by some observers is explicable when the characters of catarrhal inflammation with concomitant atelectasis and bronchial occlusion are borne in mind. Fatty metamorphosis and the melting down or the shrinking of the hepatised areas may conceivably explain the improvement in physical signs; not to mention the rarer concomitant of resolving fibrinous pneumonia. So that the signs of "clearing up" are attributable to the process of catarrhal hepatisation. Hitherto we have known nothing of a spontaneous resolution of caseous hepatisation. When small, these foci may become encapsuled; when large, softer and excavate; but neither of these modes of "cure" will restore the respiratory capacity of the affected parts. No one has affirmed that Koch's remedy acts favourably on indurative and encap-

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suling processes; its action consists in hastening the softening of caseous material. Herein lies the danger arising from the swallowing or aspiration of the rapidly softened products. So far, then, there was no evidence that the bacilli are killed and dissolved; no direct facts to prove that the remedy causes resolution of the true tubercular tissue or the absorption of tubercle as such. Then there was ample evidence that the tubercle as well as the inflammation is rapidly destroyed, thereby warranting a possibility of a relatively early cure. But there is no fact showing that induration and the encapsuling of caseous parts are favoured; rather is it that the remedy liberates masses previously encapsuled, and in that way converts an apparently harmless focus into a source of actual danger to the patient. Professor Virchow expressed the hope that the facts he had adduced might lead to more definite ideas as to the indications for the remedy, and the rejection of such cases as were manifestly unsuitable. He was far from considering these experiments as closed. He recognised with pleasure that it was highly important that such researches as had been related by Dr. Flatau should be pursued to determine if a true absorption occurs. It would be a wonderful thing if the tubercles evoked by Koch's remedy should also be made to disappear by its action. It was not impossible; but yet when we see the thousands of miliary tubercles in the bodies of those who had been injected (tubercles which some thought were all present before the injections) it is difficult to understand why tubercles arising in ordinary process of tuberculosis should escape, whilst those recently arising should disintegrate. It was important to know whether these "new tubercles" underwent any change spontaneously, whether, if the injections were not continued, they would increase in size, or what would happen to them.

Dr. FLATAU explained that the ideas about the cure of tubercle of mucous membrane were not his own, and that in the case he related the treatment had been suspended for a fortnight without any change beyond further outbreak, as related.

THE MIDWIVES' REGISTRATION BILL.

DEPUTATION TO THE LORD PRESIDENT OF THE COUNCIL.

A DEPUTATION consisting of about 100 representatives of corporations and medical societies was introduced to Lord Cranbrook by the Attorney General for Ireland, for the purpose of protesting against the Midwives' Registration Bill now before Parliament, and down for the second reading on March 3rd.

Mr. CROLY, representing the Royal College of Surgeons in Ireland, pointed out that the Council of that College would be quite willing to accept the Bill if adequate guarantees of education and competency were given. The training of midwives in Ireland had always been conducted with great care. The proposal to register all midwives now in practice was altogether objectionable. They ought to be made to show that they have been properly trained; and this was more important, inasmuch as the limitation to cases of "natural labour" was quite impracticable. In Ireland no person was recognised as a midwife without six months' training in a lying-in hospital and a subsequent examination.

The LORD PRESIDENT.—I observe that in this Bill Scotland and Ireland, except where expressly provided for, would not be affected by the Act.

Mr. CROLY continued that it was very important that midwives trained in Ireland should be put upon the English Register without any further tests.

The LORD PRESIDENT.—Yes, and that is provided for in Clause 8 of the Bill.

Mr. CROLY submitted that it was impracticable to entrust to separate County Councils or boards of guardians the examination and registration of midwives.

Dr. MACNAUGHTON JONES, representing the Royal University of Ireland, large numbers of the graduates of which were practising in England, said they opposed the Bill on the ground that it contained so many elements of danger that it was incapable of being satisfactorily amended in committee. It was an effort to legislate for an unknown quantity, and it did not attempt at any definition saving in one clause, where it refers to the midwife restricting herself to cases of "natural labour" only. Scientific obstetricians could not agree on this point. The Bill gave the women permission to attend that form of labour in which more than any other unskilled and uncalled-for interference imperilled the life of the offspring, and converted a perfectly safe case into one of considerable danger and difficulty. Legislation should take the form rather of securing for the public a high type of obstetric nurse, than in stereotyping and perpetuating an old and inferior grade of midwife. Not the least dangerous part of the Bill was that which qualified every existing "Gamp" who chooses to call herself a midwife to be registered without conforming with educational regulations and examination tests. If they could not do so, they ought to remain monthly nurses. The Bill did not define the duties of a midwife, or her responsibility in regard to puerperal septicæmia or the conveying of infection, and attached no penalty for neglect on the part of a midwife to call in skilled assistance at the proper time. The Bill contained inherent evidence of its having been drafted for a class without due regard to the interests or safety of the public.

Dr. JACOB, secretary to the Council of the Royal College of Surgeons in Ireland, pointed out that it would be permissible for incompetent women who were placed on the Register to come to Ireland, where a high standard of education had always been maintained, and practise midwifery. They dreaded that a similar thing would happen which occurred on the passing of the Dentists Registration Act, in consequence of which 4700 persons were admitted to the Register, the large majority of whom were not dentists in any sense of the word, and there they remained till the present day. They felt apprehensive that a similar course would be followed in the case of midwives, and the public for the next twenty-five or thirty years would be preyed upon by a large number of incompetent persons who had been annexed under this Bill simply by signing a paper stating that they were *bonâ-fide* practitioners of midwifery. He was authorised by the Apothecaries' Society of Ireland to state that in their opinion "no amending would make the present Bill tolerable."

Dr. GILBART SMITH, President of the Irish Schools and Graduates' Association, pointed out that, from the point of view of an ordinary physician, labour often became complicated from obscure organic disease, such as Bright's disease, and it would hardly be fair to leave the decision of such questions in the hands of a woman qualified by only a few months' training. The question had been discussed at a meeting of the Fellows of the Royal College of Physicians, and a committee had been appointed to inquire into the Bill, and there was no reason to believe that they would report in any direction but that of opposition to the Bill. He firmly believed that the best interests of the public and of the profession would be served by setting aside the present Bill.

Dr. RENTOUL said that the Medical Act of 1886 required those who practised midwifery to possess a qualification in medicine and surgery as well. This Bill was an endeavour to break through the spirit of that Act. The General Medical Council had laid it down that a student must study for at least five years, and fixes the minimum of knowledge which it was necessary for him to possess. This Bill wanted to educate the midwife in a few weeks or months, and enable her to claim fees in a court of law for all "natural labours"—that is, 990 out of every 1000 cases. The Bill could not make it penal if midwives attended abnormal cases, and it followed that the midwife ought to be competent to undertake cases in which delay threatened the life of the mother or infant. Under these circumstances she would require a full and complete training. In 1888 the report of the Registrar-General stated that 4160 died from "the accidents of childbed," most of whom lost their lives from complications arising from diseases of the heart, kidneys, or lungs. The midwife was not able to recognise these diseased conditions. Further, 30 per cent. of total blindness which affects persons in this country is due to infantile ophthalmia. There were not at present sufficient cases to supply both the medical student and the pupil midwife in midwifery. At the last session of the Council Dr. Glover moved that the minimum number of cases for each student should be thirty. To supply this number of cases to that number of students would require 51,990 cases. The voluntary medical charities gave relief

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to 50,790 lying-in women. If both student and pupil midwife must be trained, then the deplorable system which at present exists in Liverpool, where the medical student and the pupil midwife attend the same case, or it would lead to that very grave state of affairs where several students go in a body to attend the one case. And by repeated examinations aggravate the sufferings of the women. He was afraid that in future the medical student might have to receive his practical education in obstetrics from a midwife. He urged, further, that it might lead to increase in the number of stillbirths. The promoters of the Bill urged that there were about 15,000 midwives practising in England. He questioned if there were 1000 certificated midwives. The last census showed only 3000 who wrote "midwife" after their names. He submitted that the poor did not require such treatment. The Poor Law aids something like 10,000 lying-in women yearly; the voluntary medical charities relieve 50,790. There were, further, the provident and semi-provident dispensaries, and, lastly, over 24,000 doctors, many of whom were willing to go out for a confinement fee varying from 7*s.* 6*d.* to 15*s.* He urged that this Bill should be opposed.

Dr. MANSELL MOULLIN then addressed his lordship on the statistics connected with the practice of midwives.

Mr. J. E. DUNN, representing the Preston Medico-Ethical Society, suggested that a select committee should be appointed to consider the whole matter, and that evidence should be taken from those persons directly conversant with the wants and requirements of the people.

Dr. LOVELL DRAGE of Hatfield took exception to the action of the Obstetrical Society in this matter. It was composed of 700 gentlemen more or less interested in the science of midwifery, but the council was practically self-elective. This subject had never been before the Society until last week, when the council had it forced upon them. By postcard it had been ascertained that out of the 700 members, only 151 were actually in favour of the Bill; while 185 had expressed themselves as against it, 6 were undecided, 17 in favour of the principle of registration, but objected to the Bill for various causes; 21 considered three months' education insufficient and preferred a longer period. At the debate which had recently taken place on the subject the council had not brought forward a single fact or figure to show that there was any necessity for legislation whatever, and for his own part he knew of none. He believed, from considerable experience in the subject, that no rules which human ingenuity could provide would ever keep one of these uneducated women in her proper sphere.

Dr. C. ILLINGWORTH, representing the Blackburn district, maintained that the poor were quite able to pay the moderate fees demanded by young practitioners. In cases of inability the Poor-law medical officer was always ready to attend to the mother.

Mr. PERCY DUNN read letters from Mr. Braxton Hicks and other coroners, stating that they had instructed registrars of deaths to forward to him all midwives' certificates of stillbirths in order that the matter may be inquired into. They were of opinion that if midwives were registered, stillbirths should also be registered.

The LORD PRESIDENT of the COUNCIL was obliged for the fulness with which the matter had been brought before him. They were quite aware that this was not a Government Bill. It was a private member's Bill, for which the Government was not responsible, and he presumed that in addressing him on the subject they did so on account of his having some connexion with the General Medical Council, and, as such, he was supposed to have some interest in the matter, and the Privy Council became an important functionary under this Bill. At the same time there was no Government support to the Bill at present. He was a little puzzled, he frankly owned, as to the speeches of some of the members who had addressed him. Differences of opinion existed. On the one hand, the gentleman who had addressed him first spoke with some pride of the examinations which take place in Ireland, and that it was an advantage that such should be the case. On the other hand, Dr. Rentoul was rather for ending the midwives than for mending them. In Ireland they seemed to have the idea of mending them. Dr. Rentoul said that unless they became medical practitioners under the Medical Act, and qualified in medicine and surgery as well as in midwifery, they should not be taken any notice of, and he understood from that that he would rather that things were left as they were, and that midwives should not be recognised in any way. He understood that now there was no woman in the country who could not set up a midwife's establishment; there was no restriction on the part of law or any educational qualification to hinder her from setting up a midwifery business without any inquiry whatever. So far as the present state of things was concerned he could quite understand that many persons might suppose that it would be an advantage to give some education, even a smaller education, that would make more efficient those who could practise now, whether they were educated or not. However, what he gathered generally was that they entirely condemned this Bill, and that some of them were in favour of a general inquiry into the subject of midwifery in this country, whether in connexion with a Bill or not, or for a general inquiry upon the whole question before any Bill was introduced at all. That was a matter for grave consideration. Parliament was not very fond of taking up subjects in that sort of way without some pressure of immediate legislation, and so far as he was concerned there, he certainly, after hearing the powerful arguments which had been placed before him on the part of the profession, would say that, at any rate, he should defer offering any support to the Bill on the present occasion, and he might moreover say on the part of the Government that they would not support it.

After thanking his lordship the deputation then withdrew.

PUBLIC HEALTH AND THE LAND QUESTION.

A LECTURE delivered by Dr. George Homan, Secretary of the Missouri State Board of Health, Professor of Hygiene and Forensic Medicine at the St. Louis Medical College, on Public Health and the Land Question, has been published and circulated broadcast. It is an eloquent appeal in favour of land nationalisation as the best means of putting an end to the overcrowding and to the slums and rookeries that are a danger and a disgrace to the great towns and industrial centres of the civilised world. While leaving to political economists and to politicians the task of meeting the claim, pressed forward daily with more and more energy, in favour of land nationalisation, we may at least say that medical men, by reason of the practical experience they acquire while ministering to the needs of the sick poor, are especially fitted to discuss these grave social problems. Indeed, if we study the composition of the various parliaments of Europe, we shall find that among the most advanced and the most energetic social reformers an exceptionally large proportion belong to the medical profession. Dr. Homan commences his lecture by quoting the saying of the Indian chieftain: "The sun is my father; the earth is my mother; I will repose on her bosom." And then goes on to recall the classic legend of Antæus, son of the sea and the earth, who, when felled in conflict, at once received new strength each time he laid prostrate on the earth. From these legends Dr. Homan claims for every human being his share of mother earth, and argues that, by the monopolies of what natural laws intended as the property of all, we have created the unnatural overcrowding of our great cities, with all the attending evils that this begets. Leaving Dr. Homan to fight out this theory as best he may, we would cordially endorse his strong protest against the overcrowding of the tenement-houses in the great cities of America. Even in the Far West, at St. Louis, the death-rate of children under five years is equal to 40 per cent. of the total mortality. Yet St. Louis boasts of being one of the healthiest towns of its size that exist. If we go east to the larger cities, we find a much worse state of affairs. This, for instance, is what the Rev. F. D. Huntington, Bishop of New York, says about the commercial capital of the United States:—

"A civilisation which overtasks or underpays wage-workers in order to add superfluous affluence and irresponsible power to the estates of a few; which helps a hundredth part of the population to own half of the property; which exposes innumerable women to moral ruin for a living; which drives pale and emaciated and rickety children daily from pestilential tenements to factories and mines; which countenances an owner of real estate who has pocketed 4,000,000 dols. by the rental of four nests of misery and dens of vice five storeys high; which lets 15,000

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children die within a year after they were born in these cellars and garrets, without uttering a sound of indignation or alarm; which robs the citizen of his independence and manliness, enslaving him by fear or want to a landlord or employer; which increases the rate of suicide and insanity every year,—this, truly, is not a civilisation for any conscientious, thinking man to be proud of."

Dr. Homan remarks that among these crowded and oppressed populations a very high birth-rate prevails. This he attributes to an effort on the part of nature to meet the enormous waste of life so that a margin may remain to prevent complete extinction; but he protests that the vital and moral quality of offspring thus produced gravely endanger society. Tenement districts are known to police officials as nurseries of crime, as they are known to sanitary authorities as breeding-places of disease. "Those who do not perish early in life only live to become stunted, and crippled, and deformed in body or in mind, or both, and usually, sooner or later, become inmates of hospitals, reformatories, poorhouses, or prisons." Very truly, the lecturer goes on to complain that some degree of alarm and spasmodic activity in the way of arrest and prevention is occasionally manifested when cholera seems to be marching round the world, or Oriental plague breaks out in Russia, or some other epidemic menaces public health. But the influence of such epidemics on the general death-rate is really insignificant "when compared with the eternal gnawing at the population, at the bone and sinew, by diseases that are domesticated in all civilised lands mainly through the existence of conditions contraband alike of the common health, the common safety, common justice, and common humanity."

Dr. Homan then repeats what has so often been demonstrated before—namely, that these overcrowded districts are foci of epidemic disease which cannot be stamped out, but which will spread from the poor to the rich. He then eloquently urges:—

"It is well that breaches of natural laws bring their own punishment, be it slow or swift, as the case may be; that the superstition which would lean on miraculous power to stay the march of disease finds scant support to-day; that water will wet and fire will burn those who fall into them; that faith can stop neither bullets nor bacteria; that if we continually grow and sow the seeds of disease and death we shall just as surely reap the appointed harvest, for in no other way, perhaps, can the blind and selfish greed of man be taught the exceeding gain of justice and fairness, the profit of right doing to all."

PHOTOGRAPHING IN COLOURS.

THE invention which has recently been announced from Paris, of a method of communicating colour to a sensitive photographic film by the action of a ray of coloured light, will, if confirmed, awaken very widespread interest, for it is impossible to foresee all the applications to which such a discovery might be expected eventually to lend itself. The idea is credited to M. Lipmann, a professor of the Sorbonne and a physicist whose name is already widely and favourably known in connexion with some highly ingenious instruments of physical research. The theory which he is said to have successfully embodied in experiment is that the interference of two rays of light of the same wave length may be caused to produce a characteristic effect upon a sensitive film such as amounts to dyeing the film of the particular hue in question. So far as has at present been explained, the process appears to depend upon the doctrine that the chemical action, like the chromatic properties, of a ray of light is capable of being affected by the conditions which give rise to the phenomena of interference. In itself this seems likely enough. It is well known that if two rays of light having the same wave length travel along the same path simultaneously, they interfere with one another. It may and does happen that at certain points along the path, depending for their position on the wave length, the two impulses tend to counteract and at other points to reinforce one another. A luminiferous particle—whatever that may be—which is acted upon by two opposing forces will remain at rest if the forces are equal as well as opposite; while if the forces be not equal or not directly opposed, there will be some resulting disturbance, but still a disturbance different from that which would have been produced by either of the coincident forces acting alone. From this cause arise all those beautiful optical effects of interference which so strikingly illustrate the undulatory theory of light. Now, if it be a fact that the chemical activity of a ray of light is subject to the same law, and can be either exalted or depressed by causing a second ray of the same wave length to act upon the sensitive reagent, it is quite conceivable that a pair of rays of light might be so directed through a photographic film as to cause, not a uniform, but a sporadic deposit of the precipitated element. These minute deposits would in that case be distributed at definite distances apart along the line of the common path of the active rays, because they would mark the points of coöperating and therefore exalted activity. Similarly, their intervals would occupy the spaces in which the antagonism of the two rays had reduced or even destroyed the actinic effect. Now such a film would apparently be opaque to any light not having this particular wave length, because at some point it would necessarily be absorbed by the opaque deposit. But if a ray of the same wave length impinged, it might be able to pick its way successfully between the deposits. Professor Lipmann is said to have produced such a film by the expedient of placing a mirror at the back of his sensitive plate and causing the focused ray to return along its own path. The mirror is produced by making the plate one side of a mercury trough, which when filled constitutes a mirror in exactly the desired position. The expedient, if successful, is certainly charmingly simple, and, seeing that the healing art would undoubtedly benefit in as high a degree as any by a practicable system of chromatic photography, we look with lively interest for some further information upon the theory and practice so ingeniously originated.

VIRCHOW TESTIMONIAL FUND.

THE following is the list of the committee of the above Fund:—

Henry W. Acland (Oxford), Th. Clifford Allbutt, John Banks (Dublin), W. Mitchell Banks (Liverpool), H. G. Barling (Birmingham), A. Barron, M.B. (Liverpool), H. C. Bastian, Wm. Bowman, J. S. Bristowe, W. H. Broadbent, Th. Lauder Brunton (treasurer), Th. Bryant, H. T. Butlin, J. Chiene (Edinburgh), Andrew Clark, J. Coats (Glasgow), S. Coupland, J. Dreschfeld (Manchester), Dyce Duckworth, John Evans, Joseph Fayrer, D. Ferrier, W. H. Flower, M. Foster (Cambridge), W. T. Gairdner (Glasgow), Alfred Garrod, W. S. Greenfield (Edinburgh), F. de Havilland Hall, D. S. Hamilton (Aberdeen), T. Holmes, G. M. Humphry (Cambridge), J. Hutchinson, J. Hughlings Jackson, William Jenner, George Johnson, Joseph Lister, William Mac Cormac, Th. Oliver (Newcastle-on-Tyne), W. M. Ord, Richard Quain, George Paget (Cambridge), James Paget (chairman), F. W. Pavy, George Porter (Dublin), R. Douglas Powell, J. Russell Reynolds, William Roberts, Ch. S. Roy (Cambridge), T. Burdon Sanderson (Oxford), E. A. Schäfer, S. G. Shattock, John Simon, A. R. Simpson (Edinburgh), E. M. Skerritt (Clifton, Bristol), Th. Grainger Stewart (Edinburgh), William Stokes (Dublin), Octavius Sturges, Th. Pridgin Teale (Leeds), William Turner (Edinburgh), Hermann Weber, Spencer Wells, C. S. Wheelhouse (Leeds), Samuel Wilks, A. H. Young (Manchester).

The following additional subscriptions have been received:

	£	s.	d.
Sir William Jenner, Bart.	2	2	0
Sir Wm. Bowman, Bart.	2	2	0
Sir William Roberts, M.D.	2	2	0
William Gairdner, M.D.	2	2	0
Angel Money, M.D.	1	1	0
Adolf Bronner, M.D. ..	1	1	0
Bilton Pollard, M.D. ..	1	1	0
P. E. Karkeek, M.R.C.S.	0	10	6
Heinrich Port, M.D. ..	2	2	0
A. Barron, M.B., M.R.C.S.	2	2	0
W. Ewart, M.D.	2	2	0
E. Clifford Beale, M.B. ..	1	1	0
Sir John Banks, M.D. ..	2	2	0
C. G. Wheelhouse, F.R.C.S.	2	2	0
W. Broadbent, M.D. ..	2	2	0
S. Wilks, M.D.	1	1	0
C. Theodore Williams, M.D.	2	2	0
Robert W. Philip, M.D. ..	1	1	0
F. de Havilland Hall, M.D.	1	1	0
Percy Kidd, M.D.	1	1	0
Charles Coates, M.D. ..	2	2	0
Octavius Sturges, M.B. ..	1	1	0

SOUTHERN HOSPITAL NEW NURSES' HOME.—Last Saturday afternoon the ceremony of opening the Nurses' Home attached to the Southern Hospital was performed by Mrs. G. H. Horsfall, in the presence of a large and distinguished company.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6321 births and 3818 deaths were registered during the week ending Feb. 14th. The annual rate of mortality in these towns, which had steadily declined from 28·7 to 19·8 per 1000 in the preceding six weeks, was last week 19·9. The rate was 19·4 in London and 20·3 in the twenty-seven provincial towns. During the past six weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·8 per 1000, and exceeded by 0·5 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 14·2 in Leicester, 15·5 in Portsmouth, 16·1 in Wolverhampton, and 16·3 in Halifax; the highest rates were 25·3 in Cardiff and in Blackburn, 25·8 in Derby, and 28·5 in Preston. The deaths referred to the principal zymotic diseases, which had declined from 404 to 332 in the preceding three weeks, rose again last week to 340; they included 93 from whooping-cough, 77 from measles, 52 from scarlet fever, 50 from diphtheria, 36 from diarrhœa, 32 from "fever" (principally enteric), and not one from small-pox. The lowest rates from these zymotic diseases were recorded in Portsmouth, Cardiff, Derby, and Oldham; and the highest in Plymouth, Blackburn, Preston, Salford, and Huddersfield. The greatest mortality from measles occurred in Brighton, Halifax, Huddersfield, Blackburn, and Bristol; from scarlet fever in Plymouth, Preston, and Bradford; and from whooping-cough in Salford, Plymouth, Birkenhead, and Huddersfield. The mortality from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 29 in London, 4 in Sheffield, 3 in Manchester, and 3 in Salford. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1310, and showed a further decline from recent weekly numbers; the patients admitted during the week were 97, against 112 and 107 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1018 to 428 in the preceding four weeks, rose again last week to 484, but were 42 below the corrected average. The causes of 70, or 1·8 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Bradford, Newcastle-upon-Tyne, and in three smaller towns. The largest proportions of uncertified deaths were recorded in Sheffield, Liverpool, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 26·4 and 21·9 per 1000 in the preceding two weeks, further declined to 21·4 during the week ending Feb. 14th, but exceeded by 1·5 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 11·6 in Greenock and 12·3 in Perth to 21·1 in Edinburgh and 26·6 in Glasgow. The 561 deaths in these eight towns showed a decline of 13 from the number in the preceding week, and included 13 which were referred to whooping-cough, 11 to diarrhœa, 10 to measles, 6 to scarlet fever, 6 to "fever," 4 to diphtheria, and not one to small-pox. In all, 50 deaths resulted from these principal zymotic diseases, against numbers declining from 76 to 57 in the preceding three weeks. These 50 deaths were equal to an annual rate of 1·9 per 1000, which slightly exceeded the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 29 and 17 in the preceding two weeks, further declined last week to 13, of which 5 occurred in Glasgow and 4 in Edinburgh. The 11 deaths from diarrhœa exceeded those recorded in any recent week, and included 7 in Glasgow. The fatal cases of measles, which had been 8 and 6 in the previous two weeks, rose again to 10 last week, of which 6 occurred in Paisley and 4 in Glasgow. The 6 deaths from scarlet fever corresponded with the number in the previous week, and included 3 in Glasgow and 3 in Edinburgh. The 6 fatal cases of "fever" showed a decline of 3 from the number in the preceding week: 3 occurred in Dundee. The 4 deaths from diphtheria were fewer than in any previous week of this year, and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 228 to 161 in the preceding four weeks, further fell last week to 138, and were 57 below the number in the corresponding week of last year. The causes of 51, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 38·4 to 26·6 per 1000, rose again to 26·9 during the week ending Feb. 14th. During the first six weeks of the current quarter the death-rate in the city averaged 32·9 per 1000, the rate for the same period being 24·1 in London and 21·0 in Edinburgh. The 182 deaths in Dublin showed a slight increase upon the number in the preceding week, and included 2 which resulted from "fever," 1 from diphtheria, and not one either from small-pox, measles, scarlet fever, whooping-cough, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 6 and 7 in the preceding two weeks, declined again to 3 last week, a smaller number than has been registered in any week on record; they were equal to 0·4 per 1000, the rate from the same diseases being 1·4 in London and 2·3 in Edinburgh. The fatal cases of "fever," which had been 5, 4, and 3 in the preceding three weeks, further declined to 2 last week, and were fewer than in any week since November last. One death resulted from diphtheria, corresponding with the number in each of the previous two weeks. The 182 deaths in Dublin last week included 28 of infants under one year of age and 68 of persons aged upwards of sixty years; the deaths of infants showed a further decline from those recorded in recent weeks, while those of elderly persons showed an increase. Two inquest cases and 1 death from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 12, or nearly 7 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Brigade Surgeon Geo. Elmsly Will to be Deputy Surgeon-General, ranking as Colonel, vice C. G. Irwin, M.B., placed on retired pay (dated Jan. 4th, 1891); Surgeon-Major Robert Collins, M.B., ranking as Lieutenant-Colonel, to be Brigade Surgeon, vice G. E. Will (dated Jan. 4th, 1891); Surgeon William Parsons Feltham to be Surgeon-Major, ranking as Major (dated Jan. 29th, 1891).

BENGAL MEDICAL ESTABLISHMENT.—Surgeon George Augustus Cones to be Surgeon-Major (dated Dec. 13th, 1890).

INDIAN ARMY.—The Queen has approved of the restoration of the undermentioned Officer from the half-pay list to the effective list: Surgeon-Major David John McCarthy, M.D., Madras Medical Establishment (dated Dec. 6th, 1890).—The Queen has also approved of the retirement from the Service of the undermentioned Officer: Surgeon-Major John Wilson Johnston, M.D., Bengal Medical Establishment (dated Feb. 4th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Fleet Surgeon Charles C. Godding to the *Vernon* (dated Feb. 14th, 1891); Staff Surgeon John Wilson, M.A., M.D., to Chatham Hospital (dated Feb. 14th, 1891); Surgeon E. A. Spiller, M.D., to the *Excellent*, additional (dated Feb. 28th, 1891); Surgeon Jas. Menary, M.D., to Jamaica Hospital, (dated Feb. 18th, 1891); Surgeon James M. Rogers to the *Urgent* (undated); Mr. John Archibald Macquarie to be Surgeon and Agent at Peel, Isle of Man; Mr. Henry Bell to be Surgeon and Agent at Bangor (county Down), Groomsport, and Helen's Bay (dated Feb. 17th, 1891).

VOLUNTEER CORPS.—*Infantry:* Western Counties: Surgeon and Surgeon-Major F. F. Lee, M.B., 1st Wiltshire Rifle Volunteer Corps, to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Feb. 18th, 1891).—*Artillery:* 3rd Kent (Royal Arsenal): Surgeon S. Davies, M.D., from

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the Volunteer Medical Staff Corps (Woolwich Division) to be Surgeon (dated Jan. 7th, 1891).—1st Lanarkshire: Acting Surgeon W. J. Shaw, M.B., resigns his appointment (dated Feb. 14th, 1891)—3rd Durham (Western Division, Royal Artillery): Acting Surgeon W. Gowans to be Captain (dated Feb. 14th, 1891)—*Rifle:* 4th Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Acting Surgeon T. Lyndon, M.D., to be Surgeon (dated Feb. 14th, 1891).—3rd Volunteer Battalion, the Royal Fusiliers (City of London Regiment): Acting Surgeon E. G. Younger, M.D., to be Surgeon (dated Feb. 14th, 1891).—24th Middlesex: Acting Surgeon J. D. Grant, M.D., to be Surgeon (dated Feb. 14th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Woolwich Division: Alexander Stevenson Greenway, M.D., to be Acting Surgeon, Supernumerary (dated Feb. 14th, 1891).

Correspondence.

"Audi alteram partem."

ENGLISH MEDICAL PRACTICE IN PARIS.

To the Editors of THE LANCET.

SIRS,—An article which appeared in *Galignani's Messenger* of the 27th ult., and which, as will be seen, deals with a subject that directly interests the English travelling public, has excited much comment in both lay and professional circles in Paris. It has further served the purpose of arousing English practitioners established in this city to a sense of a duty, hitherto neglected, towards themselves and towards their compatriots who, in their thousands, throng the Boulevards of this gay capital during *la belle saison*. The article runs as follows:—

"Several cases have been again brought before our notice of English and American visitors to Paris, who, upon being taken ill, in second-rate hotels or boarding-houses, have found, on the part of the proprietors or managers of their temporary resting-places, an extraordinary ignorance as to the residence or even existence of physicians of the same nationality as their guests. Some of these cases have been of so flagrant a character that they would lead to the belief that the managers recommend a certain class of French doctors 'for a consideration.' We say a certain class, because there are French medical celebrities to consult whom would be well worth a long voyage. But these are not men at all likely to lend themselves to the abuses complained of. The misfortune, therefore, is generally that of the sick person, although the fault may be somewhat that of the English and American physicians. In England, we all know it is considered *infra dig.* for medical men to advertise themselves. That rule does no harm in England, where people have frequent recourse to an authentic medical directory or to the recommendation of reliable friends. But in Paris, where the population is as changeable as that of a large hotel, it would appear that the medical men would lose none of their dignity were they to find some means of advertising, at least, their names and addresses with their authenticated degrees, and, when such is the case, the special branch of medicine to which they devote their attention. Medical men are too often looked upon as persons who are obliged to attend anybody who demands their care, and there is probably no body of professional men who render so much gratuitous service to their fellows in such an unostentatious way. Still, they have to live by their profession just as have lawyers and priests. Surely they might well be allowed to advertise in this great caravanserai, especially as the facts set before the travelling public would be for the public benefit."

The above remarks, emanating as they do from the recognised organ of the English colony in Paris, and from a journal which has, moreover, repeatedly rendered yeoman service in warning travellers against that pest, the "hotel doctor," merit something more than a passing consideration. Acknowledging, with the rest of my colleagues, the truth of the facts stated, I have felt it my duty to bring the matter to the notice of my professional brethren, with a view of bringing about some combined action to remedy the evils complained of. Travellers little dream of the existence of the occult arrangements that too often hamper them in their choice of a medical attendant. Rightly or wrongly, the average ailing Briton prefers to be attended by an English practitioner, who, imbued with the traditional doctrines of British schools of medicine, understands his habits, tastes, and prejudices. But, even when the landlord consents to summon an English doctor, the independence of the latter is too often fettered by conditions which are not calculated to increase his self-respect, not to mention his income. Thus, at a certain first-class hotel, the landlord, to my knowledge, exacts from the unfortunate medico no less than 25 per cent. of the fees earned at his establishment. Again, I have known of a gentleman staying at a well-known hotel on the Boulevards, upon whom it was unsuccessfully attempted to foist the no doubt subsidising hotel doctor, the practitioner whose services he had wished to secure never having even received the message sent. Analogous instances could, doubtless, be multiplied *ad infinitum*. Take, again, the chemist, on whom devolves very frequently the choice, for a customer, of an English doctor. Of course, the chemist cannot be debarred from exercising his right to recommend any one practitioner. But when one of his assistants, on being asked for the address of an English doctor established in Paris for nearly twenty years, deliberately ignores his existence, I think it is time the public should be made independent of such misleading information.

The facts being as above, I venture to ask you, Sirs, if the periodical publication, in one or more respectable journals, of a list of English doctors practising in Paris, with their addresses and hours of consultation (the names arranged alphabetically and no degrees or specialties mentioned), would necessarily constitute a contravention of the unwritten rule observed by all self-respecting members of the profession forbidding advertising. Such a list would prove of great service to English visitors to this city, and, if made comprehensive, would not, in my opinion, come under the head of advertising in the invidious acceptation of the word.

I am, Sirs, your obedient servant,

Paris, Feb. 10th, 1891. J. H. BARNARD.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—Mr. Sewill has done good service by drawing attention to the above subject. May I be permitted to contribute my experience?

During the present session I have had several cases of septic abscess of the antrum in my wards in the Edinburgh Royal Infirmary. The following points I think are worthy of note:—1. In every case the empyema was connected with a diseased anterior molar. 2. In most of the cases the anterior molars were not known to be the cause of the empyema till they were extracted. The teeth were free from caries, and were drawn simply in order that a free drain might be established. When removed they were found in every instance to have had suppuration at one or more of their fangs, which were also protruding into the antrum.

I consider that it is not sufficient to extract the tooth. The opening left by the protruding fang is not large enough for free drainage and washing out; I always enlarge the opening considerably. This practice I learned from Mr. G. W. Watson, dentist, of this city, and I consider it a very important part of the treatment. I make my patients wash out the antrum themselves from their mouths. They take a mouthful of boric lotion first and rinse out the mouth. Then another mouthful is forced up into the antrum and out by the nose, the process being continued until the lotion flows clear. This manœuvre can be learned after a little practice, and enables the patient to wash out the antrum twenty times a day if necessary, without much trouble. I consider that the extraction of an anterior molar gives a better drain than an opening above the alveolar margin. The latter method I adopted on two occasions at the request of a colleague, and in both cases had to extract the tooth afterwards, and found it the apparent cause of the trouble. I think that no surgical treatment is required in abscess of the antrum, unless it becomes septic or is due to a bad tooth.—I am, Sirs, yours obediently,

Edinburgh, Feb. 14th, 1891. A. G. MILLER.

To the Editors of THE LANCET.

SIRS,—Those who have opportunities of studying the disease which forms the subject of Mr. Sewill's important letter in your issue of the 14th inst. cannot but feel indebted to him for bringing the matter before the notice of the profession. I fully agree with him that the affection is often overlooked, and that not only by general practitioners, but by surgeons and specialists. I am the more fully persuaded of this in that I question Mr. Sewill's statement that dental disease is the commonest cause. Not, Sirs, that I would doubt for a moment the rectitude of his observations in his own cases. All that I would maintain is that the large proportion of cases falling within my own practice is associated with, and, as I

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believe, is secondary to, intra-nasal suppuration of one kind or another. I am of opinion, moreover, that it is actually the coexistence of nose disease, such as might be held to account for all the symptoms, which has often prevented any question arising as to a possible implication of the antrum. Having diagnosed and treated upwards of forty cases, I can affirm that of these only four were unassociated with intra-nasal suppuration, the latter being generally connected with ethmoidal disease. Many were operated upon by my colleague, Mr. Leonard Matheson, who, I believe, will be prepared to corroborate my statement as to the rarity, in my cases, of tooth trouble which could be considered responsible for the mischief. I must not occupy more space by adducing further arguments, though I may add that I have discussed the question fully in my treatise on "Diseases of the Nose," since the publication of which I have become even more fully convinced of the nasal origin of the larger number of cases. And in this view I am supported by such authorities as Zuckerkandl, Hartmann, Krause, Gougenheim, Baratoux, and others. I most fully concur in Mr. Sewill's remarks as to the treatment of the affection; yet I should like to suggest to him the introduction of Ellis's smallest sized spiral drainage-tube, instead of the gold tube and supporting plate advocated in his letter. Ellis's tube fulfils every requirement, is self-retaining, can be easily removed and replaced by the patient, and may be prevented from slipping in too far by uncoiling the termination of the wire. Mr. Matheson finds this in every case efficient.

I am, Sirs, yours faithfully,

Harley-street, W., Feb. 16th, 1891. GREVILLE MACDONALD.

THE CLIMATE OF GRASSE.

To the Editors of THE LANCET.

SIRS,—As Her Majesty the Queen is about to sojourn at Grasse, some account of its climate and attractions may not be uninteresting to your readers. Towards the end of last March, with the object of collecting information for my recent work, "Book of Climates," second edition, I spent a week exploring the country between Cannes and the mountains to the north and away to the Esterels which bound the plain to the west. On this plain, which for variety and scenic beauty is not surpassed either at home or abroad, and on the sunny slope of Mount Rocavignon, at an elevation of 1100 ft. above the sea, lies the picturesque, old-fashioned, crooked, and crowded little city of Grasse. Rich in historic and Napoleonic traditions, quiet and sequestered in situation, having great facilities for driving excursions, and possessing lovely views, good water, and a pure and tonic air, Grasse has many attractions for those in need of calm and repose. Beautiful roads lead in all directions, of which that to Cesaire, nine miles to the west, and others in the neighbourhood, afford delightful views of the sea, and is deserving of mention. The chief industry of the people, of whom there are 12,000, is the distillation of the attar of rose and Neroli perfumes, the flowers for which are grown all over the district.

The climate is said to be colder than that of Cannes, which is about 9° or 10° higher than London. It did not, however, appear so to me, but the contrary. The heavy rains which generally occur in March had ceased, the trees were bursting into leaf, and though there was a certain touch of keenness in the air, there was no mistral, and the wind was far less felt than either at Cannes or Antibes. The mistral often blows over the district in March. Having a sunny aspect, and being well sheltered by mountains close behind, I believe that in the daytime the climate is milder than that of Cannes, and the air more still. At night, however, and when the sun goes down, the cold is greater.

Grasse ought to have a future before it. There is a need for a resort differing in many respects from the Rivierian seaside stations, and yet possessing all the sheltered sunshine of this region. From these stations it should afford a pleasant change, especially when they are too exciting, or amongst those bilious or dyspeptic folks to whose appetite the sea-air is injurious.

Grasse should also be a good place for persons suffering from asthma, chronic pleurisy, chronic consumption, and heart disease, who cannot stand the winds of the coast, also for gouty and lupoid cutaneous affections, rheumatism, and diabetes. It is, however, such a dull place that all but the most conscientious invalid would soon get tired of it. There are two good and moderate hotels.

I am, Sirs, your obedient servant,

D. H. CULLIMORE, M.D., M.R.C.P.Lond.

Welbeck-street, W., Feb. 19th, 1891.

"INTESTINAL IMPLANTATION AND LATERAL APPOSITION."

To the Editors of THE LANCET.

SIRS,—My thanks are due to my friend Mr. Reeves for his letter which appeared in last week's issue of THE LANCET (page 396) on the above subject. It is only by combined efforts that surgeons can hope to establish in this country the importance of such operations as have been taught by Professor Senn in America, the correctness of whose conclusions I have confirmed. The difficulties of establishing such operations as Prof. Senn and myself wish to impress upon the profession are very great, and this must be obvious, as the amount of material that falls to the lot of one surgeon is comparatively small. It is only by acting as Mr. Reeves has done that we may hope to decide if any new operation of magnitude is worthy of the support of the profession or not. These operations are now going through the same stages as other great advances in surgery have done before. It is not many years since Sir Spencer Wells placed ovariotomy on a sound and permanent footing. In the early days of this operation, at a meeting of one of the societies ovariotomy was characterised as barbarous, and I believe the dire consequences of the coroner's inquiry were threatened to the surgeon who should lose a patient after performing such an operation. I am reminded by Dr. W. Duncan in last week's issue, page 395, that Sir Joseph Lister, when advocating and practising opening the knee-joint in cases of chronic inflammation in order to remove the diseased parts, a well-known surgeon threatened, in the event of a fatal case occurring, that the distinguished operator might find himself in the dock on a criminal charge.

It was only in 1878 that the late Dr. Marion Sims first performed cholecystotomy, and, although his case ended fatally, yet the steps he laid down for its performance were so clear that now it is admitted to be one of the most successful operations in surgery. The different operations now so successfully practised upon the kidney were, when first introduced to the profession, looked upon with anything but favour, and it was only by the enterprise of such men as Messrs. Morris and Knowsley Thornton that they became thoroughly established. Mr. Reeves in his letter says the onus of showing the profession that the new intestinal operations are as easily executed and safe in results as already accepted means, rests with Dr. Senn and myself. I am perfectly willing to accept the responsibility, but in the space of a letter it is impossible to go further than to generalise, and difficult to formulate evidence of the feasibility of operations on the stomach and intestines by implantation, or lateral apposition by means of approximation plates. I have now performed five cases of gastro-enterostomy by the latter method, four for pyloric carcinoma, and one for fibrous stricture of the pylorus. Three of these made good recoveries, one (the first) died five days after operation from exhaustion due to the error of not feeding early enough (the operation in this case was perfect, as shown by the pathological specimen which I have), one case died of septic peritonitis directly the result of the operation. Besides these, cases have been reported by Dr. Clarke (Huddersfield), Mr. Mayo Robson (Leeds), Mr. Stansfield (Birkenhead), Mr. Beatson (Glasgow), and others. Dr. Weir reports in the *Medical News* (N.Y.), Dec. 14th, 1889, p. 663, eleven cases of gastro-enterostomy with but one death. The number of cases of ileo-colostomy already reported are, I believe, limited to five. Two of these are reported by Senn in the *Journal of the American Medical Association*, Jan. 14th, 1890. In these cases Senn performed resection of the cæcum for carcinoma, and united the ileum to the colon below the seat of disease by lateral apposition and bone plates; he inverted and closed the divided end of the colon. One of these cases recovered, and the other died six days after the operation from peritonitis caused by deep ulcers of the excluded portion of the colon. At the post-mortem examination he found the coaptated parts with adjacent portion of the colon and

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ileum, the serous surfaces, which had been included between the plates, firmly adherent throughout, and on connecting a hydrant a large stream of water escaped from the gut, showing that the new opening was fully established, and on closing the open end of the colon the bowel was forcibly distended without causing leakage, a positive proof that union between the coaptated surfaces was perfect. Mr. Burton (Liverpool) has communicated to me a case in which he performed ileo-colostomy, at my suggestion, on a patient who was suffering from a fæcal fistula opening between some portion of the small intestine and the vagina. The operation was successfully performed by bringing into apposition a portion of the ileum with the colon by means of bone plates. The case of ileo-colostomy reported by me in your last week's issue I claim as a surgical success, and the case which, through the courtesy of Mr. Reeves, I was enabled to assist him in, and to which he alluded in his letter, may also be quoted as one proving the practicability and success attending ileo-colostomy by implantation.

I thoroughly endorse what Mr. Reeves states, "that operations and surgeons must be judged by results, and all operations on the intestinal canal are no exception to this wholesome rule"; and I ask my *confrères* to assist me in establishing these operations, which I most firmly believe will at no distant date be acknowledged to be one of the greatest boons to the human race, and among the most successful operations in surgery, by giving me the opportunity of seeing any cases of intestinal obstruction, either of an acute form or the result of new growths, that may come under their notice, also any cases of fæcal fistula of an intractable character. The number of successful cases of gastro-enterostomy, which is quite as difficult and dangerous an operation as ileo-colostomy, or union of the small intestine by lateral apposition, if not more so, should in my opinion be sufficient to instil confidence in the minds of the profession, and tend to justify them in advising their patients who may be suffering from intestinal obstruction to seek surgical aid of the description I have advocated.

I am, Sirs, yours faithfully,

FRED. BOWREMAN JESSETT.

Upper Wimpole street, W., Feb. 14th, 1891.

THE DEBATE ON TYPHLITIS AT THE CLINICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—The clumsiness of my remarks during the recent discussion at the Clinical Society has, I understand, given rise to some misconception as to my meaning, which I should be glad if you would permit me to correct. I did not intend to imply that I am opposed to operative interference in the treatment of typhlitis. I have, indeed, advocated this mode of treatment in a manner that may have appeared to some to be even immoderate. There can be no possible question as to the urgent need for the surgeon's knife in *certain* forms of the acute type of the disease, and I have seen no cause to regret the freedom with which I have employed this means. With regard to the treatment of relapsing typhlitis by excision of the appendix during a quiescent period, nothing has occurred to alter the opinions I expressed upon that point when I first introduced this method of dealing with that affection in 1887. My list of cases is not small, nor have the results been unsatisfactory. What, however, I wish to protest against is the quiet assumption that all cases of typhlitis, and even those which are distinctly acute, demand surgical treatment, and that in the majority of instances at least medical measures avail little. I have shown elsewhere that the majority of examples of what is known as acute typhlitis end in recovery under simple medical treatment, and that a surgical handling of the trouble is only called for in a comparatively few selected cases, and that even in these it is possible to clamour for a too early operation. There are cases of appendicitis and cases of relapsing typhlitis which get well without the surgeon's aid, and I would urge that more discrimination should be exercised in selecting the cases which are suited for operation. The almost reckless and injudicious manner in which, to judge from published and private reports, the appendix is being excised at the present day, is doing a great deal to bring the operation into discredit, and to direct an adverse criticism against what is in suitable cases a most valuable and indeed indispensable measure. It would appear to be rather among American than among English surgeons that this epidemic is raging, and from the criticisms I have submitted I would exempt the very admirable series of cases upon which this particular debate is founded. Upon these cases the authors of the papers are to be congratulated, and I should be sorry if it were supposed that it is upon any of these reports that I would found an objection to that dogma which appears to consist of this one proposition—the patient has typhlitis, therefore excise his appendix.

I am, Sirs, yours faithfully,

Wimpole-street, W., Feb. 16th, 1891. FREDERICK TREVES.

"ERYSIPELAS AND TOTAL ABSTAINERS."

To the Editors of THE LANCET.

SIRS,—It would seem almost impossible to believe that Staff Surgeon Whitehead can have been really serious in inditing the letter on "Erysipelas and Total Abstainers" in your last issue. If ever there was a case of building a pyramid upside down this is one. Because three abstainers happen to have erysipelas at the same time we are asked to conclude that their abstinence must be a predisposing cause, and that it is detrimental both in hot and cold climates, in the face of all the evidence which has been accumulated to the contrary. I would challenge Mr. Whitehead to extend his observations and give us the result of the comparative sickness of the abstainers and non-abstainers in the London garrison for a period of twelve months, or longer if possible. Such comparisons have been made in other quarters. The days of sickness of the men in the abstaining friendly societies (Rechabites and Sons of Temperance) is only from one-half to two-thirds of that of the Oddfellows and Foresters (although these include many abstainers). Comparing 3978 abstainers and 8829 non-abstainers in various regiments in the Indian Army in 1885–86, it was found that the admissions to hospital were more than twice as great among the non-abstainers; the proportion invalided to the hills was 3·82 per cent. of the non-abstainers, and 1·88 per cent. of the abstainers; the proportion invalided to England was 2·93 per cent. of the former and 0·603 per cent. of the latter, the deaths per 1000 being 9·5 and 2·7 respectively. The results of the insurance companies prove to demonstration that this greater liability to disease results in a greater mortality among the non-abstainers. Mr. Whitehead speaks of the value of alcohol "as a heat-producing food." Is it possible that he is unaware that its invariable effect is to reduce the temperature, and that practical men in cold climates have found out that the colder it is the more injurious it is to take alcohol in any form? It lowers the vitality and renders the tissues more susceptible to the hurtful effect of cold. The evidence is so overwhelming on this point that it is superfluous to adduce it in detail. I have been able to find some explanation for this in the fact that alcohol, even in minute proportions, depresses the vital action of cell-protoplasm, while, on the other hand, in the same minute quantities, it promotes the multiplication and activity of bacilli. It will be found to redunce the activity of phagocytes and increase that of their antagonists. Its effect in promoting decomposition can be easily proved by putting a few drops of meat-juice, hay infusion, tartrate of ammonia, or anything which feeds bacteria, into two bottles, one containing water only, the other 1 part of alcohol to 1000 or even 10,000 of water. The latter will develop swarms of bacteria more thickly and more rapidly than the former. Whether or not this explains the facts of the superior health and longevity of abstainers (on the average, other things being the same) matters not; the facts remain, and "winna ding."

I am, Sirs, yours truly,

J. J. RIDGE, M.D.,

Hon. Sec., Brit. Med. Temperance Association.

Enfield, Feb. 16th, 1891.

THE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—During the last two years I have watched the course of five cases in which I was consulted because the patients had been advised to have the uterine appendages removed, and thought it well to have a second opinion before submitting

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to the operation, and in which the patients got perfectly well without any operation, two of them becoming pregnant. This seems to me a large number to occur in the practice of one physician, and makes me think that by some persons too unfavourable a view is taken of the prospect of recovery in cases of inflammation of the uterine appendages. I believe that the great majority of such cases get quite well without operation if properly treated. I do not think it likely that ovaries will be again removed for cardiac dyspnœa, and for this the profession is much indebted to Dr. Braithwaite of Leeds for his courage and candour in fully reporting the result of a case in which he did the operation for this condition.—I am, Sirs, yours faithfully,

Harley-street, Feb. 16th, 1891. G. ERNEST HERMAN.

THE PUPILAGE IN THE FIFTH YEAR OF MEDICAL EDUCATION.

To the Editors of THE LANCET.

SIRS,—I beg to call your attention to a serious defect in the new arrangement of the General Medical Council, under which students may spend six months in the fifth year with a general practitioner. The serious defect is this, that no provision is made for the registration of such modified apprenticeship from the first day of its commencement. The result of this omission will be fatal to a fair trial of the new system, for practitioners will be found who will sign certificates for apprenticeships never served. It is enough of a flaw, and one to which official attention must be called, that an option is allowed to students to attend clinical wards which the Medical Council's visitors tell us are already unable to supply adequate means for training, and which in any case cannot supply the kind of training contemplated by the modified apprenticeship system. I will again appeal to the Privy Council on the whole subject.

I am, Sirs, yours truly,

Cashel, Feb. 12th, 1891. THOMAS LAFFAN.

MEDICAL NOTES IN THE ISLE OF MAN.

BY A FREQUENT VISITOR.

THE praises of the Isle of Man have been frequently heard, and are both sung and said in prose and song. Under the various names of Mona's Isle (or more classically Mona), Manxland, the Manx name "Ellan Vannin," or the cynical title of "Lilliput," articles, chapters, songs, and even books have been written. In spite of all this, it may yet be doubted whether the island is even now as well known as it should be as a desirable place of recreation for invalids at all times of the year, and especially in winter. There are, too, probably many persons who spend the winter in some distant Continental resort, far from all the comforts to which they have been accustomed, at great inconvenience and expense to themselves, who would find all they want in this charming island—a mild climate, beautiful coast and inland scenery, all the comforts to which they have been accustomed, and, should this be required, skilled medical attendance. The isolated character of this—like the Channel or Scilly Islands, the Orkneys, Shetlands, or Hebrides—places the resident medical practitioners at a disadvantage, since they cannot meet their professional brethren in such numbers and so frequently as those on the mainland. Where the whole number of medical men only reaches that of a small provincial city, anything like a medical society must be difficult to establish, and still more so to maintain. But there are now nearly thirty practitioners on the island, and if a medical society could be established in Douglas, much valuable information respecting the medical history of the island, the climate, its sanitation, the diseases most prevalent, &c., might be collected and published for the benefit of the profession. The following notes are from one who during the last thirty years has made many visits to the island, and has during that time—which comprises part of the reign of Governor Hope and the whole of those of Governors Loch and Walpole (the present governor)—seen vast improvements made throughout the whole island. It is, indeed, difficult to identify Douglas, Ramsey, and Peel with their appearances of thirty years ago. Port Erin and Port St. Mary are comparatively new places. Castletown has not changed its appearance to the same extent, but considerable improvements have been effected in it. At present it may be well to note the more general features of medical interest in the island at large. Its situation is too well known to require notice here. Its proximity to Liverpool, Barrow, Fleetwood, and Whitehaven make it the resort of "cheap trippers" from Lancashire, Cheshire, and all parts of the kingdom. It has a short season, which generally includes the months of July and August, with June or September added, as the summer happens to be advanced or retarded. It is this reputation of a cheap trip resort which has deterred many persons, especially invalids, from going there. But the great bulk of cheap trippers arrive on Saturday and depart on Monday; those who stay during the week limit their attention to the towns and more pronounced show places, leaving the more rural parts quiet. But this only applies, as we have seen, to a very small proportion of the year, and during the spring and autumn the island is a most delightful and desirable place of residence, not only because of its climate, views, and accessibility, but also because the cheap trippers are conspicuous by their absence. During the winter, too, it may be resorted to with much advantage by those who require a milder climate than that of England or Scotland at this season. Though so near to Liverpool (seventy-two miles), and but little further north, there is a most remarkable difference in the climate. The climate is at once bracing and mild. Its insular character makes all the coast as open to the sea as the deck of a steamer or sailing vessel. Places more inland, such as Union Mills, and Crosby near Douglas, Kirk Andreas (near Ramsey), Ballaugh, Kirk Michael, and Foxdale (near Peel), and the more sheltered parts of Castletown, Peel, Douglas, Ramsey, Port St. Mary, and Port Erin, enjoy a climate partly marine, partly rural. The coast scenery resembles that of Scotland, all about Kirk Michael resembles that of Derbyshire, while Glen Helen, Sulby Glen, and other picturesque spots possess beauties *sui generis*. The voyage from Liverpool lasts about five hours in average weather, being shorter or longer according as wind, tide, and sea are favourable or the reverse.

The Noble Hospital.

A small hospital has existed in Douglas since 1839, but it had long been found a very inadequate structure, in a situation the reverse of healthy. It was not only the hospital of Douglas, but of the whole island. When some years ago the committee felt it imperative to look out for a new site where a new and improved hospital might be erected, the expense of the suggested land and of the hospital it was proposed to build upon it was so great that the committee felt obliged to be content with an inferior site and an inferior building. The late Mrs. Noble (to whom the land belonged) and her husband, when they heard of this, most generously offered freely, not only the site, but also to erect the hospital. This was completed and opened on Sept. 4th, 1888, amidst much local enthusiasm. A visit to it will well repay anyone, and the medical visitor who wishes to see how efficient a hospital can be provided at a moderate cost will find it a very useful model. The plan is shaped thus: ⊓⊓, the central limb being the administrative block, while right and left are those containing the male and female wards, the hospital being on the pavilion principle. The large wards contain ten patients in each, and there are two smaller ones, each containing four beds. There are also private wards and lock wards. In all forty-five beds could be provided, but a smaller number are in use at present. The cost of the building was £5000, which, considering that it has all the modern improvements, and that the best workmanship and materials have been used, must be regarded as a very moderate sum.

Sanitary Reforms.

Originally all the Manx towns were built with narrow streets of small houses, mostly two-storeyed, with courts here and there. Many of these streets are straight or at right angles, very similar to one another in appearance. They were originally built, it is said, for the exigencies of the smuggling trade, and, as will be readily conceived, they are very unfit for human habitations now. Slums, rookeries, and courts which are a disgrace to civilisation are to be found in Douglas, but they are gradually giving place to more healthy structures. The new hotels have been fitted up with all the recent sanitary improvements in the lavatories, watercloсets, urinals, &c., and this has had the

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desirable effect of inducing the managers of the older hotels to effect similar improvements. Modern houses also are furnished with wash-out closets, ventilating shafts, interceptors, &c. But much still remains to be done. The river Douglas is a tidal one, and it is very evident from the unsavoury smells in the harbour at low water, especially in hot weather, that it receives a large amount of sewage either from town or house drains, from vessels in the harbour or from all. It ought to be made an offence to discharge sewage from any vessel into the harbour, and the authorities at Douglas will act wisely if they follow the example of those at Torquay, and carry all their sewage to points where it will not be washed back by the incoming tide, but be discharged once for all into the sea. The town and harbour of Douglas have now a very considerable extent of frontage towards the sea, and very suitable points for the outfall could be found—one round Douglas Head, the other between Douglas and Onchan. The expense would at first be large, but it would be amply repaid by the increased salubrity and consequent popularity.

Public Mortuary.

For a long time past Douglas has greatly needed a public mortuary for the reception of bodies found exposed, or at dwellings in which it was not desirable to make a post-mortem examination, or to take jurors to view the body. There is now every probability of a new mortuary being erected, with a proper post-mortem chamber and all the modern requisites.

Lunatic Asylum.

About three miles from Douglas is the General Lunatic Asylum, established in 1866. It has 200 beds. The patients average 189, which may seem a large number. It must be remembered that the resident population of the island ranges from 50,000 to 60,000; which number is increased very considerably in the visiting season, as many as 3000 or 4000 persons frequently arriving on a Saturday during the summer.

The Climate.

This has been thoroughly investigated by Mr. A. W. Moore, F.R.M.S., in a most interesting paper published in Douglas in 1889. The results of a most exhaustive research are given at the end as follows:—"The results arrived at with regard to the climate of the Isle of Man may be summarised as follows: Its temperature is more equable than that of the surrounding coast, being somewhat higher in autumn and winter, similar in spring and lower in summer. There is comparatively little frost and snow, but a considerable amount of 'raw' damp weather, which to certain constitutions is more trying than a lower temperature in combination with a drier atmosphere. Its sunshine is much greater than in any surrounding district. Its winds appear to be much the same in strength and frequency, but as the island is more exposed they are felt more than on the mainland. The question of its rainfall is a most complex one, as the fall in the various parts of the island varies so considerably. Generally speaking, however, the rainfall is rather greater and more frequent than on the adjacent coasts, but much less than in the mountainous districts beyond those coasts. Its humidity, so far as can be ascertained from limited observations, is rather in excess. We may say, then, that the Manx climate is equable and sunny, and—though humid—decidedly invigorating; that its rainfall, though never excessive, varies considerably in its different districts; and that it is much exposed to winds which are, for the most part, mild and damp." Mr. Alfred Haviland, M.R.C.S. Eng., in a lecture delivered in Douglas on June 13th, 1883, spoke most favourably of the climate of the island, as the result of "a lengthened residence, careful investigation of its physical and climatal characters, as well as an attentive and close inquiry, extending over several months, into the health of the native population." The following is from the concluding portion of the lecture:—

"The above are the principal features of the climate of this island. They afford sufficient evidence in themselves of its suitability as a health resort, and incontestably prove its exceptional character, when compared with other climates in the British Isles and the continent of Europe lying within the same parallels of latitude. Favourable, however, as the general climate is of this beautiful isle of mountains and glens, a more careful study of its physical geography has revealed numerous sites where the physical features and the atmospheric conditions combine to produce local climates calculated to meet the requirements of a large number of variously affected health and repose seekers. In fine, the climatal resources of the Isle of Man, like many other gifts with which Nature has endowed it, require to be better known before they can be as fully and widely realised as they so well deserve to be."

The Resident Population.—Hereditary Diseases.

It is only within the last few years that daily communication has been established between the island and Liverpool all the year round. Formerly this only existed during the short summer season, the service during the remainder of the year being only thrice weekly. Before the time of steamers communication was even less frequent, and during the winter seldom more frequent than once a week. Apart from the question of inconvenience, other much graver evils resulted, which have a special interest for medical readers. In such a small community as the Isle of Man consanguineous marriages were very frequent when the circumstance just mentioned prevented the inhabitants from mixing with those of the neighbouring kingdoms, and so, as it were, restricted marriages within the island itself. It is to this cause that much hereditary disease is attributed. In some parts phthisis has assumed an almost epidemic form, scrofula in the form of ophthalmic diseases prevails extensively, and insanity is said to be disproportionately high. The increased facilities both for the residents and visitors to reach Liverpool, Barrow, Fleetwood, Whitehaven, and other ports has tended greatly to promote marriages between the Manx and other nationalities, much to the advantage of the future generations. These hereditary diseases and this deterioration of progeny are due to no fault of the original Manx physique. The average Manxman resembles in many respects his neighbour Scot, being tall, strong, weather beaten, and capable of almost any amount of exposure to wind and weather. He is, moreover, a sober, moral, well-conducted man, notwithstanding the many stories of an opposite character which have been told of him. A large proportion of Manxmen are total abstainers; they marry while still young men, and have happy homes. It would be well if the same could be said of the cheap trippers, many of whom set the Manxmen a very bad example.

The Local Government Amended Act, 1889.

This Act provides *inter alia* for the removal of infected persons from any ship or vessel, or from any house to a hospital, unless proper isolation can be secured. Compulsory notification of infectious disease is also provided for, and the importance of these measures in such a locality must be obvious. Otherwise disease might be both imported and exported during a busy season to a terrible extent.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Students' Diversions.

MUCH excitement has lately been caused at Queen's College by the unusual conduct of some students attending the class of surgery. Previously to the arrival of the Professor the room was filled with tobacco smoke and a broom fastened to one side of the desk. The learned professor, indignant at these proceedings, retired without giving his lecture, and the authorities of the College were invoked to maintain discipline and correct the offenders. The chief delinquent subsequently apologised, and on the strength of the promised absolution for doing so was surprised to find himself suspended. The students held a meeting afterwards to protest against this alleged breach of contract, mutual explanations followed, and happily the affair, in itself unseemly and childish, has been allowed to pass away without any further exercise of feeling on either side.

Mason College and Queen's College.

An important scheme affecting the medical department of the latter College has been for some time past under consideration. At present the medical curriculum is conducted at both Colleges, a course which presents obvious difficulties and much inconvenience. It has been thought desirable to conduct the medical teaching at one place only, and to sever the association from the theological department of Queen's College. At a meeting lately held a committee was appointed at Queen's, and it was resolved to

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invite the authorities of Mason College to appoint a similar committee for consultative purposes. Whatever is done must be submitted to the Charity Commissioners, and the foundation deeds carefully reviewed. The change would be productive of great benefit to the medical teaching of this school, and would be an advance towards a far higher position than is at present held.

The New General Hospital.

At a meeting largely and influentially attended on the 17th inst. three subcommittees were appointed to take charge of the questions of site, building, and finance. There is every prospect of a large subscription list and an ultimate realisation of the most sanguine desires of the promoters.

Death from Swallowing a False Tooth.

The dangers attending false teeth were emphasised by the deputy coroner at an inquest lately held on the body of a woman aged twenty-eight. The tooth was found at the bottom of the œsophagus, attached to a plate made of composition, which had pierced the lungs and aorta. The patient died of hæmorrhage in consequence, and a verdict of accidental death was returned.

Birmingham, Feb. 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Newcastle Skin Hospital and Koch's Treatment.

AT the annual meeting of the Hospital for Diseases of the Skin, held here last week, it was stated in the report that the number of cases of an aggravated nature had been again very large, 2434 separate consultations having been given. The senior surgeon, Mr. Anthony Bell, stated that it was his intention to have placed three or four cases of tubercular lupus under Professor Koch's treatment, but, having watched the results of the new treatment in this country, he had at present declined to adopt it. Mr. Bell further stated that the treatment of lupus vulgaris constitutionally and locally adopted at that hospital had proved eminently successful, between thirty and forty cases having been cured during the past twelve months.

Hartlepools Hospital.

It was stated at the late annual meeting of the Hartlepools Hospital that the number of patients treated in-doors and out-doors together was 1510, being 550 more than last year; and an interesting feature in the report was the fact that the workmen's subscriptions reached over £700, which, together with those of the friendly societies, made up practically half the income of the institution. The financial position of the hospital is such that the year closed with a balance in hand of £630.

Tyne Port Sanitary Authority.

At the last meeting of the Tyne Port sanitary authority it was reported that in December last 958 visits had been paid to vessels, and sundry sanitary defects had been found in 59; in January 672 visits had been made, and 10 cases of sickness on board were inquired into. There had been a considerable decrease in the number of emigrants arriving in the Tyne *en route* to America.

Friendly Societies' Convalescent Home.

The first annual meeting of the Friendly Societies' Convalescent Home was held last week at Durham, and the report presented was very satisfactory. This Society has founded a Home at Grange-over-Sands for convalescent workmen, and its distinguishing features are that it is also supported and managed by working men. It was shown that the average cost of a patient staying at the Home was under 8*s.* 8*d.* each.

The Sanitary Condition of Maryport.

At the last monthly meeting of the Maryport sanitary authority the medical officer presented a report showing that the death-rate for the past year had been 27·6 per 1000 of the 224 deaths recorded; 106 were those of children under five years of age. This excessive mortality was explained as due to scarlatina and whooping-cough. Scarlatina the medical officer reported as "prevailing during every month of the year, and in almost every street of the town."

Whitby, Yorkshire.

This is one of our healthiest seaside resorts, and deserves, from the natural advantages it possesses, to be better known than it is. Dr. Tinley, the medical officer of health, has presented his report for the last year, which shows a death-rate of only 16·8 per 1000, while its birth-rate has been nearly double, or 28·9 per 1000. The zymotic death-rate for the year has only reached a decimal 4·0 per 1000, a rate which it would be difficult to show so very low in any town of nearly 15,000 inhabitants, with a moving population of visitors in the summer season.

Darlington Hospital.

The annual report presented at the meeting of the Darlington Hospital showed that the number of out-patients treated during the year was 2500 and in-patients 173. The treasurer's financial statement was also fairly satisfactory.

Death of Mr. Joseph Bainbridge Fife, M.R.C.S.

Many of the older generation of practitioners connected with the Newcastle schools of medicine will be sorry to hear of the death of an old lecturer, Mr. Joseph Bainbridge Fife, which took place at Croft, near Darlington, on the 12th inst. Mr. Fife, who was in his sixty-ninth year, was the second son of the late Sir John Fife, so long the leading operative surgeon of the north. Mr. Fife was a long time lecturer on ophthalmic surgery at the old Newcastle School of Medicine. He was a good general and ophthalmic surgeon, and in the latter department had much practice for many years as a consultant, as well as being one of the surgeons to the Eye Infirmary in Newcastle. The practice of the Fifes passed into the hands of Dr. Jeaffreson, the present surgeon to the Eye Infirmary, many years ago, when Mr. Fife retired to a hunting seat at Croft, where, as above mentioned, he died. Mr. Fife was unmarried, and much resembled his father Sir John Fife in appearance and manners. He never worked so hard as his father, indeed he had a dislike to the drudgery of practice, and was always glad to escape for a day with the hounds. I am quite sure that the mention of "Joe" Fife's death will bring up many recollections to old Newcastle students, with whom he was a great and a well-deserved favourite.

Workington Infirmary.

This infirmary was erected four years ago, to accommodate the comparatively large number of serious cases, the results of accidents at the neighbouring iron-works; cases of all kinds, however, are admitted when there is room. There are three wards, one of eight beds and two of four beds each. All the medical men in the town are allowed to send in suitable cases, and each continues to attend his own cases. This system works smoothly and satisfactorily. The nursing staff consists of a matron and two nurses. The main source of revenue is the weekly subscription of the working men at the various works—in some cases 1*d.*, in others ½*d.*, per week per man. All the works make such contribution, the amount reaching on an average £800 (the total population is 25,000). Almost sufficient is collected in this way to meet the whole outlay. Without any legacy or extraordinary item of income the infirmary has already £400 saved for investment. The working men of Workington are surely to be congratulated for having shown to all others how hospitals may be supported. That the infirmary eminently serves the purpose for which it was built is admitted by all. As an experiment in the way of localising as opposed to centralising hospitals, it appears to have been entirely successful.

Newcastle-on-Tyne, Feb. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Universities Commission.

THIS commission continues to have frequent meetings, and, for the last week or two, has been taking evidence on matters affecting the medical faculty from the representatives of the Colleges, and from other persons interested in medical education.

Health &c. of Edinburgh in January.

During January there were 466 deaths, giving a death-rate of 20·30 per 1000 compared with 630 in the corresponding month of last year, and 393 in January, 1889. As to age, 124 were under five years, 59 between five and twenty-five years, 141 between twenty-five and sixty years, and 142

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above sixty years. Diseases of the chest caused 177 deaths, and zymotic diseases 42. There were 648 births during the month. During the same period 332 cases of infectious disease were intimated, as compared with 1582 in the corresponding month last year, and 163 in 1889. Of the total, 114 were cases of typhoid fever, 138 of scarlatina, 52 of measles, and 28 of diphtheria. There were 167 patients admitted into the City Fever Hospital and 113 discharged, and 12 died. At the end of the month 257 patients remained, which comprised 101 cases of typhoid fever, 105 of scarlatina, 10 of diphtheria, 10 of whooping-cough, 13 of erysipelas, and 6 of measles.

Death-rate in Edinburgh according to Rental.

Some interesting points bearing upon the mortality of the city during 1890 according to rental was before the Public Health Committee last week. The mortality was lowest in houses with a rent of £50 and upwards—namely, 11·49 per 1000; after these came the houses rented at from £20 to £30; and in those between £5 and £10 the death-rate was highest—namely, 23·14 per 1000. Further, the mortality under five years of age in houses of £50 and upwards was 8·57 per cent., while in houses under £5 it was 39·65; in houses between £40 and £50 it was 6·12 per cent., and between £5 and £10 it amounted to 51·33.

The Disposal of the Edinburgh City Refuse.

The question of the disposal of the city refuse has been before the Town Council for a considerable time, and it was intimated in these pages last year that a deputation had been appointed to visit several towns in England with a view to ascertain the best method of disposing of the refuse. The matter has now become urgent, as it appears there are no vacant places where the refuse can be deposited, as has been the custom in the past. The refuse amounts to something like 110,000 tons per annum. At one time a large quantity was sold to farmers, but not only has the demand from that quarter greatly diminished, but the price obtained is very much lower. The committee recommend the adoption of the destructor or burning method of disposing of city refuse, which they regard as yielding in other places satisfaction alike as regards sanitary and economic considerations. They further suggest that no attempt should be made to centralise the destructors, but that the city should be divided into three or four districts, each of which should have a destructor. The report on the whole subject was brought before the Town Council at its meeting on Tuesday, and was recommitted to the Cleaning and Lighting Committee to bring up specific recommendations and estimates for giving effect to the recommendations of the report. This is certainly a good step in the right direction, and the committee will have earned the approval of sanitarians if they succeed in carrying out their plans and making them all they anticipate.

Mortality of Edinburgh.

The mortality last week was 105, the death-rate being 20 per 1000. Diseases of the chest caused 45 deaths, and zymotic diseases 9. The intimations for the week were: Typhoid fever, 25; diphtheria, 4; scarlatina, 42; and measles, 21.

Feb. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Mercer's Hospital.

ON Monday, in the Queen's Bench, judgment was given by the Lord Chief Justice and his colleagues in the case of Nixon and Ward *v.* Auchinleck, in reference to an application to compel Mr. Auchinleck to produce the authority by which he held the post of physician to Mercer's Hospital. The Lord Chief Justice, in giving judgment, said that the governors of the hospital were left a wide discretion as regards the application of the money, and no external superintendence or control was reserved. That was the position of Mr. Auchinleck, assuming that the governors had power of appointing him. He was a mere licensee, whose licence could be revoked by the governors at any moment, and therefore he held a position in a private hospital which could not be challenged now in the nature of a *quo warranto*. The other justices concurred, and the conditional order for *mandamus* was accordingly refused.

The late Dr. J. A. Byrne.

At a recent meeting of the Obstetric Section of the Royal Academy of Medicine in Ireland the following resolution was adopted: "That the Obstetric Section of the Royal Academy of Medicine desires to record its deep regret at the loss it has sustained by the recent death of Prof. Byrne, and to express its sincere sympathy with his widow and family."

Sentence on a Medical Student.

A medical student, by name Henry Harvey, was on the 14th inst., at the Commission of Oyer and Terminer, sentenced by Mr. Justice O'Brien to one year's imprisonment with hard labour for abducting a girl under eighteen years of age.

Mr. Lawder T. Whelan has been appointed resident surgeon to the City of Dublin Hospital.

BELFAST.

The Ulster Eye, Ear, and Throat Hospital.

From the twentieth annual report presented by Dr. W. A. McKeown at the meeting of the friends and supporters of this hospital I learn that the operation for cataract has been performed forty-two times, with only one loss. During the last six years he has tabulated 296 operations for cataract, and he thinks all hospitals should publish reports of their cataract operations. Dr. McKeown urges the need of day-rooms and further space for the ear and throat department. Dr. Killen has administered anæsthetics and given much assistance. The total number of patients treated during the year was 1613, of whom 196 were intern; 964 patients paid an entrance fee of one shilling, while the remainder were admitted free. No one is refused admittance because of poverty, but well-to-do persons of the working-classes are not permitted to avail themselves of privileges to which they are not justly entitled. The committee started the year with a debt of £78 19*s.* 11*d.*; now the debt is £25 8*s.* 3*d.* The total receipts of the hospital were £630 12*s.* 8*d.*; the total expenditure was £577 1*s.*

The Belfast Medical School and the Royal University.

At the last meeting of the Senate of the Royal University, the following teachers in the Belfast Medical School were elected examiners:—Dr. Whitla, in Materia Medica; Dr. Byers, in Midwifery; and Dr. E. A. Letts, in Chemistry. I understand that a commencement will soon be made in the construction of the new chemical laboratories which are so necessary at Queen's College, Belfast.

Outbreak of Small-pox.

I regret to report that small-pox has again appeared in Belfast, but fortunately the epidemic is mild, and so far no deaths have occurred. On Monday last, in one of the barracks of the Royal Irish Constabulary in Donegal-street, where there are fifty-four men of various ranks, six were seized with the disease, and have been removed to the Union Hospital. The barracks, after thorough fumigation, have been closed, the men have been temporarily quartered in other places, and every possible precaution has been taken to prevent the disease spreading. It is stated that during the past month other isolated cases of small-pox have been met with in parts of the city, and it is thought the disease has been introduced by foreign sailors.

Feb. 17th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Sanitation in Paris.

IT may interest your readers to know what machinery is employed in this great city for the carrying out of sanitary measures. Our own Local Government Board is here represented by the Prefecture of Police, which has attached to it divers corps of inspection, included in which are, besides medical men, veterinary surgeons, chemists, architects, engineers, &c. The functions of these officers consist in the inspection of abattoirs, of the cattle market of La Villette, of establishments which are in an insanitary or dangerous state, of furnished lodgings, of prisons, of lunatic asylums, public and private, of private hospitals, and of bureaux that supply wet nurses. Workshops in which child labour is utilised are also periodically inspected. The head of this sanitary service is the Prefect of Police, who is aided by a kind of sanitary parliament, the Conseil

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d'Hygiène et de Salubrité de la Seine. A subordinate Board of Health exists in each arrondissement of Paris, as also in the suburban arrondissements of Sceaux and St. Denis. The supreme Board of Health meets every fortnight, its proceedings being duly reported in a volume issued annually. Adulteration is sharply looked after by the Laboratoire Municipal de Chimie, created some ten years ago. Here articles destined for consumption are analysed at the instance of the authorities or of any private individual who is willing to pay a small fee. Wine shops are visited by inspectors every three months as a rule, and specimens of the beverages sold are taken away for analysis. Then there is the Laboratoire de Toxicologie, where questions affecting public health and toxicological and medico-legal points are studied. Lastly, the jurisdiction of the Prefecture extends to what is euphemistically denominated the Dispensaire de Salubrité, on the staff of which devolves the duty of making a fortnightly examination of every registered prostitute in Paris. Any woman found to be suffering from venereal disease is summarily despatched to the St. Lazare Hospital, there to be detained until she is cured. This fortnightly examination is compulsory on every *fille soumise* (registered prostitute).

The Influence of Cold Weather on the Mortality of Paris.

The severe winter with which we have been visited has provided a good opportunity for establishing the relation that exists between the commencement and the cessation of the low temperature and the fluctuations in the mortality resulting therefrom. Commencing on Nov. 26th, the cold weather continued almost uninterruptedly until Jan. 21st. The mortality did not, however, rise above the normal until the third week after the first date above mentioned, the increase being, of course, due to the greater frequency of diseases of the respiratory organs. Again, from the statistics of the week ending Jan. 31st, it is seen that the mortality had descended to the level usual at this season of the year, this return to the normal being only apparent one week after the disappearance of the phenomenally cold weather.

Paroquets as Carriers of Infection.

That domestic pets sometimes constitute a danger to the health of their admirers is shown once more by the following sad occurrence, reported by the *Nouvelliste de Lyon*. It appears that a newly married couple went on a visit to an aunt living in the neighbourhood of Lyons, taking with them as a present to their hostess two paroquets newly arrived at Marseilles from Oceania. A few days later, the visitors, their aunt, and the latter's servant fell ill, and the disease was pronounced by two medical men to be yellow fever. A fatal result ensued in all four cases, and the paroquets, which are supposed to have been the unconscious importers of the germs of the dread disease, soon died themselves of "consumption." The authorities have had the house which was the scene of this sad occurrence disinfected.

The State Uniform of French Doctors of Medicine.

It is not generally known that any Doctor of Medicine of a French Faculty who may be desirous of availing himself of the privilege is entitled to sport on solemn occasions a costume that for gorgeousness throws that donned by Academicians completely into the shade. By a clause in a law bearing the date of the 20 brumaire, an XII., otherwise Nov. 12th, 1803, it is enacted that a plain Doctor of Medicine is authorised to wear at public ceremonies, or when giving evidence before a court of justice, a costume thus composed: a black gown of bolting-cloth (*étamine*), the back and front of which are of crimson silk bordered with ermine; a black coat *à la Française;* cambric bands, and a cap of crimson silk with a border of gold lace. The time is probably not far distant when that cumbrous institution, the University of France, will be replaced by local Universities after the English model. We shall then perhaps see the medical graduates of the Universities of Paris, Montpelier, Nancy, &c., cutting a conspicuous figure at public functions attired in a costume which rivals in magnificence that seen on the professors who confront the aspirant to academical honours in the dingy examination rooms of the Paris Faculty of Medicine. Its costliness would, however, always militate against its universal adoption, even if the Frenchman's innate dread of rendering himself ridiculous would induce him ever to appear in public in such a guise.

Voluntary Constipation.

In a recent article in the *Revue de l'Hypnotisme*, entitled "Voluntary Personal Uncleanliness," Dr. Galippe calls the attention of the authorities to the necessity of reforming the sanitary arrangements obtaining in most French educational establishments. Some facts related by him in this connexion will be read with astonishment by those who are not familiar with the horrible filthiness of most French closets. He says, "We need hardly remind the reader of the disgusting filthiness of most (school) closets, and I have known sensitive children who refuse to repair to these places until they are absolutely obliged to do so, such is their horror of the stench that there assails their nostrils, and the dirt they may bring away with them. I have known of many children who have suffered much from this voluntary constipation, and of others who, affected with diarrhœa, have for a whole week passed their motions into their clothing." Dr. Bourneville, in a notice of this article (*Progrès Médical*, Feb. 14th) says that he has for years urged the necessity of endowing not only schools but also hospitals and barracks with decent closets. He has endeavoured to convince the French public of the feasibility of such a stupendous feat by having constructed for the use of his idiot and imbecile child-patients at the Bicêtre closets, the cleanliness of which strikes the French visitor with astonishment. M. Bourneville also demands for each school a complete set of bath-rooms, and calls for regulations rendering the use of a bath obligatory on the scholars.

Paris, Feb. 20th.

MEDICAL TRIAL.

REGINA *versus* BERRY.

(Before Mr. JUSTICE CHARLES.)

A CASE of some interest to the medical profession was tried at the Old Bailey on Saturday, the 14th inst., before Mr. Justice Charles. Elizabeth Sarah Berry, an uncertificated midwife, practising at Tooting, was charged with manslaughter for causing the death of Emma Spicer by communicating to her the disease known as puerperal fever. Mr. Forest Fulton, assisted by Mr. Horace Avory, appeared to prosecute, while Mr. Tickell defended. Mr. Forest Fulton, in opening the case, stated that the prisoner had practised as a midwife for the last twenty years, and pointed out that the law required that midwives should bring to bear upon the discharge of their duties, just as medical men were required to do, a reasonable amount of care in the management of the cases they undertook. If that had not been done in this instance, and if the death of the patient was brought about by infection conveyed to her by the prisoner, he thought his lordship would say that she was guilty of manslaughter. It was generally recognised by the medical profession that a considerable interval should elapse before attending lying-in women after a case of puerperal fever had occurred. The defendant had attended on Dec. 12th a woman who died from puerperal fever, and on Dec. 8th she had attended another person, who had also died from puerperal fever. On Dec. 12th Dr. Taylor, a gentleman practising in the neighbourhood, told the defendant that she ought not to attend any other cases for a considerable period, at least two months. The question was a twofold one, Was the puerperal fever communicated by the prisoner, or was it, looking at the surrounding circumstances, due to other causes? The jury would have to say whether this attendance, under all the circumstances, with the warning of Dr. Taylor, and the fact that there had been no less than two other deaths, constituted such gross and culpable negligence as, in the opinion of the jury, would justify them in coming to the conclusion that the prisoner was criminally responsible for the death of this woman.

At this point Mr. Justice Charles explained that, as he understood the law, there must be such negligence as amounted to "criminal misconduct."

In her statement before the magistrates the witness had stated that she had thoroughly disinfected herself, and had refrained from attending cases for a month. How far it was possible for persons to disinfect themselves so as not to carry infection to a lying-in woman was a matter open to very great doubt. At the coroner's inquiry into the cause of death the prisoner stated that Dr. Taylor had cautioned her not to attend any other cases for a month or six weeks, and that she did not know what puerperal fever

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was, but understood it to be blood poisoning. She had attended 950 midwifery cases.

Among the witnesses examined was the husband of the deceased, who stated that his occupation was that of a plumber, and that he had to attend to drains and water-closets. Dr. Bligh of Tooting was closely pressed by Mr. Tickell to state the distinction which existed in this disease as to its power of being communicated by contagion or by infection, and also what, in his opinion, was the period of quarantine recognised by medical men under such circumstances, but he refrained from expressing any opinion on the subject. In reply to his lordship, he explained that he was in no way concerned in the delivery of the first woman who died, but was called in three days after. Dr. Taylor, in his cross-examination by Mr. Tickell, admitted that puerperal fever, coming on immediately after the birth of the child, might be due to bad drainage, but thought that a patient might show slight symptoms of contagion within twenty-four hours. The husband was then recalled, and stated that the first symptoms of pain in the abdomen occurred just twenty-six hours after delivery. Dr. Taylor further stated that he had advised the prisoner to use Condy's fluid for disinfecting purposes, but had not gone into any details as to its use, as he imagined the prisoner with her experience would have known these. In reply to Mr. Justice Charles, he stated that if he had delivered a person in whom puerperal fever had been set up he would have abstained, after disinfecting himself, from attending other cases for at least a month; and his lordship pointed out that in this case the prisoner had abstained for a month and had also disinfected herself. Mr. J. R. Purdieu, Dr. Taylor's assistant, was then examined, and in the course of his cross-examination by Mr. Tickell stated that he had told the woman that she should have come to the surgery and got permission before attending other cases. He would have given the prisoner permission after a month. He noticed on the occasion of his visit to the house a "very great stench in the room," but could not say exactly from what sources it arose.

Mr. Thomas Bond, F.R.C.S., had made a post-mortem examination of the deceased, and found the lungs considerably congested with purulent lymph and adherent to the pleura. There was no evidence of bronchitis or pneumonia. Both ventricles of the heart were filled with fibrinous clots, and the abdominal cavity was filled with fluid of a purulent nature. The peritoneal surface of the abdomen was also covered with putrid lymph. The mucous membrane of the vagina was in a highly inflamed condition, and in the uterus he found indications of recent puerperal fever. He certified that the cause of death was blood poisoning as the result of puerperal fever. There was no part of the placenta or any membrane remaining in the uterus, nor was there any evidence whatever of any injury during parturition. There was nothing in the necropsy beyond the virulence of the attack to show what had caused the fever.

A juryman asked Mr. Bond if, in his opinion, the prisoner was not justified in attending Mrs. Spicer, after having, without any ill effects, attended a previous case, but his lordship suggested that that was a question which the jury would presently have to propose to themselves.

Dr. W. C. Grigg, physician to Queen Charlotte's Lying-in Hospital, in his evidence mentioned various causes which might give rise to this fever. Judging from the post-mortem examination a considerable amount of blood must have been left within the cavity of the uterus, and that was not without danger. If the surroundings were unhygienic, it would be rapidly decomposed, and lead to this disease. The period of the development of the disease was rather against its being conveyed by the attendant. In a very severe epidemic at Queen Charlotte's Hospital (the severest he had ever seen) sixty-two women were stricken down with puerperal fever, of whom fifty died. He had carefully gone over the records of these cases. Only ten showed symptoms of puerperal fever within forty-eight hours, and of these three had been in the hospital from two to three days previously. Generally speaking, when the contagion was due to direct infection, it showed at the end of the second day or the beginning of the third; and where the mischief broke out early he looked to external sources for the cause—namely, the habitation from which the patient came—the surroundings—and concentrated his attention upon that, rather than upon the attendants; but where it broke out later he regarded the mischief as due to something connected with the attendant.

The husband was again called, and proved that the onset of the abdominal pain which Dr. Grigg had stated to be the first symptom of puerperal fever had occurred exactly twenty-six hours after delivery, and Dr. Grigg thereupon gave his opinion that the disease was probably due to the action of the patient's surroundings.

The jury here stopped the case and returned a verdict of "Not guilty."

Mr. Justice Charles, while agreeing with the jury that the case should not proceed further, thought the prosecution had been very properly instituted, because the practice of attending patients after previous cases of puerperal fever was a most dangerous one; and therefore, especially after the verdict of the coroner's jury and the bill of the grand jury, he had been reluctant to interfere earlier in the case. There was no alternative left to the prosecution after the verdict of the coroner's jury, which was "that the said Mrs. Spicer came to her death from blood poisoning as the result of puerperal fever, which was contracted by her from the gross and criminal negligence of Elizabeth Berry," and therefore they charged her with manslaughter. Now, he did not agree with that finding, and he did not think any case of "gross and criminal negligence" had been made out against the defendant.

The jury expressed the opinion that the defendant left the court without a stain on her character, in which opinion his lordship concurred.

Medical News.

UNIVERSITY OF LONDON.—The following is a list of candidates who passed in the respective divisions and subjects at the Intermediate Examination in Medicine, held in January last:—

Entire Examination.—First Division: Henry George Felkin, Jas. Ryland Hickinbotham, Charles Paine, Frederick John Poynton, Herbert Campbell Thomson, Herbert James Walton.—*Second Division:* Christopher Addison, Martin Ashley, John Aaron Berlyn, Ramon Horace Castellote, Robert Francis Chance, Dudley Willis Collings, Harry Guy Dain, Herbert Fox, Bertram Harold Kingsford, Robert Casement Kirkby, Ernest Graham G. Little, Thomas Davys Manning, Mary Ellen Rye, Samuel Robert Schofield, Walter Scott H. Sequeira, William Shears, Geo. Nathan Oscroft Slater, Kirsop B. Jas. Vickers.

Excluding Physiology.—First Division: Francis Parris Piper, Courtenay Mansel Rhodes, Edwin Sly.—*Second Division:* Evelyn Lancelot Adams, Arthur Percy Allan, Hugh Kennedy Birley, Arthur James Edge, Percy Stanhope Eves, Charles Frederick Gross, George Frederick Murrell.

Physiology only.—First Division: Leonard Arthur Bidwell, Alfred George Jones.—*Second Division:* Robert Turle Bakewell, Lullum Wood Bathurst, Alfred Herbert Card, William Henry Jewell, George Martyn, Alfred Hugh Minton, Albert Paling, William Chas. Cunningham Park, Reginald Smith.

The following candidates passed the Preliminary Scientific (M.B.) Examination in January:—

Entire Examination.—First Division: William Dyche (B.A.), Thomas Hillier Green, Richard Kay, Joseph Arthur Mawson, Harold Batty Shaw, Arthur Herbert Spicer.—*Second Division:* Malcolm Cameron, Claude Lionel Chevallier, Horace James Harris (B.A.), Thomas Clifford Last, Cuthbert Henry Jones Lockyer, William John Oakes (B.A.), Percy Allan Palmer, George H. Wheeler (B.A.).

Chemistry and Experimental Physics.—*Algernon Carter Bean, *Sydney Henning Belfrage, *William Marmaduke Bergin, *Victor John Blake, Herbert Cardin, *Felix Bolton Carter, *Walter Ernest Cross, Edward Charles Davenport, *Alfred Dimsey, *Stewart Ranken Douglas, *Edward Guy Dru Drury, Brennan Dyball, *Arthur Earnshaw, *William Dyer Frazer, Frederick Harcourt Gervis, Henry Norman Goode, Charles Hanks, *Charles John Harnett, *Thomas Hood, *David Horwitch, Edmund Eyre Lloyd, *Leonard Freeman Marks, Joseph Thomas Marsden, *Sydney Herbert Mason, *Joseph Corbett Muir, *William Percy Nicol, *James Henry Francis Nunn, *Arthur James Pedley, *Norman Howard Pike, *David Rice, *Edward Lionel M. Rusby, *Joseph Shardlow, *Frank Addinsell Smith, *Lewis Albert Smith, *James Charles Spillane, *Leonard Kirkby Thomas, Charles Robert Watson, Henry Chorley Watt, *Morris Wilks, *Harry Mortimer Wise.

Biology.—*William Boase Bennett, *Lewis William Burrow, *Joseph Ernest G. Calverley, *Cecil Frederick Gordon, *J. Alban Kendall Griffiths, Thomas A. Hawkesworth, Sindia Emily Hickson, *Albert Hilton, Gwilym Prosser James, Arthur Dickson Ketchen, William Maclachlan M'Donald, F. Archibald Hope Michod, Charles Hay Murray, *Herbert Ainslie Scott, *Thomas Blanchard Sellors, *Arthur Richard Harrie Skey, *John Clementson Smellie, Daniel Lloyd Smith, Francis Joseph Smith, *Graham Udale Smith, *Percy Montague Smith, *Harry James Spon, *John Robert Steinhaeuser, *Cecil William Stickland, *Thomas Morrell Thomas, *Edward Owen Thurston, *Sydney Gordon Tippett, *Thomas Henry Wells, Stanley Whicher.

Two Subjects of the Examination (under former Regulations).†—Colin C. Clarkson (C. B.), A. William R. Cochrane (P., B.), Adèle I. De Steiger (C., P.), William Henry Gray (P., B.), Thomas Lambe (C., P.), Eldon Pratt (C., P.).

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*One Subject of the Examination (under former Regulations).**†—William Edward N. Dunn (B.), Henry Wylie Eldred (B.), Ernest Jermyn Hynes (B.), Harry Fulham Turner (C).

* These candidates have now completed the examination.

† The subjects taken up by these candidates are indicated by initials after the names: C, Chemistry; P, Physics; B, Biology.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 5th inst. the following degrees were conferred:—

Bachelors of Medicine and Surgery. — Francis Welford, Cuthbert Wyman, Trinity; Alfred Featherstone Kellett, William Wickham Simmons, St. John's; Harry Edward Smith, Gonville and Caius; Thomas Greenwood Crump, John Elsdale Molson, Emmanuel; Edward Spencer Blaker, Cavendish Hostel.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — Those gentlemen whose names were published in THE LANCET of Feb. 7th as having passed the examination of the Royal College of Physicians, also passed the necessary examination, and, having conformed to the by-laws and regulations, were admitted at the ordinary meeting of the Council on the 12th inst. as Members of the Royal College of Surgeons. In addition to the list, the following gentlemen have also been admitted Members of the College:—

Bloomer, F. W., L.S.A., Wednesbury.
Clarke, E. A., L.S.A., Dukinfield.
Godfrey, C. G., L.R.C.P. Edin., Ampthill-square, N.W.
Hutchinson, Cyril G., L.R.C.P. Irel., Birmingham.

NAVAL MEDICAL SERVICE.—The following candidates, who competed at the examination held on the 2nd inst. and following days at Examination Hall, Victoria Embankment, for appointment as Surgeons in the Royal Navy, have been successful:—

	Marks.		Marks.
Meikle, T. C., M.A., M.B.	2741	Richards, N. L.	2364
Senior, R. W.	2632	Penfold, E. A., M.B.	2318
Tindall, E. E. P.	2521	McGregor, G.	2312
Kershaw, E. E.	2521	Clarke, B. R.	2258
Wood, J. C.	2453	Finch, E. J.	2251
Howell, A. H.	2421	Robinson, J. K., M.B.	2240
Marriott, H. B.	2405	Clift, H.	2163
Lomas, E. C., M.B.	2400		

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The surgical essay prize of 35 guineas has been awarded by the College to Mr. Harold Jalland Stiles, M.B., F.R.C.S.E., of Edinburgh, for his essay on "Contributions to the Development, Anatomy, Pathology, and Surgery of the Breast." The prize was open to all licentiates and Fellows of the College, except Fellows who were members of the President's Council, and candidates had the selection of any surgical subject.

FOUR CHILDREN AT A BIRTH.—The wife of a forgeman, living at 14, Stamford-street, Warrington, gave birth on Saturday to three boys and a girl. Two of the children were stillborn, and the others lived for twelve hours. The mother is doing well.

THE SANITARY ASSURANCE ASSOCIATION.—The tenth annual meeting of this Association was held on Monday last at the offices, 5, Argyll-place, W., the President, Sir Joseph Fayrer, in the chair. Mr. Joseph Hadley, secretary, read the annual report, which referred to the work of the Council in promoting the Sanitary Registration of Buildings Bill. On the motion of the President, seconded by Mr. Henry Rutherfurd, barrister-at-law, the report was unanimously adopted. Surgeon-General Cornish proposed: "That the petition to the Prime Minister requesting the Government to make provision in their Bill for consolidating and amending the laws relating to public health as will secure the registration of buildings in some such manner as proposed by the Sanitary Registration of Buildings Bill, 1890, be approved, and that copies be forwarded to the governing bodies of the institutions which took part in the Sanitary Registration Conference of 1887, with a letter requesting them to sign the petition and take part in its presentation." This was seconded by Mr. Andrew Stirling, supported by Mr. Mark H. Judge and Dr. Willoughby, and carried unanimously. Sir Joseph Fayrer, having some time since announced his intention of retiring from the presidency, the meeting conveyed to that gentleman its warm appreciation of and sincere thanks for the valuable services rendered by him during the ten years in which he held the office of President. Surgeon-General Cornish, late Sanitary Commissioner with the Madras Government, was elected President, and Sir Joseph Fayrer and Professor Rogers Smith were elected Vice-Presidents.

PROPOSED INFECTIOUS DISEASES HOSPITAL.—Negotiations between the West Derby and Wavertree Local Boards have been pending for the purpose of selecting a suitable site for the erection of an infectious hospital for the use of both townships, rendered necessary by the withdrawal of the permission to send infectious patients to the Netherfield-road Hospital. The Derby Board has in consequence resolved to contribute two-thirds of the cost of erecting and maintaining the proposed hospital, and the Wavertree Board will provide one-third.

ASSOCIATION OF MUNICIPAL CORPORATIONS.—At a meeting of the Council of this Association, on Feb. 12th, at the Westminster Palace Hotel—Sir Albert Rollit, M.P., president, in the chair—a resolution was passed urging corporations to adopt the provisions of the Infectious Diseases (Notification) Act, 1889, and the Infectious Disease (Prevention) Act, 1890. The members of the Association also resolved to dine together at the Hôtel Métropole on Thursday evening, March 12th, and the annual meeting was fixed for March 13th.

LONDON FEVER HOSPITAL.—It appears from the annual report for the year 1890 that there had been a considerable increase in the number of admissions. The addition included all the various forms of fever, with the exception of typhoid, the prevalence of which in the metropolis during the year was much below the average. The total number of patients under treatment was 682—308 males and 374 females. The cash statement showed a credit balance of £5026 17*s.* 10*d.*, of which £3860 had been invested, leaving in the hands of the treasurer £1166 17*s.* 10*d.*

PRESENTATIONS.—On the 13th inst., at the close of the last of a course of ambulance lectures, the members of the Rusthall branch of the Girls' Friendly Society presented Mr. Walter C. Aylward, M.R.C.S., L.R.C.P., with a handsome Tunbridge ware inkstand, accompanied by an address expressive of the donors' appreciation of the services of the lecturer.—The many friends and patients of Mr. Philip G. Lee, L.R.C.P. &c., took the occasion of his leaving Monkstown, county Cork, Ireland, on an appointment in Middlesboro', to present him with an illuminated address and handsome presentation as a testimony to the esteem and regard in which he was held during the three years of his practice in that locality.—Dr. C. J. Russell McLean has been presented by the members of the Yeadon St. John Ambulance Association with a beautiful Parisian timepiece, as a token of their appreciation of his "First Aid" lectures during the past year.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. John Nuttall, of Newstead-grove, Nottingham, bequeathed £50 to the Devonshire Hospital, Buxton.—Miss Margaret Chalmers, late of Broughty Ferry, left by her will £100 each to the Dundee Royal Infirmary, and the Convalescent Home, Barnhill.—Mr. John W. Dudley, late of East Dulwich and Woodford, bequeathed £250 each to the Brompton Consumption Hospital and the British Home for Incurables, £150 to the Cancer Hospital, Brompton, and £100 each to the Royal Ophthalmic Hospital, Moorfields, and the Cancer Hospital (free), Fulham-road.—The Tallow Chandlers' Livery Company has made a grant of 5 guineas, the Mercers' Livery Company a grant of £52 10*s.*, and the Armourers' and Braziers' Livery Company a grant of 10 guineas to the Great Northern Central Hospital.—The directors of the Bank of England have voted a donation of £100, and the Saddlers' Livery Company £20, to the Charing Cross Hospital.—The Earl of Pembroke has sent a donation of £100 to the Royal Hospital for Diseases of the Chest, City-road.—Miss Tilley, formerly of Clifton, and late of Park-road, Gloucester, bequeathed £1600 to the Gloucester Infirmary, £1000 to the Bristol General Infirmary, £600 to the Gloucester Children's Hospital, and £400 to the Gloucester Dispensary.—Mr. George Palmer of the Acacias, Reading, has sent a donation of £1000 towards the funds of the Royal Berkshire Hospital.—The Goldsmiths' Livery Company has made a grant of £20 to the Central London Ophthalmic Hospital.—The late Mr. Nathaniel Clayton, J.P., of Lincoln, bequeathed £1000 to the Lincoln County Hospital and £500 to the Lincoln General Dispensary.—The Mercers' Livery Company has sent a donation of 52 guineas to the Surgical Aid Society.

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MEDICAL MAGISTRATES.—The names of William Henry England, M.D. St. And., M.R.C.S., and John Edwin Scowcroft, M.D. St. And., F.R.C.S.Edin., have been placed upon the Commission of the Peace for the Boroughs of Leeds and Bolton respectively.

PORTSMOUTH HOSPITAL.—The forty-second annual report, just issued, shows that no fewer than 7915 patients had received treatment in this institution during the past year, of whom 937 had been in-patients, and of these 658 were cured and 142 relieved. The expenditure for the year had exceeded the income by £320 1*s.* 4*d.* The total investments now amounted to £19,174 6*s.*

THE NEW NATIVE HOSPITAL AT LUXOR, EGYPT.—This institution will be a boon to the indigent fellaheen at Luxor and other natives. The opening ceremony was recently performed by the Khedive. The hospital has been erected by contributions from English tourists, supplemented by the generosity of Mr. Brunner, M.P.; whilst Mr. John Cook has undertaken to discharge any annual financial deficiency. There are forty free beds, and gratuitous medical aid will be given to the natives. The medical officer is a native, and pursued his professional studies at St. Thomas's Hospital, London.

THE SEAMEN'S HOSPITAL SOCIETY.—Sir Thomas Sutherland presided at the seventieth annual court, held on Tuesday. The report submitted stated that the first branch hospital adjacent to the docks, opened in June last, had been almost constantly full since its opening. The cost of the building and furnishing amounted to £6798, which had to be provided out of capital. During the year the number of patients at the hospital at Greenwich had been in excess of any previous year in the existence of the Society. The dispensaries also had done good work. Excluding the legacies, the revenue showed an increase of £200. The yearly expenditure of the Society was £13,000, while the reliable income was less than £4000.

THE WARREN TRIENNIAL PRIZE was founded by the late Dr. J. Mason Warren in memory of his father, and his will provides that the accumulated interest of the fund shall be awarded every three years to the best dissertation, considered worthy of a premium, on some subject in physiology, surgery, or pathological anatomy, the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The subject for competition for the year 1892 is on some special subject in physiology, surgery, or pathology. Dissertations must be legibly written, and must be suitably bound so as to be easily handled. The name of the writer must be enclosed in a sealed envelope, on which must be written a motto corresponding with one on the accompanying dissertation. Any clue given by the dissertation, or any action on the part of the writer which reveals his name before the award of the prize, will disqualify him from receiving the same. The amount of the prize for the year 1892 will be 500 dols. In case no dissertation is considered sufficiently meritorious, no award will be made. A high value will be placed on original work.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on February 17th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total	
Eastern Hospital	261	57	1	45	2	366	442
North-Western Hospital	236	33*	—	9	..	278	443
Western ,,	157	26	—	13	1	197	224
South-Western ,,	152	23	—	10	1	186	340
South-Eastern ,,	190	18	—	20	3*	231	462
Northern ,,	284	14	—	30	—	328	480
Gore Farm ,,	5	..	—	..	..	5	300
Totals .. — —	1285	171	1	127	7	1591	2691

* Infants with mothers.

MEDICAL NOTES IN PARLIAMENT.

Elementary Education (Blind and Deaf) Bill.

IN the House of Lords on Monday, the 16th inst., Viscount Cranbrook, in moving the second reading of this Bill, said that its object was to insure that blind and deaf children, whenever capable of being instructed, should receive an education like other children in the country. Under the provisions of the measure blind and deaf children would be sent to institutions which already existed throughout the country, and which had been established for the benefit of persons so afflicted, and power was given to the school authorities to contribute to the funds of such existing institutions, or to establish similar institutions themselves, which would specially be devoted to the education of blind and deaf children. The Bill would also permit the Parliamentary grant being extended to schools where those afflicted little ones were educated, so that blind and deaf children would receive educational advantages similar to those enjoyed by their more fortunate companions. Lord Herschell, Lord Norton, Lord Egerton, and the Earl of Powis took part in the debate.

Medical Officers of Health.

On Tuesday, the 17th, the Earl of Dunraven rose to ask Her Majesty's Government as to the powers and duties of a medical officer of health appointed by a county council under section 17 of the Local Government Act, 1888. He should be glad at the same time to be informed as to the powers of county councils in the matter. It appeared to him to be very difficult to gather from the Local Government Act what were the powers of medical officers appointed by the county councils, or what powers the county councils themselves had. They had the appointment of the medical officers of health, and it was provided that by arrangement with the district councils their services could be rendered available; and pending the institution of district councils they could make, he presumed, such arrangement with the urban or rural sanitary authorities. But what those arrangements were the Act did not specify, and it was impossible to find out.—Lord Henniker, in reply, pointed out that the statute did not in any way prescribe the duties which were to be performed by those officers; neither had the Local Government Board any power whatever to define their duties. In each case the duties must be such as the county council might lay down when making the appointment.

Infringement of the Vaccination Acts.

On Monday, in the House of Commons, Mr. Matthews, in reply to a question by Mr. Channing as to a sentence of seven days' imprisonment with hard labour, passed on Feb. 4th on a person for non-payment of costs incurred in connexion with an order under the Vaccination Acts, said: I have received a report from the justices in this case, and have also been furnished with a copy of the commitment. The man was sentenced to imprisonment without hard labour. The occasion, therefore, for such action as is suggested in the second paragraph of the question has not arisen, nor have I any reason to believe that such illegal sentences are of frequent occurrence.

The Factory and Workshops Act (1878) Amendment Bill.

On Wednesday, Sir H. James, in moving the second reading of this Bill, pointed out that its application was limited to those factories where artificial humidity was introduced; it aimed at a better sanitary condition and ventilation of factories, afforded greater facilities for escape from fire and protection from injury from dangerous machinery by means of enforced fencing, and also insisted that workers should receive proper remuneration. In the discussion which followed Mr. Oldroyd, Mr. B. Reid, Mr. J. A. Bright, and Mr. James McLean took part. The Home Secretary said that some amendment of the Factories Acts was requisite in the interest of the health and safety of the workmen, and also for the purpose of preventing any irregularity—he used a mild word—in the payment of wages. The ventilation of factories was not satisfactory, but as regarded that it was as well not to lay down any hard-and-fast rule to fit all circumstances. Considering the point relating to the means of escape from fire, he agreed that the operation of a provision for that purpose could not be confined to future buildings, and was of opinion that a solution of the difficulty might be found. After the debate had continued for some time longer, the Bill was read a second time, and the Committee stage was fixed for Thursday.

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday. Lord Sandhurst, chairman of the committee, presided, and amongst other members present were the Archbishop of Canterbury, the Earl of Kimberley, Lord Clifford, Lord Saye and Sele, Lord Monkswell, Lord Cathcart, Lord Zouche, and the Earl of Lauderdale.

St. Bartholomew's Hospital.—The Outbreak of Diphtheria.

Dr. Thorne Thorne, assistant medical officer to the Local Government Board, examined by the Chairman, said he had made an inquiry into the sanitary condition of St. Bartholomew's Hospital. The treasurer asked him if he would consent to undertake this duty so far as the sanitation might have affected the outbreak of diphtheria among the nurses. He told him he could not do so officially, but as an old St. Bartholomew's man and as a personal friend of the treasurer he undertook to make the inquiry. The treasurer was under the impression that some of the sanitary circumstances might have affected the outbreak, and witness naturally inquired into that first. He had not yet completed his inquiry, but he had made an investigation into the sanitary circumstances of the two nurses' homes and the three principal ward blocks, and he had sent Sir Sydney Waterlow a provisional report. It must be borne in mind that it was a provisional report. He marked even the covering letter "private," in view of the grounds on which he had undertaken the inquiry. He found that the principal nurses' home was so far perfect that he thought it would be hardly possible to find any establishment in London the drainage arrangements of which and the sanitary circumstances were better. The second nurses' home was an old building. A great many attempts had been made to put the drainage into good order, and great expense had been incurred. He had found certain faults which he advised should be remedied. As regards both these homes, he thought provisionally that they had nothing whatever to do with the outbreak of diphtheria among the nurses. He had two criticisms to make with reference to the three principal ward blocks which he examined.

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Some fifteen years ago, at the cost of many thousands of pounds, the governors erected the so-called sanitary blocks at the end of the wards, with the object of getting the closets and lavatories aerated distinct from the wards. He did not think that this object had been properly attained, but a very small alteration would entirely remedy the defect. The principle of the arrangement was good, but the details were faulty. The same criticism applied to certain disconnecting shafts that were made at the same time. It would be a small matter to put them in order.

The Chairman: But would that not have a very prejudicial effect upon health?—Dr. Thorne: I hardly think so, because all the drains coming down into this disconnecting shaft come from these sanitary projections, which have abundant means of cross ventilation quite independent of any air in the closets. There was another defect connected with what was called the nurses' scullery. In each scullery there was a closet which had not been aerially disconnected, and which, he thought, ought to be so. That really represented the faults he found with the buildings. Recommendations were embodied in his report, and he had been informed that instructions had been given to remedy all these matters forthwith.—The Chairman: Have you been able to form any idea how this diphtheria should have made such headway?—Dr. Thorne: I have. I was rather anxious not to express any opinion upon that, for this simple reason—that in order to do so with any authority one has to know the exact dates when nurses were attacked, how the nurses were engaged, what wards they were engaged in, which home they had slept in, and especially whether they had had to do with diphtheria patients. This involved a great deal of work in a large hospital like St. Bartholomew's; and a meeting of the senior staff was at once called with a view to getting all these data. I have not yet received material enabling me to form any final judgment upon the point, but I have gone so far as to say that I feel absolutely convinced that any of the sanitary defects connected with the ward buildings could have but only the most trivial, if any, influence upon this outbreak of diphtheria.

By Lord Cathcart: He would not have advised that the nurses should be put in the cubicle ward on the same floor as the most infectious cases. He had no doubt that the spread of diphtheria led to the nurses being hurried away from the cubicle. Diphtheria was most rapidly increasing in England, and particularly in large cities.—Lord Cathcart: You are decidedly of opinion that this diphtheria did to some extent arise from defects in the arrangements, because you suggested that the sanitary blocks were not in a satisfactory state, and that the nurses' scullery was not disconnected with the main drain?—Dr. Thorne: In my report I state "that the sanitary circumstances of the Nurses' Home in Little Britain are such as to forbid the belief that they could in any way be concerned in the production of the disease; that whilst I am unable to speak with equal confidence as to the Duke-street Home, I have no ground for believing that diphtheria had been induced by any of the sanitary conditions of that building; that as regards the drainage of the ward blocks and the internal arrangements of those buildings conditions do exist, and it is notable in the ward kitchens, which do tend to unwholesomeness, and which have been known to produce sore-throat; and that even if this form of sore-throat be not in its beginnings regarded as of a specific character, it is certain that those suffering from it are to an exceptional degree apt to contract diphtheria when the disease is prevalent. This statement is not intended to prejudge the question as to the origin and diffusion of the infection during the recent prevalence, as to which the necessary data are not forthcoming."—Lord Cathcart: Are you satisfied that there has been no outburst of sewer gas into this building?—Dr. Thorne: If there has been at all it has been by means of the ward sculleries.—Lord Cathcart: And you think it probable that there was an escape of sewer gas into those ward sculleries?—Dr. Thorne: The arrangements of these sculleries were about the same as in all London houses. They were so far faulty. I know there have been complaints of offensive odours in that part of the ward, and therefore I am bound to admit that both the structural arrangements and the evidence I have received point to some such danger at that one spot.—Lord Cathcart: Do you say that the sculleries attach to the wards?—Dr. Thorne: Yes.—Lord Cathcart: Would that not in your opinion be enough to account for an outbreak of disease?—Dr. Thorne: Your term "disease" does not help me. It is well known that drain effluvia cause sore-throat, and sore-throat is a condition which diphtheria seeks above all things for its attacks. Continuing, Dr. Thorne said that he called the nurses and sisters together, and asked them to make any complaints they had to make. They said that in certain wards there had been offensive odours from the closets and ward sculleries. He did not think their complaints went beyond that.—Lord Cathcart: But Mr. Cross in evidence said that there had been no complaints about the closets?—Dr. Thorne: I can only tell you what the nurses and sisters told me.

By the Earl of Lauderdale: He occasionally gave lectures on public health at St. Bartholomew's, but he seldom entered the wards.

By the Earl of Kimberley: He considered it a bad arrangement that the closets should open into the sculleries, and he had ordered its immediate discontinuance. Though the main drain was of brick, it was very efficiently constructed, and he was not prepared in all the circumstances to recommend its removal.

Mr. Cross, clerk of St. Bartholomew's Hospital, examined by the Chairman, said that there was no periodical examination of the sanitary condition of the hospital. They had a surveyor as well as a Clerk of Works. The Clerk of Works made an inspection of the drains every three months. He would not say whether that was sufficient; he merely stated the fact.

By Lord Cathcart: It was the case that on Jan. 29th he stated there had been no complaints as to the closets. He heard nothing of such complaints until Feb. 4th or 5th. There was no intentional concealment of the facts on his part. He should be prepared to admit that they had engaged nurses who physically were not strong enough for the strain put upon them. About two months ago the governors instituted a more searching examination for all candidates as nurses, in order that they might be sure of their constitutional fitness for the duties. No one could deny that the hours of the nurses were very long. His two daughters, who were nurses in the hospital, told him that they were well fed and well cared for. He did not believe there was any ground for complaint as to the food of the nurses. The matron suggested about the middle of December that it would be desirable to offer the nurses a glass of port wine each day, and some soup at ten o'clock. The suggestion was no doubt due to the illness among the nurses. His daughter contracted diphtheria from a ward maid.

Lord Cathcart: A ward maid would be always over the sinks?—Mr. Cross replied that this particular ward maid had been in the hospital only four days. The current balance of the hospital with the Bank of England might amount to £4000 or £5000. That money lay dead. They could not keep money on deposit receipt with the Bank of England.

By Lord Monkswell: It was not the case that they had ever applied for permission to take in paying patients.

Mr. I'Anson, surveyor of the hospital, examined by the chairman, said he had general supervision of the buildings. He reported anything wrong either in sanitary or structural matters. He received reports from the Clerk of Works every week, or oftener if necessary. Witness was not a sanitary engineer, though he understood drainage matters. His salary was 300 guineas, and he received 2½ per cent. on new work. He engaged in private practice. He reported annually on the state of the property. In consequence of the outbreak of diphtheria he on Dec. 4th examined all the wards, Duke-street nurses' home, and the matron's house. The report of that examination was the first report he had presented on the sanitary condition of the hospital since his appointment three years ago. He found that the sanitary arrangements of the hospital were good, though not up to date. He expressed the opinion that there was nothing in the sanitary arrangements to account for the outbreak of diphtheria.

By Lord Cathcart: He considered it one of his duties to attend to the sanitary condition of the hospital. He did not receive a drainage plan from his predecessor, although he believed an old plan was in existence. He recommended that the main drain, which was of brick, should be cut off and ventilated. He believed the drain was executed as long ago as 1829. A large drain passed underneath the surgery, ten feet below the basement. He only made this discovery during his recent inspection. If the hospital were to be brought up to date it must be redrained. Considering that there were 600 sick persons in the building, it was, in his opinion, desirable that the system of drainage should be begun *de novo*.

Dr. Barnes, consulting physician in St. George's Hospital and Chelsea Hospital for Women, submitted evidence as to the hospital-supply of London. He expressed himself in favour of hospitals of moderate size, and thought that some of the existing institutions might with profit be removed to the country.

The Committee then adjourned.

The Committee met again on Thursday, Lord Sandhurst presiding.

Middlesex Hospital.

Mr. F. C. Melhado, secretary of the Middlesex Hospital, attended and made a number of alterations in the notes of his evidence. He also answered several fresh questions put to him by members of the Committee.

By the Chairman: They employed a firm of public chartered accountants to examine the accounts of the hospital twice a year, and give a certificate to the weekly board. The accounts were examined annually by three auditors appointed by the court of governors.

By Lord Cathcart: All patients were rendered insensible before being taken into the operating room. In his office there was a complete drainage plan of the hospital. It was accessible at any moment. In his opinion it was absolutely necessary to have a drainage plan. He could hardly understand a large hospital being without a drainage plan.

By Earl Spencer: When patients were unable to provide themselves with tea and sugar they were supplied from the funds of the Samaritan Society. About twenty patients each week were unable to provide themselves with those commodities.

Charing-cross Hospital.

Mr. Arthur E. Reade, secretary of Charing-cross Hospital, examined by the Chairman, said that the institution was founded in 1820 and the present buildings were opened in 1834. It was an absolutely free hospital. Letters were issued by the governors, but persons bearing those letters enjoyed no preference. Of the 2165 patients admitted last year, between 200 and 300 brought governors' letters. The weekly board was open to all the governors, but as a rule only six or seven attended the meeting, and these were members of council. The members of council were elected for three years at the annual court of governors, and were eligible for re-election. It was the council who dismissed the high officials. All male servants were engaged and discharged by witness, and nurses and probationers were engaged and discharged by the lady superintendent. Sisters were engaged by the council in consultation with the lady superintendent. In the event of dismissal either of a male servant or a nurse, the matter was always reported to the weekly board or to the council. There was always an appeal to a superior authority. The annual income of the hospital was about £6000. Annual subscriptions constituted their most reliable source of income. Their present income was insufficient to meet the expenses of the hospital. They had to draw from capital laid aside in better years. There were 175 beds in the hospital, of which about 165 might be described as working beds. Several beds were reserved for accident cases, of which they had a large number. They had seldom to turn away patients. As a matter of fact, he considered the hospital supply of the district to be sufficient. They experienced no difficulty with the contractors in keeping their wares up to sample. He could not remember a single case of complaint as to the food. There were five resident physicians and surgeons. In the event of gross misconduct by an officer, he would bring the matter to the notice of the treasurer. Witness had no authority to suspend an officer. Witness did not reside in the hospital, and in his absence the chaplain took his place. The nursing staff consisted of ten sisters, seventeen nurses, and twenty-four probationers. Six of the probationers were lady probationers, who paid one guinea a week. It was only recently that they had begun to do their own nursing. Sisters worked eight hours and a half per day. One Sunday they were on duty five hours, and the next Sunday nine hours. Altogether they were on duty fifty-eight hours a week. The nurses were on duty sixty-seven and the probationers sixty-nine hours a week. Nurses did nothing but nursing work. Ward maids came in to do the menial work. The council were considering the question of pensions for the nurses. Nurses were paid from £22 to £25 a year, and received uniform and 2*s.* 6*d.* per week for washing. Probationers received no salary for the first year, £15 for the second, and £20 for the third. They received uniform and 2*s.* 6*d.* per week for washing. At the end of the third year they gave the nurses a certificate of efficiency. They had only very recently begun sending out nurses. He should certainly like to see a uniform system of account-keeping among the London hospitals. He did not think it would be possible to bring the accounts into exactly

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the same form. The out-patient department was not crowded. He could give no estimate of the cost per patient in this department.

By Lord Cathcart: They had a sanitary plan of the hospital. He regarded it as a necessity in such an institution. They had a ward for Jewesses. The lady who gave the money for this ward was quite willing that Christians should be admitted, although Jewesses should have a preference. There were over 200 students in the medical school. No complaints of overwork had been made by the nurses. Lord Cathcart informed the Committee that he had made a surprise visit to the hospital along with another member of the Committee. They went over the whole establishment, and, considering the limited nature of the site, he regarded it as very satisfactory.

By Lord Zouche: The medical school paid all expenses, and made a small contribution to the funds of the hospital. There was a post-mortem examination in all cases where no objection was raised.

By Lord Thring: Eight members was a small, and fourteen a large attendance at the monthly meeting of the council.

By Lord Clifford: Unless they received large legacies or a material increase in the way of subscriptions, they would soon be unable to carry on the hospital as at present without a special appeal to the public.

By the Chairman: They were always appealing to the public, but they had not made a special appeal since 1880, when the hospital was closed for thirty days. They did not admit scarlet fever, and only severe cases of diphtheria. They took typhoid fever, but not typhus fever. Sisters received a holiday of one month, nurses of three weeks, and probationers could have a week if they cared. Any of the staff might take a day or a half day.

By the Earl of Kimberley: Many persons used the hospital as they would a consulting physician. They discovered few cases of abuse of charity. Many of the old students sent patients to the hospital both for admission and consultation.

Mr. Stanley Boyd, dean of the medical school at Charing-cross Hospital, examined by the Chairman, said that 228 students were at present in attendance. Last year they had 82 new students, 31 general, 35 dental, and 16 occasional students. The school was increasing slowly but steadily. The general student paid either 90 guineas in one sum or 100 guineas in five instalments for the curriculum or the Conjoint Board diploma. The dental student paid either 54 guineas in one sum or 60 guineas in two instalments. The total gross revenue of the school last year amounted to £4070. One-fifth of all fees was taken off for the hospital, one-fifth went for school management, three-fifths were divisible among the staff and lecturers. He considered it would be a very great advantage if the hospitals were relieved entirely from the teaching of botany, zoology and physics, and a certain amount of the rudiments of chemistry. Those subjects could be taught in the schools and colleges throughout the country. A central school would be open to considerable disadvantage.

By Lord Cathcart: They had no difficulty in maintaining discipline amongst students. Troubles occasionally arose.

By the Earl of Arran: What was wanted in the medical profession was a more uniform standard of education and a standard higher than the lowest now accepted.

By the Chairman: In the course of this inquiry it had been said that they could not possibly teach such a subject as physiology at Charing-cross Hospital. Without boasting, he might safely say that their physiological department was as good as any in London.

Mr. Frederick Willcocks, one of the out-patient physicians at the hospital, explained the methods of the out-patient department. He expressed the opinion that, from a teaching point of view, this was the most valuable department of the hospital, and he would not like to see it abolished. Very few of their patients could pay a fee for medical or surgical treatment. He did not think that the schools should be separated from the hospitals. There were sufficient, but not too many, schools in existence. The physicians and surgeons received no payment for the work they performed in the out-patient department. The resident appointments were the prizes of the school, and were given to the best of their students.

The Committee then adjourned.

BOOKS ETC. RECEIVED.

CHURCHILL, J. & A., New Burlington-street, London.
The Barbarity of Circumcision. By Herbert Snow, M.D. Lond. 1890. pp. 57.

CASSELL & Co., London.
The Year-book of Treatment for 1891. pp. 480.

KEGAN PAUL, TRENCH, & Co., London.
Body, Parentage, and Character in History. By F. Jordan, F.R.C.S. 1890. pp. 82. Price 2s.

KELLY & Co., Great Queen-street, London.
Kelly's London Medical Directory, 1891. pp. 386. Price to subscribers 5s.; non-subscribers, 6s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
A Compend of Gynæcology. By Henry Morris, M.D. Illustrated. 1891. pp. 175.
A Compend of Diseases of Children. By Marcus P. Hatfield, A.M., M.D. 1891. pp. 185.
The Elements of Ophthalmoscopic Diagnosis. By Geo. A. Berry, M.B., F.R.C.S. Edin 1891. pp. 83.
Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. Batty Tuke, M.D., and Dr. Noel Paton, M.D. Vol. III. 1891. pp. 304.

PERCIVAL & Co., King-street, Covent-garden, London.
New Official Remedies, 1890. By Ralph Stockman, M.D., F.R.C.P.E. 1891. pp. 65. Price 2s.

SMITH, ELDER, & Co., Waterloo-place, London.
St. Bartholomew's Hospital Reports. Edited by W. S. Church, M.D., and W. J. Walsham, F.R.C.S. Vol. XXVI. 1890.

THE NEW SYDENHAM SOCIETY, London.
The New Sydenham Society's Lexicon of Medicine and the Allied Sciences. By H. Power, M.B., and L. W. Sedgwick, M.D. Part 17. Mas—Mit. 1890.

THIN, JAMES, South-bridge, Edinburgh.
The Intra-cranial Circulation. By James Cappie, M.D. 1890. pp. 188.

Effecte der Nervenreizung durch intermittirende Kettenströme; von Dr. Br. Werigo (August Hirschwald, Berlin, 1891).—The New State, or Unorthodox Socialism; by J. Stirling (W. Reeves, London, 1891); price 6d.—The Treatment of Chronic Tubercular Consumption; by G. C. Smith, M.D., Austin, Texas.—Preventable Deaths in Childhood; by W. Wynn Westcott, M.B. Lond. (Hansard Publishing Union, London).—Our Baby: for Mothers and Nurses; by Mrs. Langton Hewer (J. Wright & Co., Bristol, and Simpkin, Marshall, & Co., London, 1891); price 1s. 6d.—Las Inyecciones de Koch; por el Dr. D. G. G. Lozano (Maroto y Hermano, Madrid, 1891).—Recent Reports to the Scientific Grants Committee of the British Medical Association; reprint (Office of the British Medical Association, London, 1891); price 2s. 6d.—Psychologie de l'Idiot et de l'Imbécile; par le Dr. Paul Sollier (Baillière et Cie., Paris, 1891).—Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1890 (Government Printing Office, Washington, 1890).—Experiments with Drugs as a question of Science, with a Supplement; by Wm. Sharp, M.D., F.R.S. (G. Bell & Sons, London, 1890).—Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin; herausgegeben von Rudolf Virchow; Band cxxiii., Heft 2 (George Reimer, Berlin, 1891).—Medical Education, Medical Colleges, and the Regulation of the Practice of Medicine in the United States and Canada, 1765–1891; by J. H. Rauch, M.D. (H. W. Rokker, Springfield, Ill., 1891).—Inaugural Address delivered before the Clinical Society of London, Jan. 23rd, 1891, by Sir Dyce Duckworth, M.D., LL.D., President (John Bale and Sons, London).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AGNEW, E. D., M.R.C.S., has been appointed Medical Officer for the Workhouse, and Medical Officer and Public Vaccinator for the Hollingbury District, of the Bishops Stortford Union, vice Cribb, deceased.

BALLANCE, CHAS. A., F.R.C.S. Eng., has been appointed Surgeon to the National Hospital for the Paralysed and Epileptic, Bloomsbury, vice Wm. Adams, F.R.C.S. Eng., appointed Consulting Surgeon.

BEAUMONT, A. W., L.R.C.S. Edin., has been appointed Medical Officer for the Fourth District of the West Ham Union.

BEVILLE, F. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

BLAYNEY, JOHN H., L.F.P.S. Glasg., has been appointed Medical Officer of Health to the Great and Little Heatons, Prestwich Union Rural Sanitary Authority.

CARTER, W. R., B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

CASSAL, C. E., has been appointed Public Analyst for the Administrative County of Kesteven.

COLLIER, HORACE, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Children's Hospital, Great Ormond-street, vice James Bays, M.D. Lond., resigned.

CRESWELL, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Assistant Medical Superintendent for the St. Pancras Infirmary, Dartmouth-park-hill.

DERRY, B. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Third District of the Bodmin Union.

EVANS, ABEL, M.R.C.S., has been reappointed Medical Officer for the Lampeter Union.

FORDE, T. A. M., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

GIBSON, JAMES, M.B., C.M. Glasg., has been reappointed Medical Officer of Health for the Greetland Union District.

GODFREY, G. P., L.R.C.P., L.R.C.S. Edin., has been reappointed Honorary Consulting Surgeon to the Mansfield and Mansfield Woodhouse District Hospital.

GRIFFITH, W. S., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HANSON, A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Withern District of the Louth Union.

HARPER, J. R., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HAYDON, T. H., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Ear to St. Thomas's Hospital.

HILL, W. H., M.B., C.M. Edin., has been appointed Medical Officer for the Basford District of the Basford Union.

HORNER, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Twelfth District of the West Ham Union.

HOUSLEY, JOHN, M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the East Retford Rural District.

HUGO, E. V., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer of the Workhouse, and Medical Superintendent at the Infirmary, for the Parish of Paddington.

HUNTER, WILLIAM, M.D., M.R.C.P., has been appointed Assistant Physician to the London Fever Hospital.

JACKSON, J. L., M.B., C.M. Edin., has been appointed Medical Officer for the Hedon District, Yorkshire.

JONES, THOS., M.R.C.S., has been reappointed Honorary Medical Officer to the Mansfield and Mansfield Woodhouse District Hospital.

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KELYNACK, T. N., M.B., Ch.B. (Vict.), Pathological Registrar to the Manchester Royal Infirmary, has been appointed Junior Demonstrator in Pathology to the Owens College.

KING, A., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

KIRSOPP, THOMAS, M.B. Lond., M.R.C.S., has been reappointed Medical Officer for the Second District of the Horsham Union.

LEADER, C. R., M.B.R.U. Irel., M.Ch., has been appointed Medical Officer for the Worthen District of the Forden Union.

LAMBERT, F. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Farsley Urban Sanitary Authority.

LEVICK, H. D., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric Clerk to St. Thomas's Hospital.

LITTLETON, P. R., M.R.C.S., has been reappointed Medical Officer for the Ashbourne District of the Ashbourne Union.

LOVELL, C. P., M.A. Oxon., L.R.C.P., M.R.C.S., L.S.A., has been appointed Non-resident House Physician to St. Thomas's Hospital.

LOW, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

LYONS, ALGERNON WILSON, M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the City of London Lunatic Asylum, Dartford, Kent.

MACFADYEN, D., L.R.C.S. Edin., has been appointed Medical Officer for the Parochial Board of Inverness.

MCCALL, A., M.B., C.M. Glasg., has been appointed Medical Officer for the Conisborough District of the Doncaster Union.

MACKIE, JOHN, M.D., L.R.C.S. Edin., has been reappointed Medical Officer to the Brechin Infirmary.

MEADOWS, R. T., M.B., C.M. Edin., has been appointed Medical Officer for the Borough of Saltash, vice Revel.

MILLAR, W. H., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

MORTON, C. A., F.R.C.S. Eng., has been appointed Pathologist to the Bristol Hospital for Sick Children and Women.

MUNRO, J. M., M.B., C.M. Aberd., has been reappointed Honorary Medical Officer to the Mansfield and Mansfield Woodhouse District Hospital.

NEILSON, H. J., M.D. Glasg., has been appointed Medical Officer to the Workhouse, Basford Union; also Medical Officer to the Pride of the Village Lodge of the Manchester Unity Independent Order of Odd Fellows, Old Basford.

RANSON, W. E., M.R.C.S., has been appointed Medical Officer for the Needham District of the Bosmere and Claydon Union.

RILEY, ROLAND J., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer to the Workhouse, Cannock, vice Thomas Wilson, M.D., resigned.

ROBERTSON, JOHN, M.B., C.M., B.Sc. Edin., has been appointed Assistant Medical Officer of Health for St. Helens, Liverpool.

ROUILLARD, L. A. J., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

SAYRES, A. W. F., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant for Diseases of the Ear to St. Thomas's Hospital.

SHEARER, D. F., B.A., B.M., B.Ch. Oxon., has been appointed House Surgeon to St. Thomas's Hospital.

SIMMONS, W. W., M.B. Cantab., has been appointed a House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

STOKES, W. G. G., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

THOMSON, W. E. F., M.B., C.M. Edin., has been appointed Resident Medical Officer for the Parish of Eday, Orkney.

THOMPSON, W. H., M.D. Durh., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Quarry Bank Urban District of the Stourbridge Union.

TOLLER, S. G., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TUNSTALL, A. E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Clayton Urban Sanitary District of the North Brierley Union.

UMNEY, W. F., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

USHER, C. H., B.A., M.B., B.C. Cantab., has been appointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

WALKER, BENJAMIN, M.D. Durh., M.R.C.S., has been reappointed Medical Officer for the Ravenstonedale District of the East Ward Union.

WILDE, HAYDOCK, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the St. John's-wood and Portland-town Provident Dispensary.

WILDE, LEONARD, M.D., D.P.H., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer of Health for Croydon Borough.

WOOD, WM., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Edinburgh Provident Dispensary attached to the School of Medicine, Marshall-street, vice Andrew Messer, M.B., C.M., resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CITY ASYLUM, Birmingham.—Clinical Assistant. No salary, but board, lodging, and washing provided.

EASTERN DIVISION OF THE ROYAL MATERNITY CHARITY.—Obstetric Physician. (Apply to J. Long, Esq., the Charity's House, 31, Finsbury-square, E.C.)

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer. Salary £130 per annum, with residence, board, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Surgeon to the Out-patients of this Hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Surgical Registrar for one year. Honorarium of £40 at the end of the term.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Junior House Surgeon. Salary 60 guineas per annum, with board and residence.

LUTTERWORTH UNION.—Medical Officer for No. 6 District. Salary £20 per annum, with the usual extra medical fees as allowed under the orders of the Local Government Board. (Apply to the Clerk to the Guardians, Lutterworth.)

LEEDS UNION.—Assistant Medical Officer and Dispenser for the Workhouse, Schools, and Infirmary, Leeds. Salary £100 per annum, with board, washing, apartments, and attendance.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—House Surgeon for six months. Board and residence at the Hospital, and remuneration at the rate of 50 guineas per annum.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle for one year. Salary £150 per annum, with board and residence.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon. No salary, but board, apartments, and washing provided.

ROYAL SOUTH LONDON DISPENSARY.—Surgeon in Ordinary. (Apply to Dr. Nundy, at the Dispensary, St. George's-cross, S.E.)

SALFORD UNION.—A Visiting Medical Officer. Salary £150 per annum.

SALFORD UNION.—Two Resident Assistant Medical Officers for the Union Infirmary, Hope, near Eccles. Salary £130 per annum each, with furnished apartments in the infirmary.

SKIRLAUGH UNION.—Medical Officer and Public Vaccinator for the District of Sproatley. Salary £20 per annum, exclusive of the authorised fees for surgical and midwifery cases, visiting lunatic paupers, and vaccination. (Apply to the Clerk to the Guardians, Beverley.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.—House Surgeon for three months. Board and residence provided.

ST. THOMAS'S HOSPITAL, Westminster-bridge-road.—Assistant Physician.

Births, Marriages, and Deaths.

BIRTHS.

DICKMAN.—On Feb. 11th, at Buntingford, Herts, the wife of Henry Dickman, M.B., of a daughter.

DUNDAS.—On Feb. 12th, at Litcham, Norfolk, the wife of Mordaunt G. Dundas, M.R.C.S., of a daughter.

GARDINER-HILL.—On Feb. 14th, at Middlesex County Asylum, Tooting, the wife of H. Gardiner-Hill, Medical Superintendent, of a son.

ROBINSON.—At New North-road, Huddersfield, the wife of F. W. Robinson, M.B., M.R.C.S., of a son.

WELSH.—On Feb. 10th, at Biggleswade, Beds, the wife of R. C. Welsh, M.B., C.M., of a son.

WORNUM.—On Feb. 13th, at College-terrace, Hampstead, the wife of George Porter Wornum, M.R.C.S., of a daughter.

WREFORD.—On Feb. 11th, at Clapham-road, the wife of Samuel Wreford, M.R.C.S., of a son.

UBSDELL.—On Feb. 12th, at Maridon House, Buckfastleigh, Devon, the wife of Henry Ubsdell, Surgeon, of a son.

MARRIAGES.

GODLEE—SEEBOHM.—On Feb. 12th, at Hitchin, Rickman John Godlee, F.R.C.S., of Wimpole-street, W., second son of the late Rickman Godlee, Esq., of Lincoln's inn, to Juliet Mary, eldest daughter of Frederic Seebohm, of Hitchin.

HUGILL—EVERARD.—On Feb. 14th, at St. Mary's, Balham, by the Rev. Thos. Bates, Vicar, George Frederick Hugill, of Arundel Lodge, Balham, Physician and Surgeon, third son of John Hugill, of Rosedale, Chislehurst, to Muriel Isabel, widow of the late Charles Everard, and youngest daughter of Lieut.-Colonel G. A. Vernon, of Harefield Park, Uxbridge, late Coldstream Guards.

JONES—SLEEMAN.—On Feb. 12th, at Holy Trinity Church, Southwark, by the Rev. W. London, Cyril Lloyd Jones, M.A., M.D., late of Caius College, Cambridge, and the Middle Temple, Barrister-at-Law, of 2, Ashley-gardens, Victoria-street, S.W., and Blackfriars-road, S.E., second surviving son of the late Frederick Charles Jones, M.D., to Catherine Gertrude (Katie), youngest daughter of Dr. John Sleeman, of Southwark-bridge-road, S.E.

SHACKLETON—DAVIS.—On Feb. 10th, at Holy Trinity Church, Weymouth, Thomas Francis Shackleton, M.R.C.S., L.S.D., son of the late John Colyer Shackleton, Esq., of Selhurst Park House, South Norwood, to Lilian Terry Cockeram, youngest daughter of the late Lieut.-Colonel Davis, Bengal Staff Corps.

DEATHS.

BRITTAN.—On Feb 15th, suddenly, at Oxford-terrace, London, Frederick Brittan, M.D., F.R.C.S., of Gwynfryn, Cardiganshire, late of Clifton, Bristol.

EMMETT.—On Feb. 11th, at Winter Hey House, Horwich, William H. Emmett, M.R.C.S.

OLIVER.—On Feb. 4th, at Hertford-gardens, S.W., John Ferens Oliver, M.D., late of Durham, aged 38.

MARSDEN.—On Feb. 6th, at Hastings, James Loftus Marsden, M.D., aged 76.

PARTRIDGE.—On Feb. 12th, at East-hill, Colchester, Joseph Henry Partridge, J.P., Surgeon, in his 74th year.

WARWICK.—On Feb. 16th, at Royal-terrace, Southend, Essex, William Rollinson Warwick, M.D., in his 74th year.

WOTHERSPOON.—On Feb. 10th, at his residence, the Mansion House, Brampton, Cumberland, Thos. A. Wotherspoon, M.D. Edin., aged 43.

N.B.—A fee of 1s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, February 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: Affections of the Orbit.—London Throat Hospital, Gt. Portland-street: 8 P.M., Dr. McNeill Whistler: Demonstration of Cases.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Mr. Mark Hovell: Chronic Suppurative Inflammation of the Middle Ear, and its Treatment. (Post-graduate Course.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. The adjourned Discussion on Dr. Douglas Powell's paper on "Angina Pectoris" will be opened by Sir Walter Foster, M.P.

Tuesday, February 24.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Alcoholic Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention. (Milroy Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. Charles Jones: Scavenging, Disposal of Refuse and Sewage.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. R. Barwell: Rachilysis, its Object and its Method.—Mr. John H. Hutchinson: Measles as a Cause of Endocarditis, being an Account of Four Cases in which Organic Mitral Murmurs developed during the course of the Disease.

Wednesday, February 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Theodore Williams: Cases of Phthisis treated by Koch's Method.—Royal London Ophthalmic Hospital, Moorfields: 3 P.M., Mr. A. Quarry Silcock: Intraocular Growths.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Norris Wolfenden: The Treatment of Tuberculosis of the Larynx. (Post-graduate Course.)

HUNTERIAN SOCIETY.—8 P.M. Dr. J. L. W. Thudichum: Urochrome, its alliged Derivation from the Pigments of the Blood and Bile, and on the Bearing of the Alkaloids and Extractive Acids of the Urine in Gout and Pyæmia.—Mr. F. R. Humphreys: Permanganate of Potash as a Test for the Colouring Matter of the Urine.

Thursday, February 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. R. Brudenell Carter: Ocular Symptoms in Nervous Diseases.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. M. Lubbock: Anomalies of Speech in Children and their Treatment.—London Throat Hospital, Great Portland-st.: 8 P.M., Mr. G. Stoker: The more Common Forms of Disease of the Nose.

ROYAL INSTITUTION.—3 P.M. Professor C. Hubert H. Parry: The Position of Lulli, Purcell, and Scarlatti in the History of the Opera (with Musical Illustrations).

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention. (Milroy Lecture.)

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Dr. Dunbar Hooper (Melbourne): A case of Pelvic Hæmatocele treated by Abdominal Section. Special Meeting to consider and pass Rules and Regulations for Examination of Obstetric Nurses.

Friday, February 27.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Dr. F. A. Purcell: Cancer of Uterus and its Treatment.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Theodore Williams: Clinical Demonstrations.

CLINICAL SOCIETY OF LONDON.—8 P.M. Living Specimens:—Mr. E. Hurry Fenwick: Three cases of Hydatids of the Kidney.—Mr. Stanley Boyd: A case of Thiersch's Method of Skin-grafting.—Mr. Pearce Gould: A case of Fracture of the Ulna.—Mr. Balmanno Squire: Serpiginous Rodent Ulcer of the Face of seventeen years' duration.—Dr. S. Mackenzie: Case of Multiple Lipomata.—Adjourned Discussion on cases of Removal of the Vermiform Appendix. Paper:—Mr. A. Pearce Gould: Case of Simultaneous Gangrene of both Feet from Syphilitic Disease; amputation through knee-joints; recovery.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. Shirley Murphy: Infectious Diseases and Methods of Disinfection.

ROYAL INSTITUTION.—9 P.M. Mr. Percy Fitzgerald: The Art of Acting.

Saturday, February 28.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: Vegetable Parasitic Diseases of the Skin.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 19th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 13	30·48	N.W.	38	37	74	47	37	..	Hazy
,, 14	30·69	S.W.	39	38	60	47	36	..	Overcast
,, 15	30·61	W.	44	42	69	52	38	..	Bright
,, 16	30·66	S.W.	38	37	79	53	36	..	Foggy
,, 17	30·66	S.W.	37	36	63	49	36	..	Foggy
,, 18	30·71	E.	36	35	50	47	35	..	Foggy
,, 19	30·60	E.	34	33	..	37	31	..	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"PERSISTENT DANDRUFF."

WE reproduce, for the satisfaction of correspondents on the subject of persistent dandruff, the receipt given by Mr. Purhell in THE LANCET of May 10th, 1879:—An ounce and a half of iron wine, one drachm of liquor arsenicalis, three drachms of syrup, water to two ounces. Of this one drachm is to be taken in water after meals. Then an ointment consisting of four drachms of the red oxide of mercury ointment, an ounce and a half of benzoated lard, and two minims of the essence of bergamot should be rubbed thoroughly into the roots of the hair, and its use continued for some time.

C. W. G.—There are different rules about practice in the different States. In some British diplomas are recognised; in New York, and probably some others, no diploma is recognised unless it has been conferred by a University or College in that State. As the State regulations are increasing in strictness, it would be well for our correspondent to obtain official information as to the actual requirements in the State in which he proposes to settle.

Mr. W. M. Elliott.—We would refer our correspondent to the "Manual of Bacteriology," by Professor Crookshank of King's College, who might perhaps be able also to assist him to obtain what he desires.

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DEATH CERTIFICATION AND LIFE ASSURANCE.

Mr. P. E. Hill.—Judging from the facts stated in the letter of our correspondent published last week, we certainly think he was justified in refusing a death certificate. Having referred the case to the police and coroner, however, Mr. Hill was freed from further responsibility. As regards the certificate for the insurance company, the propriety of giving one might, we think, have been decided by the results of the necropsy, supposing of course the fee for its performance were forthcoming. The alleged remark of a member of the Board under whom our correspondent serves seems pointless, since a fee could not be recovered for making a post-mortem examination and giving evidence at an inquest respecting a person who died in a workhouse infirmary.

Dr. W. Duncan.—The data are too meagre too warrant an opinion "as to the value of the statistical statements"; indeed, the mere enumeration of figures without the facts pertaining to each individual case is liable to mislead.

Mr. Thomas Lafan.—Most of the specimens in London have, we believe, been procured through the British Embassy.

Yawning should consult his medical attendant. We do not give medical advice.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—I had hoped to have finished with the controversy regarding assistants, but the slip-shod manner in which "Justus" quotes from my letter represents me as saying what I never did say. I did not say I had never been an assistant, I only said I was not an assistant, and did not want to be, and this I mentioned to show that it was not the competition of the unqualified assistant that influenced me to write. As a matter of fact, I was an assistant for over four years, though how this affects the point I raised I cannot conceive.

As to "Justus" "Denying *in toto* that it is the invariable rule" for principals to palm off their unqualified assistants as doctors. He may be right, because it is possible to conceive that amongst the numerous employers of unqualified assistants there is one honest man. I said, and still say, that "it is almost the invariable rule." I have never known it to be otherwise. "Justus" misses the only point I raised—namely, the fraud perpetrated on the public by principals palming off unqualified assistants as fully qualified doctors,—and goes off into the consideration of the comparative merits of the qualified and unqualified man, a point I never intended to raise.

"Justus" asks: "Ought I to have introduced myself as unqualified assistant?" admitting that he knowingly allowed the patient to believe he was a fully qualified doctor, as he says he would probably have been "turned out" had he not done so. Whether it is wrong or right under any circumstances to act in such a manner as to knowingly and purposely mislead another I have always considered to have been settled by the Highest Authority.

I am no enemy of the unqualified assistant. The man I object to is his employer, who represents him as a doctor. Personally, I am very sorry for the poor unqualified assistant. He is kicked about and looked down upon by his employer. I should myself prefer to labour as a "casual" at the docks than to fill his shoes. The fraud he is compelled to perpetrate by his employer must, I think, in time weaken his moral perception of right and wrong.

It is in the interests of the public and the honour of the profession that I have written. If the General Medical Council will not prevent the black sheep of the profession perpetrating a fraud—especially on the helpless poor, whose means do not enable them to prosecute the said black sheep for obtaining money under false pretences—the general body of the profession should, in their capacity as citizens, get Parliament to do so.

I am, Sirs, yours truly,

February, 1891. X. Y. Z.

To the Editors of THE LANCET.

SIRS,—I trust that room will be found in THE LANCET for a reply to "A Medical Practitioner," who takes up the cudgels on behalf of irregular practice.

"Justus" says that "before the law steps in" to stop unqualified practice the public should be protected from qualified assistants, who, he says, enter the ranks ignorant of midwifery. Can "Justus" be serious, or does the word "assistant" mislead him? I presume that all qualified men, whether they be assistants or no, stand on one common footing with regard to duly authenticated knowledge of their profession. "Justus" relates a story to the effect that while an unqualified assistant he was sent for by an M.R.C.S., L.R.C.P. to remove a placenta. It is possible; but I would ask, if we are deficient in knowledge let our examinations and training be remedied, but Oh! spare us the unqualified assistant as mentor. I freely admit that unqualified assistants attend many (too many) midwifery cases. So did the immortal "Sairy Gamp"; but it is in the capacity of midwife rather than in that of skilled medical practitioner. I think that no one will be found to urge their claims to superiority in the wider fields of medicine and surgery. As one of the class who (always excepting their patients) have most reason to regret their industry and numbers—I refer to the junior members of the profession—I contend that the General Medical Council should take the matter in hand, and either give them a "local habitation and a name" in the profession or "reform it altogether."

I am, Sirs, yours faithfully,

Feb. 2nd, 1891. A QUALIFIED ASSISTANT.

THE MEDICAL INSTITUTE FOR WOMEN.

WE have received a communication from the chairman, treasurer, and hon. librarian of the Medical Institute for Women, in which they express their desire to increase the extent and value of their library, which at present is comprised in the new buildings in Euston-road. They acknowledge the receipt of valuable donations of books from members of the profession and medical publishers, and will be glad to receive further contributions from these sources.

R. H. F.—1. Malaria is unknown in New Zealand, but prevails in the northern part of Australia—viz., to as far south as 17° latitude.—2. A brief account of present knowledge concerning micro-organisms in malaria is to be found in Flügge's work (New Syd. Soc. Transl., 1890), where also full references to the literature of the subject occur. Cornil and Babes, "Les Bactéries" (3rd ed., 1890, vol. ii.), and Klebs, "Die Allgemeine Pathologie" (1887, vol. i.), might also be consulted.

NOTIFICATION AND THE INTERFERENCE OF MEDICAL OFFICERS OF HEALTH.

To the Editors of THE LANCET.

SIRS,—Will you be kind enough to give me your opinion as to the best means of stopping the following nuisance?

My assistant was called a few days ago to a child suffering from measles. The father of the child being a schoolmaster, he reported the case to the medical officer of health. The latter gentleman called, saw the child, and said that as it had previously had measles it could not have them again, that the diagnosis was a mistake, and so on. He then wrote to me, saying that he could not tell what was the matter with the child, and wanted my opinion as to whether it had measles or not. On the receipt of this letter, I went to see the child, and found it suffering from well-marked measles, its little sister being also in bed with the same disease. I wrote to the medical officer of health and told him that after his breach of etiquette I should leave it to him to settle as he liked about the closing of the school.

Can I do anything to put a stop to the annoyance caused to both my assistant and myself? Is the medical officer of health allowed to see or express an opinion on private cases reported to him? Is he justified in saying that a practitioner has made an error of diagnosis? Is he in the right when he says (as he has done in two houses lately) that no patient can have measles twice?

I may mention that my assistant is a well-qualified registered practitioner, that we have an epidemic of measles in the neighbourhood, and that several children have been sent to their homes with the measles rash out on them during the last week from the school in question.

I am, Sirs, yours faithfully,

Jan. 10th, 1891. M. A. S.

*** We had hoped that the grievance complained of by our correspondent had ceased to exist. It is quite unjustifiable for medical officers of health to interfere with and contradict the diagnosis of the responsible practitioner in attendance. It is a breach alike of courtesy and of duty. In this case the sayings of the medical officer are either misreported, or he is ill informed as to the ways of infectious disease. The occurrence of second and even third and fourth attacks of measles is well authenticated. The symptoms in this case, and the existence of a second in the house, seem to make the demonstration of the error of his opinion complete. Our correspondent should complain to the local sanitary authority and to the chief of the Medical Department of the Local Government Board.—ED. L.

PURCHASE AND SALE OF PRACTICES.

To the Editors of THE LANCET.

SIRS,—The Medical Defence Union is a valuable guard to every medical man who joins it. May I suggest that there is a matter very near home which often needs supervision? I refer to the sale and purchase of practices. No one will deny that a fair price is due to a faithful practitioner who has worked up a practice and for some reason has to relinquish it. But I contend, under the circumstances now existing, when so many men are ready to invest in practices, there is a danger of their value being over-estimated, and consequently disappointment and loss result to the purchaser. Is there not a danger of some members of our profession devoting themselves to the very unprofessional work of carrying on a practice simply with a view to put it in the market when it attains a certain supposed market value, which is often fictitious? I believe much advantage would result to our profession if selling practices by this last class of men was under some further supervision than now exists.

I am, Sirs, yours faithfully,

Haughley, Feb. 13th, 1891. ROBERT G. WHITE, M.R.C.S.

LEGAL OWNERSHIP OF PRESCRIPTIONS.

Dr. D. Hooper.—We quite agree with our correspondent. A prescription given by a physician to a patient who consults him is the property of the patient, and not of the general practitioner in attendance.

Medicus.—Our correspondent would demean himself and probably act illegally by doing so. Midwives are not expected to have any legal qualification. Medical students are not midwives, and until they have their diploma have no legal right to practise midwifery any more than surgery and medicine.

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Dr. E. May is thanked for his letter. We fully recognise the value of his suggestions, and concur with him in the opinion that if it were possible to attack the disease at its *earliest* appearance its ravages might be materially mitigated. We also feel certain that this principle is a guiding one in the treatment of diphtheria, and is more generally adhered to than he fancies; but unfortunately the poison is so rapidly formed and absorbed that the action of local remedies is often rendered useless, and the only measures remaining are those which seek to support the vitality of the organism which is being depressed by the virus.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Jessett, London; Dr. Lewers, London; Sir E. H. Sieveking; Mr. F. Treves, London; Dr. Horrocks, London; Dr. G. Macdonald, London; Mr. H. Lupton, Stratford-on-Avon; Dr. G. E. Herman, London; Dr. Lauder Brunton, London; Dr. Charteris, Glasgow; Dr. Herschell; Dr. E. W. White, London; Mr. T. P. Wright, St. Neots; Mr. G. O. Jacobson, Huntingdon; Dr. Cullimore; Dr. Johnson, London; Dr. Whitehead, Pitone; Dr. Kaye; Mr. T. H. Pounds, Derby; Mr. Warner, Sheffield; Dr. G. Johnson, London; Dr. Auld, Glasgow; Messrs. Krohne and Sesemann, London; Mr. Kingdon, Nottingham; Herren Flatau und Mankiewicz, Berlin; Dr. S. O. L. Potter, London; Messrs. Beale and Sons, Brighton; Mr. Tobin, Dublin; Mr. Laffan, Cashel; Mr. Bland Sutton, London; Dr. E. May, Hanwell; Messrs. Smith, Elder, and Co., London; Dr. Arnison, Newcastle-on-Tyne; Messrs. Blondeau et Cie., London; Mr. R. G. White, Haughley; Messrs. Mitchell and Co., London; Mr. Boobbyer, Nottingham; Messrs. Clark, Son, and Platt, London; Dr. Nason, Nuneaton; Dr. C. Charles; Dr. Fletcher Beach, Dartford; Mr. W. J. Reed, Burton-on-Trent; Messrs. Keith and Co., London; Mr. Barling, Stoke-on-Trent; Messrs. Bates and Co., London; Mr. W. R. Cornish; Dr. Bampton, Ilkley; Dr. Fletcher Little, London; Dr. J. W. Pratt, Boston, Mass.; Messrs. Oliver and Boyd, Edinburgh; Mr. H. W. Street; Mr. D. Biddle; Dr. Hingston Fox, London; Dr. Macdougall, Cannes; Mr. Leet; Messrs. Barker and Sons, London; Mr. Cheesbrough, Brampton; Messrs. Shape and Co., Preston; Dr. Windle; Herr Bornemann; Messrs. Richardson and Co., Leicester; Mr. Phipman, Ottawa; Mr. Thatcher; Dr. Hartley, Liscard; Mr. Roberts, Uxbridge; Dr. Hodsdon, Edinburgh; Mr. F. A. Davis, London; Mr. Seale, Peckham; Mr. Girling, Halifax; Mr. T. B. Browne, London; Mr. Saunders, Manchester; Mr. Warburton, Treherbert; Mr. Kennedy, London; Mr. Buckley, Oldham; Mr. Guthrie, London; Mr. Walton, Highgate; Mr Spowart, Sheffield; Mr. G. C. Gabriel, Cairo; Mr. Taylor, Hampstead-road; Dr. Moorhead, Nottingham; Mr. Delany, St. Helens; Dr. Owen, co. Kerry; Dr. Lawrence, Chepstow; Mr. Dobbin, Brompton; Mr. Merck, Darmstadt; Mr. J. Steavenson, Glasgow; Dr. Haslett, Liverpool; Mr. Boyd, Denmark-hill; Mrs. Meredyth, London; Mr. Hannaford, London; Mr. Orr, Wanstead; Dr. Skrimshire, Blaenavon; Messrs. W. H. Smith and Son, London; Mr. Shaw, Worthing; Mr. Hornibrook; Messrs. King and Chasemore, Horsham; Mr. Thompson, Buxton; Messrs. Cooke and Sons, Winsford; Mr. Campbell, Kensington; Messrs. Dawson and Sons, London; Herr. G. Thieme, Leipzig; Messrs. Wright and Co., Bristol; Mr. Odell, Torquay; Herr Guttmann; Messrs. Coxeter and Co.; Mr. Macdonald, Gosport; Mr. Burgess, Walworth; Mr. Perkins, Newport; Mrs. Gregory, Swindon; Mr. Birchall, Liverpool; Mr. W. R. Liston; Medicus; S. H. J.; Tenens, London; Matron, Southern Hospital, Manchester; A. B. C., London; Smedley's Hydropathic Establishment, Matlock; Iles, Taunton; A. B., Leeds; Advertising and Address Co., London; X. Y. Z., London; W. M. E.; Clerk, Leeds Union; Sister Musgrave, Bolton; The Director-General of the Navy Medical Department; Scrutator; Harvard Co., Ohio; H. F. S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Tully, Hastings; Mr. Rynne, Ennis; Mr. Pearson, Newry; Mr. Lockwood, Huddersfield; Mr. Sheen, Worcester; Mr. Dent, York; Mr. Chubb, Devonport; Mr. Cuthbertson, Stirling, N.B.; Messrs. Paternoster and Hales, Hitchin; Mr. Feeny, Staffordshire; Messrs. Pownceby and Co., London; Dr. Bailey, Staffs; Mr. Clark, Cambs; Messrs. Down Bros., Borough; Mr. Detmold, Bournemouth; Messrs. Whitehead and Co., London; Messrs. Richardson, Liverpool; Messrs. Gale and Co., London; Mr. Ward, Kent; Mr. Webb, Devon; Messrs. Sharp and Co., Glasgow; Mr. Thompson, Derbyshire; Messrs. Hertz and Collingwood, London; Mr. Davenport, London; Messrs. Hewlett and Son, London; Mr. Cross, Ormesby; Messrs. Bullock; Messrs. Back and Co., Bishopsgate; Mr. Tyte, Minchinhampton; Messrs. Watkins and Osmond, London; Dr. Swayne; Dr. Woakes; Mr. Basu, Patna City, India; Mr. Bayliss, Slough; Mr. Saunders, Eton; Mr. Brown, Streatham; Mr. Howells, Aberdeen; Mr. Harries, Sussex; Dr. Fox, London; Mr. O'Meara, Leicester; Dr. Stanley, Sheffield; Mr. Blount, Paris; Mr. Cushney, Cobham; Mr. Watling, Hastings; Mr. Jones, Towcester; Mr. Wells-Bladden; Messrs. Lumleys, London; Mr. Bull, Southampton; Miss Symons, Southport; Messrs. Giles, Schacht, and Co., Bristol; Mr. Shean, Northumberland; Messrs. Robinson and Stannard, London; Mr. Heywood, Manchester; Messrs. Slinger and Son, York; Mr. Flint, London; Mr. Thin, Edinburgh; Messrs. Cox and Co., Brighton; Mr. Darke, London; Mr. Davis, Cornwall; Mr. Fox, Child's-hill; Mr. Howells, Aberdeen; Dr. Davies, Bridgend; Rev. A. Tooth, Croydon; Mr. Lyston, Nottingham; Dr. Deane; Dr. Davies, Longton; Dr. Allingham, London; Dr. Sankey, Shrewsbury; F.; C. B. O., London; T. F. A., Cheshire; Reliable, London; Express Dairy Co., Bloomsbury; J. C., Dublin; Secretary, Midland Skin and Lock Hospital, Birmingham; Sister, London; Vere, London; Bryant Co., Toronto; C. W. C., Devonport; Newcastle, London; Midland, London; P. C. E., Rickmansworth; Gavel, London; General Medical Council, London; B. S., York; Ajax, London; Matron, Stockton-on-Tees; Gamma, London; Cromwell House, Northallerton; A. B. C., Winchester; Delta, London; M.B., London; Spes, London; C. W., Southport; Dr. Medico, Bradford; E. S., Hammersmith; Medicus, London; A. F., London; Surgeon, Halifax; Alpha, Liverpool; Easy, London; A. B., Truro; R. M. O., London; Flora, London; W. E. A., Tewkesbury; Expertus, London.

NEWSPAPERS.—*Weekly Free Press and Aberdeen Herald, Windsor and Eton Express, City Press, Reading Mercury, Surrey Advertiser, Local Government Chronicle, Hertfordshire Mercury, Liverpool Daily Post, Sunday Times, Builder, Mining Journal, Leeds Mercury, Metropolitan, West Middlesex Standard, Broad Arrow, Yorkshire Post, Sheffield Daily Telegraph, Bristol Mercury, Architect, Chemist and Druggist, Spectator, Guy's Hospital Gazette, Liverpool Mercury, Pharmaceutical Journal, West Middlesex Advertiser, Law Journal, Saturday Review, Western Mail, Army and Navy Gazette, Maidstone Journal, Scotsman, Court Journal, Vegetarian, Scarborough Evening News, Brighton Gazette, Toronto Globe, Walton Gazette, South-Eastern Gazette, Madras Times, Weekly Times and Echo, North British Daily Mail, Hull News, Isle of Man Examiner, Taunton Courier, Liverpool Courier, Cambridge Express, Mansfield Reporter, Waterford Standard, Sheffield and Rotherham Independent, Border Advertiser, Fifeshire Journal, Liverpool Journal of Commerce, Dundee Advertiser, Bombay Gazette, &c.*, received.

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ABSTRACT OF

The Milroy Lectures,

ON

DIPHTHERIA, ITS NATURAL HISTORY AND PREVENTION.

Delivered before the Royal College of Physicians of London,

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.

LECTURE II.

THE term "diphtheria," as limited by our returns of sickness and death, was held by no means to cover all that must be included in any inquiry as to the etiology of this disease, the recognised diphtheria being often involved in a number of other less defined throat affections. A number of epidemics were referred to in this connexion, showing how sudden occurrences of fatal attacks and so-called "croup" were followed first by returns of "diphtheritic croup," and finally by "diphtheria," when at last the true nature of the disease was recognised. And it was also shown that preceding any marked diphtheria cases it was often learnt that for some considerable period there had been prevailing a large amount of illness, to which were applied such terms as "sore-throat," "tonsillitis," &c., these attacks commonly receiving but little notice until the seasonal activity of diphtheria showed their true meaning, and indicated also how these mild throat attacks were often the connecting links between successive prevalences of well-marked diphtheria. The infectious quality of the minor throat affections was also adverted to, and it was pointed out how in the same household fatal diphtheria was contracted from them. In confirmation of these views, and with the object of indicating the true relation of many minor throat ailments to epidemic occurrences of diphtheria, a number of outbreaks were referred to in some detail, such as Mr. Power's report on Titchmarsh diphtheria, Dr. Bruce Low's report on Halstead diphtheria, and other work by Dr. Blaxall and Dr. Parsons.

Further reference was then made to the same class of minor illness in discussing the origin of certain epidemics, and it was suggested that beyond any interpretation which regarded them all as distinct though mild attacks of true diphtheria there were a number of other considerations which called for attention. Dr. Thorne Thorne then recalled certain experiences of his own which dated from 1878, and which had led him in that year to express the view that in the case of diphtheria we had to do with an unstable poison which gave evidence of a progressive development of the property of infectiveness, which property might be as easily lost as it was acquired, in much the same way as special characteristics may be artificially developed in higher plant life, and be as easily lost again; and it was held that there were local conditions under which sore-throat, as it is commonly called, may at times thus acquire a specific and infective quality ultimately resulting in true diphtheria. The views of a number of observers, including certain local health officers, such as Mr. E. L. Jacob and Mr. Fosbroke, were quoted in this connexion; and in a similar way it was shown that certain experiences of Mr. Power tended in the same direction. But it was admitted that this view was not universally accepted, and that some of the more recent discoveries as to the causation of diphtheria tended to limit the number of diphtheria occurrences to which it might be applied.

Coming next to the question of there being some sort of identity between diphtheria and scarlatina, the reports of Dr. Bond were referred to as those most strongly pressing this view; and a contribution by Dr. Parsons to the Epidemiological Society on the same subject was dealt with at some length. It was, however, held by Dr. Thorne that if there is any relation between the two diseases, it probably lies in the circumstance that the lesion of the fauces in scarlatina affords a favourable soil for the reception of the diphtheria contagium. Were it otherwise, the almost total absence of diphtheria as a complication of scarlatina amongst several thousand scarlatina patients treated at the London Fever Hospital would be inexplicable. And, even elsewhere, diphtheria was stated to have almost always occurred as a sequel to the scarlatina, hardly ever to have been synchronous with it. Some recent experiences, having perhaps a somewhat contrary tendency, at the Metropolitan Asylums Board hospitals, were to be preferably discussed under another heading—namely, that of the aerial diffusion of the contagium of diphtheria. The relation of diphtheria to faulty sanitary circumstances was then fully entered into. As regards water-supply, it was held—and much confirmatory evidence was appealed to as to this—that no prevalence of diphtheria had ever been definitely traced to polluted water, or even to water covered with fungoid and other allied growths; whereas there was, on the other hand, abundant evidence, necessarily of a negative character, in the opposite direction. As to sewerage and drainage, the matter was not to be so easily disposed of. Many observers who do not, as a mere matter of course, regard two concurrences as being related to each other as cause and effect were decidedly of opinion that such defects as led to contamination of soil and air by sewage did cause and tend to diffuse diphtheria. On the general question, it was pointed out that the last twenty years, during which diphtheria had been increasing in our midst, was of all periods the one in which most progress had been made in improving conditions of sewerage and drainage, and that hand in hand with this there had been diminution of general death-rate and diminution of rates of death from such diseases as typhoid fever. Especially had progress been made in this direction in our towns and cities, and here too the same diminution of death had taken place, whilst diphtheria, on the contrary, was steadily laying hold of our large urban communities. But, notwithstanding these general considerations, it was admitted that careful inquiry had at times associated grave sanitary defects of the sort referred to, with grave and sustained prevalence of diphtheria, and typical amongst such occurrences was the story embodied in Mr. Spear's report on diphtheria at Aylesbury. This report was carefully entered into, and the main contention of the author seemed to be that recurring localisations of diphtheria could only be accounted for by the localisation of specially grave drain and filth conditions at those spots. The story was, however, one of extreme complication, for there had been an earlier diphtheria epidemic about eighteen months before which was associated with school attendances, and there had been a vast number of sore-throat attacks in the interval that might easily be regarded as links between the two prevalences. But Dr. Thorne felt that instances of this sort did afford some evidence of a relation between the conditions referred to and diphtheria, and this went beyond mere increase of fatality owing to unhealthy surroundings. The explanation, he believed, lay very largely, if not entirely, in the circumstance that the faulty conditions in question often produced sore-throat, apparently of a benign character, and that, just as in the case of such diseases as scarlatina and measles, the abraded surface of the throat afforded the very soil suitable for inoculation by the diphtheria organism when present in the air, as it unquestionably was at the time in Aylesbury. In such a case it would be difficult to say whether other causes were not at work, leading to the development of some special specificity in type, amongst the prevailing throat affections; but it is unquestioned that these attacks of so-called tonsillitis do at times become infective, and are communicable within the same household. Drains, too, may possibly retain a diphtheria contagium received through the sputa and dejecta of the sick. But the main influence of drain effluvia in relation to diphtheria was held to be the preparation of a soil, by means of a morbid surface of the fauces, ready to receive and promote the development of the wandering specific organism.

Much the same line of argument was applied to another story based on a valuable report by Mr. Matthew Adams of Maidstone, who had pointed to the existence of a relation between diphtheria and variations in the level of the subsoil water. The occurrences in question were illustrated by means of a large chart in which the amount of diphtheria could be compared year by year, and even week by week, with variations in the ebb and flow of the subsoil water, and Mr. Adams's main contention was that, so long as the ordinary single autumnal rise and summer fall of subsoil water took place, even a filth-laden soil was so far washed clean, and the diphtheria contagion was so far drowned

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out that no material mischief resulted; but it was explained to be otherwise when, owing to abnormal meteorological conditions, continual oscillations of subsoil water kept the soil damp, favoured decomposition of its organic contents, afforded a breeding ground for specific organisms, and at frequently recurring intervals expelled from the soil into the atmosphere above an air laden with these organisms. Mr. Adams's report was also specially referred to as an example of the admirable and exact record of facts which not infrequently resulted from investigations made by local health officers, which afforded such excellent materia for the elucidation of difficult problems in preventive medicine. In conclusion, Dr. Thorne discussed the influence on the human system of drain effluvia in their relation to specific disease in the light of the recent researches of Klein and Achillemonti on the concurrent inoculation of different infections, and he referred also to those of Oertel, which go to show that diphtheria is primarily a local disease, manifesting itself solely at the point of inoculation, whether this be effected aerially as on morbid or abraded fauces, or mechanically on a cornea or elsewhere, and that the general disease is altogether a secondary one due to infection of the system owing to changes at the seat of the primary lesion.

ABSTRACT OF THE
Erasmus Wilson Lecture,
ON SOME POINTS IN THE PATHOLOGY OF TUBAL PREGNANCY.

Delivered at the Royal College of Surgeons, February, 1891,

BY J. BLAND SUTTON, F.R.C.S.,
ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—In every female mammal above Monotremata there is a section of the genital tract intervening between each abdominal ostium and the uterus in which, under normal conditions, impregnated ova are not retained. These narrow portions are the Fallopian tubes, and they serve to conduct the eggs from the ovary to the uterus. Although Fallopian tubes are found in connexion with every uterus, bicornuate or median, it is a most significant fact that I have failed to find in literature any case of tubal gestation, except in the human female, that will bear criticism. It is usually taught that in the human female the tubes are the meeting place of the ova and spermatozoa, but this is pure conjecture. The opinion that the spermatozoa pass up the tube and disport themselves among the fringes at the abdominal orifice is as unsupported by facts as the fable that the Fallopian tubes are able to grasp the ovary and secure the ovum at its dehiscence.

It is instructive to reflect how such nonsense could ever have gained credence among us, and it is certainly amusing to watch how the members of our profession will strain at gnats and swallow camels. Hyrtl, in his classical "Lehrbuch der Anatomie," writes: "The fimbriæ at the abdominal ostium appear as if they were bitten or torn away, hence the term morsus diaboli. The devil has since Eve's time had more to do with womenkind than with men. Der Schwabenspiegel (1273) says: "Mulier est malleus, per quem diabolus mollit et malleat universum mundum." The term "morsus diaboli" is borrowed from botany. The plant Scabiosa succisa, formerly much used owing to its healing properties, was called "devil's-bit scaby" because its root presents a premorse, or bitten-off appearance. The virtues of this plant to suffering humanity rendered it an object of dislike to the devil, and the superstitious old herbalists believed that in his wrath he bit off the root. There is, however, little resemblance between the root of the plant and the fringed ostium of the Fallopian tube, but Doran has pointed out the striking resemblance which exists between it and the flower of the devil's-bit scaby. It is more reasonable to believe that impregnation occurs normally in the uterus, and that when fecundation occurs in the tubes it is accidental, and tubal gestation is the consequence.

Concerning the cause of tubal pregnancy we are very ignorant, and a careful analysis of the histories of patients the victims of this accident throws but little light upon the matter. In many instances it occurs in women who have been married eight, ten, and even twenty years, and have never before been pregnant, yet the first pregnancy occurs in the tube. In one of my cases the patient had been twice married, and had lived in wedlock seventeen years, and then became the victim of tubal gestation, never having been pregnant before. In other cases it follows a normal pregnancy or abortion by one, two, three, or four months. It may occur as a first pregnancy in a woman between thirty and forty years of age, or in a girl of twenty; in the newly married or the mother of a large family, as Parry[1] has shown, it occurs most frequently after long intervals of sterility, and it may occur twice in the same patient, as Dr. Herman[2] has indisputably demonstrated. The fact that this accident ensues frequently upon a long period of sterility in a woman who had previously borne children has given colour to the suggestion that the patients have been the victims of desquamative salpingitis, and the destruction of the proper ciliated epithelium will account for the occurrence of tubal gestation, inasmuch as it puts the mucous lining of the tubes into a condition exactly similar to that of the uterus. Mr. Lawson Tait writes: "That the uterus alone is the seat of normal conception; that as soon as the ovum is affected by the spermatozoa it adheres to the mucous surface of the uterus; that the function of the ciliated lining of the Fallopian tubes is to prevent spermatozoa entering them, and to facilitate the progress of the ovum into the proper nest; further, that the plications and crypts of the mucous membrane lodge and retain the ovum either till it is impregnated, or till it dies or is discharged."[3]

The above view is entirely a speculation, and, as far as I am aware, no one has attempted to substantiate or disprove the causative relation between desquamative salpingitis and tubal gestation. I have made it the subject of prolonged investigation, and am prepared to state that it contains an element of truth, but it does not hold in all cases. In the first place, salpingitis so severe as to produce destruction of the tubal epithelium causes such profound changes in the tubes themselves as to lead to stricture and complete occlusion of the abdominal ostia; it is exceedingly rare to meet with tubes denuded of their epithelium and the abdominal ostia patent. It is, however, well to bear in mind that salpingitis, even of a mild type, may so affect the tubal mucous membrane as to retard or altogether prevent the passage of ova, and an examination of pregnant tubes shows that salpingitis of a mild type, and without even partial destruction of the epithelium, will lead to the detention of ova and expose them to spermatozoa which may wander into the tubes. On the other hand, in several specimens of very early tubal pregnancy I have failed, even after the most careful microscopic examination, to find any evidence of old salpingitis or loss of epithelium. The museum of St. Mary's Hospital contains an interesting specimen in this relation. A single woman aged twenty years was suddenly seized with severe abdominal pain, followed by symptoms indicative of internal hæmorrhage. Rupture of a pregnant tube was suggested as the cause, but disregarded as the hymen was intact. Death occurred three days after rupture. At the necropsy a ruptured sac was found in the left Fallopian tube. In company with the curator, Mr. J. J. Clarke, I examined the sac, and found it to contain chorionic villi. Sections were prepared from the tube, but the epithelium was intact, and no evidence of salpingitis was detected.

Unfortunately few operators take the trouble to examine the tubes in such cases. Dr. Griffith reported a case of tubal pregnancy which terminated fatally at an early date. Both tubes, though apparently healthy to the naked eye, were found on microscopic examination to exhibit marked evidence of disease. The mucous membrane was quite denuded of epithelium and "the conditions present appeared to indicate a comparative recovery from a destructive inflammation of the mucous membrane." The woman had been married eleven years, but had never before been pregnant.[4] An impregnated ovum may be arrested in any part of the tube. In the early stages the ovum becomes quickly beset with chorionic villi, which enlarge, become vascular, and, if not interfered with, in due course form a placenta, but in a manner which somewhat differs from that of a uterine

[1] Extra-uterine Pregnancy.
[2] Brit. Med. Jour., Sept. 27th, 1890, p. 722.
[3] Ectopic Pregnancy, p. 4.
[4] Trans. Path. Soc., vol. xxxviii., p. 227.

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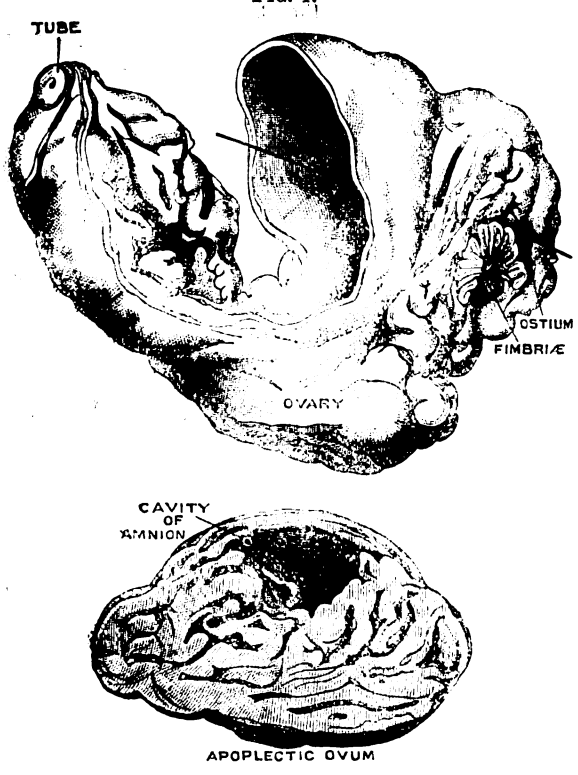
placenta. We may follow the events to be discussed in this lecture in the following order:—1. The changes in the tube and the mode of closure of the abdominal ostium. 2. Pathological changes affecting the ovum. 3. Tubal abortion. 4. Rupture of the gestation sac. The remarks in the following section apply to all forms of tubal gestation except the tubo-uterine variety.

1. *The changes in the tube.*—During the first month or six weeks that portion of the tube in which the ovum is lodged becomes very vascular and somewhat thickened. This has been described as hypertrophy, but it differs greatly from the enlargement exhibited by a gravid uterus. The latter is due to an increase in size and number of the muscle cells, whereas in a gravid tube the increase in size is simply a turgescence. This statement is the outcome of the microscopic examination of eight specimens of gravid tubes between the fourth and twelfth weeks of gestation. In some the walls

FIG. 1.



A gravid Fallopian tube at the sixth week. The walls are extremely thin; its ostium is partially closed and the ovum was apoplectic.

of the tube in contact with the ovum seem to stretch and thin from the beginning of the gestation. The rapidity of the thinning varies in different tubes, and this is doubtless due to the fact that under normal conditions the Fallopian tubes not only vary in length, but in thickness. In some individuals they scarcely exceed in thickness the vasa deferentia of the male, or resemble the narrow tubes of the mare or cow. As the tube expands from the enlargement of the ovum within it, the mucous membrane is stretched and its glandular folds effaced. Occasionally a few of the plicæ will project within the tube as long straggling processes. Whilst these changes are in progress, curious alterations are taking place at the abdominal ostium, which in most cases gradually bring about its occlusion, an event usually completed by the eighth week. During the first four weeks the congestion of the parts causes turgescence of the fimbriæ as well as of the muscular and serous tissues adjacent to them. When the parts are thus swollen, the margin of peritoneum adjacent to the ostium is very conspicuous, and forms an irregular ring over the fimbriæ. In another fourteen days this ring projects beyond the fimbriæ, and, lastly, contracts and hermetically closes the ostium.

2. *Pathological changes which may occur in the ovum.*—After impregnation of an ovum the most important change which occurs in connexion with its investing membranes is the growth of cellular dendritic processes known as chorionic villi. When thoroughly developed the villi cause the exterior of the ovum to present a shaggy appearance and serve to fix it to the adjacent mucous membrane, whether uterine or tubal; they soon become permeated by vessels conveyed to them from the aorta of the embryo by the allantois. Subsequently the greater number of the villi atrophy, those which persist increase greatly in size and complexity, and ultimately form the fœtal portion of the placenta. It matters not whether the gestation be tubal or uterine, the life of an ovum is precarious until the placenta is well formed, for the union between the ovum and the mucous membrane is not very intimate when it depends on the chorionic villi in their early stages. The result is that from a variety of causes the ovum may be dislodged in part, or entirely, from its relation to the mucous membrane; such dislodgment is always accompanied with, and in very many instances actually caused by, hæmorrhage among the chorionic villi. Practitioners are familiar with rounded bodies discharged from the uterus of pregnant women, accompanied by profuse hæmorrhage. These bodies are known by various names—"blighted ovum," "fleshy or carneous mole," "apoplectic ovum," &c. They are so common that a pathological museum usually contains several specimens, and few matrons terminate their reproductive period of life without producing one or more examples of the fleshy mole. The clinical expression for the event is abortion. When an apoplectic ovum is examined soon after its discharge it resembles a firm blood-clot in colour and consistence. On dividing it a cavity containing fluid, sometimes straw-coloured, sometimes stained red from admixture with blood, is found. The walls of this cavity are smooth and lined with amnion, and often a misshapen fœtus is contained within, or the stump of the umbilical cord, and frequently no trace of an embryo can be detected. A fleshy mole is really an early ovum with its membranes, into which blood has been extravasated. The extent of the extravasation varies; occasionally the blood invades the amniotic cavity and overwhelms the embryo. Fleshy moles similar to those arising in the uterus occur in connexion with tubal gestation, and they appear to be more common between the fourth and eighth weeks than at any other period. Their formation is in most cases attended with disastrous consequences to the individual unfortunate enough to become the victim of tubal pregnancy. This fact alone should cause them to be carefully studied.

In October, 1889, I communicated to the Royal Medico-Chirurgical Society two cases of fleshy moles from the Fallopian tubes, which I had removed from patients, and showed that they in no way differed from the apoplectic ovum which is so frequently discharged from the uterus. At the time that paper was read I was able to communicate details of a third case, which occurred in the practice of Dr. William Walter of Manchester. Since then I have had opportunities of dissecting and examining several specimens. It is of some importance to be familiar with their chief features, because the existence of a fleshy mole is a certain proof of pregnancy.[5] When the extravasation of blood is extensive and obliterates the amniotic cavity, it causes doubt whether we are dealing with a lump of blood coagulum or an apoplectic ovum; for it must be borne in mind that an ovum of this character, detained for many days in the pelvis after its discharge from the tube, or if it be lodged between the layers of the broad ligament for many weeks, becomes laminated and hard. Under such conditions its nature can only be satisfactorily determined by finding an embryo or its remains imprisoned in the clot, or by ascertaining the existence of chorionic villi. On several occasions I have been able to demonstrate the existence of tubal pregnancy by the presence of villi alone. In size fleshy moles vary greatly, depending, of course, on the date at which the hæmorrhage occurs. My smallest specimen equals in size the kernel of a cob-nut; the largest is as big as a Tangerine orange. The size of an apoplectic ovum depends on the date at which the hæmorrhage occurs, as well as on the amount of blood extravasated into the membranes. In an inte-

[5] A Case of Tubal Pregnancy, Medico-Chirurgical Transactions, vol. lxxiii., p. 55. Keller has since described three and Orthmann ten cases (Zeitschrift für Geburtshilfe, 1890).

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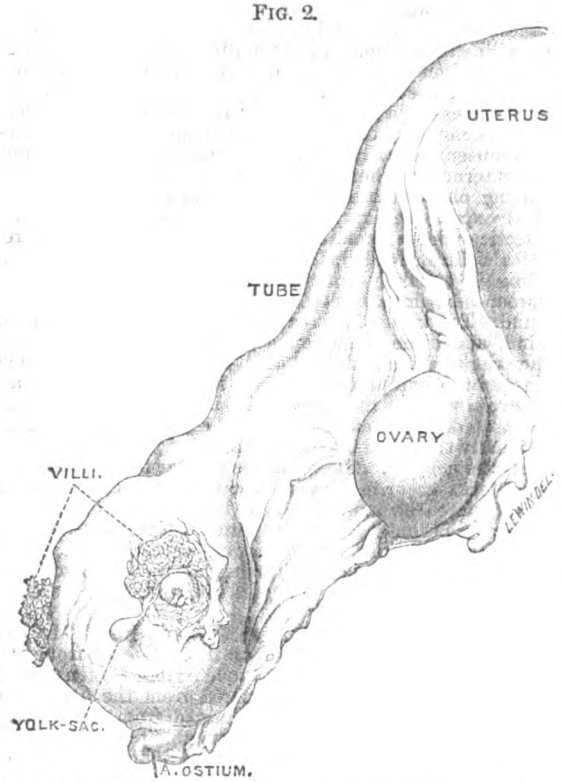
resting specimen which Dr. Herman[6] removed before rupture, he found on slitting open the sac that "hæmorrhage had taken place into the chorion, and the coagulated blood made the interior of the sac precisely resemble the interior of the apoplectic ova so numerous in our museums." In this valuable specimen the blood was extravasated into the membranes of the ovum only; there was no free blood in the tube. That an apoplectic ovum is not formed merely by the *immersion* of its membranes in blood is demonstrated by cases in which, after rupture of a tubal gestation sac from violence, the ovum has remained for several hours soaking in blood, yet when removed from the body its membranes and villi have been found delicate and transparent as in a normal ovum. The same condition occurs in early ova discharged from the uterus. It would appear that the formation of an apoplectic ovum in the tube is a frequent means of inducing tubal abortion or rupture. The museum of St. Bartholomew's Hospital contains a

FIG. 2.



A gravid Fallopian tube, which ruptured and caused death in twelve hours. (Museum of the London Hospital.)

specimen which illustrates this. It is described thus, under the heading Hæmatoma of the Broad Ligament, "The uterus and its appendages: Between the layers of the right broad ligament is a globular cyst about as big as a walnut, the wall of which, in the recent state, was seen to be formed by the separated layers of the ligament; its cavity was filled with recent blood coagula. On the anterior aspect of the cyst were two small, recently formed, irregular openings. From a patient, twenty-five years of age, who, while in the hospital for treatment of warts on the vulva, was suddenly attacked with the symptoms of internal hæmorrhage, and died in twelve hours. At the post-mortem examination the cavity of the peritoneum contained five pints of recently effused, loosely coagulated blood; and dark fluid blood oozed slowly from the openings in the cyst above described. A very careful examination of the blood-cyst failed to discover the source of the hæmorrhage. There was no evidence of the existence of uterine pregnancy, and no ruptured vessel was detected. It was uncertain whether the patient was menstruating at the date of the attack." (2940).

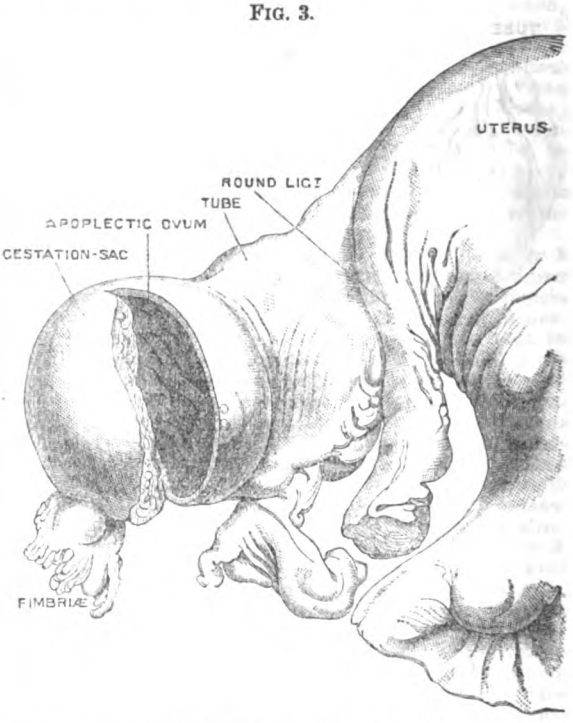
Thanks to the courtesy of the present curator, Mr. Edgar Willett, an opportunity has been afforded me of examining and sketching this interesting specimen. On opening the

[6] Brit. Med. Jour., Sept. 27th, 1880, p. 722.

parts it was clear that the blood-clot was not between the layers of the meso-metrium, but was entirely within the tube; its histology showed clearly enough the supposed blood-clot to be really an apoplectic ovum, and that the woman was the victim of a tubal pregnancy, which proved fatal about the fourth or fifth week. My investigations seem to show that many of these specimens are overlooked. A glaring example of intellectual blindness in this direction is furnished by Goupil in his interesting account of intra-pelvic hæmorrhages occurring in extra-uterine pregnancies. After arranging the various causes of this accident under five headings, he writes:—

"A sixth variety might have been made in which effusion of blood results from simple hæmorrhage of the Fallopian tube, but it would rest on only one observation, and that an imperfect one. The fœtus in that case was not found, and extra-uterine pregnancy was based only on the opinion of M. Robin that a certain membrane presented the appear-

FIG. 3.



A gravid Fallopian tube. The ovum has been transformed into a fleshy mole. (Museum of St. Bartholomew's Hospital.)

ances of the chorion. M. Fenerly has published the case in his "Thèse Inaugurale," p. 46, Paris, 1855. A patient was admitted with subacute peritonitis, which terminated fatally in ten days. The uterine walls were thicker than normal. The right Fallopian tube contained a clot as big as an egg, which was hollow and lined by a membrane, yielding microscopically the characteristics of the chorion. The uterine cavity was lined with a swollen vascular mucous membrane."

This case was clearly a typical example of an apoplectic ovum within the Fallopian tube, and is one of the earliest examples I can find recorded, but its true nature was overlooked.

It will be useful to briefly summarise the characters by which an apoplectic ovum found in a Fallopian tube, loose in the pelvis, or between the layers of the broad ligament, may be identified. (*a*) When recent, it resembles in external appearance a piece of blood coagulum of a dark-red colour. If it has been free in the peritoneal cavity or lodged between the layers of the broad ligament for several days or weeks, it will be of a yellowish colour externally (due to a layer of fibrin), and quite firm and hard. (*b*) Large apoplectic ova are usually elliptical in shape. Small ones are more or less circular. (*c*) The average size of such ova is that of a walnut. They rarely exceed in size a Tangerine orange. When smaller than a cobnut they are probably lost in the clot. (*d*) The presence of a central cavity lined with a

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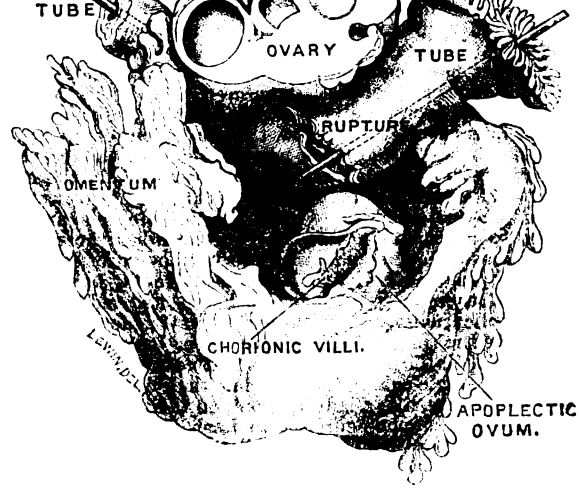
smooth membrane—the amnion. The cavity may contain an embryo. Very frequently the embryo is destroyed early, or the ovum may be ruptured and allow it to escape with the blood-clot. (*c*) Sections of the clot will show under the microscope chorionic villi. The most reliable sign of all is the presence of an embryo. Next in value is the existence of chorionic villi, and these may be detected in fleshy moles even when blood has broken into, and obliterated, the amniotic cavity.

3. *Tubal abortion.*—It has been already pointed out that the presence of an impregnated ovum in the outer third of a Fallopian tube usually leads to occlusion of the abdominal ostium; this event is commonly complete by the end of the sixth week, sometimes it is delayed to the eighth week; it is therefore a comparatively slow process. It is important to bear this in mind, because it serves to explain an apparent discrepancy, to the effect that the abdominal orifice is sometimes open and sometimes closed. As a matter of fact, the condition of the ostium depends upon the date at which it is examined after the lodgment of the ovum. So long as this orifice remains open the ovum is in constant jeopardy of being extruded through it into the peritoneal cavity, especially when it lies in the ampulla of the tube, and the nearer it is situated to the ostium the greater is the chance of its being thus discharged from the tube. To this accident the term "tubal abortion"[7] may be applied, for it is exactly parallel to those early abortions occurring in connexion with uterine gestation before the end of the second month; and it further resembles them in the fact that the ovum is apoplectic. These cases of "tubal abortion" are worthy of attention because specimens of Fallopian tubes have been frequently described in which blood-clot has been found hanging from their fringes, associated with a localised dilatation of the tubes like gestation sacs. Many of these cases resemble uterine abortions in which the ovum from some cause or other becomes apoplectic and is expelled, accompanied by a free discharge of blood from the uterus. When it occurs early the ovum is small, and, unless carefully sought for, frequently escapes detection; when large, it is easily recognised. In tubal abortions the same thing happens. The ovum is discharged with a copious hæmorrhage into the peritoneal cavity, accompanied with the usual signs of internal bleeding, and death may occur early from the anæmia thus induced or from shock. Escaping this danger the patient falls, in many cases, a victim to peritonitis. In such instances the ovum being very small escapes recognition when the clot is examined, either at the operation or post mortem. Tubal abortion can only occur during the first month, when the ovum is small enough to pass through the abdominal ostium, for we must remember that as the ovum enlarges the ostium is continually narrowing, and thus diminishes the chances of the ovum escaping through it. The large quantity of blood which flows from the tube into the peritoneal cavity may amount to thirty, or even fifty ounces. Tubal abortion is a subject of much interest, inasmuch as it furnishes many of the cases of pelvic hæmatocele, which are ascribed to metrorrhagia, reflux of menstrual blood from the uterus, and hæmorrhage from the mucous membrane of the Fallopian tube. The reason for associating the hæmorrhage with metrorrhagia and menstruation is due to the fact that whilst the ovum is growing in the tube a decidua is forming in the uterus. When tubal abortion occurs hæmorrhage takes place from the uterus, consequent on the separation and expulsion of the decidua. If this accident happens near the time the patient expects to menstruate the case would be regarded as reflux of menstrual fluid into the peritoneum. If it do not coincide with a menstrual period, it will be considered to be metrorrhagic in origin. It will therefore be well in searching clot removed in operations for pelvic hæmatocele, to examine carefully any apparently organised ovoid clot, in order to ascertain if it contain an amniotic cavity, with or without an embryo, and also ascertain the existence or otherwise of chorionic villi.[8]

4. *Rupture of the sac.*—With excessively rare exceptions, a pregnant tube either aborts or ruptures at some period before the twelfth week following impregnation. In tubal abortion the blood escapes into the peritoneal cavity. When the tube ruptures, the blood in most cases also finds its way directly into this cavity; in a certain proportion, however, the rupture takes place in that portion of the tube which is uncovered with peritoneum. Under such conditions the blood is poured between the layers of the meso-metrium (broad ligament), and is usually limited in amount. Generally speaking, intra-peritoneal rupture is a fatal accident; death may ensue in a few hours from shock, or may be induced by secondary changes, such as peritonitis, a few weeks later. The symptoms depend upon the amount of blood which is poured out. In some cases it amounts to three, four, or more pints, in others to only a few ounces. When the hæmorrhage is large in amount, unless surgery promptly affords relief, and sometimes even then, the patient quickly dies. Museum shelves too eloquently attest this. It is not difficult to prove that a pregnant Fallopian tube may rupture into the peritoneal cavity and the hæmorrhage be so slight as to give rise to no marked symptoms. In August, 1886, I removed by abdominal section the tubes and ovaries from a woman aged twenty-five years. She had been treated for many weeks by rest and medicine for what was supposed to be chronic inflammation of the Fallopian tubes, and a hard rounded swelling was easily detected on the left side of the uterus. The symptoms had come on insidiously; there had never been any sudden pain or arrest of menstruation. On drawing up the left uterine appendages they were found adherent to a large fold of omentum, containing blood-clot and an ounce of fluid blood. The omentum, tube and ovary, with the adjacent portion of the meso-metrium, were removed. The ovary contained some enlarged follicles, and it was thought that one of these had ruptured and furnished the hæmorrhage. The specimen puzzled me at the time, and was carefully preserved. Two years later I re-examined the parts, and found a rupture in the Fallopian tube near the abdominal ostium. Lying snugly in the fold of omentum adherent to the tube was a rounded mass of laminated clot, and in this an apoplectic ovum as big as a cobnut. One part of its circumference looked ragged, and on teasing some of the fragments in glycerine and examining them microscopically they were found to be typical chorioni villi. The parts are shown of nearly natural size in Fig. 4 It then became clear that the tube had been gravid. The ovum had been converted into a fleshy mole, and led to rupture of the gestation sac at about the third week. The date of the rupture could not be fixed with certainty, but I knew from physical signs that this clot had occupied the omentum for many weeks preceding the operation. The fact that this ovum and the surrounding clot were for so many weeks tolerated by the peritoneum assists us in comprehending that when an apoplectic ovum is discharged from the Fallopian tube and lodged between the layers of the meso-metrium, it becomes sequestrated, and in many cases causes no further trouble. When a living ovum is thus dislocated, it frequently continues to grow, and its subsequent history will afford a theme for a future occasion.

FIG. 4.



A gravid Fallopian tube which has ruptured. The apoplectic ovum was caught and sequestrated in a fold of omentum.

[7] A term introduced by Keller. Zeitschrift für Geburtshilfe, Bd. xix., 1890.

[8] For a typical case of tubal abortion see Obstet. Soc. Trans., 1890.

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ALOPECIA AREATA, ITS PATHOLOGY AND TREATMENT.[1]

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FEW diseases of the skin have been so long recognised as alopecia areata, as its synonym area Celsi clearly indicates, yet we know but little more of its true origin than Celsus himself. Without being in any way a physically painful disease, it is an important one to the sufferer on account of the conspicuous disfigurement it produces; while it is interesting to the practitioner on account of its frequency, its rebelliousness to treatment, and the mystery which hangs round its pathology in spite of many attempts to explain it. I hope that by the interchange of our experience, and the ideas suggested by that experience, some advance may be made in clearing up these moot points; and even if we are not so successful as we could wish, by arriving at a definite understanding as to what points attention should be directed we may perform the more humble office of paving the way for future scientists to solve the problems which await solution.

Time would fail if I were to try to do justice to the labours of the numerous workers in this field, and I propose, therefore, to base my remarks chiefly upon my own experience; and for this purpose I have carefully analysed 207 consecutive cases of alopecia areata which occurred in nearly 10,000 cases of skin disease, indicating a frequency of 2 per cent., while from private practice I have taken the first 50 cases which occurred in 1500 cases of all sorts—i. e., 3·3 per cent. In the hospital cases, there were 112 males to 95 females, and in private, 28 males to 22 females. The ages of the hospital cases ranged from two to fifty-six years, the private cases from three to fifty-five years. In the hospital cases the greater number—viz., 125—were under twenty. There were 70 cases between twenty and forty, and only 12 above that age. On the other hand, in private there were only 6 under twenty years, 29 between twenty and forty years, and 15 above that age. This discrepancy between public and private practice is, I think, chiefly to be ascribed to the peculiarities of consulting practice in a special branch. In this adults largely predominate, and there is also always an undue proportion of obstinate and rare diseases. Statistics as to frequency therefore are unreliable. Speaking generally, we may safely say that it is most common under twenty, frequent between twenty and forty, uncommon after forty, and rare after fifty; it is probably also rather more common in males than in females. I will not adduce further statistics, but I must remark that, though I have grouped all these cases together, I do not wish it to be inferred that I consider them all identical in their pathology. And this leads me to allude briefly to the current theories of the pathology of the disease, the exponents of which are practically divided into two hostile camps. In one dwell those who hold that alopecia areata is due to a vegetable parasite; in the other those who regard it as a tropho-neurosis. The tropho-neurotics, supported by the authority of the great Hebra, have outnumbered their more ancient opponents, and, adopting a Fabian policy, calmly await the onslaughts of the parasitics, who from the time of Gruby have never been wanting in defence of their theory. From time to time they sally forth—usually as single champions, wearing their own newly discovered parasite, like a lady's favour, on their breasts,—and challenge the tropho-neurotics to fresh inquiry; but the latter's motto is a "Non possumus," and they only watch and wait until a new champion with a new parasite appears, and, slaying the old parasitic, tramples his parasite to the dust, and has a short-lived triumph, until he himself and his parasite perish in their turn. I am going to try to bring peace between these old opponents, and to uphold, as the French have already done, that there are parasitic and non-parasitic cases of so-called "alopecia areata," and I shall endeavour to prove my proposition by appealing not so much to the microscope—with which it is very difficult to make a man see what he does not wish to see—as to clinical facts, which make, I believe, a parasitic basis an absolute necessity for a large proportion of cases. A careful examination of the cases I have alluded to leads me to believe that under the generic term "alopecia areata" there are at least four classes of cases which should be separated from each other. Possibly further experience may lead to still further differentiation.

In Class 1 I would place those cases in which the alopecia is universal, and in which the hair does not necessarily come out in patches, but there is general falling off, often very rapid, and accompanied in some cases by changes in or even falling off of some or all the nails, as in the following instance. A boy, aged eight years, without any apparent cause or preceding ill health except a poor appetite, within ten days lost the whole of the hair all over the body, together with all the finger and toe nails. Three years later, when I saw him, there was not a hair or nail present, and the nail-bed was rough and irregular, as if the nail had been torn off, leaving a little horny matter behind. In a second case, a boy of fourteen, the whole of the hair had come off some time previously, soon after a fall from a tree on to his head. In a third, a girl aged two years fell nine feet from a window. She did not recover complete consciousness for three weeks, and a week after regaining her senses the hair began to come out on the left side of the head, and she became quite bald in a week, with the exception of a small tuft at the left occipito-parietal suture; the nails were unaffected. A year and a half later the hair was returning, leaving circular bare patches like a commencing alopecia areata. Rapidly universal cases after worry, fright, and injuries to the head have been recorded by Tyson, Duckworth, Cooper, Todd, Holmes, Collier, and others in this country and abroad. In some the hair began to fall out in patches; in others it came out indiscriminately, or even in masses. In a captain whose ship was struck by lightning, and who sustained scalp wounds, it began the very next day on the beard, and then the scalp and the rest of the body were denuded; two months later the nails scaled off from the fingers, but not from the toes. In several other of the above cases some or all of the nails were lost. In one of Tyson's cases the big toe and thumb nails alone escaped. In a very large proportion of these loss of hair is permanent, and the course is for the most part rapid. In the following instance it was more gradual. A woman aged thirty-three began to lose her hair during pregnancy, nine months before I saw her, but it was several months before the alopecia was complete on the scalp, with the exception of a few straggling hairs on the back. The eyebrows and lashes were partially lost; some of the nails were deeply furrowed, others were half separated from the matrix, while others again were flattened with slight pitting. The universal cases of this type are really very rare, although, owing to their striking character, a considerable number are recorded in dermatological literature.

In Class 2 I would place baldness occurring in one or more patches at the site of the injury, or in the course of a recognisable nerve. These are very few in number comparatively, but there are many on record. In a woman with melancholia, aged thirty-four, whom I saw with Dr. Savage at Bethlem Hospital, there were white patches of hair in the course of the left supra-orbital, and one between two or three inches in diameter was almost bare; there was no history of them obtainable. In Pontoppidan's case a girl, aged ten, had some glands removed in the left carotid region, which was followed by ocular paralysis, indicating injury to the sympathetic nerve, while loss of hair in areas on the back of the head took place, and six weeks later the whole back of the head became denuded in the region corresponding to the domain of the major and minor occipital nerves, and the posterior branch of the auricularis magnus. Within three months the hair began to grow again. Joseph excised the second cervical ganglion in the cat and rabbit, and this operation was followed by alopecia patches in the territory of the second cervical, the occipital, and the great auricular nerves; but the results were not uniform, and his experiments, though partially confirmed by Mibelli, are not accepted as conclusive; for Behrend and others have not been able to get the same effects. Two instances of local baldness on the site of a blow are related by J. Collier in THE LANCET of June 11th, 1881. Similar cases are scattered through the literature of the subject.

Class 3 is the form originally described by Neumann as alopecia circumscripta seu orbicularis. In this the patches are circular and always small, from a lentil to a pea in

[1] An Address, introductory to the discussion on the subject, delivered at the meeting of the British Medical Association on July 30th, 1890.

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diameter, much depressed below the surface, with often a marked decrease of the sensibility. It is, in my experience, a rare form, and the prognosis is very unfavourable. The following are instances from my own practice. A gentleman aged thirty-five, in robust health, and with no history of antecedent worry, syphilis, or other serious illness, had a large number of bare, depressed, pea-sized spots on the scalp, chiefly at the vertex; the hair round them was loose, and came out with the sheaths attached, and there were no (!) hairs. All the nails of the fingers and toes underwent the following changes: they first separated from their bed, then became of a dirty yellow colour, and finally thickened without splitting; the surface remained smooth on the finger and big toe nails, but in those of the smaller toes the free end was thick, yellow, and everted, while the proximal part was thinned, rough, and striated, but not discoloured, a deep furrow separating the thin from the thick part. In a second case, the patient was an unmarried lady, aged forty-six years. The alopecia began fifteen years previously in small patches, on which the hair has never grown again, but the baldness had increased rapidly in the last two years from the multiplication of the patches. On the vertex were several irregular areas of perfectly bald skin, atrophically and deeply depressed below the surface, and there was no trace of a hair-follicle left on them. There were one or two stumps adjacent which drew out without requiring any force. There were also small patches of baldness, not sharply defined or round, but very atrophically depressed. Her general health had been bad for several years; she is subject to vomiting two or three hours after taking food, bringing up mucus only, but this has been better lately; her sight has been failing, especially in the left eye, for the last two years, and she is very subject to chalazion; she is also dyspeptic. Sangster relates two cases of this form—his own and a case of Pringle's—in the February number of the *British Journal of Dermatology*.

These cases are distinguished by the very marked depression of the bald area below the surrounding skin, and must not be confused with the pea-sized bald smooth white spots on which the area is not depressed, and which are to be referred to the fourth class. Few would dispute, I believe, that all three of these classes are essentially of a trophoneurotic nature. The prognosis of the first and third classes is for the most part unfavourable. Taken collectively they form a very small proportion of cases classed as alopecia areata—certainly not 10 per cent., and I believe not more than 5 per cent.,—and it was for that reason that in my preliminary statistical statement I did not attempt to separate numerically the different classes, as the general conclusions would not be thereby affected. It might be convenient to place them all under the head of "alopecia neurotica," with varieties universalis, localis, and circumscripta.

The fourth class is not only numerically the largest by far, but the one most open to discussion as to the origin of the affection, and on this point the conclusion has been gradually forced upon me by clinical facts that it is due to a vegetable parasite, and that if we reverted to the old term "tinea decalvans," we should not really be taking a retrograde step. Before I bring forward the facts which have led me to this conclusion I must state in a few words the clinical features of the class. (Fig. 1.) In it, the cases occur chiefly in patches from half to two inches in diameter, and of round shape primarily, but they may be larger and irregular in outline from the coalescence of neighbouring patches. They commence more frequently at the back of the head than elsewhere, but may come on any part of the scalp. (Fig. 2.) A less frequent form is a broad band of baldness which may go all round the head. (Fig. 3.) This band or serpiginous form is much less common than the round patch form and often extends much more rapidly, and its prognosis is less favourable. In one of my cases the hair came off in zigzag channels until the whole scalp became denuded. This variety is the ophiasis of Celsus, who considered it the more favourable form. The bare areas are smooth and whiter, and the tissue is lax and thinner than normal skin. In all recent and active cases there are short hairs about one-eighth of an inch long, thicker at the free than at the tapering point of insertion, so that these stumps resemble a note of admiration sign (!). They pull out almost with a touch and very soon fall out spontaneously, so that their presence betokens recent extension; and they are, in my opinion, quite characteristic of this form of the disease, as I believe they are absent in the other three classes. They are seldom present in great numbers, though

FIG. 1.

Common form of the fourth class.

FIG. 2.

Common form of the fourth class.

FIG. 3.

Band form of alopecia areata.

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I have once seen them covering the whole of a new patch, and as the disease ceases to extend disappear altogether (Fig. 4.)

It must be admitted that in a large number of cases the origin of the affection cannot be traced. As already stated, the eruption occurs mainly in youth and the prime of life, no less than 188 of 207 were under forty years of age, and in private practice 35 out of 50. Except in a very small

FIG. 4.

Illustrating the disease affecting the face. There are bald areas on the chin, cheek, and moustache.

proportion of cases there is no departure from health; most cases are perfectly healthy in every way. In the hospital cases 14 women and 7 men showed some departure from health; 6 had headaches and neuralgia, the others were of trivial importance; but this point is brought out best in the private cases, because in them this point is always inquired into most thoroughly, while in hospital practice, owing to the high pressure at which the work is done, inquiry in this direction is less systematic. In 10, 5 males and 5 females, there was or had been some departure from health; 3 were subject to headaches, 1 man was overworked and run down, 1 had had a railway accident which had left him nervous, 2 were notably neurotic women, 1 was subject to asthma, 1 had had syphilis some years before, but had never exhibited any recurring symptoms; 1, a girl, had had sciatica. All the rest, equivalent to 80 per cent., affirmed that they were, and appeared to be, in perfect health. Surely, if this was always a neurosis, and that, too, of a degenerative kind, it would be unparalleled among all other neuroses that it should be—first, a very common disease; secondly, most common in the prime of life; and thirdly, that four-fifths of its victims should be otherwise in perfect health, while those who were not quite well should for the most part suffer from merely functional disorders of the most common kind, probably in about the same proportion as would generally be found in a large number of people taken indiscriminately. Very few exhibited any other lesion of the skin, and they cannot but be regarded as accidental complications. Among the whole 250 were noted one example of each of scabies, seborrhœa capitis, comedones, pityriasis circinata, lupus vulgaris, eczema, lichen planus. One had tinea versicolor; and in one, the girl who had had sciatica, her mother thought that her skin was dry and powdery, and that there was a persistent redness of the cheeks which had not existed before the alopecia areata. This was one of 7 patients of the 50 private cases in which there was some fair grounds for considering them neurotic. Of the other six, 2 were universal, 2 were Neumann's atrophic forms, 1 (already referred to) had had his nervous system shaken by a railway accident some years before the attack, and the sixth was classed as possibly neurotic, but the evidence was not very strong. Of the 50 private cases not less than 11 had had previous attacks, and of the 200 hospital cases 22 had had previous attacks, some of them having been attacked several times. It began in a lady of thirty-two years when she was seven years old, and she had often been nearly well—i.e., with only a single small patch; but she had never been quite free. This patient was a strong, healthy woman.

(To be concluded.)

TAPPING THE MASTOID CELLS.

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IN recording this not unusual case of chronic discharge from the ear, due to caries of the temporal bone and treated by tapping the mastoid cells, I do so not in the least wishing to arrogate to myself any particular credit for an ordinary simple surgical procedure, but rather with a desire to induce others to whose lot the treatment of such affections may fall to remember the old adage, "Prevention is better than cure," and whilst not rushing needlessly into operations accompanied with more or less danger to remember that a patient suffering from a chronic offensive discharge from the ear is one whose life may practically not be worth a week's purchase, and one whose discharge, unless checked, will most certainly lead sooner or later to very grave troubles.

The recent death of the great archæologist, Dr. Schliemann, from abscess of the brain consequent on a chronic discharge from the ear, may possibly bring this matter home to us. The brilliant feats lately recorded in THE LANCET of opening the skull and plunging trocars into the brain in search of cerebral abscesses would, I maintain, be uncalled for in most instances were one of the first principles of surgery applied by surgeons to the treatment of obstinate discharges from the ear. Compared to ligaturing the lateral sinus and trephining the skull in various places in search of pus, the simple procedure of tapping the mastoid cells to ensure efficient cleansing and drainage of the middle ear is, as it were, a fleabite. On referring to the best known authors in this country and America, I find no definite advice or authority given for such procedure, unless pain or symptoms of retention of pus be present in the mastoid process. I would urge that, although there be no pain or tenderness and no evidence of the retention of pus, if the discharge be obstinate, offensive, and of some years' standing, a cure may be effected, and death averted, by a timely vent in the mastoid process. The mastoid cells may be opened with rapidity, certainty, and safety, by working from the posterior wall of the auditory canal backwards, upwards, and inwards. To effect this, a curved incision should be made parallel to the antihelix close to the pinna, and well out of sight, severing all the tissues, periosteum included, down to the bone. The pinna being displaced forwards, the posterior segment of the auditory canal is exposed. If the operator now works in the angle formed by the posterior root of the zygoma and posterior wall of the auditory canal, working in a direction at first inwards and backwards, the posterior portion of the tympanic cavity and cells of the antrum are reached with certainty and a minimum of risk incurred. The chisel and mallet I have found more handy than the trephine, drill, or other appliances. In operating on this case I had the advantage of the assistance of my colleague, Mr. James Black, aural surgeon to Westminster Hospital.

A. S——, aged twenty, a tall, delicate-looking girl, came as an out-patient to the North-West London Hospital in the spring of 1885, complaining of deafness and an offensive chronic discharge from the right ear of twelve months' standing. Watch heard on contact; left side hearing good; never had scarlet fever or measles. Throat and post-nasal space normal, with the exception of pallor and some relaxation of mucous membrane. Both Eustachian tubes were patent. On examination, left membrane normal, right obscured by pink fleshy mass bathed in pus. On cleansing, a polypus was discovered springing from the edge of a large perforation in the upper and posterior segment of the membrane. The polypus being removed with the snare, the middle ear was cleansed with warm boracic lotion and dusted with diluted iodoform. The patient attended twice weekly after this, with some periods of improvement, but never with entire disappearance of the discharge. The diligent use of Politzer's bag, associated with antiseptic and astringent

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lotions and powders, for a period of five years, was not sufficient to bring about a cure, the discharge persisting and causing much annoyance by passing occasionally into the mouth during sleep. After consulting with my colleagues, I opened the mastoid cells in the manner above indicated, replacing the auricle and draining from an opening made in the pinna immediately over the mastoid opening. During the operation carious bone could be felt with the probe on the posterior and inner wall of the tympanum. The case did remarkably well, and in ten weeks the patient left the hospital free of discharge, and with partially restored hearing.

New Cavendish-street, W.

PULMONARY PHTHISIS;

SOME REMARKS AS TO ITS PATHOLOGY AND ITS CURABILITY IN EARLY STAGES, PARTICULARLY BY THE USE OF HOT-AIR INHALATIONS.

BY T. CRANSTOUN CHARLES, M.D.

(Concluded from p. 419.)

Of the twenty-five cases of pulmonary phthisis in which I have adopted the hot-air treatment six recovered, fourteen died, and five passed from under my observation, three of them having gone to live abroad. The fatal cases were all in an advanced stage, with one exception—that of a girl aged seventeen, who apparently recovered after the use of the hot-air apparatus for four months, but in whom a year subsequently the disease returned and carried her off in seven months, although the hot-air inhalations were resumed. Only brief histories of the cases in which a cure resulted will here be given; but whether the sole credit is due to the hot-air inhalation or not I shall leave my readers to judge.

S. J——, a young lady aged twenty, whose parents were healthy, but one of whose maternal aunts died at the age of twenty-four of phthisis, had been liable to frequent catarrhs of the air-passages. She had had an attack of catarrhal pneumonia of the upper lobe of the left lung three years ago, since which time she has never recovered her strength. Six months ago she had a slight attack of pleurisy in the left side, lasting a month, and following this a frequent and troublesome cough. The patient is very delicate-looking, having a long slender neck, with prominent clavicles and badly-developed thoracic muscles. When first examined by me (Nov. 1888) there was loss of resonance on the left side from the apex of the lung to the lower border of the third rib, with prolonged harsh expiration and crackling râles. The pulse was quick, and the temperature 102 6° (6 P.M.). Emaciation was marked, and there was some hoarseness of the voice. The expectoration was blood-streaked, purulent, and nummulated, and was found to contain tubercle bacilli and elastic bundles. Night sweats were of frequent occurrence, and the patient was in a very exhausted condition. The hot-air inhalations were at once commenced, and continued regularly for five months. The cough became less frequent, and by degrees the bacilli disappeared. The breathing over the upper part of the left lung was ultimately very slightly harsher than on the right side, all râles having disappeared. I saw this patient again in August last, after she had returned from a trip to Australia, and I could detect no positive abnormal signs in the chest; indeed, she had increased greatly in weight, and appeared in robust health.

J. B——, a young lady aged nineteen, no family history of phthisis. In 1883 she had an attack of bronchitis passing into pneumonia, and was subject to occasional coughs from time to time till the spring of 1886, when she had congestion (?) of the left lung attended with much pain in the side, violent cough, and bloody expectoration. This hæmorrhage increased and continued for three weeks, but the cough lasted till the summer of the same year. In each of the three following winters she suffered from a severe cough, but about the Christmas of 1888 the cough became very frequent and severe. On examination there was dulness extending from three-quarters of an inch above the left clavicle to the lower border of the second rib on the same side anteriorly, and the expiration was markedly prolonged, harsh, and blowing, with abundant crackling râles. The patient suffered from pain on the left side, frequent cough, and abundant hæmoptysis; there was a great want of appetite and energy, she slept badly, and perspired freely both day and night, and was rapidly losing weight. The hæmoptysis continued for some time, and the râles became coarser, the bronchial breathing and bronchophony also becoming more pronounced. Towards the end of January, 1889, she began the hot-air treatment, and for the first three days after beginning its use the cough and hæmoptysis increased somewhat, after which they both began to decrease, and in two weeks the hæmoptysis ceased entirely, the cough also becoming easier and less frequent. After two months the cough likewise ceased. Some weeks subsequently she left off the inhaling entirely. The expectoration was frequently examined, and at first tubercle bacilli were very abundant; but they quickly diminished in number, and they are now completely absent, although for a considerable time one or two could be found in a preparation of the sputum. The patient is at present most active in her habits, and her health has never been so good.

J. S——, clerk, aged twenty-seven. No family history of phthisis. In 1887 was in Brompton Consumption Hospital, under the care of Dr. R. Thompson, and Dr. Theodore Acland has kindly found out for me that he was then suffering from chronic tubercular disease of the lung, with no active mischief, but with a contracted cavity in the left upper lobe. He left the hospital somewhat improved, but since then he has had repeated attacks of hæmoptysis, having had three of these, lasting a few days each, in November, 1888, and showed evidence of cavities in the upper lobe of the left lung. There was great dyspnœa and a sharp pain in the chest, shooting back from the right apex towards the lower angle of the scapula; the coughing was almost continuous at night, with profuse expectoration containing bacilli in abundance, and the night sweats were most profuse and exhausting. He began the hot-air inhalations in February, 1889, for some hours daily. The inhaling, however, owing to circumstances, was done very irregularly at first, and could not be continued for any length of time, but later it was done for an hour in the morning and two hours in the evening. The cough gradually ceased, and all the symptoms improved. In July, 1889, he was still inhaling, but when the chest was examined it was found clear and resonant on both sides, slightly higher pitched in tone, however, in the right infra-clavicular region; the respiration also was normal, although after coughing dry clicking or a dry mucous râle could occasionally be heard during inspiration. But on examining the chest again a short time subsequently there were no râles to be heard of any kind, and the patient had increased seven pounds in weight. His digestion as well as his strength generally had so much improved that he was able to attend to his daily work, which is both heavy and of long duration.

G. G——, aged thirty. Phthisis not hereditary. General health good until two years ago, when she had an attack of pleurisy in the right side, lasting seven weeks, followed five months later by pneumonia in the opposite lung. For the last four months she has had a very troublesome, dry, hacking cough. When examined (January, 1888) she was suffering from a frequent and distressing cough, with a slight amount of expectoration, in which tubercle bacilli, but no elastic fibres, were detected. Elevation and expansion movements were evident in both infra-clavicular regions, and there was no loss of resonance perceptible anywhere except posteriorly inside the spine of the left scapula, at a spot corresponding to the apex of the lower lobe of the lung. Here the expiration was prolonged, with bronchial breathing and crackling râles audible on deep inspiration. The patient improved rapidly under the hot-air treatment, and all signs of dulness and râles entirely disappeared (July, 1889). The cough and expectoration had likewise ceased.

T. W——, aged twenty-seven, a hard-working curate of the Church of England. Health has never been very robust, and has occasionally been subject to slight catarrhal bronchial attacks in the winter, but has never had to give up work till his present illness. This began three months before I saw him in April, 1889, with hoarseness and frequent tickling cough. The hoarseness varied from time to time, but gradually developed into aphonia. On examination I found the ary-epiglottic folds both swollen, their surface pale, and with a few scattered small ulcers; the vocal cords had lost their whiteness posteriorly where slight thickening was perceptible, and one small ulcer was visible on the right side. The epiglottis was likewise thickened and

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ulcerated. The patient had suffered from sore-throat and slight dysphagia for some time, but these symptoms gradually decreased in severity. The cough was very frequent and the expectoration abundant, tubercle bacilli being present in great numbers. No evidence of tubercular deposit in the lungs could be discovered, although over the left apex the resonance was slightly high pitched; but no abnormal sounds could be detected with the stethoscope either on deep inspiration or after frequent coughing. When the patient had been under the hot-air inhalation for six weeks he recovered his voice completely, and on examining him in July, 1889, I could detect no swelling or ulceration of the larynx, nor could I discover any abnormal appearances there when I saw him in the October following, or any signs of tubercular deposit in the lungs. Ulceration of the larynx, we know, is very common in pulmonary phthisis, occurring in an average of one-third of the cases; but it is generally regarded as always being secondary. Dr. Byrom Bramwell and Dr. Coats, however, have recorded cases in which the disease appeared, like the above, to commence in the larynx. It is possible, of course, nay, even probable, that a slight tubercular deposit may have previously occurred in the lung in this case, for it is sometimes very difficult, if not almost impossible, always to detect it in its very early stages.

S. W——, aged twenty-five, governess. Mother died of pulmonary phthisis. The patient suffered from scrofulous glands in the neck in early childhood, and has never been strong or robust. She has been very liable to bronchitic attacks, but has never spat blood before the present illness, which began three months previously, with great debility, loss of appetite, frequent dry cough, and great feeling of feverishness and prostration at night. Two months prior to seeing me the cough was attended with expectoration, and it was noticed to be tinged with blood. Night sweats also became frequent and troublesome. On examination in February, 1889, the patient was much emaciated, her face pale with flushed cheeks, the left cheek particularly; the chest was lean and narrow, and above and below the clavicles there were deep hollows, but better marked on the left side. Expansion was absent below the left clavicle, and there was loss of resonance over the same area, bronchial breathing and bronchophony also being audible; at one point a cavernous râle was to be heard on inspiration and expiration, occasionally attended by an amphoric echo; and at the lower limit of dulness in the third intercostal space crackling râles with occasional dry clicking were to be heard. Some hoarseness of the voice was noticeable, and there was slight hyperæmia with swelling of the ary-epiglottic folds. Bacilli were abundant in the sputum. Under the use of the hot-air apparatus the patient underwent great improvement, and after four months her weight had increased by 26 lb., the cough had almost ceased, and only a few bacilli were to be discovered in the sputum. She slept well, her appetite was good, and she possessed plenty of physical vigour.

In all these cases the signs and symptoms were of a positive kind and tubercle bacilli were abundantly present; and in them all the results were most satisfactory. The treatment combined not only the sterilisation and destruction of the bacilli by means of the hot air, but also the general employment of remedies and methods tending to improve the general health of the patient, and raise the tone of the tissues, assisted, of course, by such therapeutic agents as were indicated to allay symptoms or treat any accidents or complications that might arise in the course of the disease. In cases of bronchitis also, attended with profuse expectoration, the hot-air treatment may, I believe, be employed with very great advantage. In seven such cases where there was much effusion into the bronchial tubes, attended with dyspnœa and great general debility, and in two cases of localised catarrhal bronchitis following pneumonia, the hot-air inhalations soon brought about rapid and complete recovery.

I shall now refer briefly to some of the different therapeutic agents that have been strongly recommended of recent years in the treatment of phthisis, and state the results I have obtained with them. 1. Breathing the vapour of burning sulphur has afforded only very slight benefit, but has caused much bronchial irritation. The stronger tannin wines, as St. Raphael claret, proved highly serviceable as an adjuvant in many cases. In one patient a marked increase in weight occurred under the administration of forty grains of tannic acid daily, but the improvement only lasted during three months. One phthisical patient, who also suffered from marked cardiac debility, with a very rapid, feeble, and irregular pulse, and whose digestion was being impaired by the long-continued use of digitalis, benefited greatly in every respect under the administration of tincture of strophanthus in three-drop doses; but how long the improvement lasted I cannot say. The use of anilin and eucalyptus oil by inhalation, the administration of acetanilide, and the application of an ointment of iodoform and eucalyptus oil to the chest, the internal administration also of iodoform, were all of only temporary advantage, and the same may be said for inhalations and sprays of oil of peppermint. 2. Pure wood creasote proved very often of some service. It was useful in allaying irritable cough dependent on congestion of the larynx, as it appears to exercise a tonic action on the mucous membrane. It may be given internally with cod-liver oil, inhaled, or employed as a spray when diluted with spirit of chloroform. One of its constituents, however, guaiacol, the methyl ether of pyrocatechin, is an advance on creasote in every respect. Its taste is not so unpleasant, it rarely disagrees, and it appears more effective, particularly in the early stages. It can be given in drop doses in cod-liver oil or sherry. I employed it last year in three cases over several months; a slight but decided improvement showed itself, the cough and expectoration diminished, and the weight, as well as the bodily strength, increased. This amelioration lasted for a month in one of the cases, for six weeks in the second, and for eleven weeks in the third. 3. Lactic acid and lactate of soda, besides improving the digestion in some of the cases in which they were given, tended also to diminish the sweating. About ten drops, every two or three hours daily, of the lactic acid allayed the cough and quenched the thirst. Under their administration, also, the sleep was rendered deeper and more refreshing. By increasing the acidity of the system by the use of tincture of the perchloride of iron and nitro-hydrochloric acid, alternately with lactic acid in large doses, an attempt may be made to lessen the activity of growth of the bacilli. Much benefit seemed to result in two cases in which the experiment was tried, the number of bacilli in the expectoration undergoing marked diminution. 4. For the profuse sweating I have found atropin most useful, particularly where there was excessive formation of mucus in the stomach, and much tendency to hæmoptysis; though for the latter I have had to resort on several occasions to the inhalation of amyl nitrite, or to the subcutaneous injections of ergotin, ergotinin, and hyoscin. Sulphonal and hydrate of butyl chloride also proved serviceable, if there were likewise sleeplessness and much night cough. On a few occasions pilocarpin ($\frac{1}{12}$ gr.) injections afforded relief, as it also tended to diminish the dyspnœa. Camphoric acid gave but little satisfaction. 5. High temperatures were reduced by antipyrin and phenacetin in small and repeated doses. These bodies also relieved the cough and induced sleep. Hypnon, likewise, when inhaled in five-drop doses every four hours, lessened the frequency of the cough, slightly lowered the temperature, and gave a quiet sleep; but it proved somewhat variable in its action. In a few of the cases after taking antipyrin a troublesome skin eruption showed itself, accompanied by elevation of temperature. In these cases quinine proved most useful, and did not appear to manifest any hurtful action, such as Daremberg states is sometimes the case. Daremberg's plan of administering antipyrin I have, however, followed with advantage: Fifteen grains when the temperature is rising, but before it has reached 99·7°; then fifteen grains every hour if it rises more than 0·5°, or even for a less rise than this should the patient be asleep. Cold baths proved of great service in two cases; but in another case in which the temperature rose to 105·8° it was rapidly reduced by the application of flannel cloths wrung out of iced water to the chest and frequently changed, any tendency to collapse in either method being carefully watched for and overcome by stimulants. 6. In the case of a phthisical girl of healthy parents but of hysterical tendency, whose right apex was dull down to the lower margin of the second rib, and where the emaciation and loss of strength were very rapid, and there was great disinclination for food, after several methods of treatment had failed, I tried, with marked success, the following plan of excessive feeding. The stomach was well washed out, and then, by means of the stomach tube, 2 oz. of powdered beef with 18 oz. of sweet milk and three raw eggs were introduced into it morning and evening. After three days

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the powdered flesh in each meal was increased by ½ oz., until 4 oz. were reached. Some brandy was also given with each meal. This treatment was continued with the best results for fifteen days, when suddenly great irritability of the stomach with persistent vomiting set in. Rectal feeding was then had recourse to for a few days. The bowel was washed out as high as possible, and twice daily the following mixture was injected:—Finely divided beef, 5 oz.; finely divided fresh pancreas, 2 oz.; and lukewarm water, 4 oz.; a little carbonate of soda being added. The patient had in addition a quart of milk daily, both with the gastric as well as with the rectal feeding. Well-marked increase in weight occurred under both methods of nutrition. Accordingly, the latter method was had resort to occasionally, but sometimes 3½ oz. of flesh peptones were injected instead of the beef, varied occasionally with 4 oz. of pea-meal that had been artificially digested in water, to which glycerine extract of pancreas had been added, together with a little salicylic acid. Under this purely dietetic treatment, which extended over four months, and was combined with the use of hypophosphites, cod-liver oil, and maltine, this young lady increased greatly in weight, the bacilli disappeared entirely from her sputum, all hæmoptysis ceased, and when I saw her a year and a half subsequently, shortly after she had returned from a long sea voyage, she appeared to be in perfect health, all dulness at the right apex having disappeared, and the respiration become normal. This case is, I think, interesting, as the treatment was almost purely dietetic. Hypophosphites undoubtedly tend to raise the nerve power and to improve the character of the secretions, and accordingly are most valuable tonics in phthisis. I have noticed under their administration an increased expansion of the chest, an improvement in the appetite, and a diminution in the night sweats. Combined with the malt extracts, cod-liver oil, Valentin's extract of beef, and Kemmerich's peptones of beef, they are often of great value. In early cases, also, arsenic may likewise be given with advantage. 7. In some cases in which diarrhœa was very troublesome, good results followed the use of small raw meat balls, alternately with meat peptones and Valentin's extract of meat, opium and bismuth being given at the same time. 8. In three cases I have tried Potain's treatment—that is: sodic chloride, 10; sodic bromide, 5; potassic iodide, 1; water, 100, 2 oz. every morning in a cup of milk. In two cases of caseous phthisis it was of no service, but a case of fibroid phthisis appeared to benefit greatly under its administration. 9. In affections of the throat in connexion with phthisis, I have repeatedly seen great improvement follow the injection into the larynx of 10 to 20 per cent. solutions of menthol in olive oil. In one case, however, it failed completely; but in another, a man aged twenty-four, in whom there were tubercular ulcers in the larynx posteriorly, with tubercle bacilli in the sputum, and some slight alteration in the normal physical signs at the left apex, the ulcers completely healed under the influence of the menthol injections, menthol also being given internally. Having lost sight of this patient, I, however, can say nothing as to how he has progressed.

Albert Mansions, S.W.

THE VALUE OF DIMINISHED ELECTRICAL RESISTANCE OF THE HUMAN BODY AS A SYMPTOM IN GRAVES' DISEASE.

BY H. W. D. CARDEW, M.R.C.S. ENG.

IT is, perhaps, advisable to recall a few well-known physical and physiological facts bearing on this subject before proceeding to discuss it. Regarded from an electrical point of view all bodies are classified as conductors or non-conductors. Bodies which allow the free passage of electricity through their substance are called conductors, the term bodies being used in a general sense. Those which do not allow the free passage of electricity through their substance are called non-conductors, it being an accepted fact that every substance permits of some movement of electricity in itself. Electrical resistance is the reciprocal of electrical conductivity—thus: if X has a resistance of 1 ohm and Y a resistance of 10 ohms, we may say that the resistance of Y is ten times that of X; or, that the conductivity of Y is one-tenth that of X. It is customary, however, and more convenient, to speak of the resistance of substances when wishing to compare that property in definite terms of measurement. The unit of resistance is called an ohm, and is arbitrarily taken to be that offered by a column of mercury at 0° C., 106 centimetres in length, with a section of 1 square millimetre. In order to create a readily comparable standard of resistances for various substances, a definite quantity (one cubic centimetre) is taken of each substance at a definite temperature, and its resistance measured from face to face. Such resistance is known as the specific resistance of each substance, and a glance at a table of such specific resistances enables us to see the relative conductivity of the various substances. The specific resistance of solid conductors is easily found, but in attempting to calculate that of a liquid we are confronted with certain difficulties. We take the same amount at the same temperature of the various liquids, but it is not easy to be so sure of its definite composition and strength if a solution, as in the case of a solid, such as a metal. Further, a fluid conducts by convection, being electrolysed by the passage of a current through it, and this electrolysis sets up a counter electro-motive force, which opposes the current, and is yet not true resistance. Many methods have been introduced for minimising these difficulties.

The following table of specific resistances will be of use, as bearing on the subject:—

Copper annealed,	1·598 microhms (one millionth of an ohm).	
Silver annealed,	1·504 ,,	
Graphite,	41800 ,,	
Sulphate of zinc solution with density,	1·2891 = 28·3 ohms.	
Sulphate of copper solution ,,	1·2051 = 29·3 ,,	
Water (pure)	9320 ,,	

Taken from Jenkin on Electricity and Magnetism. The temperature of the first two was 0° C.; of graphite, 22° C.; of solution, 10° C.; of water not stated.

This table demonstrates the fact that though a saline solution has not the high conductivity of copper and silver, it may yet be regarded as a fairly good conductor. It is a recognised fact, and one easily proved, that the human body conducts solely by virtue of the fluid contained in its tissues, the conductivity of each tissue being in direct proportion to the quantity and conducting quality of the contained fluid. This resembles the manner in which a silken thread, itself a non-conductor, after being moistened with a conducting fluid, conducts by virtue of the conducting fluid contained in its interstices. Any one tissue of the human body is, when freed from fluid, a non-conductor; but it can be converted into a conductor by soaking it in a hot saline solution, provided that it allows the fluid to occupy its minute instertices. Through the kindly courtesy and with the assistance of Professor Stewart, I examined two mummies in the Museum of the College of Surgeons, with a view to see if they acted as conductors. These mummies were prepared in 1779, and may reasonably be looked upon as human bodies free from their fluid constituents. I used an electro-motive force of 60 volts; the galvanometer used would show 0·00001 ampère. Bare ductile metal electrodes, connected with the battery and galvanometer, were placed in various portions of the mummy examined, but there was no deflection of the galvanometer. A simple calculation shows, therefore, that the resistance of each mummy must have been over 6,000,000 ohms. Other dried tissues have acted in a similar manner. We are, therefore, justified in accepting as a recognised fact that the human body conducts solely by virtue of the fluids contained in it. These different fluids are, to all intents and purposes, saline solutions containing a variable amount of different salts. They may be regarded from our point of view as fairly good conductors, remembering the conductivity of those solutions enumerated in the table of specific resistances. Regarding the human body as conducting solely by virtue of these different solutions contained in the various tissues, we should expect to find it a good and not a bad conductor. How comes it then that there is such an enormous difference between their conductivity, when contained in the various tissues of the body, and what we are led to believe by analogy would be their conductivity if examined external to and separate from the body. The difference is not due to them, but to the different conditions of the two experiments. When examined separate from the body, they would be in direct contact with the electrodes; when examined as part of the body there is placed between the electrodes and the fluid a layer of non-conducting material which

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would be a complete non-conductor were it not for minute orifices and interstices contained in it, which perforations contain a variable quantity of fluid. This non-conductor is the stratum corneum of the epidermis, consisting of cells which, as they approach the surface from the deeper portion of the skin, become dry from evaporation and horny from conversion of their protoplasm into keratin.

When we recall the statement that the human body free from fluids is a non-conductor and apply it to this tissue, we see at once why it is a bad conductor, and why it is that were it not for the minute interstices between the cells, the openings of the sweat glands, sebaceous glands, and hair follicles, containing a conducting medium naturally or artificially placed there, it would be a complete non-conductor. We may assume that it is to this layer the body owes its high resistance, this being borne out by the fact that the resistance of the body is different according as to thickness and the number of orifices in the portion of this structure covered by the electrodes. It has also been demonstrated that the resistance of a definite portion of the human body is enormously diminished by removing the epidermis. A simple way of demonstrating this theory to be correct is the manner adopted by us in the percutaneous method of applying electricity. We reduce the resistance of the stratum corneum by either sponging the skin with hot water (the resistance of fluids is diminished by heating them), or a hot saline solution, or by soaking the coverings of the electrodes in the same fluids; or better still by doing both. In either case the fluid enters the intercellular interstices and the other perforations of the stratum corneum by capillary attraction, thus forming a conducting medium between the moist structures immediately beneath it and the electrodes placed on it. The further reduction of its resistance depends on the electro-motive force of the battery and the duration of the application up to a certain point. I examined one patient, and with all conditions of both examinations the same, bare metal electrodes being used, I found the resistance 60,000 ohms before and only 3764 ohms after moistening the skin with a hot saline solution.

In applying the various physical facts to the study of the human body as a conductor, we see at once that it is not possible to assign a specific resistance to it. The conditions affecting its conductivity are so diverse that enormous variations in the resistance are found in the same body. We cannot take any definite portion of a body for a type of the whole of the body as regards its structure and composition. Since it conducts by virtue of the fluid contained in it, we meet with all the difficulties enumerated when speaking of the specific resistance of a fluid, this being further complicated by the fact that the electrodes are not placed so that their whole superficial area is in contact with a corresponding superficial area of fluid; and, further, that the sectional area and length of the column of fluid vary. But in examining the resistance of human bodies, for the sake of comparison, there are certain conditions we can control, and then our results are of some importance. Such conditions are to use electrodes, made of some ductile metal, having a definite superficial area, to apply them bare to definite portions of the bodies, to ensure as much as possible that the number of orifices in the stratum corneum beneath them are approximately the same. This is important, for we must regard these orifices as containing threads of the conducting medium, and therefore the greater the number of these threads beneath the electrodes, the less the resistance will be, since resistance diminishes with increasing sectional area and increases with the length of a conductor. The electro-motive force of the battery used should be the same in all cases. Other conditions vary with the method adopted of estimating the resistance.

The first to call attention to the fact that the bodies of those suffering from Graves' disease offered a very diminished electrical resistance was Dr. Charcot. He did not say that it was present in all, but only in the majority of such cases. He states in a lecture on this disease[1] that in it we have a symptom of great value, and likely to be of great importance in the diagnosis of atypical cases (*formes frustes*). That it is present in the majority of cases I believe to be certain. I found it present in fifteen out of twenty cases. That it is a symptom of great or even any value, I would venture, with all respect for such a distinguished observer, to deny. My attention was called to this condition when I first had the opportunity of carrying out the electrical treatment for Dr. Sansom in some cases of Graves' disease. One noticed that in the majority of these cases the electro-motive force necessary to produce at once the desired current strength was very much less, all other conditions of the application being the same, than in patients suffering from other diseases, such as facial paralysis—that is to say, the resistance offered at the commencement of the application was very much less than usual. Thus, with all conditions of the examinations the same, I found in the majority of patients suffering from Graves' disease an average resistance of about 3000 ohms, as against from 30,000 ohms and upwards, according to circumstances, related further on, in other cases. This being the case, on recalling the conditions by which the human body conducts, one naturally attributes this enormous difference to some change in the resistance of that portion of the body (the stratum corneum) which offers the greatest part of the whole resistance. This was the condition found. Most patients suffering from Graves' disease perspire more or less profusely, and as evaporation does not take place at a rate equal to that of the secretion, the stratum corneum is covered with sensible perspiration, and its intercellular interstices and the orifices piercing it are filled with this saline solution, which forms an excellent conducting medium between the internal fluid of the body and the electrodes placed on it. This deduction I found confirmed in my own cases, as pronounced diminished electrical resistance such as described occurred only in those patients in whom the perspiration was sensible. I thought, however, that, incontrovertible as this explanation of the diminished electrical resistance was to me, it would be advisable to examine a number of other cases. By the kindness of Dr. Sansom, and with the assistance of his house physician Mr. Reynolds, I examined a number of suitable cases in his wards at the London Hospital. In addition to these I examined in the out-patient department of the London Hospital, by the kind permission of Dr. Ralfe and Dr. James Anderson, a large number of out-patients. I take this opportunity of thanking these gentlemen for so kindly affording me the necessary facilities for obtaining the information I desired.

I found it practically impossible to estimate the resistance in all these cases by the Wheatstone Bridge method for obvious reasons, and therefore adopted the plan of estimating it by means of Ohm's law. This is usually written as an equation $C = \frac{E}{R}$ (C being the current strength in ampères, E the electro-motive force in volts, R the resistance in ohms); R being the quantity I wished to find out, the equation for this purpose being written $R = \frac{E}{C}$. The electro-motive force I estimated with a voltmeter, and the current strength with a galvanometer. These two factors being known, a simple calculation gave the required R. My method of procedure was as follows:—I used a 4 cell (chloride of silver, Schall) battery, having an electro-motive force of 6·4 volts and an internal resistance of 1·2 ohms; a galvanometer, which was graduated in ten-thousandths of an ampère, having a resistance of 200 ohms. A deflection signifying 0·0001 ampère, with the electro-motive force 6·4 volts, therefore showed the resistance in circuit to be 64,000 ohms. This, less the 200 ohms resistance of the galvanometer, and the 1·2 ohms resistance of the battery, would represent the resistance of the portion of the human body being examined, the equation being $R\ (64{,}000) = \frac{E\ (6{\cdot}4)}{C\ (0{\cdot}0001)}$.

In describing the cases below, when I say that the resistance was more than 64,000 ohms, I mean that with such an electro-motive force and such galvanometer put in circuit with a patient, the deflection was not equal to 0·0001 ampère, my object not having been to ascertain the exact resistance when high, but merely to establish the difference between the two extremes, high and low. I further ignore the other resistance in circuit—namely, that of the battery and galvanometer—in stating the resistance to be over 64,000 ohms. The electrodes used were of ductile metal, to allow of their adaptability to the body surface, and circular in shape, having respectively a diameter of three and one and a half inches. The large one was placed on the nape of the neck so that the centre of its lower border corresponded to the centre of the seventh cervical spinous process; the smaller one on the manubrium, so that the centre of its upper

[1] Gazette des Hôpitaux, Jan. 31st, 1885.

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border corresponded to the centre of the sternal notch. The electrodes were applied bare and dry, care being used to keep their surfaces clean and bright. The current was allowed to flow for ten seconds. Thus I venture to think that the conditions of the examinations were the same in all cases, so far as those under my control were concerned. The site of the electrodes is convenient of access, and has constant landmarks for accuracy of position. The actual examination consisted of five steps: (1) applying the electrodes; (2) switching in a voltmeter and noting the electromotive force; (3) withdrawing the voltmeter and switching the patient with galvanometer simultaneously; (4) switching the patient with galvanometer out of circuit at the expiration of ten seconds, and switching in the voltmeter again to note the electro-motive force; (5) calculating the resistance of the portion of the body examined by the equation $R = \frac{E}{C}$.

The following are notes of some of the cases examined by me:—

Healthy adult male, examined three times in the twenty-four hours; the first time, immediately after undressing at night (he wore flannel next the skin), perspiration sensible to touch and sight, R = 2438·8 ohms; the second time, ten minutes later, the subject having remained with chest and back bare to allow evaporation, previously interfered with by his clothing, to take place freely, R = 4713 ohms; the third time, the following morning, the subject slept in a cotton night-shirt, perspiration insensible, R = 32,798 ohms. This great difference would be due to diminished perspiration with increased evaporation during the night. These three examinations were made in moist warm weather. I therefore examined the subject again during dry, cold weather, and found, all conditions of the examination being the same, that the resistance at similar periods was respectively 3167·2 ohms, 8941·6 ohms, and over 64,000 ohms. This was due to diminution of perspiration and increase of evaporation being influenced by atmospheric conditions. A large number of out-patients were examined, some before being exposed for the purpose of physical examination, and some after their chests and backs had been exposed for this purpose. The resulting resistances found varied in all degrees from 3000 ohms to over 64,000 ohms, the recently stripped patients offering the lowest, and those examined some minutes later the highest resistance; whilst, on re-examining those offering low resistance immediately their chests and backs were exposed, some minutes later, the resistance had increased according to the time they had been exposed for physical examination, and in proportion to the amount of original perspiration and the rate of evaporation. These cases were all of them suffering from the various chronic disorders such as are usually met with in out-patient departments. In every case where the resistance was markedly low, the portion of skin to which the electrodes were applied was covered with perspiration sensible to the touch and sight. Of acute cases I examined in the wards of Dr. Sansom at the London Hospital, the following two will be sufficient to quote. One, a young woman suffering from subacute rheumatism, was perspiring moderately when I first examined her on the night of her admission; R found to be 2899·8 ohms; ten days later perspiration insensible, over 64,000 ohms. Another case, that of a man, was 3563·5 ohms when perspiration was sensible but moderate in amount, and 31,798·8 ohms when perspiration was insensible. In the case of a healthy male adult examined by the Bridge method, I reduced his resistance from 80,000 ohms to 1900 ohms by administering hot spirituous drink to him, then putting him in a hot room and covering him with thick clothes until he perspired excessively. In this case the electrodes were the same as regards size, position, and all other conditions as in the experiments described above. It is not necessary for me to enumerate the results of other examinations, as I venture to think that those described above are sufficient to support my contention that markedly diminished electrical resistance of a definite portion of the human body signifies merely that the portion of skin covered with the examining electrodes is moist with sensible perspiration. Such being the case, I leave it for those who read this statement to assign that condition its proper value. If the existence of sensible perspiration is regarded as a diagnostic symptom of any value, then, as it is sensible to our touch and sight, any corroboration by means of special apparatus is unnecessary. If, on the other hand, the question of perspiration being sensible or insensible depending on such a great number of circumstances, it is not to be regarded as a symptom of value. This being my opinion, such evidence for or against the presence of sensible perspiration is absolutely unnecessary.

Harley-street, W.

CASE OF MEGRIM, ACCOMPANIED WITH PARALYSIS OF THE THIRD NERVE, AT FIRST TRANSIENT, BUT SUBSEQUENTLY BECOMING PERMANENT.

BY E. N. NASON, M.B. CANTAB., M.R.C.S.

THAT megrim is sometimes accompanied by paralysis of the third nerve is well known, but that this transient and generally called functional paralysis should become permanent is extremely unusual. This, with some other points of interest in the following case, is I think sufficient reason for its publication.

George C——, aged twelve years and a half, the child of healthy parents, was brought to me last September, having suffered for the last five years from recurrent attacks of the following nature. An attack begins with a feeling of languor and general weariness. The child is at the same time extremely restless, wandering about unable to settle to anything, or to attend school. This prodromal stage often lasts from one to even three days, and is accompanied towards the end of this time by continued slight but increasing pain in the left frontal region. Then suddenly there supervenes a period of from twelve to twenty-four hours characterised by intense nausea and vomiting, associated with pallor; irregular, slow, and feeble pulse, and great prostration. The pain now rapidly increases, and soon becomes agonising. This pain is referred to the course of the supra-orbital nerve of the left side, but is also felt over the occipital protuberance, but much less severely. There is at the same time increased lacrymation and a discharge of watery mucus from the left nostril, great intolerance of light, prominence of left eyeball and increase of intra-ocular tension, wrinkling of left side of forehead, with fibrillar twitchings of the frontalis, &c. Gradually increasing paralysis of the third nerve then follows, the various branches of that nerve being affected in the following order of severity: the levator palpebræ superioris, rectus superior, and obliquus inferior are completely paralysed. The rectus inferior is almost completely paralysed, and the rectus internus is partially paralysed. The pupil remains midway between contraction and dilatation, and reacts but slightly to light or accommodation, the reactions being anomalous. To light there is a momentary, almost imperceptible, contraction, followed by a slight permanent dilatation. The pupil dilates, too, slightly when the patient looks from a distant to a near object. There is also marked double vision over the whole field visible to both eyes. During the height of the attack the child seems extremely ill. His face is pallid and the expression anxious; tongue furred; bowels confined; the urine scanty and high-coloured. There is complete anorexia. After a variable time the pain leaves him almost suddenly, the sickness abates, the appetite at once returns, and within a few hours he feels quite himself again. The paralysis however, remains for a day or so, but gradually passes off. Lately these attacks have become more frequent and more severe, and have left more and more residual paralysis, till at the present time there is almost as much paralysis between the attacks as during one. There is no optic neuritis or atrophy or other appreciable change in either fundus, but vision, especially in the left eye, is much impaired, enabling him to do little more than count fingers at three feet with that eye. There is no family history of epilepsy, megrim, or other kindred neurosis, or of syphilis in either parent. The mother gives the following history: The child was quite healthy up to four years of age, when he had scarlet fever rather badly, but this was not followed by any discharge from the ears. Since then he has suffered at frequent intervals from severe "colds in the head," and from what the mother calls "sick headache," also from occasional nocturnal incontinence of urine. She dates his present attacks from his seventh year, and says they have continued at intervals of from three to four weeks ever

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since. If he goes beyond four weeks without an attack, the next is proportionately severe. Between the attacks he appears to be in good health, and is an intelligent though rather ill-developed boy. He is also the subject of double undescended testicle.

This case is probably a variety of megrim, and certainly should be classed among the paroxysmal neuroses. The nuclei of the third and fifth nerves of the left side are probably first affected, the "storm" spreading also to the nucleus of of the vagus, as evidenced by the vomiting and irregular cardiac action. If we regard these storms as of vaso-motor origin and consisting of spasms of the arterioles supplying these nuclei, an explanation of the permanence of the paralysis suggests itself. If the nucleus of the third nerve were repeatedly deprived for some length of time of its proper nutritive supply, what was at first a mere functional derangement might ultimately become an organic change, and partial atrophy of the nervous elements might result, having for its visible effect permanent paralysis of the muscles supplied from that centre.

Nuneaton.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON LOCK HOSPITAL.

INCONTINENCE OF FÆCES, FOLLOWING PHAGEDÆNA, TREATED BY INGUINAL COLOTOMY; RELIEF; REMARKS.

(Under the care of Mr. J. ERNEST LANE.)

THE history of this patient helps to confirm the statement that "the occurrence of phagedæna is almost invariably a concomitant of the infecting sore"; for at the time when the patient suffered from the ulceration there was evidence of constitutional infection. We rarely meet with the phagedænic sore, with its rapid destruction of tissue, at the present day; and although cases similar to the one described are recorded, still such an extensive cicatricial deformity is luckily most uncommon. The unusual position of the intestine with regard to the artificial anus is of importance in view of such a procedure as that referred to by Mr. Lane.

M. B., aged twenty-eight, single, was admitted as an in-patient to the Female Lock Hospital on Feb. 4th, 1890. The history was that nine years previously she had contracted a syphilitic sore of the labium, which subsequently took on phagedænic action, the destructive ulceration spreading to the rectum and nates, destroying completely the labia and nymphæ, and spreading thence forwards to the pubes and outwards on to the thighs. She was under treatment at one of the metropolitan hospitals, and subsequently at an infirmary. The sore was followed by a severely ulcerated throat.

The condition of the patient on admission was as follows. She was a spare woman, of good family history, with an anxious expression of face; she had not menstruated for eight years. The vaginal and anal orifices had been completely destroyed by a severe ulcerative process, which had in some places become cicatrised over, while in other parts the scar tissue had broken down, leaving extensive and unhealthy ulcerated surfaces. Examination under an anæsthetic revealed the following condition: An oval opening with tough indurated edges existed in the perineum and admitted the finger into a species of cloaca, for the recto-vaginal septum had been destroyed for some distance; with the extremity of the finger it was possible to make out two circular apertures—one, the larger, leading backwards presumably towards the rectum, while the other led forwards towards the vagina; both these openings were surrounded by dense cicatricial tissue, and barely admitted the tip of the index finger. No urethral aperture could be discovered, but it was ascertained by the nurse that the urine was voided partly through the cloacal orifice, and partly through two minute fistulæ on either side of this. From the perineum ulceration had spread upwards to the groins; cicatrisation had taken place, the result being that the thighs were maintained in a slightly flexed position, while, owing to the contraction of the scar tissue between the thighs and perineum, abduction was only permitted to a very limited extent. The result of this examination was a severe rigor, and a rise of temperature to 105°; the hyperpyrexia disappeared on the following day. The most distressing feature of the case was complete incontinence of fæces, which prevented the patient from moving about or undertaking any duties. Whenever she rose from the sitting posture there was an escape of liquid fæces, in consequence of which she was shunned by her fellow-patients, and her life was one of abject misery and enforced solitude.

As she was willing to submit to any operative procedure, it was decided to have recourse to inguinal colotomy, and accordingly on March 14th, assisted by Mr. Cotes, that operation was performed in the usual manner, and with the strictest antiseptic precautions. To lessen the tendency to prolapse of the mucous membrane through the artificial opening, the sigmoid flexure was drawn downwards as far as possible, and with a view to creating an efficient spur the bowel was drawn forwards so that quite two-thirds of its circumference were placed in front of the sutures attaching it to the abdominal wall. On March 20th, the patient having felt no inconvenience from the operation, and the temperature not having once risen above the normal, the bowel was opened and some flatus escaped; three days afterwards there was a copious evacuation of the bowel, and within three weeks from the time of the operation the patient had recovered from its effects.

The condition of the patient in August, five months after the operation, was as follows:—Her general appearance had greatly improved, and she was in the best of spirits. She was wearing an abdominal belt with a plug projecting into the artificial anus; the bowels were opened regularly once a day; there was scarcely any prolapse of the mucous membrane, and no passage of fæces by the aperture in the perineum. On a close examination it was found that the fæces escaped from the lower extremity of the artificial anus, and on passing the finger downwards into the lower of the two portions of bowel attached to the abdominal wall, this was found to contain moist fæces, while the mucous membrane of the upper segment was dry and its cavity was empty. The significance of this unusual circumstance is explained below. Since the patient was discharged from the hospital she has been menstruating regularly through the cloacal opening in the perineum, though before the operation the menses had been absent for eight years. The cicatrix in the perineum was contracting, and the aperture into the cloaca was smaller.

Remarks by Mr. LANE.—Hitherto inguinal colotomy has seldom been performed except for the relief of those suffering from stricture of the rectum, such stricture being in the majority of cases malignant in nature. Mr. Harrison Cripps records a case in which the operation was done for the relief of a recto-vesical fistula;[1] in my case, as in Mr. Cripps', the operation was one of expediency. The condition of the patient was a very distressing one, still it was not one which would endanger or shorten life, and the only object of the operation was to enable her to resume her household avocation, by ridding her of the intolerable annoyance to which she was subjected by the constant escape of fæces. It was with a feeling of considerable responsibility that I undertook an operation which can hardly be said to be devoid of danger, and it is a matter of congratulation to me that the proceeding has been fully justified by the result. It was not till a considerable time had elapsed after the operation that it was discovered the fæces escaped from the lower part of the artifical anus, and not, as one would naturally expect, from the upper end of that opening. The reason of this condition of things I presume to be as follows:—At the time of the operation the sigmoid flexure, owing probably to the existence of a long and loosely attached meso-colon, was twisted upon itself somewhat as in a volvulus. If this condition exists it must be difficult, or even impossible, to discover it at the time of operation, and it will only be ascertained by close examination of the artificial anus; after a time the distal end of the bowel becomes dry and empty, the proximal end being naturally moist and containing fæces. This occurrence is of course well known to surgeons who have had much experience in abdominal surgery, but hardly sufficient stress has been placed upon it in the published accounts of the operation; it has been mentioned in discussions at the societies, but has

[1] THE LANCET, Sept. 29th, 1888.

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not, I believe, obtained any prominence in print. It does not in any way militate against the success of the operation; on the other hand, there can be no passage of fæces into the distal end of the bowel, as such passage would be against the laws of gravity. At the same time this complication must be borne in mind should the surgeon adopt the operation recommended by Mr. Jessett; here the bowel is divided, its upper end is attached to the abdominal wall, while the lower is invaginated, stitched up, and returned into the abdominal cavity. For this procedure it is essential that the operator should recognise which is the upper and which the lower end of the portion of bowel exposed; any misconception on this point would be attended by disastrous results, and the possibility of making such a mistake is a feature upon which I would lay special emphasis.

SALFORD ROYAL HOSPITAL.

A CASE OF COMPOUND DEPRESSED FRACTURE OF THE RIGHT PARIETAL BONE OVER THE MOTOR AREA TREPHINED, AND BONE REPLACED.

(Under the care of Mr. ANDREW BOUTFLOWER.)

THE indications for operative treatment in this case were very clearly marked, there being a compound fracture of the skull, with symptoms of injury to the motor region. The success of the operation adds further proof (if that were needed) of the value of the method of treatment employed in the present day. A recognition of the fact that it is possible in some cases to replace the bone removed by the trephine at once, and so secure complete restoration of the vault of the skull, has only obtained during recent years. Dr. Hopkins has found that when sterilised dead bone is placed in contact with living bone, under favourable circumstances it undergoes absorption; when placed in contact with periosteum it undergoes organisation. These processes are not associated with inflammatory action. For the following account of this case we are indebted to Mr. W. P. Stocks, house surgeon.

The patient, a healthy looking lad of fourteen, on the evening of Aug. 8th, 1890, jumped from a train in motion, alighting on his head upon the platform. With the assistance of a porter he walked to the hospital, a distance of about half a mile. When in the accident room he appeared muddled, but perfectly conscious, and was able to give an account of himself. There was a contused wound, two inches in length, running horizontally forwards, between two and three inches above the right ear, and a finger introduced into the wound detected a depressed fracture. On being put to bed he exhibited symptoms of cerebral irritation; he speedily was seized with an epileptiform convulsion, with the following sequence of events. Both pupils, previously normal, became suddenly dilated; clonic spasm of the left orbicularis palpebrarum, accompanied by twitchings of the mouth and cheek supervened, next the left arm, then the knee, and lastly the left side of the trunk were affected with similar spasms. The entire fit lasted some three minutes, and the spasms died away in the reverse order of their appearance. There were no spasms of the right side; a comatose condition remained. An hour and a half after the accident Mr. Boutflower trephined. On enlarging the wound the fracture was found to run forwards and then upwards, linear anteriorly, somewhat comminuted behind, and the upper fragment was depressed beneath the lower. The disc of bone removed was placed in warm carbolic lotion. The dura mater was intact. When elevation was complete the bone disc was replaced entire, and the pericranium drawn over it and stitched with fine catgut. The wound was sutured with silk and a small drainage-tube introduced posteriorly. A dry dressing of corrosive sublimate gauze and sal-alembroth wool was applied. The carbolic spray was used throughout. On recovery from the chloroform the lad was quite conscious and free from pain. His restoration to health was uninterrupted. The temperature never rose beyond 99·6°. The wound was dressed on the third day, owing to a slight hæmorrhage; on the seventh day the sutures and drainage-tube were removed, and a few days later the wound was quite healed. On Oct. 6th he presented himself at the out-patient room, feeling perfectly well; the disc of bone was firm and apparently united, the seat of injury only presenting a small cicatrix; the bony structure was perfectly even, showing no signs of ever having been disturbed.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Rachilysis.

AN ordinary meeting of this Society was held on Feb. 24th, the President, Mr. Timothy Holmes, in the chair.

Mr. BARWELL read a paper on Rachilysis, its Object and Method. He stated that the first commencement of lateral curvature was merely a faulty position, produced either by unequal length of the lower limbs, by bad habits in sitting while writing &c., by muscular debility and excessively rapid growth, or by other like causes. If this position were maintained for a certain period with considerable persistency, both muscles and ligaments underwent certain changes; he laid more particular stress on the latter, showing that the intervertebral discs became wedge-shaped, the thinner end lying in the concavity of the curve. But the changes undergone by the anterior common ligament were even more important. In 1881 he observed, at a post-mortem examination, made under restrictions and very great difficulties, that this structure had a very tight, sharp edge, which lay quite in the concavity of the curve, the whole structure having become apparently moved in that direction. Since that date Nicoladoni had shown, and his observations have been amply confirmed, that in lateral curvature this ligature shifted its place towards the concavity. Mr. Barwell accounted for this phenomenon by the fact that most fibres of this ligament passed from one vertebra over several others to be inserted into a more distant one, the more superficial over five or six bones, the deeper over a less number. Therefore, when the column assumed a sideways curve these fibres must tend to be straighter than the deviated spine; subsequently as they thickened and contracted they bound the bones into their abnormal position, acting as did the string which kept a tense bow bent. Considering that this condition could hardly be overcome by mere gradual pressure, or by what was erroneously termed support, Mr. Barwell devised some years ago a potent means of straightening the curves—in other words, of stretching the contractured ligaments. This, which he therefore named "rachilysis," he demonstrated to the Society. In describing it he supposed an S-shaped curvature, dorsal to the right, lumbar to the left. To two walls or beams facing each other certain hooks were fixed. Between these, on an ordinary chair, the patient was seated in a three-quarter side-back position. A properly padded loop-like belt was placed on the side of the loin opposite the most pronounced part of the curve and fixed by a hook on the right. A similar appliance was placed, loosely for the present, on the dorsal prominence. A loop with a lanyard attached was passed under the left axilla, the body was inclined to that side so as to unfold somewhat the lumbar curve, and the cord of the lanyard was secured immovably, acting as counter-extension on the patient's right. Now the dorsal belt was hitched on to the hook of a system of dislocation pulleys, an eighteen-inch board or strut was placed between the laps of each belt, preventing compression of the abdominal organs or of the ribs, and traction was made. This, though considerable, produced no pain, and after two or three times not even discomfort. Measures were taken on two lads markedly curved, which showed that by this force the column was lengthened in one case one inch, in the other one and three-quarter inches, an effect which could only be due to rectification of the morbid bends. In practice Mr. Barwell applied this method with a frequency commensurate to the severity of the case and the age of the patient. The amount of traction used by the hand varied according to the same condition, from 8 lb. to 16 lb.—i.e., the force exercised by the belt is from 40 lb. to 80 lb., *minus* unavoidable friction. Immediately after its use he applied that one of his bandages most adapted to the sort of curve. An appendix to the paper consisted of histories of cases which justified the following conclusions:—That in young persons even badly deformed spines were curable with patience and sufficient perseverance within a moderate period. That older patients, even considerably deformed, might be greatly benefited—i.e., the form improved, and persistent aching of the back cured. That deformation of the bones—certainly of the ribs, therefore presumably of the vertebræ—might be to a considerable extent rectified.

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Mr. GOLDING-BIRD found that the subject was one very difficult to discuss, and probably the best way in which to approach it was to endeavour to measure the treatment proposed by ordinary surgical standards. Under the head of "causation" he found that the author had placed unequal length of leg side by side with other more important etiological factors. He had carefully watched cases of spinal curvature develop in which this condition was present, but it was remarkable how many years elapsed before any deformity was produced, and even then it could be cured by a high boot. So far as he had seen of these cases there was something more than mere stretching necessary in order to render a cure complete. There was a limpness and want of stability about the muscular system, the patients being usually either flabby and indolent girls, or thin and wiry ones who were neurotic and quickly exhausted. It was essentially the lack of muscular power which caused the disorder or tended to its permanence, and treatment must be directed to a restoration of the muscular tone. As to faulty position, the posture of standing at ease was a good one physiologically; it was, in fact, a physiological luxury, but if it were carried too far it would bring about disease. The pain in the back which was complained of was really an augmentation of muscular sense. He disputed the office which the author would give to the anterior common ligament when he compared it to the string of a bow; if this ligament were really the cause of the curve, how came it about that one could completely straighten the curve at one sitting by merely pressing on the curves or suspending the spine? for the ligament was quite inelastic, and must rupture if it were taut in the concavity of the curve. Any treatment to be successful in permanently strengthening these spinal cases should relieve the spine of the weight of the head and shoulders, should periodically straighten the curves, should strengthen the muscles, and the treatment as much as possible should be placed in the patient's own hands. In all chronic diseases this latter was an important practical point, for it was very difficult to persuade the patient or the public of the necessity of very frequent visits to the doctor in these cases. He considered that the old support treatment received its death-blow from Sayre when he demonstrated his extension method, but Mr. Barwell's apparatus appeared to act very much on the old principle. Sayre thought that by means of his jacket giving the patient a hard exterior crustacean-like shell he would be able to keep the spine straight after extension; but in practice it was found that an accurate fit could not as a rule be obtained, and the patient telescoped again as before. He knew as yet of no means by which the elongation of the spine could be maintained, but it was certain that girls improved very much when constantly told by their friends to sit up. He believed in recumbency, which kept the spine straight and took off the weight of the head and shoulders. The passive straightening of the spine which had been recommended he believed was ineffectual because it did not do all that was required; whereas the well-known active method of Sayre not only had all the advantages of the passive method, but also caused the patient to use her muscles. The ordinary suspensions from a trapeze in bad cases he had seen relieve the pain, the oppressed breathing, and the irritable heart, though they did not cure the curvature. Finally, he thought that the machinery to be used was somewhat formidable and might frighten the patient.

Mr. WARRINGTON HAWARD, while thanking the author for his paper, was unable to agree with the pathology and treatment he had put forth. He held that the faulty position was produced by the muscles themselves. The ligaments were passive, and it was the muscles which held the spine upright; if these contracted unequally on the two sides, then a curvature was produced. It was remarkable that if a lateral curvature were produced by putting a block under one foot a slight degree of rotation only was produced, and not nearly so much as would be present in a curve of corresponding extent from disease. The ligaments did not prevent or limit this rotation, for they were relaxed and weak, and allowed the muscles to pull the spine into a false position. The frequent accompaniments of flat-foot and knock-knee bore out this idea of ligamentous weakness. Though the spine could be pulled straight in this way it was a question how long it would remain so; when the pressure was taken off the spine went back, and it appeared to him that this would always happen. The rational treatment appeared to be exercising the weak muscles and alternating that with reasonable rest.

Dr. LITTLE referred to the case of a girl with threatening phthisis who was wearing a heavy apparatus for lateral curvature. On removing this and applying massage to the muscles of the back great improvement had taken place, both in the curvature and in the chest trouble.

Mr. NOBLE SMITH, referring to the subject of causation, said that it was common to hear of all weakness spoken of as muscular weakness, but he had thought that there was often a general weakness of the body, the bones being unnaturally soft and the ligaments unnaturally lax. The treatment, therefore, should not be confined to exercise of the muscles alone, and he found himself unable to accept any one method of treatment for all cases. Mechanical means in some cases were useful, and it was absurd to abuse mechanical apparatus on the one hand, and yet on the other to advocate the use of poroplastic felt jackets, which were one of the most barbarous measures of treatment ever proposed. He was a strong advocate of muscular exercise, especially massage and an occasional resort to recumbency on a prone couch, this position being a much better one in which to exercise the muscles of the back than the supine one. He thought certainly that the treatment advocated by the author ought not to be ignored simply because it required attention from the surgeon; if so, on that ground cancer and many other chronic diseases would be debarred advice.

Mr. BARWELL, in reply, said that he had not stated that the ligamentous condition described was the cause of the lateral curve, but rather that it was the result, and he supposed that when once the curve existed the ligament might aid in increasing it. Many writers had found that in lateral curvature beyond the first degree—that was, the stage of mere malposture—the ligament shifted itself towards the concavity of the spine. It was one of the results of a commencing curve, and it aided in keeping it up. He called a case a severe one in which a rotation existed of twenty degrees; he had seen a case where the rotation was twenty-five degrees, and under rachilysis for three months it was now only five degrees. As the paper was not upon the treatment of lateral curvature, but upon rachilysis alone, he had not referred to the other measures of treatment he was in the habit of adopting, such as the lateral sling and the prone position for short periods. The weight of the head and shoulders certainly did not produce the curve, and he knew of no support which would lift the head, and the best of them only partially bore the weight of the shoulders. Suspension had not in his hands straightened the spine in the way Sayre said it would. He admitted that the spine in some cases could be straightened by the hands, but it was only possible in the very commencement of the affection. Constantly carrying a weight in one hand and a faulty position in writing were great causative factors in producing lateral curves. Though a lumbar curve could be corrected by putting a piece of wood under the affected side, yet if a compensatory dorsal curve were present this could not be straightened by this means. He failed to see in what way muscular action could produce rotation of the spine.

MEDICAL SOCIETY OF LONDON.

Adjourned Discussion on Angina Pectoris.

AN ordinary meeting of this Society was held on Feb. 23rd, the President, Mr. Knowsley Thornton, in the chair.

Sir WALTER FOSTER of Birmingham reopened the discussion on Angina Pectoris. He agreed with Dr. Powell that a broad basis should be taken for consideration of this subject, for under this title could be grouped a series of conditions from trivial remediable disorder to severe attacks of terrible heart pangs, ending in sudden death, and, if they were considered as a whole, some ideas might be built up as to their pathology and treatment. He first desired to refer briefly to four cases. The first was that of a doctor aged sixty-four, who complained of angina pectoris, which came on in the course of the night. The symptoms were described as those of intense pain, which developed in the region of the nipples and radiated down the left arm, and he was seized with terror and a sense of impending dissolution. Under sinapisms and free stimulation he was relieved. It was in this patient the beginning of a gouty condition, and attacks were afterwards induced by walking up hill. The patient died of a dilated heart eight years afterwards. He saw another case in the year 1863, when he was in charge of a friend's practice in the south.

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of London. It was that of a young man who was a good runner, and who one evening ran the length of the street for a wager. When near the end of the street he uttered a sudden cry and died in a few minutes. A careful necropsy revealed the left cavities empty, the right ventricle almost so, while the right auricle was enormously distended. In his death agony he complained of intense cutting pain in the chest. In another case a prematurely old man aged about fifty-six complained of intense pain across the chest; the pulse was slow, not more than 50 to the minute, and was of high tension. During the attacks the pulse fell to 36 and became intermittent; there was pain between the nipples, down one or both arms, together with much anxiety, general clammy sweats, and pallor of the face. Against advice he married a young wife, and though he survived very well the earlier weeks of matrimony, he died eleven months later, and at the necropsy no valve lesion was found, and there was no aortic atheroma. In another case, which occurred in a medical man, he graphically described the attack. The pulse fell to 20 at the wrist, though the heart was beating more frequently, and it was small, irregular, and hard; the face was pale, there was no pain in the chest, but he felt that he was dying. Sinapisms were applied to the chest and hot bottles to the feet, while strophanthus, with ether and ammonia, were given internally. Under this treatment he recovered; he put it down to a neurotic attack induced by influenza, and influencing the pneumogastric nerve. Later he had a second attack, slighter in degree, but he died in the midst of a third, which came on at night, and was associated with well-marked heart pang. No necropsy was made, but there was no indication during life of organic disease of the heart or arteries. These cases illustrated certain features of the affection, and he wanted to compare them with other cases—cases in which there was agonising pain accompanied by grave organic disease. In one man, who committed suicide on account of the anguish, there was double aortic valve mischief, with an aneurysm springing from one of the sinuses of Valsalva, and pressing on the root of the aorta and on the cardiac nerves. In the cases of valve disease which suffered the most pain there was considerable dilatation of the left ventricle of the heart, with, later, degeneration of the cardiac muscle. As this dilatation was usually associated with aortic disease, it confirmed Dr. Walshe's remark that the cases of disease of the basal valves were those associated with angina. He had once witnessed a case of rapidly developing insufficiency of the aortic valves produced by a sudden strain. The patient had severe chest pang, and was collapsed and insensible. He was bled from the arm and rallied, and was then found to have aortic regurgitation, although he was known before the strain to have sound valves. For days he complained of stretching pain under the sternum, due to dilatation of the ventricle. The same kind of stretching pain was met with when further dilatation was in progress in an already diseased heart, as when the hypertrophied muscle underwent degeneration late in Bright's disease; and such cases were relieved by the establishment of mitral regurgitation. In all these cases he had related he believed the immediate cause of the heart-pang to be distension of the cavities of the heart, either right or left. In the case of the patient who got his attacks when walking up hill, the right was involved, while in the gouty patient, in whom the attack came on at night, it was the left ventricle which could not overcome an increased vascular pressure, brought about, perhaps, by the circulation in the blood of some excess of uric acid. He held that stretching and not spasm was meant by the "distensio" of Heberden. He thought that in all or nearly all the cases there was a degeneration of the myocardium, with distension of the cardiac cavities. This view was counter to that of neurosis, but he knew of no direct evidence to support the idea of spasm of the coronary arteries. In Sir Richard Quain's revised article on Angina he referred to Dr. McWilliams's recent researches as to the nature of "delirium cordis" in animals in which there was a quick irregular cardiac action, with fall of blood pressure due to a distended ventricle remaining in a state of diastole and excited by trivial causes, such as distension of the gut. He preferred to regard angina, not as a disease, but as a mode of death and a term under which might be grouped a number of allied conditions having a common pathological basis. In the treatment a scientific step had been made when drugs like nitrite of amyl and nitroglycerine were introduced, which counteracted the vascular condition which was the starting-point of the malady. If the pain were prolonged, morphia subcutaneously was indicated, while in the intervals no drug was more valuable than arsenic, with ether, iron, bromides, or alone. Iodide of potassium, in doses of five, ten, or fifteen grains three times a day, had wonderful power of lessening the pain and improving the patient's condition. The female sex were not troubled with angina because they were less exposed to strain of the heart than men.

Professor GRAINGER STEWART of Edinburgh found that his line of thought diverged considerably from that of the previous speaker, and he referred to the interesting comparisons that had been made between glycosuria and asthma and the affection under discussion. Cases of angina grouped themselves into four categories: 1. Simple neuralgia of the heart, seen in women at the climacteric, and in men of gouty constitution, in which pain was referred to the heart itself, and was very amenable to treatment. 2. A condition of angina dependent upon and associated with acute or subacute inflammation of the aorta. He had more than once seen a patient describe a curve on his chest like that of the aorta to indicate the site of his pain, and he described a case in which pain was referred to the lower part of the thoracic aorta which recurred in paroxysms and travelled gradually higher up. Later a marked double aortic murmur developed, and death occurred. There was no post-mortem, but aneurysm, pleurisy, and new growth had been excluded, and he considered that the case had been one in which an aortitis had commenced low down and had spread upwards, damaging the valves and producing dilatation of the heart. Though this latter had only developed at the last, pain had been present from the first, and had been of true anginous character. 3. A common group of cases in which angina pectoris was associated with fatty, fibrous, or other degeneration of the cardiac walls, or with changes in the coronary arteries. 4. Angina pectoris associated with spasm of the arteries and increased tension. There was very little change in the heart, but it was overmastered by the arterial spasm without the coronaries or substance of the heart being necessarily involved. As to the determining causes of anginal attacks, many of them would apply to all four groups. They were exertion, emotional excitement, such as anger or grief, dyspepsia, constipation, the various toxines absorbed into the system from the intestines, or from failure of the kidneys or other eliminants, and certain changes in the nervous system, such as, for instance, occurred when sleep was setting in; each or all might suffice to bring on an attack. But in any of the last three pathological groups the same lesions might exist without pain; so that one had to ask one's self what was the explanation of the pain when it occurred. Was it of muscular or of nervous origin? Sir Walter Foster had said that it was a muscular pain, but he did not know what spasm of the heart muscle meant; he doubted very much if it were like cramp, though a vague idea to that effect still floated in the minds of some. What seemed against this was that the heart and pulse might remain steady all through an attack, and if aortitis could of itself be a cause of angina, that vessel did not contain enough muscle to produce a painful cramp. He therefore looked upon it as a pain of nervous rather than of muscular origin. Inquiring whether any purely nervous diseases resembled angina, he pointed out that epileptiform neuralgia was wonderfully like it, coming on in sudden paroxysms, and often ceasing as suddenly, leaving the patient well, but subject to a new attack, being more common in men, and at or after the middle period of life. Certain slight peripheral influences would provoke intense pain, which was relieved by cutting or stretching the affected nerve. So also in angina, explosions of pain occurred from time to time in connexion with irritation in the aorta or heart, the cardiac nerves being capable of afferent as well as efferent function. In short, he suggested the essence of the process to be a change of organic or functional nature in the nerves or nerve-endings which controlled the heart, and he added that distension of the heart did not necessarily produce pain. For treatment, he agreed that the general health should be improved, excitement and effort being avoided, and nitrite of amyl administered to relieve spasm. The latter drug he believed had also a direct effect on nervous structures, for it relieved other neuralgiæ. Arsenic and iodide of potassium were invaluable, and occasionally direct cardiac tonics, such as digitalis and strophanthus, might be given with benefit.

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Professor MACVAIL of Glasgow agreed that the basis of the whole subject should be broadened, so that any condition of pain about the heart should be alluded to as angina. As regarded the pain, it might be general or partial. He had seen two cases in which it was likened to a knife plunged into the apex of the heart; in another it was as if needles had been driven in; in another as if crushed or grasped; and in yet another as if greatly dilated, the patient actually feeling to ascertain if his chest was not bulged out. In some the pain was radiating, in others it was distinctly local. The question of radiation depended on two circumstances: on the amount of the pain and on the ability of the nerves to conduct. People differed from one another, and the same people differed at different times with regard to their power of conductivity. In one of the cases above mentioned, in which the pain was knife-like, there was no radiation; but in the second case of knife-like pain it passed from the cardiac apex to the left shoulder. In the case in which the pain was like needles it passed from the apex of the heart to the scapular angle, thence to the top of the left shoulder and down to the bend of the arm. In the case in which the heart felt to be dilating the patient either became faint or was confused mentally; this might be due either to an insufficient blood-supply to the brain, or it might be really an instance of radiation, and thus resemble some of the mild forms of epilepsy. Not only did pain radiate from the cardiac seat, but before the attack began a sensation might also travel towards the cardiac area. It was a kind of aura. In one case, that with the crushing sensation, the patient described a sensation as of burning or of boiling water poured on a small area of skin near the umbilicus; thence it travelled towards the heart, and then the attack of angina commenced. In the case where the pain was like needles it commenced at the inner end of the left seventh interspace; thence it travelled to the apex of the heart, which took five minutes; from there the pain went to an inch below the scapular angle, taking ten minutes, and it was now no longer like needles, but like a knife; thence to the left shoulder in five minutes, and finally to the bend of the arm in two minutes. The connexion between angina and epilepsy was worth more attention than had been paid to it, and in every case an antecedent sensory condition should be inquired for. He had found the organic conditions present to vary much; in one of the cases of knife-like pain there was a double mitral murmur, while in the other there was mitral regurgitation alone. In the instance where the sensation was of a crushing character there was a double mitral murmur; in that in which a sense of dilatation was complained of the condition was one of double aortic trouble. In the case where the pain was like needles no organic abnormality could be made out. What was the actual condition of the heart when the pain was present? Sir Walter Foster and Professor Stewart had contended that it was not cramp. Was it possible to separate cramp from a neurotic condition? Though it might be done in laboratory work, it was quite impossible to separate them in practice. He himself was quite unable to separate the nerve condition from the muscular condition of the heart as regarded pain. An ordinary muscular contraction was a pleasurable sensation, as in exercise; but if the contraction were much increased in intensity, as under strong faradaism, it then became painful and was a condition of cramp. The muscular condition in the living body was always one of tonus; there was no such thing as complete relaxation during life. It had long been taught that the cardiac contraction was not one of physiological tetanus, but this idea had been proved beyond all dispute to be false. If over-contraction were present, it was simply a question of degree whether pain would be present or not. Dr. Walshe had objected to angina being due to spasm, because he held that if it were due to spasm the heart would necessarily remain continuously contracted during the spasm. But this by no means followed, for if the upper extremities were thrown into a condition of tetanus by means of the faradaic current, it would be still found possible to move the hands, unless, indeed, the current were extremely strong; so in moderate cases of angina the tetanic spasm was not strong enough to interfere with the impulse. Dr. Walshe likewise stated that as in diastole the ventricle was flaccid, the angina, if due to spasm, should be intermittent. But there was no evidence to show that the ventricular wall ever became flaccid even in diastole. The presence of a murmur in aortic regurgitation was fatal to the idea of the ventricle ever giving up its grip of the blood. The idea of this murmur being caused by valve vibration was of course absurd, and Balfour had shown that it was caused by a thin stream of regurgitant blood forcing its way back into a mass of blood remaining in the ventricle under considerable tension. If the ventricle were thus never quite flaccid even in diastole, it removed the great objection to the theory of spasm. He thus upheld the old idea of Heberden, as supported by Latham, that the condition of angina was immediately dependent upon spasm of the heart. The excessive irritability of nerve and muscle caused by overwork induced instability of the nerve centres, and if the explosions from the unstable centres became sufficiently frequent, then a condition of cramp would result. He asked, in conclusion, that each individual case should be examined in reference to the order in which the parts were attacked by pain and the directions into which it radiated.

On the motion of Dr. SAYMOUR TAYLOR, seconded by Dr. LITTLE, the debate was adjourned to a future meeting, due notice of the date to be given by the secretaries.

MIDLAND MEDICAL SOCIETY.

AN ordinary meeting was held on Jan. 14th, Mr. A. Messiter, President, in the chair.

Subconjunctival Dislocation of the Lens.—Mr. WOOD-WHITE showed a man who some weeks before had received a violent blow from a fish on his only eye, resulting in almost complete blindness. The iris was torn from its ciliary border for about one-third of its circumference; the vitreous was so opaque that no details of the fundus could be seen, and the lens was lying between the conjunctiva and the sclerotic near the upper and outer corneal margin.

Lupus of Palate and Larynx.—Mr. BARLING showed a patient aged twenty-five with lupus of these parts without the skin being affected. The disease commenced in the pharynx five years ago, and then extended upwards and downwards. The condition at present is as follows:—In the oro-pharynx and in the soft palate complete cicatrisation; on the hard palate ulceration involving the mucous membrane of the anterior third, the ulceration (having no tendency to perforate its area) having extended but little during the last two years, and its base being covered with coarse granulations; the upper gums of the incisors and canines are red, swollen, papillary, and in places slightly ulcerated. The epiglottis is extensively destroyed, the upper margin presenting an irregularly excavated condition with some thickening, whilst the colour is for the most part a curious glistening white; over the inter-arytenoid fold is an ill-defined, somewhat warty thickening, but no ulceration can be seen. The patient is married and has a healthy child. There is no evidence of acquired or of congenital syphilis, and the administration of mercury and iodide of potassium has had no effect on the lupus. Locally lactic acid has been applied up to a strength of 75 per cent., but without effecting improvement, so it is proposed to try the effect of injecting Koch's fluid. Mr. Barling pointed out the advisability of being prepared to intubate such a case instead of doing tracheotomy should injection produce much stenosis of the larynx.

Fibroids.—Dr. MALINS showed (1) a Fibroid Tumour of the Broad Ligament weighing 9½ oz., with microscopic sections made by Dr. Ratcliff establishing its structure. The patient was a widow aged forty, multipara. The tumour was enucleated by abdominal section, the edges of the capsule being sewn to the wound. She recovered without an untoward symptom. (2) A Fibroid Tumour weighing two pounds and a half, enucleated per vaginam from a woman aged fifty-one, presenting in the anterior part of the uterus into the vagina. The tumour was delivered by midwifery forceps from the vagina, the perineum torn and stitched up again. The patient did remarkably well.

A Series of Calculi removed from one Patient.—Mr. THOMAS showed a number of calculi which he had removed from the same patient by four operations. The first was in January, 1887, when a phosphatic stone, weighing 604 grains, was removed. In the following April three small calculi, weighing thirty grains, were removed by nephro-lithotomy from the right kidney; in May, 1887, a calculus, weighing 423 grains; and in December, 1890, three more, having an

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aggregate weight of 500 grains. The first was almost a pure phosphatic stone, but in the others were layers of uric acid. The supra-pubic operation was done three times, and it was interesting to observe that the condition of the bladder was not affected by the numerous operations.

Modifications in the Treatment of Club-foot.—Mr. THOMAS read a paper on the above subject. The paper was illustrated by the exhibition of a number of cases, including a tarsectomy four years and a half after operation, a case in which Syme's amputation had been performed on one foot and tarsectomy on the other for severe talipes, and other cases showing the improvement according to the mode of treatment and length of time.

Exhibition of Specimens.—At a meeting held on Feb. 4th (John W. Taylor, F.R.C.S., in the chair), Mr. HASLAM showed a small Branched Exostosis that he had removed from a woman aged thirty-four. It was growing from the upper and inner aspect of the humerus, and was causing pain by its pressure on the branches of the brachial plexus. Mr. Haslam also showed some Phosphatic Calculi that he had successfully removed by the supra-pubic operation from a man aged seventy.—Mr. JOHN W. TAYLOR, in showing a specimen of Ovarian Cyst with Twisted Pedicle, which had been diagnosed previously to operation, pointed out the main elements which go to form a rational and successful diagnosis—(1) The previous knowledge of a cystic tumour of moderate size (presumably ovarian) situated fairly high in the abdomen, and therefore possessing a long pedicle; (2) the sudden occurrence of abdominal pain and other local peritonitic symptoms, together with rapid and marked increase in the size of the tumour. When these conditions are satisfied, strangulation of the cyst with hæmorrhage into its cavity may be inferred, with every prospect of the diagnosis being correct, which leads to early and usually successful treatment. The patient made a rapid recovery.—Mr. DAVID WALSH showed a Heart which, with its great vessels, had been ruptured by indirect violence. The patient, who suffered from advanced phthisis, jumped from the top storey of the workhouse infirmary. The necropsy showed several bone fractures. The heart showed the following lesions: An irregular rent opened into the cavity of the right ventricle; the tip of the auricular appendix was torn away, and was found in the pericardium. The left ventricle showed a small non-penetrating laceration, and a ragged rent at the apex communicating freely with the cavity. The aorta was almost completely severed from its cardiac origin, and the pulmonary artery was rent longitudinally.

Dr. MALINS read a paper on Rudimentary Organs of Generation in the Female, which was illustrated by six cases.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting was held on Feb. 12th, Mr. W. Bales James, M.R.C.S., President, in the chair.

Dog-bite.—Dr. HUNT read the notes of a case which had been admitted into the Fir Vale Union Infirmary suffering from the effects of a dog-bite. The symptoms were extensive œdema of the face and head, epistaxis, delirium, and fever. Post-mortem examination revealed meningitis, and on the membranes were found a large number of tubercular-like tumours, which from their pressure had produced indentations on the inner surface of the skull. There was no pus or fluid in the ventricles. The wound where the man had been bitten was discharging pus. There was nothing of importance found in the other organs. Dr. Hunt could not say how far the condition of the brain, which was the cause of death, was attributable to the bite which had been received a month before.

Multiple Cystic Bronchocele.—Dr. SIDNEY ROBERTS showed a woman aged sixty-seven with Multiple Cystic Bronchocele of forty-seven years' duration. The swelling had been tapped twenty-seven years ago, but speedily refilled. In the last eleven years the patient had been subject to attacks of sudden dyspnœa, and had to be propped up in bed. Except for this the tumour caused no pressure symptoms whatever, and very little discomfort. The greatest circumference of the neck was twenty-four inches. The goitre measured seventeen inches across and nine inches from above downwards. The walls of the thyroid between the cysts were extremely hard and cartilaginous to the touch.

Xanthoma Multiplex.—Dr. GWYNNE showed a boy aged nine years suffering from this affection. The disease had commenced when he was about four years old, appearing first on the elbows and next over the tendo Achillis, just above its insertion, where it formed an oval mass one inch long by three-quarters of an inch broad, and raised one-third of an inch above the surface. It next appeared on the webs of the fingers and on the posterior aspect of the pinnæ of the ears. The patches on the elbows were about an inch in diameter, and had the usual nodulated appearance and wash-leather colour. There was no family history of any special diathesis. The boy had suffered from the usual complaints incident to childhood. He had never had jaundice. He was delicate, of sallow complexion, with pigmentation of the skin under the eyes.

Mr. J. JEEVES showed three Hearts, all taken from the bodies of men between fifty and sixty years of age, in which the pericardium was very thick and adherent, presenting in nearly the same situation in each case, on the posterior aspect of the heart, a calcareous plate from three to four inches in diameter.

Dr. ARTHUR HALL showed a series of Micro-photographic slides with the oxy-hydrogen lantern. They included physiological and pathological specimens which had been very kindly taken by Mr. G. T. W. Newsholme from sections by Dr. Hall. Dr. Hall stated that his chief object in showing the specimens was to endorse what had been said and done by others lately on the great teaching value of micro-photography. The photographs, which had been taken with an ordinary camera, without its lens, a Beck's microscope, and an ordinary paraffin lamp, included specimens of human retina, intestine of frog, showing the absorption of fat by the epithelium, rodent ulcer, pneumonic lung, anthrax bacilli, &c. A discussion followed, in which Dr. Burgess, Dr. Rhodes, Mr. Boynton Lee, Dr. Ruxton, Dr. Lyth, Dr. Martin, and Dr. Sinclair White took part.

Lymphangioma Cavernosum.—Mr. JAMES read the notes of a case of this disease, which he had shown to the Society previously as a doubtful tumour which he then believed to be cystic. It occurred in a boy aged five, was situated near the angle of the left scapula, was a smooth, slightly lobulated tumour, bluish in colour, not greatly involving the skin, but rather subcutaneous. It had been noticed for six months, and was painful when struck against anything, which not infrequently happened. The tumour was removed on Dec. 5th, peeling readily from its bed. To the naked eye it presented a large number of cysts, of various sizes, from a millet seed to a marble, some containing clear lymph, others venous blood. The cyst walls were well defined and very tense, the contents being jerked several feet on puncture. Microscopical examination showed a structure characteristic of this form of tumour. The surface of the epithelium was quite normal, and the dermis as far down as the level of the sudoriparous glands. Here, amongst and between the lobules of adipose tissue, were large and small irregular spaces, some containing granular shrunken lymph corpuscles. These were surrounded by very definite cyst walls, some of them showing faint indications of endothelial lining. The fibrous structures were presented in two very different conditions—those which remained were evidently hypertrophied, while others had undergone atrophy, and appeared as partially destroyed septa between lymph spaces. The etiology and histology of the disease were discussed, nothing being found to lead further back than Török's suggestion, that it was a congenital disease analogous to the earlier stages of congenital elephantiasis.

Reviews and Notices of Books.

A Contribution to the Natural History of Scarlatina. By D. ASTLEY GRESSWELL, M.A., M.D. Oxon. Oxford: Clarendon Press. 1890.

THE author of this monograph, which was presented as a dissertation for the M.D. degree, merits much commendation for the good use to which he has put his experience at the South-Western Metropolitan Fever Asylum during the epidemic of scarlatina of 1887–88. He made a series of obser-

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vations upon individual cases, which have brought to light many new facts, whilst his generalisations are based upon a very thorough and exhaustive study of the subject. The book opens with a brief historical sketch of the prevalence of scarlet fever in England, and then proceeds with a general statement concerning the cases which are so minutely analysed in the subsequent chapters. Here we find a study of the cause and symptoms of the disease in relation to season, and also in regard to the incidence of albuminuria. Indeed, no inconsiderable portion of the monograph is devoted to the important subject of renal complications, and many curious and interesting facts are recorded. For instance, it was found that of the patients admitted during the months of October and November as many as 93·1 per cent. had albuminuria; of those admitted in December and January there were 13·8 and 26·8 per cent. respectively which did not have albuminuria before getting up; whilst this condition was but slightly marked in no fewer than 31·9 per cent. and 19·5 per cent. respectively of this series. Indeed, it may be said that albuminuria was nearly twice as prevalent in the latter as in the former series. Dr. Gresswell shows that this albuminuria was mainly of renal origin, and he associates it with glomerular lesions. Leucocytes were found in the deposits, but epithelial casts only scantily. He is inclined to believe that in those cases (no small proportion) in which the albumen did not appear until after the patient "got up," the kidneys were already diseased. The incidence of albuminuria varied also with the ages of the patients and the stage of the illness. A full discussion of the nature of early and late albuminuria is given, and the question of "cyclical" albuminuria receives full attention. Some instances of this symptom arising along with recurrence of sore-throat are quoted. The general inference to be gained from the study of the facts so carefully gathered is that in albuminuria we have an index of the severity of the disease, not so much with regard to pyrexia, as to the amount of scarlatinal poison circulating in the blood.

Dr. Gresswell notes that as the hospital scarlatina increased in its prevalence, and as the mortality from scarlatina rose for the whole of London, so did most of the symptoms increase in frequency and severity; but that as prevalence and mortality subsided, so also did the relative frequency and severity of the symptoms. The differences exhibited at various periods between individuals comparable as to age, sex, and surroundings, can only be explained by modifications in the action of the scarlatinal virus, or differences in mode of infection, and also perhaps to individual proclivity. It clearly appears, however, that there is a very decided weakening of the virus as the epidemic influence extends and declines. The subject is one of great difficulty, and allows of much theoretical speculation; but it is of wide range, and requires profound study. The contribution made by Dr. Gresswell will aid in the determination of some of the problems of epidemic disease, whilst in scarlatina especially it will long be a standard of reference. We regret, however, that many of the diagrams and charts illustrative of statistical points are so intricate as to be of comparatively small service.

Les Microbes de la Bouche. Par le Dr. TH. DAVID, Directeur de l'École dentaire, Chirurgien Dentiste des Hôpitaux. Précédé d'une Lettre-Préface de M. L. PASTEUR. Avec 113 figures en noir et en couleurs dans le texte. Paris: Félix Alcan. 1890.

IN the work before us, Dr. David has collected in a well-arranged and clearly written form a description of the various micro-organisms that have been found in the mouth, not only in connexion with diseases of the teeth, but also with such other diseases as tuberculosis, gangrene, diphtheria, pneumonia, and the like.

The work is arranged specially for the use of dental students, but it should also prove useful to those who wish to acquire a general knowledge of micro-organisms. Of course, as one would expect in a text-book of this nature, a part is devoted to general considerations of the subject. The historical section carries us back to Leeuwenhoek's earlier investigations which were made on micro-organisms taken from the material covering the teeth. A short sketch of the general form and classification of micro-organisms, their structure, biology, mode of reproduction, and the substances that they secrete, is followed by a description of the more important methods of cultivation and examination. The common non-pathogenic microbes are then sketched, special attention being paid to the organisms that give rise to the mannite and lactic and butyric acid fermentations. A chapter is devoted to the organisms of salivary septicæmia, first described by Pasteur; the microbe of pneumonia, described by Friedländer, and the pyogenic streptococci and staphylococci are all in turn spoken of as occurring in the mouth. The next chapter treats of the organisms of the disease conditions already mentioned, whilst the last chapter deals with what should be the practical outcome of the study of bacteriology to dentists—the destruction of injurious organisms that occur in the mouth, a note being given on the antiseptic treatment of caries. This part concludes by a list of formulæ of liquids and antiseptic powders adapted to the prophylactic and curative treatment of affections of the mouth and teeth. The bacillus of influenza is described in an appendix, its claim to notice being that it finds its way by the mouth into the lungs and intestine.

In a book that goes over so much ground it is difficult, no doubt, to give any great amount of detail, but we cannot help feeling that a somewhat fuller description of particular methods and of the special organisms connected with the study of dental surgery might have been more appropriately given than such a collection of pathogenic organisms, that, after all, have to be studied more by, and are of more interest to, the general physician, than the dental surgeon; whilst to the laryngologist and rhinologist some parts of the work would be specially interesting, though they can only have a very general interest to students of dentistry. The subject of phagocytosis, we think, from the short reference made to it in the book, can scarcely be fully understood, as the author speaks of phagocytes as certain microbes which can destroy others by devouring them, although he certainly assigns to the white blood-corpuscles and the tonsils the *rôle* of phagocytes, but in a secondary degree. In the chapter on actinomycosis the author follows Cornil and Babes very closely, and here, as in the former work, we find no reference to M'Fadyean's important contribution to the subject, and Delépine's and Crookshank's work is not alluded to.

Some of the illustrations are exceedingly good, and, as a whole, the book may be highly recommended to those who take something more than a general interest in bacteriology, especially in its relations to dental surgery. It is pleasantly written, and the paper and print are really excellent.

OUR LIBRARY TABLE.

Casuistisch-Statistische Beiträge zur Pathologie und Chirurgie der Gallenwege. Von Dr. L. G. COURVOISIER, Professor in Basel. Leipzig: F. C. W. Vogel. 1890.—During the last ten years the gall-bladder and bile-ducts have been submitted to surgical treatment, and with a large measure of success. This has given a great impetus to the careful pathological and clinical study of the diseases of these parts,

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and many valuable additions have been made to the literature of the subject. At a cost of great labour Dr. Courvoisier has studied the literature of the gall-bladder and the ducts, and in the work before us he gives the results of his labour. He discusses the various parts of his subject in an orderly and methodical manner, and, as the title of his book tells, he largely deals with statistics. He first of all reviews what is known of the pathology of the gall-bladder and ducts, taking in order gall-stones, fistulous openings into the biliary tract, inflammation, congenital malformation, and then injury. The second part is surgical and therapeutical, dealing with descriptions of the various operations that have been performed for the previously named diseases and injuries, their results, and a discussion of their value. The book closes with a very full and carefully prepared bibliography. Altogether it is an excellent piece of work, and will be of great service to surgeons who are anxious to acquire a complete knowledge of what has been effected in the investigation of this important group of diseases.

The Law relating to Medical Practitioners. By JOSEPH CRAVEN and THEODORE COPPOCK, Barristers-at-Law. London: Shaw and Son.—The object of the authors of this book has been, as explained in their preface, to collect within a reasonable compass the law relating to medical practitioners in England, and to embody it in concise and ordinary language. So far as the size of the volume is concerned they have succeeded, for it extends to no greater bulk than some two hundred and fifty small octavo pages, printed in very legible type. The writers have, however, adopted too slavishly the practice of extracting the language of reported cases for the material of their text to have attained either to conciseness or the perspicuity that lies in freedom from technical expression. Thus, for example, we find on page 41 a definition of gross negligence extracted from the report of Rex *v.* Markuss, and on page 46 we have the same definition in the same terms—indeed, the identical extract repeated. In other passages considerable laxity, and even inaccuracy, of expression is permitted, as, for instance, where it is said, "If any person cause the death of another intentionally, it is murder," as if justifiable homicide were unknown to the law. Again, many passages might be cited in which the loose language employed is apt to be even misleading. One example may suffice. On page 23 we read: "Speaking generally, the patient is the person who is liable to pay the charges of the medical man who attends him. In some cases it is another person who has promised payment." Why the patient instead of the person who employs the medical man to attend should be designated as paymaster is hard to perceive. A parent calling in a medical man to attend his child, a husband to attend his wife, or a master to attend his servant becomes liable to pay the fee incurred, and when these numerous instances are excluded from the operation of the rule given above its scope will be seen to be so very restricted that it will be difficult to see why it should be introduced with "speaking generally." But though the book is in some respects open to criticism, it is very handy, and calculated to be useful if certain imperfections which characterise it are borne in mind.

A Zoological Pocket-book, or Synopsis of Animal Classification. By Dr. EMIL SELENKA, Professor of Zoology in the University of Erlangen. Translated by J. R. AINSWORTH DAVIS, B.A. Trinity College, Cambridge. Pp. 238. London: Charles Griffin and Co. 1890.—This is a little volume that will prove very serviceable to those who are attending biological lectures, and to those also who are about to present themselves for examination in biology at any of our universities. It contains a brief description of the essential characters of the several classes and genera of the animal creation on the most recent taxonomic arrangement. Space is left for the student to append notes of lectures. We can best give an idea of the manner in which the subjects are treated by a quotation. Selecting the Mollusca, we find the following:—"Phylum V. Mollusca: unsegmented animals with a soft body, mantle, and dorsal shell (usually), muscular ventral foot, large digestive gland (liver), and open vascular system. Enterocœle represented by pericardiac cavity which typically communicates with exterior by a pair of nephridia. Cerebral, pleural, and pedal ganglia. Larva (veliger), usually with a velum. Subphylum A. Lipocephala (acephala): head region rudimentary and devoid of eyes; no odontophore. Class I., Lamellibranchiata, with bilobed mantle and shell (valves equal, but unsymmetrical), large gill-plates (in most), two pairs of labial palps, paired nephridia (organs of Bojanus), auricles, digestive gland, and gonads; sexes generally separate. Order 1, Asiphonida; no siphons; with one adductor muscle: Pecten jacobæus clam, Ostrea edulis, oyster, both hermaphrodite, with two adductors. Meleagrina margaritifera, pearl mussel. Mytilus edulis, edible mussel. Lithodomus dactylus, Trigonia, Unio pictorum, anodonta cygnæa, freshwater mussels (the free larva, 'glochidium' parasitic on fishes). Order 2, Siphonida siphons, two adductor mussels. Cardium edule, cockle. Cyclas cornea, in freshwater. Venus. Solen aspergillum, with tubular shell. Teredo navalis, shipworm." The translation is accurately and clearly done.

Dissection of a Symelian Monster. By R. C. BENINGTON, M.B., Newcastle-on-Tyne. — This pamphlet, which is a reprint of a paper contributed to the twenty-fifth volume of the *Journal of Anatomy and Physiology*, gives the results of a careful dissection made by Dr. Benington of a monster in which there was complete union of the lower limbs, the combined limbs being terminated by two feet, with the soles turned to the front. There were nine toes, the second toe of the left foot being absent. An excellent plate accompanies the description.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER and Professors KLEIN, SEDGWICK, and MILNES MARSHALL. New Series, No. CXXV. London: J. & A. Churchill. 1891.—The memoirs contained in this part are: 1. Studies on the Comparative Anatomy of Sponges, Part 3, devoted to the anatomy of Grantia labyrinthica and the so-called family Trichonidæ, with one plate; and 4, on the Flagellated Chambers and Ova of Halichondria panicea, by Arthur Dendy, M.Sc., F.L.S., with one plate. 2. On Megaloscolex ceruleus from Ceylon, with a Theory of the Course of Blood in Earthworms, by Alfred Gibbs Bourne, D.Sc., with two plates. 3. On a little known Sense Organ in Salpa, by Arthur Bolles Lee, with one plate. 4. Immunity against Microbes, by M. Armand Ruffer, M.D.

New Inventions.

NEW FORM OF UTERINE DOUBLE TENACULUM.

THE principal objections to the use of the ordinary form of uterine tenaculum are, first, its liability to tear its way out of the tissue when the necessary traction is made on the hook, and, secondly, the difficulty of disengaging the point, more especially in cases where the speculum has to be dispensed with while examining by touch the posterior fornix or wall of the uterus. By using the form of double tenaculum illustrated these objections will vanish, and I can safely recommend it as an improvement on either the tenaculum or vulsellum, from which it differs by having the points set at right angles, and so holding a larger surface. The instrument will be found easy of introduction, and there can

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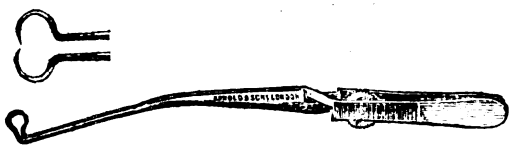
be no fear of the points tearing their way out, unless a force unnecessary and unjustifiable is used. The points can be disengaged in a moment, without using the speculum, by simply pressing on the side of the handle approximated by the cross-action spring. The convenience of possessing



an instrument that will hold firmly and can be disengaged at once will, I think, commend itself to the gynæcologist, of whose armamentarium it should form an essential part. Messrs. Arnold and Sons, London, are the makers.

ALEXANDER DUKE, F.R.C.P.I.,
Ex-Assistant Master Rotunda Hospital, Gynæcologist at Steevens's Hospital, Dublin.

AN OVUM CURETTE.

IT has always appeared to me that the treatment of early miscarriages has been unsatisfactory and incomplete in the majority of cases, and this opinion has been confirmed since practising in New Zealand, where patients may be fifteen or twenty miles from skilled assistance. If the patient is within easy reach, the ordinary method of plugging and administering ergot may be satisfactory enough, and direct interference not called for; but there are many cases, as I have instanced, to which a medical man is called, and on arrival he finds the fœtus escaped, a mass of placental tissue remaining, and more or less severe hæmorrhage taking place. The distance and the urgency of the case render it imperative that everything should be removed at one sitting, and the choice hitherto has laid between removal by the fingers or forceps. In the former case a considerable amount of unnecessary force is apt to be used, and in addition the operator is frequently tantalised by feeling the placental mass, and yet is not able to remove it without considerable difficulty, owing to insufficient dilatation. With regard to the ovum forceps, I consider it requires a somewhat callous operator to use them with any confidence, owing to the impossibility of forming any idea of the substance held by them. It was this unsatisfactory choice which suggested to me the advisability of trying the curette, and in my next cases I used a Sims' improved one with considerable success and much greater satisfaction than heretofore, the result being that I left my patient feeling satisfied that the whole of the embryonic tissue was removed. As I consider there is still room for improvement in the instrument, I offer to my medical brethren what I have christened "an ovum curette." As will be seen from the engraving, in general appearance it resembles an ordinary curette, but the raspatory portion, as it may be termed, is of steel, and on section is comma-shaped, with an edge sufficiently sharp to remove the tissue and yet not to injure the underlying structure. By means of the flexible stem this edge may be directed upwards, forwards, or downwards, according to the placental site, which is first ascertained by digital examination. After the operation the cavity is gently washed out with a warm antiseptic fluid. I think with such an instrument the whole uterine cavity may be successfully searched and cleared of placental tissue without difficulty or injury to the uterus, and also it will have the advantage over the forceps of communicating to the operating hand the nature of the particular part with which it is in contact.

Since sending my first description and sketch to Messrs. Arnold and Sons, I notice in the *Australasian Medical Gazette* of October, 1890, that the subject of curetting in miscarriages has been advocated in a discussion before the South Australian Branch of the British Medical Association, and that an instrument was suggested by Dr. A. A. Hamilton.

Pitone, N.Z. A. MEREDITH WHITEHEAD, M B, C M.

A NEW DANGER TO LONDON.

To the Editors of THE LANCET.

SIRS,—Three weeks ago I discovered that the wharf known as Bingley's Slate Wharf, situated next to and south of the Millbank pier, opposite to the south-east angle of the now disused prison, had been bought by the united vestries of St. John's and St. Margaret's, Westminster,—sanitary authorities, be it remembered—and that they were quietly and rapidly having it altered to fit it for a wharf for storing and dealing with the dustbin and other scavenger's refuse, and shipping it into barges on the river, "and for other parish purposes"—a very elastic description, which, considering that there is nothing to prevent their accommodating the great neighbouring vestries of St. James's, St. George's, Chelsea, and the Strand for an adequate money consideration, is by no means reassuring, as, in addition to the contents of the many thousand masses of corrupting animal and vegetable matter from the bins of these two large parishes which will be concentrated here day by day and week by week, we should have four or five times that amount from those which border on us. As they are putting up a high wall, which I understand is to be roofed in, and the electric light is to be introduced, I think it may fairly be inferred that it is intended to "screen," or sift, all this filth, and that the work will be carried on almost continuously. I do not think that it is contemplated to set up "destructors"—at present at all events—as these, though comparatively harmless to life and health, emit much noisome stench, and this would speedily lead to legal suppression, as in Kensington and Paddington, thanks to the energy of Sir Algernon Borthwick. The hot fumes pass up the shaft, and, after they have been carried a certain distance by the wind, are condensed and fall to the lower levels. The nuisance proposed to be created is of a far more subtle and dangerous description, as the gases and germs most inimical to life, which cannot fail to be generated and multiplied, will spread laterally from this plague centre like a huge fan, travelling according to the direction and force of the winds. A more ingenious plan of spreading the germs of malaria, diphtheria, scarlet, and other fevers, cholera, and the host of other infectious diseases, far and wide over the wealthiest portion of the greatest city the world has ever seen could not have been devised by its most malignant enemy. You will therefore, Sirs, be still more astonished when I inform you that another and greater sanitary body, the London County Council, has actually voted a loan for these purposes. The statements I make have already been brought to the notice of the Government by me, and duly verified as exact. No blame whatever attaches to the medical authorities of the Local Government Board, Dr. Buchanan not having heard of the matter till I told him, and I should not have found it out had I not been resident close to the place, for the outrage in contemplation was kept as quiet as possible. This spot is at the southern extremity of the great river reach which extends thence to Waterloo almost in a straight line, and a southerly wind will bring infection to the Houses of Parliament, Westminster Abbey, all the great public offices up to and including Somerset House, the Strand, and Fleet-street. An east wind carries it to the palaces, clubs, and the line of Piccadilly and Hyde-park, while northerly winds would rake all Chelsea. But the Houses of Parliament and St. Thomas's Hospital would be the greatest sufferers. I trust, Sirs, therefore that the profession will as usual come to the rescue and show Parliament the grave danger of permitting such accumulation within the metropolitan district. That the parishes are puzzled what to do with their refuse is some slight excuse, but the remedy they propose is infinitely worse than the evil. It is not, however, beyond the resources of modern physical and mechanical science, and with your permission I will in a future communication indicate a safe and cheap way of removing decaying refuse from our midst. Meanwhile it behoves us to urge the necessity of forbidding the creation of such a dangerous nuisance on Parliament.

I am, Sirs, your obedient servant,

Grosvenor road, S.W., Feb. 25th, 1891 KENNETH CORNISH.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 28, 1891.

IT will be in the recollection of our readers that last October a deputation from the Association of Fellows of the College of Surgeons of England had an interview with a committee of the Council of the College for the purpose of obtaining an increase of privileges for the Fellows of the College. Of the three points urged the first and most important was that meetings of the Fellows should be summoned by the Council separately from the Members to consider all matters of interest to the Fellows, and that the Fellows should have a common room in the College. The position taken up was this, whether the Council under the Charters and by-laws possessed the power of calling together the Fellows apart from the Members was not certainly known. If they had, the Association desired the Council to exercise it; and if they had not, they wished them to obtain it. After some discussion, in the course of which some of the members of the Council present expressed themselves as favourable to the concessions asked for, a half promise was given that the question should be submitted to counsel, and on Nov. 13th it was resolved by the Council that Mr. WILDE be instructed to prepare a case for submission to the Attorney-General and Mr. PAGET for their opinion whether the Council possesses the power to summon a meeting of the Fellows of the College separately from the Members. The opinion asked for was drawn up on Dec. 22nd, 1890, and submitted to the Council at the ordinary meeting on the 12th inst. It would have been more satisfactory if the case submitted by Mr. WILDE to counsel had been published with the opinion to which it was a reply; for, judging by the latter part of the opinion, it would seem that it was not a simple question to which a direct affirmative or negative only was required; but that the advice of counsel was sought as to the expediency of exercising the power of calling meetings of sections of the corporate body, presuming that such power was possessed by the Council. In substance the opinion states—(1) that there is no legal objection to meetings either of the Fellows or Members in the College premises, whether such meetings were summoned by the Council for consultation purposes or permitted by the Council to be held therein; (2) meetings of sections of the corporate body could not possess any corporate efficacy, and any proposals to affect the interests of the corporation or any of its members could only be discussed so as to have effect at a regularly assembled meeting of the whole corporate body; (3) neither the Charters nor By-law 17 give or imply any inherent power to summon or countenance any effectual meeting of Fellows only or of Members as distinguished from Fellows; (4) if separate meetings of Fellows are summoned or permitted, it would neither be consistent nor reasonable to refuse similar facilities for meetings of Members if such meetings were requested by a substantial number of the Members; (5) it would be inexpedient and unwise to permit a meeting of any section of the College whilst litigation is pending, as it would be ground for comment and prejudice in the course of it. At the end of the opinion the remark is volunteered that it is for the Council to consider whether the end they have in view—namely, to take the sense of the body of Fellows—cannot as well be attained by some less formal method, either by private meeting elsewhere than in the College, or by circular, neither of which courses seems to counsel open to the same objections as the one suggested. This opinion shows that there are absolutely no obstacles to regular consultative meetings of the Fellows of the College but the good pleasure of the Council and pending litigation. The Members of the College are better off already than the Fellows, for the annual meeting of Fellows and Members is virtually a meeting of Members, and only such questions as affect the interests of the Members can possibly be discussed. Questions affecting the interests of the Fellows, chiefly or exclusively, have no chance of engaging the attention or interest of a mixed meeting of Fellows and Members in which the latter may largely preponderate. This is one of the grounds on which the Fellows' Association have asked for the concession of separate meetings; and doubtless if more meetings of Fellows than one in the year were likely to lead to inconvenient demands for more meetings of Members, the Fellows of the College would be satisfied if they were called together separately once in the year. The other ground for asking for meetings of Fellows is that they may be placed on an equality with the Fellows of the other medical and surgical Colleges, all of which possess a more liberal constitution than the College of Surgeons of England. Undoubtedly it would be desirable to get rid of all litigation in the first instance, and it is to be hoped that the long-pending action STEELE *v.* SAVORY will come to a speedy termination, satisfactory if possible to both parties. The request of the Association of Fellows for separate meetings of Fellows, which is a reasonable request, would not be likely to excite the opposition of the Members of the College, provided those fair concessions were made to the Members which the justice of the case and the interests of the College and profession have so long demanded. It would be the most satisfactory solution of the existing controversies if the contending parties could arrive at a mutual agreement, but the basis of such agreement must necessarily be the grant of representation on the Council, in some form or other, to the Members of the College. If this were done, as it might be done, gracefully by the Council at the present time, a new Charter might be obtained embodying the provisions for such representation, and for separate meetings of Fellows as well as for meetings of Members for consultative purposes. We fear, however, that the millennial period of universal peace and good will is too far distant to justify the Fellows of the College in resting on their oars and allowing their craft to glide gently down with the favourable current in which Collegiate politics are running. The Association of Fellows of the College has undoubtedly scored a point in pressing the question of separate meetings of Fellows on the attention of the Council of the College, and securing from

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counsel an opinion which, with all its qualifications, is distinctly affirmative of the power of the Council to consult the Fellows as a body in the College whenever they should be so minded, and that which now remains to be done is to follow up the success without delay. In the circular which the Association issued last year a memorial to the Council from the general body of Fellows was proposed, and if the majority of the Fellows have any *esprit de corps* or any desire to improve their status, there ought not to be much difficulty in obtaining a large number of signatures to a memorial asking for at least one meeting of the Fellows for consultative purposes in the course of the year. The Council of the College have a happy method of minimising the force of any recommendation, or proposal, or suggestion in the cause of progress which may be brought before them by assuming that the persons who make it represent no one but themselves, and it is absolutely necessary for success that there should be evidence of substantial support to the present movement. When a sufficient number of Fellows asked for voting papers, voting papers were conceded; if a sufficient number ask for meetings of Fellows, meetings of Fellows will be summoned in due time. The Association of Fellows has been strictly moderate in its programme. It has not asked that the decision of meetings of Fellows should necessarily be binding on the Council, but that opportunity should be given to the Fellows assembled within the walls of the College to make known their views to the Council. If such opportunity should be afforded, all other desirable changes will follow in due course, and the Fellows of the College will do well to adhere with pertinacity to this cardinal measure of reform.

EVERYONE acquainted with the literature of "puerperal fever" knows the numerous theories and hypotheses which have been suggested to explain its nature, etiology, and pathological relations, and the consequent unsatisfactory methods of treatment employed to abate the evil in what was regarded as its epidemic course. For long it was looked upon as a specific fever, and this idea even yet dominates the minds of some obstetricians and modifies their methods of treatment. As our knowledge, however, of traumatic diseases in general has increased, so the investigation of the febrile sequelæ of labour has become more exact, and in accordance with the principles of modern pathology. The result of this investigation and the application of purely scientific methods to practical midwifery have proved that puerperal fever is of a septic infective nature, and that the lesions of the parturient canal are the chief points of entrance into the system of the poison-generating germs. It has been thought by some that clinical experience renders it probable that the germs may enter by other channels—as through the respiratory organs—but the results of most of such experiences have not been submitted to the judgment of those who are well qualified by pathological education and bacteriological experiment to arrive at a generalisation. Such conclusions are certainly open to discussion, and, indeed, many of them are probably capable of refutation. The theory of antisepsis is based upon a long series of well-attested clinical and experimental facts, and is now almost universally accepted as a true explanation of the excellent results of modern surgery and practical midwifery as seen in nearly all our maternity hospitals. Even in the practice of those surgeons and obstetricians who do not admit this theory it is found that their methods are not incompatible with the teaching of LISTER, to whom the elaboration of this great theory is due, as based upon the brilliant labours of PASTEUR.

The early history of the evolution of antiseptic methods in midwifery is very interesting, and a glance at its development emphasises the immense improvement that has taken place in the conduct of lying-in cases from the application of the principles involved. To SEMMELWEISS is due the credit of having in 1847 recognised, though dimly, what has in recent years developed into the antiseptic system. The mortality in the lying-in wards in the General Hospital of Vienna had been excessive—about 12 per cent. With a true scientific spirit, he set about to discover the cause of this high death-rate. "Telluric conditions" had for long been regarded in Vienna, in London, and other places as a mighty factor, but SEMMELWEISS found that the fatal fever was not "epidemic" in other parts of the city, and, as a result of his investigations and careful reasoning thereon, it became to him a self-evident fact that the cause or causes must be within the clinique itself. At that time anatomical students were allowed to go direct from their practical studies to attend midwifery cases, the only precaution taken being the ordinary washing of the hands with soap and water He, however, ordered all students previous to examining parturient women to wash their hands in a solution of chloride of lime. In the course of a few months the mortality in the lying-in wards under his charge was reduced to about 3 per cent., and within a year it further diminished to between 1 and 2 per cent. Like all pioneers, SEMMELWEISS was subjected to opposition, and even received the abuse and ridicule of his rivals, who endeavoured to upset his methods. Many of the higher minds in the profession in Vienna at that day supported him. Among these were ROKITANSKY, SKODA, HEBRA, and HALLER. The last-named observer saw with prophetic eye the grand antiseptic system now developed by LISTER, and, in a paper read in February 1849, remarked that the importance of SEMMELWEISS' "experiences for the welfare of the maternity department and for the hospitals in general, but particularly for the surgical wards, is beyond calculation." In 1850, SIMPSON of Edinburgh published a short paper on the "Analogy between Puerperal and Surgical Fevers," and with a remarkable foresight heralded many of the truths with which we are now thoroughly conversant, as brought to light by the investigations of modern pathology and bacteriology. What we think is required by surgeons, obstetricians, and gynæcologists is to apply the truths of pathology and the more recent teaching of bacteriology to their respective practices. Cleanliness, it has been averred by those who do not adopt the antiseptic theory as a working hypothesis—and this is the important point practically, — is sufficient for them, and they point out their results as comparable with or superior to those who work on antiseptic lines. Those who are "satisfied with cleanliness" forget that this is the very

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essence of antiseptic methods, the aim of which, in fact, is microscopic cleanliness or asepsis—that is, the absence of septic germs or decomposing material. Some reproachfully refer to the laying aside of many of the complicated means formerly employed to maintain asepsis, such as the spray producer, which in some maternity hospitals was employed to form an antiseptic cloud into which the child was ushered at birth. This is only part of the simplifying of the means adopted to secure aseptic conditions, and the greatest and most recent successes of the system have been the perfecting and making more simple the means employed to attain them. What we wish to impress upon every practitioner is that in order fully to appreciate the full scope and responsibility of antiseptic midwifery cases of childbirth must be guided as faithfully in every minute detail as any serious surgical operation. It is needful, we think, for all practical obstetricians to profit by the most recent advances in pathology and bacteriology, and to receive the teaching of these in a scientific spirit. The experiments and observations of METCHNIKOFF, which attempt to prove the anti-bacterial action of normal leucocytes—a process of phagocytosis,—may assist in explaining some of the anomalous or milder cases of febrile disturbance seen in puerperal cases. Whether this be the case or not, it is well to keep our minds open for all the help that pathology and bacteriology may give us in establishing correct principles for the regulation of the conduct of lying-in cases in our every-day practical antiseptic midwifery.

IN the February number of the *Contemporary Review* Mr. ROMANES discusses the position of ARISTOTLE as a naturalist, and it is worthy of notice that in the Hunterian Oration which has just been delivered by Mr. HUTCHINSON, the orator remarked that in the long interval between ARISTOTLE's death and the birth of our great English surgeon, few, if any, men can be mentioned whose owners would have been so capable of estimating the value of the acquisitions made to science by HUNTER as the Greek philosopher. ARISTOTLE was born B.C. 384 at Stageira, and died at the age of sixty-three at Chalcis. He was the son of NICOMACHUS, physician and friend of AMYNTAS, King of Macedonia. His father died early, and after running through the fortune that was left him ARISTOTLE is said to have become a soldier, and, satisfied with a brief experience of that life, to have exchanged it for philosophy, and to have maintained himself for a time by practising pharmacy. Settling in Athens, then the centre of the intellectual life of Greece, he became the pupil of PLATO, who, soon recognising his ability, remarked that he did not need the spur but the bridle. For twenty years he continued a disciple of PLATO, but at length, probably as the result of pursuing a different and more objective method of research, he separated from the school to which he had so long been attached with the notable apophthegm—"Amicus PLATO, amicus SOCRATES sed major veritas." Departing from Athens, he went to Atarneus in Mycia, married, and lived in Mytilene, whence, in his forty-second year, being summoned by PHILIP of Macedon to educate ALEXANDER the Great, then a lad, he devoted nearly twelve years of his life to this important vocation. Returning to Athens when ALEXANDER had gone to the East, he founded the peripatetic school, and his lessons were doubtless illustrated by the numerous specimens of plants and animals that were collected by the orders of ALEXANDER and forwarded to his old teacher. The personal qualifications of ARISTOTLE were not attractive. Small of stature, with bald head, wrinkled cheeks, little eyes, a stammering pronounciation and generally feeble health, it required, indeed, the fire of genius to make him the most successful teacher of his own time and to render him one of the greatest—some think him the greatest—thinker and writer the world has seen. The subjects on which he wrote were numerous, and included physics, astronomy, meteorology, zoology, comparative anatomy, physiology and psychology, poetry, ethics, rhetoric, logic, politics, and metaphysics—a goodly array; and whilst all were done well for his time, the second group, it may be confessed, was more satisfactorily treated than the first. A careful examination of his works enables Mr. ROMANES to say that he mentions at least seventy species of mammals, one hundred and fifty of birds, twenty of reptiles, one hundred and sixteen of fish, eighty-four of articulata, and about forty of the lower forms—making about five hundred in all.

Mr. ROMANES justly expresses surprise at the inequality and curious imperfection of ARISTOTLE'S knowledge; for whilst he to some extent understood the structure and functions of the heart, experimented on the coagulation of the blood, and had certainly observed the development of the embryo of the fish, he exhibits absolute ignorance of a nervous system, and an inability to comprehend the functions of the muscles, which is extraordinary, since he never associates them with movement. He seems to have confused the arteries and veins with the nerves, since he thought the nerves sprang from the heart. The breadth of the studies of ARISTOTLE enabled him to perceive the importance of the inductive method of inquiry, and to recognise the value of generalisations founded on a sufficient number of well-observed facts; and in most instances, when he states what he believes to be a fact, he gives an illustration by which he may be better understood. It is in the value he sets upon observation, though many of the observations he records were certainly erroneous, and in the vast number that he has collected, that the high esteem in which he is held by those best qualified to judge mainly rests, and amongst them we may mention BUFFON, CUVIER, FLOURENS, CLAUS, and OWEN. The plan and method of his work were his own. The facts were perhaps supplied by others, and on this point Mr. ROMANES makes a remark that we think requires correction. Looking, he says, to the "enormous range of his work in biology alone, remembering that in this work he had had no predecessors; considering that at the same time he was thus a single-handed collector of facts, and a single-minded thinker upon their import, it becomes evident that ARISTOTLE would have been something more than human if either his observations or his reasonings could everywhere be justly compared with those of the scientific genius when more favourably circumstanced." We are inclined to doubt that ARISTOTLE had no predecessors. In the first place, the growth of a subject like biology is slow; words have to be

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coined, expressions forged, and it is incredible that any one man could have performed the dissection and established the phraseology of a science; and, secondly, he himself directly refers to the labours of others, as, for example, when he refutes those who believe the lungs are void of blood, and of those who have established the existence of mammæ in the dolphin. The errors and inconsistencies are so remarkable that it is almost impossible to believe that we are really in possession of the original work of ARISTOTLE. His writings were buried for more than a century, and when they were eventually brought to light, APELLICON, into whose hands they fell, Mr. GROTE informs us, felt no scruples in correcting what had been worm-eaten and supplying what was defective or illegible. In concluding, we would remark that we are indebted to Mr. ROMANES for a very readable article.

Annotations.

"Ne quid nimis."

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE UNIVERSITY OF LONDON.

OUR report of the proceedings at the meeting of the Council of the Royal College of Surgeons of England, held on the 12th inst., which appeared in THE LANCET of Feb. 14th, contained two announcements of the highest possible interest to the body corporate of the College. One of these, which related to the power of the Council to summon meetings of Fellows separately from the Members, we have discussed in another column. The other had reference to the revised scheme for the reconstitution of the University of London, which the Senate are about to submit to Convocation for discussion and approval, or otherwise, and which the Senate had adopted after conference with the two Royal Colleges. This scheme, be it noted, was approved by the Council of the College of Surgeons then and there, and ordered to be entered on the minutes. Not a word appears to have been said about submitting the scheme to the body corporate, the Fellows and Members of the College, for consideration and approval. If anything was said, if any voice was raised against the summary determination of a very important question, it was plainly in vain; neither was it in any way operative, for it was not backed up by the proposal of any resolution in favour of the obvious and desirable course, consultation of the Fellows and Members of the College before the Corporation was committed to a scheme with far-reaching consequences. Surely it is a great anomaly that a scheme which vitally concerns the interests of the Fellows and Members of the College should be considered and approved in secret conclave by twenty-four individuals only one of the thousands who belong to the Corporation, and are interested in its well-being and relations to the Universities and the other medical and surgical Colleges. Whilst the Fellows of the College of Physicians and the graduates of the University of London will enjoy opportunities for thorough discussion and consideration of the scheme, the Fellows of the College of Surgeons, to say nothing of the Members, are absolutely excluded from any voice in a measure which would increase the power of the Council of the College and profoundly modify for good or evil the existing conditions of medical education and examination. That ignoring the views of the constituency is not advantageous either to the public or to professional interests was clearly shown when the Society of Apothecaries was excluded from the Conjoint Scheme of the Colleges in the hope that this exclusion would lead to its extinction as a medical authority and licensing body. It only resulted in kicking the Society upstairs and enhancing its power by enabling it to confer a complete double qualification at a price far below the costly exactions of the Royal Colleges. If the voice of the constituency had been heard and obeyed, the fatal mistake of neglecting the opportunity of absorbing the Apothecaries' Society, and securing the boon of a single examining board for the ordinary professional licences, would not have been committed; and it may be that a similar neglect of the constituency or body corporate in the present instance may lead to disadvantages which might have been avoided by encouraging open discussion of the scheme. Why are the Fellows and Members of the College to be treated like ciphers or children, and how long will they submit to their degraded position? It is time that they should "awake, arise, or be for ever fallen."

PROFESSOR LIEBREICH'S REMEDY FOR TUBERCULOSIS.

WE have received by telegram from our Berlin correspondent an account of the remedy which Professor Liebreich has introduced as a means of combating tubercular disease, and the good effects of which were vouched for by Professor B. Fraenkel in his speech at the Berlin Medical Society on the 18th inst. to be found on another page. It was at the meeting of this Society on the 25th inst. that Professor Liebreich gave an account of his remedy, which consists of cantharidate of potash, a combination of 0·2 grm. pure cantharidin and 0·4 grm. of potassic hydrate, in 20 cubic centimetres of water. In his opening remarks Professor Liebreich regretted that the older methods of treating disease had been so much lost sight of; and he said that he had been led to think of cantharidin in the present connexion, by the good effects observed from the prescription of cantharides in skin diseases. The specific property of cantharidin is to excite serous exudation from capillary vessels, and he argued that this effect would more readily occur if those vessels were already irritated. In applying the drug to cases of tuberculosis he proceeded very cautiously, commencing with injections of 1-50th of a decimilligramme of the solution of the cantharidate of potash, and gradually increasing the dose. It was found that the expectoration was thereby increased, and that the ordinary dose required to produce substantial effect was one to two decimilligrammes. It is likely that six decimilligrammes would be the maximum amount that could be safely used. No cures have yet been effected, but, as already said, Professor B. Fraenkel and Dr. Heymann have been struck with the remarkable amelioration of cases so treated, and with the absence of any untoward symptoms. The drug probably only affects the diseased tissues, and it may be applicable to other affections than tubercle. The address was followed by great applause.

CHOLERA INTELLIGENCE.

ACCORDING to intelligence up to the end of January last, cholera had undergone a great diminution in Syria, no new cases having been recorded for several weeks in the villayets of Aleppo, Adana, and Damascus. On the other hand, it was reported that two cholera deaths had occurred in the villayet of Diarbekir and five i that of Beyrout. The total cholera mortality in Syria up the week ending Jan. 24th had been 4170. Of these, the villayet of Aleppo was responsible for 2361, that of Damascus for 1189, of Beyrout for 421, of Adana for 97, of Memouret-ul-Aziz for 85, and of Diarbekir for 15. Later intelligence is to the effect that cholera had ceased in Syria by Jan. 22nd, and

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we have information from a correspondent who is able to speak with considerable authority, to the effect that so far as the towns, at least, of Beyrout and Damascus are concerned no case of cholera has as yet appeared. It may also be added that quarantine restrictions imposed at Constantinople on arrivals from Syrian ports between Alexandretta and Beyrout have been removed, and that the Syrian ports generally are regarded as free from the disease. There is, however, reason to believe that, as regards Tripoli, cases are being hushed up, and that the disease has not yet quite ceased there. The serious epidemic in Japan, to which we have from time to time adverted, also seems to have come to an end.

THE JUBILEE OF THE CHEMICAL SOCIETY.

A MEETING in celebration of the jubilee of this Society was held at Burlington House on Tuesday, the 24th inst., when a large assemblage of representatives of various chemical societies, both home and foreign, attended. On Wednesday, the 25th inst., the members of the Society dined at the Hôtel Métropole, on the occasion of the Society's jubilee. The President (Dr. W. J. Russell) occupied the chair, and there were present the Marquis of Salisbury, the Attorney-General, Sir Lyon Playfair, M.P., the Prime Warden of the Goldsmiths' Company, Professor Frankland, Professor Odling, Dr. Will (representing the Deutsche Chemische Gesellschaft), Dr. J. H. Gladstone, M. A. Gautier, M. A. Combes, M. de Clermont, M. A. Haller (representing the Société Chimique de Paris), Sir F. Abel, Sir H. Roscoe, M.P., Professor Victor Meyer, Dr. Hugo Müller, Dr. J. F. Holtz, Professor T. M. Thompson, Dr. H. E. Armstrong, Professor T. E. Thorpe, Sir Douglas Galton, the Presidents of the Physical Society, the Pharmaceutical Society, the Institution of Electrical Engineers, the Institute of Chemistry, the Society of Chemical Industry, and some 200 other gentlemen. The President proposed a toast in honour of the Jubilee, and the Marquis of Salisbury proposed "Prosperity to the Chemical Society," on behalf of which Sir Lyon Playfair replied. The Attorney-General gave the toast of "Science and Industry," which was responded to by Sir H. Roscoe. Other toasts followed, including "The Delegates of Foreign Chemical Societies," to which M. Gautier and Dr. Will responded; "Our Foreign Members and our Visitors," to which Professor Victor Meyer and the Prime Warden of the Goldsmiths' Company replied; and "The Presidents Past and Present."

HEART SOUNDS AT A GREAT DISTANCE.

DR. GUIDO BELL, who had previously reported in the *Memorabilien* a case in which, after contusion of the thorax, the heart sounds were plainly audible the whole length of the room, and even further, now publishes a second case of a similar kind. A large and heavy but healthy man had, in the presence of the author, fallen backward from an open vehicle to the street, and in a state of unconsciousness was carried the short distance to his house. He had fallen on his right shoulder and had fractured several ribs, but without injuring the pleura. His breath was short and superficial; the pulse frequent and very small; the pupils of moderate size, but insensible to light; the eyes open and expressionless; the skin cool and pale. When the patient was placed in bed, the heart sounds were very loud at the distance of a foot. This abnormal loudness lasted half an hour. The patient recovered after a serious attack of pleurisy, and both he and the patient previously referred to are now strong and well. Both patients had been under the influence of shock while these peculiar symptoms lasted, and these are in Dr. Bell's opinion merely symptoms of shock. Assuming that in low vitality of the vagus and sympathetic the ganglia of the heart may have increased activity, he considers that we may look upon the increased action of the heart as simply a symptom of shock. The author considers his theory proven by the fact that each nerve system, besides being under the control of the brain, also has an independence of its own, with ganglia for centres. The spinal cord, and still more the sympathetic, certainly have this independence, and probably also every other ganglion in a corresponding manner. When the influence of the brain as nerve centre has ceased to be felt in any organ—the heart for instance—this may still exercise its independent activity, and especially so when its antagonist has become inactive. Even the apparent contradiction of a small pulse with increased action of the heart could be explained by assuming a certain independence of the ganglia. This independent action is further increased by the narrowing of all bloodvessels through paralysis and consequent increased resistance.

LIFE INSURANCE OMITTING THE INVESTMENT ELEMENT.

CARRYING into effect a suggestion contained recently in our Insurance Supplement, the Directors of the Caledonian Insurance Company have formulated a scheme of long term temporary life insurance, under which they are able to give, in the form of immediate insurance benefits, a return greatly in excess of that which is secured by an ordinary insurance policy. The contingent nature of risk undertaken by the office, which will make no payment whatever in the case of a life insured which survives the stipulated period, compensates for the enhancement of the benefit in amount during the period over which the contract extends. The result is aptly described, in the language of the prospectus, as securing to the policyholder "during the time that he really needs it an insurance of about double the amount which he could obtain for the same premium under the cheapest ordinary policies."

TREPHINING FOR SUBDURAL HÆMORRHAGE.

AN interesting and valuable case is recorded by Drs. Homans and Walton in the *Boston Medical and Surgical Journal*. The patient was a man aged twenty-eight, who was thrown from a horse, and struck his head against some stones. He was immediately sent to the hospital, where he was found to be unconscious and to have a large hæmatoma over the right side of the scalp at a point corresponding to the middle of the suture between the right parietal and the occipital bone. The right pupil was at first dilated, but in a few minutes the pupils became equal, and consciousness began to return. The pulse was slow and full, and there was no bleeding from the nose or ears. The hæmatoma was incised, but no fracture could be felt. Consciousness returned to all appearance perfectly, and there was no paralysis. Two days later the patient, who had been going on well, became delirious, with a high temperature, and soon after sank into a state of semi-consciousness with aphasia. On the ninth day after the injury he had twitching of the right angle of the mouth; during the next day or two he had numerous epileptiform attacks, all apparently starting in the right side of the face, but at times extending to the limbs and trunk; and finally, before operation, the entire body was in a state of almost continuous tonic rigidity. On trephining over a point corresponding to the lower end of the fissure of Rolando and incising the dura mater a large clot was found, and after the opening had been enlarged it was turned out. At one point a small hæmorrhage was seen under the pia mater, and this also was removed and the wound closed. Everything went on well, and a rapid improvement took place in the aphasia, so that at the end of a month the patient

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could talk without difficulty, although he still occasionally used a wrong word. Except for an attack of headache and feverishness a month later—an attack associated with the formation of an abscess over the left ear—the progress was excellent, and the patient is now pursuing his calling as a waiter. The diagnosis of hæmorrhage from contrecoup which was made in this case, and the localisation of the lesion, were amply confirmed by the subsequent progress, and the success of the measures taken to relieve the condition has added one more to the already brilliant results of cerebral surgery.

THE LEPROSY COMMISSION.

THE latest intelligence to hand respecting the labours of the Leprosy Commission now engaged in India is to the effect that Dr. Rake and Surgeon-Major Thomson have returned to Calcutta from Burmah, and, after conferring with their colleagues, Dr. Buckmaster, Mr. Kanthack, and Surgeon-Major Barclay, they will probably next pursue their inquiries in the North-west Provinces and the Punjaub. The laboratory work is reserved for the hot season, and it is not expected that the inquiry will be completed until the end of the year.

THE DRAINAGE OF OVERSTRAND.

A GOOD deal of discussion has been going on concerning the need of a scheme of drainage for Overstrand, which is becoming a bathing resort on our eastern coast; and in the end it has been decided that the cesspool system is for the present to be retained, on the understanding that "the cesspools shall be properly looked after." What this means it is difficult to say, for, unless the cesspools are watertight and periodically emptied, it is perfectly obvious that their contents must soak into the surrounding soil—a condition of things that is hardly calculated to attract those who seek recreation and health. The decision seems to have been come to because of some doubt as to whether the flow of the tide would not bring back the sewage from the proposed outfall to the spot where bathing is resorted to. It is by no means clear that this would have been so, but it ought to be possible to devise a scheme which should be free from any such risk.

PATHOLOGY OF GLAUCOMA.

IN an exhaustive review of recent contributions to the subject of glaucoma (abstract in *Fortschr. d. Med*, No. 4) Knies formulates as essential to the affection changes at the corneo-scleral margin and its vicinity and those in the optic nerve. The earliest changes in the corneo-scleral margin are those arising around the canal of Schlemm, which give rise to no clinical signs, not even an increase in tension. At this stage there is a considerable accumulation of round cells in the corneo-scleral region. Subsequently there occur more obvious inflammatory lesions with adhesion of iris to cornea and obliteration of Fontana's space. The optic nerve changes likewise appear early, commencing as hyperæmia and œdema of the papilla, often associated with cellular infiltration, this neuritis invariably preceding excavation; then follows optic atrophy. Glaucoma thus characterised may begin very acutely or have a much more chronic course from the commencement, with round cell infiltration of the corneo-scleral margin and optic neuritis, increase in globe tension and excavation of the nerve following later. This being so, the condition might perhaps be better termed "iridocyclitis anterior adhesiva." It is not easy to differentiate from it those cases in which there is excavation, but without increased tension or the above pathological lesions, especially the neuritis; for that class von Graefe's term, "amaurosis with excavation of the optic nerve," is still the best. Iridectomy is indicated in true glaucoma; it is useless in excavation without increase of tension. Knies concludes by attributing the lesions to the presence of irritant substances formed within the eye, and not circulating in the general blood-stream; and that it is owing to their passage outwards that inflammatory changes are excited in optic nerves and around the sinus, which form the chief outlets from the organ. The obstruction to the outflow of lymph thereby occasioned produces the phenomena of glaucoma.

SENTRY DUTY.

WE are glad to have Mr. Stanhope's assurances, in reply to Viscount Wolmer, that the matter of sentry duty at St. James's, Buckingham, and Kensington Palaces, the War Office, and Home and Foreign Offices, had recently been under consideration, and that material alterations had been effected in the arrangements for that duty. The number of sentries at these various places in the metropolis has not unfrequently been remarked upon, and the necessity for such a provision is not very apparent to the non-military mind. No doubt sentry duty is an integral part of the soldier's training; it is indispensable in war, and some practice of it in peace is therefore requisite. But as the exposure and loss of rest incidental to that duty are frequent sources of ill-health, and it is naturally irksome and unpopular, it is right that its amount should be reduced within reasonable limits. Apart from sanitary considerations, the waste of physical energy and power and loss of sleep involved by the posting of a number of sentries, as a matter of form or routine, within short distances of one another, to guard unoccupied places, must be very unpopular with soldiers, who are constituted like other men in their dislike to performing labour that must seem to them purposeless.

LECTURES AT THE COLLEGE OF SURGEONS DURING MARCH.

THE following lectures will be given during the month of March in the lecture theatre of the Royal College of Surgeons at 5 P.M. on the dates mentioned below:—Professor Benjamin Thompson Lowne will give three lectures on the Anatomy and Development of Insects in Relation to Recent Views on the Origin of Vertebrates, on Monday, Wednesday, and Friday, March 2nd, 4th, and 6th. Professor Charles Stewart will give six lectures on Secondary Sexual Characters, and Some New Additions to the Museum, on Mondays, Wednesdays, and Fridays, March 9th, 11th, 13th, 16th, 18th, and 20th.

CYSTS OF THE PANCREAS.

IN the *Deutsche Medicinische Wochenschrift*, 1890, No. 46, Dr. Karewski publishes an exhaustive paper on the Diagnosis and Treatment of Cysts of the Pancreas. He describes two cases of this affection, in each of which an early diagnosis was made and operative treatment successfully carried out. In both cases some injury was given as the exciting cause, the cysts developing four weeks after the accident. The subjective symptoms accompanying the formation of the cysts were continuous feeling of pressure in the stomach and frequent vomiting after meals. The objective signs were not so difficult to make out as usual, and the diagnosis could be made fairly easily. In each case there was a slightly movable tumour corresponding precisely with the position of the pancreas, and which could be distinguished by a tympanitic percussion note from the spleen and liver. In the first case Dr. Karewski attempted to substantiate the diagnosis by means of an exploratory puncture. This was not altogether satisfactory, but was productive of a useful warning, as a later

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operation showed that there were extensive adhesions between the wall of the cyst and the stomach, so that the needle had penetrated the stomach before reaching the tumour. Dr. Karewski therefore advises that an exploratory incision should be made rather than merely a puncture, and an additional reason for this is that the amount of fluid contained in the cyst is too small to offer any very great aid to diagnosis by its examination. The supposition of Küster, that the contents of a pancreatic cyst are always hæmorrhagic and consist of small round granules, is not correct, as in many cases the fluid from the cyst has been perfectly clear, as in transudations. Dr. Karewski maintains that an early diagnosis of these pancreatic cysts is all the more important, as the prognosis is then much more favourable than when they have existed for some time before the operation has been performed. Up to the present time three principal methods of operation have been adopted. The first is total extirpation of the organ. The author has collected five cases of this kind, of which three proved fatal. In one of the two successful cases the cyst was pedunculated, and in the other the wall of the cyst was extremely thick, so that it was possible to shell out its contents. The other two methods consist in single or double puncture of the tumour with subsequent drainage. The double puncture is only possible when the wall of the cyst is thick, and the tumour itself large. As a rule the tension is so great that two punctures could hardly be made.

THE FACTORY BILLS.

THE ponderous and voluminous report of the Lords' Committee on Sweating is at last bearing fruit. For a while not a few persons despaired of seeing any practical result arise from so many disclosures and so much dissertation. The evils of the sweating system, which THE LANCET was the first to bring to public notice, were admitted on all sides, but doubts were expressed as to the possibility of dealing with such questions by legislative enactment. We sketched out what improvements to the existing laws would beneficently affect the condition of the workers who toil in sweating dens. Parliament, however, adjourned, and it seemed as if nothing was to be done. But our hopes were not abandoned, they were only deferred, and now at last we are rewarded with a deluge of Bills on the question which, in a great measure, we have made our own. The principal difficulty to-day is to sort and to select the best suggestions from these many projects. In the House of Lords we have the Sanitation of Factories Bill, introduced by Lord Thring, who was an active member of the Sweating Committee; and the Factories and Workshops Bill, presented by Lord Dunraven, who was the chairman of that Committee. In the House of Commons Sir Henry James and Mr. Sydney Buxton have each Bills dealing with the same question; while Mr. Matthews, on behalf of the Government, has introduced a fifth Bill, on which should be grafted, it is suggested, the best clauses of all the other Bills. It will, however, we fear, be necessary not merely to add new clauses to the Government Bill, but also to extract some of the proposals it contains. For instance, on all sides there is a consensus of opinion that it is the application rather than the law itself which is most at fault. If inspectors were more numerous and more active, if the authorities entrusted with the duty of applying the law were not themselves interested in evading its provisions, the grievances which have been so loudly denounced would not have arisen—at least in their present aggravated form. The greatest of all necessities is the creation of an army of inspectors who will be perfectly free from local influences and local corruption. But the Government Bill proposes practically to do away with certifying factory surgeons, who number in all about twelve hundred. An increase of inspectorships in other directions will not compensate this very severe loss. We trust, however, this clause (No. 19) in the Bill will be excised. In this respect, as on all other points, advantage should be taken of the present favourable disposition of Parliament to arrange matters in as broad and liberal a spirit as possible.

QUEEN'S COLLEGE, BELFAST.

As a means of reuniting and strengthening the corporate feeling of old members of Queen's College, Belfast, it has been decided, if possible, to arrange a dinner, to be held at Belfast. A circular has been addressed to many of the graduates of this College, many of whom now hold important positions in every department of public life. Those who are resident within a convenient distance are requested to sign the slip accompanying the circular and return it as early as possible to the hon. secretaries: John Park, M.A., D.Lit., Queen's College; James Alex. Lindsay, M.A., M.D., 37, Victoria-place, Belfast; Robert T. Martin, B.A., 4, Holborn-terrace, Belfast.

PROTRUSION OF THE UPPER MAXILLA AND TEETH.

DR. EUGENE TALBOT of Chicago, in a paper read at the International Medical Congress at Berlin, subdivided this particular form of irregularity into six classes. 1. Anterior protrusions due to constitutional causes. In these cases, which are generally hereditary, the upper maxilla is too large for the lower, and stands out beyond it; the incisors, however, are not inclined forwards, but are vertical or turned inwards; the lower incisors bite considerably inside the upper, whilst the bite of the molars is normal. 2. Anterior protrusion of the alveolar process and teeth from excessive deposition of osteoblasts. The facial angle in these cases is less than normal, as the alveolar process and teeth protrude. The lower maxilla may be normal or the chin may recede. The partial eruption of the first molars makes the bite too close, thus causing the lower incisors to strike against the palatal surface of the upper; often they glide back and find a resting place in the alveolar process. The irritation which results from the pressure against the mucous membrane produces excessive deposit of bone-cells in the inner plate of the alveolar process, which causes the superior central incisors to be carried forward. Finally, the cutting edges of the teeth appear below the upper lip, and the lower lip is caught beneath, increasing the tendency to stand out. 3. Anterior protrusion found in the V-shaped arch. When, from a want of harmony between the size of the teeth and that of the upper maxilla, their combined diameters form an arch larger than that of the maxilla, the teeth are necessarily crowded, and when the cuspid erupts it pushes the anterior column forward. This leads to a flexion in the alveolar process at its weakest point, which is at or near the mesial line. The local causes producing the same condition are the forward movement of the first molars of the upper jaw, due to the premature extraction of the deciduous teeth or the arrested growth of the ramus of the lower maxilla. 4. Anterior protrusion due to thumb-sucking. The location of this deformity is not uniform, as it depends upon the hand used, and the habitual position of the finger or thumb. The teeth usually flare out fan-shaped, or one or more teeth may be pressed sideways. This form of irregularity differs from the V-shaped arch in that the central incisors in a thumb-sucking deformity *diverge*, whereas in the V-shaped arch they *converge*. 5. Anterior protrusion due to extrac-

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tion of posterior teeth. When all the teeth of the upper and lower maxillæ have been lost for some time, and not replaced by artificial substitutes, there occurs in many cases a straggling arrangement and flaring out of the upper teeth, while some or all the bicuspids migrate backward. This is due to several causes. More work in mastication is thrown upon the anterior teeth, which have to perform the double function of cutting and grinding. This introduces a new form of antero-posterior motion exerted by the cutting edges of the lower incisors against the basillar ridge of the upper, which forces them forward. Moreover, the two wedge-like cusps of the bicuspids are forced between the crowns of their antagonists, which cannot now resist this action when not fortified by adjoining molars, and the resulting shortening of the bite forces out the incisors more and more. 6. Anterior protrusion from Rigg's disease. In Rigg's disease the teeth are forced out of their sockets very gradually, so that the change in the contour of the mouth takes place imperceptibly. The front teeth become prominent, the angle at which they strike each other being more acute than normal. The distinctive feature of this form of protrusion is the diseased state of the gums.

THE AMBULANCE IN THE MERCANTILE MARINE.

THE Mercantile Marine Service Association has decided upon forming a class for instruction of ships' officers in the elementary treatment of urgent illness and injury. There would seem to be in some quarters no very clear idea of what is likely in the circumstances contemplated by its promoters to be included in the course of study provided for the class, and this is perhaps hardly to be wondered at when we reflect on the utter isolation of some ships at sea and the perils to which they are exposed. It should be clearly understood and taught, however, that first aid in such cases, though necessarily a term of wider meaning than it usually is on land, implies essentially such a degree of assistance as can safely be rendered by one intelligent man to another on a basis of quite elementary medical knowledge. Continuous and systematic treatment could neither be learnt nor applied without risk under this system. Some knowledge of the home remedies contained in the medicine-chest, some ready surgery, as, for example, the posturing and provisional setting of a broken limb, the arrest of bleeding from a divided vessel, the resuscitation of persons apparently drowned, the use of the catheter, the relief of burns and scalds, these and matters of like simplicity, details of cleanliness, ventilation, wholesome cookery, and ordinary hygienic rules in general, come within the scope of a legitimate course. Any attempt to go further and to teach with greater fulness the methods of medical procedure would only place in hands unskilled in the work, and otherwise fully engaged, the duties and responsibilities without the powers of practical treatment. In conclusion, let us express a hope that such a measure of ambulance training may be provided for seamen as will fit them to co-operate with the useful efforts of their officers

MEDICAL MEN AND LITERATURE.

LITERARY production in other than professional fields has in all ages divided with more purely technical studies the power of attracting the mental energies of medical men. Such names as those of Roger Bacon, Sir Thomas Browne, Locke, Garth, and others have indeed so shone in the fame of letters that in their case an original connexion with medicine has almost been forgotten. In these days the zeal for learning follows a more exclusively practical and scientific tendency. As if in harmony with the laws of the circulation, the cravings of the medical mind commonly find satisfaction within the round of its most familiar occupations. There are, however, not a few exceptions to this rule. We have not yet lost the medical poet or philosopher, nor have the efforts of romance in prose been unassisted by practitioners of our art. To employ thus the precarious leisure of routine in practice cannot but refresh the mind of those most nearly interested, while recent experience might also be shown to prove that efforts thus applied have not been fruitless in refreshing the intellect of the reading community. Some faults might naturally be expected in the productions of a medical writer. Among the chief obstacles to his success may be numbered a too didactic style, a philosophic heaviness, above all, a tendency to excess in realism, particularly if engaged upon that now all-popular and most profitable form of composition, the novel. An error of discretion, indeed, may sometimes lead to serious embarrassment. Take, for example, the case of a medical novelist in France, who was lately called upon to answer the allegations of an indignant husband that his wife's morbid state was exactly reproduced in the heroine described by her doctor, who was therefore liable for a breach of professional secrecy. The case might well have been one in which the cap of the proverb was found to fit a head for which it was not made, but it may serve, nevertheless, to accentuate the dislike to an exact description of morbid states and symptoms in which we must admit a share with many general readers. A high professional standard alike in literary taste and in true medical propriety is, we take it, best maintained by those who can discreetly separate what are in them related faculties, and be medical in their medicine but scholarly in letters.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE initial steps in the foundation of the British Institute of Preventive Medicine at Cambridge have advanced so far as the selection of a site near to the museum and medical laboratories, where the new buildings are to be erected. The Council of the Institute contains representatives of all the British Universities and several scientific and medical corporations. Sir Joseph Lister is the chairman of the executive committee, and in Cambridge the local committee consists of Sir George Paget, Sir George M. Humphry, Professor Liveing, the Master of Downing, Dr. Gaskell, Dr. Lea, Dr. D. Macalister, Professor Roy, and Messrs. J. W. Clark, Shipley, Shore, Adami, and Hankin.

THE MICROBES OF PNEUMONIA.

IN a bacteriological study of acute pneumonia, Dr. Guido Banti (abstract in *Centralbl. f. Bakteriol.*, ix., 5) found that the diplococcus lanceolatus was present in the lungs and pleural exudation of every one of the forty-seven cases of fibrinous pneumonia examined. Once only was it associated with the staphylococcus pyogenes aureus and albus, and in four cases other non-pathogenic microbes were present also. But in no case did he meet with Friedländer's bacillus or the streptococcus pyogenes. Dr. Banti has, however, rendered the subject more complicated by his discovery that the diplococcus pneumoniæ occurs in four varieties (of which one is the well-known Fraenkel-Weichselbaum form), differing in their pathogenic properties and degree of virulence when inoculated on animals. Without entering into details, it must suffice to say that he attributes the varying severity of cases of this disease to the special variety of microbe with which it is associated, and he points out that during the years 1886, 1887, and 1890, when the type of pneumonia was relatively mild, only the Fraenkel-Weichselbaum form of diplococcus occurred; but that in 1888 and 1889 the cases were far more severe, and the other three varieties of this micro-organism were far more constantly met with. His investigations also comprise eight cases of secondary broncho-pneumonia,

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which yielded the diplococcus lanceolatus alone or associated with staphylococcus pyogenes aureus, or the latter alone or in association with the streptococcus pyogenes. In exceptional cases other microbes, such as the bacillus pneumoniæ of Friedländer, occurred. The main point of his research seems to be the well-nigh invariable presence of the diplococcus lanceolatus in lobar pneumonia, not only in the exudation in lung and pleura, but often, and probably always, also in the blood; and that variations in the intensity of the disease depend on differences in the virulence of the microbe; and lastly, that complications are as a rule excited by the same agency.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

THE objections raised to the new scheme by the professorial staffs of the London teaching colleges have been followed by other objections from the provincial colleges. The professors of the Birmingham colleges have met and adopted resolutions demanding an increase of four provincial representatives on the Senate and of four on the standing committee of Medicine, and they add that without these additions they decline to enter on any further consideration of the scheme. The other provincial colleges will probably soon follow the lead of Birmingham in the demand for increased provincial representation, and this, if granted, will necessitate another recasting of the Senate and of the standing committees. We may direct attention to the remarks of Mr. Erichsen, addressed to the members of University College at their annual meeting, and which will be found reported in another page. At a meeting of graduates of the University of London, held on Wednesday, the 18th inst., it was decided to take steps to oppose the latest revised scheme. A provisional committee, consisting of Dr. J. B. Napier, M.D. (chairman), Dr. W. E. Grigsby, LL.D., L.C.C., Dr. Baines, M.D., Dr. W. J. Collins, M.D., M.S., B.Sc., Dr. J. W. Carr, M.D., B.S., Mr. H. Austen, M.B., B.S., was appointed, and the following, to whom communications may be addressed, are the hon. secretaries: Mr. J. G. Joseph, LL.B., B.A., 3, Harcourt-buildings, Temple, E.C.; Mr. H. J. Waring, M.B., B.Sc., St. Bartholomew's Hospital, E.C.

TUBERCULOSIS IN CHILDREN.

AN analysis of the relative frequency of tubercular (and scrofulous) lesions in children has been made by Müller,[1] based on 500 post-mortem examinations made at the Munich Pathological Institute from 1881 to 1888. Of this number, in 150 tuberculosis was the cause of death; in 59 it accompanied other disease. The majority (76) of the deaths due to tubercle occurred at less than five years of age. The latency and limitation of the process to certain parts—viz., glands or joints—are pointed out as characteristic of this period of life. The lungs were involved in 173 cases, but not so much with regard to the apical as the middle and lower parts, those nearest to the bronchial glands, which were generally caseous. The condition in the lung was one of caseous pneumonia, and it is inferred that the bacilli may pass through the lung without settling there, but, arrived at the glands, remain in them. Of other lymphatic glands, the cervical were most often diseased, and the inspection of these after death is recommended. Müller regards the tendency of such glands to caseate to be a leading feature of tuberculosis in children. Tubercular meningitis occurred in forty cases; and the general statistical result of implication of other organs is given as follows: Lymphatic glands, 170; pleura, 111; spleen, 10; kidney, 68; intestine, 58; liver, 51; bones, 36; peritoneum, 27; brain, 12; heart, 8; stomach, 5; pericardium, larynx, each 4; tonsils and submaxillary gland, each 3; spinal cord, adrenals, each 2; œsophagus, parotid, thymus, Fallopian tube and ovary, epididymis and testicle, each one. Dealing with a part of the same subject in a paper read before the New York Academy of Medicine on Jan. 20th, Dr. Northrup[2] analysed 125 post-mortems in cases of general tuberculosis recorded at the New York Foundling Hospital. His investigation also went to show the comparative frequency of primary tubercular infection of bronchial glands. In thirty-four cases the lesions were so disseminated as to forbid any positive determination of the primary focus. In twenty where these glands were infected, there were cheesy masses in the lungs and general tuberculosis; in forty-two such caseation was limited to the bronchial glands, but there was general tuberculosis; in thirteen, caseous bronchial glands, miliary tubercle in lungs; in thirteen the bronchial glands alone were tuberculous; in three the primary infection was obviously in the mesenteric glands. Inoculation experiments were related to prove the latency of the tubercular virus in the bronchial glands of apparently healthy subjects. Arnold's experiments, proving the path of transmission of inhaled dust from the lungs to the glands, were claimed in support of the probable course taken by the bacilli. Dr. Roosevelt considered primary infection of the bronchial glands to be equally frequent in the adult, and suggested that the lungs were attacked subsequently by material from the glands entering the circulation through the medium of the thoracic duct.

[1] Abstract in Centralbl. f. Bakteriol., No. 5, 1891.

LIFE INSURANCE AND PROFESSIONAL SECRECY.

THE French Court of Appeal has just delivered judgment in a case in which a widow had brought an action against a life assurance company for the amount of her husband's policy, which the company declined to pay because the medical man who had attended him refused to fill up the usual form with the name of the disease and its duration, declaring himself bound by the law of professional secrecy not to reveal the nature of his patient's disease. The court has decided against the company, holding that the medical man himself is the sole judge as to whether facts revealed to him by a patient were confided to him under the seal of professional secrecy.

THE PREVENTION OF STREET ACCIDENTS.

WHETHER it be due to reckless driving, to the hurry of pedestrians, the mere excess of traffic, or the carelessness of parents who allow their younger children the run of crowded streets, the number of accidents in the London thoroughfares is alarmingly great. It has recently been stated that during the year 1889 5000 persons were run over, in the majority of cases by covered vans or carts. The obvious inference need hardly be insisted on. A driver seated aloft, under the shadow of a canvas awning, is with regard to vision clearly under conditions not unlike those of his own horses. He is practically between blinkers, the sides of his van, and his observation of wayfarers is correspondingly limited. Some alteration for the better is certainly not impossible. As a step in the right direction we would suggest the adoption of a driving-seat projected much more forward than is now usual, combined with the use of a covering, where this is needful, more cut away at the sides. Exact lateral observation could not thus, indeed, be assured, for the simple reason that a driver's horses are his chief concern; but it would be rendered much less difficult, and the danger of accident would be decidedly lessened. For other safeguards we must look to the better regulation of traffic, and to greater personal care on the part of foot passengers. It is further most important that police authorities should oblige parents whenever possible to provide for the proper control of the numerous children who

[2] Boston Med. and Surg. Journ., No. 6, 1891.

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now throng some thoroughfares literally among the horses' feet. The more we contemplate the matter the more are we surprised that children so recklessly exposed are comparatively so seldom injured.

PRODUCTION OF EXOPHTHALMOS.

AT a recent meeting of the Académie des Sciences, Dr. Stilling made a communication with reference to the production experimentally of exophthalmos. He carried out his observations on rabbits, and his method was to tie both external jugulars, and to cut through the sympathetic on one side. The result was the production of œdema of the face, of the nasal mucous membrane, a flow of tears from both eyes, exophthalmos on both sides, prominence of the lids, and slight upward deviation of the eyes. All the symptoms disappeared on the day after the operation, with the exception of the exophthalmos, which lasted from six to ten days. It was found that simple ligature of the veins produced slighter exophthalmos than was produced by this procedure together with the section of the sympathetic. No alteration was found in the orbital tissue or glands; but in the ocular muscles, in a case in which exophthalmos had been present ten days, there were found changes consisting chiefly in a loss of striation and a granular change in the fibres. This change, as well as the exophthalmos, Dr. Stilling considers to be due to engorgement of the veins of the orbit; but he is unable to offer a satisfactory explanation of the increase of the exophthalmos through section of the sympathetic on one side.

A CASE OF MELANCHOLIA.

DR. FRANK CHURCHILL relates a case in the *New York Medical Record* which is of some interest. The patient was a young married woman, who, after weaning her child, began to suffer from sleeplessness and gradually increasing loss of health and strength. In a few months she had become absent-minded, moody, and despondent. Her condition was rendered more serious at this juncture by receiving a telegram announcing the death of a friend by suicide. When seen by Dr. Churchill, she was manifestly a victim of melancholia. She had delusions of sight and hearing, and she "felt something urging her to do this or that, like killing her baby." On physical examination, the only lesion found was a bilateral laceration of the cervix uteri. General treatment by good feeding and hypnotics was tried first, and in seven weeks her condition physically was much improved. Her mental condition, however, was unaltered, and an operation on the cervix was then performed. On the third day after the operation it was evident that a mental change was taking place, and at the end of a week she was quite sane. Her recovery was uninterrupted. The rapid improvement after the operation is certainly significant, but it is not easy to be quite sure that any profound mental impression, such as that produced by any operation, might not have produced the same effect.

INTRODUCTION OF OXYGEN INTO THE STOMACH.

DR. LANDI mentions, in the *Revista Generale Italiana di Clinica Medica*, some observations on the effect of oxygen on the interior of the stomach, which he has recently conducted under the advice of Professor Grocco. The method adopted was to introduce an œsophageal tube into the stomach, which was then partially filled with water; oxygen was passed into the tube and made to bubble up through the water, and the patient was desired to eructate the gas, which was accomplished without difficulty, either by making gentle pressure on the abdomen or without any external assistance at all. The stomach was again filled with oxygen once or twice, so that the interior should be acted upon by it throughout. Dr. Landi found, as the result of his observations on patients, that this treatment has the effect of improving gastric digestion, and that it could be employed as a therapeutic measure in cases of atonic dyspepsia. Amongst the results of the observations on the gastric juice, Dr. Landi came to the conclusion that the free hydrochloric acid in it has less effect on digestion than has generally been ascribed to it.

CONGRATULATORY DINNER TO SIR GEORGE MURRAY HUMPHRY, M.D., F.R.S.

A CONGRATULATORY DINNER was given by the Cambridge Medical Graduates' Club to Sir George Murray Humphry on Tuesday evening, Feb. 24th. A large and representative gathering assembled to do honour to the guest of the evening. In proposing his health, Sir George Paget said the members of the club and their guests had met to offer their congratulations to Sir George Humphry on account of the honour of knighthood which had been bestowed upon him by Her Majesty the Queen. Sir G. M. Humphry responded to the toast at some length, and gave an amusing account of the difficulties under which the study of anatomy had been prosecuted at Cambridge. At the conclusion of his speech the company rose and gave the guest of the evening three times three with musical honours. Dr. Dickinson, the Senior Physician to St. George's Hospital, proposed the toast of "The Guests," coupling with it the names of Mr. Bryant, the President of the Royal College of Surgeons, and Dr. Austin Leigh, the Provost of King's College, Cambridge, as the heads of the two Colleges of which Sir George Humphry is a Fellow. Dr. Hare, Consulting Physician to University College Hospital, proposed the health of the Chairman, which was drunk with enthusiasm. Sir George Paget returned thanks, and also proposed the health of the hon. secretaries of the club, to whose exertions he said they were indebted for a very successful evening.

HER MAJESTY THE QUEEN has been graciously pleased to command that in future the British Nurses' Association shall bear the style and title of "Royal." The Association has been in existence three years, and its first and primary object has been the publication of a register of trained nurses. The first annual register is now in course of issue, and in time will undoubtedly prove of much value to medical men and the public. The Association has already been joined by a large number of well-known medical men, and by about 3000 trained nurses, working in every part of the Queen's dominions. It carries out various important benevolent schemes for the good of its members. The offices are in Oxford Circus Avenue, W.

IT is announced that Dr. von Gossler, Minister of Public Worship, has issued an order containing instructions as to the regulations to be observed in connexion with the sale by apothecaries of "Tuberculinum Kochii." This order requires all apothecaries engaged in the sale of the fluid to return to Dr. Libbertz at Berlin whatever quantities of the remedy still remain unsold within six months of the time of purchase, when a fresh supply will be given in exchange without further cost. The price of the remedy has been fixed at six marks per cubic centimetre, or five cubic centimetres for 25 marks.

THIS year the Council of the Royal Medical and Chirurgical Society have fixed the hour of five o'clock for the annual meeting. We understand that the address of the President (Mr. Timothy Holmes) will be somewhat of a departure from the old lines, and that the meeting will, to a great extent, be spared the details of the annual obituary, which has for many years furnished the material for the presidential address. Several important changes in the by-laws have been proposed, and we understand that more are in contemplation.

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BY permission of the Senate, a lecture on certain points in the Physiology of Diabetes will be given in the theatre of the University of London on Tuesday, March 4th, at 5 o'clock, by Dr. A. E. Wright, late "Grocers' Student" in Sanitary Science.

MR. VICTOR HORSLEY asks us to allow him to state that he is not and never has been a candidate for the Chair of Anatomy now vacant at the Royal Academy.

"REVISED SCHEME" OF THE UNIVERSITY OF LONDON: ADDRESS BY MR. ERICHSEN.

AT the annual general meeting of the members of University College, on Wednesday, Feb. 25th, Mr. Erichsen, the President of the College, in moving the adoption of the report, dealt *inter alia* with the subject of the new "revised scheme" for the reconstitution of the London University in its relation to the medical profession. In directing attention to the question he said: At the last annual meeting we were still in negotiation with the University of London with regard to its reconstitution, and in the month of June or July these negotiations appeared to have been brought to a fairly satisfactory termination. We had agreed upon the principal points in connexion with that reconstitution, leaving certain questions of detail—although some of these questions of detail were of very high importance—still unsettled; and there was a general consensus of opinion between the delegates of the two Colleges and the University that some of these points might perhaps be left for settlement by the Lord President of the Council. Since that period a complete change has come over the scene. The kaleidoscope of the University of London has been again shaken, and a new and most startling figure has made its appearance. Since the commencement of this session a scheme called the "revised scheme" of the University has been propounded. That "revised scheme" differs most essentially from any of its predecessors on two particular points. In the first place, it provides for admission into the reconstituted University of provincial colleges to be constituent colleges of that University, a provision which necessarily alters the face of things entirely. That reconstituted University would no longer be a University, as originally contemplated, in and for London with an open side, but one quite as much for the whole of England as for London, and having constituent colleges scattered all over the country. And, further, it is a provision which is in direct contravention of the recommendation in the report of the Royal Commission upon this very point. I will not say more upon this particular subject, because it is a matter that is perhaps a little outside our province, and we must look upon it as *un fait accompli* which certainly now cannot be undone. But there is another point to which I wish to direct your attention. It is also a novel one in the "revised scheme," and which touches the medical faculty of this College, medical schools, and the profession in London generally very closely. It is the provision in the new scheme by which the University of London has associated itself with the two Royal Colleges of Physicians and of Surgeons. Now, most of you are aware that for some years past there has been a general demand in the profession in London for the establishment of a medical degree in the metropolis, readily accessible to students at a moderate cost, and on not too high a level—a degree, in fact, that would be on the same level as that of the best Scotch universities like that of Edinburgh, and that demand was very much and very closely pressed, up to three years ago. The two Royal Colleges proposed a scheme in virtue of which their licentiates and members could under certain terms obtain this degree. That scheme was submitted to and condemned by the Royal Commission, and since then the matter has dropped. But those who were anxious for the institution of an M.D. degree upon the terms I have mentioned necessarily turned towards the reconstitution of the University of London or the foundation of a new "Albert" University in London in the hope that one or other of these bodies, whichever might come to the fore, would be enabled to grant the degree that was desired. Still the University of London has sent in its "revised scheme" which is generally understood to be its ultimatum. And now what does that scheme propose in reference to the medical degree? The demand has been for a doctor's degree—an M.D. degree—equal to that which is given by the University of Edinburgh. Instead of that the reconstituted University leaves the old M.D. degree of the London University exactly where it was, as difficult of access as it ever was before, hedged in by the same difficulties of matriculation and preliminary scientific examinations — such obstacles to its attainment by the average student in former days; and now so great are these obstacles, and so difficult of attainment is this degree, that in all probability less than 5 per cent. of the medical students of London are able to take it. The rest must go elsewhere in search of a doctor's degree. All this is left exactly where it stood—and perhaps very properly left, for I should have been sorry to see a degree of such high standing as this, to which so many eminent men in the profession owe their doctorate, in any way lowered. I think it is of great importance that such a degree should continue intact and be obtained only after a long and serious course of study. But the demand has been for an M.D. degree of a different kind. What has the University of London done? The profession asks for bread, and the University of London gives it a stone, and that stone is the M.B. degree. The M.B. degree is a perfectly valueless thing. It is neither a man nor a boy, but a sort of hobbledehoy degree. Nobody uses it, it does not confer the title "doctor," and it is rarely put on any brass plate. It is a stepping-stone to the other degree, but as a finality—as a final degree—it is comparatively worthless to the profession, and that is the kind of degree which is now proposed to be given by an examination "in combination" (that is the word) with the two Royal Colleges. What "in combination" means it is difficult to say, except that the examinations would in all probability be conducted chiefly by the two Royal Colleges with some kind of assessors appointed by the University of London. But if we look into the constitution of the body which will finally determine the kind of examination that is to lead to this degree, I think it is impossible to be altogether satisfied. That body is called the standing committee of the Senate. It is composed of nineteen persons—viz, the Presidents of the two Royal Colleges, together with a Fellow from each of them; five members of the Faculty of Medicine of the University, and one provincial Fellow. Added to these ten there are to be nine members of the Senate of the University of London. I think it would be difficult to find a body more unworkable or more difficult to bring together or to manage. The two Colleges could easily send their delegates, so could the Senate. The provincial Fellow would always have to come from a distance. But where are the five faculty fellows to come from, and how are they to be elected? Under the new scheme they are to be the representatives of the constituent Medical Colleges—twelve in all—including University and King's Colleges and the nine schools, which are generally looked upon as registered, and finally, the London School of Medicine for Women. Now that is the point to which I wish particularly to direct the attention of the members of the medical faculty in this College—the admission of the London Medical School for Women into the medical faculty of the University. Personally, I have not the slightest objection to women entering the medical profession, or to their studying law or divinity, riding to hounds, shooting grouse, or throwing a fly over a salmon. They may do anything they like, according as their instincts or their abilities direct. But this is introducing a new element into the constitution of the examining bodies and the governing bodies of the University of London, because five faculty members of this standing committee will be elected by the faculties of the constituent colleges, of which the London School for Women would constitute a part. The faculties of the constituent colleges, according to the revised scheme, are composed of teachers of these constituent colleges, and they are all put upon a line; there is no distinction made, so far as appears on the scheme, between the best and most important schools in the metropolis, such as our own College, St. Bartholomew's or Guy's Hospital, and the smaller schools. I cannot conceive anything that is more likely to lead to disunion, disagreement, and trouble of all kinds between the medical schools in London than for the twelve schools, including the London School

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of Medicine for Women, to elect somehow or another the five faculty members. I am only thankful that I am no longer connected with a medical school to have to take part in this kind of election. Medical schools in London are not particularly harmonious amongst themselves, and how this election of five faculty members out of twelve schools is to be managed the scheme does not say, and I cannot form any conception. It seems to me to be an utterly unworkable and certainly a most undesirable arrangement. These are the chief points to which I wish to direct your attention in connexion with the medical department of this scheme; and so far as I am enabled to understand it—and I have given the best attention that I could to the subject—that is the portion of the scheme that I, as a medical man of some experience in London in teaching, and as having sat for a long time upon the Council of the Royal College of Surgeons, and served the office of president in that College, should most emphatically condemn. The scheme does not give the profession in London the M.D. degree that it urgently needs and has repeatedly demanded. It practically throws the whole of the medical education of the metropolis into the hands of the corporations, and it admits women for the first time as exercising a control over the management of that education.

In reply to the Rev. Henry Solly, who asked whether the scheme did not require Parliamentary sanction before being really an accomplished fact, Mr. Erichsen explained that he merely meant that the union between the provincial colleges and the University of London was *un fait accompli*, and not that it was a legalised proceeding.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.[1]

THE debate arising out of Professor B. Fraenkel's paper read before the Berlin Medical Society on December 17th, has at length concluded. The chief speech on the 18th inst.[2] was that in which Professor Fraenkel replied, and his reference at the close of his remarks to Dr. Liebreich's new remedy foreshadows continued discussion on the subject of tuberculosis at this Society, of which Professor Virchow is the president.

The proceedings on Feb. 18th commenced by Dr. Grabower reporting further concerning the two patients of the Moabit Hospital which he had shown to the Society (p. 389). Under further treatment the fresh miliary nodules in the larynx had disappeared. The tubercular character of these nodules had been proved by microscopic examination of excised portions; so that there was indubitable evidence of the occurrence (during this treatment) of grey tubercles in previously healthy parts, and its later subsidence, without leaving any defect or scar in the mucous membrane.

Professor VIRCHOW showed specimens from a case which had received thirty-six injections from Nov. 27th to Feb. 2nd, death occurring on the 8th. He remarked that the case had been sent from another institution, and incidentally commented on the paucity of fatal cases reported elsewhere as compared with those at the Charité, where they amounted to twenty-one last year, twenty in January, and ten in February. The specimens showed a recent ulcer at the posterior extremity of the vocal cord; a large mass of recently caseated bronchial glands; slight old disease of one apex, with recent caseous and ulcerative changes that must have arisen during the period of injection. Miliary nodules, mingled with recent catarrhal hepatisation, were scattered throughout the lung.

Dr. LEO JACOBSOHN, in resuming the debate, asked whether the disappointing results noted in many cases were not due to a disregard of Koch's statement that the "initial stage of phthisis should be the sole object for treatment;" and that his remedy can only "influence living tuberculous tissue, not acting on the dead tissue." Evidently Koch only had in view cases of such recent infection that all the specific tissue was still active, and would not consider as in the "initial stage" any case in which the process had become arrested and dead masses encapsuled. Phthisis in that very early stage might not be revealed by any physical signs or febrile movement, so that one might say we never do detect *commencing* phthisis, but only that which is more or less advanced. That must be borne in mind in attempting to test the truth of Koch's prophecy that he hopes to certainly cure commencing phthisis. Still, his remark does not apply to florid and hectic cases, which are not favourable for treatment. In attempting to differentiate an initial phthisis "in Koch's sense" all such cases must be discarded as show an improvement in general symptoms, since such abatement indicates cessation of absorption of the morbid products, because of their encapsulation. In such cases a cure in the fullest sense of the word is impossible. On the other hand, that very unusual improvement takes place under Koch's treatment even in the second stage of phthisis, and in those of extensive infiltration, is indubitable.

Dr. B. FRAENKEL, in his reply, said that he could not traverse all the ground taken by the various speakers in this debate, but would content himself with some general remarks. The original statement that Koch's remedy destroys tuberculous tissue had been borne out in many of the specimens shown by Professor Virchow, which showed destruction of parts admittedly tuberculous. This had also been observed in the living subject; but Professor Virchow had said the destruction involved the surrounding tissue rather than the tubercle itself, and in that way explained the apparent effect on the latter. Nevertheless, it seemed to the speaker that "tuberculin," as it is now officially termed, acts like a powerful caustic on parts where tubercle bacilli flourish and excites therein an inflammatory change leading to necrosis. He said "in parts," because in specimens brought before them they had seen that by no means all the tubercle is acted on. Miliary tuberculosis, foci of caseous pneumonia, and tuberculous ulcers were met with in injected cases. In using the term "tuberculous tissue" he only meant to imply that the changes excited by the remedy took place in parts where tubercle bacilli are seated, and are producing changes. If this be so, he must still hold tuberculin to be a specific for tuberculosis, and thence arises the question how it is that so many objections have been raised to its efficacy. The answer, he thought, depends on the fact that tuberculin (1) leaves the tubercle bacilli undisturbed, and that (2) it develops some injurious bye effects (*Nebenwirkungen*). In very many cases the "tuberculous tissue" is so destroyed as to allow of the bacilli being directly removed from the body. This is especially the case in cutaneous tuberculosis, in that of the pharynx and larynx, in some cases of tuberculosis of the lung, and in intestinal tuberculosis. Here the conditions are most favourable. When ulcers are formed which still contain bacilli, and yet heal, the healing process is due to the granulations that are formed resisting the further inroads of the bacilli. This may explain the variations observed with respect to the characters of the ulcers and their tendency to heal. Professor Virchow had shown specimens of partially cicatrised intestinal ulcers, and similar specimens had been elsewhere shown by Dr. Guttmann and Professor Rindfleisch. Thus in the living as well as in the dead subject it had been shown that under certain conditions the cure of tuberculous processes could be effected by the action of tuberculin. When the bacilli are not so favourably placed, but are seated within closed cavities, or in caseous nodules, or with peribronchitis, or even below the epidermis or deeply beneath the surface of mucous membranes, then either the materials must be absorbed or the bacilli become encapsuled. The description given by Schimmelbusch of partially cured lupus cases renders it probable that tubercle nodules and bacilli may still be found beneath an apparently healed skin. Dr. Fraenkel did not know whether this was also the case in those instances observed by himself and others, where tuberculous infiltration of mucous membrane gradually subsided without ulceration. He had not yet had the opportunity of examining such cases microscopically. As to closed cavities, or where a peribronchitis undergoes such a change as is seen in superficial mucous membranes, then there occurs that permanent fever of which he had spoken, and which had been very often observed. This fever, which excites much anxiety, is owing to the continued absorption of the breaking-down tissue. Of much more importance is the possibility, suggested by Professor Virchow, of the supervention of general miliary tuberculosis. In his opening address he (the speaker) had pointed out that sometimes in the vicinity of existing foci an erup-

[1] See THE LANCET, vol. i. 1891, pp. 215, 271, 328, 389, and 450.
[2] Berliner Klinische Wochenschrift, No. 8, 1891.

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tion of tubercle will appear at the early period of the injections; but often so early as to suggest rather that the tubercles had been present before, and only brought into view by the changes exerted by the tuberculin in their vicinity. But Dr. A. Fraenkel showed a case in which a previously healthy part (the tongue) became the seat of tubercle whilst undergoing a long course of treatment. Turning from these local extensions of tubercle to the more important question whether general tuberculosis can be excited by Koch's remedy, he pointed out that the liability to miliary tuberculosis was not limited to those who are being injected with tuberculin. The possibility of miliary tuberculosis being evoked by the remedy must be admitted, especially if the tubercular process involve the walls of veins or lymphatics; for then the bacilli would, through the breaking down of the deposit, gain an easy entrance into the circulation, and be disseminated throughout the body. But this hypothesis can only be sustained when at least three weeks have elapsed between the appearance of the miliary tuberculosis and the injections, since inoculations in animals show that this period is required for the development of tubercle after the entrance of bacilli into the body. Respecting the age of tubercle, he remarked that he had formerly described at that Society a case in which tubercles had been observed in the choroid from May 22nd until Oct. 1st. Specimens showing the presence of tubercle had been exhibited in which more than three weeks had elapsed after the injections, and it must therefore be deemed probable that in certain cases a miliary tuberculosis may arise under the influence of Koch's remedy. The cases brought forward by the President showed nothing special; the most unusual one was that of tuberculosis of the epicardium. The anatomical conditions did not prove the alleged cause; it must be shown that in the bodies of the injected general miliary tuberculosis is more frequently met with than in cases of phthisis not treated in this manner. However, in view of the theoretical possibility of the supervention of miliary tuberculosis, physicians must attribute its occurrence in some cases to the action of the tuberculin until the contrary is proved. Just as a general fever may be excited by retention of the bacilli within the body, so do we see "the possibility, indeed the probability, of miliary tuberculosis being generated." As regards harmful bye effects, these, too, must be admitted as probable. Among them is the occurrence of inflammatory changes in the lungs, the four varieties described by the President. He would only remark that the invasion of caseous pneumonia in phthisis had previously been discussed—viz., as to whether it arose out of catarrhal pneumonia excited by pulmonary hæmorrhage. Professor Virchow now suggests that material filled with bacilli taken into the lung is able to excite caseous changes, and there is no ground for disputing this provided that a sufficient time is allowed for the development of the bacilli, but not if such inflammatory changes arise on the day after the injection. If a pneumonia occur a few days after injection, it must be catarrhal; and so long as the contrary is unproved, this must be considered one of the risks of the treatment. So, too, as regards perforation of the serous membrane under the influence of tuberculin. He had reported such an event in the intestine, and Dr. Lazarus had seen one in the pleura. Such events might arise apart from the treatment, but this might hasten them, so that here was another danger to be reckoned with. Then tuberculin is a remedy which is dangerous *per se*, imposing responsibility on him who employs it. Whenever the slightest unusual change occurs, he asked himself whether that might not be of ill omen; or, if fever arise, was it due to general tuberculosis? If patients complained of headache, or if any intestinal symptoms occurred, he always felt the need of great caution, and considered a great responsibility rested on the physician using the remedy. But the risks must be taken into the bargain. With the creasote treatment he had never seen anything like the effect of that produced by Koch's treatment. So that on the one hand we have a remedy involving risks, which cannot be disregarded; and on the other a remedy which offers prospect of cure to many hitherto incurable cases. The physician must act on the same lines as the surgeon in risking something in prospect of saving life. The attempt must be made to separate clinically the cases in which dangers may arise and those in which there is prospect of cure. Care in dosage alone does not suffice, for the dangers have been observed in some which had only received a few milligrammes. Rather must one seek by improved diagnosis to separate the unsuitable from the suitable cases. In conclusion, Dr. Fraenkel said that since the last sitting he had, through Dr. Liebreich, been made acquainted with a remedy which, without exciting fever or local inflammation, has given astonishing results in six cases of laryngeal phthisis in his policlinic. A similar excellent result has been observed by Dr. Paul Heymann; and as soon as permitted Dr. Liebreich proposed to lay the details of his remedy before the Society.

LUNACY INQUIRY.

IN pursuance of a petition to the Lord Chancellor, and an order consequent thereon, an inquiry has been held in Queen's Bench Court V., before Sir Alexander Miller, one of the Masters in Lunacy, and a special jury, as to the alleged lunacy of Mr. Francis Henry Paget, a gentleman formerly residing at Birstall, in Leicestershire, the petitioner being his daughter, Mrs. Walker, of Maunby Hall, Thirsk, Yorkshire. The case on behalf of the petitioner was that Mr. Paget was neither dangerous to himself nor to others, but that, owing to an illness which had come upon him in 1889, his brain had become affected, and that consequently he was unable to manage his own affairs. He was now fifty years of age, and had an income of about £1400 a year. He had been married, having a daughter, now Mrs. Walker, the petitioner. In 1883 he was separated from his wife and left Birstall, where he had resided, selling the property, and went to live at the County Club at Leicester, where it was suggested he led a somewhat irregular life. In September, 1889, he was out shooting on a farm which belonged to him in Dorset, and was seized with a severe illness, attributed to a complaint from which he had previously suffered, and which resulted in a state of diseased brain.

Evidence was given that Mr. Paget suffered from loss of memory and from delusions. Mr. Francis Joshua, who attended him after the seizure, formed the opinion that he was of unsound mind, and gave evidence to that effect. Dr. Fielding Blandford and Dr. Maudsley had also examined him, and they were likewise of opinion that he was of unsound mind and incapable of managing his property or affairs. Dr. Marriott of Leicester gave evidence that Mr. Paget was improving in his mental condition, that he had no delusions, was able to read and do simple sums in arithmetic. On cross-examination Dr. Marriott said there could be no doubt that Mr. Paget had suffered from severe disease of the brain, but he regarded it as an ordinary seizure. In July last there had been a wonderful improvement. Despite the experts and the evidence called for the petitioner, he did not regard Mr. Paget as a lunatic. He was not a man of sound mind, but there was a marked distinction between the two. Mr. Berkeley Hill deposed that in conjunction with the last witness he had examined Mr. Paget in July in regard to his mental powers. To several simple questions he answered satisfactorily. His difficulty was in remembering matters, and witness formed the conclusion that he had suffered from syphilitic disease of the brain, but had tolerably improved. Some further evidence having been given, Mr. Bucknill, Q.C., addressed the jury on behalf of the alleged lunatic. Having pointed out that the evidence in support of the petition was contradictory, he severely animadverted upon the conduct of the petitioner, and contended that the proceedings were not the outcome of pure filial piety. He appealed to the jury to say that Mr. Paget was improving, and that, although his memory was impaired, he was still quite capable of managing his own affairs, and that he was not a lunatic.—Mr. Crump, Q.C., then addressed the jury, urging that the proceedings were approved by the chief members of the Paget family, and that the opposition arose entirely from Mr. Miles, the deceased solicitor, of Leicester, who died by his own hand. He urged that this case was on "all fours" with the celebrated Wyndham case, where, as the result of the jury finding that the gentleman was not insane, he was allowed to do as he chose without any control, and with the result that he dissipated a splendid fortune. This, he contended, would be the result unless some control was placed upon Mr. Paget by the appointment of a Committee in Lunacy for the administration of his affairs under the court. On the conclusion of the learned counsel's address the court was cleared in order that the

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alleged lunatic might be examined before the master and the jury in private. The jury retired at a quarter to three o'clock. They were absent only ten minutes, and unanimously found that Mr. Paget was of unsound mind, but that he was not dangerous, though incapable of taking care of himself or of managing his affairs.

Upon the evidence, and after personal inquiry and examination, the jury arrived at the only conclusion open to them; for even Dr. Marriott admitted that Mr. Paget was not of sound mind. All who have experience of paralytic seizures from cerebral lesion, especially if there is a syphilitic taint, know how very frequently the consequences show themselves in mental enfeeblement and loss of business-like qualifications which the individual may have previously possessed. The loss of memory which almost invariably accompanies this condition may be a not unlikely means of causing the individual to do an unintentional injustice in one direction or another when writing out his will or making some similar business effort. Again, this enfeebled condition of mind is apt to cause the individual to take such likes or dislikes to those about him as he would never have done had he been in full possession of his faculties. So long as a lunatic or person of unsound mind is not a source of danger to himself or to the community, we think that a reasonable latitude should be given to him in spending his money or indulging in innocent foibles. But we are strongly of opinion, on the other hand, that no unreasonable obstruction ought to be placed in the way of the affairs of a lunatic who is himself unable to manage them being handed over in a legal and proper manner to the control of such a committee as may be approved by the Chancery authorities.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

THE tenth annual meeting of the above Congress will take place at Wiesbaden from April 6th to 9th, under the presidency of Professor Leyden of Berlin. The subjects for general debate are: 1. Biliary Calculous Disorders, to be opened by Dr. Naunyn (Strasburg) and Dr. Fürbringer (Berlin). 2. Koch's Remedy in Pulmonary Tuberculosis and other Internal Tuberculous Diseases. 3. Angina Pectoris, to be opened by Dr. A. Fraenkel (Berlin) and Dr. O. Vierordt (Heidelberg). The following is a list of the papers promised for the meeting:—Dr. Kahler (Vienna): Intermittent Albuminuria. Dr. Mosler (Greifswald): the Treatment of Leukæmia. Dr. T. Schott (Nauheim): the Differential Diagnosis of Pericardial Exudation and Cardiac Dilatation. Dr. Knoll (Prague): (1) Disorders of Circulation; (2) Morbid Changes of Striped Muscle. Dr. Brieger (Berlin): Chemical Changes in Infectious Diseases. Dr. Rosenstein (Leyden): the Diagnosis of Hypertrophic Cirrhosis of the Liver. Dr. Quincke (Kiel): Hydrocephalus. Dr. Eichhorst (Zurich): Observations on the Patellar-tendon Reflex in Tabes Dorsalis. Dr. Edelfsen (Kiel): (1) the Origin of the Vesicular Murmur; (2) Varicella Statistics. Dr. Tappeiner (Munich): the Diuretic Action of Phenylmethylpyrazolcarbonic Acid. Dr. Friedländer (Leipsic): (1) the Method of Mathematical Diagnosis of Acute Articular Rheumatism and of all forms of Central Rheumatism; (2) Etiology of Bright's Disease. Dr. Leubuscher (Jena): Clinical Researches on Acid Excretion in Mental and Nervous Diseases. Dr. Schmaltz (Dresden): Examination of the Specific Gravity of Human Blood, and its behaviour in Anæmic Conditions. Dr. Mordhorst (Wiesbaden): Diagnosis and Treatment of Gout.

The secretary of the Congress is Dr. Emil Pfeiffer of Wiesbaden.

HOSPITAL ABUSES AND GENERAL PRACTITIONERS.

ON Monday last a meeting of medical men in general practice was held at 29, Threadneedle-street, E.C., to consider the question of hospital abuses and the advisability of taking collective action to make the views of general practitioners as regards hospital reform known to the Special Committee of the House of Lords now sitting to inquire into hospital management. Among those present were: Messrs. George Brown, M.R.C.S. (chairman), T. R. Atkinson, M.R.C.S., F. H. Alderson, M.D., J. B. Cook, L.R.C.P. Ed., James Dawson, M.D., W. Piercey Fox, L.R.C.P. Ed., T. C. Winn, M.R.C.S., A. C. Dove, M.D., F. H. Corbyn, L.R.C.P. Ed., and Hugh Woods, M.D. After considerable discussion the following resolution, proposed by Dr. Corbyn and seconded by Dr. Cook, was carried *nem. con.*: "That a provisional committee be formed with a view to organise general practitioners to protect their mutual interests, especially in regard to the abuses of medical charities." All the above-named gentlemen having consented to join the committee, Dr. A. C. Dove was elected hon. secretary *pro tem.*, and the meeting terminated with a vote of thanks to Mr. Brown for presiding.

VIRCHOW TESTIMONIAL FUND.

PROFESSOR HUXLEY, F.R.S., Professor Struthers (Aberdeen), and C. Theodore Williams, M.D., have joined the committee.

The following additional subscriptions to the above fund have been received since the last list was published:—

	£	s.	d.		£	s.	d.
T. H. Huxley, F.R.S. ..	2	2	0	T. Grainger Stewart, M.D.	2	2	0
Sir Joseph Lister, Bart...	2	2	0	T. Bryant, F.R.C.S.	2	2	0
P. Frank, M.D.	2	2	0	W. Priestley, M.D.	2	2	0
J. Althaus, M.D.	1	1	0	Julius Dreschfeld, M.D.	2	2	0
Professor A. R. Simpson	2	2	0	Henry Simon, Esq.	2	2	0
Walter K. Sibley, M.D...	0	10	6	Professor Struthers	1	1	0
John Moorhead, M.D. ..	1	1	0				

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5964 births and 4139 deaths were registered during the week ending Feb. 21st. The annual rate of mortality in these towns, which had been 19·8 and 19·9 per 1000 in the preceding two weeks, was last week 21·6. The rate was 20·4 in London and 22·5 in the twenty-seven provincial towns. During the past seven weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·4 per 1000, and exceeded by 0·3 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 14·5 in Nottingham, 14·8 in Wolverhampton, 14·9 in Hull, and 15·4 in Brighton; the highest rates were 28·6 in Blackburn, 30·9 in Manchester, 31·0 in Huddersfield, and 37·7 in Halifax. The deaths referred to the principal zymotic diseases, which had been 332 and 340 in the preceding two weeks, further rose to 381 last week; they included 126 from whooping-cough, 113 from measles, 49 from diphtheria, 44 from scarlet fever, 27 from diarrhœa, 22 from "fever" (principally enteric), and not one from small-pox. The lowest rates from these zymotic diseases were recorded in Norwich, Hull, and Nottingham; and the highest in Salford, Blackburn, Halifax, and Oldham. The greatest mortality from measles occurred in Leeds, Huddersfield, Halifax, Bristol, Blackburn, and Oldham; from scarlet fever in Bradford; and from whooping-cough in Oldham, Birmingham, Halifax, Salford, and Birkenhead. The mortality from "fever" showed no marked excess in any of the large towns. The 49 deaths from diphtheria included 34 in London, 7 in Manchester, and 2 in Derby. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1287, and showed a further decline from recent weekly numbers; the patients admitted during the week were 113, against 107 and 97 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 428 and 484 in the preceding two weeks, further rose last week to 524, and were 27 above the corrected average. The causes of 90, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were

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duly certified in Leicester, Nottingham, Hull, Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Bristol, Hull, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 26·4 to 21·4 per 1000 in the preceding three weeks, rose again to 22·6 during the week ending Feb. 21st, and exceeded by 1·0 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·3 in Greenock and 16·1 in Leith to 28·6 in Glasgow and 29·9 in Paisley. The 591 deaths in these eight towns showed an increase of 30 upon the number in the preceding week, and included 26 which were referred to whooping-cough, 9 to scarlet fever, 8 to measles, 7 to diphtheria, 7 to "fever," 5 to diarrhœa, and not one to small-pox. In all, 62 deaths resulted from these principal zymotic diseases, against numbers declining from 76 to 50 in the preceding four weeks. These 62 deaths were equal to an annual rate of 2·4 per 1000, which exceeded by 0·4 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had declined from 29 to 13 in the previous three weeks, rose again last week to 26, of which 16 occurred in Glasgow and 3 in Leith. The deaths referred to scarlet fever, which had been 6 in each of the preceding two weeks, rose to 9 last week, of which 5 occurred in Glasgow and 4 in Edinburgh. The 8 fatal cases of measles were within 2 of the number in the previous week, and included 4 in Paisley and 3 in Glasgow. The deaths from diphtheria, which had been 12 and 4 in the preceding two weeks, rose again to 7 last week, of which 3 occurred in Glasgow and 2 in Leith. Of the 7 fatal cases of "fever," 3 were recorded in Edinburgh and 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 228 to 138 in the preceding five weeks, were last week 140, and were 65 below the number in the corresponding week of last year. The causes of 41, or 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·6 and 26·9 per 1000 in the preceding two weeks, further rose to 27·3 during the week ending Feb. 21st. During the first seven weeks of the current quarter the death-rate in the city averaged 32·1 per 1000, the rate for the same period being 23·6 in London and 20·4 in Edinburgh. The 185 deaths in Dublin showed a slight increase upon the number in the preceding week, and included 2 which resulted from whooping-cough, 1 from diphtheria, but not one either from small-pox, measles, scarlet fever, "fever," or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 7 and 3 in the preceding two weeks, were again only 3 last week; they were equal to an annual rate of 0·4 per 1000, the rate from the same diseases being 1·5 in London and 1·7 in Edinburgh. The fatal cases of whooping-cough, which had been 2 and 0 in the preceding two weeks, rose again to 2 last week. One death resulted from diphtheria, corresponding with the number in each of the previous three weeks. The 185 deaths in Dublin last week included 30 of infants aged under one year and 58 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons exhibited a decline of 10 from the number recorded in the preceding week. Three inquest cases and 2 deaths from violence were registered; and 71, or more than a third, of the deaths occurred in public institutions. The causes of 18, or nearly 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

THE ARMY ESTIMATES.

THERE are no important changes to chronicle regarding the Army Medical Service in the Army Estimates for the year ending March 31st, 1892. Vote 2 shows a net decrease of £1400 for the coming year. The estimated cost of the Medical Establishment, pay, medicines, &c., amounts to £292,800, as against £294,200 in 1890–91. There is an increase of £700 over 1890–91 under the head of Pay, &c., of the Medical Staff, but a saving of £1000 in the cost of medicines, as well as one in the estimated amount for pay of Militia Surgeons and civilian medical practitioners and that of the Medical Staff Corps, nurses, clerks, and other subordinates. In addition to the foregoing vote for Medical Services provision for similar expenditure is made in other votes, and among these we notice that the cost of the staff of the Army Medical School is estimated at £7910, and that of the Director-General and Medical Officers at headquarters at £4850.

ARMY MEDICAL STAFF.—Brigade Surgeon Jas. Wilson, M.B., F.F.P.S. Glasgow, is placed on retired pay (dated Feb. 14th, 1891); Surgeon Robert Hippisley Cox, from the Coldstream Guards, to be Surgeon (dated Feb. 25th, 1891).—The undermentioned Surgeons on probation to be Surgeons, ranking as Captains (dated Jan. 31st, 1891):—Thos. Boswall Beach, Edgar Elkins Powell, Coryndon W. R. Healey, James Willes Jennings, Edgar McKenzie Williams, Henry Esmonde Dowse, John Colpoys Connor, M.B., James Edward Carter, M.B., Frederick Wynne Hardy, John Thurlow Clapham, Walter Ap Samuel James Graham, Daniel Davis Shanahan, Charles Wm. Henry Whitestone, M.B., Albert Pearse, Hubert Dempster Mason, and Chas. Dalton.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon C. E. Douglas, M.B., resigns his commission (dated Feb. 25th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Surgeons John L. Thomas to Jamaica Hospital, and Anthony Kidd to the *Bellerophon* (both dated Feb. 19th, 1891); Surgeon Henry G. Jacob to the *Wildfire*, additional (dated March 8th, 1891).—The following qualified candidates for the Naval Medical Service have been appointed Surgeons in Her Majesty's Fleet:—Thos. Christopher Meikle, M.A., M.B., Robt. Wilks Senior, Ernest Edwd. Partridge Tindall, Eric Edwd. Kershaw, Jos. Cudlip Wood, Arthur Henry Howell, Horace Bruce Marriott, Ernest Courtney Lomas, M.B., Norman Lloyd Richards, Ernest Alfred Penfold, M.B., George McGregor, Basil Roberton Clarke, Ernest James Finch, John Kirkup Robinson, M.B., and Hugh Clift (all dated Feb. 11th, 1891).

VOLUNTEER CORPS.—*Rifle:* 2nd Volunteer Battalion, the Royal Warwickshire Regiment: Acting Surgeon R. Bullock to be Surgeon (dated Feb. 21st, 1891).—5th Volunteer Battalion, the Cheshire Regiment: Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) S. H. Munro, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Feb. 21st, 1891).—2nd Volunteer Battalion, the Hampshire Regiment: Acting Surgeon H. W. R. Bencraft resigns his appointment (dated Feb. 21st, 1891).—3rd Volunteer Battalion, the South Staffordshire Regiment: Surgeon and Surgeon-Major F. E. Manby is seconded whilst holding the appointment of Brigade Surgeon in the Staffordshire Infantry Volunteer Brigade (dated Feb. 21st, 1891).—3rd London: William Maurice Abbot-Anderson, M.B., to be Acting Surgeon (dated Feb. 21st, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Edinburgh Division: Acting Surgeon D. Wallace, M.B., to be Surgeon (dated Feb. 21st, 1891).

PRESENTATIONS.—On the 30th ult., at the Norfolk and Norwich Hospital, a handsome dressing-bag, excellently fitted with silver mounts &c., was presented by Mr. Cadge, on behalf of the nursing staff, to Mr. H. C. Nance, upon his leaving the hospital, having held the post of house-surgeon for six years.——On the 11th inst., a handsome silver salver, bearing the inscription, "Presented to Brigadier-Surgeon Sandford Moore, on his marriage, by his brother officers of the Army Medical Staff, 1890," was forwarded to him by Surgeon-General Sinclair, P.M.O. in Ireland.——Mr. Edward Pope, M.R.C.S., of Tring, has been presented by the members of Court Albion, No. 4423, of the Ancient Order of Foresters, on his retirement from the post of medical officer to the lodge, after a service of nearly twenty-five years, with a handsome cruet set, as a token of esteem and regard.

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Correspondence.

"Audi alteram partem."

THE "REVISED SCHEME" OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—I have elsewhere expressed the opinion that the "revised scheme" is very unsatisfactory, seeing that it is not calculated to satisfy the wants which afforded the principal occasion for it and other recent attempts to reconstitute the University of London. I have ventured further to express my own belief that this scheme will fail to prove acceptable to Convocation. I should like, with your permission, to be allowed, as briefly as possible, to explain to your readers my reasons for entertaining these views.

This last attempt at the reconstitution of the University has, like those which have preceded it, been undertaken in consequence of the report of a Royal Commission. The appointment of this Royal Commission grew out of a loud but in part twofold cry. The first element of this cry was of a general character, urging the pressing need of a real "Teaching University in and for London," which should comprise within itself all the faculties of a university. The second element was a cry of a narrower nature (partly included within the former), and having special reference to the need existing in London for an ability to obtain the degree of M.D. by medical students after curricula and examinations less stringent than those necessary for the acquiring of such a degree from the University of London. This latter element of the cry assumed a separate and more or less isolated character mainly on account of the efforts made by the two Royal Colleges to be themselves allowed to grant degrees after appropriate examinations. Some of us have felt all along that the University of London has, in its own way, as an imperial examining and degree-giving body, had a career of distinguished usefulness in the past, and one which in this respect is likely to grow in the future. And, not to speak of its influence in raising the standard of education and of examination in Arts and Science (possibly also in Law), we believe that it has had an admirable effect in elevating the standard of medical education and examination—and that too even elsewhere than within its own walls. The standard of the University of London in Medicine is so high that its degrees are only sought after and obtained by some of the best men; they constitute, in fact, a species of "Honours Degree," obtained, however, only by about 8 per cent. or less of the total number of medical students in London. In the face of this state of things we may ask, in the first place, How does the "revised scheme" propose to meet the acknowledged want so far as the great majority of medical students are concerned? That this scheme meets with the approval of the two Royal Colleges is not difficult to understand, for reasons which you have sufficiently explained in your very able article in last week's issue. If the Royal Colleges do not acquire the right to grant medical degrees, they obtain the nearest approximation to it that seems possible. But if we look at the scheme proposed, apart from corporate interests of this or that kind, we may easily see that, so far as students are concerned, it must entail one or other of two results—either (*a*) it will lead to a lowering of the standard in the case of the medical part of the M.B. examination which is to be conducted conjointly by the two Royal Colleges and the University—any certain prospect of which would, as I believe, surely lead to the rejection of the "revised scheme" by Convocation; or (*b*) it will not lower the standard, and in that case it will not meet the acknowledged want (for which a cry has been so widely raised), and make M.B. and M.D. degrees distinctly more accessible to the great majority of London medical students. It seems delusive to me to say, as some of the advocates of the present scheme in the Royal Colleges do say, that the proposed arrangement "will tend to raise the standard of medical education in London." Why should it do so? The University of London has all along tended to foster a high standard of medical education, and the result is that about 8 per cent. or less of London students obtain its medical degrees. Do the Royal Colleges think that the new conjoint degree of M.B. will be more sought after than that of the University of London alone has been? Yes, possibly, if they lower the standard, but surely not otherwise. But, touching this possibility, other considerations remain. If the new scheme is not to result in a lowering of the standard, and if (as I hear it whispered) the standard for those who are to obtain the pass M.B. is to be distinctly higher than that now enforced by the Conjoint Board for the obtaining of medical diplomas, then my experience as an examiner in Medicine under that Board leads me to believe that the result would be an obtaining of M.B. degrees by a percentage of students only a little if at all higher than the 8 per cent. above cited. And even should I be mistaken in this estimate of the effect of any distinct elevation of the standard in the conjoint examination for men seeking the M.B., I would still ask, Where are we to find the distinctly increased facilities for the acquiring of an M.D. degree by average students under the provisions of the revised scheme,—with the difficult matriculation and preliminary scientific examinations remaining to bar the way precisely as before, with a professional examination for the M.B degree not appreciably lowered (and, be it remembered, this degree of itself gives the holder no right to assume the coveted style of "Doctor"), and, finally, with all the difficulties of the M.D. examination remaining exactly as they were? Surely the belief is utterly delusive. I do not say that those who are in favour of the scheme do not think the facilities will be much greater; I merely say that I see no real grounds for entertaining any such belief.

After what has been so ably said in your two leading articles I need not occupy further space in pointing out some of the more general demerits of the scheme. It is, in my opinion, an inadequate attempt to meet the general demand for a "Teaching University in and for London." Let the University of London go along its own previous lines of growing usefulness as an imperial degree-giving body, and let us have a real Teaching University for London rather than something of a nondescript character which does not profess to be more a University for London than one for all England. And seeing that the Royal Commission pronounced strongly against the inclusion, which has now been made, of provincial colleges in any new scheme, there is much room for doubt as to the view which the Privy Council will take of the means now proposed by the University of London for meeting the general wants as to which the Commission reported. This doubt seems to me to be all the greater by reason of the way in which the new scheme proposes to meet the more special cry in regard to increased facilities for the obtaining of medical degrees by London students. The Commission reported strongly against conferring the power of granting degrees upon the Royal Colleges. But they might also condemn the approximation to this course which is now proposed. What I wish, however, particularly to enforce is this, that even if the standard of the conjoint M.B. were to be distinctly lowered, the facilities offered to London medical students by the "revised scheme" for obtaining an M.D. degree would be scarcely appreciably greater than they are at present, so long as all the well-known difficulties offered by the earlier and the later examinations remain (as it is proposed they should) precisely what they have hitherto been in the hands of the University of London.

I am, Sirs, yours truly,

Manchester-sq., Feb. 23rd, 1891. H. CHARLTON BASTIAN.

THE FACTORY ACT AND CERTIFYING SURGEONS.

To the Editors of THE LANCET.

SIRS,—The text of the Factory Act Amendment Bill is out, and in it we can see that the same cavalier treatment of the military medical service by the Horse Guards is meted out to their civilian brethren by the Government. Sir Andrew Clark, as head of the profession, who has so ably and vigorously taken up the cudgels on behalf of army doctors, will perhaps assist us civilians too with his influence.

Clause 19 of the new Bill abolishes the chief functions of certifying factory surgeons, and thus deprives them of nine-tenths of their income from such appointments. The second section of the same clause certainly reserves their services for the purpose of reporting accidents; but, as every cer-

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tifying surgeon knows, accidents, especially slighter ones, are often never notified to them for report—in any case are few and far between, are paid for at about the rate of a cab fare, and, in fact, as in my own case, yield less than one-tenth of whatever the total emoluments of the appointment may be. Therefore at one stroke I may say we are practically abolished, with a few months' notice to quit, so to speak, for the Bill is to take effect from Jan. 1st, 1892. To many certifying surgeons, in large towns and manufacturing districts especially, these changes are a serious matter. A number of years have elapsed since these surgeons were appointed. The income they derive for this work forms an appreciable amount of their total income, to which they have been accustomed to look to meet the daily necessities of life. Being a public appointment they have often felt bound to attend to its requirements first at the possible sacrifice of private interests. So that in respect to their position they have come to feel that they have acquired so far a vested interest, as great indeed as that of any Government official. It seems to me a rank injustice that a body of men who are doing and have done useful work all over the United Kingdom, in helping to render the working of the Factory Acts efficient, should be summarily deposed and their means of living straitened, not through any fault of their own, but because a body of manufacturers, having egged on their operatives to join them, bring political pressure to bear on Ministers to rescind a portion of these Acts, which, though distasteful to them, are undoubtedly for the public benefit.

Clause 20 of the amending Bill obliges employers to keep copies of certificates of births of "young persons" employed in the factory, to be produced when required by the inspector. Sirs, from my knowledge of the past working of the Factory Act, I do not hesitate to say that such a provision against the employment of children under the legal age will be a farce; or, worse still, it will be a dead letter. Inspectors have quite enough work to do as it is, and cannot attend at the innumerable factories in large towns often enough to keep a check on this point over employers. Many factories they will not be able to visit more than once in several months, where factory surgeons now call once a week or fortnight, and where it is quite necessary they should call, unless the old evils of infant employment are to be gradually and insidiously revived. I am surprised at such a retrogressive step on the part of a Conservative Government. Under present conditions, with factory surgeons living in the various manufacturing localities where they have been appointed, with all their intimate knowledge of their factories, they repeatedly find attempts made to evade the law on the question of age, either wilfully or through ignorance. To appoint a large number of extra inspectors—for a small number will not do—may counteract the evil. But at what an expense, compared to the present method! Dispensers of patronage may find it very delightful to have the gift of numerous additional inspectorships in their hands. But the country will have to pay for them, and our Civil Service estimates are high enough already, in all conscience. As matters stand, the country pays nothing, for the manufacturer pays the certifying surgeon. And, after all, what does each manufacturer pay in the course of a year? The sum is so trifling, such a miserable pittance, that I am astonished that there could have been any agitation capable of evolution from such a microscopic origin. But the Bill is not yet law. To amend the clauses alluded to above I would urge on every certifying surgeon to bring what influence he has, directly or indirectly, to bear on the M.P. for his constituency. Politics being an organised hypocrisy, where good is sometimes done by chance, not for its own sake, but because it is expedient, the medical profession will find their feelings and interests eternally ignored by Government unless they can prove their political power. If they will not take the trouble they must suffer in the future as they have suffered in the past. The importance of this subject, I trust, will stand as my apology for occupying so much of your valuable space, which is so generously and so often devoted to the welfare of the profession.—I remain, Sirs, yours faithfully,

Feb. 25th, 1891. MALLEUS INJUSTITIÆ.

*** The impolicy and injustice of the proposal to practically abolish the office of certifying factory surgeon are referred to in another column, but will receive further consideration in our next issue.—ED. L.

ENGLISH MEDICAL PRACTICE IN PARIS.

To the Editors of THE LANCET.

SIRS,—In his letter of last Saturday Dr. Barnard has asked you a question which is of the most vital importance to all of us here in Paris, and which I venture to think will not be without interest to many other members of the profession, more particularly those who reside in continental towns or other places where a floating hotel population is one of the chief sources of practice. When the suggestion made by *Galignani* first appeared, it naturally caused a great difference of opinion, and two opposite camps were formed, one consisting of the few men who are the favourites of the chemists and the *protégés* of the hotel keepers, who censured in the most scathing terms this proposal of medical advertising; the other comprising the balance of the profession who have never managed to ingratiate themselves with the hotel clerks and chemists' assistants who dispense medical favours, and who naturally thought any way of bringing their names without impropriety before the public worth consideration.

The question you are asked to answer is practically this, Whether those men who have persistently been kept out of the most lucrative practice obtainable, and who have found that no length of waiting avails anything against the prevailing system, should consent to accept an undignified and subordinate position? or whether it is more fair to publish in the English organ of this city a simple list of names and addresses? I dare say that some of your readers would be inclined to advise Dr. Barnard to wait, to practise his profession with dignity and propriety, in the certainty that such an attitude will be rewarded in the long run; and possibly Dr. Barnard, who is comparatively a newcomer, would find it hard to make a suitable reply. I, however, who have been here for fifteen years, can vouch for it that unless a doctor can manage to become *persona grata* with hotel keepers or chemists, he will never by any chance see an hotel patient, except, perhaps, the one out of every five of those recommended to consult him by their friends or professional advisers at home, who has sense enough to refuse to be "choked off" seeing the man he wants by interesting intermediaries. I believe that it was to me that Dr. Barnard alluded when he spoke of a physician who had been practising here for twenty years, and who was unknown to a chemist in the Rue de la Paix. If not, with the slight exception that I have only been here fifteen years, the anecdote might have applied perfectly. A lady, sent to me for the treatment of the morphia habit by her doctor in San Francisco, was advised independently to consult me by the physician who attended her in London. She very naturally thought that I must be a well-known person, but on inquiring for my address at the office of the hotel where she was staying—one of the most important,—she was assured that no such doctor was known, *nor could his name be found in the directory.* This is an arrant falsehood. Determined, however, to find me if possible, she refused the kind offer of the booking clerk to recommend her "the best doctor in Paris," and started for the Rue de la Paix. There, again, I had never been heard of, and the assistant had no idea as to how I could be found. It was by the merest accident that another person in the shop desired the cashier to show him the Medical Directory, where my name was of course found at once.

Some time back an American *confrère*, then starting in this town, but since gone elsewhere, determined to bring about, if possible, a change in the existing state of affairs, and, in order to ascertain exactly how the land lay, he sent round some friends to the chemists who pretended to be in want of the address of a first-rate English or American physician. The result was that the same two or three names were almost invariably given, and, these, curiously enough, were the same as were recommended in the hotels, and in many cases the persons designated were not British practitioners at all.

Let anyone who reads this, and who knows of a patient now or recently under the care of an English physician recommend by the hotel keeper, consult the English Medical Directory or Register, and I will engage to say that in three cases out of four, whatever may be the qualifications of the person guaranteed as an English physician, his name will not be found in either of these volumes, a clear proof that he has no right to bear any such title. It would be easy enough to multiply cases of imposition on the part of

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hotel keepers and chemists. I also know of the case mentioned by Dr. Barnard where 25 per cent. was regularly deducted from the gross total; and it is not long since I was offered the patronage of a leading courier on the same terms.

Some years ago Dr. W. Chancellor, writing to a Baltimore paper from the Continent, expressed himself as follows:—"I feel that I would be but ill acquitting myself of a duty were I to fail to administer an admonition to those of my compatriots who may one day journey into this land, and I hope that they will take heed to what I say, for it is wholesome. I would strongly advise Americans who contemplate travelling upon the Continent to be very chary of patronising physicians recommended by hotel or boarding-house keepers, concierges, porters, &c., without first having inquired of their consul, or their banker, or some friend, as to the standing of the party recommended; for it not unfrequently happens that these parties plot together exclusively as a matter of personal gain, and without any regard whatever for the well-being or interest of those whom they advise. It would be well for persons visiting Europe either to obtain the addresses of competent medical men in the various cities they propose visiting before leaving home, or on their arrival to get advice from some reputable person *out of business and above taking a commission*, otherwise they may have a tenth-rate doctor introduced as the 'former physician of the Emperor,' 'the chief of the hospitals,' 'the doctor to the American Legation,' or some other high-sounding but fictitious title, and they may be left in his hands to be robbed, maltreated, perhaps murdered. Travellers, in fact, should make it a rule *to take any other physician than the one proposed by a landlord, or concierge, or courier*, unless the medical man thus recommended be a compatriot or is endorsed by some disinterested person, and they should *insist* upon having the doctor of their choice, if they have a choice, *really sent for*, taking no excuse for any delay or neglect in regard to the matter." As regards the danger of being murdered, that is perhaps going a little too far, but there certainly is danger to the patient that the hotel keeper's physician may not have independence enough to insist upon sanitary matters distasteful to the proprietor, and so oblige him to run a greater risk than he need do.

I maintain that this practice of the exclusive recommendation of an hotel favourite has degenerated into an unjust monopoly, against which those who have been persistently left out in the cold have a right to protest. As I live within a hundred yards of an English chemist in the Champs Elysées, I am generally supposed to derive a number of patients from this source. I may state that it was on my encouragement, if not at my suggestion, that the proprietor substituted the practice of giving a printed list of English and American practitioners to every English-speaking person inquiring for a doctor, instead of recommending any one man. I am glad to see that Dr. Barnard has had the courage to commence the attack upon this abusive monopoly. I cordially hope that now it is under investigation the subject will be carefully considered by the profession in England, and that it will lead to proper advice being given to patients about to travel on the Continent. If no better advice can be found for a given case, remember Dr. Chancellor's recommendation, "to take any other physician than the one proposed by the landlord or concierge," and, let me add, the chemist. This will always be timely counsel.

In conclusion, let me add, that to a certain extent the public can judge of a man by his fees. There is no English physician here who asks more than a guinea a visit. Most of us charge the more convenient price of a louis. If, then, a medical account exceeds these charges the patient may suspect that he is being victimised, and that his amiable landlord is also having a finger in the pie.

I am, Sirs, yours faithfully,

OSCAR JENNINGS,
M.D. Paris, M.R.C.S. England, &c.

Paris, Feb. 23rd, 1891.

THE CASE OF WILLIAM KERR.

To the Editors of THE LANCET.

SIRS,—We have read your leading article on the case of William Kerr, and we trust to your sense of fairness to insert the following reply.

It is a singular circumstance that the theory of consent should be put forward a year and eight months after the trial. It is well known here that the prisoner had the advantage of skilled medical assistance at the trial; that two medical witnesses were in court prepared to support by their evidence the theory of consent, but they were not called. The prisoner's counsel, confessedly one of the ablest barristers on the circuit, after hearing the evidence for the Crown, declined to call them. One of these witnesses subsequently took an active part in obtaining a remission of the sentence: he abandoned the consent theory, and in a memorial which was presented to the Home Secretary in May of last year, and which was influentially signed, he has put forward an entirely new theory, quite inconsistent with the theory of consent. It is in this memorial that the suggestion is made that we probably caused the injuries, and we are glad to see that you say it would manifestly be unfair to us to suppose that we would commit such a blunder. With regard to this memorial, as we may have to refer to it at some future period, we need only say at present that there is absolutely no foundation for such a charge, and that the statements upon which the theory is founded are purely fictitious. With regard to our evidence we are not conscious that we gave any which can be called equivocal, and we do not think that we gave any one-sided interpretations of facts. The investigation which we undertook in the public interest was a laborious one, we felt its difficulties and its responsibilities, and we were determined to make it as exhaustive and impartial as possible. We can point out with satisfaction that no new fact, so far as we can learn, either for or against the prisoner, has been discovered since the trial. In your report of the case[1] you say, "It must be admitted the evidence against him [the prisoner] was very strong;" and you are good enough to conclude an excellent summary of the trial in these words: "It is only just to add that the reports of Drs. Henry Barnes and Maclaren were admirable, showing that all their various examinations of the body of the deceased, of her clothing and the prisoner's, and of the various localities had been of a most exhaustive character, leaving nothing to be desired."

We accept your two questions, and shall proceed to deal with them in their order.

I. Had the woman been ravished? We think we can satisfy you that this question must be answered in the affirmative. As to the evidence of sexual intercourse, it should be stated that this was not questioned at the trial, or probably a fuller statement of the grounds upon which our opinion was founded would have appeared in the depositions. The woman was found on her back, with her clothes down behind and up in front, the chemise only covering the thighs nearly to the knees; the legs were separated, about eighteen inches between the feet; the front of both thighs were smeared with mud, which she could not have done herself, but which might have readily been caused by a man with muddy trousers; and then, finally, there was the smearing of the blood on the external genitals, the bruises at the orifice and the tears mentioned in our report. It is certain that these injuries must have been inflicted very shortly before death, as there was no great amount of blood on her underclothing, it was mostly on her person. You mention five points against the theory of rape. 1. The orderly disposition of the woman's clothing by the side of the body. The term orderly is not a correct statement. The clothes are described as all thrown down together on the hard road about a foot from the body. With the clothes was a wisp of false hair, which a consenting woman would have no object in removing and placing there herself. 2. The proximity to a dwelling-house. The distance was 162 yards. It was late at night, and the witness who saw the prisoner pass the house afterwards went to bed. 3. The fact that no one heard sounds of alarm. There is strong presumptive evidence that the first act of the tragedy was a knock down blow which rendered the woman unconscious. 4. The absence of seminal stains. Taylor says the non-discovery of spermatozoa does not prove that stains have not been caused by seminal fluid, a fact established by Casper. Emission, however, is not necessary to establish the crime of rape. 5. The absence of rough handling of the woman's clothes. If the woman was insensible, or even semi-

[1] THE LANCET, July 26th, 1890.

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conscious, there is no reason why the clothing should be roughly handled. There was one tear in the outer skirt.

We have never used the argument which you attribute to us—that the injuries to the vagina were greater than could have been inflicted had there been consent to intercourse with a drunken man, and there is no foundation for such a statement in the depositions. What we did say was that if the woman had been conscious the injuries must have caused great pain, and there would have been evidence of a struggle, even if she had been a consenting party. Apart from the utter improbability of a sober, respectable woman consenting to lie down on a muddy, miry bank, we may just allude to some other evidence against the consent theory. There was the smearing of blood on the cheek. She had not placed that there herself, as her hands were clean. There was the bruise on the head already alluded to. A severe blow or fall would cause such a bruise. In our opinion it was caused by a blow, as there was no evidence on the clothing or bonnet of a fall. The actual mode of death might be cited as evidence against consent, inasmuch as a woman, conscious and unrestrained, would instinctively make some effort to save herself from suffocation by turning on her face or side. Kerr himself said, when arrested, "I saw no woman, and know nothing about her." He adhered to this denial after his conviction.

II. Did Kerr commit the crime? The jury have already answered this in the affirmative, and no material facts have come out since the trial. You have already mentioned some of the presumptive evidence against Kerr. We do not propose to enter into detail as to the general evidence, but shall confine ourselves mainly to that for which we are responsible. It has been suggested that the vomit on his coat came from himself. We made our first examination of his clothing eight hours after his arrest, when the vomit was still fresh and moist, and it had no smell of beer, of which he had been partaking freely. Some of it was on the back of his coat, where he could not have put it himself. As to the blood-stains on the vest, we do not think he can have caused them by blood-spitting; they probably came from his face; but the smears of blood, epithelial scales, and mud on the fly of his trousers clearly came from another source. They resembled closely the stains on the woman's thighs and person. As to the red woollen hairs found in the mud on the trousers, it has been suggested they may have come from his sister's flannel petticoat. It is important to remember the hairs were not simply adherent, but were found embedded in the mud. Probably the explanation of their being overlooked in the first examination is due to the fact that only a minute portion of mud was placed under the microscope, and it was in consequence of the discovery of hairs on the plaster cast that a further examination was made. There is one other point which has been commented upon, and that is the absence of any distinct impression of the prisoner's knees or toes at the place where the body was found. It should be stated that there was a good deal of water in the muddy ditch across which the woman's legs were stretched, and there were many depressions in the ditch filled with water at the time of our visit. There were several footmarks about. Only two casts of impressions near the edge of the ditch were taken by direction of the police, but it is a mistake to say there were no other impressions.

In conclusion, it must be remembered that the evidence in a case of this kind must be treated as a whole. Nothing is more easy than to pick out sundry details from their surroundings, and to show that these may possibly be explained on some other theory (or even on contradictory theories) than that of the commission of a crime, or of the guilt of a prisoner. But we think that few will read the story as a whole without coming to the conclusion which we hold, that in no other way can the whole facts be explained than that the poor old woman was grossly outraged, that in consequence she died, and that Kerr was the man who did it. The deed was done in darkness, no witness can testify to what actually occurred, and on some small points inferences may be wrong. But even if this is so, the main facts on which the verdict was given remain unalterable evidences of guilt.

We are, Sirs, yours faithfully,

HENRY BARNES, M.D.

Carlisle, Feb. 24th, 1891. RODERICK MACLAREN, M.D.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—I am really grateful to Dr. Herman for the way in which he refers to the "courage and candour" with which I reported the result of a case of removal of the "ovaries" for cardiac dyspnœa—meaning, I suppose, that the result was so bad that no one would again attempt the like. I feel, however, that I hardly merit his praises, as the case, instead of being a miserable *fiasco*, was a brilliant success. Moreover, only one ovary was removed. I read this case before the Obstetrical Society of London on April 5th, 1882. The chairman, the late Dr. Matthews Duncan, completely extinguished me. The drift of his denunciatory speech was to the effect that it is better for a woman to have pain or any amount of suffering, such as my patient had, rather than have one diseased ovary removed. This was echoed by most of the members, with the noteworthy exception of Dr. Barnes. They declined to publish my case in the Transactions, and it never was published. It is so unique and interesting that I venture now to give a brief account of it.

L. R——, aged thirty years, multipara, applied as an out-patient at the Women and Children's Hospital, to which I was then one of the surgeons in April, 1881. She stated that she had been under the care of numerous medical men, of whom she could give the names of eight or nine, but she had never succeeded in getting relief from attacks of dyspnœa. These attacks came on from any ordinary work or exertion, and had for five years rendered her unable to do her own housework except to a very limited extent. On admission I observed one of these attacks, and it was clearly cardiac, the heart being excited and beating violently. The patient could lie upon her stomach or on either side in bed, but not upon her back, as the "shortness of breath" was at once induced. During the day she found out that she could relieve the attack by sitting upon a stool and bending the body forward so that the forehead rested upon another stool; also by lying down "curled up" on one side. There was a marked mitral murmur. The lungs were sound. Behind the uterus, and almost in Douglas's pouch, was a prolapsed ovary, exquisitely sensitive to pressure, and pain and discomfort continued for some time afterwards. My colleague, Mr. Scattergood, agreed with me that it was worth while trying whether removal of this ovary would relieve her, and we thought ourselves justified in doing this by the great length of the case, and the absence of any hope of relief by any other mode of treatment. The curious effect of certain positions in relieving her and in bringing on the attacks also led us to this opinion.

I removed this one ovary through a small incision in the roof of the vagina, the other ovary being left. It was examined, and found to the touch normal. The first result of the operation was spontaneously mentioned by the patient—namely, that she could lie upon her back with comfort. The result was to nearly, but not absolutely, cure the dyspnœa. On Sept. 27th her husband reported that she had up to then been able to do her own housework, and especially to knead the dough, which she never could do before. It had not been necessary for her to resort to the peculiar positions again. Of course I could come to no other conclusion than that the dyspnœa, although cardiac, was excited in some way by the state and position of the ovary. Dr. Galabin kindly made a microscopic examination of the ovary, which was cystic. He says: "The tissue near the cysts was in parts greatly infiltrated with inflammatory nuclei, especially between the cysts, and the surface of the ovary and dilated vessels containing blood were here seen." I am content to leave this case to the judgment of the profession, and to ask if they see any reason why this removal of a diseased and useless ovary should not have been done, and if, as the result showed, great relief was given, why I should have been "put down" and "sat upon" by the President, who called the treatment a "wild proceeding." Dr. Barnes, however, said he "regretted that the attitude assumed by London surgeons seriously obstructed the progress of this branch of surgery. All great improvements in surgery were largely due to a spirit of enterprise, it might be said of experimental research." I think I have shown that Dr. Herman's memory has played him falsely in his reference to this case; perhaps it also has in reference to the five cases he mentions in which the

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patients had been advised to have the uterine appendages removed, and got ultimately perfectly well without the operation. We all know how much patients' accounts of opinions of their cases may be trusted. Probably in several the operation had been merely mentioned as possibly required at some time. I am myself not in sympathy with the manifesto of Dr. John Williams and Dr. Champneys; it breathes too much the same spirit with which I was met. The real secret of this matter is that the London obstetric physicians are as a body not surgeons, whereas gynæcology has been becoming more and more surgical; and it is a question whether the appointments should not be surgical ones, rather than medical.

I am, Sirs, yours faithfully,

JAMES BRAITHWAITE,
President of the North of England
Gynæcological Society.

Leeds, Feb. 21st, 1891.

MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I had hoped that I had made my position quite clear in connexion with the Bill. It is evident from your leading article that I have not. My contention has been from the first that it is for the promoters of the Bill to justify its introduction. This they have not done. Neither during the debate at the Obstetrical Society nor in their circular did the Council furnish, or attempt to furnish, any facts to demonstrate the basis on which they rest their position. All that is said in the circular is: "From year to year successive Councils since 1872 carefully discussed every aspect of the question, and through a system of examinations gained practical experience as to the value of examination." Surely after nearly twenty years' labour they might have incontestably proved the justness of their views by facts, if facts existed. In the next place, I have taken my stand against the present Bill on the ground that it reverses the principle of all recent medical legislation, and that it creates a new race of inferior female practitioners in midwifery. You, Sirs, protest against the same class, if educated in medicine and surgery as well, so I do not think there is much between us on that point. You talk of reasonable legislation to stop incompetent midwives from practising. I have from the first stated that I believe that is exactly what is required. But before such legislation could be passed, surely the grounds for its necessity must be clearly stated, and the sufficiency of the means adopted to secure the end demonstrated. With regard to the satisfaction you say I expressed to the Lord President, I must remind you that you have omitted a very material part of my statement—I mean that relating to the paucity of women attended by any but doctors in my own district, and also the inquiry as to how it was that of all the women who receive the diplomas year after year from different bodies so few of them were found attending the poor and destitute. It is a tolerably well known fact that these trained women as a rule prefer monthly nursing at high fees, and small blame to them. I very much regret the tone that some have introduced into the discussion—Dr. Holman's accusation, for instance, that an appeal has been made to the cupidity of the profession; and Dr. Grigg's charges against his own profession, contained in his address to the British Gynæcological Society. It seems a pity that he did not make them during his speech in the debate on the Bill, when there were present those who could answer him. Verily, discretion is the better part of valour. In answer to him I will ask him who is responsible if doctors are turned out with insufficient knowledge of their subject? Surely, I say, those men in the position of Dr. Grigg whose establishments are advertised as training medical students and monthly nursing. What has Queen Charlotte's Hospital done in the cause of education in midwifery? In my time in London the men who went there, as a rule, were those who were not anxious to do more than the indispensable minimum, and that comfortably.

I am, Sirs, yours faithfully,

LOVELL DRAGE.

Hatfield, Feb. 21st, 1891.

To the Editors of THE LANCET.

SIRS,—I trust, as you have made some very grave statements regarding my action in opposing the Midwives' Registration Bill, that you will give me room for reply.

In THE LANCET of Feb. 21st, p. 444, the writer of the editorial article suggests that I wish to form a low order of practitioners educated in medicine, surgery, and midwifery. I shall only answer this by calling attention to the notice of motion put down by me for the last meeting of the British Medical Association, which, I trust, shows that I am as opposed to the recognition of midwives as to the recognition of a barber surgeon, or any itinerant bone-setter, herbalist, and quack specialist, holding, as I do, that the midwife must give place to the woman doctor, just as the barber surgeon has been displaced by the modern surgeon. The following is the notice of motion:—

The Registration of Midwives.—Dr. Rentoul also gives notice that he will move: "It is the opinion of this meeting that no new order or class of midwifery practitioners is required, and that any Act passed by Parliament which provided that any man or woman may practise midwifery, either as a registered midwife or registered medical practitioner, unless such have undergone a period of four years' study at a recognised school of medicine, and possess a degree or diploma recognised at present by the General Medical Council, would be injurious to the lives of lying-in women and infants, and prejudicial to the best interests of the medical profession. Also, that the Local Government Board be requested to put into force in each Union the General Order of the Poor-law Commissioners of 1847, Acts 182 and 183, empowering guardians to pay certain fees to their medical officers, in cases of childbirth and puerperal maladies. That a copy of this resolution be forwarded by the General Secretary of the Association to the General Medical Council, both Houses of Parliament, the President of the Local Government Board, to the daily press, and to the medical journals."

Secondly, you question my statement regarding 7*s.* 6*d.* midwifery fees. In a late number of THE LANCET the Derby Friendly Societies' Medical Association advertised for a doctor, offering 5*s.* 3*d.* per confinement. Is it not a fact that some Poor-law medical officers get less than 10*s.*? Personally, I may say that the fee paid to me for attendance on the confinement itself frequently does not exceed 6*d.* Take a case of a 30*s.* confinement fee. The woman comes to engage me and is certain to want twenty minutes' consultation and a prescription. Then I have to go out at night to her confinement perhaps twice. Next I have to visit her again on the night of the confinement. She will expect to be visited during the fourteen days following the labour. It is 50 to 1 she will also ask that her baby be vaccinated free—i.e., included in the confinement fee. That latter means for me—writing to London for calf lymph and paying 1*s.* 2*d.* for it, seeing the child to see that it is fit, vaccinating it, inspecting the arm, and filling up the certificate. I do not think any reader will consider the above an exaggerated picture of general practice. I regret the above conditions; but the competition of medical charities, midwives, doctors who keep unqualified assistants, State vaccinators, and younger practitioners all tend, by an unhealthy competition, to keep the fees down. I know very well that those who pay me my lowest confinement fee of 30*s.* can readily pay me 50*s*, but thus they can get Dr. So-and-So to attend for 20*s.*, 25*s.*, or 30*s.*! I do not in the above estimate include bad debts. Now, Sirs, taking the above 30*s.* confinement fee, and counting that I must give at least ten visits, this gives me 3*s.* 6*d.* per visit, and practically nothing for the confinement. I do not include the vaccination and its usual three visits. Indeed, most general practitioners own that the fee paid *nominally for the confinement* gives them on an average 2*s.* 6*d.*, 3*s.* 6*d.*, to 5*s.* per visit, and leaves nothing for attendance on the confinement itself. I wish that general practitioners would honestly speak out, and let you know the real state of affairs. At present I know good men who are going out for a fee of 1*s.*, and to confinements for less than 10*s.* I have no ends to gain by exaggeration, and no one has yet shown my statements to be wrong.

I am, Sirs, yours faithfully,

ROBERT REID RENTOUL, M.D.

Liverpool, Feb. 23rd, 1891.

*** We gladly give Dr. Rentoul, as we have freely given before, room to expound his views—in our opinion extreme views, which do not place the profession in a good light before the public and Parliament. His statement before Lord Cranbrook that "many medical men were willing to attend midwifery for 7*s.* 6*d.*" still appears to us one of the most astounding assertions which any medical man assuming to represent the profession could have made, especially when considered in connexion with a proposal of his to ask Parliament to prohibit midwives attending a case under 15*s.* And, in our judgment, his attempt to justify it fails completely. The offer of a Friendly

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Society of 5*s.* 3*d.* per confinement is surely not a proof that "many medical men are willing" to accept such terms. He tells us that the fee paid to him for a confinement does not exceed sixpence. To reach this conclusion he has to spread the fee of 30*s.*, which is his lowest, over a daily attendance for fourteen days, to regard the interview with him for making the engagement as a visit, and to include one or two possible night visits. This seems to us very far-fetched. We all know that many of the cases of a busy obstetrician take only a short time, and require very few subsequent visits. But if Dr. Rentoul's own fee of 30*s.* is so inadequate, why did he represent to Lord Cranbrook that many men were willing to go for less than the fourth of that sum? Again, referring to Dr. Rentoul's attempt to answer our remark that the tendency of his arguments or of his agitation is to create a new class of medical women, "I do hold," he says, "that the midwife must give place to the woman doctor, just as the barber surgeon has been displaced by the modern surgeon," but he does not tell us how the 10,000 midwives are to be got rid of. The midwife has survived the barber surgeon, and is recognised as a fact, to the number of 10,000, by law, by the profession, and by the public. We approve legislation that would provide a respectable woman with some training for ordinary cases; but we object to more than this. We do not want medical women imported into this business, and the proposal is unfortunate and uncalled for. Midwifery is laborious work for men, *a fortiori* for women. In the simplest cases the midwife may act. It is not conceivable that any legislation would absolutely forbid her acting. But it might do two things. Indeed the necessity for its doing two things is urgent—viz., to stop the practice of midwifery by the incompetent, and to insure an amount of training that will enable a midwife to know when a case is abnormal, and impose a solemn obligation on her in such circumstances to send for a medical man.—ED. L.

THE MICROBE OF MALARIAL FEVER.

To the Editors of THE LANCET.

SIRS,—It was only a few days ago that my attention was drawn to the annotation in your issue of Dec. 6th, 1890, in which you refer to a statement from a Monsieur Daruty, who styles himself Director of the Microbiological Laboratory of the Royal Academy of Arts and Sciences of Mauritius, contradicting the assertion I made in my article on the discovery of the malarial parasite in Mauritius (THE LANCET, Aug. 23rd, 1890). I beg strongly to protest against any criticism upon my researches coming from Monsieur Daruty's pen, for the simple reason that that gentleman, who has never left his native isle, is not a competent person to form an opinion on the subject which my paper treats.

Monsieur Daruty is the curator of a small museum in Port Louis, and as such he is responsible to the Government for the microscope which belongs to that institution. I am astonished at his assertion that I showed him my specimens, whereas only one out of the sixty that I took from the fifteen patients I examined actually came under his observation, and that by a mere accident, whilst, together with a fellow-graduate of the London University, I was examining that specimen under the microscope of the museum. I remember his remarking that the solid, small round body, seen in profile, adherent to the disc of a red corpuscle, was a vacuole, but we treated the remark as it deserved, and I never again had occasion to use the museum microscope. Several of the specimens revealed this sessile pearl-like body (distinctly seen to be solid when caught in profile), and also the non-nucleated pigmented spheroids which are a further development of the former, but I was not positively certain at the time that these were the parasites I was looking for; it was only after my return to France, after seeing Professor Laveran's specimens, that I became convinced of their identity with these.

In conclusion, I beg to state that Dr. Chevreau, who was not in the Mauritius when I was there, and who never saw my specimens, speaks *sans connaissance de cause* in his criticism on my researches. Begging you to insert this letter in THE LANCET,

I remain, Sirs, yours faithfully,

DANIEL E. ANDERSON, M.B., B.A., B.Sc. Lond., &c.

Paris, Feb. 10th, 1891.

AMBULANCE CLASSES FOR THE MERCANTILE MARINE.

To the Editors of THE LANCET.

SIRS,—Some influential nautical men have inaugurated this work in Liverpool, so that at no distant date it may fairly be expected few vessels will leave this port without at least one mate or seaman holding the certificate of the St. John Ambulance Association. This movement, initiated as it has been by employers and not by seamen themselves, marking the commencement of a new era in marine sanitation, induced me on the 9th inst. to address a respectful letter to the manager of the Shipping Federation, pointing out that, as these classes were to be "specially adapted for sea service," the medical instructors should include in the course the subjects of ship sanitation and personal hygiene, and that the practical result would be that insanitary conditions on shipboard could in future be respectfully reported to the owners and the Board of Trade by these men who were trained in the ambulance course. But one practical difficulty I have submitted in a letter to the leading Liverpool shipping paper—viz., "Will not masters, mates, engineers, and seamen holding Ambulance certificates hesitate to use their knowledge by submitting to their employers anything like a report upon insanitary matters lest their personal interests should suffer thereby? In fact, somewhat like the ship's surgeons of to day, who, possessing no *locus standi* on shipboard, are tempted to shut their ears to seamen's complaints of faulty ventilation. I feel so strongly the vital importance of this subject that I have solicited the opinion of the profession through THE LANCET and *British Medical Journal*." Without further encroaching upon your valuable space,

I am, Sirs, yours faithfully,

CHARLES HENRY LEET, F.R.C.S.,
Late Surgeon-Major Royal Engineers.

Seaforth, Liverpool, Feb. 23rd, 1891.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Discussion on Cremation at the Medical Institution.

THERE was a well-attended meeting at the Medical Institution on the 12th inst., a large number of members being present, to hear Dr. Hope's paper on the subject of cremation, and to vote for or against the following resolution:—"That this Society recognises the sanitary advantages of cremation as a means of disposal of the dead, and considers the establishment of a crematorium in Liverpool, under suitable regulations, as free from objection." Dr. Hope's paper was studiously moderate, showing the advantages of cremation as a means of disposal of the dead and meeting the various arguments against it. While admitting all the advantages of our present reformed burial system, he contended that there must be great difficulty before long in acquiring the large quantity of land which will be necessary for burial purposes, it being requisite to provide for the disposal of the bodies of the 15,000 who die annually within the city of Liverpool and its suburbs. The discussion, in which many members and two lay visitors—Mr. Alfred Holt, ex-chairman of the Dock Board, and Mr. Boulnois, City Engineer—took part, was very interesting. The general feeling was in favour of cremation as a voluntary principle, and the resolution was carried by an overwhelming majority.

Royal Southern Hospital Nurses' Home.

The new nurses' home in connexion with the Royal Southern Hospital, which has just been completed, was opened on Feb. 14th. The new home, which adjoins the hospital, has accommodation of a very complete character for forty nurses, each nurse having a separate bedroom, while the bath and sanitary arrangements are in the best style. The nursing institution in connexion with this

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hospital was first established in 1880, and has been so successful as to require this new and enlarged building. In the course of the proceedings Dr. Cameron, the senior physician to the hospital and chairman of the building committee of the new home, stated the reasons which had induced them to build the new home, adding that it was their desire to provide in close proximity to the hospital the means of leisure and recreation necessary to the health of the nursing staff; and whilst teaching the details of medical and surgical nursing, in order to fit the nurses for the useful and honourable career they had chosen, to protect them from unhealthy influences, and enable them to renew their duties with vigour and usefulness. He hoped that ceremony would enable the hospital to take a place among the most valued philanthropic institutions of the city.

Coroners' Juries and Viewing Bodies.

Some months ago Mr. Brighouse, the county coroner, dispensed with the viewing of a body on the grounds that, as it was in a very advanced state of decomposition, such viewing might be attended with danger to the health of the jurors. More recently the deputy coroner for Leigh has left it to the jury to decide whether such a duty is necessary, and in an evening local paper it is stated that if the body is identified by a relative, its inspection by the coroner, by one juryman, or by a police-constable would suffice. Until, however, this is settled authoritatively, an inquest without a view must remain null and void.

Swing-boat Fatalities.

Several accidents have recently occurred from the swing-boats which are to be found on vacant pieces of land in different parts of the city. In two the result was fatal. A boy aged fourteen died in the Northern Hospital on the 12th inst. from injury to the head received from being struck by a swing-boat two days previously. A fireman, twenty-one years of age, died on the 11th inst. in the Royal Southern Hospital from the effects of an injury to the head caused by his falling out of a swing-boat. A boy had a wound on his head dressed at the same hospital, he having received it in a similar manner. Nothing should be easier than to prevent by the most ordinary care most, if not all, of these accidents. Swing-boats could be so constructed that it would be next to impossible for any one inside to fall out of them; while the fact that it is possible for a boy to go so near one while it is in motion shows great carelessness.

Liverpool, Feb. 24th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Reform.

IT will be remembered that some months ago, acting upon the suggestion of the mayor, a special representative committee was appointed to inquire into the subject of hospital abuse in Birmingham. The report has just been issued, and will be presented at an adjourned conference of representatives of the charities and of the medical profession to be held on March 9th. At the close of the inquiry the committee passed a hearty vote of thanks to his Honour Judge Chalmers, and eulogised the valuable services he had rendered in his capacity of chairman during the proceedings. The report is an exhaustive one, and gives evidence of careful consideration of the subject at issue. A form of questions of a close kind was sent out to fourteen of the medical charities of the city and district; seventeen witnesses were examined, nine of whom were medical men, acquainted with the working of the respective charities and the grounds of complaints generally. The alleged abuses oft reiterated were discussed, and are well known to the profession. The work of the hospitals, the committee rightly say, fundamentally consists in the treatment of in-patients, to which the expenditure is largely devoted. Practically no complaints were made against this management. The report adds that no subscriber to the hospital should think that his money has been wasted, and no friend of the hospitals should relax his efforts to promote their efficiency and welfare. The number of patients treated is very large. According to the returns furnished there were in voluntary hospitals in 1889 150,441 patients—namely, 8611 in-patients and 141,830 out-patients. The list of hospitals includes the West Bromwich Hospital, with 6485 patients, but does not include the General Dispensary, with 29,899 patients; nor does it include the patients in the Workhouse Infirmary, or the 8351 who received out-door relief from the guardians. The suggested reforms form an important part of the report. They are as follows: The first essential is to devise some means by which the hospitals can take collective action, and the committee suggest the formation of a general council, on which all the hospitals should be represented, as well as the Hospital Saturday and Sunday Funds; also the City Council and the guardians should be represented. The functions of such a council would be almost purely consultative. It would have no power of enforcing its opinions on individual institutions, except so far as it could bring public opinion to bear on them. Secondly, it has been suggested that an inquiry agency should be formed in connexion with hospitals, for the purpose of investigating the financial means and position of applicants for hospital treatment. It has been suggested that the Charity Organisation Society could best supply the necessary machinery. But whether it would be better to work in connexion with or independently of that Society appears to be one of those matters which is proper for the determination of the proposed General Council. Thirdly, it has been suggested that the committee should recommend the formation of a self-supporting provident dispensary. In concluding the report the committee recommend: 1. The formation of a General Council representative of all the public medical institutions of the city. 2. The formation of an inquiry agency to investigate the circumstances of applicants for treatment at the hospitals. 3. That, apart from first aid and urgent cases, regulations should be framed by the hospitals to exclude trivial cases and cases where either the patients are in a position to pay for such treatment as they may require, or which could be more properly dealt with under the Poor Law. 4. That facilities should be given for cases so excluded being dealt with by dispensaries or provident associations. 5. That any person recommended by an approved provident association, or by a qualified medical practitioner, should, as a rule, be admitted to the out-patient department of the hospitals without further formality. Some minor expressions of difference of opinion amongst members of the committee are noted; but, taken as a whole, the subject of the inquiry has been dealt with in an exhaustive manner. What the practical outcome will be is difficult at present to determine, but the exertions of the committee will at least have had the effect of bringing into prominence the widespread feeling that something should be done towards remedying the defects and grievances attending the present system of working out-patient departments.

Feb. 25th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Northern Counties Hospital for Consumption and Diseases of the Chest, Newcastle.

THE annual meeting of this charity has been held, and the report stated that 1026 out-patients had been treated. Of this number, 244 were cured, 744 relieved, and 6 died. There had been 12 in-patients, 3 of whom were cured, 8 were relieved, and 1 died. The financial statement was satisfactory. It having been resolved to try the Koch treatment in some cases, a supply has been obtained from Dr. George Murray, who has recently been to Berlin, and has presented the fluid to the institution, and it is being tried in three cases, which seem to be deriving benefit, but it is too soon to speak decidedly on this point.

The Study of Bacteriology in Newcastle.

At the last meeting of the North of England Veterinary Medical Association Dr. G. Murray showed, on the invitation of Mr. Clement Stephenson, some hearts of pigs which had died of endocarditis; the cavities of these hearts abounded with valvular vegetations, and the microscopic slides of these growths were distinguished by bacilli, the exact nature of which, however, it was impossible to define. The College of Physical Science has afforded Dr. Murray facilities for pursuing the study of bacteriology, and we look in Newcastle for some important results from this new laboratory.

The Newcastle Health Society's Lectures.

The Newcastle Health Society's lectures, so successfully inaugurated by Dr. Wm. Murray, are creating a good deal

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of interest, which has been fully maintained by the able and popular lectures of Professor Oliver on "The Air we Breathe and the Clothes we Wear." Both at these lectures and at the lecture given by Dr. Howden on "The Human Body" the attendance has been very large and the audience appreciative.

Annual Meetings of Medical Charities.

The annual meeting of the Gateshead Dispensary has been held, and from the report it appears that the number of letter patients treated was for the past year 3404, and the number of casual and accident cases 12,222. The total number treated by the institution was 15,626. Scarlet fever had proved fatal in many cases, and was constantly present in the borough. With a view of diminishing this and other infectious diseases the report is in favour of the compulsory notification of diseases being adopted and enforced. The financial condition of the dispensary was shown to be satisfactory. The annual meeting of the Gateshead Children's Hospital has also been held, at which the Bishop of Durham spoke strongly in favour of the institution. The total number treated during the year had been 863, consisting of 789 out-patients and 74 in-patients. The financial condition of the hospital was satisfactory.

Death of Dr. G. S. Dixon.

I regret to note the death of Dr. George Seymour Dixon, long the oldest practitioner in Gateshead, where he had resided for fifty-two years. He died on the 15th inst., and was interred on the 19th. His remains were followed to the grave by the members of the Gateshead Medical Society and numerous friends and former patients. Dr. Dixon, who was in his eighty-first year, was noted during his long career for his strict attention to the rules of professional etiquette and for his courtesy and kindness to his brethren. He held that in a brother's unavoidable absence it was only a duty to fill his place and do the best for him until his return, when, the patient's wishes being regarded, he was to be honourably handed back to his family attendant. He was sometimes considered severe on those who did not sufficiently regard this rule, but it worked well in Gateshead for all who adopted it, and may be said to have given a high tone to medical practice in the town. Dr Dixon has left two sons in the profession. Another son, in the legal profession, is honorary secretary to the dispensary.

Darlington Hospital.

The annual report just issued refers to the completion of the increased accommodation in the domestic department which had been provided by Mrs. Pearse. The statement of income and expenditure is fairly satisfactory. The total receipts amounted to £1171, against £1351 in the previous year. The committee solicit the aid of the subscribers in preventing persons able to pay for medical attendance from obtaining the benefits of the hospital; 160 in-patients had been admitted during the year, the largest number of any previous year; 3377 out-patients' tickets were received at the dispensary. Of these, 877 were double tickets—that is, requiring attendance at their own homes.

It is stated that Mr. H. B. Brady (son of the late Mr. H. Brady, surgeon, of Gateshead), the eminent chemist and naturalist, whose death I noted lately in this correspondence, has left the sum of £1000 to the Natural History Society of Newcastle for the promotion of its objects.

Erratum.—In my communication last week, referring to the zymotic death-rate of Whitby, by a printer's error I am made to give that rate as 4·0 per 1000. It should, of course, have been 0·4 per 1000.

Newcastle-on-Tyne, Feb. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Royal Edinburgh Asylum.

THE annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held on Monday. After the treasurer's report was read and adopted, Dr. Clouston submitted his report for the past year. The total number of patients under treatment was 1156. There had been 322 admissions and 226 discharges, and 109 deaths. The number of rate-paid admissions was 225. It was a fact that did not tend to bear out the popular ideas as to the rapid increase of mental diseases in recent years that the yearly production of pauper lunacy in the district had scarcely risen appreciably during the past fifteen years. The production of pauper insanity was with them not keeping pace with the growth of the population. They seemed to be a saner people in Edinburgh than they were fifteen years ago, for in that time the population had increased 30 per cent., while the annual production of pauper insanity was only 3·7 per cent. more at the end of that time than at the beginning. There was, however, a steady increase in the total number from the accumulation of uncured cases. This continuous increase or silting up must, however, stop in time if the new production did not increase year by year, for a chronic lunatic must die sometime; and this process of diminishing accumulations of incurable cases had clearly begun. There were two marked facts in connexion with the cases admitted. The one was that the average general health and condition of the patients were lower than usual; the other was that in the two chief divisions made of the mental condition of patients—namely, melancholia and mania—the cases of mania commonly greatly predominated. During the past five years the cases of mania exceeded those of melancholia by 37 per cent., while during last year they had 140 cases of melancholia and only 134 of mania admitted—quite an unprecedented experience. He had come to the conclusion that there must be causes for this, and from his observations generally he believed that the year 1890 was one depressing in its conditions to the nervous tone and lowering generally to human vitality. Whether it was the influenza in the early part of the year that had perceptibly lowered human vitality, or whether the prevalence of the influenza merely showed that European humanity was in a lowered state of vitality, so being a fit nidus for the influenza germs to propagate in, or whether it was the sunless, summerless general character of the year, he could not say. He distinctly connected, however, the influenza in some way with the unprecedented number of melancholic patients sent to them. He believed the epidemic of influenza of 1889–90 left the European world's nerves and spirits in a far worse state than it found them, and that they scarcely yet had recovered their normal tone. The poison seemed to burn up the nervous energy and leave the brain in some cases unable to recuperate. He next dwelt upon the dangers attending the period of adolescence, and thereafter considered the causes of death, and referred to the observations made in the asylum during the influenza epidemic.

Scottish Microscopical Society.

The fifth meeting of this Society was held on the 20th inst., Professor Rutherford, F.R.S., in the chair. Dr. Joseph Coats of Glasgow was elected by the Council a vice-president of the Society, in place of the late Mr. Schulze. Dr. G. Catrington Purvis, B.Sc., gave a communication on the Microscopic Structure of the Electric Organ of Raia Fullonica. He traced the development of electric organs from muscle as originally described by Babuchin, and showed that in Raia Fullonica the "cup" type of electric organs is highly developed. Each cup has a thin nucleated mass of protoplasm, the electric layer lining its concavity, in which the nerves end. The existence of an electric organ in the skate was discovered by the late Dr. Stark of Edinburgh; and Dr. Burdon Sanderson has shown that it produces feeble electric currents. Dr. Robert Muir, junior assistant to the Professor of Pathology in Edinburgh University, read a paper on Blood Plates, and gave reasons for regarding them as distinct elements of the blood. He described their characters as seen in fresh blood, in various preservative fluids, and in films prepared by Ehrlich's method. He discussed Hayem's theory of their being hæmatoblasts about to become red corpuscles, and regarded it as untenable. He detailed the results of elaborate enumerations of blood plates, leucocytes, and red corpuscles in artificial anæmia and in various diseases. He showed that blood plates are found only in blood, and not in lymph from the thoracic duct; that the theory of their being the nuclei of broken-down multi-nucleated leucocytes had some facts in its support, but was still unproved. Both papers were illustrated by numerous diagrams and preparations, and excited much interest. Mr. Frazer, optician, explained a new method of adjusting a double nose-piece to give a minimum of trouble to the microscopist.

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Health of Edinburgh.

The mortality last week was 82, making the death-rate 15 per 1000. Diseases of the chest accounted for 28 deaths, and zymotic causes for 7. The intimations for the week included 22 cases of typhoid fever, 9 of diphtheria, 33 of scarlatina, and 37 of measles.

Royal Physical Society.

At the meeting of this Society last week Dr. William Russell read a paper on Robertson's Prevertebral Hæmolymph Glands.

ABERDEEN.

The Aberdeen Dispensary.

In the report of the dispensary for the past year it is stated that the total number of cases treated during the year was 10,769, being an increase on the previous year of 226. The number of ordinary and zymotic diseases was 8666, being an increase on the previous year of 137; there were 212 midwifery cases—a decrease of 32; vaccinations, 482—a decrease of 115; dental operations, 893—an increase of 15. In addition to these, special attendance is given on the afternoons of Tuesdays and Fridays for diseases of the ear and throat and diseases of women. Of the former class, 305 cases were treated, and of the latter 211. There are eight qualified midwives attached to the institution, and during the year sixty-two medical students paid for admission to the practice of the institution. Medicines cost £243 19*s.* 9½*d.*, as compared with £261 for 1889. With regard to the work done by the medical officers, the committee of management state that they have again to thank those gentlemen for the excellent way in which they have performed their duties during the past year. The committee regret that Dr. Gibson, one of the medical officers, has by severe illness been prevented for a considerable period of the year from undertaking his work; but the same has been efficiently performed by his substitute, Dr. Beveridge. Dr. Gibson has sent in his resignation, and the committee recommend the appointment of Dr. Beveridge at the coming general meeting of managers. Soon after the annual meeting of managers in March, 1890, the committee of management had before them a communication from Professor Stephenson on the subject of providing a maternity hospital. At present the students and nurses attend midwifery cases at the patients' homes. Owing to impending changes in medical education and contemplated public improvements in the neighbourhood of the dispensary, the committee resolved to delay consideration of this question and other matters referred to by the medical officers in their report. The financial statement shows a balance of £135 3*s.* 5*d.* to the credit of the institution.

Health of the City.

During the past week the following cases of zymotic diseases were notified to the medical officer of health: Scarlet fever, 12; typhoid fever, 1; diphtheria, 1; whooping-cough, 3—a decrease of 17 as compared with the total for the previous week, and of 14 in the cases of scarlet fever.

Feb. 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal College of Surgeons.

A MEETING of the College was held on Monday, the 23rd inst., to witness the election of a member of Council in the room of Mr. A. H. Corley, deceased. As already stated, there were two candidates—Messrs. Austin Meldon and William Frazer,—the former gentleman being duly elected by a large majority. It is stated that His Excellency the Lord Lieutenant has accepted the invitation of Mr. Croly, the President, to a banquet at the College, which will take place on March 7th.

Dublin Hospital Sunday.

The committee of the Dublin Hospital Sunday Fund held their annual meeting last week. The report was a satisfactory one, the total sum collected and available for distribution being £4332. It is believed that the two ophthalmic hospitals will shortly be amalgamated—a result which must conduce not alone to efficiency, but also to economy.

Parliamentary Grants to Dublin Hospitals.

The annual grant for the coming year for those nine hospitals which receive assistance from Parliament will be the same as for previous years—viz., £15,722 15*s.* 9*d.* Of this sum the lion's share goes to the House of Industry Hospitals, which obtain £7472 15*s.* 9*d.*; while Cork-street Fever Hospital gets £2500, and St. Mark's Ophthalmic Hospital only £100.

Factories and Workshops Act Amendment Bill.

This is a Government measure, and the second reading takes place this week. It is to be hoped that the 19th clause will be opposed in the interests of the community. Under the arrangement which exists at present an apprentice before being admitted to a workshop or factory requires to undergo a medical examination, showing that he is not suffering from any organic malady or contagious disease, and that he is a fit subject for the employment he seeks. The 19th clause of the Bill rescinds this arrangement. Why it has been admitted by the Government is inexplicable; it cannot be on the score of economy, inasmuch as the fee for medical inspection is paid by the employers, and does not come out of the Treasury.

Poor-law Out-door Relief.

By the tenth section of the Act passed in 1847 no person who occupied land more than a quarter of an acre in extent could be regarded as a poor person and entitled to relief. This clause was repealed some years since so far as it related to relief inside the workhouse; and Sir J. Pope Hennessy is now promoting a Bill to repeal the quarter-acre clause so far as it relates to out-door relief.

Sir George B. Owens, M.D., J.P., has been elected a honorary life governor to the Royal Hospital for Incurables.

BELFAST.

Queen's College.

For some time it has been felt that an attempt should be made to strengthen the corporate feeling of the old members of Queen's College, Belfast. Many men who now hold important positions in every department of public life were educated there. It has, therefore, been decided to hold a reunion of the Belfast graduates in March in the form of a dinner, and the President, who, since his appointment, has been unceasing in his efforts to advance the interests of the College, is using every endeavour to make it a success. Prof. Park, Dr. J. A. Lindsay, and Mr. R. T. Martin are the secretaries of the movement.

Death of John Laird Gaussen, M.D., F.R.C.S. Eng.

I have with sincere regret to announce the death of one of the oldest medical men of Belfast, Dr. J. L. Gaussen, who died on Feb. 22nd, at his residence, Wellington-place, at the advanced age of eighty years. Dr. Gaussen graduated M.D. of Edinburgh in 1831, and in 1859 he obtained the Fellowship of the English College of Surgeons. For some time he was Surgeon-Major of the Antrim Militia, but in later years he had quite given up practice of any kind.

The Small-pox Epidemic.

I am glad to be able to report that there have been no new cases since Wednesday, Feb. 18th, and it is hoped the epidemic will not spread. At a meeting of the Belfast Dispensary Committee, held on Feb. 23rd, full reports were handed in by the various medical officers as to their districts, and the propriety of revaccination was strongly urged. On Saturday night it was reported that three cases had occurred in Ballymena, but as the sailor who introduced the disease into Belfast had visited this town, it is probable it was he who carried the infection. Dr. Stafford, Local Government Board Inspector, along with Dr. Whitaker, is making every effort to localise and to stamp out the disease. One of the greatest disadvantages that Belfast labours under at present is that it contains no infectious diseases hospital for non-pauper patients. The better class of people will not go into the Union Hospital, and consequently they must be nursed at home. If the Town Council adopt the Notification of Infectious Diseases Act, it will be absolutely necessary for them to erect a hospital for contagious maladies.

The Ulster Medical Society.

At a largely attended special meeting of the Ulster Medical Society, held on Wednesday, Feb. 18th, Dr. McCaw, the secretary, presented a report from the Council containing the following resolution passed by them: "That the

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Council of the Ulster Medical Society has with pain recently seen reports from time to time in the daily press of purely professional subjects, which, no matter with what object or by whom inserted, must be regarded as of the nature of advertisements for those concerned, and that this Council considers such publications injurious to the best interests of the public, degrading to the honour and dignity of the profession, and deserving of our strongest and most earnest disapproval." On the motion of the President (Dr. Alex. Dempsey), seconded by Professor Dill, and supported by Professor Cuming, this report of the Council was unanimously and cordially approved of and passed.

The Royal Hospital.

The quarterly meeting was held on Monday, and from the report I gather that 655 intern patients were treated during the past three months, while there were 5077 extern cases. The large deficit existing at the end of last quarter had been reduced by nearly £500. At the commencement of the last financial year the debt had been £1607, but during the first six months of that year it increased to £1984. The receipts from donations this year are below the average, and there have been no bequests. In September the Royal Hospital enters its hundredth year of existence, and in commemoration of this it has been decided to hold a fancy fair and bazaar in November. The one favourable point in the financial statement is that the subscriptions from the working classes have increased.

Feb. 24th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Report of the St. Louis Committee on Koch's Treatment of Cutaneous Tuberculosis.

IN the latter part of November, 1890, there was constituted at St. Louis Hospital, as I have already informed your readers, a committee composed of Drs. Vidal, Besnier, Fournier, Hallopeau, Quinquand, and Lailler, deputed to study and report on the effects of Koch's liquid on the cutaneous forms of tuberculosis, more especially lupus. A male and a female ward were set apart for the purpose, and a special staff of students detailed for taking and registering clinical observations. All the patients, numbering fifty, were first carefully examined *seriatim* by the assembled committee, and, the diagnosis verified, the programme of inoculations for each case (date of repetition and dose) was made out, subject to modification. Each patient was, moreover, kept under observation for several weeks after the termination of the treatment (the end of January). All necessary antiseptic precautions were taken, and the whole inquiry rendered as precise as possible. I have already communicated to your readers the gist of the preliminary report furnished by M. Vidal (*vide* THE LANCET, Jan. 24th). On the 13th inst. MM. Besnier and Hallopeau presented in their turn to the Société de Dermatologie et de Syphiligraphie a very full report of the proceedings of the committee, illustrating it by a table giving the following heads of information:—Age and sex of patient; diagnosis; number and date of inoculations, with doses; principal phenomena of the inoculatory fever; characters of the local reaction; date when tolerance was established; other phenomena and complications observed; result of the treatment; name of the physician treating the case. The table contains the history of thirty-eight cases, the remaining twelve not being included because certain of them were cases of leprosy, whilst in the rest the treatment had either been interrupted or had been undertaken too recently to merit a place in the list. After a few introductory remarks, M. Besnier said: "There is one feature attending the application of the method which the appended table cannot bring home to your minds—no mere reading will enable you to adequately appreciate its importance, and I am surprised that, in so many published accounts of the inoculations, this aspect of the question is glossed over with such a light heart—I refer to the suffering inflicted on many of the patients experimented upon. Whoever has visited our wards six or eight hours after a series of inoculations of patients who had not yet reached the period of tolerance will never forget the spectacle." The above remark furnishes the keynote to the criticisms that follow. The speaker added that, although no fatal result had occurred in their practice, several of their patients had, despite precautions as to dosage, frequency of inoculation, &c., been in danger of falling victims to the action of the toxine. Two points dominate the history of these experiments—viz., (1) *local reaction:* its insufficiency, its progressive diminution in spite of the increased dosage, and its ultimate cessation; (2) *general reaction:* its noxious effects in certain cases, the serious localisation of its action on the viscera in general, and on the circulatory system in particular, and finally the risks of a fatal result even with feeble doses, and even after a single injection. The committee deny the germicidal properties of the liquid, as also its power of sterilising the tissues invaded by the bacillus. When a patch of lupus is vaccinated with the liquid its local effects do not exceed those excited in healthy skin, cellular tissue, or muscle into which it is injected. Nay, there is reason to believe that, thus employed, it tends to favour the tuberculous process. In a little boy affected with lupus of the lower extremities a patch was vaccinated with the liquid, and that patch is now, several weeks after the operation, considerably more florid than its neighbours. The inoculations provoke local irritation of an exudative nature, with a tendency to consecutive cicatricial atrophy; but this tendency is followed by a revival of the tuberculous nodules, which appear to be endowed with greater vitality than ever. In the cases experimented on not only have all the nodules reappeared, but fresh ones have also sprung up. As to the alleged affinity of the liquid for tuberculous tissues, the committee need only call to mind the following phenomena noted before, coincidently with, or independently of, the irritation of the lupus patch, viz., hyperpyrexia, leucocytosis, diminution of red blood-corpuscles, cutaneous eruptions, endocarditis, pulmonary, splenic, and renal congestion, hæmaturia, albuminuria, arthropathies, and many another neurodynia affecting viscera certainly free from tuberculosis, or which are simply in a state of physiological congestion—e.g., the ovaries in menstruating women. The ephemeral fever of Koch generally reveals itself locally in cicatricial or "closed" lupus by the provocation of inflammation of an erythematous, erythemato-squamous, or erysipelatous type, bearing a great resemblance to the recurrent attacks of lymphodermatitis so common in cutaneous tuberculosis. In "open" lupus the reaction is more manifest, being characterised by a serous discharge, œdema, and the formation of scabs—a rare occurrence in "closed" lupus. In all forms of lupus the local reaction may be intense, but at St. Louis it has never been seen of such violence as to cause loss of substance. In every case the reaction is only a passing storm, which subsides in a few days, excepting when the operation has excited phlegmonous inflammation in glands, or in the neighbourhood of joints. The storm over, a more or less marked reduction in volume is noted in the pathological mass, together with a diminution of vascularity of the adjacent tissues, followed by a certain levelling of the surfaces affected. Sometimes there is also noted an obvious tendency to cicatrisation, which appears extraordinary only to observers imperfectly acquainted with the normal lupic process. This curative effort is sometimes very remarkable; but even when it is very marked the tubercle is never destroyed. A striking case was cited in support of this statement. This partial or general reduction in volume is not always proportionate to the intensity of the apparent reaction. It is observed more particularly in the upper lip or other parts where the lesion is complicated by the chronic lymph œdema which is so pronounced a feature in certain cases of lupus. Should this constrictive process occur in lupus of a cavity, such as the nose, much relief is experienced from the restoration of the patency of the passage. In buccal, pharyngeal, and laryngeal tuberculosis the same relief may be conferred. But even after reiterated inoculations the previous condition is not only re-established, but it becomes sometimes aggravated. Of the lupic patients who have benefited the most from the treatment not one has been cured, the improvement having been only temporary. In not one of the cases of lupus of the parts situated behind the nostrils has cicatrisation of the ulcers been obtained. In the majority of the cases tolerance has been established, and the experiments have thus necessarily been brought to a premature conclusion. Even should the susceptibility to the action of the liquid reappear at a future time, no advantage will have been gained, for fresh tubercles will have developed in the meantime. It is a case of "No thoroughfare!" Several writers have compared the action of Koch's liquid to that of the (now rare) intercurrent attacks of erysipelas some-

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times seen. But even in its most intense form the local reaction excited by tuberculin never attains the proportions, nor does it present the same characteristics of form and duration, of true erysipelas. A single attack of this latter disease effects a cure apparently more complete than has been noted in any one of the fifty patients of the committee. It should be remembered, however, that even erysipelas never cures lupus. In none of the patients of the committee has there been obtained a result superior, or even equal, to that realised in the same time by ordinary methods of treatment. Painful as these latter are, they occasion less suffering than is entailed by the fever consecutive to inoculation. M. Besnier thus sums up:—"1. In cutaneous tuberculosis in general, and more particularly in all the divers forms of lupus, the inoculation of Koch's liquid is productive of a local reaction, the earliest effect of which is the temporary reduction of the morbid mass. Very appreciable in all the 'open' varieties of the lupus of Willan, this atrophic process becomes less marked in the 'closed' varieties, and is still less in the dry, sclerotic, fibrous forms. The minimum result is seen in the lupus of Cazenove, all the varieties of which are dry and 'closed.' In all these forms the beneficial effect may be considerably increased by the simultaneous employment of any therapeutical measures which excite deep irritation of the lupus, or which convert it into the 'open' variety. In the immense majority of cases the treatment, even when pushed to tolerance, is incapable of curing; it is not superior, indeed it is not equal, to methods of treatment in actual use. 2. In every case without exception, however feeble the dose injected, the local reaction cannot be evoked without the ephemeral fever, the intensity of which cannot be predicted, but which, even with small doses, and with a single inoculation, may kill the patient. Even when the patient does not succumb, the toxine may occasion grave persistent symptoms in relation more particularly with the circulatory system, the brain, or the kidneys, not to mention the awakening up into renewed activity of tuberculous deposits which had hitherto lain dormant. 3. Such being the case, I do not consider myself, nor do I deem any other physician, authorised to continue these experiments with Koch's liquid. In refusing to persevere with the application of the method, I believe I am only acting in conformity with the dictates of humanity, and with that respect for human life which is one of the noblest characteristics of French medicine." M. Hallopeau continued in the same strain, and gave it as his opinion that, the therapeutical value of the liquid being at best extremely limited, its employment is for the present contraindicated.

A Simple Treatment of Corneal Ulcers.

M. Valude, one of the ophthalmic surgeons of the Quinze-Vingts Eye Hospital, communicated to the Académie de Médecine on Feb. 10th a new method of treating those troublesome cases—ulcers of the cornea—so simple in its application, and, according to its inventor, so successful in its results that it cannot fail to be generally adopted. Hitherto corneal ulcers complicated with hypopion have been treated by puncture either by the knife or thermo-cautery, this operation having frequently to be repeated, and too often leaving behind it opacities, if not actual staphyloma. For this unsatisfactory method M. Valude substitutes a simple dressing, consisting of a pad of salol gauze, which, with a moistened gauze bandage, effectually seals the eye and maintains a certain amount of compression. Before being applied the eye is carefully disinfected. The dressing is not renewed until after three or four days have elapsed, when the ulcer is found to be already healing, and the collection of pus in the anterior chamber much diminished. M. Valude states that the cornea tends to regain its original transparency without any opacities. In corneal ulcers uncomplicated by hypopion M. Valude, relying on his experience of fifteen successful cases, asserts that this new treatment is *the* treatment *par excellence*.

Paris, Feb. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Koch's Method.

AT a meeting of the Society for Internal Medicine on the 16th inst., Dr. Thorner, who has used Koch's remedy since Nov. 20th, gave a full account of his observations. He is of opinion that there is no reason for trying to prevent its use in private practice, and that, on the contrary, it is highly and even urgently desirable that it should be made accessible to all practitioners. He declared the entering of tubercle bacilli during the application of Koch's method into the bloodvessels, and consequent general miliary tuberculosis, to be an extremely rare occurrence. With reference to experiments on animals, he made the new statement that already existing miliary tuberculosis in animals can be cured by Koch's remedy, and that, during the injection period, certain animals are immune against new inoculations with tubercle bacilli. The head of the medical department of the Prussian army and the Prussian Home Minister have issued special regulations for the treatment of tubercular soldiers and prisoners by Koch's method. The former social democratic deputy Viereck has petitioned the Reichstag to prohibit the use of Koch's fluid as dangerous to the public welfare.

Professor Angerer.

Professor Angerer of Munich has been appointed Nussbaum's successor as professor of surgery there. He was born at Geisfeld in Bavaria in 1850, and studied surgery under Linhart at Würzburg. He was assistant, first to Linhart and then to Linhart's successor, Bergmann. As a special province he chose the study of coagulation of the blood. He has been a university lecturer since 1879, first at Würzburg and then in Munich. In 1872 Bergmann and he together wrote on the relation of ferment intoxication to septicæmia. His other writings are reports on the Würzburg and Munich surgical hospitals, studies on the application of sublimate, on the excision of joints, &c.

Professor von Helmholtz.

The President of the French Republic has conferred the Grand Officer's Cross of the Legion of Honour on Professor von Helmholtz.

German Death-rates for the week ending the 7th inst.

Aix-la-Chapelle, 25·4 per 1000; Altona, 30·8; Barmen, 15·5; Berlin, 17·5; Bremen, 15·3; Breslau, 25·4; Chemnitz, 26·3; Cologne, 23·6; Dantzic, 24·4; Dresden, 15·3; Düsseldorf, 20; Elberfield, 22·8; Frankfort, 14·2; Hamburg, with its suburbs, 21·4; Hanover, 16·6; Königsberg, 21·7; Krefeld, 22·3; Leipsic, 19·5; Magdeburg, 21·6; Munich, 24·6; Nürnberg, 19; Stettin, 28·6; Strasburg, 23·7; Stuttgart, 19·9.

Berlin, Feb. 22nd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Cattle Transport.

THE evidence given before the Deputy Minister of Marine at the inquiry held last month in Montreal disproved the various charges of heavy losses during transit, great suffering of the cattle from cruelty, want of fresh air, and sufficient room to permit of their lying down. A statement submitted by the steamship companies showed the losses during the past ten years to be small indeed—in one line being only 1 in 266. It was generally considered advisable to prohibit the shipping of deck loads after Nov. 1st of each year, while some of the exporters were of opinion that shipment in any manner might cease after that date. The exporters, shippers, and employers were unanimous in disclaiming the acts of cruelty; the cattle were as well treated on the steamers as at the farms. An exporter who has crossed some sixty times with the cattle had never witnessed an act of cruelty, but considered the men worse off than the cattle—a fact which received testimony from several witnesses, the food being poor, and in some cases supplied in a pail which was used for watering the cattle; the sleeping accommodation also was bad. Mr. Baker, V.S., assistant to the chief Government inspector, explained how the cattle were inspected. First being seen at the stock yard, and if in good health a permit was given to load; after being shipped an inspection was made chiefly with the view to ascertain that sufficient space was allowed each animal, it being generally agreed they should have thirty-two inches in warm and thirty inches in cold weather. The space permitted cattle to lie down and rise at will. The steamers on most of the lines are now provided with steam fans and condensers, the latter supplying twelve gallons per head of cold water every twenty-four hours. The shipments last year were given as 123,136 head of cattle and 43,372 sheep. The commis-

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sioner, in concluding the inquiry, expressed the hope that it would have the effect of stopping legislation hostile to Canada, and in his opinion it would.

Examination for Personal Injuries.

In an action to recover damages for personal injuries—Reily *v.* City of London—caused by the alleged negligence of the defendants, a motion by the defendant corporation for an order directing the plaintiff to attend and submit to an examination of her person by medical experts chosen by the defendants was decided recently by the Master-in-Ordinary sitting for the Master-in-Chambers, as follows:—"The application of the defendants in this case is to compel the plaintiff to submit her person to an inspection and examination by surgeons chosen by this Corporation, and subject her to the contingency of being committed for contempt in case of her refusal. By the common law, any unlawful setting upon or interference with another's person is an assault (*insultus*), and therefore what the court is asked to do by the order desired by these defendants is to authorise the surgeons nominated by the corporation to do what the common law forbids; for compelling the plaintiff to submit to their tactual examination of her person against her will would come within the definition of an assault. And if surgeons can be authorised—for there is no magic in the title of 'surgeon'—so may other persons, or even officers of the corporation. And if these defendants are entitled to this compulsory exhibition and examination of the person of this plaintiff in such a way as these surgeons may determine, it must follow that they have also the right to have a similar exhibition and examination made before a jury, for a jury are entitled to see as well as hear for themselves. And if one part of the person may be subjected to such an examination, so may every part, and this judicial sanction might be given to an act trenching upon another rule of law governing exposure of the person. On no principle of law can acts which involve that which is forbidden by the criminal law be authorised by the court. The motion must therefore be refused, with costs to the plaintiff in any event."

Death-rates of Canadian Cities.

The mortality returns of the principal cities of the Dominion for the month of December are as follows: Quebec, 2·37; Halifax, 2·11; Montreal, 1·84; Toronto, 1·35; Ottawa, 1·31; St. John (N.B.), 1·26; Victoria (B.C.), 0·71; Winnipeg, 0·66. Referring to the medical health officer's report of the city of Ottawa for 1890, a leading daily says the report records the fact that in one foundling institution, out of 191 children 110 died, and adds: "This seems to be a wholesale baby farm." That something is radically wrong with the sanitary condition of Toronto is evidenced by the great increase in the totality of cases of zymotic diseases. Quoting from the acting health officer's report, the figures are:—

	1889.	1890.
Enteric fever	273	947
Diphtheria	290	441
Scarlet fever	250	353

The reported cases during August, September, and October of enteric fever were 500, while during the last quarter of the year diphtheria was more prevalent, and in July the record showed scarlet fever as then most prevalent. The report further speaks of an "immense number" of privy pits in use, and suggests their abolition in the more densely populated parts, substituting dry-earth closets therefor in preference to waterclosets, as the latter plan "involves the danger of contaminating our water-supply," and yet large quantities of excrement are poured daily into the bay from thousands of waterclosets, and no voice is raised against the ever-increasing evil.

Koch's Remedy.

Several of the medical men who went to Berlin to study the treatment of tuberculosis by Dr. Koch's liquid, have returned and given most interesting accounts of their clinical experience, Dr. J. D. Thorburn reading a paper thereon before the Toronto Medical Society. Through Professor Ramsay Wright, who is still in Berlin, a supply of the liquid has been received and distributed to the hospitals of the province.

Training of Nurses.

The commencement exercises of the Training School for Nurses of the Toronto General Hospital were held on Jan. 16th. The report of the lady superintendent stated that since its establishment in 1881 111 had qualified after a two years' course of training; and at present there were fifty-two pupil nurses during the year. Over 400 applications for admission were received. The excellent training received and high standard attained by the pupils are generally recognised, and many are filling important positions in the United States and Canada.

Death of Dr. John Stewart.

The death is announced at Kingston of Dr. John Stewart, for many years dean of the Royal College of Physicians and Surgeons, Kingston, in the founding of which he took an active part. Deceased was a native of Perthshire, Scotland, receiving his medical education in Edinburgh.

Canada, Feb.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on Feb. 19th the following degrees were conferred:—

Bachelors of Medicine and Surgery.—Alfred Waugh Metcalfe, Trinity; Arthur Henry Bindloss, John Crossley Wright, St. John's; Victor Grey Molteno, Charles Rolfe, Clare; Thomas Horace Haydon, Charles Howard Usher, Gonville and Caius; Henry Sharland Pope, Cavendish Hostel.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND: CONJOINT EXAMINATION.—The following have passed the February Supplemental Examination in Physics:

T. Cairns, R. Coffey, T. Conlon, J. Cormack, B. Coyle, W. Croly, G. Davidge, J. Davis, K. Delany, M. Delany, J. Dwyer, G. Fisher, J. Foley, M. Goodwin, H. Herrick, E. Hogan, T. Jordan, E. L'Estrange, H. Martin, J. Martin, E. Moore, C. O'Gorman, T. Palmer (Mechanics), J. Shera, J. Walsh, W. Whitla, F. Woods.

ARMY MEDICAL STAFF.—The following is the list of the successful candidates at the recent competitive examination for commissions in the Medical Staff of Her Majesty's Army:—

	Marks.		Marks.
Porter, F. J. W. . . .	3135	Hardy, W. E.	2780
Robinson, O. L. . . .	3025	Begbie, F. W.	2770
Brown, F. J.	2960	Burtchaell, C. H. . . .	2760
Healy, C. J.	2960	Lenehan, T. J.	2760
Stalkart, C. E. G. . . .	2930	McDowell, F.	2760
Gibbard, T. W.	2925	Faichnie, N.	2755
Buist, H. J. M.	2905	MacCarthy, J. A. O. . .	2695
Duggan, C. W.	2880	Gerrard, J. J.	2690
Brogden, J. E.	2815	Stanistreet, G. B. . . .	2680
Austin, J. H. E. . . .	2780	Jameson, J. C.	2670

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on Feb. 9th, 1891, when 59 candidates competed for 21 appointments, and 57 were reported qualified:

	Marks.		Marks.
Burton-Brown, F. H. .	3625	Frost, G. H.	3035
Lumsden, J. S. S. . . .	3340	Smith, S. B.	3030
Deare, B. H.	3330	Graves, D. H. McD. . .	3020
Brown, A. T.	3215	Penny, J.	3020
Bird, E., M.D.	3180	Ewens, G. F. W., M.D. .	3010
Oldham, B. C.	3165	Henvey, W.	3010
Wilkinson, E.	3160	Pridmore, W. G. . . .	3010
Duer, C.	3155	Irvine, J. W.	3005
Wood, H. S.	3125	Dallas, S. A. C. . . .	2995
Entrican, J., M.D. . .	3090	Palk, C. H. L.	2975
Donovan, C., M.D. . .	3050		

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the Examination in Surgery during February:—

A. Allen, Charing-cross Hospital; H. Collier, Liverpool University College and Middlesex Hospital; C. E. Cornwall, St. Bartholomew's Hospital; R. S. Freeland, L.R.C.P., M.R.C.S., Guy's Hospital; A. G. Haydon, St. Bartholomew's Hospital; C. G. Hutchinson, L.K.Q.C.P.I., Birmingham Queen's College and Dublin; G. Jones, M.A., Oxford and London Hospital; W. F. H. Newbery, M.D., Trinity Medical College, Toronto; J. H. Roberts, Guy's Hospital; C. B. P. Spencer, Guy's Hospital; R. D. Waghorn, Westminster Hospital; F. C. Wood, L.S.A., London Hospital.

The following candidates passed in the subjects indicated:—

Medicine, Forensic Medicine, and Midwifery—T. S. Byass, University College; H. Fairfax, Charing-cross Hospital; F. Lewis, St. Mary's Hospital; F. H. Lowe, St. Bartholomew's Hospital; H. F. S. Nunes, St. Mary's Hospital; C. B. P. Spencer, Guy's Hospital; J. F. Twist, Queen's College, Birmingham.

Medicine and Forensic Medicine.—W. R. Thomas, M.D., McGill, Montreal, and London Hospital.

Medicine and Midwifery.—W. R. Willey, St. Mary's Hospital.

Forensic Medicine.—W. R. Nicol, M.D., McGill, Montreal; W. E. Toyne, Sheffield and Edinburgh.

The following received the Diploma of the Society, having passed in all the subjects required for registration:—

A. Allen, T. S. Byass, C. E. Cornwall, H. Fairfax, F. Lewis, F. H. Lowe, H. F. S. Nunes, C. B. P. Spencer, J. F. Twist.

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MEDICAL MAGISTRATE.—Mr. John Walter Yeatman, M.R.C.S., of Auburn, South Australia, has been appointed a Justice of the Peace for the colony.

BEQUESTS.—Mrs. Emily Fitzgerald left £500 to the Mater Misericordiæ Hospital, and £100 to the Royal Hospital for Incurables.

WARNEFORD HOSPITAL, LEAMINGTON.—Lord Leigh, the Right Worshipful Master of the Province of Warwick, has appointed March 18th for laying, with Masonic honours, the new wing of this hospital.

SUPERANNUATION GRANT.—Mr. Charles M. Frost, F.R.C.S. Eng., L.R.C.P. Edin., lately medical officer for the second district of the parish of St. Mary Abbots, Kensington, has been granted an allowance of £83 6*s.* 8*d.* per annum.

ABERYSTWYTH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.—The report for the year 1890 shows the growing usefulness of this charity. During the year the in- and out-patients numbered 1375, an increase of 87 on 1889. The cash account showed a balance in hand of £388 9*s.* 3*d.*

NEW MORTUARY.—The formal opening of a public mortuary for Hampstead took place on the 21st inst. It is situated in New-end, near the workhouse, and is a red-brick building of one storey, containing chambers for the reception of ordinary and infectious cases, a dissecting room, and accompanying offices.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The annual general meeting of the Association will take place at 11, Chandos-street, Cavendish-square, at 5 P.M. on Tuesday, March 17th. On the same evening the members will dine at the Holborn Restaurant at 7.30 P.M., Dr. Gilbart Smith, President, in the chair.

THE COLLEGE OF STATE MEDICINE.—Professor W. R. Smith, M.D., D.Sc., has resigned the office of Professor of Hygiene and Public Health in this institution, and the council have selected Mr. A. Wynter Blyth, medical officer of health and public analyst, St. Marylebone, to fill the vacant office. Professor Blyth will commence his classes early in April.

DERBYSHIRE INFIRMARY.—At a meeting of the governors of the Derbyshire Infirmary, held on the 23rd inst., it was unanimously decided to pull down the present building, which has been proved to be deficient from a sanitary point of view, and to erect new premises at a cost of £74,000. The Duke of Devonshire, as lord-lieutenant of the county, has promised to call a county meeting for the purpose of raising the necessary funds.

LINCOLNSHIRE COUNTY HOSPITAL.—At a special meeting of the governors of the Lincoln County Hospital held at Lincoln on Monday last, it was resolved to accept the offer of Mr. Joseph Ruston, ex-M.P. for Lincoln, to provide a children's ward for the hospital, and to tender their cordial thanks for his noble gift. Plans for the new building and the alterations have been approved, and the work will be commenced as soon as possible.

HOSPITAL FOR WOMEN, NOTTINGHAM.—The prominent feature in the past year's report of this institution is the completion of the purchase of the premises occupied by the Inland Revenue and the prospective removal of the work of the hospital to more commodious and suitable premises. The year has also been marked by a special increase in the operative work. During the twelve months seventy-five patients were admitted, forty of whom had undergone operations of a more or less serious nature, with satisfactory results. The beds were continuously occupied, and the capacity of the hospital had been taxed to the utmost.

CHARING-CROSS HOSPITAL.—The seventieth annual report of this hospital states that during the past year the number of in-patients had been 217 more than in any previous single year, and the out-patients numbered 21,640. The statement of receipts and expenditure was again unsatisfactory. A decrease is shown in the donations, and the amount of legacies was the smallest in the history of the hospital since it had attained its present proportions. These deficiencies had necessitated the disposal of stock amounting to £3662, and a liability of £3000 had been incurred with the bankers.

THE SANITARY INSTITUTE.—The Duchess of Albany has consented to present the certificates awarded at the close of the course of lectures on Domestic Hygiene to be given at the Sanitary Institute.

FOX *v.* WHITEHEAD.—In the case of Mr. Richard Dacre Fox, F.R.C.S. Edin., M.R.C.S., of Leeds, against Messrs. Whitehead, Limited, proprietors and vendors of a patent medicine known as Mother Seigel's Curative Syrup, an application to the Court of Appeal for a new trial was refused.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—This institution has accomplished very satisfactory work during the past year. The invested funds now amount to £8794 15*s.* 1*d.* A former encumbrance had been discharged, and there was a balance on the current account of £196 12*s.* 2*d.*

SUICIDE OF A MEDICAL PRACTITIONER.—Mr. T. Hoyle, the coroner for the Borough of Newcastle, held an inquest last week on the body of Mr. W. C. Wicks, M.B., L.R.C.P. Edin., aged forty years. The evidence adduced was to the effect that the deceased had suffered great mental depression during the last two years, and that death was caused by taking prussic acid while in a desponding state of mind.

THE PROPOSED NEW FEVER HOSPITAL AT BIRKENHEAD.—A meeting was held on Tuesday of ratepayers of this town, convened for the purpose of considering the proposal of the Health Committee of the Corporation to erect a fever hospital to accommodate seventy-two patients, after considerable discussion a resolution was adopted strongly opposing the proposed hospital, and urging that it was desirable the ratepayers should have the opportunity of petitioning the Town Council to reconsider their decision on the question. A committee was formed to prepare a memorial for presentation to the Town Council.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—The yearly demand upon the good work of this institution well attests its value and importance to the town and neighbourhood. During the past year 248 in-patients had been treated. There was a diminution in the number of those residents in the town who attended as out-patients, due to the establishment of the provident dispensary, but the country parishes supplied their usual quota. Voluntary efforts were being made to permanently augment the income by £250 a year, which is required to put the institution on an efficient footing. The Provident Dispensary still maintained its ground, about 2300 members being entitled to its benefits.

MEDICAL NOTES IN PARLIAMENT.

Elementary Education (Blind and Deaf) Bill.

IN the House of Lords on Monday, Feb. 23rd, this Bill passed through Committee, and was reported with amendments.

Factory and Workshops Sanitation Bill.

In the House of Lords on Friday, the 20th inst., Lord Thring moved the second reading of this Bill, and explained that the object of the measure was to extend to workshops the regulations now applied to factories. It proposed to provide that every workshop should be kept in a state of cleanliness. The inspector might enter at all reasonable times and take with him a medical officer or other person experienced in sanitary matters. It gave power to the inspector to enforce sanitation instead of taking proceedings to enforce a fine. The Bill did not deal with the hours of labour, as the question had not been sufficiently investigated. He believed the Bill would bring light and healthiness into dark spots, and brighten and make healthy what must be admitted to be the unlovely existence of many a humble artisan and many a hard-working woman.—The Earl of Dunraven supported, and hoped the Bill would become law.—Lord de Ramsey asked their lordships to read the Bill a second time only on the understanding that the noble Lord would proceed no further with it until there had been an opportunity of discussing the Government measure. The Bill was read a second time.

Factory and Workshops Bill.

The Earl of Dunraven moved the second reading of this Bill. He said it was founded principally, if not entirely, upon the report of the Sweating Commission, and was designed to meet some of the graver evils and scandals which had been proved before the Commission. The Bill was read a second time.

Consolidation of the Public Health Laws.

In the House of Commons on Saturday, in reply to Sir H. Tyler, Mr. Matthews stated that the President of the Local Government Board would bring in a Bill to amend and consolidate the law as to public health in the metropolis. He mentioned that in 1887 a Committee of the House of Lords had investigated the subject of smoke in the metropolis, and did not think any new light would be thrown on the subject by the establishment of another similar inquiry.

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Sentry Duty.

In the House of Commons on Monday, Feb. 23rd, in reply to Viscount Wolmer, Mr. E. Stanhope said that the number of sentries stationed at St. James's Palace, Kensington Palace, the War Office, the Home Office, and the Foreign Office was fourteen, supplied by a guard of forty-two men. Since 1885 the medical officers of the Guards have not reported against sentry duty. On the contrary, in 1886 and 1888 they reported that the duties were not too severe. Too heavy sentry duty is unpopular, and probably has an unfavourable effect on recruiting, but every effort has been made to reduce it to a reasonable extent in London.

The Windsor Courts and Alleys.

In answer to Mr. Leveson-Gower, Mr. Ritchie said: Inquiries have been held by inspectors of the Board with regard to the sanitary condition of courts and alleys in Windsor. I am informed that since January, 1887, considerable improvements have been made in Southplace. On the north side six houses have been provided with additional sculleries and back doors, and with windows at the back. Ten new waterclosets have been erected, and six old ones reconstructed. An additional water-supply has been provided, and also new dustbins, and the paving of the yards and the drainage have been improved. As regards the houses on the south side, nine have been improved by match-boarding and the under-ventilation of the floors, and through ventilation has been secured by means of grid ventilators on the staircases where back windows have not been provided. The eleven houses on the south side are now occupied by only forty-six persons, and as the medical officer of health is of opinion that the watercloset accommodation cannot now be declared inadequate, he does not advise that some of the houses should be demolished for the purpose of making such provision.

The Sale of Ether in Ireland.

In answer to Dr. Tanner, Mr. A. J. Balfour said ether had been scheduled, and it can only now be sold by qualified chemists or druggists as a poison.

The Fog Plague.

Viscount Wolmer has intimated to the First Lord of the Treasury that on Monday he will ask whether, considering the serious injury to health, the disturbance of business and the hardships inflicted on many of the poorest wage earners of the metropolis by the curtailment of their working hours, caused by the increasing prevalence of fogs, the Government will consider the advisability of appointing a Royal Commission to examine and report how far the evil is one which can be mitigated by legislation.

Inflammable Liquids Bill.

Mr. James Rowlands and Mr. Cobb have given notice of their intention to move the rejection of the Inflammable Liquids Bill.

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday, Lord Sandhurst presiding.

St. Mary's Hospital.

Mr. Thomas Ryan, secretary of St. Mary's Hospital, Paddington, gave evidence as to the affairs of that institution. In reply to the chairman, he stated that the hospital was founded in 1845. Although the building had the advantage of youth, it could not be said to have all the advantages of modern sanitary science. The medical staff were inclined to the view that the building did not possess those advantages. It was practically a free hospital, although they had a letter system. They had no paying patients. They had 281 beds, and a working maximum of about 255 beds. The number of patients they took in per bed per annum was about fourteen, which was more than most other hospitals. The hospital was continually full. They were very careful to sift the patients, with a view to taking the gravest cases.

The Chairman: It has been said by one witness that in this district there is an enormous amount of medical relief in the way of hospitals and dispensaries. We have been told that there are 2000 beds.—Mr. Ryan: I should have thought that that was hardly so. There is only one hospital in our district. The whole district to the west of Edgware-road and the north of the Park is supplied by St. Mary's Hospital. Continuing his evidence, witness said that St. Mary's Hospital was inadequate at the present moment to meet the necessities of the district. In his opinion medical relief for the poor in the Paddington district was certainly deficient. His salary amounted to £400. He did not reside in the hospital. He was responsible to the weekly board. The quarterly and weekly boards appointed the two standing committees—the house and finance and the medical committees. Complaints, if serious, were laid before the committee; if trifling he dealt with them, and afterwards made a report to the committee. If complaint as to the food reached him, he would not report to the committee in the first instance, but deal directly with the contractor. The circumstance would be recalled when the tenders were considered. When meat or coal was bad he sent it back to the contractor. The medical committee met once a month, on the first Monday of each month. They examined the medical superintendent's report, which would refer to anything of the nature of the sanitary condition of the hospital, the behaviour of clerks and dressers, and matters of that class. In the standing orders witness was spoken of as being the governing head of the establishment, and he presumed, although it had never been necessary, that he should suspend an officer in certain circumstances. He was in a position to dismiss subordinate servants, but he should have to give a good reason to the weekly board for what he had done. The medical superintendent received a salary of £150, with board and lodging. He was not a member of the medical committee. He acted as head of the establishment in the absence of witness. He supervised the resident medical officers, the clerks, and the dressers. He would be expected to report any sanitary defects in the building to the medical committee. They admitted all classes of cases except infectious cases. When they admitted cases of diphtheria they were only cases which it would not be safe to send away. The cases were rigidly isolated. They had not found their charity abused. They made strict inquiry as to their out-patients. They had a form requiring particulars as to name, address, occupation, wage, &c. If any feature of an exceptional character was brought out by the clerk, then the case was reported to witness, who made further investigation. The clerk, after his long experience, was practically an inquiry officer, and was very capable of judging the merits of cases. The number of cases in which witness had to make inquiry outside the building was very small. Last year their income from subscriptions amounted to £5227. That sum more than covered the amount of annual salaries and wages of all classes. The total expenditure last year was £23,608. The balance against the hospital last year amounted to £1063, which had to be met out of capital. Among their items of income last year were: Donations, £3177; dividends and rents, £2521; legacies, £2276; Hospital Sunday Fund, £2083; Hospital Saturday Fund, £868; alms boxes, £47; and payments by probationers, £412. During the past ten years the average income from legacies amounted to £7354. The statement of the Charity Organisation Society was absolutely inaccurate as regards St. Mary's Hospital in respect that legacies were left out of the ordinary income. He included the legacies in the ordinary income, and they spent every farthing of it. Their beds varied in annual cost from £72 to about £84. He questioned entirely the correctness of endeavouring to form a criterion of either the excellence or the economy of a hospital by a comparison of the cost per bed. It was a fallacious comparison and extremely misleading, and he considered it was open to considerable mischief. Nothing would please him more than to have a uniform system of hospital accounts. Such a system would render comparison easy and reliable. There were many circumstances which made comparisons at present unreliable. For instance, a hospital with a medical school attached to it was more expensive than a hospital without a medical school. A medical school was undoubtedly a source of increased expenditure. On the other hand, it increased the number of persons interested in the institution. The comparison was disturbed by the expensive character of certain cases. There was the proportion of children also to consider; children were much less expensive than adults. In the case of the out-patient department much depended on the extent of the maternity work. Some hospitals were rated at their full value, while others paid upon a very small sum. St. Mary's Hospital had paid upon a rateable value of £250, but the other day the sum was raised to £1500, the difference representing £1 4s. per bed. Another point was the existence or the absence of necessity for expense in collecting the funds. In some hospitals such articles as tea and sugar were not included in the dietary. The matron was head of the nursing department at St. Mary's Hospital. Her salary was £125, with board and lodging. She was responsible to the house and finance committee and the weekly board. The nursing staff consisted of one matron, one night superintendent, ten sisters, twenty-six staff nurses, and twenty-three probationers. Occasionally they were at a loss for a nurse, and in such an event they applied to Brompton Consumption Hospital, where there was an institute. There were twenty-three wards. At night it happened that two nurses had the charge of forty-three beds. Special arrangements were made for special cases. The sisters came on duty at eight o'clock each morning, and left at ten o'clock each evening. They were off duty twice weekly from five till half-past ten o'clock, once weekly from seven till half-past ten o'clock, every other Sunday from three till half-past ten o'clock, and every Sunday from two till half-past four o'clock. Their holidays were one day per month, and one calendar month per annum. The staff nurses' hours were from seven o'clock in the morning till nine o'clock in the evening. They were off duty twice weekly from five o'clock, once weekly from seven o'clock, and every other Sunday from three o'clock. Their holidays were one day per month, and one calendar month per annum. The hours of probationers were from seven o'clock in the morning till half-past eight in the evening. They were off duty two hours daily. They treated the probationers better than the staff nurses in this respect. The probationers were less accustomed to the work than the staff nurses, and required more leisure. The night superintendent came on duty at ten o'clock, and left at seven. The net working hours of sisters were 10½, of staff nurses 9½, and probationers 9½ hours per day. The sisters' wages ranged from £30 to £40, and staff nurses from £20 to £25, and probationers were paid £10 per annum. The probationers began to get full nurses' wages in the second year of their apprenticeship. The hospital was affiliated with the National Pension Fund for Nurses. Every nurse must contribute to the fund, and the hospital paid one-half of the contribution.

By Lord Saye and Sele: The hospital was in possession of investments of the value of £72,000.

By Lord Cathcart: Last year the number ill among the nursing staff was fifty, which included twenty-one cases of influenza. The number of days they were ill was 456, and the average daily number of nurses on the sick list was 1·25. They had a drainage plan. The quarterly meetings of the board were open to reporters. They kept a temperature book. On the whole, he regarded a medical school as advantageous to a hospital.

By the Chairman: He certainly would prefer to see the reorganisation of hospitals come from within rather than from some outside body. A central authority might do some good. If it put a check on the spread of small special hospitals it would do a valuable work indeed. Personally, however, he did not think that much good to hospitals would come from placing them under a central authority. His impression was that the result of central authority was rather towards harm than good. They had before them the experience of the Metropolitan Asylums Board. He thought it well that the hospitals should preserve their individuality. No distinction was made in the treatment of the probationers and the lady probationers. They dined at one table. The lady probationers paid £30 a year for board and lodging.

Colonel Bird, chairman of the house and finance committee, stated that the duties of his committee were to check extravagance. The institution was governed by an open board which, in his opinion, was very disadvantageous to it. Governors who took little interest ordinarily in the affairs of the hospital came upon occasion to the meetings and overruled those governors who devoted themselves systematically to the institution. He did not object to the quarterly board being open to all governors. His objection applied to the weekly board.

Mr. Herbert W. Page, late dean of the medical school and one of the surgeons of the hospital, stated that the number of students was about 300. Until last year the number had been on the increase. The fall last year he attributed to the successful rivalry of other schools. The attendance had more than doubled in the last four or five years. The average income amounted to about £4500, and the expenses to about £3300. The balance was distributed amongst the lecturers. The largest sum received by any lecturer was about £1600. It might be desirable to have some of the subjects dealt with in a central school. He would not advocate any interference with the

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present individuality of the hospital schools as to the teaching of medicine and surgery, but he thought there was great waste of energy in keeping up eleven medical schools in London, all of which taught what he might call preliminary subjects. They had a residential college in connexion with St. Mary's Hospital Medical School. It was a commercial undertaking quite apart from the hospital. It began well, but had since fallen off on account of the high fees charged. A reduced scale of fees had been framed. As to the question of hospital management, he thought there should be no Government interference. Some means, however, might be devised to regulate the erection of new hospitals.

Mr. Malcolm Morris, physician-in-charge of the skin department of the hospital, stated that during his nine years' experience he had not found an instance in which a person applied for assistance who did not deserve to receive it. He thought Poor-law infirmaries should be utilised for teaching purposes. Patients in these infirmaries took it as a compliment to be lectured upon. The objection came from the managers, not the patients. He thought that before sanction was given for the erection of a hospital public necessity should be proved.

Mr. Pearce Gould, dean of the Medical School of the Middlesex Hospital, said that in London there was great need of improved facilities for teaching practical anatomy, subjects for dissection were becoming scarcer every year. The general medical schools were without proper facilities for teaching their students with regard to infectious disease. With few exceptions, the hospitals excluded infectious diseases from their wards. He would not like to see the old apprenticeship system revived, but he thought it might be desirable to have some system of apprenticeship after the close of the curriculum. This would tend to diminish the number of unqualified assistants. The experience of London was not strongly in favour of residential colleges.

The Committee then adjourned.

The Committee met again on Thursday, Lord Sandhurst presiding.

Westminster Hospital.

Mr. Quennell, secretary of the Westminster Hospital, was examined. In answer to the Chairman, he said that the hospital was founded as long ago as 1719. The present buildings were erected in 1834, and had since then been extensively altered. It was practically a free hospital, although they had governors' letters. Out of 2500 or 2600 patients admitted last year only about 100 brought governors' letters. There were 206 beds in the hospital. Sometimes the beds were all occupied. They were not very careful about keeping a margin. The average number of patients last year was 184. Witness was responsible to the house committee, who met once a week. They had a professional auditor. At the end of the quarter the bills were all checked by witness and scheduled, and when that was done the professional auditor was called in and checked them. The professional auditor made a report to the finance committee. The petty cash was checked once a fortnight. The bank accounts were checked once a quarter, but the bank book was exhibited and examined at the weekly meeting of the committee. Witness received a salary of £400 without residence. Last year they derived £2706 from dividends and rents, £1461 from annual subscriptions, £1860 from donations, £6610 from legacies, £1145 from the Hospital Sunday Fund, and £300 from the Hospital Saturday Fund—total, £14,109. The expenditure amounted to £13,331. In addition to the income he had stated they had transferred to them during the year £24,000 in Consols. They had also received £1000 for the endowment of a bed. In the way of capital they had £10,000 for the endowment of a ward, £17,353 for the endowment of what was called the incurable establishment, £1324 for the endowment of a lithotriptic ward, and £4400 for the endowment of beds and cots. At present they had £50,806 to the credit of the General Purposes Fund, and about £34,000 of those endowments. They could spend the former but not the latter. The patients were practically all admitted by the senior house physician and the senior house surgeon. Patients arrived at all hours of the day and night. They had not a resident medical officer. They had two house physicians, two house surgeons, and the officers of the obstetrical department. In the event of a grave case arriving a messenger would be sent in a cab for the surgeon or physician. They excluded small-pox, typhus fever, and scarlet fever. They admitted diphtheria. They had no regular system of isolation. In the out-patient department the resident physicians were not obliged to see more than twenty new cases each per day. It was reckoned that each patient attended four times, and that the total attendances in the course of a year numbered about 100,000. They did not make any inquiry into the circumstances of the out-patients. It was proposed and carried fourteen or fifteen years ago, at the House Committee, to employ a Charity Organisation Society officer to make inquiries, but the decision was overruled by the governors at their general court. In his opinion, he did not consider that upon the whole the charity was abused. Although occasionally they had to turn away applicants, he did not consider that the medical relief for the poor in the district was insufficient. Complaints as to food would come to him in the first instance. He presumed that he was responsible for the sanitary condition of the hospital—at any rate during the daytime. He was not an expert in sanitary matters. They had an architect, and if witness came to the conclusion that there was anything wrong in the sanitary arrangements he would send for him. They paid the architect no salary or commission, but simply for work done. The matron received no salary from the hospital. She was not only their matron, but the superintendent of the Westminster Training School and Home for Nurses. This institute trained the nurses in the hospital. The Home was independent of the hospital, but the two institutions were very much involved one with the other. The nurses were paid by the institute, not by the hospital. They found this arrangement work admirably. The nurses were controlled by the matron. He supposed that cases of misconduct would be reported by the matron to the managers of the institute. The nurses who worked in the hospital—to the number of about thirty-three—had their food in the hospital. Many of the probationers had their food in the institute, which was only about 150 yards distant from the hospital.

By Lord Monkswell: They had several lady governors, but he had never summoned them to the meetings. The governors numbered about 300, and at the quarterly meetings last year the attendances were 27, 25, 21, and 22. It was felt that the governors, having supplied the hospital with funds, should review the work of the House Committee. In his opinion the establishment of a central board to control the hospitals of London might do a great deal of harm, and he was not prepared to advocate it.

By Lord Cathcart: They had a drainage plan which was always accessible. If reporters asked admittance to their general meetings he would submit the question to the Board. He admitted that when an institution received its means and support from the public reporters should be allowed to attend those meetings.

By the Earl of Kimberley: They had no periodical inspection of the drainage system. The last inspection took place in 1883, when large alterations were effected. The drains were regularly flushed and the work was well done owing to the force of water they had. It might be desirable to have a yearly inspection by an outside authority. Such an arrangement would be attended with some difficulty.—By the Chairman: He wished to explain that they employed a man whose duty it was to examine the waterclosets and drains every Monday.

Miss Pyne, matron of the hospital, and superintendent of the Nurses' Training School and Home, examined by the chairman, said that the nursing arrangements of the hospital were very satisfactory. The building did not afford accommodation for the nursing staff. They had eight ward sisters, thirty-two nurses, and twenty-three probationers. They had no paying probationers. The Home did not nurse any hospital besides the Westminster, but they sent out nurses to private houses. The sisters went on duty at 8 o'clock in the morning, and were relieved at 9 o'clock in the evening. They had two hours for dressing and meals, and they were off duty three evenings a week from 6 to 9, and four hours on Sunday. The staff nurses went on duty at 7 o'clock in the morning and were relieved at 9 o'clock in the evening. They had two hours for dressing and meals, and they had two hours off duty three times a week and four hours on Sunday. The night nurses went on duty at 9 o'clock, and were relieved at 9 o'clock in the morning. They had a meal in the middle of the night, and came down from the wards for breakfast at 7 o'clock in the morning. There were eighteen wards. As a rule they had two or three nurses off duty through sickness. The sisters and nurses had an annual holiday of one month. The private nurses received no percentage on their earnings. The surplus derived from the working of the Home was devoted to the Superannuation Fund, which at presented amounted to over £3000. They did not keep ward maids in the hospital. The nurses did all the work of the wards save that in connexion with the floors and the beds. They employed a certain number of scrubbers. She did not think the nurses were overworked. The presence of the nurses gave a good tone to the wards, and the work was better done by them than by ward maids.—By Lord Monkswell: She had full power to dismiss probationers, but she could not dismiss a trained nurse without reference to the Committee.

Mr. Allchin, dean of the medical school in connexion with Westminster Hospital, examined by the chairman, said that there were about 100 students in attendance at the school. They had accommodation for about fifty more. The average receipts for the past five years had been £1860 and the average expenses £913. He thought there might be an amalgamation of some of the smaller schools for the purpose of teaching certain of the preliminary subjects in medical education.

By the Earl of Arran: All their physicians and surgeons must hold the London qualifications. He did not think they lost good men by this arrangement. The London Colleges exercised a disciplinary control over their Members and Fellows with far more certainty than the colleges in Scotland and Ireland. The position of an individual attached to a London hospital was a powerful one for influencing medical opinion, and it was highly desirable that those who held the position should be of the highest possible character and should be subject to disciplinary control. The greater number of the London students went to the London qualifying bodies for examination.

Lord Thring: Do not you think London is showing a bad example to Dublin and Edinburgh in restricting its hospital appointments to its own degrees?—Mr. Allchin: It is not a question of restriction to London degrees. The degrees are not in question. It is a question of control other than that on a purely professional standard.—Lord Thring: Do you not think it would be a great disadvantage to Dublin that nobody should be allowed to be an officer of a great Dublin hospital unless he had a Dublin qualification?—Mr. Allchin: I really do not know how to answer that question, because if I say "yes" it would imply that the London qualification is so much better than the Dublin qualification.—Lord Thring: Quite so, you surely think so?—Mr. Allchin: It is not on the ground of the professional qualification that I speak, it is on the ground of the control exercised by the London bodies.

The Committee afterwards adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, G. R. W., M.B., C.M. Edin., has been appointed Honorary Medical Officer to the Austin Hospital, Melbourne.

ALCORN, ROBT. G., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Visiting Surgeon and Dispenser to the Gaol, Maitland, New South Wales.

BOAKE, W., L.R.C.S., L.K.Q.C.P. Irel., has been appointed Public Vaccinator for Maffra, Victoria, Australia, vice Brown.

BREWIS, R. A., M.D. Edin., has been appointed Medical Officer of Health for the District of Waratah, Tasmania.

BRYANT, J. H., M.B., B.S. Lond., has been appointed Assistant House Physician to Guy's Hospital.

BYRNE, HUGH J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the District of Campbell Town, Tasmania.

CASSON, T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer to the Hearts of Oak Benefit Society, Gainsborough.

CALTHROP, L. C. EVERARD, L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to the London Hospital.

CHARNLEY, WILLIAM, M.D., M.C. Cantab., M.R.C.S., has been appointed Honorary Oculist to the Bridgnorth and South Shropshire Infirmary.

CREASY, ROLF, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First District of the Winslow Union.

ELLIMAN, ARTHUR C., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Kent and Canterbury Hospital, vice W. F. A. Clowes, resigned.

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FETHERSTON, GERALD H., M.D. Melb., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed an Official Visitor of the Lunatic Asylums at Yarra Bend and Kew, Victoria, Australia.

GRIFFITH, J. DE BURGH, M.B., M.Ch. Dub., has been appointed, *pro tem.*, Assistant Medical Officer at the Quarantine Station, Victoria, Australia.

HARRISON, REGINALD, F.R.C.S., has been appointed Consulting Surgeon to the Braintree and Bocking Cottage Hospital.

HARTFORD, H. W., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Workhouse, Christchurch, Hants.

HAWKINS-AMBLER, GEO. A., M.R.C.S., L.R.C.P. & L.M. Irel., has been appointed Medical Officer for the Whitley Upper Sanitary District.

HUGO, EDWIN V., M.B., B.S., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer of the Workhouse, and Assistant to the Medical Superintendent at the Infirmary for the Parish of Paddington.

JACKSON, C. GRANVILLE, L.R.C.P. Irel., has been appointed Medical Officer of Health for the District of Ringarooma, Tasmania.

KENNISH, T. L., M.B., C.M. Edin. has been appointed Medical Officer for the Second District of the Winslow Union.

LIPSCOMB, E. H., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer of the St. Albans Hospital, Herts.

LLOYD, H. SANDERSON, M.B., C.M. Edin., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Ryde, New South Wales.

LOVEGROVE, JAMES F., M.R.C.S., has been appointed an additional Public Vaccinator for the District of Timaru, New Zealand.

MAXWELL, KENNETH, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Hobart General Hospital, Tasmania.

MILES, GEO. E., L.R.C.P. Lond., M.R.C.S., has been appointed Public Vaccinator for the District of Leichhardt, New South Wales.

MUDGE, T. H. T., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Paignton District of the Totnes Union.

ROSS, J. M., M.B., C.M., B.Sc., F.R.C.S. Edin., has been appointed Medical Officer of Health for the County of Dumfries.

ROWSE, E. L., L.R.C.P., M.R.C.S., has been appointed House Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

SLOGGETT, H. PAYATER, L. & L.M.K.Q.C.P. Irel., M.R.C.S., Dipl. State Med., has been appointed Resident Surgeon to the Victorian Eye and Ear Hospital, Melbourne.

SMITH, ALFRED, ex-Assistant Master to the Rotunda Hospital, Dublin, has been appointed Examiner in Midwifery to the Royal University, Ireland.

STEVENS, T. G., M.B., B.S. Lond., has been appointed Assistant House Surgeon to Guy's Hospital.

SWEETNAM, F. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Shire of Mount Rouse, Victoria, Australia, vice Woodford.

TURNER, ALFRED J., M.D. Lond., M.R.C.S., has been appointed House Surgeon to the Hobart General Hospital, Tasmania.

VAISEY, T. F., M.R.C.S., has been appointed Medical Officer for the Third District of the Winslow Union.

WATSON, JOHN, M.B. Durh., F.R.C.S. Edin., has been appointed Senior House Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

WOOD, WM. D., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Witney.

WELLFORD, F., M.B., B.C. Cantab., has been appointed Assistant House Surgeon to Guy's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM PROVIDENT DISPENSARY.—Medical Practitioner on the staff of the Balsall-heath Branch. (Apply to Rev. W. C. Thomas, Hon. Sec, Moseley, Birmingham.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Medical Officer for one year. Salary £80 per annum, with board and residence.

DENTAL HOSPITAL OF LONDON AND SCHOOL OF DENTAL SURGERY.—Four Demonstrators. Honorarium £50 per annum.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons to take charge of the out-patients.

HULL ROYAL INFIRMARY.—Ophthalmic Surgeon.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle for one year. Salary £150 per annum, with board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Physician.

NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Dispenser. Commencing salary £60, with board and residence.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Junior House Surgeon for nine months at a salary of £5 per month.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. In lieu of salary, rooms, commons, and washing provided in the hospital.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House Surgeon and Secretary. Salary £80 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging, and washing.

TURNER'S HOSPITAL, Kirkleatham.—Surgeon. Unfurnished house, rent free, and no other remuneration.

WEST HAM UNION.—Assistant (Resident) Medical Officer for the Workhouse. Salary £100 per annum, with the usual resident allowances. (Apply to the Clerk, Clerk's Office, Union Workhouse, Union-road, Leytonstone, E.)

Births, Marriages, and Deaths.

BIRTHS.

BEVILLE.—On Feb. 23rd, at the Firs, Palace-road, East Molesey, the wife of Fredk. W. Beville, L.R.C.P. Lond., M.R.C.S., of a daughter.

BROWNFIELD.—On Feb. 22nd, at Petersfield, Hants, the wife of H. Munyard Brownfield, M.R.C.S., L.R.C.P., of a son.

DODS.—On Feb. 18th, at Bugbrooke, Weedon, Northamptonshire, the wife of Louis F. Dods, Surgeon, of a son.

FARRAR.—On Feb. 17th, at the Vale House, Stamford, Mary, the wife of Dr. Reginald Farrar, of a daughter.

LANE.—On Feb. 21st, at Burford, Oxon., the wife of Frederick H. Lane, M.R.C.S., of a son.

LYSTER.—On Feb. 18th, at Long Eaton, Nottingham, the wife of Arthur E. Lyster, M.R.C.S., of a daughter.

PROUT.—On Feb. 19th, at 6, Mentone-terrace, Edinburgh, the wife of William T. Prout, M.B. Edin., Government Medical Officer, Gold Coast, of a daughter.

PRITCHARD.—On Feb. 19th, at Combehurst, Nutley-terrace, Hampstead, the wife of Urban Pritchard, M.D., F.R.C.S., of a daughter.

RUSHWORTH.—On Feb. 20th, at Langdale, Goldhurst-terrace, Hampstead, the wife of Frank Rushworth, M.D., of a daughter.

STIVEN.—On Feb. 21st, at the Manor Lodge, Harrow-on-the-Hill, the wife of E. W. Flemyng Stiven, M.D., of a daughter.

MARRIAGES.

BICKERTON—BURTON.—On Feb. 21st, at St. James's Church, Birkdale, by the Rev. R. Stephenson, Thomas H. Bickerton, of Rodney-street, Liverpool, to Mary Jessie, daughter of the late James Burton, of Hilton House, Prestwich.

FISH—HALL.—On Jan. 28th, at Georgiana, Brevard County, Florida, U.S.A., Henry Clay Fish, M.D., to Alicia Maria, elder daughter of the late John Charles Hall, Esq., J.P., late of Letterfrack, county Galway.

IRVINE—DURY.—On Feb. 19th, at St. Nicholas Church, Strood, Kent, D. L. Irvine, Army Medical Staff, son of the late Rev. Walter Irvine, M.A., Rector of All Saints, Newcastle-on-Tyne, to Diana Lucy Elizabeth, daughter of T. H. Dury, Esq., D.L., of Bonsall Leys, Derbyshire.

SPENCER—CHARLTON.—On Feb. 21st, at St. Bartholomew-the-Less, Smithfield, by the Rev. W. Ostle, Vicar, Walter George Spencer, of 35, Brook-street, son of the late Walter Spencer, Esq., of Little Chalfield, Wilts, to Elizabeth, daughter of the late William Charlton, Esq., of Madras.

DEATHS.

BARNARD.—On Feb. 23rd, at Uppingham, John Wyatt Barnard, M.D., aged 74.

CARMICHAEL.—On Feb. 21st, at Walmer-crescent, Paisley-road, Glasgow, James Carmichael, M.D., Fleet Surgeon Royal Navy, retired List, in his 89th year.

ELLIOTT.—On Feb. 20th, after a short illness, F. H. Elliott, M.D., aged 38.

LESTOURGEON.—On Feb. 22nd, at The Close, Cambridge, Charles Lestourgeon, M.B., aged 83.

MASSEY.—On Feb. 21st, at his residence, Park-row, Nottingham, Isaac Massey, M.D., Surgeon-Major South Notts Yeomanry, in his 82nd year.

OGILVY.—On Feb. 20th, at Clevedon, George Livingston Ogilvy, M.D., late of Newton Mill, Forfarshire, aged 77.

TONGE.—On Feb. 19th, at Harrow, Morris Tonge, M.D., aged 54.

TUCKER.—On Feb. 19th, at Start House, Slapton, Richard Paige Tucker, M.R.C.S., aged 80.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on February 24th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	253	52	1	37	2	350	442
North-Western Hospital	224	36*	—	8	..	268	443
Western ,,	153	18	—	9	3	180	224
South-Western ,,	151	20	—	12	..	183	340
South-Eastern ,,	187	16	—	20	3*	226	462
Northern ,,	254	16	—	26	—	296	480
Totals .. — —	1227	158	1	112	8	1606	2391

* Infants with mothers.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 26th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 20	30·41	E.	35	34	47	40	34	..	Overcast
,, 21	30·58	E.	34	33	..	39	32	..	Foggy
,, 22	30·40	S.E.	34	34	59	43	32	—	Hazy
,, 23	30·50	E.	30	..	45	41	29	..	Foggy
,, 24	30·55	E.	33	33	45	41	30	..	Foggy
,, 25	30·34	E.	31	..	58	51	31	..	Foggy
,, 26	30·00	E.	34	34	70	53	31	..	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE MIDWIVES' BILL.

Dr. C. M. Campbell.—We regret that we have not room for Dr. Campbell's letter, our space being given to replies by two gentlemen who reasonably claim to answer our criticisms of last week. Dr. Campbell thinks it would be manifestly unfair and absurd to bestow upon an uneducated woman a legal recognition and right to practise one of the three great branches of the profession apart from the other two, while forbidding men to do so. The answer is, that midwives in thousands have already a quasi-legal position without the slightest education or guarantee of fitness, and that it is not proposed to give them a right to do more than attend a normal labour. He further argues that the Bill is meant to soothe the consciences of guilty and shabby guardians, who employ midwives instead of medical men. But thousands of women employ midwives who are not paupers, and whom there would be very grave objections to making into paupers by denying them the right to employ a midwife. It must not be forgotten that 10,000 women practise as midwives now, not only without let or hindrance, but with a certain legal standing and title. Happily, there is now almost universal agreement on this one point, which is all we contend for—that legislation is needed to prevent incompetent and ignorant women from practising as and calling themselves midwives.

Mr. Jos. S. Galiria, B.A.—We fear our correspondent is without redress, unless he could come to England and take proceedings.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—Will you permit me to say a few words on behalf of the much-abused class of unqualified assistants, to which I have the misfortune to belong?

Your correspondent, G.P., is especially severe when he puts us on a level with travelling quacks &c. The majority of assistants have spent some time at a hospital and passed one or two examinations. I never met a pharmaceutical student who was employed as one. The fact seems to be completely ignored, that if the employment of assistants (sine diploma) were to be forbidden, as some of your correspondents seem to wish, a great number of men would be thrown out of employment. Take my own case, by no means an isolated one. I am married and have three young children, have passed first college and failed once for final, have never had the money to go up again. I do not write well enough for a clerk, and am not fitted for any other occupation. I am, Sirs, yours faithfully,

February, 1891. H. L.

THE CLIMATE OF THE ISLE OF MAN.

ON this subject *Dr. D. H. Cullimore* writes in effect as follows:—Physicians in their appreciation of the value of therapeutic measures in the treatment of disease may be broadly divided into two classes—the constitutionally enthusiastic, who see in every drug a panacea; and the constitutionally incredulous, who rely on the *vis medicatrix naturæ*. The safest course is to follow the old adage, *in medio tutissimus ibis*. Those who recommend this sea-girt isle as a winter resort in comparison with the many admirable stations in this and other countries assuredly belong to the former class. The dampness of the climate must be to certain constitutions more trying than a lower temperature in combination with a drier atmosphere. If the sanitation of Douglas, the chief place of resort, "leaves much to be desired," it is difficult to see for what class of invalids the island is suited. Our correspondent alludes also to the dangerous character of the voyage, and states that the soil, being a stiff clay and marl underlying sand, is unfavourable to invalids. The mountain chain which passes over the north-east and south-west of the island helps to increase the rainfall, without affording any protection from the rainy winds which even in summer are apt to blow over its timberless fields. The element of great equability between the day and the night temperature is not so important as is generally imagined. The island is, however, an admirable resort in summer, and may perhaps be advantageously visited even in the spring and autumn.

Mors.—Full details of the art of embalming will be found in articles by Dr. B. W. Richardson in the Asclepiad for 1888 (vol. v.).

AN INSPECTOR OF PRACTICAL MEDICINE AND SURGERY.

To the Editors of THE LANCET.

SIRS,—The importance of a fair apportionment of "subjects" for the practical study of anatomy in the dissecting rooms according to the requirement of each medical school has long been recognised by the institution of an inspector of anatomy. Is it not necessary to have a somewhat similar official to see that each medical school receives students only in proportion to the amount of clinical material available at the hospital connected therewith, especially fifth-year students? A knowledge of medicine &c. gained only from books, lectures, and making one of a crowd going round the wards with the physicians and surgeons may avail the passing of examinations, even with distinction, but they are not sufficient to equip a man for the responsibilities of practice. It is imperative that every effort should be made to secure for this fifth year a real opportunity for educating the senses of sight, hearing, and touch, together with the practical use of instruments required for diagnosis and treatment. It should be arranged that each student has sole charge of a certain number of beds (of course under the physician or surgeon) for a definite period in addition to his other clinical work, the number of "clinical" students permissible at any one hospital to be determined by the number of beds in general occupation, affiliation with hospitals or infirmaries not having medical schools being allowed if required. This would be the principal duty of the proposed inspector.

I am, Sirs, yours truly,

CHAS. W. CHAPMAN, M.D.

Fitzjohn's-avenue, N.W., Feb. 20th, 1891.

VACCINATION AND ITS RESULTS.

DR. CREQUY has had charge of the *employés* of the Chemins de Fer de l'Est in the matter of vaccination, and he has just given his experiences in an interesting paper. From 1870 to 1888 the mean number of days lost to the Company by the prevalence of small-pox among the *personnel* was 400 per annum. For the last two years, from 1888 to 1890, after vaccination and revaccination rigidly and carefully practised, the figures fell to 20 per annum—a sufficiently eloquent proof of the value of the prophylactic measure.

J. McC. will find the required information in the quite recent work of Dr. Th. David on the Microbes of the Mouth.

Mr. W. Furniss.—The paper has been received and marked for insertion.

Medicus has not enclosed his card.

THE METROPOLITAN HOSPITALS INQUIRY.

To the Editors of THE LANCET.

SIRS,—In your condensed notice of my evidence before the Lords' Committee on the 16th inst. I am reported to have said that "some of the existing institutions might with profit be removed to the country." In labouring to be brief you attribute to me a statement which a fair reading of my argument will not support. The tenour of my evidence went to explain how the rise of the special hospitals is accounted for by the inadequate accommodation afforded by the general hospitals, and by the close government of these hospitals, which drives men impelled by the spirit of scientific research to seek unfettered opportunities elsewhere. I am, Sirs, yours faithfully,

Harley-street, February, 1891. ROBERT BARNES.

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THE MATTEI TREATMENT AND THE KEIGHLEY COTTAGE HOSPITAL.

AT the annual meeting of this hospital, the governors desiring information as to Dr. Roberts's resignation, a letter from that gentleman was read, from which it appeared that he had used Count Mattei's remedies for cancer, and that his five colleagues on this ground declined to co-operate with him. He expressed regret for anything he had said which had hurt the feelings of his *confrères*, but vindicated his right to use any remedies he found to be of value. We cannot agree that the use of secret remedies in public institutions can in the long run be beneficial. The tradition of the profession in favour of openness is unmistakably sound, and should be adhered to. Let Count Mattei make full disclosures as to his remedies, and they will receive fair trial. The matter was not pursued.

G. S. T.—There is no inflexible rule. The custom of the district should be followed.

Dr. Kendal Franks.—We shall be pleased to receive the paper.

HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—I shall be glad if some of your readers will advise me as to what should be done in the following instance.

Some weeks ago I sent a patient with a letter to Dr. Edmunds, asking that he might be admitted into one of the pay wards of St. Thomas's Hospital; but, as far as I can make out, instead of handing in my letter he managed to get taken into one of the general wards as a non-paying patient. When I told him on his return home I understood he had been an inmate of one of the free wards, he said, "Well, I have not to thank you for that." I have written to the hospital authorities, and told them he was in a position to pay for his board and attendance, as he was for many years in a good business and had a regular banking account. It appears to me that the amount which he would have been charged had he been admitted into the pay wards should be demanded of him, as he had no right to live at the expense of a charity which at the present time has to close some of its wards on account of its income being insufficient to keep them open.

I am, Sirs, your obedient servant,

Surbiton, Feb. 25th, 1891. F. P. ATKINSON.

RESIDENCE AND POOR-LAW APPOINTMENTS.

Dr. D. A. Fraser.—We think that, *cæteris paribus*, the resident in a parish should be preferred by guardians to one for whom the poor would have to send four or even seven miles. But the present incumbent certainly has strong claims in being in possession and in there being no complaint to make of inattention. Responsibility would be considerable if the distance which the poor have to send were found to be too great in urgent cases.

SPONGE SUBSTITUTES.

To the Editors of THE LANCET.

SIRS,—Having been hitherto dissatisfied with the artificial sponges in general use, I have for some time past been experimenting with different sponge substitutes, with the aim in view of getting a cheap antiseptic and absorbent sponge. I find that Hartmann's wood wool enclosed in a layer of sublimate gauze to be decidedly the best substance which I have tried. I may mention that wool and gauze are impregnated with ¼ per cent. of corrosive sublimate. I have suggested to the Sanitary Wood Wool Company, 11, Hatton-garden, that they should make and bring out these sponges in three sizes, and have also a larger and flatter fourth size, which I think will be found of great use in abdominal operations.

I am, Sirs, yours faithfully,

Derby, Feb. 18th, 1891. T. HENDERSON POUNDS, F.R.C.S. Eng.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bastian, London; Dr. Broadbent, London; Mr. S. Snell, Sheffield; Dr. W. S. Playfair, London; Dr. Cullimore, London; Dr. Barnes, London; Dr. J. Braithwaite, Leeds; Dr. Peregrine, London; Dr. Masen; Mr. Victor Horsley, London; Dr. Linn, Paris; Mr. Green, Derby; Dr. Theodore Williams, London; Mr. Lund, Manchester; Dr. Herschell; Mr. Stuart Low, London; Dr. Steavenson, London; Mr. W. L. Dickinson; Dr. J. Little, Maryport; Mr. Mackintosh, Harpurley; Dr. Campbell Black, Glasgow; Mr. Cardew; Dr. J. W. Martin, Leith; Messrs. Margrave Bros., Llanelly; Prof. A. Stuart; Dr. Ground, Maidstone; Mr. Mayo Robson, Leeds; Dr. C. W. Chapman, Hampstead; Messrs. Mann and Son, London; Mr. C. Russell; Dr. Charles, London; Messrs. Oliver and Boyd, Edinburgh; Mr. Kendal Franks, Dublin; Messrs. Perkins and Co., London; Mr. Trubshaw, Mold; Mr. A. S. Panday, Gowallia Tank; Dr. S. Stephenson, Hanwell; Mr. Creagh; Messrs. Thorp and Co., Glossop; Dr. Lovell Drage, Hatfield; Dr. Rentoul; Dr. Glover Lyon, London; Dr. G. H. Mackenzie, Edinburgh; Messrs. Mayer and Meltzer, London; Mr. Briscoe, Esher; Mr. P. Edgelow; Dr. Leslie Phillips, London; Dr. C. M. Campbell; Mr. F. A. Rogers; Dr. Oscar Jennings, Paris; Dr. F. P. Atkinson, Surbiton; Surgeon-Major Deane, Croydon; Mr. J. S. Galizia, Malta; Mr. Piggott, Clare; Dr. Barnes, Carlisle; Dr. Fergusson, Banff; Dr. Goldmann, Frieburg; Mr. Watt, London; Dr. Mackinnon, Damascus; Mr. Davis, London; Dr. Jones, Ruabon; Mr. Cranston Charles, London; Messrs. Hopkinson and Co., Notts; Mr. Blount, Paris; Mr. Harries, Sussex; Messrs. Giddy and Giddy, Pall Mall; Messrs. Richardson, Leicester; Messrs. Griffin and Co., London; Mr. Dunscombe, Westminster; Messrs. Keene and Ashwell, London; Miss Fernie, Macclesfield; Messrs. Baillière and Co.; Mr. Perkins, Newport; Mr. Mackiewicz, Berlin; Dr. Lediard, Carlisle; Mr. Bramwell, Edinburgh; Mrs. Morice, Agra; Mr. Gurner, Pall Mall; Mr. Whitney, Liverpool; Mr. Ramage, Largs; Mr. Diack, Suffolk; Mr. Cornish, London; Mr. O'Meara, Carlow; Mr. Roberts, Sheffield; Mr. Ackrill, Harrogate; Dr. Rouw, London; Mr. Smith, Bromsgrove; Mrs. Matthews, Birmingham; Mr. Horne, Bradford; Miss Campbell, Glasgow; Mr. Johnson, Leicester; Mr. Hornibrook, Bloomsbury; Mr. Rutherford, Redcar; Miss Hooper, London; Dr. A. H. Robinson, London; Mors; M. O. S., London; Maltine Manufacturing Co., Bloomsbury; G. W. S., Leeds; Geoffrey, London; Rotherham Hospital; M.D., London; Urbanus, London; Z., London; Children's Hospital, Bradford; Medicus, London; Evans, Beckenham; Indian Engineering, Calcutta; Doctor, London; L.R.C.P.; Audi Alteram Partem; Clentha, London; Beta, London; A Ruined Lodging-house Keeper; Veritas; The Clerk, County Borough of Sheffield.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Tully, Hastings; Mr. Norman, Bayswater; Mr. Sheen, Worcester; Mr. Tyte, Minchinhampton; Mr. Fitzgerald, Queenstown; Mr. Istance, Newport; Mr. Buckley, Oldham; Mr. Pearson, Newry; Mr. Rushworth, Halifax; Mr. O'Meara, Leicester; Mr. Burns, Carlisle; Dr. Thomas, Pontypridd; Mr. Macdonald, Manchester; Mr. Jones, Glamorganshire; Mr. Williams, Oswestry; Mr. Prout, Edinburgh; Dr. Huide, Banbury; Mr. Blatchley, London; Mr. Evered, Athlone; Dr. Jones, Ruabon; Mr. Davies, Newport; Mr. Thomas, Liverpool; Mr. Hogg, Huddersfield; Mr. Chesebrough, Brampton; Mr. Cochrane, Wigtownshire; Dr. Hendersen, co. Derry; Mr. Crosskey, Kent; Mr. Brooks, Hull; Mr. Hepburn, Bournemouth; Mr. Spencer, Wilts; Dr. Lloyd, Llanarthney; Dr. Chawner, Chesterfield; Messrs. Coule and Son, New York; Mr. Trestrail, Glasgow; Miss Walker, London; Messrs. J. and H. Grace, Bristol; Mr. Yorke-Davies, Sherborne; Messrs. Blondeau et Cie., London; Mr. Whitehead, Brentford; Mr. Thomas, Wickham Market; Mr. Flint, London; Dr. Pope, Dublin; Messrs. Cassell and Co.; Mr. Moore, Welshpool; Mr. Jerome, Camelford; Messrs. Smith and Son, Manchester; Mrs. Campbell, Kensington; Messrs. Beal and Sons; Mr. Jessop, London; Mr. Tidswell, Cornwall; Messrs. Mertens and C.; Mr. Thomas, Leeds; Mr. Finley, Longford; Messrs. Cooke and Sons, Winsford; Mr. Heywood, Manchester; Messrs. Shape and Co., Preston; Rev. Mr. Thomas, Birmingham; Mr. Thomas, Ystrad Rhondda; Mr. Owen, London; Mr. Howard, Norfolk; Messrs. Iles and Stradling, Watford; Mr. West, Stamford; Mr. Whiteley, Liverpool; Mr. Walsh, Glasgow; Mr. Essex, Pontypool; Dr. Hector, Bradford; Dr. Fraser, Manchester; Mr. Thin, Edinburgh; Mr. Rhodew, Manchester; Mr. Pim, Dublin; Dr. Briscoe, Wilts; Mr. Eaton, Sheffield; Mr. Baird, Walsall; Mr. Ryley, London; Dr. Saul; Dr. Orr, Hanover; Dr. Hooper, Ripley; Mr. Smith, Oldham; Mr. Reynolds, Cambs; F. H., London; Florence, Yorkshire; Nesaler; Kenilworth Convalescent Home; D. G., London; Secretary, Barnwood County Asylum, Dorset; Delta, London; Scot, London; Vere, London; Vade Mecum, London; Medicus, Glasgow; Deltoid, London; West Riding Lunatic Asylum, Wakefield; Christian, London; Secretary, County Asylum, Dorset; M. C. S., Manchester; Iodine, London; Stamford Infirmary, Rutland; A. F., London; M.B., Loughborough; Iatros, London; B., Manchester; Oxon, London; M.A., London; Ferndale, Torquay; Carter, London; K. L., London; Success, London; M.D., Bristol; Medicus, London; Crown, Roxburghshire; Stafford County Asylum; P. A., Hatcham; Gamma, London; Secretary, Hospital for Women, Leeds; A. R., Halifax; Omega, Manchester; A. W. H., Norfolk; Country, London; Princeps, London; Surgeon, Cardiff; G. W., Leeds; Alpha, London; Genuine, London; C. D., London; Omega, Cardiff; Secretary, Royal Hospital, Portsmouth; P. W. H., Barking-road; Spes, London; Surgeon, London; A. M. H., London.

NEWSPAPERS.—*Scotsman, Morning Post, North British Mail, Mining Journal, Local Government Chronicle, City Press, Windsor and Eton Gazette, Glasgow Herald, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Sunday Times, Builder, Reading Mercury, Chemist and Druggist, West Middlesex Advertiser, Windsor and Eton Express, Architect, Broad Arrow, Metropolitan, Spectator, Law Journal, West Middlesex Standard, Guy's Hospital Gazette, The Schoolmaster, Eastern Daily Press, Saturday Review, Pharmaceutical Journal, Yorkshire Post, Surrey Advertiser, Leeds Mercury, Scottish Leader, Newcastle Journal, Oldham Evening Chronicle, Bristol Mercury, Rangoon Times, Health, Statist, North Star, Western Mercury, Invention, Waterford Chronicle, Observer, Hastings Chronicle, Walton Gazette, Manchester Examiner, Worcester Herald, Sidmouth Observer, Belfast News Letter, Worthing Gazette, Alliance News, Galignani's Messenger, West Herts Post, Durham Chronicle, Isle of Ely Advertiser, Braintree and Bocking Adver er, Glossop Times, Darwen Post, &c.*, have been received.

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Medical Diary for the ensuing Week.

Monday, March 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. Wm. Lang: Strabismus.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. Woakes: Tinnitus and Vertigo.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—5 P.M. Annual General Meeting.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. J. W. Bond: Ozæna. (Post-graduate Course.)
ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Paper:—Dr. W. Job Collins: Related and Associated Ocular and Dental Diseases. Casual Communications:—Mr. Storer Bennett: A case of Alveolar Abscess of three years' duration caused by the perforation of the side of a root.—Mr. Ackery: Some cases of Eruption of Teeth in Abnormal Positions.—Dr. Scanes Spicer: Opacity of the Antrum in Disease (a demonstration with the electric light).—Dr. David Hepburn: A New Dental Dressing Stand.
MEDICAL SOCIETY OF LONDON.—General Meeting at 8 P.M. for the Election of Officers and Council. Ordinary Meeting at 8.30 P.M. Mr. Knowsley Thornton (President): Further Observations on cases illustrating Hepatic Surgery.
SOCIETY OF ARTS.—8 P.M. Mr. Gisbert Kapp: The Electric Transmission of Power. (Cantor Lecture.)

Tuesday, March 3.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Legal Relations of Insanity.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. T. Oliver: Lead Poisoning in its Acute and Chronic Manifestations. (Goulstonian Lecture.)
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. F. J. Sykes: General Powers and Duties of Inspectors of Nuisances.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. W. G. Spencer: Exophthalmic Goitre.—Mr. H. B. Robinson: (1) Cystic Disease of Breast (two cases); (2) Duct Carcinoma.—Dr. W. Collier: Thrombosis of Cerebral Veins.—Mr. Howard Marsh: Loose Bodies from a Tubercular Knee-joint.—Mr. E. Willett: Loose Body from the Knee. Mr. B. Clarke: Loose Body from the Knee, consisting of portion of the Articular Cartilage of the Patella.—Dr. H. D. Rolleston: Patella with Dislocated Internal Semilunar Cartilage fixed to it.—Mr. L. Shaw: Sarcoma opening Trachea. Card Specimens:—Mr. E. Solly: Melanotic Sarcoma of Conjunctiva.—Dr. W. B. Haddon: Pancreas in Diabetes.—Messrs. S. G. Shattock and C. A. Ballance: Fuchsin Bodies in Carcinoma, Tuberculosis, Diphtheria.—Dr. Rolleston (for Mr. A. A. Kanthack): Fuchsin Bodies in Various Conditions.

Wednesday, March 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Acland: Some Affections of the Bronchi.—Royal London Ophthalmic Hospital: 8 P.M., Mr. Lawford: Ocular Palsy.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. MacDonald: Stenosis of the Larynx, Intubation, Tracheotomy. (Post-graduate Course.)
OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Mr. J. B. Sutton, Dr. Hayes, Dr. Crawford, and others. The President will deliver the Inaugural Address. Dr. Dakin: Tetany in Pregnancy.—Dr. John Phillips: On a case of Death following Vaginal Injection of Acid Nitrate of Mercury.
SOCIETY OF ARTS.—8 P.M. Mr. J. H. Carter: Modern Flour Milling.

Thursday, March 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Ormerod: Electrical Testing.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. O. Sturges: Cases illustrating the Simulation of Tuberculosis in Young Children.—London Throat Hospital, Great Portland-st.: 8 P.M., Dr. E. Law: Demonstration of Cases.
ROYAL INSTITUTION.—3 P.M. Professor C. Meymott Tidy: Modern Chemistry in relation to Sanitation.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. T. Oliver: Lead Poisoning in its Acute and Chronic Manifestations. (Goulstonian Lecture.)

Friday, March 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Mr. F. Bowreman Jessett: Cancer of the Stomach and its Treatment.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Acland: A Demonstration illustrating both by living and other Specimens the Lecture on "Some Affections of the Bronchi" delivered on March 4th.
SOCIETY OF ARTS.—4.30 P.M. Capt. Abney: The Science of Colour.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. F. J. Sykes: Objects and Methods of Inspection.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Mr. Percy Dunn will show some Pathological Specimens. Mr. Bruce Clarke: A case of extensive Skin Grafting.—Mr. Edwards: Two cases which have undergone Operative Treatment subsequent to Inoculation with Koch's Lymph.—Mr. Keetley: A Boy with Healed Tubercular Finger.—Dr. Ball: A case of Lupus of the Nose treated by Scraping.—Mr. Pickering Pick: Notes of a case of Trephining for Epileptic Fits, the result of a Depressed Fracture.—Dr. Herringham: A case of Multiple Neuritis in a Man.—Dr. McAdams Eccles: A Child with Multiple Epiphysitis of Syphilitic Nature.
ROYAL INSTITUTION.—9 P.M. Professor J. A. Fleming: Electromagnetic Repulsion.

Saturday, March 7.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 2 P.M., Dr. Payne: The Treatment of Cutaneous Inflammations.—Bethlem Hospital: 11 A.M., Dr. Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

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ABSTRACT OF

The Milroy Lectures,

ON

DIPHTHERIA, ITS NATURAL HISTORY AND PREVENTION.

Delivered before the Royal College of Physicians of London,

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.

LECTURE III.

THE third lecture was largely devoted by Dr. Thorne Thorne to the subject of "school influence" in relation to diphtheria. That some such influence obtained had been one of the earliest observations following on inquiry into this disease, and it was at first assumed that the question was simply one of personal infection under specially favourable circumstances. Beyond this the earlier investigations did not go. Dr. Thorne cited as an example of further progress the story of the Coggeshall epidemic in 1877, from which it was seen that under three years of age school attendance did not materially affect the number of attacks, that between three and twelve years the incidence was 50 per cent. greater on those attending school than on those who did not, and that from twelve to fifteen years the school attendants suffered three times as much as those not known to attend school. An outbreak at Radwinter was next adverted to, from which it appeared that school attendance had clearly afforded to healthy children at a particular age the special opportunity of coming in contact with others capable of transmitting throat infection. There was also a marked difference in the incidence of the disease at different ages, on school attendants, and on others, and it was noticed that from three to twelve years, 76 per cent. of school attendants were the first attacked in households; whereas, including all subsequent attacks at those ages, they only amounted to 48 per cent. There was also some evidence to show that attack and death were more common in the same locality in the case of schools that were overcrowded and ill-ventilated than in others.

But in 1883 an outbreak at Pirbright, which was investigated by Mr. Power, revealed other features of school influence. It was here distinctly shown that the child of from three to twelve years of age had, for a reason other than its age, a susceptibility to contract the disease and to convey it home, school-going being the reason in question. Then, again, each time the school was closed the diphtheria practically came to an end; each time it was reopened the disease recommenced, and this without any source of infection that was obvious, although much care was taken to detect any such cause. And although it became quite clear that school attendance had played an important part in the speciality of the diphtheria amongst children at the ages of three to twelve years, it seemed clear that faulty sanitary circumstances had had no concern that could be detected in bringing about this result. But a further point was illustrated by reference to the facts observed. Not only did diphtheria break out each time school operations were recommenced, but the disease appeared on each occasion with startling suddenness and with fatal gravity, and this without any known intermediate cases which could have admitted of a process of progressive infectiveness; and it seemed that the mere bringing together of the children was responsible for imparting to the throat affection the serious specific quality in question. Other cases were also cited in which the commencement of school operations had led, after apparent cessation of diphtheria, to sudden "explosions" of the disease, and one instance was quoted to show that other aggregations of children than those actually in school houses operated much in the same way. The case in question was one recorded by Dr. Bruce Low, in which a school treat was held on a damp day in a tent after a prevalence of throat disease, the result being that the disease broke out again within twenty-four hours, with a virulence and fatality quite in excess of anything that had gone before; and it was held that such aggregations had, under certain circumstances, the peculiarity of manufacturing, as it were, an infection of a special potency and virulence.

Another point had also been observed in connexion with school attendance—namely, the recrudescence of the infective quality attaching to throat affections, the observations as to this having been mainly recorded by Dr. Astley Gresswell. It had been noticed that a number of persons in different parts of the country, who had years before been attacked with diphtheria, were constantly suffering from throat affections, any change of weather or trifling cold sufficing to produce an acute inflammatory condition about the tonsils. And it having been observed on a number of occasions that amongst those associating with such persons there had occurred cases of diphtheria the origin of which could not be accounted for, the question arose whether the chronic tonsillar affection left in certain persons after diphtheria might not be due to the continued sojourn in them of the material cause of diphtheria. A series of instances were quoted in connexion with these occurrences, and it was especially pointed out that in schools diphtheria attacks had occurred immediately subsequently to the recurrence in monitresses, who had previously had diphtheria, of any symptoms of renewed throat mischief such as was assumed only to have resulted from taking cold. These cases have suggested dormancy and recrudescence in an infectious form of the material cause of diphtheria in an individual. The obscurity involved in such occurrences was also pointed out to be the greater because convalescents from diphtheria, who have returned to their work with healthy looking tonsils, may be found shortly afterwards with creamy patches on the tonsils and pharynx, or even with genuine diphtheria membrane on the fauces, and this apparently without the general symptoms usually affecting the system when such results ensue on a primary attack of the disease. Diphtheria appeared, according to the views expressed, to become at times a chronic malady in certain individuals with liability to recrudescence; and glanders in the horse, contagious ophthalmia in children, as also gleet in its relation to gonorrhœa, were referred to as analogous to diphtheria in this respect. A somewhat parallel experience had also been noticed in the case of certain parasitic organisms, which exhibited periods of renewed vitality, to which the term "rejuvenescence" had been given. And, as regards diphtheria, it was stated that such recrudescences had mostly been associated with unwholesome circumstances and surroundings much of the same sort as those conditions which had before been shown to induce a form of sore-throat which rendered the individual especially liable to receive the diphtheria contagium, the tonsils under such circumstances affording exceptionally suitable hosts for sustained maintenance of the virus of the disease. Such experiences, also, may possibly afford one explanation of the circumstance that an attack of diphtheria does not, as is the case with most of the specific fevers, afford immunity from a second or even a third attack.

Dr. Thorne then summed up, under a number of headings, the various methods in which school influence would appear to be operative in favouring diphtheria, and he laid especial stress on the conditions of school life that tended to communication of the disease from person to person by reason of the closeness of the mouth and nares of the recipient individual to the faucial mucous membrane of the individual by whom the infection is imparted. And reverting again to the excess of diphtheria in females at school ages over males, he pointed out how a number of practices which tended to danger, such as the collective singing and intoning of lessons, kissing, and the sharing of sweetmeats, were more commonly sources of mischief amongst girls than amongst boys. And this led him to speak of one possible cause of excess of diphtheria amongst females who had reached more adult years. Premising that age susceptibility had by that time largely passed away, he was inclined to think that a much closer contact with diseased fauces was necessary in the case of adults than in children, and he pointed out that whereas in diphtheria wards, where nurses were in the habit of carrying the sick children about; the spread of the disease to those nurses was not uncommon, there were instances where no such spread had been known for a series of years, this result being associated with a prohibition to lift or carry about a diphtheria patient. The danger to adults of close contact with diphtheria was exemplified by the terrible risks

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incurred by surgeons and dressers in endeavouring to save life by suction of blocked tracheotomy tubes; but whilst such action must be regarded as akin to a deed of heroism, the needless actions of parents, nurses, and others who could not be prevented from embracing and fondling the diphtheria sick amounted only to a wanton carelessness of life. And when, as is not uncommon, especially in some northern counties, children were deliberately brought by school teachers to see and even kiss their dying or dead schoolmates, the practice became one bordering on criminal culpability. The various aspects of school aggregation, involving a steadily increasing stringency in bringing together children to the elementary schools under our present Education Acts and regulations, were next considered, in so far as the success in attaining those educational results may have had a bearing in the increasing incidence and fatality of diphtheria both in the country generally, and especially in our large towns and cities. And in this connexion Dr. Thorne explained that again and again had suggestions to exclude from school children residing in infected houses and localities been resented, because the step tended to diminish the average attendance on which the financial status of the school, and at times of the teachers also, was dependent. Indeed, when children stayed away from causes such as "sore-throat," amongst others, there was at times a "whip-up" of this dangerous absentee residuum; and it had become notorious that the suspicious form of sore-throat previously adverted to could most easily be found in schools. Then often followed "explosions" of diphtheria. "And if," said Dr. Thorne, "as I have suggested, the specific organism of diphtheria tends to behave as do certain low forms of vegetable life, may it not be that, just as special characteristics tend to be developed by the gathering together into a hothouse of selected forms of plant life that have hitherto been struggling towards a tardy and imperfect development in the open, so the increased virulence and greater reproductiveness of the diphtheria contagium, which would appear in point of time to have been associated with the steady growth of a system by which the young are gathered together for educational purposes may turn out to be dependent on the aggregation, forced or otherwise, within school premises, of children suffering from such throat ailments as I have indicated?"

ABSTRACT OF THE

Goulstonian Lectures

ON

LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians, March, 1891,

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,

PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, AND PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF DURHAM.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—Let me thank you for the very great honour which you have conferred upon me in inviting me to become the Goulstonian lecturer for the year. Having accepted the office, I am deeply sensible of the responsibility it involves. Weighty as I feel the duty imposed upon me, it is only equalled by my desire to make these lectures acceptable and instructive. In searching for a subject, I considered there was one upon which, with the time at my disposal for its preparation and delivery, I might be able, from the opportunities afforded me for its study, to say something that might prove of interest to you and of service to the profession. Lead poisoning is not only of local but of national importance. The last two years have shown how truly necessary it is for us to realise the dangers that lurk in the supply of drinking water and of food. The wholesale poisoning that occurred a short while ago in Sheffield and in Keighley bear witness to this statement. Apart from epidemics of lead poisoning due to the contamination of the drinking-water, it is true that the disease only affected a small proportion of the working classes, but that is one reason why we, who are the guardians of the public health, should help those who cannot help themselves. It was in the College of Physicians that in 1767 Sir George Baker, a scientist of celebrity, first drew the attention of the medical profession at once to the production of colica pictonum by the use of cider, and successfully taught how to remedy the evil. There is a general consensus of opinion that the insidious introduction of lead into the human system in very minute quantities is followed by symptoms of a more serious nature than when taken in large quantities and for a short period. In the latter case we have the symptoms of irritant poisoning, but in the former the symptoms are sometimes so remote that their relationship may escape our attention. In the cumulative action of the poison lies the danger.

Whilst recognising food, water, and fermented liquors as media whereby lead may be introduced into the system, my experience has been gained mostly from workers in lead factories. I shall therefore deal with the subject more from the industrial than the accidental side. Lead poisoning has long been known. Galen condemned the use of lead pipes. Nicandre described acute lead poisoning, and the Roman architect Vitruvius forbade the use of lead for conducting water owing to the *ceruse* which it formed being hurtful to the human body. Lead is introduced into the system through many channels. Those who are engaged in lead mining never suffer. The danger begins with the smelting of the metal. This is a hazardous occupation. The fumes which escape from the molten metal frequently poison cattle grazing in the vicinity of the smelting furnaces—a circumstance which has frequently been a cause of litigation. Cattle have died from eating the grass thus impregnated with lead dust, and the dogs that have lapped the water trickling from lead works have also exhibited signs of lead poisoning. Some interesting points bearing upon this point have been shown by Schroeder and Reuss. In their paper, on the "Influence of Forge Smoke upon the Animals of the Forest," they state that the birds which eat the berries of the mountain-ash trees which are in close proximity to the forges are frequently found lying at the foot of the trees paralysed or dead; but that the wild animals, particularly the stags, which roam about in the woods, whilst not suffering from paralysis of the extremities, exhibit peculiar monstrosities of their horns. Their antlers are short and stunted; the radioles are small, sometimes they are absent, the rosettes in these cases being flat and almost touching the cranium. Double crowns sometimes appear. These monstrosities are most apt to occur amongst stags whose sexual organs have been injured, for stags, like men, have their reproductive organs affected in lead poisoning. Gamgee, in his work on the "Domestic Animals in Health and Disease," draws attention to the fact that cattle have frequently died from drinking water contaminated by lead, and from eating grass impregnated with the oxide of lead, and he has shown that the deposition upon land of town manure which contains the refuse of paint, sheet lead from tea-chests, and pieces of painted oilcloth, has been followed by an attack of what is known as "staggers" in the animals allowed to graze in the fields. Thackrah, in his book on the "Effects of Trades on Health and Longevity," gives no place to lead-making as a dangerous employment. He introduces the subject in his remarks upon plumbers and painters. Plumbers suffer, he says, from the inhalation of the volatilised oxide of lead arising during the process of casting. They are short-lived.

It is amongst lead workers that the worst types of plumbism are met with. So far as the working of lead is concerned we have seen that the producer of the raw material never suffers; it is the smelter. The next danger arises during the process of the conversion of the metal into white lead or carbonate. There is no process of preparation of white lead, so far as is known, that is equal to the old Dutch method. It is a simple but a dangerous procedure. It was introduced into this country about the year 1780. [Dr. Oliver briefly described the process, and showed that the greatest danger arose in what is known as the "white beds" and "stoves."] It was the opinion of Sir James Alderson, when he delivered the Lumleian Lectures in this College in 1852, that women were less frequently affected by lead than men. Such is not my opinion. It is known that when the two sexes are exposed equally, or in epidemics of plumbism from the use of contaminated waters, the fair sex

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is weaker, and their nerve centres are more readily undermined.

[Drinking water as a source of accidental lead poisoning was discussed, and the following case reported :]

Last year I saw, in consultation with Dr. Smith of Ryton, a gentleman, aged fifty, who a few months previously had been suddenly seized with unconsciousness in a hay field. The attack was regarded as syncopal. From that day he was never well. He complained of severe pain in the abdomen, just above the umbilicus, and became extremely depressed in spirits. When I saw him a few months afterwards he had all the symptoms of general paralysis. In addition to colic and constipation he had delusions and fibrillary tremor of lips and tongue; the right pupil was dilated compared to the left; he was extremely cachectic. He complained of a disagreeable taste in his mouth and a blue line was noticed on his gums. His heart and lungs were healthy. There was no albumen in the urine, but a trace of lead was present in it. He was sent to the seaside, where he improved. The drinking water was analysed, and found to contain 0·0028 grain per gallon. This patient died of an intercurrent disease, but retained many of his symptoms of lead poisoning. At the necropsy there were found thickening of the pia mater and arachnoid over the fronto-parietal region, with accumulation of fluid in the subarachnoid space, extreme pallor and hydræmia of the brain, fluid in the lateral ventricles. His wife had also a blue line on her gums, but none of the children. The water from the well passed through several feet of lead piping into the house.

As an illustration of lead poisoning from the use of fermented liquors I would draw attention to the following case. It occurred in the practice of Dr. Cromie of Blyth, Northumberland. In September of last year he was called to see a botanic beer manufacturer, aged forty-four, who had been a healthy man until two years previously, when he suffered from constipation and dyspepsia. In February, 1890, he had "wrist drop." In August of last year he had a convulsion whilst standing in his shop, but he soon recovered consciousness. The convulsions kept recurring, and in one of them he passed into a state of coma, in which he died. The case was one with all the physical signs of plumbism. The history of his household is interesting. His wife, who is twenty-eight years of age, had formerly a good deal of colour. She is now very anæmic. She has two children, one aged five and the other three years and a half. Since the birth of the younger child she has had one miscarriage. Her menses are profuse. At her husband's instigation she has taken botanic beer for the last two years. She was seized with colic twelve months ago, had vomiting, headache, and constipation, but soon recovered. When I saw her she had just recovered from an attack of colic, which had come on soon after her husband's death. She was pale; had well-marked blue line on her gums; no albuminuria. Living in the house with her two children was a domestic servant. The maid, though frequently pressed to take the botanic beer, refused on the ground that she did not like the taste of it. She has remained quite well, and has no blue line on her gums, nor is she anæmic. The elder child has been living most of the time away from home with his grandmother, and has therefore not had many opportunities of taking the botanic beer. He is not distinctly anæmic, and has only the faintest trace of a blue line on his gums. His sister, a child of over three years of age, has lived always at home, and since early in infancy has received daily a small quantity of the botanic beer. She is very anæmic, and has a blue line on the upper gum. This child when I saw her could not talk, nor even walk well. There was a good deal of staggering; her knee-jerks were absent. Three months afterwards she died in a convulsion. There had been several convulsions. The urine contained albumen.

The use of hair dyes is a source of lead poisoning. A short time ago one of the ballet girls from the Tyne Theatre was admitted into the infirmary under my care suffering from colic headache and amaurosis; there were retinal hæmorrhages. She had been using a cosmetic containing lead. She recovered. A more striking illustration of the serious effects of the indiscriminate use of lead hair dye occurred in the practice of my friend Mr. C. B. Morgan of Sunderland.[1] It was that of a maiden lady who sought advice because her left eyelid drooped, that she saw objects double, and that for some weeks past she had been gradually losing the power in her arms. There was obstinate constipation. Her mind was perfectly clear. A week afterwards, as she had not improved, Mr. Morgan added iodide of potassium to her mixture. Next morning she was found dead in bed. At the necropsy, Mr. Morgan naturally expected to find some brain lesion, but the most careful examination, conducted by himself and Dr. Ransom, failed to reveal anything abnormal either there or anywhere else. Both these gentlemen were struck by the luxuriant black hair of the corpse. A few weeks after this the niece of the old lady, who had also been struck by the beauty of her aunt's hair, ventured the suggestion that the illness might have been due to the use of a hair dye which the aunt made by mixing sugar of lead and sulphur with another liquid which was unknown to the niece. By its use, Mr. Morgan suggests, may be explained the paresis of the upper limbs, then of the third nerve, and then rapid death following the administration of iodide of potassium, on the theory of Melsens, that a soluble iodide had been formed which is highly injurious. Dr. Macdowell of the Northumberland County Asylum has related to me two cases of lead poisoning arising from the wearing of false teeth the plates of which contained lead; both patients became insane. Lead poisoning due to the contamination of articles of food was alluded to, and the *colique sèche* of the French navy was shown to be nothing else than lead colic. Dr. Stephen Mackenzie alleges that in the autumn a larger number of cases of lead poisoning is met with than at any other season of the year. The months of June, July, and August have supplied the largest number of cases in the north of England.

As regards the age at which plumbism is most apt to occur it is difficult to say. Children are not exempt. Adults are most exposed to the influence of lead, and therefore suffer most. Whatever doubt surrounds the question of age, there is no doubt as regards the greater susceptibility of the female to be contaminated with lead compared to the male. This is an opinion so totally at variance with that given by several authors that I must explain myself. My experience, drawn from hundreds of cases, is that, both as regards acute and chronic forms of lead poisoning, women are much more quickly brought under its influence than men, and this not simply from the fact that women are more exposed in the factory to greater dangers. It is shown by the statistics of epidemics. In Yorkshire, where, out of 1000 cases of lead poisoning, it was noted to be due to the drinking of water contaminated by lead, the proportion of females to males was as four to one. Brown of Bacup also noticed a preponderance of females affected. Not only is there a sexual, there is also an individual idiosyncrasy to plumbism. There is a class of women very easily affected, but what that type is it is impossible to say. It is the ill-clad and the poorly-fed women who suffer most. They soon break down when exposed to the influence of lead.

Lead as a poison strikes early at the functions of blood-making and reproduction, producing sterility, liability to abortion, and amenorrhœa or menorrhagia. From her constitutional idiosyncrasy, woman is, therefore, more liable to be impressed by lead. Whatever may be the power of sex, of family and individual predisposition, however potent may be the effects of inadequate food and clothing, if there is one thing which most greatly increases the influence of one or other of these as factors in determining lead poisoning, it is alcohol.

Once the individual has suffered from an attack of lead colic or any symptom of lead poisoning, he is launched upon a morbid stream of life where, under the influence of metabolism which is making for health, he may recover; on the other hand, if he is inattentive or unwilling to regulate the requirements of his constitution by abstinence from alcohol, and again exposes himself, preferring thus to be wafted by the breeze that placed him on that stream, he floats the more rapidly down, heedless of the gulf in which he is so soon to be submerged. Between the first and subsequent attacks there are periods of quiescence; the first attack predisposes to the second, and the second to the third; or a first attack is experienced, and, without any fresh exposure, there is—long after, it may be—another outburst. What is the meaning of this? Is it that during the period of apparent health lead has been deposited in some of the organs in an insoluble state, and that as the result of some particular diet, drink, or medicine it has again been rendered soluble, circulates afresh in the system, and for the time being the person is poisoned with lead absorbed from his own tissues?

[1] Transactions of the Northumberland and Durham Medical Society, April, 1877.

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ON THE EFFECT OF THE DIVISION OF CERTAIN CONSTITUENTS OF THE SPERMATIC CORD IN THE RADICAL CURE OF VARICOCELE AND OTHER OPERATIONS UPON THE VITALITY OF THE TESTICLE.

BY WILLIAM H. BENNETT, F.R.C.S.,
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IN THE LANCET of Feb. 9th, 1889, page 261, I called attention to an operation for the relief of varicocele differing in important respects from any method previously described. I then stated that in my opinion this proceeding was by far the best means available for dealing with the class of affection for which it was devised. This belief has been strengthened by a considerable additional experience, obtained since the publication of my paper on the subject. An essential detail in the operation, after the vas deferens has been isolated in the customary way, is the application through an incision in the scrotal tissues of two ligatures placed at a distance from each other round the sheath of fascia which contains the spermatic plexus of veins. The portion of the cord lying between these ligatures is then excised. The remaining points in the technique of the proceeding need not be recapitulated, as they have no special relation to my present purpose. The whole of the spermatic plexus of veins, with the exception occasionally of a small vessel lying remotely at the back, are contained within the sheath formed by this fascia, and one object of including it in the ligature is to ensure the obliteration of the whole of the veins; for it is clear that if the ligatures are passed round the connective tissue sheath before the vessels are exposed none of these can escape. Further, if the ligatures are passed in the manner described, not only are the veins with certainty included, but also the main trunk of the spermatic artery, in evidence of which it is my custom, when operating in hospital practice, to demonstrate the existence of a section of this artery in the excised portion of the cord. Two points of interest here arise: First, it is obvious that if the spermatic artery is included in the ligature, as it certainly is under these circumstances, the traditional teaching of the schools that the vas deferens when pushed aside carries the spermatic artery with it is wrong. Practically this is so, for the artery does not go with the vas deferens when it is displaced, but remains either quite close to the spermatic veins, or, as commonly happens in varicocele, is actually surrounded by them. So intimate, indeed, is this relation of the artery to the veins that I believe it to be almost impossible to include the whole of the latter vessels in a ligature in a case of varicocele without also including the artery, unless an elaborate and tedious dissection be undertaken for the purpose. I have therefore little doubt that in the vast majority of operations for varicocele in which the spermatic plexus of veins is divided that the main trunk of the artery is also involved in the section. To this fact no reference exists in the literature of the subject so far as I can ascertain. It is difficult to see upon what anatomical basis, if such exist, this traditional view as to the associated displacement of the vas deferens and spermatic artery rests. It is, however, possible that the belief commonly held that the nutrition of the testicle is dependent almost entirely upon the integrity of the spermatic artery led to the conclusion that in operations in which the spermatic veins were freely divided the artery had escaped injury because no ill effect was necessarily produced upon the testicle. It was then easy to assume that the apparent safety of the vessel was due to its having been pushed aside with the vas deferens. The second point of interest is the effect of this division of the spermatic artery, together with the veins, upon the nutrition of the testicle. The isolated position of this organ, coupled with the accepted view just referred to that its blood-supply depends almost entirely upon the long and slender spermatic artery, has given rise to the impression that its vitality is endangered by the division of this vessel, together with the spermatic plexus of veins, and that section of the spermatic artery, veins, and vas deferens—i.e., virtually the whole cord—is certain to be followed by sloughing of the testis. So strongly is this view held by some practitioners that it is, I believe, not uncommonly taught, in the event of the cord including the vas deferens being divided during an operation, that it is proper to remove the testis at once, not only on account of its having been rendered functionally useless, but especially because if it is left sloughing will surely follow.

Now, with regard to division of the spermatic artery with the veins no harm whatever need result, for the artery of the vas deferens which is certain to have escaped injury is by no means always an insignificant vessel, and generally sufficient by its anastomoses with the spermatic to prevent not only immediate necrosis of the testicle, but also immediate wasting, as it often receives assistance from other vessels which will be indicated presently. In support of this contention I can state without any hesitation that in almost every case of varicocele upon which I have operated a portion of the spermatic artery could be demonstrated in the excised part of the cord, and that in none of these instances has there been the least suspicion of wasting. On the contrary, the testicle when soft or small has invariably become more natural in size and consistence, and certainly in one instance more perfect in a physiological sense. The immediate result of division of the vas deferens with the spermatic veins and artery, whether by accident or of necessity, is naturally to render the testicle functionally useless, as its duct has been severed; but the idea that sloughing of the organ necessarily ensues is certainly not correct, as will be seen from the three examples which follow. (*a*) Some years ago, whilst performing one of my earliest operations for the radical cure of a congenital hernia, I divided apparently the whole cord, including without doubt the vas deferens, the spermatic artery, and veins. My first impulse was to remove the testicle, but, for reasons which I need not enter into, I did not do so. The case progressed rapidly without any sign of inflammatory action; moreover, to my surprise, no appreciable change had taken place in the testis four months after the operation, when the patient was seen for the last time. (*b*) In the course of an operation for the radical cure of hernia, I saw a surgeon of repute and experience divide apparently the whole cord. In this case again the testicle did not slough, and two months after the operation was indistinguishable in general characteristics from the opposite healthy gland. (*c*) I have recently examined a youth in whom I know that the vas deferens and apparently the remainder of the spermatic cord was divided about four months previously in an operation for the cure of a congenital hernia. The testicles remain precisely alike in natural consistence and size. These are remarkable cases and will, I venture to think, repay a brief consideration as to their practical bearing, for I can find no record of any similar instances.

In the pre-antiseptic period of surgery there is little doubt that such an extensive injury to the cord as occurred in each of the above cases would generally have been followed by sloughing of the testicle. Hence the traditional teaching to that effect. The only possible explanation of the survival of the organ after such a serious interference with its vascular arrangement must lie in the fact that there exists a considerable arterial supply over and above that which need be involved in a section of the cord itself. The only available sources of this additional blood-supply are (1) some outlying branches of the spermatic artery, one of which sometimes comes off high up, and so may easily escape division; (2) the artery of the vas deferens, which may not be injured, even though the duct itself be divided; and (3) some small but important anastomotic vessels passing from the subvaginal tissue, which, in cases of congenital hernia, are more than usually large and numerous, in consequence of the modified relation of the tunica vaginalis and the hernial sac. This additional supply, although sufficient under favourable circumstances to maintain adequate nutrition of the testicle, is, however, derived from vessels which are as a rule small and delicate; any inflammation therefore about the part would be sufficient to choke them, sloughing of the organ following as a necessary result. If, however, no inflammation occurs—i.e., if the wound remains aseptic,—the supply of blood is enough to prevent sloughing and subsequent atrophy. The immediate cause, then, of the death of the testicle, which happened in these cases in the days prior to the practice of surgical cleanliness, as the term is now interpreted, appears to me to have been not the mere division of the cord, but rather the inflammation and suppuration, one or both of which almost constantly followed upon it. For my own part, I hold very strongly the view

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that the fact of the testicle having been rendered physiologically useless by the division of its duct is no sufficient reason for its immediate removal. On the contrary, there is ample cause for its preservation if there be a reasonable chance, as the instances I have mentioned clearly show there is, of the organ retaining its vitality; for, quite apart from its functional purpose, the testicle should be if possible preserved, not only on æsthetic grounds and in consequence of the esteem in which its existence is held by the majority of subjects, but also in order to prevent the feeling of mutilation suggested by its loss, which in highly sensitive people may be productive of serious mental depression. Again, in the "radical cure" of hernia in candidates proposing to enter the public services, the saving of the testicle, under any conditions, is of special importance, since its sacrifice may raise the question of ineligibility on account of "physical defect," and entirely defeat the object for which the operation on the hernia was performed. Personally, therefore, I should never think of the immediate removal of the testicle under the circumstances now being discussed; indeed, I should go a step further and, if the patient were an adult, or in any other subject with parts sufficiently large, certainly attempt to restore the continuity of the vas deferens by uniting the cut ends with sutures, which is not difficult, as may be demonstrated in the cadaver.

The principal points to which I wish to call attention in this communication may be conveniently summed up in the following conclusions, which, although in several respects opposed to what is commonly taught, I believe from experience to be perfectly sound:—1. That the vas deferens having been displaced in the manner usually adopted in operations for varicocele the spermatic artery does not accompany it, but remains with the spermatic veins. 2. That in cases of varicocele the division of the main trunk of the spermatic artery, together with the veins, if the ordinary principles of surgical cleanliness be observed, is not only harmless to the testicle, but probably aids in the ultimate relief of the affection by diminishing the pressure of blood going to the testis at the time when almost all the returning veins are suddenly obliterated. 3. That the division of the vas deferens, spermatic artery, and spermatic veins, which entails a section of apparently the whole cord, is not necessarily followed by sloughing, or even subsequent wasting of the testicle, provided that a perfectly aseptic condition of the wound is maintained.

ALOPECIA AREATA, ITS PATHOLOGY AND TREATMENT.

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(*Concluded from page 480.*)

HITHERTO I have discussed the negative evidence of a universal neurotic theory, and I hope I have shown that it is inapplicable to a large proportion, perhaps as much as nine-tenths, of the cases. I propose now to examine the positive evidence of the only other possible hypothesis—viz., the parasitic theory. This I must admit *in limine* has many weak links in the chain of evidence; had it not been so, the matter would have ceased to be one of controversy long ago.

First, let us examine as to the evidence of contagion. Here, again, much of it rests on the patient's statements or opinions, but while individually many of the instances I am going to relate are not very conclusive, cumulatively they have, I think, some value. I shall take first the private cases where inquiry was most thorough:—A man aged twenty-seven stated that it came on eight days after wearing a theatrical wig. A lady ascribed it to the servant using her brushes. A man aged fifty-five stated that it came on soon after having had his hair cut by a country barber. A man aged twenty-three worked alongside of a man who also had it. A lady aged fifty stated that hers began soon after sleeping for three weeks with a married daughter who was suffering from it, who ascribed it to sleeping with a lady who had been quite bald from childhood. A man aged thirty had a brotner who also lost all his hair, which has now regrown. In a man aged nineteen; his father has also had it for twelve years. In a girl aged seven; her brother has a small bald patch; the patient has the characteristic ! hairs. A woman aged forty dates the disease from having her hair cut by a barber. A man aged twenty-eight said that his brother had it when he was eight years old, and he himself had a single patch about the same time; when I saw him the face and scalp were almost bare. A man aged twenty-nine said that the disease was of fourteen years' duration altogether, though his hair had regrown several times. The mother, who has dark hair, first had it, then the patient, who also has dark hair, and then his younger brother, also with dark hair. The father and sister, who have fair hair, have not had it. This is not a solitary instance with regard to dark-haired people; it has even been asserted that it occurs exclusively among dark-haired people. This, however, is certainly not true. I have repeatedly seen it among fair-haired persons of both sexes, but I am inclined to believe that it is more common in dark-haired persons. There is, however, a close relationship between alopecia areata and tinea tonsurans. One of the first patients who apprised me of this fact was a medical man who came to me with a bald smooth spot on the side of the chin. He stated that he had been treating some cases of ringworm, and had a habit of rubbing his own chin with his finger at the spot which had become bald. On pulling out some of the hairs round the patch, in one, unmistakable fungous elements like those of tinea tonsurans were observed. Many cases corresponding with this have since come under my notice. In a schoolmaster, a perfectly healthy man, who had been personally treating ringworm in some of the boys of his school, smooth bald spots appeared in his whiskers, in some of the hairs of which I found fungous spores. In spite of treatment other patches formed in the scalp, and gradually denuded nearly the whole scalp, eyebrows, and lashes. Recovery was very incomplete, and after a long course of treatment he deserted me for other advice. Two years and a half after her father had been affected, his little daughter, aged three years, came under my care with two perfectly bald patches with some ! hairs. She had, however, been also with a little boy who had had ringworm, but was said to be cured. I did not succeed in finding any fungus in this case, but I only made one examination. Another little girl of three, who had played with another patient of mine who had ringworm, was brought to me with smooth bald patches and ! hairs. But I will defer relating any more such cases in children, as it will be said that these are the cases we all recognise as the bald form of tinea tonsurans. Without denying this I will only remark that they are often absolutely indistinguishable from alopecia areata, possessing the straight ! hairs of that affection, and not the bent and twisted ones of ordinary tinea tonsurans. A lady nurse aged thirty-five had tinea tonsurans at the nape just where the hair commences. I got her apparently well with some difficulty, and a month or two later she came with a patch of alopecia areata on the temple. Another lady about thirty came with a single patch of alopecia areata, which she had noticed two days. She wanted to know if it was ringworm, as she had recently been in contact, though not very closely, with a child affected with ringworm. Quite recently a medical man practising in the West Indies came to me with alopecia areata of the beard and whiskers of nine months' duration. He was physiologically bald to a considerable extent on the scalp, and he stated that three years previously he had had his hair cut by a negro barber, and within a few days distinct rings of tinea circinata appeared on the bald part of the scalp; and, although with mercurial applications he had removed it apparently, it had recurred again and again. All these were in private practice, but for some of the cases I have gone outside the first fifty cases of alopecia which I took for comparison with the hospital cases.

Among hospital cases one was a woman who was bringing her son to the hospital for ringworm, and who, after attending for some time, showed me a bald smooth patch on the side of her head. Another was a girl of seventeen, who had disease on the right temple. She stated that she had been working with a girl who had ringworm of the face, and the bald patch on her head appeared soon after. A man aged twenty-two, who had some occipital patches, stated that his brother's child, with whom he had been in contact, had had ringworm, though it was supposed to have been cured for more than a year. I could relate many instances of smooth

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bald patches in children with ! hairs who had been in contact with ringworm; but I know it will be said of them that these are merely instances of bald tinea tonsurans, and I will only mention one family of eight children who, while at seaside lodgings, developed small bald patches; they then heard that in the previous season several children with ringworm had been in the same lodgings. I do not wish to lay any stress upon this, but after a time the governess, aged twenty-four, observed three pea-sized bald spots on her own head. She went to her home, and the doctor there told her that it was alopecia areata, and not contagious; she therefore slept with her adult sister, who soon after showed similar spots on her head. The mother of the children, when she came to me, had a bare spot half an inch in diameter in the occipital region; it had been noticed three weeks; there were no ! hairs, but the hairs round were loose, and on one of them from the border of the bald patch were spores of the appearance and size of those of tinea tonsurans. Hillier's cases are well known. In a parochial school of 1100 of both sexes the outbreak occurred suddenly in forty-three girls of one block in which one girl had had it for some time. To complete the chain of evidence I must allude to certain instances of tinea tonsurans, with regard to which I will only make statements. First, briefly, then, I have repeatedly seen cases of ordinary ringworm of the head with characteristic bent hairs, which after being treated for some time change into smooth bald spots with the straight ! hairs of alopecia areata. That smooth bald spots occur *ab initio* which it is acknowledged are of the nature of ringworm, even by ardent advocates of the universal application of the neurotic theory, is an acknowledged fact. In one family in which several were attacked there was a strong reason to believe it was originally contracted from a horse with ringworm. In some of this class of cases the patches are very small, from a hempseed to a large pea in size, while in others they are of the ordinary size and aspect of alopecia areata. These small spot cases usually remain small to the end, recover very slowly as a rule, and are not depressed like Neumann's neurotic form. I have, I trust, shown that this fourth class of alopecia areata is to a limited extent contagious under favourable conditions, though far less so, of course, than tinea tonsurans, as its clinical symptoms would lead one to infer on *a priori* grounds. Secondly, that cases with all the signs of ordinary alopecia areata arise not in children only, but in adults from contact with ordinary tinea tonsurans. Thirdly, that not only may tinea tonsurans commence in a bald form, but that cases which have begun in the ordinary way may be converted into alopecia areata in children.

It follows, then, from all this, that the two forms of disease may be interchangeable in childhood, while in adults practically we see only the one, or bald form, and the question forces itself upon us, therefore, Is not alopecia areata in the majority of cases not only non-neurotic but parasitic, and is not the parasite that of trichophyton tonsurans? This would account for the otherwise curious fact that, while ringworm of the head is so common in children, it disappears after puberty, and may this not be because the hair alters in its consistence, and the fungus is no longer able to penetrate into its substance, but passing down between the root-sheaths separates the hair from its nutritive supply and so leads to its atrophy and gradual extrusion? It may naturally be asked, Why, then, cannot the fungus be found, except by a very favoured few who do not agree as to its characters? I believe that it can be so demonstrated in recent cases, if rightly looked for. It is no use looking on the bald places themselves, it is no use looking in atrophied ! hairs; the fungus is never in the shaft, but on it or the attached epithelium. The best way is to pull out a good many of the loose hairs at the border of the bald area, then to examine these with a lens, and select those hairs which have most root-sheath attached, rejecting those with smooth atrophied roots, and then, taking the selected hairs, cut off the greater part of the superfluous shaft, soak these root ends in liquor potassæ or a saturated solution of caustic potash in glycerine, and examine the portions of epidermis attached to the shaft; it should not be manipulated too much, or the affected part may get detached from the shaft and be lost. The fungus is always in small foci, and perhaps only in one of several selected hairs; sometimes it may be seen at the very extremity of the root, as if it had worked round and separated the hair from its papilla. In most recent cases, in my opinion, its presence can be conclusively shown with a sufficiently careful search, but I have found it more easily in hairs from the beard than those from the scalp. It is worthy of notice that alopecia areata is most common where tinea tonsurans is most common, and it is also instructive to observe that the neurotic theory is most strongly held in those countries, such as Germany and America, in which both ringworm and alopecia areata are comparatively rare. The old-fashioned tinea decalvans was an acknowledged entity until the great Hebra, who did so much to sweep away the myths of dermatology, swept poor tinea decalvans away with the rest and placed it along with other forms of alopecia areata among the tropho-neuroses; but while alopecia areata constitutes less than 1 per cent. in Vienna, ringworm of the head is infinitely rare. In answer to an inquiry, his son, Dr. Hans Hebra, kindly informed me that of 15,000 cases in his policlinique only 196 were cases of ringworm, and in only 14 of these was it in the head—not 1 in 1000, therefore; while in my hospital practice it constitutes fully 10 per cent. Clearly there is something in Vienna scalps unfavourable to trichophyton tonsurans fungus, and alopecia areata exists in only 0·6 to 0·7 per cent. in the same clinique. In France, on the other hand, where alopecia areata is commoner even than with us, a parasitic origin and a limited capacity for propagation are generally acknowledged, and had I not been obliged by the limited time at my disposal to confine myself to cases in my own experience, I could have strengthened my argument much from the interesting cases related in the excellent recent monographs on Pelade by Besnier, Leloir, and Dubreuilh, who relate extensive outbreaks amongst soldiers and firemen. The percentage of alopecia areata in different countries is approximately as follows: France, 3 per cent.; England, 2; Scotland, 1·5; Vienna, 0·75; North Germany, 0·75 to 1; America, 0·5.

With regard to the treatment, I rely most on blistering the early patches, painting on the liquor epispasticus in three coats, allowing each to dry before the other is applied. At a later stage those parasiticides, which are also powerful stimulants, give the best results in my hands. It is true that such applications fit either theory, but they are none the worse for that. The loose hair round the patches should first be pulled out, and, where practicable, from half a drachm to one drachm of chrysarobin to one ounce of lanoline and oil is one of the best applications; but owing to the erythema it is liable to excite, the indelible staining of linen and the discolouration of the hair, it can only be used in a small proportion of cases. A cleaner and universally applicable remedy, even for the face, is two to five grains of perchloride of mercury, one drachm of rectified spirit of wine, to seven drachms of oil of turpentine. The smaller proportion of perchloride of mercury should first be tried, and the strength increased as the patient can bear it. Of course it produces some burning and stinging of the skin, but this is inevitable in all really efficacious remedies. It should be rubbed in with the finger, not only on, but round the patch, night and morning. Internal medication is not of any use, except in the late stage when the disease is not spreading, but only the dormant vitality of the injured hair follicles requires awakening, then I think pilocarpine may be given with advantage internally in the proportion of one-sixth to a quarter of a grain at bedtime, and I find it acts most surely when given in solution. Where circumstances permit, hypodermic injection of pilocarpine is still more efficacious. One-tenth to one-sixth of a grain may be given. It is not wise, however, to administer it except at the patient's house, as in some subjects it produces vomiting and faintness. Of course, if I find any defect in the patient's health, I endeavour to rectify it, but I do not think it exercises any influence on the course of the affection.

Let me, in conclusion, sum up what I have said in the following propositions:—At least four classes of cases are recognisable under the term "alopecia areata." In the first are universal cases, usually of rapid development, and not necessarily in patches. In the second are those cases with one or more patches in the course of a nerve, or on the site of an injury. In the third are cases with small atrophically depressed patches, which Neumann called "alopecia circumscripta." In the fourth are cases of the common type in patches or bands of irregular distribution, and with characteristic ! hairs at the border of spreading patches. The first three classes are undoubtedly of tropho-neurotic origin, and the fourth is parasitic, and forms the largest proportion of the cases. With regard to the fourth class

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the preceding facts show:—1. That this form is to a limited extent contagious, and that from time to time limited outbreaks have occurred in small communities. 2. That not only children, but adults who have been in contact with tinea tonsurans sometimes develop bald patches indistinguishable from alopecia areata. 3. That in tinea tonsurans commencing in the typical way the typical crooked stumps may both spontaneously and under treatment disappear, and the patches develop into an alopecia areata condition with ! hairs. 4. That in those countries where tinea tonsurans is most common alopecia areata is also most frequent. 5. Hence we must conclude that a large proportion of cases in adults which are termed alopecia areata are cases of bald tinea tonsurans which is acknowledged to exist amongst children, and that the old authors, from Bateman onwards, were justified in calling it porrigo or tinea decalvans. 6 Finally, I believe that a parasite indistinguishable from the trichophyton tonsurans fungus may be demonstrated in recent cases, and the treatment most efficacious is inunction of powerful and stimulating parasiticides.

THE DIAGNOSTIC VALUE OF THE PHYSICAL SIGN "TRACHEAL TUGGING" IN THORACIC ANEURYSM.

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IN 1878 the following remarks, by Surgeon-Major W. S. Oliver, M.D., appeared in THE LANCET:—

"As the diagnosis of thoracic aneurysm of the aorta is often difficult and obscure, notwithstanding the various physical means we have now at our disposal for detecting it, I am desirous of mentioning a method of examination which has afforded me material assistance in diagnosing this disease (or even simple dilatation of the vessel) when it occurs, as is most generally the case, either in the ascending or first part of the transverse portion of the arch. The process is as follows:—Place the patient in the erect position, and direct him to close his mouth and elevate his chin to the fullest extent, then grasp the cricoid cartilage between the finger and thumb, and use gentle upward pressure on it, when, if dilatation or aneurysm exist, the pulsation of the aorta will be distinctly felt transmitted through the trachea to the hand. The act of examination will increase laryngeal distress should this accompany the disease."

Since the publication of the above remarks this physical sign, which came to be known as "tracheal tugging," has been sought for in the medical wards of the Montreal General Hospital, and its great importance was early recognised by my teacher and predecessor in the chair of clinical medicine, Dr. George Ross. Tracheal tugging was always found to be a reliable sign of aneurysm of the transverse arch, and in one case it was the only positive sign present of an aneurysm whose existence was subsequently made evident by well-marked signs and symptoms of the disease. In all the cases of aneurysm of the aorta published in journals or in society proceedings either by Dr. Ross or by myself, the presence or absence of tracheal tug was carefully noted. On several occasions, too, Dr. Ross has drawn attention to its value, notably in his article on Thoracic Aneurysm in Wood's "Reference Handbook of the Medical Sciences":—

"Another physical sign of very great diagnostic importance, and which is also to be obtained by the educated sense of touch, is what is now known under the term 'tracheal tugging.' It is but quite lately that attention has been directed to this method of examination, and it is only now that its value has been realised. ..... If a deep-seated aneurysm be present which impinges at all upon the trachea or one of its principal divisions, then a very distinct and unmistakable *tugging downward* will be felt with each systole of the heart. When the heart is acting strongly, or when aortic incompetence is present, considerable rhythmical pulsation may be communicated to the fingers from the adjacent carotids, but with a little care this cannot be mistaken for the tugging directly downward above described. I have observed a number of cases of thoracic aneurysm, cardiac and other thoracic diseases, with reference to this sign, and I have never observed it produced by any other condition but aneurysm."

The author of the article Thoracic Aneurysm, in Pepper's "System of Medicine," refers to Dr. Oliver's directions as to the mode of examination for "tracheal tugging," but he does not mention his own opinion of its value. Beyond these two references I am unaware of there being any mention of this physical sign in any treatise on thoracic disease, British or foreign. Nor have I found that the sign was looked for in any hospital I have visited either in England or the United States, except in the medical wards of the Johns Hopkins Hospital, where Drs. Osler and Lafleur, old pupils of the Montreal General Hospital, have carried some of the results of their clinical teaching with them. In the discussion on the diagnosis and treatment of aneurysm of the aorta at the Medical Society of London on Dec. 9th, 1889, "tracheal tugging" was not mentioned—in fact, it appeared to be quite unknown. As to the mode of eliciting this physical sign, I have nothing to add to the directions given by Dr. Oliver. In some cases the movement of the box of the larynx is so distinct that the pulse can be counted simply by placing the tip of the forefinger upon the pomum Adami, and making a slight upward pressure.

With the object of forming a just estimate of the value of the tracheal tug, I have collected the histories of all the cases of thoracic aneurysm recorded in the case-books of the Montreal General Hospital since 1878, omitting those in which the absence or presence of tugging was not definitely noted. This period embraces the service in the medical wards of Drs. Osler, Ross, Wilkins, Molson, and myself. Twenty-three such cases are upon our records, and to this series I have added the histories of two cases observed in private practice. With these twenty-five cases I shall attempt to prove a series of statements regarding the significance of tracheal tugging as observed in the light of our clinical experience at the Montreal General Hospital.

1. *Tracheal tugging is never present except in aneurysm.*—Though I have repeatedly examined patients who were suffering from other diseases, as well as those who were suspected of having aneurysm, with a view to testing the truth of this statement, I have never found the tug perceptible. In a case of Hodgkin's disease, where there were enlarged glands in the thorax causing a pressure upon the trachea, which could plainly be seen with the laryngoscope, and in which there were other signs of pressure—dilated pupil, unilateral sweating of the face, unilateral epistaxis, and accelerated pulse-rate, all pointing to pressure upon the sympathetic in the root of the neck,—I could detect no tug.

2. *When tracheal tugging is present the aneurysm is so situated as to press from above downwards on the left bronchus, or upon that portion of the trachea immediately adjacent to it.*—To understand thoroughly the mechanism of tracheal tugging a careful study of the relations of the transverse aorta in a cross section of the frozen chest should be made. The plates of Braune or of Dwight are also very instructive. The length of the transverse arch is not great, and the direction of its course is almost directly backwards from the upper border of the second right costal cartilage to the upper part of the left side of the body of the fifth dorsal vertebra. The transverse aorta rides on top of the root of the left lung, lying between the left bronchus and the trachea. An enlargement of the bloodvessel, be it ever so small, will press upon the bronchus or upon the trachea at the root of the bronchus, and impart its pulsation to the air tube. At each beat it would push the bronchus down, and this downward push would necessarily be felt by the trachea and the larynx.

In seventeen out of twenty-five cases tracheal tugging was noted. What part of the aorta was involved in these seventeen cases, and on what part of the trachea did the aneurysm press? A necropsy was obtained in eight of these cases. Seven were hospital patients, and one was a private patient. In six there was distinct pressure upon the left bronchus from above. The most convincing case is one of Dr. Molson's (Case 1), in which the aneurysm, after pressing upon the left bronchus, caused a fatal hæmoptysis by opening into it. In Case 2, which I closely watched myself, the tumour as seen *in situ* distinctly pressed down upon the left bronchus. In Case 4 there was no pressure at all on the trachea, but only upon the left bronchus. The main features of these cases are as follows:—

CASE 1 (Dr. Molson's patient).—James G——. Tugging present. Other evidences of aneurysm of the transverse arch, including paralysis of the muscles of the left side of the larynx.—*Necropsy:* A rupture of an aneurysm the size of a small orange into the left bronchus.

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CASE 2[1] (Dr. MacDonnell's patient).—H. G——. Tugging well marked. Other evidences of aneurysm of the transverse arch, including paralysis of the muscles of the left side of the larynx, contraction of the left pupil, weak breathing in the left lung, almost complete obliteration of the left radial pulse.—*Necropsy:* An aneurysm the size of a small orange pressed directly upon the left bronchus into the angle between it and the trachea.

CASE 3 (Dr. Ross's patient).—William H——. Tracheal tug present. Evidences of aneurysm of ascending arch, including perforation of sternum. The patient left the hospital, and died two years later at his home in the country.—*Necropsy:*[2] A large aneurysm occupied the whole of the transverse arch extending from the sternum to the vertebral column, and pressed upon the last inch of the trachea and left bronchus.

CASE 4[3] (Dr. Ross's patient).—Tracheal tugging present. Cough, dyspnœa on exertion, pain in chest and left arm, slight dulness and loss of vocal resonance on upper left front. Marked weak breathing at left base. No inequality of pupils.—*Necropsy:* A saccular aneurysm between the trachea and ascending aorta. "Immediately behind the right half of the sac is the bifurcation of the trachea, and the left bronchus passes along the posterior wall just opposite to the mouth." The trachea was not compressed. The condition of the larynx not noted. Here tracheal tugging is associated with downward pressure on the left bronchus.

CASE 5[4] (Dr. Ross's patient).—Tracheal tugging present. All the other symptoms pointed to innominate aneurysm. Pain in the top of the right shoulder, extending up the neck to behind the right ear. Voice husky; respiratory stridor. Pulsating tumour above the right sterno-clavicular notch. Pupils unaffected. Paralysis of right vocal cord. The presence of the tug clearly indicated that the transverse arch was involved, *for tracheal tugging is never found when the innominate is above the seat of aneurysm.* At the necropsy, the aortic arch uniformly dilated and of large size; projecting from it, just before the innominate is given off, is an aneurysmal dilatation about the size of a walnut, somewhat conical in shape, which passed by the side of the innominate and occupied a position immediately behind the sterno-clavicular articulation. The lower lobe of the left lung was hepatised.

CASE 6 (Dr. MacDonnell's patient). — Hugh M——, tracheal tug present. Aneurysm was thought to involve the innominate artery. The symptoms began with pain on the right side of the head and neck extending to the back of the right ear. Extreme varicosity of the thoracic and abdominal veins. Brassy cough. Pulse on right side is weaker than on the left. Pupils equal; paralysis o the muscles of the right side of the larynx. Here the only symptom which indicated an extension of the disease to the aorta was the tracheal tug. Had I valued it properly, I might have made a better diagnosis. At the necropsy a large aneurysm was found to have involved the whole arch extending from the sternum to the vertebral column and pressing up on the innominate artery, thereby shutting off the blood-supply to the upper extremity. The superior vena cava was also pressed upon.

CASE 7 (Dr. Molson's patient).—Anthony G——, a negro. Tracheal tugging. Pains in back and right arm. Trachea evidently obstructed. Pupils unaffected. Right radial pulse somewhat weaker than the left. Strong pulsation in episternal notch and a heaving impulse limited to a small area under the right sterno-clavicular articulation. The breathing generally impeded, but there was no difference perceptible at the bases of the lungs. Condition of larynx not noted. Death from dyspnœa.—*Necropsy:* The sac compressed the trachea and eroded the fourth and fifth dorsal vertebræ, being formed entirely upon the transverse aorta, the ascending portion being tolerably normal.

The following case is not so conclusive as those which precede it. The notes of the necropsy are not to be found. It is stated in the clinical case-book that the aneurysm was situated upon the ascending arch, but no mention is made of the condition of the transverse arch, or of the relations of the trachea to the tumour. The particulars are as follows.

CASE 8 (Dr. Molson's patient).—Andrew J——. Tracheal tugging. Burning pain in the middle of the sternum. Stridor. No evidence of tumour, except rather well-marked visible pulsation at the right of the sternum at the junction of the third costal cartilage wtth the sternum. A brassy cough, relieved by lying upon the face. Death occurred by rupture into the trachea and consequent hæmoptysis.

In the remaining ten cases no necropsy was obtained. The clinical evidence in favour of the existence of aneurysm of the transverse arch is very strong, particularly in Cases 7 and 8, where there was pain in the left shoulder and arm, together with tumour to the left of the sternum and paralysis of the muscles of the left side of the larynx; and in Case 8 additional evidence was afforded by the weakened breath sounds in the base of the left lung.

CASE 9 (Dr. Ross's patient).—James McG——. Marked tugging. Pupils unaffected. Pain in left shoulder, back of the neck, and left axilla. Dull area to left of sternum under the inner end of the clavicle. Paralysis of the muscles of the left side of the larynx.

CASE 10 (Dr. Ross's patient).—Patrick T——. Tugging present. Pupils unaffected. Pain in left shoulder. Evidences of tumour to left of sternum. Weak breathing in the base of the left lung. Paralysis of muscles of the left side of the larynx.

In the following series the evidences of aneurysm of the transverse arch are not so clear as in the preceding cases.

CASE 11 (Dr. MacDonnell's patient).—James G——. The tracheal tugging is very distinct, and has a direction downwards and to the right. Pupils unaffected. Tumour behind right sterno-clavicular articulation, which can be felt pulsating at the sternal end of the subclavian triangle. The tumour can be felt to move with the act of swallowing. The larynx is unaffected. The lumen of the trachea is not pressed upon. The physical signs observed in connexion with this case show that tugging may be present without any pressure upon the trachea. The movement of the tumour with swallowing is due to the lifting up of the tumour by the left bronchus, and is an additional proof that tugging depends on pressure on the left bronchus from above. I shall attempt to explain later on how a tumour may give rise to tug, and yet leave the recurrent laryngeal nerve unaffected.

CASE 12 (Dr. Ross's patient).—Frank G——. Tracheal tugging. The evidences of transverse arch disease were pain in left side of the chest and enlargement of the cervical and thoracic veins on the left side. This patient died in a paroxysm of dyspnœa. No necropsy.

CASE 13 (Dr. Ross's patient).—J. B——. Tracheal tugging. The evidences of an aneurysm of the transverse arch were contraction of the left pupil, and pain in back of the neck. Tumour in centre of chest; dulness and bulging behind the upper piece of the sternum.

CASE 14 (Dr. Molson's patient) —G——. Tracheal tugging. Pupils unaffected. Pain in back of neck and down the right arm. Tumour in centre of chest, behind manubrium. No difference in the breath sounds of the two lungs. Distension of cervical and upper thoracic veins.

CASE 15 (Dr. Ross's patient). — McD——. Tracheal tugging. Pupils unaffected. Pulsating tumour to right of sternum under the clavicle. No difference in the breath sounds of the two lungs.

CASE 16 (Dr. Ross's patient).—Elizabeth O——. Tracheal tugging. Pupils unaffected. Pain in the middle of the sternum, between shoulders and down the arms. Tumour in the centre of the chest. Weak breathing at the base of the left lung.

(To be concluded.)

[1] Reported fully in the Medical News, Feb. 15th, 1890.
[2] I am indebted to my former pupil, Dr. J. E. Orr, of Cookshire, P.Q., for the detailed report of the necropsy.
[3] Canada Medical and Surgical Journal, vol. viii., 1878, p. 241.
[4] Ibid., vol. viii., p. 451, and vol. ix., p. 20.

A NOTE ON THE BONE LESIONS (USUALLY INSIDIOUS) OF MAMMARY CARCINOMA.[1]

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I THINK it will be generally admitted that the clinical course of carcinoma in the female mamma is frequently obscure and mysterious. That the two phenomena, in particular, of an occasional long interval of seeming immunity after operative measures, followed by renewed manifestations of disease,—of a similar growth in the opposite breast, after a more or less prolonged period of health, and often purporting to be an independently developed tumour,—make

[1] A paper read in the Section of Pathology at the Birmingham meeting of the British Medical Association.

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this particular variety of malignant neoplasm a *crux* in the path of those who, like myself, are convinced—from the analogy of all the other species, as well as from clinical observation—that the developments of cancer are consecutive and infective. In this paper I attempt an elucidation of the mystery, although my investigations are far from complete, and I have to ask the indulgence of the Section for their fragmentary character.

I need hardly remark that carcinoma of the mamma is the result of abnormal proliferation of the acinar epithelium—a process ordinarily *chronic* and insidious, and giving birth to the familiar "scirrhous cancer." When, however, as happens in a substantial minority of cases, the malady runs an *acute* course, the resulting tumour formation may aptly be termed "soft, encephaloid," or "medullary carcinoma." The two, however, are practically identical; every gradation of acuteness or of chronicity is observable in individual examples; and both the clinical and histological differences between specimens at opposite extremities of the scale are plausibly explicable by the variations, which we are daily called on to notice, in the consistence of the fibrous tissues of respective individuals. However this may be, the point here in question is of some consequence in the present connexion, because, if I am not greatly mistaken, there is a tendency to classify soft, rapidly advancing growths of this region as sarcomata; partly by reason of the inconspicuous gland infection often manifest under such circumstances, partly because very careful examination of their sections taken from several portions of the periphery is often needed in order to demonstrate the acinar arrangement and epithelioid origin of the cells. I have not noticed any bone symptoms in a true sarcoma whose connective tissue origin could be definitely traced.

Every surgeon must be familiar with the so-called "rheumatic" pains which torment the latter days of most or all scirrhous patients. The *upper arm* on the same side as the disease, the corresponding *scapula*, and the *lumbar region* are their most usual seats specially referred to by the sufferer, but hardly any portion of the body in the neighbourhood of bone may not be complained of. A certain amount of subjective localisation thus takes place. The patient often speaks of universal and overwhelming sensations of painful weariness and lassitude out of all proportion to the objective manifestations of disease in the shape of tumour or of palpable secondary deposit, and often present when the latter is entirely wanting. The local pains are described as gnawing and as deep-seated, as being felt in the bones rather than in the soft parts. Like those of true rheumatism, they are often worse at night, and are also greatly relieved by the administration of salicylates—a point I am disposed to attribute to their origin in irritative conditions of the periosteum. They are not, however, specially confined to the neighbourhood of articulations; they are referred to the bone; are fixed, not metastatic and transitory. By far the most conspicuous point of distinction from true rheumatism lies in the concurrent and progressive muscular weakness. Except in so far as it may be propped up by medicinal measures of treatment, the general health steadily and rapidly breaks down; the patient becomes wan, pinched, and sallow, and her physical condition may be not inaptly designated by the almost obsolete term "cachexia." In rheumatism all the symptoms are usually subjective. In the state here described we have the most unmistakable objective evidence that grave organic lesions exist somewhere, and are surely sapping the springs of life; although, as not seldom happens, we find few outward manifestations of cancer growth during life, and after death an amount of visceral deposit entirely inadequate to account for the phenomena.

Now, so far as my opportunities of investigation have extended, the concrete basis underlying these symptoms is an infection of the bone marrow by malignant cells derived from the primary growth, or from some of its secondary tumour formations. With perhaps greater respect for the clinical acumen of our forefathers than is universally current nowadays, I take it that the "cancerous cachexia," on which they were wont to dwell in this connexion, actually denoted the fact of such infection, mingled, it is true, with the result of the ulcerative and septic processes commonly, but not invariably, met with in cancer. From the analogy of similar tissues elsewhere it is *primâ facie* obvious that the marrow, richly cellular and abundantly supplied with lymphatics and bloodvessels, must almost of necessity form a particularly favourable soil for the development of cancer cells, should these once gain access to it, as also for their diffusion by means of the general circulation. The phenomena of extensive diffusion seen in cases of primary malignant growths on bone may be pointed to as countenancing the latter statement. And, in the second place, in the light of current views of this structure as the *great red-corpuscle factory* of the organism, we can readily comprehend the marked physical weakness and steady progress down hill obvious whenever the "rheumatic" pains of mammary carcinoma—I am not aware that they are commonly associated with any other variety—are felt in any great degree.

The recorded symptoms and morbid appearances of many cases of "osteo-malacia" seem to indicate that this should rank as a truly malignant disease of the bone marrow. Professor Huxley makes the following remarks upon an allied topic. The italics are the writer's own: "This circumstance enables us to understand that which one would hardly suspect from the appearance of a bone—namely, that *throughout life*, or at all events in early life, its tissue is the seat of an extremely active vital process. The permanence and apparent passivity of the bone are merely the algebraical summation of the contrary processes of destruction and reproduction which are going on in it."[2]

If we examine the shoulder-joint and its vicinity in a person dead from breast scirrhus, in whom "brawny œdema" of the adjoining arm is a conspicuous feature, we commonly find it difficult or impossible to disarticulate the head of the humerus from the glenoid cavity in the ordinary manner. Hardly any calcareous salts seem to be left in the bone matrix; and the knife passes through the upper epiphysis, where the condition is most marked, with little or no more resistance than through the soft parts. It might be supposed that this phenomenon is due to the general absorption of lime-salts occasionally met with in other chronic wasting diseases, particularly in connexion with insanity. In my experience, however, it is associated with an actual deposit of malignant cells in the marrow. Individually, these are distinguishable from osteo-clasts by the relatively huge nuclei; collectively they, if degenerative processes have not proceeded too far, present the acinar distribution specially characterising mammary carcinoma. The fine adipose tissue reticulum seen in sections of healthy marrow is absent; everywhere we find indications of absorption and of erosion of the bone matrix (such as myelo-plaxes and Howship's lacunæ), seemingly by the proliferating cells of the new growth; the cancelli are occupied by masses of parenchyma, apparently malignant, but often more or less degenerate, and breaking down into granular débris. This state of soft decalcification is only apparent as a rule in the humerus, sternum, and ribs adjoining the primary growth — parts where the cell growth is presumably most abundant. It is but relatively very exceptional to encounter a distinct *tumour* in the bones, the result of secondary deposit in the course of breast scirrhus; and the cases in which *fracture* takes place are also comparatively rare. Yet I believe I may assume that failing the one or the other of these two occurrences, the state of the bones does not ordinarily receive attention at a necropsy; is certainly not tested by the microscope. Thus to take the specimens of such deposit in the long bones contained in the Museum of the Royal College of Surgeons, which are derived from four patients. No. 1670, vol. ii., part 4, is a preparation of the condyles of a femur, filled "*without any change of form*," by the malignant parenchyma. Here there had been no tumour or fracture; but attention had been called to the part by local pain, swelling, and knee-joint effusion. No. 1671: Head and upper part of femur in like condition. *Fracture* had taken place. "*Form of bone scarcely altered.*" No. 1672: Humerus, filled with secondary scirrhous deposit, *fractured*. "*Shape of bone scarcely altered.*" No. 1675: Humerus, similar to last, *twice fractured*. No tumour.

I beg to exhibit drawings of the appearances in several of these cases, and also the slides themselves. Most are from the upper epiphysis of the adjacent humerus after death from breast scirrhus; in one, which I regard as a specially test case, seeing that not only were objective bone symptoms absent during life, but that death took place from cerebral and pulmonary complications long before it might have been expected from the malignant growth alone, deposits of scirrhous cells, arranged in acini, were

[2] Elementary Physiology, 1886, p. 834

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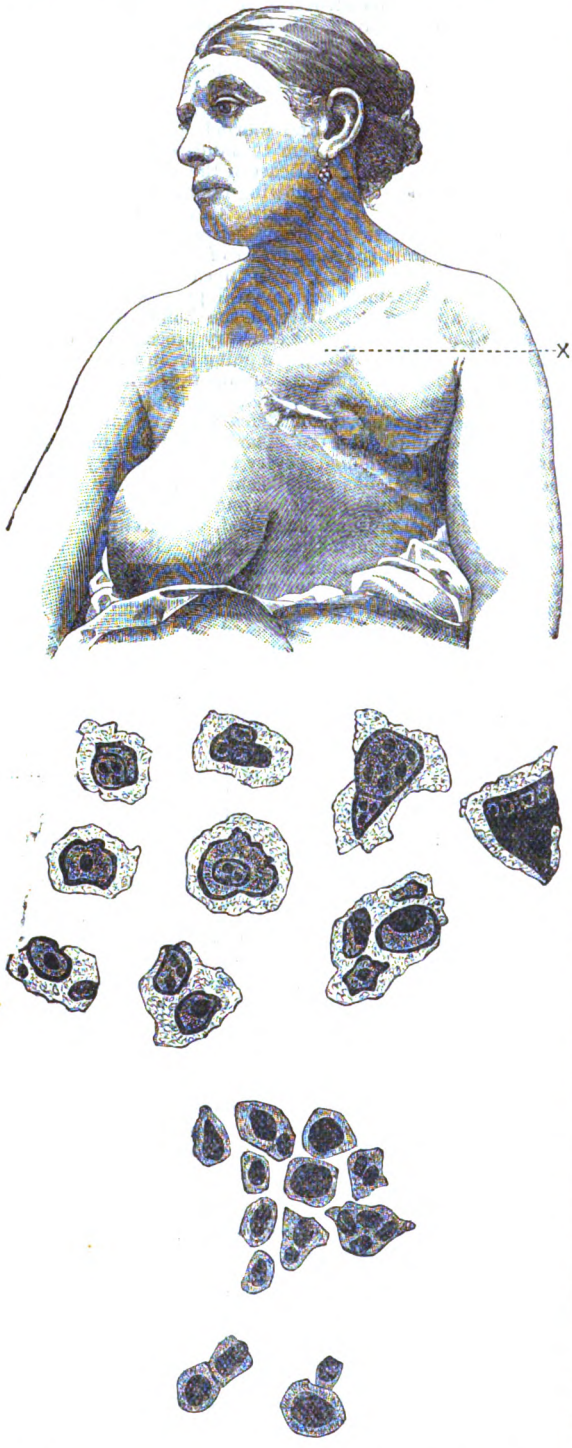
found in both humeri and in one of the lumbar vertebræ. There are two sections of marrow taken from the shaft of the femur in a case some years ago under the care of my colleague (Dr. Purcell), to whom I am indebted for kind permission to quote particulars. Here multiple tumours on



the bones, secondary to an encephaloid carcinoma of the left breast, existed, but, as may readily be seen by the outlines of the section, no tumour formation was present at the spot. The section was taken, in fact (as I did not then suspect this infection phenomenon), as a specimen of normal marrow, and the small groups of scirrhous cells discovered by accident only. There is a slide of secondary deposit, subsequently to excision of the left mamma for scirrhus, in the bodies of the sixth and seventh cervical vertebræ; but as here, although no distinct tumour was produced, marked objective phenomena, and death from paraplegia, ultimately resulted, the case is, to some extent, foreign to the main purport of my paper. Particulars of these are given in the appendix. The recognition of this actual deposit of malignant cells in the bone marrow is useful in enabling us to comprehend the cachexia and general mal-nutrition, out of proportion to the palpable amount of disease present, the infection of the opposite breast which takes place in a certain percentage of instances, and the renewed manifestations of tumour development after several years of seeming immunity procured by operation.

It remains briefly to glance at two of the early *objective* indications of the occurrence, which are not without importance to the practical surgeon. These are:—1. A sensation of fulness and enlargement, sometimes accompanied by tenderness on pressure, afforded by the upper epiphysis of the *humerus* nearest to the diseased mamma. 2. A marked thickening and prominence of the *sternum*, affecting especially the part between the articulations of the first and third ribs. The first of these was described by myself in THE LANCET, vol. i. 1880, p. 912. I am not aware that it had been pointed out by any previous observer. At a comparatively early stage in the course of breast scirrhus (long anterior to any œdema of the soft parts) the humerus on the side of the disease becomes slightly thickened and seemingly flatter and less rounded than in health. Occasionally the bone is tender to the touch; but more frequently hyperæsthesia is absent, at least in any marked degree; and occasionally again the part may be sore on pressure without manifest enlargement. Sometimes, but very seldom, the woman complains of aching "rheumatic" pains about the shoulder and down the limb; as a rule, at the early stage to which I refer, no subjective symptoms direct attention to the part in question; and the condition *is discernible only by the medical attendant on a careful comparison of the corresponding bones on each side*. The apparent hypertrophy is at the best but slight and inconspicuous; and several cases in succession may be examined before a well-marked instance is found. I need hardly say that in a stout patient it is difficult or impossible to satisfy oneself as to the presence of the condition. At a still later stage the phenomenon, moreover, becomes obscured by "brawny œdema" of the soft tissues on the one hand, and on the other by the supervention of a similar physical sign in the humerus on the opposite side.

Opportunities of examining microscopically or otherwise the state of the bones at the early period indicated are necessarily rare. I have, however, in my possession thin sections taken post mortem from a woman who lately died in the Cancer Hospital insane, and with very advanced tubercular disease of the left lung in addition to a right breast scirrhus of three years and a half's duration—death thus resulting from the complications long before the period when it would apparently have been caused by the malignant disease alone. In this patient no œdema of the arm anywhere existed, and no symptom (objective or subjective) was present to direct attention to the bones. Yet typical scirrhous cells, arranged in acini, were present in both humeri, and in one of the lumbar vertebræ in proportion to the proximity of these to the initial lesion, being most abundant in the head of the right humerus, less so in that of the left, and least in the vertebra. The degree of tenderness on pressure varies considerably, and this symptom is often entirely absent; or, fairly marked at one time, may be wanting at another. Being entirely subjective, not much stress can be laid upon it; it is probably due to irritative conditions of the periosteum, not sufficiently acute to be called periostitis.

As above remarked, this humerus symptom is at the best but inconspicuous; beyond some "aching" or "gnawing" pain down the upper arm, complaint of which is as a rule elicited only upon direct inquiry, and which, therefore, is probably not very severe, attention is not drawn to the part. In a marked degree, and in such form as to be readily demonstrable at the first examination to anyone unfamiliar with it, it occurs about once in five or six cases, being most readily recognisable in stout fleshy women a little before the supervention of œdema in the soft parts, and being usually absent in cases of "atrophic" scirrhus after the lapse even of several years. In most examples of mammary carcinoma, however, minor degrees of the affection are commonly present, when the patient has been thus diseased for more than a twelvemonth.

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Thus of twenty-one cases recently examined the sign is recorded as specially marked in four only; in twelve instances the upper epiphysis of one humerus appeared, on careful comparison of the two sides, to be fuller and thicker than the normal; in seven, both, although the basis of inference was then necessarily unreliable; in two only—both atrophic—were the results of examination purely negative.

I am aware of the categorical contradiction, by no less an authority than Dr. Samuel Gross,[3] to my report of the above symptom. I have, however, been in the habit of demonstrating it in the out-patient room since 1880, and am well satisfied of its existence in a large proportion of the cases.

(To be concluded.)

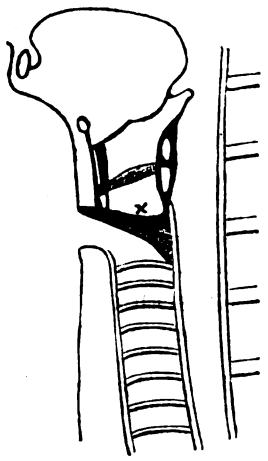
NOTE ON THE

TREATMENT OF TRACHEAL STENOSIS BY A NEW T-SHAPED TRACHEOTOMY TUBE.

BY C. J. BOND, F.R.C.S.,
SURGEON TO THE LEICESTER INFIRMARY.

THE good results obtained by intubation in the cases of tracheal obstruction following tracheotomy recorded by Messrs. Pitts and Brook in THE LANCET of Jan. 10th show the value of that method of treatment in such cases. There is, however, another class of cases—viz., suicidal wounds of the trachea occurring in adults—in which the wound of the air-tube is always a transverse one; such cases are often only seen late in their history, and after cicatrisation and constriction have advanced to a considerable degree, and are correspondingly difficult to treat. In such a case I have found the T-shaped tube described below very useful, not indeed affording complete cure, for the tube has still to be worn, but rendering the patient's condition very comfortable, enabling him to talk and earn his living. The patient, a man aged fifty-two, "cut his throat" six months ago; the transverse wound completely divided the trachea below the cricoid; suppuration occurred, and dyspnœa came on three days afterwards; this was relieved by the introduction through the wound of an ordinary bivalve tracheotomy tube, and this he has never been able to leave out for any length of time since. On examination six months later, respiration was carried on entirely through the tracheal opening, the larynx being entirely shut off by a tough skin-like septum, which completely blocked the trachea at the upper level of the opening. The voice was of course absent. It was evident that free removal of the obstruction must be the first step, and this was done by first enlarging the opening downwards, and plugging the trachea with a Trendelenberg's cannula. The cricoid was then divided in the middle line, and the larynx laid open above the obstruction. (See engraving.) In this way the limits

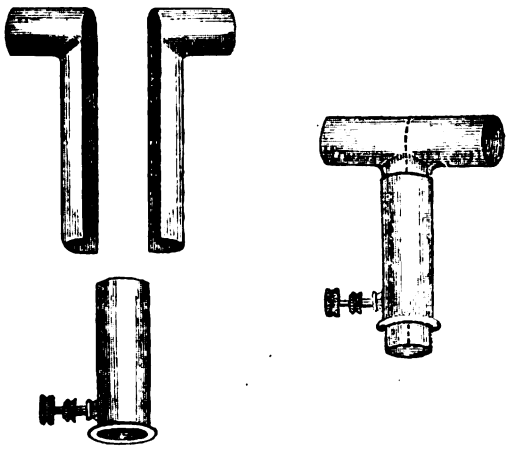
VERTICAL SECTION OF LARYNX.



×, Fibrous septum.

and attachments of the membrane were made out, and it was cut away with scissors. The part attached to the posterior wall of the trachea was very hard, almost cartilaginous, and had to be smoothed off with cutting forceps. The problem now remained how to keep the reopened channel patent and prevent reobstruction. For the first few days a piece of indiarubber tubing was worn entirely in the trachea, with a lateral opening opposite the tracheal opening, and secured by two threads. This, however, soon clogged with mucus; and as the outer opening contracted, its introduction became more and more difficult. After many trials and several disappointments I had the metal tube made in two halves, with a removable collar and screw. (See engraving.) This the patient now

T-SHAPED TRACHEOTOMY TUBE.



introduces easily himself one half at a time, and these, when held together by the collar and screw, form one rigid T-shaped tube, of which the long or tracheal portion passes through the cicatrising portion of trachea and keeps it patent; by blocking the outer opening with a plug of cork or the finger respiration is quite natural, and the voice clear and distinct. The patient has now worn the tube some months without any discomfort or sign of tracheal irritation. In this case the tendency to cicatricial encroachment was so great that I think it would have recurred whenever any tube was discontinued, even an intubation tube—in fact, he wore at one time a tracheotomy tube with the curve upwards, passing through the constricting ring; but in a short time, while wearing this, constriction began at the lower angle of the opening, by an encroachment all round of granulation tissue, leading to urgent dyspnœa until relieved by the downward tube. The T-tube combining the dilating advantages of an upward and downward tube was introduced in two halves, to get over the difficulty of introduction. If compelled, at any rate for some time, to wear some sort of tracheal dilator, the T-tube has the advantage over the intubation tube of allowing phonation. In these cases, then, of obstruction after transverse suicidal wound the T-tube will, I think, prove useful, and if not necessarily permanently, perhaps as a commencement before beginning intubation. It may be also that when healing is complete—that is, when skin and mucous membrane have joined all round and left no granulating and encroaching edge,—the T-tube might be discontinued, when the outer opening would soon comparatively close, though leaving a small aerial fistula. The tube was made for me by Wood of Leicester.

Leicester.

[3] International Journal of the Medical Sciences, March and April, 1888.

THE NORTH OF ENGLAND SURGICAL AID SOCIETY.

The annual report, in reviewing the work of this Society for the year 1890 (the second year of its existence), points with satisfaction to its augmented usefulness. In the nine months of 1889 forty-nine appliances were supplied; in the same proportion last year the number would have been sixty-six—the actual number was 121. The work has hitherto been carried on free of cost in rooms in the infirmary, but the committee have been compelled to begin the year by appointing (with the consent of the governors) one of the house surgeons of the infirmary to do the work previously performed by a subcommittee. The financial position renders necessary an appeal for funds to meet the increasing demands upon the Society.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SURFACE AND SUBSURFACE NODULAR RHEUMATISM.

BY ANGEL MONEY, M.D., F.R.C.P.

IN the recorded history of nodular rheumatism mention will be found of pericardial nodules and nodular pericarditis. I believe there is a radical distinction between the two, as there is between surface lesions and subsurface lesions generally. At a recent necropsy on a woman aged twenty fairly recent adhesions obliterated the whole pericardial sac, and nothing very nodular about the pericarditis could be detected; but, on peeling off all the pericardial lymph, at least three subpericardial nodules were found, each of the size of a small hempseed; the pericardial endothelium appeared to be intact over them, and they had made a place for themselves in the surface myocardium. These are, I suggest, the true homologues of subcutaneous nodules, and ought to be called subpericardial. The nodular endocarditis is to be compared to nodular pericarditis, pleurisy, and perihepatitis. Further information is required about this surface inflammation. In the nodular perihepatitis which I have seen several times one observes fine granulations not much larger than grains of white sand, and the spaces between them are wide; but there is a regularity about the arrangement of the granulations which does not obtain in nodular perisplenitis. The appearance hardly reminds one of the true granular pneumonias, and yet the sizing and regularity are points in common. As a suggestion it may be put forth that all rheumatic manifestations are locally circumscribed, but that at the surface of organs this feature is masked by attendant phenomena, such as the effusion of lymph and the coalescence of locally circumscribed areas. Beneath the surface there is less chance for the masking, possibly owing to the less anastomosis between vessels and other anatomical and physiological arrangements.

Subcutaneous nodules and acute rheumatic polyarthritis are seldom found together. Generally the rheumatism is of subacute and subchronic intensity and duration when nodules appear. The more smouldering the lesion the more liability is there to subcutaneous and subcapsular and subserous nodules to form. Is this true? It is rather rare in my experience to find crops of nodules coming and going with rapidity—i.e., in the course of a few days. A nodule now and then behaves thus, but not often. Their relation to chronicity is further testified by the usual absence of tenderness, of pain, and of fever. Diseases that are chronic in adults are less chronic in their histological development in children, any irritation giving rise to more interstitial sprouting in children, as would indeed be expected from their nearness to or less distance from the embryonic multiplication which is, or which characterises, the growing. Dr. Cheadle observes: "This very acute inflammation (pericarditis) appears to be less identified with the development of nodules than the more chronic form." In most acute diseases there is a tendency to surface inflammations, and, in proportion as chronicity obtains, lesions appear in the deeper interstitial parts. The subserous, cutaneous, and capsular nodules then are a measure not only of the gravity of the prognosis, but also of the duration and insidiousness of the disease.

A contrast is suggested between surface and subsurface nodular rheumatism. That the rheumatic foci are more numerous, smaller, more closely aggregated, more transient, more painful, the more superficial they are; and, conversely, the deeper seated, the less numerous, the less closely packed, more permanent and less painful.

Harley-street, W.

HYPERPYREXIA FOLLOWING CURETTING.

BY J. E. H. KELSO, M.B., C.M.

THE following case is interesting as showing the care necessary after curetting, and also one of the difficulties practitioners often have with patients in the country.

Mrs. F—— came under my care in August, 1889. Her case was as follows. She commenced menstruating at fifteen years of age. At eighteen she had hard out-door work on a farm, and at this time she noticed that her menstruation was excessive in amount. She married at twenty; had no children; no history of abortion, and her family history was good. The menorrhagia increased as years went on, and at twenty-seven—viz., three years previous to her application to me—she was attacked with severe pain in the back, and at this time had an almost continuous discharge. She had derived little benefit from treatment previously adopted. When she consulted me she was pale and somewhat emaciated. On examination I found her uterus to be enlarged, retroflexed, and immovable; there was no pain on passing the sound. I ordered rest, hot water injections, and ergot internally. No improvement resulting from this treatment, on Oct. 9th I determined to curette, the discharge being little. With strictly antiseptic precautions I performed the operation, dilating the cervix with Hegar's dilators. The scrapings were set aside for microscopic examination, but were acidentally thrown away by one of the patient's friends. After curetting, pure carbolic acid was applied to the endometrium, and I left the patient with strict orders to keep her bed for a week. I subsequently learned that, feeling perfectly well, the patient got up an hour after the operation, went to her garden to take in some clothes which were drying as it had commenced to rain, and got wet during the process. In the morning of Oct. 11th her temperature was 103°; pulse 110, hard, bounding; no tenderness on abdominal pressure. I prescribed hot vaginal injections of carbolic acid. The next day the temperature was 105·1°; pulse 120. I ordered drop doses of aconite every quarter of an hour, as there were pain and symptoms of pelvic peritonitis. In the evening she became delirious; temperature 107°; pulse 160. Owing to the extreme gravity of her symptoms I ordered her to be placed in a warm bath, cold water added, and afterwards wet packing. Four hours after this was done the temperature was 101·2°, and she was now conscious; she now had a morphia suppository (¼ gr.) and a tablespoonful of brandy every three hours; also, small doses of quinine; milk diet. From the 12th to the 21st there were a morning fall and evening rise of temperature, but it did not exceed 102°. Her bowels were regulated by enemata and an occasional gentle aperient. Abdominal pain was slight. On Oct. 21st the temperature reached 105·1°; and quinine failing to reduce it, I gave twenty grains of antipyrin every three hours. On the following day the temperature fell to 100°; antipyrin was stopped, and quinine substituted. There was little variation of temperature until Nov. 1st, when it rose to 103° with vomiting and retention of urine. I ordered ice to be sucked, relieved the retention of urine with the catheter, and gave fifteen grains of quinine per rectum every four hours. In the evening of Nov. 2nd no nourishment could be taken by the mouth, the patient being supported by beef-tea and brandy enemata, also rectal suppositories. Temperature now fell to 99·8°. On Nov. 5th she passed urine without the aid of the catheter, and took some milk by the mouth, which she retained. On the 10th the temperature was 99°. She now had a simple febrifuge. There was no pain or abdominal tenderness. The next day the temperature was normal. Menstruation occurred on Dec. 1st, lasted three days, and was of small amount. The patient was now allowed to get up daily, the temperature remaining normal. She recovered strength, although she was under treatment for anæmia for four months. I saw her at the end of June, 1890. She had menstruated regularly, had gained flesh, was not anæmic, and said she had not enjoyed such good health for ten years.

Kincardine-on-Forth.

HERPES ZOSTER OF THE LEG.

BY CLARENCE BEESLEY, L.R.C.P., L.R.C.S.

THE following brief notes of a case of herpes may be of interest as showing the apparent nervous origin of the complaint, and its distribution over the cutaneous area supplied by a given nerve—in this case the anterior crural. The patient, a male aged sixty, had suffered very severe pain in the right thigh ten days before the eruption showed itself. When seen, a very copious characteristic herpetic rash covered the anterior aspect of the thigh as far as the upper border of the patella, and there was also a small patch just

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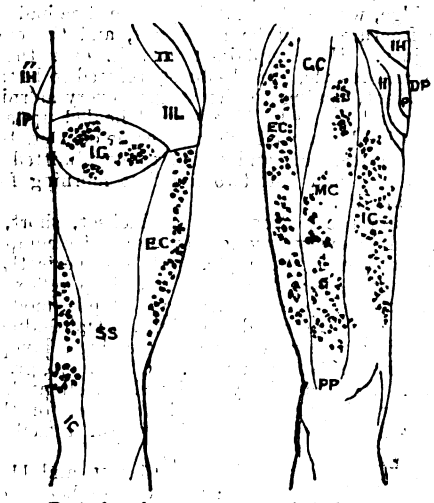
above the gluteal fold. The sartorius appeared to divide the eruption into two distinct parts, and there were no vesicles in the skin over this muscle. The following diagram

CUTANEOUS NERVES OF LOWER EXTREMITY.



Posterior view. Anterior view.

(*After Flower.*)

shows the extent of the rash at a glance, and it is seen to be exactly limited to the external (E C), middle (M C), and internal (I C) cutaneous branches of the anterior crural. Under appropriate remedies the patient made a somewhat tardy but complete recovery.

Warrington.

THE EFFECTS OF OVERDOSES OF EXALGINE (METHYL-ACETANILIDE).

By ARTHUR CONNING HARTLEY, M.B., C.M.

WHILE having many satisfactory results from the use of exalgine, I think it would be of some interest to give an account of two cases of overdose.

CASE 1.—Mrs. C——, aged twenty-seven, married, had been subject to severe periodic attacks of neuralgia over the right orbito-temporal region for the last five years, and, as nothing had done her any good, exalgine was tried. The attack began at 11 A.M., and increased in severity. At 1 P.M. she took a three-grain dose of the French preparation (MM. Brigonnet and Naville), and the same dose was repeated at 2, 3, 4, and 6 P.M., without giving any relief or discomfort. At 9 P.M. she took three grains more, and almost immediately afterwards felt absolutely powerless. This lasted for five minutes, the patient remaining quite conscious. She compared the sensation to that of taking chloroform before she was quite "under." At 12.45 A.M. the pain still being very severe, she took a seventh dose, and in fifteen minutes felt a feeling of impending death, could not speak, gasped for breath, pallor intense, dilated pupils; the limbs became quite rigid, heart palpitated, felt utterly powerless, and broke out into a profuse perspiration. By the aid of fresh air, stimulants, &c., the attack passed off in fifteen minutes, leaving her very prostrate, with ringing sounds in the ears. The pain, which frequently lasted only this length of time, now left her. Other functions remained normal, and no rash developed. This happened between her menstrual periods.

CASE 2.—Mrs. G—— had been taking two-grain doses at intervals for a neuralgic headache, obtaining relief, though sometimes feeling slightly faint, but by mistake an undetermined overdose was taken. She soon experienced a feeling of complete prostration, her limbs became powerless though not rigid, felt as if she was sinking through the bed, slight perspiration, and thought she was dying; breathing faint and shallow, and nearly pulseless at the wrist. Mustard, hot bottles, and stimulants, brought her round, but she felt very weak for many days afterwards.

Liscard.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI: *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

TWO CASES OF PERFORATING ULCER OF THE STOMACH, WITH MISLEADING PHYSICAL SIGNS.

(Under the care of Drs. DICKINSON and EWART.)

IN these cases the peritonitis which followed the perforation of the ulcers did not pursue the more usual course and spread throughout the peritoneal cavity, but remained more or less localised, though most intense and purulent. The purulent collections secondary to perforations of the stomach may attain large size and produce swellings in parts of the abdomen where such would not be suspected. They present great difficulty in diagnosis on account of the gaseous contents which are not infrequently present and mask the evidence of fluid. Sometimes, in consequence of adhesions between the base of the ulcer and the diaphragm, perforation may take place into the pleura, and empyema, with pneumothorax, result. The symptoms in Case 2 made it probable that such a complication had arisen. The occasional coexistence of certain heart murmurs, indicative of pericarditis and endocarditis, with symptoms pointing to gastric ulcer in chlorotic girls, has been observed by Dr. Ord in a few instances, and formed the subject of an interesting paper read by him before the Medical Society.[1] For the account of these cases we are indebted to Dr. Charles Salter and Mr. W. L. Dickinson, formerly medical registrars to the hospital.

CASE 1. *Perforation with supposed pericarditis.*—In December, 1887, a chlorotic girl aged twenty-four was admitted under Dr. Dickinson with symptoms of peritonitis, which from the history was considered to be due to perforation of the stomach. Besides the peritonitis there was considerable disturbance of respiration and circulation. The heart's action was forcible, and friction sounds, having all the characters of those present in pericarditis, were plainly audible along the right border of the sternum from the third to the fifth costal cartilage. Moreover, there was tenderness over the whole precordium. Pleural friction was heard in the left axilla. These signs, taken in connexion with the fact that there was a great liability to syncopal attacks, seemed to indicate that in addition to peritonitis and pleurisy there was pericarditis. When the patient had been in the hospital about ten days she was attacked with diphtheria and rapidly died. At the necropsy there was found a perforation of the posterior wall of the stomach, which had caused peritonitis, almost restricted to the left half of the diaphragm and the upper surface of the left lobe of the liver, the under surface of the liver being also coated by recent lymph. A layer of soft lymph coated the lower part of the left pleura. There was no trace of pericarditis. Between the liver and the diaphragm was an abscess pushing up the left leaflet some distance; and it is probable that this alteration of the usual relations, together with the pleurisy on the left upper surface of the diaphragm, gave rise to the friction synchronous with the heart's action which was mistaken for pericarditis.

CASE 2. *Perforation with supposed pneumothorax.*—In November, 1890, a very chlorotic girl, aged eighteen, was admitted under Dr. Ewart with signs of pneumonia at the base of the left lung and a history of gastric ulcer. Three days later there was consolidation at the bases of both lungs. This condition of double pneumonia underwent very slow resolution, but a gradual subsidence of fever suggestive of an irregular pneumonic lysis took place in the course of three weeks. There was now a return of fever and serious symptoms. A careful examination of the chest showed that the right lung had returned to its normal state, but that on the

[1] Trans. Med. Soc., 1888, March.

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left side just above the spleen pure amphoric breathing was audible, and a perfect "bell-note" could be obtained by percussion with a couple of coins. At the posterior base there was evidence of some effusion of fluid. These physical signs varied a little from day to day, but those especially characteristic of pneumothorax were always present. Many rigors occurred, and the patient died six weeks after admission, ordinary gastric symptoms having been in abeyance throughout. At the necropsy there was no pneumothorax. The lower lobe of the left lung was partially compressed by a small effusion of turbid fluid into the left pleura. An abscess cavity was found containing air and pus between the diaphragm, the spleen, and the upper surface of the left lobe of the liver. Opening into this abscess was a small perforating ulcer on the anterior wall of the stomach near the cardiac end. There was also a ragged abscess in the substance of the spleen, which communicated with that beneath the diaphragm.

TOTTENHAM HOSPITAL.

FOREIGN BODY IN THE FEMALE BLADDER; REMOVAL.

(Under the care of Dr. HOOPER MAY.)

THE surgeon is much more frequently called upon to remove foreign bodies from the bladder of the female than from the bladder of the male, and such bodies are very commonly found forming the nucleus of a stone when removed from the former. Although they are usually introduced from the urethra by the patient, there is a specimen in the museum of Guy's Hospital, a piece of slate pencil, which was removed from the bladder, having found its way there from a neighbouring viscus. Sometimes the shape of the body prevents its ready extraction, but removal can usually be effected, as in this case, after dilatation of the urethra.

E. A——, aged twenty, was admitted to the hospital in June, 1889. She was a delicate-looking girl. The right hip-joint was stiff, with scars in the thigh from old abscesses. She says "she sat on her pocket, and a pencil slipped into her bladder a week ago." She complains of constant pain at the "bottom of the stomach" and pain during micturition, which has not been more frequent than usual. There has been no incontinence, and the urine is neutral, with phosphates and mucus.

June 27th.—Patient being under chloroform a sound was introduced, but gave no certain sign. The urethra was dilated with forceps and the finger, and on introducing the finger it immediately came in contact with a pencil lying across the bladder. Difficulty was found in turning it so as to get hold of the end. After partly filling the bladder with boracic lotion it was turned so that the end could be seized with small lithotomy forceps, and then it was removed through the urethra without difficulty. The urethra was slightly torn upwards for about half an inch.

The night after the operation she had incontinence of urine; none in the day, and none in the night following. Since that there has been incontinence occasionally. The bladder was washed out daily with boracic lotion until July 7th. Before the operation the temperature had been irregular, ranging as high as 102°. The day after it was 100 4°; then it became normal.

July 10th.—The urine continues neutral in reaction. The foreign body, which the patient called a pencil-case, was a thin tin cylinder, about 3½ in. long, partly encrusted with phosphates.

13th.—For the last two or three days the urine has been acid, and there has been no incontinence.

14th.—Discharged well.

LINCOLN COUNTY HOSPITAL.

CASE OF TRAUMATIC EPILEPSY; TREPHINING; RECOVERY; REMARKS.

(Under the care of Mr. CANT.)

FOR the account of this case we are indebted to Dr. Brook, late house surgeon.

C. C——, a carter aged thirty-four, came to the surgery on the afternoon of Sept. 25th suffering from the effects of a kick from a horse on the right temple and cheek. He walked to the hospital and was perfectly sensible, but said that he remembered nothing for some minutes after the receipt of the injury. There was an abrasion of the skin over the right malar bone, with ecchymosis of the conjunctiva on the outer side, and there was a bruise on the temporal ridge, where the caulking of the shoe had struck him. No fracture could be made out, and the eye had escaped injury. He complained of pain over the right malar bone and temple, but absolutely refused to be treated as an in-patient, coming to the surgery every morning to have the wound dressed. The wound healed up, and he was apparently almost well when he came on Oct. 1st, six days after the accident, and asked to be admitted as an in-patient, as he had had two fits that morning for the first time in his life.

On admission the patient was a thickset, short, very muscular, and in every way healthy man. He complained of pain over the right temple, but was perfectly conscious. No paralysis; superficial and deep reflexes and electrical reactions appeared healthy. Pupils, moderately dilated and equal, reacted to light. Ophthalmoscope showed nothing abnormal, except old high myopia of right eye. Temperature normal. Urine: sp. gr. 1015; no albumen. He had always enjoyed excellent health; never had any epileptic fits. Total abstainer for the last six years. On Oct. 1st three epileptiform attacks after admission.

Oct. 2nd.—Eight attacks between 5 A.M. and 11 A.M.; they were all similar in nature; immediately before one of these the patient was lying on his right side and perfectly conscious. The attack began with twitching of the left side of the mouth, which was drawn upwards and to the left, followed after a few seconds by twitching of the left hand and protrusion of the tongue to the right. During this time the right side and both legs were unaffected; but he now turned over on his back, clenching his hands and drawing them up, while the legs were extended stiffly, the eyes closed and teeth clenched, and back arched so that he was resting on his heels and back of his head. This condition of opisthotonos lasted for a few seconds and then suddenly relaxed; at the same time he gave a loud cry and struck the bed violently several times, not rapidly, but at intervals of about five seconds, drawing up his arms and arching his back, and then, after a pause, violently extending the arms, while the back relaxed. This attack lasted four minutes. Immediately before he recovered he sighed deeply, turned on his right side, and put his right hand to the right temple. He regained consciousness perfectly in the course of a minute. Pupils widely dilated. He did not pass urine during the attack. He said that before an attack comes on he has pain at the seat of injury, which passes right round his head, and then he loses consciousness.

During the next fortnight he had from seven to twelve such attacks daily, although he had been taking twenty grains of bromide of potassium, five grains of iodide of potassium, one drachm of liquor hydrargyri perchloridi; to be taken three times a day. During this time he rapidly lost flesh, becoming very weak, so that the attacks appeared to be less violent; they, however, were of longer duration, and had altered in character, the patient often biting his tongue.

Oct. 29th.—Unconscious for two hours; no movement, except quivering of the eyelids, but when touched he sprang into a sitting position and tried to bite, snarling like a dog. On coming round, he remembered nothing of what had happened. He was out of bed when one of these attacks began, walking across the ward, and was seen to drag the left leg for some seconds before he lost consciousness and had time to get back to bed. On percussing over the right temple there was a very tender area the size of a shilling two inches behind and above the external angular process of the frontal bone. This was exactly the place over which he put his hand before regaining consciousness, and he said that he had always pain there after a fit was over. As the symptoms indicated a localised cortical lesion, and as they were not relieved by medicinal treatment, it was decided to trephine over the seat of the lesion in the hope of relieving the patient. Every attack began with twitching of the left zygomatici, so that there was evidently a discharging cortical lesion situated in the facial centre on the right side—i.e., in the ascending frontal and ascending parietal convolutions and point opposite to the sulcus between the second at a

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third frontal convolutions. The patient's head was shaved and the motor area mapped out according to Reid's rules, and at the point indicated a circle one inch in diameter, having its centre two inches and a quarter behind and two inches and a half above the external angular process, was marked out with nitrate of silver. The following day, Nov. 10th, the patient was anæsthetised by the A.C.E. mixture, and the operation performed by Mr. Cant. The strictest antiseptic precautions were adopted. The scalp was shaved and thoroughly washed, a wet pad of sal alembroth wool and perchloride of mercury lotion being applied for six hours before the operation, which was performed in one of the small wards. All the instruments were kept in carbolic lotion, and the operator's hands dipped in perchloride of mercury lotion (1 in 2000), sponges of sal alembroth wool being used. The scalp was reflected downwards from the right temple by a semilunar flap. There were no signs of any fracture of the skull. The pin of an inch trephine was applied at a point corresponding to the centre of the circle marked out (¾ in.) behind the coronol suture just over the temporal ridge. The circle of bone was removed without difficulty, and appeared quite natural. The dura mater bulged very much at the posterior part of the opening. The dura mater was divided and reflected, a considerable quantity of serous fluid escaping from the bulging portion, which was found to be situated over the ascending parietal convolution, the fissure of Rolando crossing the posterior half of the opening. The fluid (which was of a yellowish colour) was beneath the arachnoid, lying entirely behind the fissure of Rolando, and at this spot a black substance could be seen through the pia mater, which on exposure proved to be two small blood-clots in the grey matter, and which were removed. An aspirator needle was pushed into the cortex for three-quarters of an inch in case there should be any collection of pus, but nothing was found. The trephine opening was extended backwards for another three-quarters of inch, but nothing further was discovered. The wound was washed with perchloride solution (1 in 2000), and the dura mater brought together with fine chromic gut sutures, the scalp replaced, and sutured with carbolised silk. A pad of wet sal alembroth wool covered with tissue was applied. The bone was not replaced owing to the brain bulging. During the operation, whenever the cortex was touched, the left side of the mouth and left hand twitched. The patient soon came round from the anæsthetic, and was perfectly conscious.

Nov. 11th.—Very excitable and restless. The wound was dressed under the spray and a suture removed. Ordered bromide and chloral if restless.

12th.—No epileptic attack since the operation. Temperature 98·8°.

13th.—Had a slight twitching of the left side of the mouth lasting half a minute.

15th.—Scalp wound united; sutures removed. There has not been any recurrence of the convulsions since the 13th, and the patient is in very good spirits.

Dec. 22nd.—Discharged from the hospital in perfect health and spirits, having had no return of the fits in any way whatever.

Remarks by Mr. CANT.—The above case seems to clearly prove the advisability of operating in cases of traumatic epilepsy, especially when the convulsions and the pain both so clearly indicate the seat of the lesion. This patient commenced having fits about one week after the receipt of the injury, and continued having them very frequently and very severely for six weeks, with commencing loss of power of left leg. After the operation was performed they entirely ceased, and up to the present time, several weeks after, he has had no return of them, but has gained in flesh, and is now apparently in perfect health.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—This infirmary was satisfactorily and successfully conducted during the past year. There were 7889 in- and out-patients. Of the out-patients, 915 were treated in the eye and ear department. The continuous increase of in-patients forewarns the Board that additional wards will soon be required. The total income was £6728 19*s.* 3*d.*, and the expenditure (including £441 16*s.* 6*d.*, the previous year's deficit), amounted to £6916 5*s.* 1*d.* But that liability had been reduced to £187 5*s.* 10*d.* During the year fair progress was made with the building fund for the "Nurses' Home."

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Exophthalmic Goitre.—Duct Carcinoma of Breast.—Cystic Disease of Breast.—Thrombosis of Cerebral Veins.—Loose Bodies from the Knee-joint.—Dislocated Internal Semilunar Fibro-cartilage fixed to the Patella.

AN ordinary meeting of the Pathological Society was held on March 3rd, the President, Dr. W. H. Dickinson, in the chair.

Mr. W. G. SPENCER showed a specimen taken from a fatal case of Exophthalmic Goitre, consisting of a large bronchocele, and attached to which at the lower border was a persistent thymus gland. The bronchocele had been produced by uniform enlargement of both lateral lobes and of the isthmus, and surrounded the trachea so as to meet behind that tube, compressing it laterally from the larynx above to one inch from the bifurcation below. The carotids, vagi, and internal jugulars had been pushed outwards, and lay separated from one another in deep grooves on the back of the tumour, whilst the recurrent nerves, after their reflection, were buried in the mass. The inferior thyroid arteries were much enlarged, that on the right side being a branch of the subclavian; on the left it arose from the aorta between the left carotid and subclavian. The tumour had the structure of a cystic colloid hypertrophy of the thyroid gland. There were no changes in the central nervous system. A persistent thymus larger than the head of the pancreas was attached to the goitre at the lower part, having the characteristic microscopic structure. The specimen was taken from a girl aged twenty, who had been under the care of Drs. Ferris and Davidson of Uxbridge for a year suffering from exophthalmic goitre. The goitre slowly increased in spite of treatment, until the patient had attacks of dyspnœa. After admission to the Westminster Hospital asphyxia became imminent, and Mr. Spencer opened the trachea through the upper part of the tumour. There was much hæmorrhage, and the gland substance bulged greatly when the capsule was divided, showing the tension which existed within the capsule. The operation could not have been performed except with the aid of several assistants. No relief was afforded when the trachea was opened, nor when an ordinary tracheotomy tube was inserted. However, air entered freely through a vulcanite tube passed for four inches down the trachea. The dyspnœa was quite relieved for a time, but during the same evening mucus collected below the tube which the patient could not cough up, and she died in asphyxia. Mr. Spencer further remarked that this termination of a case of exophthalmic goitre was rare, and that some recent operations by which a cure had resulted after the removal of a great portion of the gland connected the pathology of the disease closely with the thyroid body.—The PRESIDENT asked what part of the trachea was constricted, and whether the tube was passed in above the constriction or below it.—Mr. SPENCER replied that the compression was exerted from the larynx to within an inch of the bifurcation of the trachea, and that the rubber tube was passed down the trachea to below the area of compression.

Mr. H. B. ROBINSON showed a specimen of Duct Carcinoma of the Breast, taken from a woman aged fifty-one. Five years before she had had a knock on the breast, and there was no family history of cancer. The tumour involved the left breast, and was external to the nipple, which was not retracted, and there was no discharge from it. The growth had for some time increased steadily in size, and there was no enlargement of the axillary glands. On removal, it was found to be partly hard and partly cystic, the cysts containing greenish-brown fluid, and the cut surface of the hard part cupping distinctly. Under the microscope the larger cysts were found to be lined with two rows of cells, which were flattened from pressure, while in some there was marked proliferation of the epithelium, which was swollen and of spheroidal type. The solid part showed typical columnar-celled carcinoma. There was very little round-celled infiltration of the connective tissue. Clinically it appeared to be a typical scirrhus, only there was no retraction of the nipple and no involvement of the glands. This low degree of malignancy suggested that early removal would lead to permanent cure. The growth might either begin in the large

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ducts, and thus resemble papilloma, or it might begin in the acinous dilatations.—Mr. R. WILLIAMS said that a great many of these growths were not cancers at all, but were either villous growths or sarcomas. They were classed by Billroth as soft tubular adenomas.—Mr. BOWLBY said that these tumours did not generally run the ordinary course of cancers of the breast; they grew more slowly, did not affect the glands, were less likely to recur, and did not disseminate. They were not simple papillomas, because they infiltrated both the skin above and the adjacent tissues below; they often broke down to form ulcers. The specimen shown differed from the ordinary duct cancer of the breast, with its branching processes, in presenting these distinct tubular structures. He doubted if this case would fall clinically under the same category as the majority of duct cancers.—Mr. ROBINSON, in reply, said that the operation was done in November, 1889; the whole breast was removed, and the patient was at present free from recurrence.

Mr. ROBINSON then described two cases of Cystic Disease of the Breast. The first was a single girl aged twenty, who was admitted in July, 1890. A lump in the left breast had existed for two years, and had slowly increased in size. There had been no discharge from the nipple, and no enlargement of the glands. There was no limiting capsule to the growth. Its centre was found to be composed of an aggregation of small tense cysts; at the margin the cysts were further apart, and radiated towards the periphery of the gland. The cysts were surrounded by condensed fibrous tissue. The second case occurred in a girl aged nineteen, who was admitted in the same month. Eleven months before a growth had been noticed in the upper part of the left breast of about the size of a filbert, and it caused some shooting pain, which strapping failed to relieve. It was freely movable, there was no retraction of the nipple, no enlarged glands, and it was devoid of limiting capsule. Its appearance on section and under the microscope was similar to the first case related. The cause of both was obscure.—Mr. R. WILLIAMS regarded them as instances of chronic interstitial mastitis, and to a question as to the presence of intracystic growths he received an affirmative reply.

Dr. W. COLLIER exhibited a Brain which was the seat of Thrombosis of the Veins. The patient was a woman aged twenty-three, who was prematurely confined of a stillborn child on Jan. 4th, 1891, and on the 20th she complained of headache, and became hysterical and aphasic. In a few hours general convulsions affected the right side, vomiting supervened, and the urine contained a trace of albumen. In a week the patient became comatose and died, the temperature rising before death to 107° F. At the necropsy the upper surface of the left hemisphere was found ecchymosed and covered with a thin layer of lymph. There was extensive thrombosis of the veins on the left side, while the arteries at the base were normal and empty. The cerebral substance was softened, and there was no evidence of ear disease or septic trouble.—Dr. DICKINSON remembered seeing a young woman who after confinement had plugging of the veins of the leg, and later hemiplegia supervened.—Dr. HADDEN referred to the case of a young woman aged twenty-three, in whom hemiplegia developed after an attack of convulsions. She died, and cerebral thrombosis was found. There had been a suspicion of miscarriage some time before.

Mr. HOWARD MARSH showed several Loose Bodies removed from the Knee-joint during the operation of excision. The patient from whom the specimens were removed was a female aged seventeen, whose left knee-joint had been the seat of tuberculous disease for three or four years. The synovial membrane was considerably thickened, and the head of the tibia was displaced backwards and outwards towards the popliteal space. When the joint was opened, five loose bodies escaped. They were about the size of almonds, glistening and perfectly smooth on the surface, of a pale-yellow colour, and apparently consisted of masses of fat. The joint was extensively diseased. The synovial membrane was thickened and overlapped the articular cartilage. There was no suppuration, and the joint contained no fluid. Two other similar loose bodies were found attached to the synovial membrane investing the lower end of the femur. On examination, these loose bodies were found to consist of a shell, or capsule, enclosing a central mass, with an intervening space. The capsule was firm and of the consistence of coagulated fibrine. The central portion resembled, in general appearance, those shaggy masses of fibrine, which are often found in the cavities of bursæ. Mr. Edgar Willett, curator of the museum, had furnished the following report: "Under the microscope the difference between the outer layer and the central portion was very distinct. The outer layer was about $\frac{1}{10}$th of an inch thick, and was composed of a uniform collection of granular cells without stroma or definite structure. The transition to the inner part, or kernel, was very marked. This kernel had an imperfect and irregular structure, presenting a number of well-defined collections of small cells, either circular or oval in shape, and resembling the giant cells found in tubercular deposits. No tubercle bacilli were found." Mr. Marsh remarked that he had not met with this kind of loose body before; but, after Mr. Willett's report, he was inclined to regard them as tubercular formations in the fringes of the synovial membrane, to which some were still connected, while some had become detached. The view which some might be inclined to hold, that these masses were similar to the melon-seed-like bodies often found in the sheaths of tendons, appeared to be negatived by the fact that the two differed from each other in structure, the melon-seed-like bodies being quite amorphous—evidently nothing more than masses of coagulated fibrine,—while the bodies which he had shown presented the microscopic structure of tubercle in, as he thought, an unmistakable form. Mr. Alexis Thomson of Edinburgh had described, in a chapter on nodular tubercle of the synovial membrane, the occurrence of polypoid masses apparently precisely similar to those described in the paper, and Mr. Watson Cheyne had also alluded to loose bodies of the same kind.

Mr. EDGAR WILLETT showed for Mr. Harrison Cripps two Loose Bodies which had been removed separately, with an interval of four weeks, from the left knee-joint of a healthy young man. There was a history of an injury. The bodies were flat, roughly about one inch square, and had a layer of smooth cartilage on one surface, and were calcareous if not bony on the other. On comparing them, it was found that they fitted together. The question was raised as to whether they had originally been attached to the femur and had become separated by the injury.

Mr. BRUCE CLARKE showed a piece of a Patellar Cartilage which had been knocked off and formed a loose body in the knee-joint. The patient was a man aged twenty-eight, who slipped on getting into a 'bus in the Hammersmith-road, and was taken to the West London Hospital. He was operated on for a dislocated internal semilunar cartilage, and in the course of the operation an abrasion was found on the under surface of the patella, from which a piece of cartilage had been knocked out. The cartilage (about half an inch by three-quarters of an inch) was extracted from the joint, and was shown to the meeting. A good recovery with perfect movement of knee-joint ensued, and the patient had since been under his care for a loose body in the opposite joint. A loose body had been removed from this joint seven years ago by Mr. Baker of Birmingham. It was worthy of note that this joint, which had been twice operated on, was now the seat of rheumatoid thickening of the edges of the condylar cartilages on the femur.

Dr. ROLLESTON showed the Patella from a Left Knee-joint which had been partially dislocated outwards for years. The articular surface of the patella had regularly adherent to its periphery a cartilage resembling the semilunar cartilages of the knee-joint. The internal semilunar cartilage was absent from its position on the tibia. What appeared to be the femoral surface of the internal semilunar cartilage looked into the joint, the tibial surface being adherent to the margin of the patella by what greatly resembled a coronary ligament of the normal knee-joint. There was a synovial pouch between the cartilage-clad surface of the patella and the tibial surface of the displaced cartilage, just as in the knee between the tibia and semilunar cartilages. At the upper border of the patella, however, the whole cartilage was for a small area adherent to the patella. The two extremities of what appeared to be the internal semilunar cartilage were not separated, but united by a firm plate of cartilage the size of a shilling. This additional piece lay to the inner side of the patella, so that the supposed internal semilunar cartilage had rotated round before becoming adherent to the patella, the external condyle of the femur only articulating with the tibia. There was chronic rheumatoid arthritis of the joint. The external condyle was eburnated, and the external semilunar cartilage was partially eroded. The internal condyle was clad with cartilage. Cartilages

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lipped around both condyles, especially the external.—Mr. SHEILD referred to a loose cartilage which he had exhibited some time ago, and which he believed had been separated by violence. His ideas as to its causation were subjected to much criticism at the time, but two of the cases now shown confirmed the view he then put forward. Another of the specimens looked much like quiet necrosis of the cartilage, and a microscopical examination should be made to see if it were so. The idea that loose bodies in joints might be tubercular was new to him, although he knew that bacilli had been found in the melon-seed bodies of compound palmar ganglion. These bodies were common in chronic rheumatoid arthritis, and this affection was often found in joints which clinically had exhibited no symptoms of that affection.—Mr. J. HUTCHINSON, jun., thought that the cartilage in Dr. Rolleston's case was semilunar, and he wondered if ever a semilunar cartilage had been found free in a joint. He referred to a specimen in which a complete septum existed between the femur and the tibia, which he believed to be due to an error in development, and he opined that the displacement might be developmental in the case shown. He related a case in which melon-seed bodies were removed from the front of the ankle-joint of a boy who a few months later returned with tubercular disease of the joint itself.—Mr. CLUTTON said that it was a pity that in the discussion many distinct varieties of disease were being confounded. On two occasions he had removed loose bodies from chronic tubercular joints, and less than a week ago he had found one of these bodies attached to the pulpy synovial membrane. They were never found in olden days, because the joints were not opened until the loose bodies had caseated, softened down, and dissolved, coming away disintegrated in the discharges from the sinuses. He had removed a loose body which was rough on one side and smooth on the other from a case in which there was no history of injury.—Mr. SHEILD said there was a specimen in the museum of St. George's Hospital where the semilunar castilage was practically free, being held only by a thread. He thought that Dr. Rolleston's specimen was too small to be a semilunar cartilage.—Mr. BRODIE called attention to the fact that the cartilage was only attached to the patella on the outer side.—Mr. ROBINSON said that three cases of nodular tubercular disease had been in St. Thomas's Hospital recently. In all the bodies were attached by long peduncles and were proved to be tubercular.—Mr. WINGRAVE said it was curious that the cartilage should be of the precise size of the patella.—Mr. MARSH, in reply, thought that loose bodies might be tubercular in a larger number of cases than had hitherto been suspected.—Dr. ROLLESTON, in reply, said that as there had been a history of severe injury to the joint, he was loth to believe that the affection was of congenital origin. The smallness of the cartilage was no doubt due to the fact that it probably did not develop after being displaced.—The PRESIDENT referred the specimen for further report to a special committee.

The following card specimens were shown:—

Mr. E. SOLLY: Melanotic Sarcoma of Conjunctiva.

Dr. W. B. HADDEN: Pancreas in Diabetes.

Messrs. S. G. SHATTOCK and C. A. BALLANCE: Fuchsin Bodies in Carcinoma, Tuberculosis of Glands, and Diphtheria of Tonsil.

Dr. ROLLESTON (for Mr. A. A. KANTHACK): Fuchsin Bodies in Rhinoscleroma and Madura Foot.

Recent specimens:—

Mr. WYATT WINGRAVE: Lungs and Larynx of a patient treated by Koch's method.

Dr. A. F. VOELCKER: Scurvy Rickets.

Dr. N. PITT: Gumma of Heart.

Living specimen:—

Mr. ROGER WILLIAMS: Man with Median Supernumerary Nipple.

CLINICAL SOCIETY OF LONDON.

Hydatids of Kidney.—Thiersch's Method of Skin-grafting.—Fracture of Ulna.—Lipoma of Nose.—Multiple Lipomata.—Serpiginous Rodent Ulcer of Face.—Stricture of Œsophagus, with Laryngeal Paralysis.—Adjourned discussion on Removal of the Vermiform Appendix.

A CLINICAL EVENING of this Society took place on Feb. 27th, the President, Sir Dyce Duckworth, in the chair.

Mr. HURRY FENWICK showed the case of a man aged forty-six, who had a large Renal Tumour of thirty years' standing, and had passed hydatids by the urethra for the last five years. He also showed a second case of Renal Hydatid in a man aged fifty-seven. In this instance the cyst appeared to have been suppurating, as the urine at one time contained pus, together with bacteria, phosphates, uric acid, and small cysts. Gradually, however, the pain complained of had become less, the loin tumour began to contract, and the urine to clear. When the man was going to pass cysts he had definite indicative symptoms. There was first numbness of the testicle, which gradually increased to pain; the pain then travelled to the kidney, and the testicle became better; later, when the hydatid entered the urethra, there was tingling at the end of the penis. After from eight to ten hours the renal pain would cease, and the patient would pass about eight ounces of hydatid cysts. He had had a third case of renal hydatid under his care, in which drainage had been followed by a good result.

Mr. STANLEY BOYD showed a man aged sixty-five, from whose leg he had removed an Epitheliomatous Growth, leaving a large ulcerating surface. In order to cover this he adopted Thiersch's method of skin-grafting, sawing off with a razor large pieces of epidermis from the forearm, and covering the whole of the raw surface. An antiseptic dressing was placed over it, and the whole left for ten days, when it was found that it had healed by first intention. Success with the method depended upon stopping the hæmorrhage before applying the grafts.

Mr. PEARCE GOULD showed a case in which the Ulna was Fractured obliquely through the base of the Olecranon Process. The accident was one which had escaped the notice of most English writers, though it had been described by French and American authors. He himself had seen four cases. The patient he showed was aged twenty-eight, and he fell whilst skating. The fracture started from the base of the sigmoid notch, and passed obliquely downwards and backwards, the fragments being held in place by the aponeurosis. In the first case he had seen non-union had occurred, and the bone was wired. In the second and third cases bony union occurred. In the case he showed there was no bony union, and the triceps had wasted considerably. The injury was one liable to be overlooked, and if put up with the elbow bent at a right angle the lower end of the upper fragment was likely to come through the skin. It was better to put it up with the arm nearly straight.

Mr. BALMANNO SQUIRE showed a case of Lipoma Nasi after operation. The patient was a man aged sixty-five. The end of the nose had been carved off at four successive operations, and the parts had granulated up, giving a very good result.

Dr. STEPHEN MACKENZIE showed a man with Multiple Lipomata of twelve years' standing. They were first noticed after an attack of acute rheumatism, and were very painful at times. They were most plentiful on the extremities, being more abundant on the forearms and legs than on the arms and thighs.

Mr. SQUIRE showed a woman aged fifty-four with a Serpiginous Rodent Ulcer of the Face of seventeen years' duration, commencing on the lower lip. He referred to the points of diagnosis from syphilis and lupus.

Mr. CHARTERS SYMONDS showed two cases of Epitheliomatous Stricture of the Œsophagus, situated respectively twelve inches and eleven inches from the teeth. There was complete paralysis of the left side of the larynx, producing a high-pitched voice.

In reopening the discussion on the cases of Removal of the Vermiform Appendix, the PRESIDENT said that it was a question of moment for the physicians to decide when to transfer these cases to the surgeons, and for the latter to determine how best to conduct the operation. It was evident, from the large measure of success that attended the medical treatment of these cases, that operation was not needed in every instance, and there was a difficulty in deciding which should be transferred and when that step should be taken.—Mr. LANGTON said that the good results which had been brought forward bore evidence of the fact that removal of the appendix did not necessarily involve any serious risk to life, and this may have led to too hasty interference in some cases. A fuller experience, however, would indicate more accurately the proper time for transference for the purposes of operation. Though he had seen a large number of cases recover completely under the care of the physicians, there being in some no recurrence of the disease for many years, yet he was sure that surgery was

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far in advance of medicine in the treatment of this affection. The anatomy of the parts was accurately known, and surgeons were at one as to the necessity of making the incision either just above Poupart's ligament or in the right linea semilunaris. Mr. Allingham's incision in the middle line had yielded, and it would be well to fit a support. It was no doubt more difficult to wash out from a lateral incision, but the tendency to hernia was less. There could be no universal way of dealing with the stump of the appendix. He (Mr. Langton) then referred to the time at which the operation should be performed. In the cases of acute perforative appendicitis, especially if associated with general peritonitis, operation was clearly called for at once. In recurrent cases with a periodic rise of temperature, indicating probably the formation of a small amount of pus, interference was also justifiable, but there remained a considerable number of cases in which it was difficult to decide. It was certainly bad practice to thrust in a needle to search for pus; it added considerably to the patient's danger. It was remarkable that the great majority of these cases occurred in young people and in males. The large amount of adenoid tissue in the appendix explained its liability to give way, and for the same reason the cæcum itself gave way before the rest of the large intestine in cases where the gut ruptured from obstruction *a fronte*. A great secret in the treatment was to provide free drainage. The operative measures constituted a marked advance over the old method of allowing the cases to drift on unrelieved, and if there had been such an epidemic of removal of appendices as had been referred to, they had been taken rather from the operating theatre, where lives had been saved, than from the post-mortem room, where lives had been sacrificed.—Mr. PEARCE GOULD said that the subject matter of the paper had been much discussed abroad, especially in Berlin and in America. He could not agree that surgeons were at one with regard to methods of treatment. The cases which had been described in the papers were fair examples of the three forms of the affection, and they also represented about the proportion in which they occurred. The relapsing or recurrent cases formed about 10 or 11 per cent. of the whole, and those with general peritonitis about a similar ratio. But by far the largest number of cases were instances of inflammation of the appendix associated with circumscribed suppuration. Mr. Sutton had seemed to imply that abscess had existed some time before the acute symptoms were set up, but he himself (Mr. Gould) regarded the abscess as the result of the local disease. The inflammation which occurred round the appendix very often not only shut off and localised the disease, but set up an inflammation in the appendix itself, which led to its obliteration, and the patient might then remain free from attacks afterwards. He had never known a relapse after a case of suppurating appendicitis. As to the treatment of these cases, the abscess should be opened, washed out, and drained, but the appendix need not be removed. It was better to wait in order to see where the abscess was forming, and then evacuate the pus by a small incision not more than an inch or an inch and a quarter long. This not only weakened the abdominal wall less, but one could never be sure of the extent of the adhesions, and it was certainly desirable to avoid opening the general peritoneal cavity. All the pouches of the abscess should be evacuated, taking care to avoid breaking down the limiting adhesions. He referred to a case in which under palpation the latter accident happened, and in spite of speedy operation the patient, a child, died of acute peritonitis. He advocated leaving the appendix, because its removal rendered the operation more dangerous, while leaving it did not increase the danger; also the incision must be larger, and the risk of breaking down adhesions was greater. There was more probability of the occurrence of ventral hernia, and it did not of necessity remove the whole of the disease, as gangrene recurred in the stump in one of the cases related. In the second class, represented by Mr. Allingham's case, an early laparotomy was clearly the only treatment. He preferred a median incision, with another over the semilunar line, which best provided for the speedy exit of pus from the appendix and allowed cleansing of the peritoneal cavity. With regard to relapsing typhlitis, the attacks occurred very frequently; he had known a case with as many as fourteen, and then the patient got well; they were therefore not necessarily fatal if not operated on. Nothing could be better than the result of Mr. Sutton's operation, which removed a distinct source of danger, though the latter might have been deferred for weeks or months. He was glad to hear that the opinion which Mr. Treves had recently expressed with regard to these cases was different from that which he propounded at the Royal Medical and Chirurgical Society three years ago; for it should not be forgotten that there was a distinct mortality to this operation. Error in diagnosis was frequent, and he himself had seen one case in which a perfectly healthy appendix was found on exploration. It probably might be safely asserted that the danger of local suppuration if a case were left would not be greater than the danger of the operation if the removal of the appendix were undertaken.—Dr. J. K. FOWLER referred to the pathology of the affection. Mr. Treves was apparently now of opinion that in the majority of the cases which recovered the symptoms were due to fæcal accumulation in the cæcum, followed by stercoral ulcer and inflammation of the overlying peritoneum. Stercoral ulcer was a rare condition, generally absent in fæcal accumulation, far in excess of that met with in typhlitis, and when present, as in chronic obstruction of the large bowel, often the cause of perforative peritonitis, whereas in fatal cases of typhlitis no such changes were found in the cæcum. All post-mortem evidence and that derived from operations was in favour of the appendix being the seat of the affection. That the "complete clearing up of the local signs" could not be trusted to prove that the mild cases were of cæcal origin was shown by Mr. Treves' case,[1] which proved to be one of appendicitis, although before the operation there was "no trace of the iliac swelling," and "the abdominal signs had entirely disappeared." He agreed with the statement that "it could not be denied" that inflammation of the cæcum might in some cases be the cause of the symptoms, but he knew of no evidence pointing to that conclusion. He had analysed the medical and pathological reports of the Middlesex Hospital for the ten years 1880–89. During that period eighty-five cases had been admitted with the diagnosis of typhlitis or perityphlitis, of which eighty-four had recovered (in three fatal cases included in 1889 the diagnosis was altered post mortem) and one had been "discharged at own request." Apparently only two of the cases had been submitted to incision (1889). These figures showed that "the measures generally employed by physicians" were not without success, and they to some extent indicated the degree of need for surgical interference. During the same period, in fourteen cases in which the appendix was found on necropsy to be perforated the diagnosis on admission had been (generally) peritonitis (? typhlitis) or (?) enteric fever (one case), pyo-pneumothorax, &c. In none were the signs sufficiently definite to allow of a positive diagnosis of typhlitis. Twelve of these cases were fatal from acute peritonitis, in three of which there were old lesions about the appendix. A concretion was found in nine cases; in six cases it was still in the appendix. With regard to operation, he agreed with Mr. Pearce Gould's views: where the diagnosis was acute peritonitis (? typhlitis) laparotomy was indicated; and in all other cases the early treatment should be that at present adopted. No absolute rules could be given as to the time for incision, but the persistence of a high temperature after the fifth day suggested suppuration. Medical treatment in the early stage could not be said to have failed, even should incision ultimately become necessary, as by localising the pus it saved the patient from general peritonitis. He was opposed to the removal of the appendix. Relapsing perityphlitis in a labouring man who could not afford to rest might be treated by operation, but other cases he thought had better be left alone.—Mr. CHARTERS SYMONDS referred to a case which he had published in 1885, the patient being a young man aged twenty-three, who was subject to repeated attacks of abdominal pain. He had six attacks of acute pain in the five weeks previous to admission, and there was a rise of temperature, with a swelling in the right iliac fossa. This swelling subsided, leaving a lump the size of a marble, and he was discharged. He speedily returned with another attack, so an incision was made like that for tying the external iliac artery, and a calculus was found in the appendix. The concretion was removed, the appendix stitched up, and, though a sinus remained open for some time, the patient ultimately got quite well, and had had no attack since. This, he thought, was a case of relapsing typhlitis of a kind in which operation was quite justifiable. He agreed with Mr. Gould that it was usually not necessary to remove the

[1] Med. Chir. Trans., vol. lxxi., p. 171.

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vermiform appendix, and he referred to three cases in which after simple opening of the abscess the patients recovered. The abscess should be thoroughly irrigated out and a concretion sought for, due care being taken not to disturb the adhesions.—Mr. JESSETT considered that the cases which the authors had related showed that early operation must be a proper procedure; the risk to life was certainly not so great as if the diseased appendix was left behind. If an abscess formed which was shut off from the peritoneal cavity, then the appendix might be left. In dealing with the stump of the appendix, he suggested that it should be invaginated into the cæcum and held there by stitches.—Mr. ALLINGHAM, in reply, said that in both the cases he had dealt with it was impossible to tell at the time of the operation precisely what the condition was, and therefore the median incision was adopted. As a matter of fact, he had found that to deal with the appendix from the middle line was just as easy as to deal with it from the side. The boy he showed had worn an abdominal belt since the operation, and the yielding of the cicatrix was to be explained in his case by the special circumstances detailed in his paper connected with the healing of the wound. In neither of his cases was there any localised abscess. He suggested that these cases might be divided into three classes: first, the very acute cases, like the two he had related, which were severe from the beginning; secondly, the acute cases supervening on chronic attacks; and thirdly, the very chronic cases. In those of the first class the sooner operative interference was adopted the better. In the second class operation was also surely advisable, for he was quite unable to understand why a man should be left with an abscess to burst where it wished; it would be sounder surgery to cut down over the indurated part, and let the pus out as soon as it had formed. He had been looking through the necropsy records at St. George's Hospital, and had found that the fatal cases were all due to trouble in the appendix, and not in the cæcum.—Mr. SUTTON, in reply, regretted that his references to the treatment adopted by physicians had been misunderstood. There had certainly been no epidemic of removal of the appendices at the Middlesex Hospital, and the six cases he had related represented the whole of his practice. Mr. Treves seemed to fear that the result of wholesale removal of the appendix might lead to its suppression, but there was overwhelming evidence against the transmission of mutilations, consequently surgeons need not be apprehensive that their art would suffer in that direction. Speaking as a demonstrator of anatomy of many years' experience, he had never once failed to find the appendix, though it frequently lay out of position. The only instance of abnormality of the appendix he had met with was in a fœtus, in which it was represented by a dimple. Mr. Treves' observations bore on far too small a number of cases, and he illustrated this by his conclusions with regard to Meckel's diverticulum. The appendix might be regarded as an abdominal tonsil possessing adenoid tissue and glands, and pathologically this resemblance explained the morbid phenomena met with in respect of the appendix. Many people suffered from simple tonsillitis, and this condition in the appendix would account for the cases of appendicitis, which recovered under medical treatment. Others, however, resembled tonsillar abscess in running on to suppuration, and the very acute quinsies corresponded to sloughing appendices. He explained the greater frequency of appendix troubles in young people by the fact that affections of adenoid tissue generally were more common in early life. As to the greater frequency in males as compared with females, he suggested that part of the excess might be accounted for by the fact that the symptoms, when occurring in females, were usually put down to perimetritis. He admitted that notwithstanding this there would remain an unexplained preponderance of male patients. He never opened the peritoneum intentionally, but made his incision over where he believed the adhesions to exist. If he opened the abdomen, found a sloughing appendix and failed to remove it, he believed he would be as guilty as if he, in operating for hernia, returned a piece of gangrenous omentum into the abdominal cavity. The removal of the necrotic appendix shortened the convalescence, did away with a source of danger, and obviated the formation of a sinus. On the other hand, to carry out the plan he had adopted was simply to follow ordinary surgical axioms.—Mr. ANDREW CLARK, in reply, could not feel sure that if the appendix had been left in the second case the result would have been any better for the patient.

MEDICAL SOCIETY OF LONDON.

General Meeting.—Cases Illustrating Hepatic Surgery.

A GENERAL MEETING of this Society was held on March 2nd, Dr. Gilbart-Smith, Vice-President, in the chair.

The report of the Council for the past year was read and adopted. The total number of Fellows had reached 744, there being thirty-five accessions during the year. The Society regretted the loss of thirteen Fellows by death, including Dr. Henry Bigelow (of Boston, U.S.A.), Mr. C. H. Rogers-Harrison, Dr. Matthews Duncan, Dr. Gulliver, Dr. Pearce, and Mr. Bellamy. A new scheme for the administration of the Fothergillian Fund had been practically sanctioned by the Charity Commissioners by which the Fothergillian medal will be awarded triennially instead of annually, together with the sum of sixty guineas, for original work done during the previous five years, the first award taking place in 1893. It was announced with regret that Mr. Poole, who had faithfully served the Society as librarian for a period of twenty-five years, would resign on account of his health in the autumn. The reports of the hon. treasurer and hon. librarian having been received and adopted, the business of the ordinary meeting was proceeded with.

In the absence of Mr. Knowsley Thornton through illness his paper on Observations on Some Additional Cases illustrating Hepatic Surgery was read by Mr. MARMADUKE SHEILD. After recalling his two previous papers on the same subject read before this Society in 1887 and 1888, the author stated that the present series completed the whole of his practice in this branch of surgery to the end of January, 1891. He gave full notes of nine cases in which he had diagnosed gall-stones, had found and removed them in seven with complete cure, had failed to find a stone which was present in one, the patient dying, and the stone being found after death in the peritoneum; and in the remaining case found hydatids to be the cause of obstruction instead of gall-stones, the patient making a smooth recovery. He then referred more briefly to seven other cases in which he had operated and found pathological conditions having a more or less important bearing upon hepatic surgery. One of these was a large hydatid cyst of the liver, which had been diagnosed by several physicians as disease of a much more serious character. The patient recovered. Two were cases of malignant disease, one a case of doubtful nature, and one of chronic pain, and adhesion after the passage of large gall-stones. In none of these did he consider before operation that the indications pointed to the presence of gall-stones. In one other case he operated, expecting to find gall-stones, but found nothing definite to account for the attacks of pain, and though temporary relief followed the exploration, there had been recently fresh attacks of pain. The last case was one of very large tropical abscess of the liver in a gentleman aged sixty-three, in which unusually rapid recovery followed free incision and drainage. Commenting on the whole series, he claimed the results as good, and amply justifying the operative procedures. At the same time there was sufficient uncertainty and failure to show that it was to more perfect diagnosis that our attention must be directed. This would be greatly aided by more frequent exploration in doubtful cases. He dwelt upon the important points in the diagnosis of gall-stones while still in the bladder, in the cystic duct, and in the common duct, and emphasised from two of the cases recorded the danger of attempting to force the stones through by massage; and also pointed out that adhesion of the gall-bladder to the right kidney was a potent source of error in diagnosis, both from the position of the swelling and the sympathetic renal symptoms induced. He claimed three entirely new departures in this branch of surgery: 1. Direct incision of the common duct and removal of the stone, with complete suture of the opening without opening the gall-bladder. 2 Incision into the common duct, needling the stone into fragments, and closing the duct over the fragments, leaving them to find their own way into the duodenum. 3. Leaving the gall-bladder open in the peritoneum with efficient provision for drainage through the abdominal incision in cases in which it is impossible to suture it into the abdominal wound, and not advisable to attempt complete intra-peritoneal suture. In the latter cases, and in all cases where fouling of the peritoneum was possible, he strongly advised a counter opening above the

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pubes, and additional drainage by means of a glass tube in the pouch of Douglas.

Sir JOSEPH FAYRER congratulated the author on including the unfavourable as well as the favourable data with regard to his cases. He himself had seen practically nothing of the surgery of the gall-bladder, but he had had a very large experience of hepatic abscess. He quoted two cases of calculus of the gall-bladder in which nature had relieved herself; one patient came to him with a history of long trouble in the hepatic region and a sinus at the umbilicus. He recovered completely without operation, passing twelve gall-stones by way of the umbilical opening. Another case was that of a lady, the wife of a medical man, who was very ill and suffering from severe hepatic colic and jaundice. On deep palpation an enlarged gall-bladder was felt, the outline of the stones being distinctly perceptible. He advised waiting a day or two before operation, and during this time all the gall-stones were passed by the bowel, the manipulation for the purpose of diagnosis having probably dislodged them.

Dr. GILBART-SMITH, speaking of massage, was reminded of a case which he had seen seven years ago. An old gentleman was at the point of death and complained of abdominal pain, and presented a hard lump in the neighbourhood of the gall-bladder. Malignant disease had been diagnosed by others, but after examination he himself, inclining to the belief that it was gall-stone, ordered gentle massage over the neighbourhood of the swelling, with the local application of hot fomentations and the administration hypodermically of strychnine and digitaline every two hours to stimulate the failing heart. Two days later he passed a large gall-stone, and had since remained well. The frequency with which patients, after abdominal palpation, passed gall-stones which had previously given trouble suggested that massage in many cases might be rightly and beneficially employed. To illustrate the value of exploration in abdominal disease he related two cases. A patient with pyloric obstruction died within a week of his first seeing him; malignant disease had been diagnosed and operation advised against. At the necropsy a duodenal ulcer was found caused by an impacted gall-stone. Some years later this patient's brother came to consult him, suffering from a condition which had been diagnosed as cirrhosis and ascites. But absence of alcoholic history and the peculiar character of the abdomen on percussion were against this idea. Fluid of an inflammatory character being withdrawn, a tumour in the epigastrium presented itself, which was variously diagnosed as abscess, malignant disease, and enlarged spleen. A week later, under exploration, eleven pints of dark-green fluid were evacuated, which proved on examination to be decomposed blood. The patient recovered, a result which could hardly have been hoped for had it not been for the exploration. He referred to one other case where a cyst was opened which was thought to be hydatid. It was really connected with the kidney, and it unfortunately drained into the peritoneal cavity, leading to a fatal result.

Dr. ALTHAUS said that one of the syphilitic cases referred to had since come under his care, and was progressing favourably under antisyphilitic remedies.

Mr. JOHN TAYLOR of Birmingham said that his experience of hepatic surgery was mainly confined to the operation of cholecystotomy, which, though not needed in quite so many cases as he had at one time thought, was useful in obstinate instances of biliary colic, in cases of distension due to obstruction of the cystic duct, and in suppurative cholecystitis. Phosphate of soda he had found to relieve most cases of hepatic colic arising from biliary calculi. In cases of calculus impacted in the cystic duct, when all efforts to seize it or break it from within had failed, three resources remained: either to crush it from outside the duct, or to extract it through an incision in the duct, or after cholecystotomy to inject fluids which were either solvent or helpful towards spontaneous cleavage or removal. The two former methods he looked upon as dangerous, whereas the third in his hands had proved efficient. He injected a solution or emulsion of the tauro-cholate of soda twice a day into the gall-bladder, and this speedily produced separation, breakage, and evacuation of the impacted stone. The removal of the obstruction was indicated by the discharge of bile from the wound, and the incision, as a rule, healed a few days later.

Mr. M. SHEILD referred to Murchison's remarks on the similarity between hepatic gummatous projections and cancer formations. In a young man presenting hepatic nodules the thought of syphilis should ever be present, and mercurials with iodide administered for the purpose of diagnosis. He related a case which he had seen two years ago which had been pronounced to be of a cancerous nature, but in which the adoption of this method of treatment led to a favourable issue.

Dr. SIDNEY COUPLAND had had no personal experience of the treatment of gall-stone in the ways suggested by the author. Evidently a considerable advance had been made, when not only were dilated gall-bladders attacked, but the bile duct itself had been successfully dealt with surgically. It was a question how long patients should be allowed to suffer with hepatic colic before being submitted to surgical treatment.

The following officers were elected to serve during the ensuing year:—President: Dr. Richard Douglas Powell. Vice-Presidents: Drs. Stephen Mackenzie and W. H. Allchin, and Messrs. Reginald Harrison and W. Rose. Treasurer: Mr. A. E. Durham. Librarian: Dr. W. H. Allchin. Honorary Secretaries: Dr. T. Colcott Fox and Mr. A. Marmaduke Sheild. Honorary Secretary for Foreign Correspondence: Dr. Jean S. Keser. Council: Drs. Frederic Bradshawe (St. Leonards), T. Churton (Leeds), C. J. Cullingworth, A. E. W. Fox (Bath), G. Allan Heron, Donald W. C. Hood, Percy Kidd, Isambard Owen, C. E. Sheppard, and Messrs. H. W. Allingham, C. A. Ballance, J. Astley Bloxam, W. Watson Cheyne, Alban Doran, D. H. Goodsall, W. F. Haslam (Birmingham), C. Bell Keetley, Stephen Paget, Bernard Pitts, and J. Knowsley Thornton.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Present Position of Disinfection.

A MEETING of this Society was held on Feb. 13th, Mr. H. E. Armstrong, President, in the chair.

Mr. WYNTER BLYTH, in introducing this question, wished to confine his remarks to one important change that our ideas on the subject had undergone within the last few years. When Professor Koch, in 1881, gave to the world the first results of his inquiries into the relation of micro-organisms to disease, it was the general inference that pathogenic microbes, or those concerned in the propagation of diseases of the infectious kind, were exclusively or nearly so of the spore-bearing class, and that, since the spores of all such organisms possessed great inherent vitality, no so-called method of disinfection could be deemed thoroughly efficient which did not succeed in destroying the vitality of the spores of bacillus anthracis, the most resistant of all. Now, however, that the nature of pathogenic microbes was no longer a matter of conjecture, those of most specific diseases having been identified, it was found that the bacillus anthracis could not be looked on as typical of the whole class, since the greater number, including such well-known forms as those of cholera, enteric fever, epidemic diarrhœa, septicæmia, and erysipelas, were not sporiferous, but occurred as micrococci, streptococci, or bacilli, very feebly resistant to heat or chemical agents. It was therefore unnecessary to have recourse to powerful chemical substances, the use of which was attended by obvious practical difficulties. In a paper read before the Royal Society he had pointed out the importance of temperature, time, and space as factors, and had shown that under appropriate conditions such simple measures as limewashing and aeration were in most cases amply sufficient for disinfection. Recent experiments, as those of Behring and of Pfuhl, published in the *Zeitsch. f. Hyg.*, had proved the remarkable efficacy of lime. Boer had observed that while the addition of very small quantities of lime to culture fluids greatly favoured the development of the bacteria, larger quantities or the equivalents of potash or soda, producing an alkaline reaction equal to what was known as 50° of normal acidity, were speedily fatal to all pathogenic organisms in any form other than the spore. Thus the strongly alkaline soft soaps were far better germicides than the much vaunted carbolic, thymol, or terebene soaps, and stripping off the wall paper, limewashing of walls and ceiling, with scrubbing of the floors and woodwork of a room with soft soap, were generally sufficient for all the purposes of disinfection. Lime, from its power of absorbing sulphur compounds and other offensive gases, while it was itself inodorous, was speci-

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ally suited as an application to the contents of street gulleys, in the removal of disinterred corpses, in mortuaries, and in nearly all cases in which it would not cause the evolution of ammonia. For deodorising stable manure and excreta he thought that the acid sulphates, which would fix the ammonia, and not detract from the value of the manure, would be found preferable to carbolic powders. In the disinfection of rooms he now believed that sulphur fumigation was a useful addition to limewashing &c., though at one time he was very doubtful as to its efficacy; but he held that all disinfection should be composite. He was inclined to the belief that the danger of infection being carried by the clothing of persons visiting the sick had been exaggerated. He did not deny that it might be conveyed by attendants who had been, so to say, "soaking" all night in the poisoned atmosphere, but it was quite a different matter with medical men and inspectors, whose exposure to the infection was of short duration.—Dr. SWETE called attention to sec. 5, subs. 3 of the Infectious Diseases Prevention Act, and described his practice of fumigation with sulphur and hot limewashing, not whitewashing. He considered that the state of the atmosphere, especially as regards humidity, had an important influence in the conveyance of infection on the person.—Dr. SYKES narrated his experience of the immense value of quicklime in the removal of 2000 bodies and 4000 tons of the most horribly offensive earth from St. James's churchyard, in the parish of St. Pancras, to the extramural cemetery. As the ground was opened quicklime was thrown in, and the stench at once ceased. The coffins were placed in wooden cases with lime, and at first lime was spread over the loads of earth; but complaints being made by the residents in the streets through which the carts passed, he substituted clean earth, when no more complaints were raised. The graveyard had been closed for twenty years, and the condition of the bodies was awful; indeed, without the lime the operation would have been impossible. He objected, however, to the use of lime in mortuaries, preferring to irrigate the place with a 50 per cent. dilution of Burnett's fluid, which was a 4 per cent. solution of zinc chloride, a powerful disinfectant and quite inodorous. He called attention to a description in the first number of the *Hygienische Rundschau* of the admirable arrangements of the refuges recently opened in Berlin, where the persons admitted were treated to a bath while their clothing was being disinfected in a steam chamber. Recent German researches appeared to establish the superiority of current to pressure steam, the steam being admitted above, and its temperature observed at its exit below.—A gentleman suggested that the advantages of current and high-pressure steam might be combined by making the aperture of exit smaller than the inlet, or by fitting the two pipes with safety valves of unequal power.—Dr. WILLOUGHBY supported this suggestion, fearing that current steam might otherwise tend to follow the lines of least resistance without penetrating the entire mass of bedding &c.—Mr. HOLLINSHEAD said that in the midlands the removal of midden refuse and the contents of pails was a serious question. He used a mixture of powdered sulphate of iron and sulphate of lime, which he found both cheap and effective.—Dr. CAIGER, as medical officer to two large fever hospitals, had frequently had to disinfect wards, the walls of which had been saturated for months with the poison of one or other fever. He used soft soap and limewashing, followed by free aeration, and had never found the patients subsequently admitted contract the fever that had been treated in the same ward previously. He did not use sulphur fumigation. There were regulations as to bathing and change of clothing by nurses going out of the hospital; but, looking to the fact that at certain times one could not expect a woman to take a bath before going out of doors, the regulations in respect of bathing were in some cases a dead letter. Yet though he had given 12,000 passes in one year, he was not aware of any infection by their means. In the laundry clothes were exposed to steam for twenty minutes before soaping.—Dr. GIBSON, when in the country, had often known scarlatina carried out by nurses to the neighbouring villages. He objected to odorous disinfectants as likely to conceal instead of destroying other odours, and he was surprised that no mention had been made of corrosive sublimate, the most powerful and inexpensive of all disinfectants.—Dr. WOODFORD observed that he always employed it.—Dr. NEWSHOLME recommended it for the disinfection of enteric stools.—Dr. CAIGER believed that persons who had for weeks breathed an infected atmosphere continued to exhale the poison for some days afterwards, and that thus the frequent experience of fevers being propagated by discharged patients, notwithstanding the thorough disinfection of their persons and clothing, might be explained.—Dr. VERDON invited inspection of the disinfecting chamber at Lambeth, where steam was injected into a Neville's baking oven, the temperature of which had been previously raised to 360° F., the iron trays &c. being covered with asbestos to avoid the scorching of clothing &c.—The PRESIDENT deprecated any hasty expressions of opinion such as might be calculated to put the public off their guard. It was also a question whether lime might not occasionally act as a preservative of infection.—Mr. BLYTH, in replying, insisted that all recent research tended to show that time was a most important factor. Given unlimited time, comparatively low temperatures were effective, and intermittent heating below 100° C. might be well employed in the disinfection of such articles as kid gloves, which would be damaged by higher temperatures. In connexion with Dr. Caiger's last remarks, he referred to Oertel's discovery of the bacillus of diphtheria in the throats of convalescents three weeks after apparently complete recovery, and suggested that such might be the case also with scarlatina. Puerperal septicæmia was, he believed, mostly communicated through the finger-nails of the medical attendant, a source of danger not obviated by any change of clothes or ordinary bathing.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Feb. 4th, Mr. C. H. White, President, in the chair.

Abdominal Section for Inflammatory Diseases of the Pelvis. Mr. MICHIE read a paper on this subject, and gave among other statistics particulars of twenty-nine recent cases in his own practice, with but one death. He laid stress upon the necessity of avoiding as far as possible manipulation of the intestines, of providing free drainage, and of evacuating the bowels after operation by the careful use of enemata. He was opposed to the use of saline purgatives for this purpose. In his practice the results obtained by such treatment had not been nearly so favourable as those attending the former method. Having described the various forms of pelvic inflammation, he stated that he omitted pelvic cellulitis from the list because he had never met with a case.

Fibrinous Casts.—Mr. F. M. WRIGHT exhibited Fibrinous Casts expectorated by a male patient aged twenty, still under his care, with plastic bronchitis. The first attack had occurred two years before, and between this and the last there had been occasional slight recurrences. The symptoms were never very serious or acute, but the material expectorated was always more or less fibrinous in character. One curious physical sign was a shrill whistling sound to be occasionally heard over affected patches of lung.

Aspiration for Chronic Sanguineous Pericardial Effusion.—Dr. HANDFORD related this case, which occurred in a miner aged twenty, who was admitted complaining of vomiting and pain at the stomach. There was never any precordial pain or difficulty in swallowing. He had not had rheumatism or other serious disease. His illness began four months previously and kept him in bed nine days. After that he worked a fortnight. Subsequently he kept his bed more or less till admission. The sickness was soon relieved, but he continued to complain of pain and distension at the epigastrium. The liver was greatly enlarged, but not tender; vertical dulness six inches and a half. He had slight cough. The pulse was very small and irregular. There was an area of dulness extending from the first left intercostal space to the sixth rib, and from a variable distance to the right of the sternum to the mid-axillary line. Over this area the breath sounds were audible in varying degrees of intensity, and the heart sounds were feeble and distant. There was no impulse, and the apex could not be localised. The left back was hyperresonant and the breathing bronchial. The urine was free from albumen. The temperature continued normal. Pericardial effusion was diagnosed, and he was treated by rest and iodide of potassium. After a month general œdema of

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the extremities and ascites came on. Aspiration of the pericardium was contemplated, but it was decided to wait. The abdomen was tapped, digitalis was added to his medicine, and in ten days all his œdema was gone. For some time he improved in general condition, but the physical signs did not alter. On Jan. 10th he rapidly became faint and pulseless without known cause. In two days, by the assiduous use of warmth and stimulants, he had considerably improved, and it was decided to aspirate the pericardium. A fine needle was entered in the fourth space about one inch outside the nipple and on the same level. Eleven ounces of coffee-coloured fluid were removed, when the pulse began to flutter, and it was thought wise to withdraw the needle. He was much relieved for two days, but became collapsed again, and died three days and a half after the tapping. At the necropsy the pericardium occupied almost the whole of the left chest, the lung being invisible from the front, collapsed, and pushed to the back. The pericardium was much thickened and the sac contained over forty ounces of fluid as described, making more than fifty ounces in all. The heart was small and covered with shaggy lymph. The mark of the puncture could not be traced, and there had been no leakage of pericardial fluid into the pleura. There was extensive perihepatitis. As the pericardium was evidently quite incapable of absorbing, Dr. Handford's chief regret was that he had not aspirated much earlier and removed more fluid.

Thrombosis of the Vertebral and Basilar Arteries.—Dr. HANDFORD showed this specimen, which was taken from a man aged sixty, who had had syphilis many years ago. Failure of sight had been coming on for ten years. There was some atrophy of both discs, remains of syphilitic choroiditis, slight retinitis pigmentosa, and a few bright spots, probably cholesterin. There were no hæmorrhages, no hemianopia, and no ocular paralysis. The pupils were equal, and reacted to light and accommodation. Six weeks before admission he had what he thought was a bilious attack, accompanied by severe occipital headache, which had continued ever since. Within forty-eight hours right hemiplegia became complete. There was no loss of consciousness. The face appears not to have been affected, and there was certainly no aphasia or breathlessness. But for several days difficulty of swallowing was great. This afterwards completely passed off. On admission the leg had improved so that he could stand and walk with assistance, and the arm was gaining power. The radial and temporal arteries were not much thickened. There was no paralysis of the lips or tongue, but the soft palate and larynx were unfortunately not examined. The very gradual onset pointed to thrombosis rather than embolism or hæmorrhage. The difficulty of swallowing localised the lesion to the pons and medulla. The history of syphilis and the choroiditis suggested syphilitic arteritis as the cause. He was treated with iodide of potassium and saline aperients. The paralysis continued to improve, and the headache greatly diminished. But after a fortnight he had a sudden attack of unconsciousness, and died in twenty minutes. At the necropsy the left vertebral, which was in the same straight line with and formed the main supply of the basilar, was blocked by an old-standing, adherent, partially decolourised clot. The right vertebral showed a quite recent thrombus, and the upper end of the basilar was also occluded. There was some opacity of the membranes, subarachnoid effusion, and a small quantity of fluid blood under the arachnoid on the upper and posterior part of the cerebellum. No softening could be detected by the naked eye. All the vessels at the base of the brain were more or less thickened by syphilitic arteritis. The kidneys were somewhat granular. The cause of his sudden death was apparently the blocking of the second vertebral and of the basilar, causing anæmia of the respiratory centre.

A special meeting was held on Feb. 20th, Mr. C. H. White, President, in the chair.

Dr. W. S. PLAYFAIR delivered an address upon the Neurotic Complications of Uterine Disease, in which he uttered a warning against the irrational treatment of more or less imaginary physical ailments of the female generative apparatus, followed by a description of neurasthenia arising from a combination of conditions especially common in parturient women. In conclusion, he described his own treatment for the latter conditions especially following principal headings—viz, altered surroundings, rest, nursing, massage, electricity, feeding. During the delivery of the address photographs were exhibited illustrating the remarkable improvements brought about by this system of treatment in suitable cases.

A vote of thanks to Dr. Playfair, proposed by Mr. Joseph White and seconded by Dr. Ransom, was carried with acclamation.

MANCHESTER CLINICAL SOCIETY.

AT the meeting held on Feb. 17th, Dr. Braddon, President, in the chair, the following communications were made:—

General Cystic Degeneration of the Kidneys.—Dr. BUCKLEY reported a case of this kind in a woman aged forty-two. The patient when admitted into the Clinical Hospital was suffering from symptoms simulating bowel obstruction, the colon being greatly distended with solid fæcal accumulation, which obscured the recognition of renal enlargement until emptied. At first there was a complete absence of symptoms pointing to kidney mischief, the urine being free from albumen, blood, or pus. Three days before death albumen was present, the appearance of which was quickly followed by uræmic convulsions, in one of which she died. The intellect remained clear between the attacks, uræmic coma never supervening. Both kidneys were found to have undergone complete cystic degeneration, the cysts varying in size from a pea to a walnut. The cysts contained a serous-like fluid varying in colour from light yellow to deep purple. The fluid contained albumen, but showed an absence of urea and uric acid. The left kidney weighed 28 oz. and the right 22 oz. Similar cysts were also found in the liver. No trace of hydatids could be found. There was also disease of the aortic and mitral valves, with left cardiac hypertrophy.

Treatment of Prostatic Retention of Urine.—Mr. SOUTHAM made some remarks on this subject, and mentioned two cases where, ordinary palliative measures having failed to give relief and self-catheterism being impracticable, the patients had regained the power of voluntary micturition, in one instance after division, in the other after removal of the obstructing portion of the prostate gland through a supra-pubic opening.

Peritonitis.—Dr. HUTTON read notes of a case of peritonitis occurring in the course of an attack of tuberculosis, treated by incision and free drainage, with very satisfactory results. In commenting upon this case, Dr. Hutton mentioned others in support of his contention that it is by no means uncommon for all the symptoms of tuberculosis to subside and for health to be restored in cases where the peritoneum, the lungs, and even the meninges of the brain have been the seat of disease.

Dr. OWEN made some remarks upon the treatment of Spasmodic Affections in Childhood, and showed several cases.—Dr. HILL GRIFFITH showed a case of Vascular (?) Protrusion of the Eyeball.

Reviews and Notices of Books.

Studies of Old Case Books. By SIR JAMES PAGET, Bart. London: Longmans, Green, & Co., and New York. 1891.

IT was good reading for the profession when the Messrs. Longman intimated a few weeks ago that they were about to publish some results of Sir James Paget's dip into his old case books. Medical practice is a mine of experience, and the case book of any ordinary observant and intelligent practitioner, whose term of practice has extended over forty years, would repay examination. How much more the records of the cases seen by such a student of nature and of disease, or perhaps of disease as a part of nature, as Sir James Paget. He, it is true, in the preface—that most important part of a book, in which the author most reveals his mind—makes light of the value of old case books, his own amongst others. He argues that the reports of the daily progress of his cases forty years before the introduction of the antiseptic system

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would be well-nigh useless and uninteresting. But we scarcely subscribe to this conclusion—which is partly qualified indeed by Sir James Paget's own remark that "they would give evidence of considerable success under treatment which would now be justly deemed utterly negligent." Whether they supply evidence in this happy direction, or only show that the success in any given class of cases was less then than now, they would still be full of instruction and interest. It may, indeed, be confidently said that in the literature of our profession we have too few "case-books." We might in this gather a lesson from the lawyers, who so quickly and patly refer one to "cases." Our "Practice of Physic" is too much systematised, too mechanical, too much cut-and-dried. Hence our disappointment in actual practice to find description that does not fit living and actual cases. It is the genius of men like Sir James Paget which gives life and nature to our notions of disease, which reproduces cases in their flesh-and-blood form and connexions, and in their details. In this view we hail the Studies from the "Old Case Books," which, for want of leisure, ceased to be written much after 1870.

The mere enumeration of the heads of the chapters of the "Studies" will be the best indication to our readers of the varied nature of the contents of this book, with the remark that the chapters consist not so much of the history of cases as of comments suggested to the thoughtful mind of the author by the chief facts of them. The chapters are seventeen, and are thus headed: I. Periostitis following Strains. II. Diseases of the Metatarso-phalangeal Bursæ. III. On Some Diseases of the Corpora Cavernosa Penis. IV. On Spines Suspected of Deformity. V. Obscure Cases of Caries of the Spine. VI. Perforating Ulcer of the Septum of the Nose. VII. The Detection of Abscess. VIII. Errors in the Chronometry of Life. IX. Residual Diseases. X. Diseases of Structure due to Disturbance of Nerve Force. XI. Diabetic Gangrene. XII. Subcutaneous Ulceration. XIII. Ununited Fractures in Children. XIV. Swellings above the Clavicle. XV. An Irregular Pulse. XVI. Single Rare Cases. XVII. Use of the Will for Health. Such is the rich store of reflection and experience provided for the readers of this volume. We are far from believing, however, that it exhausts the interest or the lessons of Sir James Paget's "Old Case Books." It may be that his own leisure or disposition for working at the mine may be limited; but it would be well if he would think seriously of further dips into the treasury, either personal or vicarious, with the view of bringing out of it things new and old. No advance in either pathology or treatment much affects the value of the experience and observation of such minds as Sir James Paget's. Heberden's commentaries are as valuable to-day as if Bright and Addison had never lived, and all the triumphs of antiseptic surgery do not lessen the value of the works of John Hunter. We will not attempt to discuss in detail the above chapters, or to take from the freshness of them by any analysis of their contents. The study of them will make every man more likely to achieve accuracy of diagnosis and wisdom of treatment and forecast, not only in regard to the particular groups of disease under discussion, but in the very habit and attitude of his mind in the daily practice of his profession. If we may single out individual chapters that have most interested us, we should specify the first on Periostitis following Strains; the fifth, on Obscure Cases of Caries of the Spine; the eighth, on Errors in the Chronometry of Life; and the ninth, on Residual Diseases. The fundamental virtue of Sir James Paget's description of cases is in his quick and strong sense of what we may call the physiology of disease and the relation of facts and cases which to common or careless observation seem altogether unrelated.

Studies in Statistics: Social, Political, and Medical. By GEORGE BLUNDELL LONGSTAFF, M.A., M.B., Cert. Preventive Medicine, Oxon., F.R.C.P. With Maps and Diagrams. London: Edward Stanford. 1891.

[FIRST NOTICE.]

THE true and sufficient reply to the oft-quoted allegation that one can prove anything by statistics is that without them one can prove nothing. This book might not inappropriately have been styled Studies in Demography, for it deals with the vast problems affecting or arising out of the life conditions of peoples as deduced from a study of statistical data.

The nature, scope, variety, and thoroughness of this volume make a notice of it an embarrassing task to the reviewer. To afford anything like an adequate idea of the book presupposes the possession on his part of considerable analytical power and painstaking. But we fear that even then the result would, after all, prove inadequate, save by the absorption of an amount of space altogether beyond the limits at our disposal. "Studies in Statistics" might be thought abstruse and uninteresting; but these studies raise so many points, are so suggestive of thought, and the facts are set forth with such perspicuity that many readers will feel that they are taking part, as it were, in a personally conducted tour through new countries, and prospecting the future from the appearances of the present. The author wisely decided not to overload his work with long arrays of figures and tables. For these he has substituted maps and diagrams for the most part, and by a free use of the graphic method he has rendered his treatment of the subjects in hand clear, purposive, and attractive. The care and labour bestowed in their production and in that of the work itself must have been very great. As the author says in his preface, the numerous and voluminous reports on the very dusty shelves of the library of the Statistical Department of the General Register Office form a vast reservoir, into which a ceaseless stream of facts has been flowing for more than half a century. To disturb the dust upon those shelves; to sort out facts; to group, arrange, compare, and ponder over them, has long been his hobby. Nor have his labours been circumscribed within these limits. They have been extended into considerations of the phenomena of human life as these are unfolding themselves in other countries, communities, and races—the growth, fluctuations, migrations, and food supplies of populations, the admixture of races, and, by a legitimate exercise of the scientific imagination, the potentialities and probable political influences of these factors on the future history of the race.

The first three chapters are introductory in character. Chapters IV. to XII. consist of an exposition of the more striking facts and results of the growth of population in Europe, America, and the British colonies within the last half century; Chapters XIII. to XXI. are mainly technical and medical; and a short concluding chapter closes with the following paragraph: "My hope throughout has been that increased knowledge of facts, alike in matters political and matters medical, may tend to make legislative and administrative efforts more reasonable, and less empirical. Some progress is more likely to be attained by the diligent and patient study of details than by the more showy and more attractive method of *a priori* speculation, which is but too apt to lead to rash and possibly disastrous experiments."

A careful perusal of this book would no doubt be profitable as a preparatory course of study to many a would-be philanthropist provided with some brand new scheme for ameliorating the social condition of the masses. It would serve to indicate, at any rate, the complex nature and vast scope of the problems that have to be solved.

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In the first essay on Death-rates, the author, speaking of the difference between the sexes in this respect at certain periods of their lives, remarks that the well-known greater length of life attained by women to a large extent accounts for their numerical excess in this country, and that their occupations, habits, and probably some constitutional differences, account for this superior longevity; but he does not see his way to explain satisfactorily the great excess of mortality of male infants in the first year of life (which almost disappears during the second), unless it depends upon some constitutional difference. The author points out and explains the sources of fallacy underlying the vulgar notion that a high death-rate is no proof of sanitary defects, but is attributable to, and can be accounted for by, the high birth-rate, since the mortality of young infants is well known, and large towns giving high death-rates have also commonly excessive birth-rates. And as regards the assertion that epidemics do not, on the whole, materially affect the general death-rate, since their action is to kill off those who would have died from some other cause had there been no epidemic and those who were already in bad or feeble health, with the result of lowering the death-rate for the years immediately following, Dr. Longstaff properly remarks that, while there may be some truth in these assertions, the permanent injury to the constitution of those attacked by the epidemic has to be borne to mind. We have, in short, to deal not only with the killed, but with the wounded. He then proceeds to illustrate this and the effect of epidemics on the general death-rate. The cholera epidemic of 1849, and the terrible sufferings of our troops before Sebastopol in the winter of 1854–5, were the main causes of that movement in public opinion in favour of sanitary legislation and improved sanitary practice which has resulted in our remarkable freedom from serious epidemics and a striking fall in the death-rate in the last fourteen years.

Chapter IV. deals with the growth of population in England, Chapter V. with the migrations of the people in the nineteenth century, and Chapter XI. with the population of London and its migrations. The facts and figures contained in these sections will essentially concern the members of the proposed Royal Commission on Labour. The recent increase of population is absolutely enormous; such an increase has taken place during the last fifty years in Europe and in the new worlds of the west and south as has never been seen before. The opening up of new land and new countries afforded unlimited employment and supplies of food, and the great expansion of the nineteenth century is not only exceptional, but absolutely unique. Dr. Longstaff sums up the causes that have led to the remarkable developments of the past fifty years in a sentence. The application of novel mechanical appliances has rendered possible an unparalleled increase of population by bringing within reach unlimited supplies of food.

As regards births, England and Wales alone add 1000 a day to the population of the world. It is shown in a table that the natural growth of population in London is 133 a day, reinforced by thirty-two daily immigrants, mostly from the country districts. Assuming this rapid production of human beings to continue unchecked to the beginning of the next century, accommodation will have to be found in England and Wales by A.D. 1901 for some seven millions more persons than were enumerated at the last census, and more than half of this addition will be given to our already teeming cities and towns, the balance going to make up what may be conveniently, rather than accurately, styled our rural population—painfully suggestive, as Dr. Longstaff remarks, for the future of the people of England, if a comparison be made between the aspect and physique of our country and town-enlisted military and militia recruits.

On page 29 an estimate is given of the new public buildings that will be required by 1901 for the vastly increased population. And on the same page the earnest attention of economists is called to one of the results of modern legislation, with its increasing tendencies to State socialism and a "progressive" policy. Between 1875 and 1887 the National Debt was reduced by some 32½ millions sterling—a very satisfactory result for twelve years. But during the same period the indebtedness of the local authorities of England and Wales alone increased by no less a sum than 94 millions sterling. During the eight financial years 1880–88 the amount levied in rates has been increased by nearly 23 per cent.

Analytical Records.

MILK STERILISED BY THE PROCESS OF NEUHAUSS, GRONWALD, AND OEHLMANN.

(AGENT IN LONDON: F. H. GOTTLIEB, YEDDO GRANGE, LEWISHAM PARK.)

THE increasingly important subject of the supply of milk free from infection has received considerable attention on the part of the patentees of this process. They have made a praiseworthy attempt to deal with the difficulties which have hitherto baffled earlier experimenters, and much of the success achieved depends upon their correct interpretation of the cause of previous failures. The sterilising agent employed in this process is purely and simply steam, and the milk is submitted to its action in *open* bottles, and the stoppering of the bottles is accomplished during the exposure. A preliminary warming of the milk is, however, a fundamental part of the method, as while this brings about a temporary preservation of the milk, it also incites the germs of bacteria, especially those of a tenacious character, as the potato bacillus or the hay fungus, to development, thus ensuring their destruction in the condition of organism by subsequent treatment with steam. As regards the quality of the milk, better could not be desired, as a glance at our analysis will show, while the flavour can scarcely be distinguished from that of fresh cow's milk but for a very slight boiled taste. The milk was kept in a warm corner of our laboratory for a month without undergoing any apparent change as long as the stopper was not removed. Even after this the milk kept perfectly sweet for several days. The only drawback we find is the difficulty of getting the cream, which separates into clots, to mix satisfactorily again with the rest of the milk. The entire absence of antiseptics was confirmed. Analysis: Non-fatty solids, 9·49 per cent.; fat, 3·90 per cent.; mineral matter, 0·88 per cent.

ANGEL WHITE TOILET POWDER.

(GEO. C. BLACKWELL, LIVERPOOL.)

According to the results of our examination of this powder, it may justly be regarded as a specially refined species of fullers' earth. The powder, which is beautifully white and free from harmful ingredients, is composed of very finely divided silicate of magnesium and possibly aluminium. Fullers' earth is of similar composition, containing 53 per cent. silica, 10 per cent. alumina, and 9 per cent. of oxide of iron. This powder may therefore claim to have the healing and cooling properties which are attributed to fullers' earth, while the special purity of colour contributes to its value.

VICHY LIQUEUR.

(AGENTS, INGRAM AND ROYLE, 52, FARRINGDON-STREET, E.C.)

The special claim made for this liqueur is that it is prepared with the natural salts of Vichy water, and on this account it is esteemed a valuable digestive. Acting on this statement, we were prepared to find by analysis an appreciable

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amount of the well-known salts which occur in natural Vichy water, as, for instance, the bicarbonates of soda, potass magnesia and lime, and the sulphate and chloride of sodium, which, with traces of iron and manganese, are present according to published analyses to the extent of 7·914 grammes per litre. An analysis of the liqueur, however, which we have purposely repeated, gives the following figures:—Absolute alcohol by volume, 39·74 per cent.; extract in 100 cc., dried at 100° C. (chiefly sugar), 35·62 grammes; *mineral matter*, 0·13 gramme per 100 cc. Neither chloride of barium or silver nitrate in an acid solution gave any positive result; the former reagent of course is used to indicate sulphates and the latter chlorides. The small amount of mineral salt, chiefly carbonate of soda, is, it cannot be contested, probably derived from natural Vichy water; but the proportion is so small that the liqueur can hardly claim to be an aid to digestion any more than are other concoctions of the same class. The flavour is decidedly pleasant, and is certain to be liked by those who are wont to indulge in this so-called "digestive."

CALVERT'S CRESO-CARBOLIC DISINFECTING SALTS.

(F. C. CALVERT & CO., MANCHESTER.)

Manufacturers of disinfectant compounds are recognising the desirability of employing a soluble rather than an insoluble substance to act as the vehicle for the distribution of disinfectants. Hitherto, insoluble substances like gypsum, kieselguhr, and various silicates were extensively used for this purpose, with the result that in not a few cases drain-pipes have been choked and stopped. The well-known firm of Calvert & Co. now manufacture under the name of "creso-carbolic disinfecting salts" a brick-dust coloured powder, perfectly soluble in water, which contains a high proportion of phenols. The base, from our experiments, is soluble sulphate of soda. On the application of heat the phenols are readily expelled, and can easily be recognised by the crystalline appearance of the tri-bromo-derivative produced on adding bromine water to the distillate. Another advantage attaching to a soluble disinfectant powder of this kind is that it may be used for the disinfection of cuts, wounds, and insect bites.

GRANULAR EFFERVESCENT PREPARATIONS.

(ALFRED BISHOP AND SONS, SPECKS-FIELDS, 48, SPELMAN-STREET, E.)

Granular effervescent preparations, as every practitioner knows, afford in many instances a convenient and acceptable form of administering drugs. Children, for example, will often take a preparation that "fizzes," although the medicament contained therein may happen to be nauseous to the taste. Messrs. Bishop were amongst the first to prepare compounds of this kind, and we have more than once had occasion to report upon their general excellence. Of recent effervescent preparations examined we have on record the following:—(1) Sulphur compound (Dr. Garrod's formula); (2) cascara sagrada, two grains in each drachm; (3) citrate of caffeine, three grains in each drachm; and (4) salicylate of soda, ten grains in each drachm. The results of our analysis are interesting, inasmuch as in the cases where the drug permitted of quantitative determination the presence of the proper quantities was confirmed. Thus the citrate of caffeine preparation, when treated with slaked lime and hot chloroform for the purpose of extracting the caffeine, yielded for every drachm of the powder 1·80 gr. caffeine, which calculates into 3·50 grs. of the citrate. Similarly the salicylic acid extracted from the salicylate preparation with ether when calculated into sodium salt amounted to exactly 10·80 grs. The sulphur compound readily gave up its sulphur to what is the best sulphur solvent, carbon disulphide. The preparations are readily soluble in water; whilst the excellent granulation indicates the care which is bestowed upon them in the course of manufacture.

COOMBS' EUREKA AERATED PASTRY FLOUR.

(W. A. COOMBS, NOTTINGHAM.)

Carbonic acid gas, though deadly poisonous to inspire, is probably one of the most useful agents which serve to produce a wholesome form of food, an agreeable form of beverage, and frequently a palatable form of medicament as in effervescent preparations. Carbonic acid, for instance, is generated by the action of yeast on sugar in the production of sparkling wines, and it is by the disengagement of this gas that bread is made light and porous. It is well known that carbonic acid is obtained from chalk and vitriol for the purpose of manufacturing artificial mineral waters, and ingredients which interact to produce this gas are frequently substituted for yeast in the production of a light dough. The action of yeast, however, is known to be uncertain, and it has occasionally been accounted the cause of the sourness in bread, which may not unreasonably be supposed to render it less wholesome. The microscopical as well as the chemical examination of Coombs' flour shows it to consist of pure wheaten flour, with the addition of a small quantity of a mixture of two substances like tartaric acid and carbonate of soda, which when moist of course evolve carbonic acid gas. The logwood test showed the entire absence of alum.

IMPROVED EFFERVESCENT CARLSBAD POWDER.

(S. KUTNOW & CO., 66, HOLBORN VIADUCT, E.C.)

The medicinal virtues of the well-known waters of Carlsbad depend on the presence of mineral salts, which analysis has shown to consist largely of the sulphates of soda and potash, in addition to small quantities of carbonate of lime, with which occur traces of the rarer salts of lithium and strontia. The water is accordingly reputed to be useful in rheumatism, gout, and kidney disorders. Kutnow's Carlsbad Powder is stated to contain, amongst other ingredients, the active principle of the Sprudel salt obtained direct from the mineral water. However this may be, our analysis confirmed the presence of the chief constituents referred to. The powder is beautifully clean and white, and is evidently prepared with care, while the taste of the effervescing solution is by no means disagreeable.

THE GENERAL PRACTITIONERS' UNION.

AT a meeting held at 29, Threadneedle-street, E.C., on Wednesday, March 4th, it was decided that the name of the Society be the "General Practitioners' Union," and that the objects of the Association be as follow:—To consider the question of the abuse of medical charities, to obtain evidence thereon, and to take such steps as may be necessary to safeguard the interests of general practitioners; to obtain increased and more efficient representation on the General Medical Council, especially for the purpose of forcing that body to exercise its powers in suppressing illegal medical practice; to supervise all legislative proposals calculated to affect the interests of general practitioners; to deal with all matters affecting medical men in general practice. It was resolved that every registered general practitioner should be eligible for membership and that the subscription should be 5*s*.

The following members were elected as a subcommittee to confer with the Charity Organisation Society on the subject of hospital abuses—viz., F. H. Alderson, F. H. Corbyn, J. Dawson, Hugh Woods, Geo. Brown.

WINDSOR INFIRMARY AND DISPENSARY.—The annual report for 1890 presents a favourable financial position compared with the previous year, but the income is still less than the expenditure. During the year 265 patients were admitted to the sick and convalescent wards; of these sixteen died—an increase in the mortality attributed to several cases being sent for admission in a hopeless condition. The committee had been enabled to reduce the balance due to the treasurer from £470 to £137.

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THE LANCET.

LONDON: SATURDAY, MARCH 7, 1891.

THE factory surgeons have much reason to be satisfied with the debate on the Factories and Workshops Bill. Nevertheless, it is necessary that they should lose no time in organising themselves for the vindication of their office. Not a day is to be lost in preparing statements of their work. We would urge upon them to use every diligence in this matter. The masters and employers have evidently been sowing tares and bringing strong pressure to bear on the Government. Very likely, too, they have been assisted and supported in this matter by parents who are apt to think that children who should be at school might with profit be at work. For once masters and employers seem to have acted in agreement. It is high time, therefore, that the factory surgeons take counsel among themselves as to the best way of meeting this plausible attack on their office, which has so far overcome the Home Secretary, who is generally a sensible and a wise statesman. But the debate must have somewhat opened his eyes. It seems to us not only to have triumphantly vindicated the existence of factory surgeons, but to have shown that, so far from being disestablished, they should be strengthened in their appointments, and that the range of their duties should be extended. We very much misjudge Mr. MATTHEWS if he does not now see that the certifying surgeons are an indispensable if not a prime element in factory legislation. They represent the very humanity of the State. Unless Sir U. K. SHUTTLEWORTH, Mr. LENG, Mr. MUNDELLA, and others were all misinformed, they reject a considerable number of children. Mr. MUNDELLA said he had abundant evidence that they had not only frequently rejected children, but that their work had acted as a great deterrent in the matter of the employment of sickly, weakly, and diseased children. Their efficiency is not, however, to be judged by the number they reject; though, as Sir LYON PLAYFAIR showed, in one district alone (Dublin) in one year (1888–89) there were fifty-six refusals on account of age, eighty-four on account of infectious disease and debility, and thirteen on account of heart disease. As Dr. FARQUHARSON argued in his admirable speech, the very fact that children have to be examined by a factory surgeon has the effect of keeping back those who are unfit—either from age, or infirmity, or infectious complaint. Such influence is of the very kind that is needed—impartial, kindly, and, for the purpose, judicial. Well might Sir LYON PLAYFAIR say that the proposal to abolish the protection of the children by the examination of the factory surgeons was a most unreasonable retrogression in this kind of legislation, in regard to which the Conservative party has a reputation to lose. It may be that the payments should be made in part or altogether by the Government, as Mr. SHAW LEFEVRE argued. The State in this matter stands, as it were, *in loco parentis*, and in that view should perhaps pay for the protection of the children. But, at any rate, it will abdicate one of its most honoured and binding functions if it does not continue its protection to them in respect of ascertaining the facts as to age and physical fitness. And it can delegate this duty to none but to members of the medical profession. We agree entirely with Mr. MUNDELLA in this matter that the action of the factory surgeons should be extended. Their services should be utilised more freely in the way of occasional inspection of half-timers as well as for the purpose of giving an initial certificate. It is of enormous importance to this country, and to the credit of it, that it should show regard for the sanctity of young life. How else is the physical welfare of the people to be secured? We know what reckless waste of life has obtained in former days, and how slowly we have advanced in attempts to stop it. The factory surgeon is one of the safeguards most prized by no less an authority than Lord CROSS. It is inconceivable to us, after the discussion of Feb. 26th, that Mr. MATTHEWS will at a stroke and in the mere wantonness of a majority abolish what has worked so well. He may well ask to be excused inflicting such a blow, not only on factory surgeons, but on factory legislation. The opinions of Mr. BURT and Mr. BROADHURST, so temperately and yet so forcibly expressed, may well convince him that the best section of the working classes appreciate the provision of factory surgeons, and see in it no real enemy to these classes. By rejecting children who are too young or physically unfit for work, it not only preserves them, but by so much abates this—a most undesirable—competition with adult labour.

Let us emphasise, in conclusion, the practical advice we offer to the factory surgeons at the beginning of this article. They will make a great mistake if they allow the favourable tone of the debate as a whole to lull them into a sense of security. They must organise themselves so as to convince every member of the House, and especially those on the Government side, of the importance of the work they have to do. They must undeceive Mr. MATTHEWS in his amazing delusion that for years not a child has been rejected by the examining surgeon. The debate shows that the spirit of reasonableness and humanity which gave rise to the Factory Acts is not dead yet, but it needs to be carefully cherished and kept well "up to date."

WE have on more than one occasion adverted to the serious prevalence of enteric fever which occurred in the Tees Valley towards the close of September last, and to certain attempts which were made to dispute or to minimise the conclusion arrived at with respect to its cause being the drinking of the water supplied by certain companies deriving their supply from the river Tees. It would appear that some of the more interesting features of the epidemic involve the consideration of a number of complex facts, and that the full report on the subject may, in consequence, have to be delayed. Under these circumstances Dr. BARRY has submitted to the Local Government Board an interim report, the character of which can leave no doubt in the minds of unbiased readers that his original contention as to the cause of the outbreak is confirmed in the most convincing manner.

The Tees Valley contains a population roughly estimated

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at 520,000, and it includes the towns of Darlington, Middlesbrough, and Stockton, besides a number of smaller towns and villages. In a tabular form Dr. BARRY sets out the number of attacks of enteric fever fortnight by fortnight from January to October, 1890, and whilst the fortnightly average from January to September 6th was about 35, there occurred in the fortnight ending September 20th no less than 243, and in the fortnight ending October 4th no less than 334 attacks—or 577 cases of enteric fever in four weeks. And taking certain towns, such as the three just named, it was further found that the distribution of the disease had been fairly uniform throughout their whole area. In the villages lying in the Tees Valley the same uniformity was not observed, the special incidence of the fever being confined to certain townships and localities, others escaping.

Seeking the cause for this sudden and widespread outburst of fever, Dr. BARRY found himself enabled to eliminate all ordinary conditions which are held to be capable of leading to enteric fever, except one, and this was the water service. The three towns named, with other places and villages in the Tees district, get their water through two bodies—namely, the Stockton and Middlesbrough Water Board and the Darlington Corporation, and both these bodies draw their supply from the Tees at nearly the same point in the river; and it is shown that, with one single exception, and this in the latter part of the four weeks referred to, the heavy incidence of the disease was practically limited to the areas so supplied.

In the Tees Valley district some 41,000 houses receive Tees river water, and they were invaded by enteric fever at the rate of 12 per 1000; in the same district are some 56,000 houses obtaining water from other sources, and these were invaded only at a rate amounting to rather less than 1 per 1000. So also in localities receiving no other supply than the Tees water the rate of attack on houses varied from 11·5 to 13 per 1000; and much higher rates of attack were observed in such portions only of localities which received this water, whereas other portions had a different supply. In short, the exceptional incidence of the disease was found to have been almost entirely confined to the users of the Tees water; and the suggestion that one cause only was the essential one at work is shown by the uniformity in the rate of incidence in the larger communities receiving Tees water only.

But how did the Tees water come to have the faculty of distributing disease? The answer to this reveals a state of affairs hardly to be credited. The drainage area of the Tees covers some three hundred square miles, and within this area the river receives, either directly or indirectly, the drainage of some fifteen to twenty villages, as well as that of the town of Barnard Castle and of many graveyards and farmsteads. Dr. BARRY'S report carries the reader up and down from Barnard Castle to the intakes of the two water-distributing bodies, telling in detail of the filth discharged into it, and of the filth deposited on the foreshore, which only awaits a sudden flush of water to be swept on towards the intakes. As to Barnard Castle, the sewage of some six thousand people, to say nothing of large bodies of summer visitors and the militia, has its outfall through a main sewer "directly into the Tees." Besides other local sources of contamination there are the contents of the waterclosets from nearly four hundred houses. We need not follow Dr. BARRY in all his details as to the pollution of the river. His conclusion, "that a considerable amount of excremental filth and house refuse is being continually poured into and conveyed down the river," can admit of no denial; and it seems equally clear that the pollution of the river must be enormously increased during periods of heavy rainfall, when the river is in flood. Having this latter point in view, he inquires next if, by reason of any exceptional circumstances, any wholesale discharge of sewage into the Tees could have taken place shortly before the prevalence of fever. It soon transpired that in the fortnight ending Aug. 23rd no less than 3·6 inches of rain fell, this being one of the heaviest records of rainfall known in the Tees Valley. This circumstance, too, came into play just when it should have done to allow of the period of incubation generally exhibited by enteric fever as an antecedent to the explosion beginning on Sept. 4th.

Enteric fever is rightly regarded as typical of the class of "filth diseases," and its occurrence is very commonly associated with the excremental pollution of potable water. In the instance under consideration we find that the people attacked are drinking a water habitually fouled by sewage and excreta, and that a special flush of filth was swept into the source whence the supply is derived just antecedent to a special outburst of disease.

But why, it may be asked, is not enteric fever more common in the Tees Valley, and why were only some 10 per 1000 of the households drinking this water attacked last autumn? We have abundant evidence that the contagium of enteric fever must be a particulate one, and that it is not uniformly distributed through such a vehicle as water in the same sense that any substance in solution would be. It also seems clear that the extent of risk to infection from water depends, in the case of this disease, in the number of opportunities which occur for receiving the particles of infection. In the case of the Tees, often a rapidly flowing river, the amount of risk may perhaps be roughly estimated by the average amount of enteric fever occurring amongst the inhabitants of the Tees Valley, although we would not presume that the river water is the only cause of that disease. On the other hand, the special risk, such as was incurred in a particular fortnight last year, may to some extent be measured by the tenfold increase in the amount of the disease which took place in September last. That much matter potent to produce enteric fever was washed past the intakes of the water companies during the rapid flush in August last must be obvious, and that a good deal of water free from the particulate infection could have been drawn up into the town must be equally obvious. Herein, doubtless, lies the answer to the questions put. But the danger remains, and must remain so long as the people in the Tees district are supplied with water from a stream charged with the excreta and sewage of their neighbours above.

WHATEVER may be said of total abstainers from alcohol, it can never be alleged truthfully against them that their peculiar habit interferes with their industry, their energy,

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or their perseverance. When an aspiring member of Parliament is about to contest a district, one of the first things he considers is the strength of the teetotal element. If there be many teetotal organisations, he is sure from the first that he must reckon with them; they will have their own ideas, they are likely to combine in many ideas, and perfectly certain it is that, should they set to work, their physical powers will fully compensate for any shortcomings of an argumentative kind. They will be aggressive, patient, vigilant, and of long endurance. Last week there was an illustration of some of these faculties in those abstaining members of the profession of medicine who are the representatives of the British Medical Temperance Association, a medical body now numbering close upon five hundred, and, we believe, overnumbering that figure if they who are learning their "rudimans," as Dr. COPHAGUS called it, may be considered medical. This Society, like its fellows, meets ordinarily in its own central rooms in the west end of London, or in the central rooms of its branches in other parts of the kingdom, and there carries on its work of papers and discussions. But now, on the suggestion of its indefatigable honorary secretary, Dr. RIDGE, the members of the Society, with characteristic pertinacity, are moving into new pastures and holding meetings in different districts in order to invite the busy practitioners of the district visited to meet them in the most convenient way and discuss with them the great argument for and against alcohol. On Wednesday week last, Feb. 25th, the first meeting of this kind was held at Northampton House, St. Paul's-road, Highbury, and for numbers present, as well as for the matter of debate, it must be accepted as a most successful first attempt. Dr. B. W. RICHARDSON, the President of the Association, occupied the chair, and in an opening address led the way simply towards discussion. Every word that was extreme was avoided as unnecessary. The apathy of the profession as compared with the energy of the clergy was first touched upon, and then the sanitary side of the matter was made a special point for consideration. Alcohol produces a certain large and calculable mortality; the mortality means a large bill of sickness, and the sickness means an enormous loss of labour and the rewards of labour. But we as a profession of health, said the chairman, are the custodians of health, and ought, therefore, specially to concern ourselves in the wholesale removal of the preventable cause of so much disease and misery. If an epidemic from some more obscure cause destroyed a tithe of people so systematically and regularly as alcohol does, we should be ambitious to vie with each other in discovering the mode of reaching and removing the root of the evil. It is our duty to do the same thing in regard to this great plague which is always before our eyes. Another point dwelt on was the recognisable pathology of alcohol, and the lesson it supplies, in respect to the employment of it as a medicinal remedy. Touching this last subject, the speaker repeated his often stated opinion that alcohol, whenever it is prescribed in disease, should be prescribed as "a weapon of precision"—that is to say, diluted with water in measured doses, without the least complication. This plan, he urged, answers perfectly, and after fifteen years' employment of it he had found it equal to every requirement. Finally, the requirement itself was, he thought, in truth, very much curtailed when all the facts of the necessity were fully disclosed. The masters of physic who recognised the force of the *experimdia fallax* were most sound when they exposed that kind of experience, and never more was that soundness verified than in the practice of alcohol administration. Let a practitioner, said the speaker, who has been accustomed to use alcohol once have the courage to look at the other side of the shield, and see what remarkable results follow treatment without it—as, for example, in cases of hæmorrhage, pneumonia, and asthenia, and the rapidity with which the mode of treatment without alcohol would advance would lead to quite a revolution in the practice of using alcohol as a remedial instrument. Dr. RIDGE, Dr. NORMAN KERR, and Mr. MOIR followed on the same side. The most trenchant opponent was Dr. KING, who dwelt more particularly on the social influence of alcohol for good when perfect moderation tempered appetite. He was of opinion that wine judiciously taken aided the worker and sustained the enfeebled. Altogether, this new experiment of local discussion on the alcohol topic from its medical aspects, by medical men amongst themselves, was so friendly, hopeful, and instructive that we trust it will be repeated. It is good for brethren to dwell together in unity.

THE Report of the Hospital Reform Inquiry Committee of Birmingham has recently been published[1], and should be procured and read by all who are interested in the great and urgent question of Hospital Reform. Our Birmingham correspondent gave last week a summary of its principal points. It is to be presented on the 9th instant to an adjourned conference of representatives of the medical charities of Birmingham and other organisations allied to them, and of representatives of the medical profession as convened by the Mayor of Birmingham in January of 1890. The chairman of the committee was his Honour Judge CHALMERS (of the County Court). Three members represented the medical profession, two the General Hospital, one the Queen's Hospital, two the General Dispensary, one the Hospital Saturday Committee, one the Children's Hospital, the Eye Hospital, and the Women's Hospital collectively.

It may be remembered that medical men are largely responsible for the initiation of this inquiry. In November, 1889, the profession in Birmingham met to consider a report on the question by a committee of medical men, prepared in October of that year, and passed resolutions suggesting a conference of all parties interested. The conference was held, and recommended a committee the constitution of which should be left to the Mayor, and was composed as we have described above. It is gratifying to think that the medical profession has been so honourably associated with this inquiry. Of the seventeen witnesses examined nine were members of the profession. They were, of course, in a minority on the committee. But it will be seen from the report that the results of inquiry and the remedies suggested accord closely with the views long held by the medical profession. The report is an admirable one in its arrangement, in its lucidity, and in its brevity. It does not include a copy of the evidence taken, but we may

1 Messrs. Osborne and Son, New-street, Birmingham.

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hope that this will be published in a separate form. The general result of the inquiry is to show that there is an enormous abuse of hospital charity in the out-patient department of hospitals by the almost reckless admission of all comers. In some hospitals there is no pretence of inquiry; in others, and almost in all, it is formal and ineffective. The result, of course, is that the people prefer the gratuitous advice of consulting and hospital physicians and surgeons to paying, however reasonably, for the services of the ordinary practitioners. They would undoubtedly prefer to get their food and other necessaries of life on the same terms. Under this demoralising system the out-patients of hospitals in Birmingham have advanced in twenty years—1867 as compared with 1887—from 67,000 to 166,000. The evils of this monstrous excrescence of charity are well pointed out: unfair pressure on the hospital staff; hurried examination of patients; and the long detention of those who are seriously ill. The framers of the report seem appalled at this rapid growth. They become prophetic, and say if it is not stopped an utter breakdown of the present arrangements must be the result. This is what we have long prognosticated. The benevolent will give any reasonable amount for the relief of really urgent cases, but for those who can insure themselves against sickness, in the clubs of private practitioners or in provident dispensary or sick funds, they will not subscribe, and are already becoming critical.

The main conclusions of the Committee are to recommend: 1. The formation of a general Council to secure common and joint action of all hospitals and dispensaries. 2. The formation of an inquiry agency to investigate the circumstances of patients. 3. The exclusion of all but serious cases, and of all who can either pay or who could more properly be dealt with by the Poor law. 4. Provision for cases so excluded in dispensaries or provident associations. 5. The admission to the out-patient department of any person recommended by a provident association or a qualified medical practitioner.

These are admirable suggestions. Only one thing remains—to carry them into practice. It must be remembered that the gratuitous treatment in hospitals of those who can pay is only one shade less demoralising than downright pauperism. We shall look anxiously for the continued action of the profession in assisting the Mayor and other leading men of Birmingham in this great reform. We must be practical. We must give help to social reformers. It will be another feather in the cap of Birmingham if, even before the Lords' Committee shall have time to report, it shall have shown the way of effective reform of the hospital out-patient system.

Annotations.

"Ne quid nimis."

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SINCE our last issue the Councils of University and King's Colleges have held special meetings for the consideration of the latest "revised scheme" of the University of London. As was anticipated, neither body has accepted it. The Council of University College passed a resolution to send a letter to the Senate (1) "Recognising that in the course of the discussion of successive draft schemes the views on behalf of the London Colleges on some important points have been fairly met, but at the same time regretting that in the revised scheme there are other important points which in their present form are not satisfactory to the Council." We understand that a stronger resolution was only defeated by the narrowest majority, so that the new scheme meets with little favour at University College. The resolution passed by the Council of King's College was more pronounced in its opposition, and was carried with scarcely a dissentient voice: (1) "Recognising that in the course of the discussion of successive draft schemes the views urged on behalf of the London Colleges on some important points have been carefully considered; but the Council regret that in the revised scheme submitted to them changes have been introduced which are inconsistent with an important principle laid down by the Royal Commission, and which render the scheme materially different from that to which the Council assented last July." The July scheme made some provision towards a local university or its equivalent in London; the latest scheme, by engrafting on it the recognition of provincial colleges as constituent colleges, and by enlarging the Senate to carry out this new work, has altered materially the position of the London Teaching Colleges, and these could hardly be expected to agree to a new scheme in which they were placed at a relative disadvantage, and which was in direct opposition to the recommendation of the Royal Commission. The divergence of views on educational questions to be expected on such a large Senate was emphasised by a proposition placed before it on Jan. 28th, to enlarge its proposed number of fifty-two still further by adding ten more non-collegiate members. The other resolutions, which were passed in identical terms at both Colleges, would seem to intimate that conferences with the Senate of the University were at an end, and that they were anxious to refer the question at once to Lord Cranbrook. In this manner a solution of the problems will possibly be most readily found. "(2) Expressing the opinion that on these it will probably be best that the views of the University and of the Colleges should be heard by the Lord President or the Privy Council; (3) and reserving full liberty to the Council to express to the Lord President or the Privy Council their objections to any features of the Scheme which may remain in a form unsatisfactory to the Council, or may fail to secure for London the advantages of a Teaching University." A memorandum published this week by the Senate of the University of London is most interesting in relation to medical degrees. It is distinctly stated that "no alteration is now made in the degree of M.D." In regard to the M.B. pass degree arrangements are suggested which will, while keeping the preliminary scientific M.B. examination under its own Standing Committee in Medicine, transfer all the other subjects for the pass degree to the supervision of a joint committee of the Senate and the Royal Colleges. This arrangement is, strangely enough, described as one "which will not lower the standard or lessen the value of the medical degrees of the University, or impair their scientific character." If this means that the examinations to be controlled by the newly suggested Board are to be kept at the existing standard, then the boon of medical degrees to London students on reasonable terms will be as far off as ever; if such conditions are granted under these new arrangements, how is the standard—declared by the Royal Commission to be an Honours one—to be maintained at its present level? The two positions are clearly incompatible.

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THE MAIN DRAINAGE OF LONDON.

THE immediate necessities of London in respect of main drainage have been placed before the London County Council in a carefully prepared report by Sir Benjamin Baker and Mr. A. R. Binnie, the chief engineer of the Council. These necessities are twofold. The one, the provision of sufficient sewers for the effectual drainage of the metropolitan area; the other, the proper treatment of the sewage before its final discharge. London north of the Thames is provided with three main sewers—the high level draining Hampstead, Kentish Town, and Hackney, and being joined at Old Ford by the middle level sewer, which runs nearly in a straight line to this point from Bayswater; while the northern low level sewer extends from Pimlico to Abbey Mills, where the sewage from the northern part of London is raised by pumping into the northern outfall sewer, to be discharged at Barking. The southern part of London is drained by two main sewers, the high and low level, joined by the Effra branch, eventually discharging, after pumping, at Crossness. The insufficiency of these sewers has long been recognised, and the floodings of the low-lying parts of London, especially in times of heavy rainfall, have been frequently the subject of public comment. There has been, therefore, much necessity for this insufficiency to be considered by competent engineers, and for the necessary steps to be taken to make provision which will relieve these districts from the disadvantage from which they suffer. The proper method of dealing with the sewage, whether by chemical treatment or by irrigation, has been matter of so much investigation that it cannot be expected any further light will be thrown upon it for some time to come. At the present time the arrangements for chemical treatment are incomplete, and particularly at Crossness, where the necessary works for precipitation are in progress; but the experience gained at Barking warrants a more hopeful view of this method than might have been anticipated. No one, therefore, with any sense of responsibility would be prepared to recommend a new departure until it was known that there was necessity for further change. This is evidently the outcome of the inquiry, the details of which we propose to discuss shortly.

THE INFLUENZA OF 1890 AND A DEPRESSED TONE OF HUMAN VITALITY.

IN our Edinburgh correspondent's notes last week some interesting extracts were given from the report submitted by Dr. Clouston upon the Royal Edinburgh Asylum for the past year. They had reference more especially to some evidence produced by Dr. Clouston as to the existence of an exceptionally low tone of human vitality during the year 1890 in relation to the epidemic of influenza. Whether it was the influenza in the early part of the year that had perceptibly lowered human vitality, or whether the prevalence of the influenza merely showed that European humanity was in a lowered state of vitality, so being a fit nidus for the influenza germs to propagate in, or whether it was the sunless, summerless general character of the year, Dr. Clouston could not say. He distinctly connected, however, the influenza in some way with the unprecedented number of melancholic patients sent to Morningside Asylum. He goes on to say, and we think with truth, that he believes the epidemic of influenza left the European world's nerves and spirits in a far worse state than it found them, and that they scarcely yet had recovered their normal tone. Many others have expressed themselves in the same sense, and we look upon the subject as one of deep interest. An excellent opportunity will be given to asylum superintendents at this season of preparation of their annual reports to confirm or otherwise this expression of opinion on the part of Dr. Clouston. With regard to the vexed question of the alleged increase of insanity, Dr. Clouston stated that the number of rate-paid admissions into the Edinburgh Asylum did not tend to bear out the popular ideas as to the rapid increase of mental diseases in recent years, for the yearly production of pauper lunacy in the district had scarcely risen appreciably during the past fifteen years. The production of pauper insanity was with them not keeping pace with the growth of the population. The cases of melancholia admitted during the year were in excess of those of mania, and this was quite an unprecedented experience, as during the past five years the cases of mania exceeded those of melancholia by 37 per cent. The relationship existing between insanity and other diseases and epidemics, on the one hand, and with disturbing social influences of a general character on the other, is yet far from being worked out, and we welcome such observations as those of Dr. Clouston as being not only interesting and instructive in themselves, but as suggestive and useful to other workers in this complicated region of scientific thought and medical experience.

THE MIDWIVES' REGISTRATION BILL.

WE are glad to be able to give a report of the proceedings of a deputation on the Registration of Midwives' Bill to the Lord President. The Lord President's answer is important, and shows that he is considering the subject carefully. He takes for granted that there is an almost universal desire to improve the education of midwives so far as that can be done by legislation. We are not the less satisfied with Lord Cranbrook's position that he sees clearly the difficulties to be overcome. He is a very likely man to overcome them. There seems no prospect of legislation this year, so that plenty of opportunity will be given for the consideration and removal of all reasonable objections.

THE CANTHARIDIN TREATMENT OF TUBERCULOSIS.

WE may refer those who are interested in the newly found substitute for Koch's liquid to the pages of our esteemed contemporary, the *Berliner Klinische Wochenschrift*, which devotes many pages to the textual report of the proceedings of the Berlin Medical Society on the 25th ult., when Dr. Oscar Liebreich discussed the pharmacological and therapeutical properties of salts of cantharidinic acid. Drs. Paul Heymann, G. Guttmann, and B. Fraenkel related cases in proof of the efficacy of the minimal doses (averaging two decimilligrammes) of the drug used as subcutaneous injections in cases of tubercular disease. The evidence adduced by these experienced observers is all the more valuable since they have been for the past few months carefully following up the results of Koch's injections, in cases of laryngeal phthisis particularly. The local changes and the general improvement ensuing upon the cantharidin injections appear, in the few cases that have been so far treated, to have been very marked, and, what is more to the point, to have been unattended by any of the drawbacks with which the use of "tuberculin" is so often associated. Unless the "enthusiasm" has outrun even that which was displayed in the early days of Koch's remedy—and we can hardly suppose that the lesson then taught has been given in vain,—it does really seem as if Dr. Liebreich's pharmacological speculations are likely to be fruitful in many ways. We may remind our readers that he selected this substance because of its known remarkable property of exciting exudation from the capillaries. That property, which is patent to all when the skin is subjected to the action of a blister, is doubtless likewise exerted upon internal organs, notably the kidneys and sexual organs, when cantharides is taken internally. Nay, it has been found to produce pulmonary œdema, and Dr. Liebreich said that he had

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found is recommended (in English literature too) in certain pulmonary diseases. He reasoned then that, since it has some selective property—e.g., a much greater affinity for the renal glomerular capillaries than for the vessels in other parts—it was not unlikely that, in the case of capillaries in a morbidly irritable state, its effects might be exerted by doses quite inadequate to excite transudation in the normal body. As to its applicability to tubercle, he ventured on the further surmise that its action might be an indirectly specific one, since the researches of Buchner and Stern have shown that blood serum has a bactericidal action. Commencing with the greatest caution, and finding that a dose of six decimilligrammes excited hæmaturia in one case, he recommended that no more than one or two decimilligrammes of cantharidin in alkaline solution (one cubic centimetre of which contained two decimilligrammes) should be injected, and that an interval of one day might elapse between the injections. Renal disease is of course a contraindication. Strangury, hæmaturia, and other symptoms were observed by Dr. Heymann in some of his cases, symptoms which soon disappeared on suspending the injections for a short time. It is clear that in Berlin professional interest will be centred for some time upon the relative value of "tuberculin" and "cantharidin" in tuberculosis.

BURIAL REFORM AND THE STATE OF ST. ASAPH CHURCHYARD.

IN spite of all that has been done in the cause of burial reform cases crop up now and then which show how much still remains to be done. An instance has occurred lately. Dr. Hoffman, the medical officer of the Burial Acts Department of the Home Office, has been holding an inquiry into the insanitary condition of St. Asaph Churchyard, which has been in use for four centuries, and is so crowded that new graves cannot be dug without bringing up the contents of old ones, while human bones are to be seen frequently strewn on the surface. Dr. Hoffman inspected the churchyard in company with Dr. Lloyd-Roberts, the medical officer of health, who informed him that owing to the impregnated condition of the soil it was dangerous to health. Dr. Hoffmann intimated that he should recommend increased restrictions, limiting burial to existing vaults and walled graves, and to earth graves for widows and widowers of those already interred there. It is, however, greatly to be hoped that public opinion and the good sense of the St. Asaph citizens will effect even a greater reform, and close entirely this already too full churchyard. The Church Congress will meet this year at Rhyl, under the presidency of the Bishop of St. Asaph. We trust that burial reform will receive the early attention of the "subjects committee." Welsh people have always been very conspicuous for their conservatism of language and of ancient traditions. Their churchyards have been condemned before in no measured language, and the description just given of St. Asaph churchyard is one which could hardly have been expected so near to the close of the nineteenth century.

CAPACITY OF THE SPINAL CANAL.

THE results of certain experiments undertaken by Professor Reid and Dr. Sherrington, with a view to determining the result of position on the capacity of the spinal canal, are related in the last number of *Brain*. The plan of experiment was as follows. After trepanning over the vertex close to the longitudinal sinus, the dura mater was removed to an extent corresponding with the trepan hole. Water was then poured into the subdural space until it filled it, and a glass tube was next secured in the hole in a perfectly watertight fashion, a thin membrane which floated on the water filling the subdural space having been previously drawn over the end of the tube. A piece of glass tubing was connected with the other tube by flexible watertight joints, the farther end of this tube being on a level with the trepan hole in the skull. Finally, this tube and its connexions were filled with water and its free end projected over the scale pan of a sensitive balance, the other arm of which had a recording apparatus marking a revolving cylinder attached to it. The cadaver was suspended by means of an iron coronet, and variations in position were produced with the aid of a horizontal bar from the vertical stand on which the body was hung. The conclusions arrived at are that the capacity of the cranio-vertebral canal is at its maximum when the body is hanging freely and vertically, that there is diminution in this capacity when the weight of the trunk and limbs is taken off, and also when the vertebral column is bent backward or forward. In other words, it is found by this method of investigation that the alterations in the curvatures of the spinal canal by various movements do influence the capacity of the canal, but not to any great extent. This variation is found to be greater in the child than in the adult. The authors conclude by remarking that this increase is so small that it becomes difficult to conceive how in the suspension treatment for cases of tabes there can, as has sometimes been claimed, be any actual stretching of the spinal cord.

MILITARY MEDICINE IN ARGENTINA.

WE have received the first number of the *Boletin de Sanidad Militar*, a monthly journal dealing with subjects of interest to the naval and military medical services of the Argentine Republic, and edited by the inspectors-general of each service and a number of other officers. A good deal of space is devoted to Koch's treatment in Europe, the observations which were being made in Buenos Ayres being in too incomplete a state to warrant any report. Dr. Cabezo contributes an article on first dressings, in which he does not give any information as to what were used in the Paraguay and Entre-Rios campaigns, though he mentions these operations as showing the great importance of efficient field dressings. A description of a simple apparatus for estimating the carbonic acid in the air is contributed by Señor Bosque y Reyes, pharmacist, and a complete list of the military and naval, medical, and pharmaceutical officers is appended.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE presidential address of Mr. Timothy Holmes at the annual meeting of the Royal Medical and Chirurgical Society was full of satisfaction with the present position of the Society and of hope for its future. The Society has embarked on a considerable financial undertaking, but there is reason to believe that it is fully equal to its responsibilities, although during the past year it has had to curtail considerably its outlay on the library. Still, those who are best acquainted with its position are confident that it will be able to keep up its invaluable library on a scale equal to all requirements. Mr. Holmes, whilst omitting the full biographical details of deceased Fellows, intimated, however, that he had prepared these for publication, and his brief references to the departed were marked by good feeling and judgment. We would suggest that the compilation of full obituary notices—which certainly should be retained—might be entrusted to personal friends of the deceased Fellows, and that they might form an appendix to the published address by the President. Mr. Holmes referred to the idea initiated thirty years ago, and more than once revived (the last occasion, we believe, being in Mr. Erichsen's presidency), of the combination of the leading

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medical societies of the metropolis into one Academy of Medicine, but he did not think the time yet ripe for the initiation of such a scheme; whilst Mr. T. Smith, when seconding the vote of thanks to the President for his address, was wholly opposed to it. Mr. Holmes alluded to the increased facilities to be offered to country Fellows; and amongst other suggestions he made one which was received with some favour. It was that an attempt should be made to cultivate the social side of the Society by having *réunions* of a less formal character than the ordinary meetings. Another matter on which the Society is to be congratulated is the foundation of a permanent endowment fund, initiated last year by Sir R. Quain, and augmented by benefactions from other gentlemen. The utility of such a fund is unquestionable, and it affords an admirable opportunity for the Fellows to prove their practical interest in and attachment to the aims and objects of the Society.

HYSTERICAL DEAFNESS.

A CASE of so-called hysterical deafness is related by Dr. Würdemann in the *Philadelphia Medical News*. It occurred in a girl whose age is not given, and who was the subject of interstitial keratitis and middle ear disease. The hysterical symptoms consisted in inability to hear and understand what was said by members of her own family, with retained ability to hear what was said by others, and the abolition of perosseous conduction of the tuning-fork sound, although she was able to hear it through the ear. There were areas of anæsthesia about the ear, and sensibility on her hands, feet, and knees seems to have been lessened, although the patient's stupidity was great, rendering the examination unsatisfactory. Vigorous treatment by galvanism, blistering, and hot baths was used with good effect. The hearing improved, but the areas of diminished sensibility persisted on both sides.

DIPHTHERIA AND ITS CAUSATION IN SALFORD.

SALFORD is one of the large towns in England which has within recent years exhibited a large increase in diphtheria, and the subject has been dealt with in an exhaustive report by Mr. Charles Paget, the medical officer of health for the borough. During the five years 1883–87 the mean annual number of notified attacks from diphtheria was 72; in 1888 the numbers rose to 176; and in the next two years they reached 691 and 694 respectively. The increase in the incidence of diphtheria commenced before Mr. Paget's tenure of office; and, apart from this, there are obviously great difficulties in tracing the beginnings of such a disease as this three years after its commencing prevalence. Indeed, it is admitted that the origin of the epidemic cannot now be determined; but there is a strong presumption that there was a considerable prevalence, in the last quarter of 1887, of that form of sore-throat which goes unnotified, but which has some definite connexion with diphtheria prevalences. With regard to origin, Mr. Paget further states that he is able to exclude both milk and disease among domestic animals from any obvious share in the occurrence; but he is convinced that the elementary schools tended largely to the distribution of the malady, and this mainly by means of the aggregation of children suffering from the mild attacks of so-called "sore-throat" already referred to. Much pains were evidently devoted to ascertaining whether, and if so how far, soil pollution could have had any influence on the disease, and a special effort was made to ascertain how far "tips" and the erection of buildings on soil polluted by accumulations of refuse had a share in localising the prevalence. In the end Mr. Paget is obliged to come to the conclusion that between such conditions and the diphtheria in Salford no direct connexion could be made out. Still, he by no means exonerates the midden privy system and the practice of levelling up building land with refuse containing organic matter from a share in aggravating the circumstances of the epidemic and from enhancing the virulence of the infection in regard of individual attacks in persons exposed to such influences. The general effect of such influences in lowering vitality can hardly fail to be operative for evil, in the sense indicated, in the case of such a disease as diphtheria. All clue to a direct infection seems, however, to have been overwhelmed in the one prevailing circumstance that, whether at school or elsewhere, there was ample room for the operation of direct personal infection from person to person. But a predisposing cause beyond that already suggested is believed to have existed in the condition of the drains and sewers, and this especially where these admitted of the retention in them of offensive and infectious matters. By this latter statement we assume that Mr. Paget is inclined to regard sewers and drains as capable of acting directly by giving out the diphtheria contagium which has been received into them. The point is one of considerable interest; it is one as to which it is impossible to speak with certainty, and this especially where personal infection by means of unrecognised, as well as by recognised attacks, was so widely in operation. One thing is certain—namely, that immense pains have been devoted by Mr. Paget to the inquiry, and to the preparation of the well-illustrated report which he has submitted. If he and others before him have failed in clearing up the obscurities attaching to the causation of diphtheria, we may well concur with him that mere local investigations can no longer be expected to solve the difficulty, and that "the necessity for an exhaustive inquiry as to the origin and maintenance of diphtheria in this country" is growing daily, and has "already become a matter of national concern."

THE VIRCHOW TESTIMONIAL FUND.

AN official letter has been received by the honorary secretaries to the above fund from the German Committee, in which the latter express their pleasure at seeing the thoroughly representative character of the British Committee and their warmest thanks for the readiness with which the British profession are responding to the invitation to do honour to the great pathologist. They further inform the honorary secretaries that it is the intention of the German Committee to present, as far as means will permit, replicas of the medal which is to be struck in Virchow's honour to some of the representative British institutions. Finally, they state in reply to a question raised by several British admirers of Virchow, who wish to possess a lasting memento of his jubilee, that the artist to whom the execution of the large medal will be confided will also produce a replica on a smaller scale, which may be purchased from him. Particulars on this point will be given in due time.

THE SERUM OF GOATS' BLOOD IN PHTHISIS.

DR. LÉPINE of Lyons, who, starting from the fact that goats are refractory to phthisis, has been experimenting on patients by injecting goats' blood or its serum subcutaneously for some little time past, has just described in *La Semaine Médicale* the method which his experience has taught him is the best to employ. He finds that subcutaneous injections of serum cause so large a surface to become painful that it is impossible to repeat such injections frequently. When, however, they are intravenous, they may be repeated every two or three days, 80 or 100 cubic centimetres being introduced each time. There is, too, practically no danger, and

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scarcely any pain, if the serum and all the apparatus are properly sterilised, and if the operation is conducted slowly. A goat in good condition will give 400 grammes of blood. This is drawn through a cannula inserted into the jugular vein, and is caught in a vessel half immersed in cold water. It is defibrinated, filtered through sterilised muslin, and then put into tubes attached to the circumference of a revolving disc, which is made to revolve by steam power 2000 times per minute for about forty minutes; after which, the separation of the corpuscles from the serum being complete, the latter is transferred to a sterilised vessel provided with an indiarubber tube issuing from the bottom and closed above with cotton-wool. The patient's arm having been disinfected and tied as for phlebotomy, a prominent vein is selected, and a very fine silver trocar inserted without dissection, which is by no means a difficult operation. This is cautiously connected with the indiarubber tube and the serum allowed to flow into the vein very slowly. If the patient should feel malaise, the flow must be stopped by lowering the reservoir. The highest amount that Dr. Lépine has transfused at one sitting has been 100 cubic centimetres. When the blood itself was transfused not more than 40 grammes could be borne, the patients complaining—for some not very evident reason—of extreme pain in the loins. Dr. Lépine does not as yet profess to be able to say how far this method of treating diseases by injecting blood or serum from an animal refractory to such diseases is likely to be successful; but it is, he considers, a promising idea, and he thinks it has the best chance of succeeding if the serum only is used, as the corpuscles appear to him, if anything, to hinder the good effect.

A NEW SUBSTITUTE FOR SANTONINE.

ACCORDING to Dr. Coppola santonine is not a true vermicide, its action on threadworms being that of a convulsant only, causing movements very similar to those due to epilepsy. In this state the worms are unable to coördinate their movements, and are easily expelled from the intestine by a purgative. Santonine also labours under other disadvantages; it is very easily absorbed by the mucous membrane of the gut, and it sometimes produces toxic effects. A much better vermicide is to be found in a compound of santonine, santoninoxyme, which he has recently prepared. This actually kills the worms, and is well borne in much larger doses than can be given of santonine. The best plan is to give for two or three days three times as large a quantity as is ordinarily prescribed of santonine, each dose being followed by a purgative.

THE SPREAD OF SANITATION.

THE amount of good which may result from a diffusion of a knowledge of the simplest sanitary laws has long been recognised. The difficulty is that, in spite of legislation and inspection, little can be done unless these are aided by individual appreciation and intelligent coöperation. In many places lectures upon the laws of health have been delivered with the view of rousing interest and supplying useful facts. But the lecture, when addressed to the relatively uneducated classes, stands a poor chance of doing lasting good. If notes are taken, they are frequently confused, and more frequently still they are incorrect. Almost a special training is necessary for the task of judiciously selecting the wheat from the chaff, which so often forms a large part of a popular lecture. To overcome this difficulty the Manchester health lectures for the people have been for some time past most usefully supplemented by their publication in cheap form, but in addition to these the Manchester and Salford Sanitary Association has recently issued a series of tracts prepared for distribution at a merely nominal price (2*s.* per 100). These touch upon a great variety of topics connected with health—e.g., the care of children, the prevention of blindness in infancy, school attendance and infectious disease, how to avoid scarlet fever and to prevent its spread, the influence of alcohol upon the system, &c., while in one tract we find grouped most usefully together the early symptoms of the commoner infectious diseases of childhood. These tracts are in simple, straightforward language, and should go far to accomplish the end in view.

THE SHELTON-STREET IMPROVEMENT SCHEME.

THE St. Giles's Board of Works are endeavouring to prevent confirmation by Parliament of the provisional order relating to the Shelton-street scheme. The main objection of the Board is to the proposal of the London County Council to erect a model common lodging-house upon the vacant land. The London County Council inherited from the Metropolitan Board of Works an unfortunate legacy. The scheme, it will be recollected, was forced upon the Board by the St. Giles's authorities, and the Board neglected to acquire sufficient of the trade premises with which the area was interspersed to enable it to be dealt with in a satisfactory manner. The Council's difficulties are therefore considerable, and it may be anticipated that when the subject is discussed in the House of Commons a satisfactory answer will be given to the objection of the St. Giles's authority. One of the allegations of the St. Giles's Board is that the vacant land is not sufficiently devoted to the provision of artisans' dwellings, which it is stated are much needed in that neighbourhood. The area is, however, not well adapted for buildings of this kind, and, indeed, it is not obvious how the Council would meet their statutory obligation to rehouse one half the number of inhabitants displaced by the clearance were they to adopt any other course. No doubt the proposal to erect a common lodging-house will not be looked upon with favour in the district, especially by the owners of buildings of a similar kind, who may fear that the accommodation which they provide will be in less demand than that of the London County Council. There is not much probability that the House of Commons, when all the circumstances of the case are explained, will refuse to endorse the decision of the Home Secretary. The chief lesson to be learnt from what has taken place is that it is false economy to carry out an improvement scheme in any but a liberal manner.

BACTERIA PROTEINS AND THEIR RELATION TO INFLAMMATION AND PUS FORMATION.

DR. H. BUCHNER gave last year three lectures on the relation of bacteria proteins to the inflammatory and pyogenic process, in which he said that it is generally supposed the proximate chemical cause of inflammation and formation of pus is the presence of decomposing substances, the chemical produce of bacterial cells; but that ptomaines and toxins, and even toxalbumens, are pre-eminently nerve poisons, and in only a few of them, as in cadaverin and putrescin, can a pyogenic effect be traced as well. These substances do not, therefore, explain the inflammatory and pyrexial character of most infectious processes, including suppuration, especially as Lange and Roemer have proved by their experiments that no decomposing substances have any considerable affinity for leucocytes. Substances having such affinity, however, do exist, according to the author, and he has already referred to them in a previous publication. They are parts of the bacillary body, that is, of its plasma—namely, the so-called bacteria proteins, which Nencki had already studied in 1880 without imagining their

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great pathological importance. Dr. Buchner has shown by his experiments that bacteria proteins have the strongest affinity for leucocytes, and that in man they also have an intensely inflammatory effect. A hypodermic injection of a few milligrammes of the protein of bacillus pyocyaneus caused an inflammation which, though non-infectious and free from bacilli, and almost deserving the name of chemical inflammation, presented all the clinical symptoms of erysipelas with lymphangitis; the course of this inflammation is, however, more rapid and more benign, and the general state of health is little disturbed. The author considers that the proteins can exercise their activity only when they have been secreted from the bacterial cell, and that this secretion takes place exclusively when the cell is in "involution"—that is, dying, or at any rate morbidly affected. This also explains why in anthrax of rodents, when virulent bacilli are indefinitely increased in the blood and never die, there is no sign of inflammatory leucocytosis, while a hypodermic injection of very weak or even completely sterilised anthrax culture has a strong pyogenic effect in the same rodents. Of seven different bacilli which the author has been able to experiment upon the proteins of the typhus bacillus seem particularly effective. It is very easy to obtain the protein of Friedländer's pneumonia bacillus, and still more so that of the bacillus pyocyaneus. The protein has the same chemical reaction as all albuminoids, and most nearly approaches in that respect vegetable caseins. The author subsequently experimented on vegetable caseins, especially on the gluten casein of wheat, and the result was remarkably similar to that of experiments with bacilli.

THE HOUSING OF THE WORKING CLASSES.

THE Paddington Vestry, not satisfied with the results of the conference held at the offices of the London County Council on the Housing of the Working Classes Act, invited to a Conference at the Paddington Vestry Hall representatives of those local authorities who were prepared to further discuss the matter, and the first meeting was held on Feb. 20th. This conference endorsed the resolution passed at the County Hall, that the Council should contribute one moiety of the expenses of carrying into effect all schemes comprising an area of five dwelling-houses and upwards, and appointed a committee to further define the conditions which constitute a house so dangerous or injurious to health as to be unfit for human habitation. Certain suggestions on this point were referred to this committee for consideration. We have already expressed the opinion that every house must be taken on its own merits, and that it is impossible to define what is really a question of degree, and we fail to see that the suggestions are any material advance upon the report of the medical officers of health presented to the meeting at Spring-gardens. Other proposals were also referred to the committee which enter into more detail, and among them we note one to the effect that a house is to be deemed so dangerous or injurious to health as to be unfit for human habitation if it be without a dustbin.

TRIGEMINAL NEURALGIA.

IN the *Medical News*, Professor Andrews of Chicago draws attention to a means of relief afforded in those distressing cases where there is a recurrence of the pain after resection of the nerve. A patient of his, on whom he had operated by removing a portion of the inferior division of the nerve, returned after eighteen months again suffering from pain, and begging for an operation. He incised the old cicatrix, and, judging that the end of the nerve was probably attached to the cicatricial tissue, he got hold of that as deep down as he could, and forcibly drew upon it and twisted it until it came away. Although no nervous tissue was discovered in the removed matter, there is no doubt that even if no part of the stump of the nerve was removed very considerable traction was exerted upon it, and to this nerve-stretching the author is inclined to ascribe the relief from pain which followed the operation. This, no doubt, in part at least, explains the result, but it is also in some degree to be ascribed probably to freeing the stump of the nerve from the cicatricial tissue in which it had become involved.

THE PATHOLOGY AND SURGERY OF THE APPENDIX CÆCI.

ALTHOUGH the Clinical Society departed from its usual course and devoted its meeting on Friday last to an adjourned discussion on the above subject, yet it must have been felt at its close that the question had been by no means exhausted. It is one that has of late years come prominently to the front—one, too, in which both physicians and surgeons have an interest. It deals, moreover, with a class of disease of singular frequency, and of varying fatality. To discuss it adequately would require a debate much more prolonged than that which has just been assigned to it. We will therefore content ourselves here with noting some of the points raised in the course of that discussion. In the first place is to be remarked the want of unanimity upon the true nature of so-called typhlitis—a term which is, in the opinion of some, misapplied to the larger proportion of cases that are at present included under it. Although Mr. Treves has apparently gone back from his former belief as to the frequency with which the appendix shares in the production of the symptoms of typhlitis, and although, as Mr. Pearce Gould showed, the diagnosis of "appendicitis" had in some quarters been often very erroneously made, still there is no question that the pathological evidence of an independent inflammation of the body of the cæcum is as rare as the verification of an inflamed and ulcerated appendix in cases of "typhlitis" is common. Drs. Coupland and Kingston Fowler expressed this view strongly, the latter dealing with definite post-mortem facts. Mr. Treves laid some stress upon the palpation of an enlarged appendix through the rectum as serving to distinguish the cases; but he did not state whether this plan had been adopted in the ordinary cases, which recover under the guiding principles of "rest"; and it is certain that "relapsing" cases form no very large proportion of all those in which there is appendix mischief, nor, indeed, that there is more danger in a relapse than in a primary attack. On the whole it will conduce to lucidity if we regard the appendix as the seat of the trouble in all classes of cases—those which resolve and those which lead to more or less extensive perityphlitic suppuration. Mr. Bland Sutton's comparison of the appendix to the tonsil was suggestive, but hardly essential to the argument. For although, as he showed, this structure is richly provided with lymphatic tissue, yet it is by no means certain that its inflammatory lesions are primarily evolved and not excited by fæcal or other impacted contents. As to the results of inflammation and ulceration of this structure, the cases may be grouped under the following heads:—1. Cases where perforation occurs suddenly leading to general peritonitis. 2. Cases where the surrounding inflammation is limited, owing to the formation of adhesions. This class may be further subdivided into (*a*) those where there is resolution of the inflamed products, with or without a liability to relapse;

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and (*b*) those where suppuration takes place, the ultimate issue being uncertain, the pus sometimes burrowing into the tissues outside the peritoneum in various directions, sometimes being more or less confined within a peritoneal abscess, the existence of which is a constant element of danger to life. There can be no hesitation as to the propriety of surgical intervention in these latter cases; but the fact that the progress of the suppurative inflammation is often very insidious emphasises the need for a prompt recourse to surgery whenever possible. A highly interesting point was raised by Mr. Pearce Gould—namely, whether the diseased appendix should be removed or not. He advocated the latter course, trusting to free incision and drainage, and he was supported by Mr. Charters Symonds; whilst Mr. Sutton, in his able reply, contended that this would hardly be an advance upon the old practice, and that it would be wrong to leave behind the source of irritation. The final decision in this matter must be left to the teachings of experience. One thing at any rate may be hoped for as the result of this debate, and that is a prompter resort to surgical interference when the indications point to extension of the inflammatory process to the general peritoneum or the supervention of suppuration.

THE LATE MR. JOHN MARSHALL.

WE would call the particular attention of those among our readers who were friends, pupils, or admirers of the late Professor Marshall to a letter which appears in another column inviting subscriptions to a fund which is being raised to establish a memorial to him in the shape of a bust and prize in connexion with University College, London. While it is becoming that the memorial should be attached to the institution with which Professor Marshall was himself so intimately associated for half a century, it should not be forgotten that the influence of his thought and activities extended over a wider range. Professor Marshall's work was indeed useful and many-sided. He was not only distinguished as an anatomist, a physiologist, a pathologist, and a surgeon; but as President of the Royal College of Surgeons and of the General Medical Council he took an active and important part in shaping recent medical polity, and in both these offices exhibited administrative powers and political insight of a rare and very high order. Indeed, there are not a few who think that, eminent as were his labours in the more scientific and technical departments of professional work, his peculiar and special excellences were most conspicuous in the domain of medical politics and statesmanship.

EPILEPTIC DELIRIUM.

IN the *Centralblatt für Klinische Medicin*, 1891, No. 6, an abstract is given of an interesting paper by H. A. Wildermuth on Epileptic Delirium. The author first treats of the chronic psychical degeneration occurring in epileptics, which has been long recognised and studied, and is characterised by steadily progressing weakness of intellect, which is easily detected, and needs no special description or comment. The transitory delirium or incoherency is more interesting, and demands more attention. It may be divided into two large classes:—1. The psychoses, which are combined with more or less complete loss of consciousness. 2. The psychical alterations, which are not so accompanied. To the first division belongs the epileptic stupor which often occurs in connexion with severe attacks, and which may reach any stage, from total loss of consciousness to the capability of performing simple conscious acts. When consciousness has returned, or partially so, hallucinations are frequent, generally having a grotesque purport, and driving the patients almost to the verge of death from fright, or putting them in a delirium of joy. These forms generally follow an epileptic seizure, seldom replacing it and never preceding it. The second group is far more often met with. In the less marked cases there is only a change of "natural inclination." According to the relation of time which the mental defects bear to the epileptic fit, four forms may be distinguished:—1. The psychical changes are equally distributed over a series of attacks. 2. The morbid condition of mind is entirely different before and after the fits; before it is depression, after exaltation; or this order may be reversed; in the same patient the same sequence is nearly always followed. 3. The delirium is only apparent after the attack has completely passed, and usually takes the form of querulous mania. 4. The psychical phenomena may take the place of a fit. The mental complications are very different when occurring with purely cortical epilepsy; the disturbances of the intellectual balance appear late, and seldom reach an extreme grade, and recovery usually occurs.

NOTTINGHAM METEOROLOGICAL AND MORTALITY RETURNS.

FOR some years past it has been the custom to issue from the municipal buildings at Nottingham a record of the meteorological conditions observed in the preceding year, the records being prepared under the direction of the borough engineer and the medical officer of health. Those issued this year by Mr. A. Brown, C.E., and Dr. P. Boobbyer are, if anything, of even greater value than formerly; and it is especially noticeable that much trouble has been taken in setting out the materials collected, both as to climatic conditions and mortality, in diagrammatic form. Such returns are of great value. Their true worth cannot be judged by single reports, but when the causes of a given disease come to be studied it is important in the extreme to have at hand a trustworthy record of all the complex circumstances which constitute for a given locality that which is known as its "climate." It is because of the paucity of returns compiled with similar exactness and care that our knowledge remains so deficient with regard to the true influence of climate and meteorology in the etiology of disease. With increase in accuracy of notification of disease we may hope to see comparison made between local meteorological conditions and attacks from different diseases. Hitherto fatal attacks have alone been dealt with.

CIRRHOSIS OF THE LIVER AND NERVOUS SYMPTOMS.

IN the St. Bartholomew's Hospital Reports, vol. xxvi., Dr. Ormerod directs attention to a curious and important class of cases in which extreme cirrhosis of the liver is present, and in which the symptoms are mainly nervous. He relates the particulars of one which was under the care of Dr. Gee. The patient was a boy of ten, who had three or four months before admission developed weakness with cramped position of right hand and arm and difficulty in speaking. This condition became more pronounced, and was accompanied by gradual mental impairment, difficulty in swallowing, and finally some affection of the left arm and hand. During the time he was in hospital his condition was characterised by severe attacks of pain, extreme noisiness, and idiotic appearance. The electrical condition of the muscles remained unchanged in spite of the contractures and weakness. During the last three months of life he had occasional attacks of pyrexia, sometimes with profuse sweating; he developed bedsores; the urine became alkaline and phosphatic, and mental hebetude became extreme. The optic discs and fundi underwent no change. At the necropsy the liver was found to be in a state of extreme cirrhosis, and the only lesions found in the nervous

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system were two small, almost symmetrical patches of softening in each lenticular nucleus, and two minute points apparently also of softening in the pons. Dr. Ormerod, in his comments on this case, mentions one or two similar cases, of which, however, he is unable to give full notes; but reference is particularly made to a set of cases recently published by Professor Homen in the *Neurologisches Centralblatt*. These cases were three in number, and the patients were all members of the same family. Their symptoms were giddiness, headache, mental failure, unsteady gait, and difficulty of speech, together with contractures of the limbs, and in two of them there were found, in addition to slight changes in the cortex cerebri, softening in both lenticular nuclei and well-marked cirrhosis of the liver. These cases offer a new problem in symptomatology, for, whatever may be the relation of the slight changes found in the nervous system to the symptoms produced during life, there seems to be little room for doubt that the fundamental morbid condition is the cirrhosis of the liver.

THE INFLUENCE OF EXERCISE ON DIGESTION.

DR. STRENG, in a lecture before the Medical Society of Giessen on the Influence of Exercise on Digestion, which has been published in the *Deutsche Medicinische Wochenschrift*, states that he concludes from his own experiments that this influence is of a retarding nature. His experiments, however, suffer from the fact that he always injected 300 cubic centimetres of water before obtaining the contents of the stomach, so that the proportion between gastric juice and water continually varied. The first experiments in the clinic at Giessen were made on two dogs. Twenty-five grammes of meat, suspended in 300 cubic centimetres of warm water, were twice injected into the fasting stomach, and after one feeding the dogs were compelled to remain for three hours in absolute bodily rest, while after the other feeding they were made to take active exercise. After the three hours the contents of the stomach were obtained and analysed. The quantity did not essentially differ in the two cases; the experiments consequently tended to prove that exercise does not influence the time required for digestion. The chemical analysis also detected no difference. The same results were obtained by substituting the white of an egg for the meat. The experiments were then repeated twenty-five times on three men with healthy stomachs. Two of these suffered from sycosis, and the third from incipient muscular atrophy. They were fed each time with 200 grammes of minced meat, a bun, a plate of bouillon, and three spoonfuls of mashed potatoes, and the contents of their stomachs were obtained four hours and a half afterwards. The exercise after meals consisted partly in gymnastics, partly in walking; absolute rest was obtained in bed. These experiments gave the same results as those on the dogs, the difference resulting from the chemical analysis being especially imperceptible. The author therefore concludes that the gastric function is in no way influenced either by muscular action or by absolute rest.

TUBERCLE OF THE LARYNX.

THE article in *Virchow's Archiv*, Bd. cxxi., by E. Fraenkel, on the Etiology of Tubercle of the Larynx, will well repay perusal. The task the author set himself was to answer two questions: 1. Whether all ulcerations of the larynx in phthisical subjects were to be considered as specific, or whether ulceration may sometimes be due to other causes than the tubercle bacillus? 2. Is tubercle of the larynx the product exclusively of tubercle bacilli in the tissues of the part, or are other organisms also concerned in intensifying the effects and supporting, as it were, the action of the true pathogenic organism? By careful microscopic examination, and also by means of cultivation experiments, the following results were arrived at. The presence of tubercle bacilli in the tissues is the most important factor in the production and further development of the characteristic changes in the larynx; but in a considerable number of cases a secondary infection may take place in the affected tissues by other micro-organisms, such as the staphylococcus and streptococcus. In thirteen out of eighteen cases these organisms were found in addition to tubercle bacilli. It appeared, however, that deep ulceration producing exfoliation of the cartilage is purely the result of the action of the tubercle bacilli. Again, in the ulceration usually designated as "aphthous," or "lenticular," the bacilli were always found. Fraenkel is very strongly of opinion that, according to his researches, the bacilli reach the deeper tissues through the epithelium, although this may be little, if at all, diseased. The number of bacilli present seems to stand in no relation to the intensity of the destructive process. In general, the axiom propounded by Baumgarten and Weigert holds good—namely, the more numerous the giant cells, the less in number are the bacilli. The entry of the streptococcus and staphylococcus is always secondary, the tubercle bacilli invariably lying deeper in the tissues. The phlegmonous process that sometimes occurs may, indeed, be caused by micrococci. In one case in which there was an ulcer in the trachea from which an abscess had spread into the front part of the neck only micrococci could be discovered, and no tubercle bacilli. In reference to the second question quoted above, the author states as his opinion that any marked disease of the larynx in consumptive patients must be considered as the product of the tubercle bacillus; but the results are commonly intensified by the engrafting of pyogenic organisms. Fraenkel only twice found disease of the larynx in tubercular subjects from which tubercle bacilli were absent. In one of the cases there was a shallow ulcer on the inner surface of the arytenoid cartilage above the processus vocalis, this being the only lesion to be seen in the larynx and trachea. In the second case the trachea was the subject of disease, this being undoubtedly of a tubercular nature; but over the processus vocalis was an ulcer in which no bacilli could be found, and which Fraenkel thought was not specific. These non-tubercular ulcers are to be considered as mycotic necrosis of the epithelium, being a similar process to that which occurs in enteric fever.

THE REGISTRATION OF BRITISH NURSES.

THE opponents of the Royal British Nurses' Association held a meeting on the 27th ult. at St. Thomas's Hospital for the purpose of concerting measures to oppose the licence to register the Society without the word "limited" as a part of its title, for which application has been made to the Board of Trade. To say that objections can be urged against the proposed register of nurses is to say no more than that it is like everything else that is human, whether good, bad, or indifferent. It was proved with much energy of conviction that no register could exhibit, and no registration test could determine, all the qualities of a good nurse. All this may be freely admitted, and yet it may prove in the end desirable that a register should be established for the purpose of recording and publishing such facts concerning the qualifications of nurses as are capable of being scheduled. The present is, however, hardly an occasion that calls for a discussion of these general questions. Whether the Royal British Nurses' Association shall be registered by that title or by the title of the Royal British Nurses' Association (Limited) is not an issue which naturally or properly leads to a general discussion of its merits. Its promoters are entitled to registration under the Companies Acts if they satisfy certain statutable conditions concerning the raising and holding of their capital and other property, and they are

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entitled to registration in the way desired if they satisfy the Board of Trade that their Association is formed, not for profit, but for the purpose of promoting "art, science, charity, or any other useful object," and that the intention is to apply the profits, if any, or other income of the Association, in promoting its objects, and to prohibit the payment of any dividend to the members of the Association. We cannot imagine that they will find any difficulty in furnishing this proof, and if so the present opposition will be futile. Under the circumstances it seems to us to be singularly ill timed, for although the considerations agitated at the St. Thomas's Hospital meeting would be very proper to be laid before the Privy Council on an application for a charter, they ought not to affect the decision of the President of the Board of Trade.

EXPERIMENTS TO DETERMINE THE CENTRE OF RESPIRATION.

DR. LABORDE communicates to the "Comptes Rendus de la Société de Biologie" the results of experiments made by him to ascertain the nerve centre for respiration, promising a larger work at some future time. He found that superficial mechanical injury to the region of the alæ cinereæ does not accelerate respiration; a deep puncture decreases, or even temporarily arrests, respiration; if the injury penetrates at least to the middle of the substance, respiration may cease altogether. This result is always obtained if a certain circumscribed portion of the substance is cauterised with the hot iron. This portion need in the rabbit be only half a millimetre in diameter, in the dog from one to two millimetres. The iron must, however, enter immediately above the apex calami, and must penetrate at least half the substance from the raphe. If the injury is unilateral, respiration may continue for some little time on the opposite side. Total separation of the medulla below the apex calami always arrests respiration of the trunk, while that of the head continues for some time. Spinal reflexes continue, and even increase; irregular superficial contractions of the respiratory muscles, leading to no results, may be observed. The increase of the reflex action is especially remarkable in new born animals. No parts of the brain above the medulla oblongata, including the cortex, the corpora quadrigemina, and thalami optici, have any specific influence whatever on the respiratory muscles.

WEATHER CHANGES AND THEIR WORK.

EVERY winter as it passes leaves behind, in evident marks of disease and death, proofs of the close relation at all times existing between man and his constant environment of atmospheric temperature. We have already had occasion to notice the consequence in certain cases of exposure to the mere cold of the recent severe winter, and to trace in them the somewhat unfamiliar evidences of frost bite, systemic and local. We have still more recently had to do with related influences, which, however, belong to another class, and though apparently less violent in their action, are even more dangerous on account of their more insidious and uncertain operation. No sooner has the thaw set in, and a promise of coming spring breathes now and then through the lengthening days, than there come also the petty chills, obscurely localised, of unaccountable origin, prone to be overlooked by the sufferer and those about him, yet full of mischievous possibility. These are the natural accompaniments of the breaking season, the morbid counterpart of those perpetually changing movements of temperature, moisture, and air density, which by degrees and with some amount of bodily illness and discomfort will bring us forward to more equable conditions. To find these latter will be Nature's fee to tried and enduring organs, but some will have perished in the trial. Perhaps not a few even of the stronger constitutions, endowed with much elastic vitality, will not have met without grave change and peril the swift variations of weather which we have lately had to face. Certainly we may say that when spring is reached many of the feeble young and the time-stiffened aged will not have safely passed through the daily alternations of frost and balmy sunshine, with sudden gales and chill overburdening fogs, but will have found among them the end of their earthly way. For all, but especially for such as these, avoidance is the truest caution. But this is not always possible, and careful management of the person therefore becomes an imperative and somewhat anxious duty. In particular, let us urge the necessity of warm woollen clothing. No form of clothing is equally protective. Further, it is to be hoped that the public may be wise enough to summon their trusted medical advisers to treat at the outset the beginnings of illness, or to follow out by consecutive measures the morbid changes immediately following. By the time that a mere chill has developed into pneumonia, for example, the fittest opportunity for treatment is already passing away, for in this class of diseases we must sow betimes our remedies if we would reap success.

MEDICAL REPORTS AND THE PROOF OF INSURANCE CLAIMS.

WE receive from time to time complaints from so many medical practitioners of the demands which are made upon them in connexion with the proof of claims upon insurance offices arising upon the death of patients that we have thought it desirable to inquire fully into the subject, and to state for the benefit of the profession generally the result of our inquiries. The practice which gives rise to this discussion is this: When a claim is made upon an office two things have necessarily in every case to be proved—namely, the death of the person whose life was assured, and the title of the person claiming to receive the proceeds of the policy. Most offices, however, stipulate for something more than this—that is to say, for a report by the medical attendant upon the fatal illness. Such a report is interesting to the paying office in many ways. It adds statistical materials to the records of the case. It serves in some cases of long-standing illness to detect a concealment or deception that may have been practised upon the office at the time of effecting the insurance, and it affords very valuable evidence of the identity of the deceased person. All these are points upon which the directors of the company may reasonably enough desire to be satisfied; and if they have stipulated with their policy holder that such evidence shall be given, they may reasonably enough ask to be satisfied at his expense. It appears probable, however, that the demand is made in behalf of some companies which have no right to insist upon it, having undertaken, as the phrase runs, to pay on proof of death and title. When that is the case the demand ought to be resisted by claimants, but the practice is now so general that a claimant seldom knows whether he is liable to satisfy it, but always assumes that he is. He therefore asks the medical attendant to fill up the form, and becomes liable to pay him the fee for so doing. But he commonly expects to get it done gratuitously, and we believe that the custom of many practitioners is to acquiesce in this course. In the circumstances it must no doubt be left to medical men to deal as they think proper with every particular case. We entertain no doubt that the legal right is what we have indicated above. If the offices became liable in these circumstances to pay the fee, there could be no difficulty or delicacy about exacting it. Unfortunately, however, that is not the case, for the practice, and we believe invariable practice, is to ask not the medical

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attendant, but the claimant, to provide such a report. This interposition of his patient's representatives at such a time between him and the office is undoubtedly a hardship to the medical attendant. The difficulty in the way of its removal is, however, so far as we can see, insuperable. The claimant must necessarily be the paymaster, and as the office stands in a more or less hostile attitude to him, it is not likely to take any part of the burden off his shoulders.

THE DISFIGUREMENT OF KENSINGTON GARDENS.

IN order to justify, if that be possible, such an evident barbarity as is contemplated by the Paddington and Kensington Subway Bill, there must at least be the prospect of great public advantage or the proof of a great public necessity. Neither of these conditions has up to the present time been shown to exist. On the contrary, there is already very free communication by road and rail between the parishes already mentioned. Yet it is proposed, with little or no reason beyond that afforded by the mere enterprise of speculation, to deface one of the most tastefully planted and most popular of the larger parks with which London is favoured. It is not therefore surprising that under the circumstances Mr. Plunket was recently questioned at some length in the House of Commons as to the scope of the proposed measure, and it is evident that so important a matter as the preservation of this beautiful area has been far too little considered. Among other matters, we learn that a number of trees will be permanently destroyed. This is hardly suggestive of subterranean transit under ordinary conditions, but is rather indicative of an overground route, which, whatever its advantage from a commercial standpoint, could not fail to disfigure the park, and, in our opinion, quite needlessly. The Bill has already passed a second reading, but we have it on record, by way of consolation, that the Select Committee, the subscribing public, and, lastly, Her Majesty, who is the final custodian of this Royal gift to the metropolis, may refuse to sanction the proposed very material alterations in its character. There can be no doubt that the scheme in its present form is impossible, and it clearly behoves the committee, to whom its future course is now for a time entrusted, either to refuse it altogether as a needless and vandalic undertaking, or to ensure for the subway a passage which will be undestructive, underground, and unobtrusive.

SURGICAL TREATMENT OF PULMONARY CAVITIES.

THE bold endeavour to radically attack phthisical cavities and drain them, although introduced some years ago, has been lately receiving fresh advocacy, especially in relation to the treatment of phthisis by Koch's "tuberculin." Many of the dangers of this remedy in advanced cases of phthisis rest upon the retention of necrotic material within the lung, and the liability to its being inhaled into previously unaffected areas. Dr. Sonnenberg recently operated upon four cases undergoing this treatment, and Dr. E. Leser of Halle reports two more.[1] One of these was a female aged forty-three, who had had symptoms for four years, and presented physical signs of excavation at the left apex. The operation consisted in making an incision in the first intercostal space, seven centimetres long, and, after dividing the muscles and securing blood-vessels, introducing a trocar in the direction of the cavity. Although no fluid could be obtained, it was evident that the point of the trocar was in the cavity, and the pleuræ being firmly adherent, an aperture was bored through the layer of tissue overlying the cavity by means of a Paquelin's cautery, the trocar being taken as a guide. The cavity was the size of an apple, had somewhat irregular walls, and was coated with flakes of inspissated pus and caseous matter; these were removed, and the cavity stuffed with antiseptic gauze. Subsequently the patient was injected with Koch's "tuberculin," which always caused increased discharge from the cavity; and later still some of the fluid was directly introduced into the cavity itself. At the last report the patient had improved much in general health, and the cavity had dwindled to one-half its former size. The second case, a man aged forty-two, was similar, except that in him the cavity was no larger than a chestnut, and was situated at the right apex. Here, too, the use of tuberculin produced increased discharge, and on one occasion its direct injection into the cavity was followed by severe vomiting, dyspnœa, and other alarming symptoms. Dr. Leser, however, thinks this mode of treatment has a future before it. At present he would make it a *sine qua non* that the costal and pulmonary pleuræ should be firmly united, as they usually are when cavities are of some standing; and he enters fully into the technique of the operation, laying stress upon having a fairly large incision through the thoracic wall, but not a very large aperture made in the lung, since this will be sure to increase by sloughing. The notable feature of these cases seems to be the immediate relief to cough and expectoration given by the external opening, although, when the injections are resorted to, the secretion becomes so much more abundant.

[1] Münchener Med. Woch., Feb. 24th.

LENTEN FASTING.

A TENDENCY to asceticism is not a distinguishing feature of the British character, and it naturally follows that the austerities of Lent have no very wide prevalence among us. Systematic fasting still is observed indeed, but it is at best the custom of a considerable minority. Yet it cannot be said that the practice in itself is necessarily an unwholesome one. In some cases and in due measure it is probably advantageous in a physiological sense. In others it is, judged by the same standard, but little to be recommended. The habitual and full flesh-eater, for example, may well intermit his daily round of two or three meat meals by allowing an occasional fast day, and the rest thus afforded his overdriven digestive organs will be repaid in his present comfort and their subsequent healthy action. We might even go so far as to say that few persons in robust health would not rather benefit than otherwise if the more stimulating elements in their food were at stated intervals, say, once a week, omitted or reduced in favour of the more bland. There are, however, other persons whose condition is at any time under par, and these may nevertheless, nay often do, exhibit an almost abnormal zeal for abstinence. Here, again, physiological rule is in danger of infringement. In such cases fasting in any strict sense, whatever its moral relation to the soul of man, amounts to a sin against his body. A clerical writer, on fasting in Lent, sees fit to rally the medical profession on its assumed reluctance to control those excesses in diet which provide it with occupation. We will not mistake for earnest a jest so trite and so manifest. The above remarks, however, will serve to show that medical practitioners are careful above all to inculcate moderation as the rule of life, and to impress its importance upon the too eager and self-afflicting spirit no less than on the unbridled appetite. Since it is, after all, the physical condition which must qualify or disqualify in a matter of this kind, it is obviously advisable that anyone desirous of fasting should consult his medical adviser before so doing.

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FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Dr. Laufenaur has been promoted to the full rank of Professor of Mental Diseases.

Erlangen.—Professor Leo Gerlach has been promoted to the chair of Anatomy, Dr. Friederich Hermann taking his place as Prosector, with the rank of Extraordinary Professor.

Florence.—Dr. A. Lustig has been appointed Extraordinary Professor of General Pathology.

Giessen.—Dr. Hoingman has been recognised as *privat-docent* in medicine.

Heidelberg.—Dr. Hofmann has been promoted to the chair of Nervous Diseases. He was a pupil of Erb, and has been his first assistant for several years.

Rome.—Dr. Conasanti has been appointed Extraordinary Professor of General Pathology.

Vienna.—Dr. A. Edler von Rosthorn has been approved as *privat docent* in Midwifery and Gynæcology.

AT the meeting of the Royal Medical and Chirurgical Society next Tuesday, March 10th, Dr. Hale White and Mr. Golding-Bird will, between 8 and 8.30 P.M., before they read their paper, demonstrate by means of the phonograph the peculiarity of speech to which the term "Idioglossia" has been applied. The children as improved by treatment will also be shown. Dr. F. Taylor and Dr. Hadden will also show cases.

AT the next meeting of the Hunterian Society on March 11th Dr. Hughlings Jackson will exhibit Phonogram-talking of a Patient the subject of Disseminated Sclerosis.

AT the meeting of the Medical Society of London on Monday next, the adjourned discussion on Angina Pectoris will be opened by Dr. Lauder Brunton.

MR. HERBERT F. WATERHOUSE, M.D., C.M. Edin., F.R.C.S. Eng., has been appointed Assistant Surgeon to Charing-cross Hospital.

DR. H. P. HAWKINS has been appointed assistant physician to St. Thomas's Hospital.

PROFESSOR KOCH'S TREATMENT OF TUBERCULOSIS.

PROFESSOR VIRCHOW, at the meeting of the Berlin Medical Society on the 25th ult., again referred to Koch's treatment, and showed some specimens in illustration of his remarks. He doubted whether the statement by Dr. B. Fraenkel, as to the duration of miliary tubercle, based on inoculation experiments, was correct—namely, that a period of three weeks is required for its development. The question was one to be decided by clinical observers, for it could not be determined by pathologists. If one were to admit that in all those cases in which miliary tubercle is found this has been present before the injections were practised, then a much longer extension must be given to the duration of miliary tubercle than has hitherto been assigned to it. A distinction in this respect must be made between local tuberculosis and the general acute disease which creates such marked constitutional disturbance. He detailed a case of pleuritic effusion under the care of Professor Leyden, in which phthisical signs, with laryngitis and fever, developed whilst under treatment by Koch's injections, death supervening four weeks after the first injection. In this case there was very marked general miliary tuberculosis,—submiliary granulations occurring in liver, kidneys, thyroid, larynx, and in parts of the peritoneum, including the recto-vesical pouch, as well as in the lungs, which were also the seats of old apical mischief. Here was a case which certainly did not come under the class referred to by Dr. Fraenkel, for it had been long under observation and had been injected before the supervention of the acute tuberculosis. Professor Virchow also showed a lung from a patient who had received eight injections which presented a large caseous mass in process of separation, and an intestine exhibiting a very marked eruption of tubercles and implication of the lacteals in the vicinity of ulcers.

Professor Cantani of Naples, in giving the results of his experience with Koch's remedy (*Berl. Klin. Woch.*, No. 9), points out that the important part of the method is the production of local reaction, which in some cases occurs without any general febrile disturbance. This local reaction, he said, is nothing else than a quickening of the natural processes whereby the organism seeks to get rid of the *materies morbi*. He found more marked improvement in cases where there was no fever and only slight local reaction—cases in which the commencing doses were very small, and their repetition with slight increase in quantity made at some intervals. He further explained that many of the alleged dangerous results of the treatment are prone to occur in the spontaneous course of tubercular disease, but may occur more readily and rapidly from the hastening of the necrotic process by the injections. Nor should the result of every case that is fatal whilst undergoing this treatment be assigned to the latter; and he did not doubt that when the time came for a full survey it would be found that the favourable results would counterbalance the unfavourable. As to the prospect of Koch's fluid curing tuberculosis, Professor Cantani remarked that the changes observed in lupus were very hopeful. In the lungs the physical signs denote the occurrence of similar changes to those observed in lupus, and the increased bacillary expectoration was evidence of the focus being destroyed. But the impediment to the free removal of the necrosed area in the case of the lungs was against marked progress, although this was noted in some cases. The laryngeal cases showed more obviously the local improvement. Professor Cantani points out that phthisis embraces not only tuberculosis, but other septic processes due to the presence of pyogenic organisms; so that in advanced cases little can be expected from the treatment, which in such must be followed with the greatest caution, if at all. He did not think the time had arrived for a definite conclusion to be formed as to the efficacy of the method in phthisis, and deprecated too great enthusiasm on the one hand and depreciation on the other as contrary to the interests of truth. The remedy was new and its effects striking, but it must be further studied before its practical value is appraised. At any rate, Koch had shown the path to be taken by bacteriology in the future, and the progress of knowledge would cause its further extension.

At the Aerzte Verein in Prague last week Professor Chiari gave an account of seventeen further necropsies on cases of tuberculosis treated with Koch's fluid. He divided them into two main groups. In seven, mostly in children, the doses had been small and the results were mostly negative. In one case—a woman—temporary extension of the dulness was noted clinically, but nothing was noticeable post mortem. In the second main group distinctive reactive changes were always present. He placed them in three classes: 1. Cases of severe tuberculosis. 2. Surgical tuberculosis. 3. Miliary tuberculosis apparently contemporaneous with the injections. The first class all showed the hyperæmic exudation to which he drew attention in his first cases. In one case where there was laryngeal ulceration the appearance of the tuberculous tissue was much more necrotic than usual. In another, where two distinct ulcerations could be seen with the laryngoscope some time before death, the aid of the microscope was necessary to show its existence post mortem, when one very small (healing?) ulcer was detected. The other seemed quite healed. In another case, where the tuberculosis was extensive, almost the whole lung was in a condition of hepatisation, and there was hardly any air-containing tissue left. In the bronchial glands in this case the miliary tubercles appeared almost like sequestra. The second class seem to promise most for the success of the treatment, as some ulcerations appeared to be almost healed. In one

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case, where there was also a tuberculous nodule in the lung, it was surrounded by a species of colloid matter. The third group compels the most serious consideration. Two cases of not very severe tuberculosis after the second injection developed miliary tuberculosis. In conclusion, he dwelt on the power of the injection in causing inflammatory hyperæmia, and re-enunciated the caution about using the fluid where there is extensive disease, as the reaction may practically obliterate the patient's already diminished breathing space. Curative processes were sometimes distinctly present. The cases of miliary tubercle, though demanding most serious consideration, were too few to draw any definite conclusion from. In answer to Prof. Jakseh, he said that he had not examined the blood, as the process was so unreliable post-mortem.

ROYAL SOCIETY.

THE following are abstracts of three papers read on Feb. 5th by Dr. ANDERSON STUART, Professor of Physiology, Sydney University:—

On the connexion between the Suspensory Ligament of the Crystalline Lens and the Lens Capsule.—The common teaching is that there is a direct continuity of substance between the suspensory ligament and the capsule of the lens, but an observation by the author of the paper seems to indicate that the ligament is only cemented to the capsule. On opening eyeballs in an advanced state of decomposition (putrid), he found the lens in its capsule perfectly free, and no indication of any rupture of tissue along the line of attachment of the suspensory ligament. This ligament was found intact, projecting from the collapsed vitreous body as a sort of frilled ring with a free edge. These points are best seen after the Gross staining of the structures, as described by the author in the *Journal of Anatomy and Physiology*. The observation bears upon the still unsettled question of the development of the lens capsule, and upon cases of detachment of the ligament from the capsule, of atrophy and solution of the ligament, and of luxation of the lens.

A Simple Mode of demonstrating how the Form of the Thorax is partly determined by Gravitation.—Remembering how potent and how constant is the action of gravitation, and arguing that the segments of the thorax were so many rings of more or less elastic matter, the author concluded that if similar rings of any other elastic material were suspended in the same way, the form of the thoracic segments should be reproduced, provided there intervened no other condition strong enough to counteract the action of gravitation. The author finds crinoline steel most convenient, though bands of paper do very well. The forms of the thoracic segment of the quadruped, of the human fœtus, and of the human adult are necessarily reproduced if the hoop be held between the finger and thumb and gradually turned from lying in the vertical to lie in the horizontal plane. The complete reproduction of the features of the human adult thorax at its most characteristic level is most striking; this is when the steel as usually sold is some six feet long and half an inch wide. As the hoop is made smaller the forms of the higher segments appear in succession. The points that are thus reproduced are so numerous and simultaneous that the author cannot believe them to be mere coincidences, and concludes, therefore, that gravitation has had a greater influence in determining the typical form of the chest than would generally be admitted. This is supported by the shapes assumed by the steel rings when the mode of suspension is varied from the normal, as in deformities of the vertebræ; here the particular form in the individual—the thoracic deformity—is more or less accurately reproduced.

On a Membrane Lining the Fossa Patellaris of the Corpus Vitreum.—The existence of a membrane here had been the subject of discussion *pro* and *con.* till 1886–87, when the matter was considered by some to have been finally set at rest by Schwalbe, who decided against it in very clear and explicit terms. According to his description the vitreous jelly itself lies against the lens capsule and forms the posterior boundary of the canal of Petit, if such it could be called, for the canal, he says, is merely to be compared with the other clefts in the vitreus. Any membrane that had been seen he declares to be an artificial product the result of the action of reagents. The author, however, finds that in the perfectly fresh, unaltered eye, after the removal of the lens and its capsule the membrane may be raised off the jelly, and that when stained and mounted it does not disclose any structure. Isolated and tied over the mouth of a test-tube, the membrane from a four year old ox sustained a column of forty inches of water, and a somewhat smaller column than this may be sustained for days. Isolated and dried it forms a delicate membrane. It is thinner in the centre where it lies against the lens capsule, thicker peripherally where it forms the posterior wall of the canal of Petit, which is thus a true canal. The line of separation of the two parts is fairly sharp, and when the entire vitreus is squeezed the middle of the anterior face may be seen to bulge more than the periphery does. The sun's rays concentrated upon it show fluorescence as marked as in the case of the hyaloid, and at a puncture the fluorescent sharp edge of the membrane is strikingly distinct from the glassy appearance of the jelly showing through the hole. Treated with picro-carmine by the Gross method of staining (described by the author in the *Journal of Anatomy and Physiology*), the membrane is red, the jelly is yellow, and now its wrinkles, as the vitreous floats in the water, are seen just as in the case of the hyaloid. In successful meridional sections of the eyeball the membrane is seen *in situ*. For ophthalmological practice a knowledge of the existence of this membrane is most important, and the observations of ophthalmologists strongly support the author's observations.

EMERGENCY RELIEF DURING THE GREAT FROST IN PARIS.

CONSIDERABLE surprise and admiration have been expressed throughout Europe at the prompt and wholesale character of the relief given to the homeless in Paris during the recent severe weather. Casual wards had already been established in Paris, where applicants may receive hospitality for three nights. They are given a good douche, a bowl of soup in the evening, a piece of bread in the morning, and their clothes are stoved and disinfected during the nights. The accommodation thus afforded in normal times by the municipality amounts to 244 beds at the Quai Valmy refuge, 225 beds at the Rue Châteaux des Rentiers, and 200 beds for women at the Rue Fessart. There are also night refuges organised by private charity in the Rue St. Jacques for 130 women and fifty children, and in the Rue Labatt for forty more women. For men there are 140 beds in the Rue de Tocqueville, 250 in the Rue Charonne, and 210 in the Boulevart Vaugirard. Thus in normal times the Municipality provides 669 beds, and private charity 820. The help thus given contrasts favourably with our English workhouses and casual wards in the sense that nothing is done to humiliate the recipients of the relief. It is considered that they are entitled to the hospitality given, at least in the municipal refuges, as a sort of return for the taxes they have paid in more prosperous days.

When the great winter set in the 1489 beds mentioned above were rapidly filled, and the doors of the Municipal Councillors, who consent to receive applications from inhabitants in distress, were besieged by starving crowds. Dr. Paul Brousse, Vice-President of the Municipal Council, received in one single morning 280, all from his own district, which consists of but one-eightieth part of Paris. A great number of these applicants had been driven from their homes through inability to pay the rent, and therefore could not receive relief from the Assistance Publique, as inquiries must first be made at the domicile of the applicant. Dr. Paul Brousse—and we are glad to note that what was done was due to the initiative of a member of the medical profession—called in M. Thuillier, a fellow Municipal Councillor, as a witness of this distress, and together they applied to M. Alphand, Prefect of the Seine, insisting on immediate action. M. Alphand responded by at once establishing eighty braseros, or open fire-grates, in the streets, so as to revive those who were weakened by the cold. Half an hour later Dr. Brousse and his companion called on M. Peyron, the Director of the Public Assistance, who declared that stretchers were blocking the space between the beds in the hospitals, so great was the crush of the sick poor. Proceeding to M. Menant, Director of Municipal Affairs, who

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has in his charge the night refuges, it was at once agreed that supplementary night refuges must be opened. The bureau of the Hôtel de Ville was convoked by urgency, and with the greatest promptitude it organised relief in a wholesale manner. What is most remarkable is the readiness with which Dr. Brousse's efforts were supported by the authorities concerned, the absence of red tapeism, and the rapidity of the action taken. Abroad we have heard principally of the night refuge, which held some 2000 persons, organised in the art galleries in the exhibition palace of the Champ de Mars, and the pavilion where 100 women received shelter. But other supplementary refuges were opened in the Gymnasium Voltaire for 800 persons, in the gymnasium of the Rue d'Allemagne for 330, in the Rue Cléraut for 180, in the Rue Pajol for 200, in the Rue St. Maur for 190, and in the Rue Jenner for 30 women. Altogether an average population of 3900 to 4000 was provided in these supplementary refuges with food and sleeping accommodation. The maximum reached on any one day was 4500. The beds consisted of a straw mattress and a military rug provided by the War Department, and the Municipality provided the management, the premises, and soup morning, noon, and evening. Soup was also given to those who did not sleep at the night refuges, but who declared they were in want. Altogether as many as 24,000 servings of soup were given out in a day. This soup was made of dry vegetables, such as haricot beans, peas, lentils, salt, and lard. Bones could not be obtained at a sufficiently low price or in large enough quantities, and of course all green vegetables were exorbitantly dear during the frost. It is calculated that the soup cost about seven centimes per portion; a little more than a halfpenny, and a little less than three farthings. At this rate two persons would be fed for three halfpence; and the lard was found a fair substitute for meat. Soup of this description still continues to be distributed at all the refuges throughout Paris to the poor in the neighbourhood. Though the weather is now much milder, 17,000 portions of soup per day were given out last week.

Of course, it will be objected that such widespread charity, distributed without question or check, must tend to pauperise a number of people. This is not the view the Parisians take of the matter. They argue that it must tend to maintain the vitality of the race and to prevent illness and death. Undoubtedly many of the recipients were unworthy objects; but it was practically impossible to separate the chaff from the corn. The object in view was to save life and not to inquire into the moral character of those who were evidently suffering. The difficulty that does cause some anxiety, and even alarm, is the necessity of closing the temporary refuges opened during the exceptional stress of the weather. Of course, a considerable number of the occupants of the refuges have obtained work and have left, but some 2500 still remain, and among these are the individuals who are the least worthy of sympathy. They were naturally the first to come, and will be the last to go. As the weather is now milder, and there is no longer the same excuse for the distress, questions are put to those who remain in the refuges. Of the 2000 at the Champ de Mars it was found that 1200 had their papers in order, and could give satisfactory explanations of themselves. No less than 600 had flocked into Paris from the outside rural districts as soon as they heard that relief was so freely given in the capital. Arrangements will be made to send them back to their native districts. Of the thousands helped only some 500 persons seemed reluctant to give explanations about themselves or allow inquiries to be made. Setting down the number of persons received in the night refuges established to meet the exceptional distress at an average of 4000, the advisability of helping some 500 of these is open to question. Admitting that it is not right or expedient to give relief to a criminal or an incorrigible idler—and it is questionable whether even the 500 can be thus defined,—is it not better to commit this mistake with regard to the 500 dubious cases rather than neglect the 3500 other and more worthy persons? If one in every eight is undeserving, public health would be gravely compromised by the abandonment of the seven because some doubts are entertained about the eighth. Such neglect is all the more inexcusable when we consider how very small is the cost of relief like that given in Paris. There was, of course, no rent to pay, as the edifices used belonged to the Municipality. The bedding, provided by the Ministry, was certainly not worth more than eight shillings, or ten francs at the very outside. The 4500 to 5000 beds of this description cost, let us say, £1800. The bedding has not been destroyed, no attempt was made to steal any of the rugs, the wear and tear has not done more than deteriorate this property to the extent of a few hundred pounds. The management of the refuges and the distribution and the making of the soup cost, in all, £60 a day. For this very small sum, thousands of persons have been saved from the intense rigour of the winter, and all the horrors of starvation. It is not often our pleasure to record that it has been possible to accomplish with so small a sum so great a good. The braziers, on the contrary, cost £80 a day, and the heat they gave out, lost in the space of the streets, was of comparatively small service, though the expense was considerable. These fires were consequently not maintained for long.

In conclusion, we would urge that the Paris Municipality has shown us how relief can be organised very promptly, on a very large scale and for an extraordinarily small outlay. When the winter is as rigorous and the distress as exceptional as they were during January, such wholesome relief, given without hesitation, stint, or question, must have materially helped to preserve life and prevent illness.

NOTIFICATION OF DISEASES ACTS.

ON Tuesday, March 3rd, at the Clerkenwell Police-court, before Mr. Bros, Mr. Frederick Lefevre Milburn, M.R.C.S. &c., appeared in answer to a summons taken out at the instance of the vestry of Clerkenwell, charging him, under the Notification of Diseases Amendment Act, with having neglected to report for five days a case of typhoid fever which had come under his care. The case was instituted in order to ascertain the meaning of the words of the Act which require that notification shall be made "forthwith."

The first witness called was the mother of the child, who stated that in February last her child suffered from typhoid fever, and was attended by Mr. Milburn, who informed her of the nature of the disease on Feb. 12th, having mentioned to her on Monday, the 9th, that there were symptoms of typhoid fever in the case. At this point the prosecutor intimated that he could not carry the case further, as the evidence of the witness was at variance with what he had been informed had happened.

Mr. M. A. David, Barrister-at-law, instructed by Messrs. Rookes and Co., who defended the case at the instance of the Medical Defence Union, stated that as a matter of fact very serious reflections had been thrown upon the defendant on account of a total misapprehension of the circumstances. As he understood the facts from Mr. Milburn, they were exactly as the witness had stated. It was perfectly true that on Feb. 8th the doctor had been consulted, and it was most important to see what was the nature of the disease. On Feb. 9th there were certain symptoms much more developed, but it was not until the evening of the 12th that the medical man was able to determine by the general symptoms that the case was one of typhoid fever. Having done so, Mr. Milburn did not even trust the post, but on the morning of the 13th he actually delivered personally the notice that is required by the statute. It was perfectly clear that this was giving notice forthwith in accordance with the provisions of the statute. Typhoid fever was very difficult to determine until many days after the incipient symptoms had appeared, and he had come prepared with six medical gentlemen to give scientific evidence in support of that contention. He hoped his Worship would at least say that there was no reflection on Mr. Milburn, and that the whole matter had evidently arisen from some misconstruction placed upon something that the witness had told the inspector.—The Prosecutor: It may have been that some error has been committed, but the witness told both the medical officer of health and the inspector that five days had elapsed before notification, and they were quite willing to enter the box, and swear to that fact.

Mr. Bros thought the case very important; and under the circumstances, although the case could not go on, he had allowed the counsel for the defendant to make a public statement. The case ought never to have been brought there at all; and to mark his sense of the gravity of the mistake he would, although no application had been made, allow one guinea costs.

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PROPOSED REGISTRATION OF MIDWIVES.

DEPUTATION TO THE LORD PRESIDENT.

A DEPUTATION from various medical bodies had an interview with Viscount Cranbrook, the Lord President, at the Privy Council Office, on the 27th ult., in support of the Bill introduced by Mr. H. Fell Pease, M.P., for the educational examination and registration of midwives. Dr. Farquharson, M.P., introduced the deputation.

Dr. FARQUHARSON said they came less in support of a particular Bill than in the interests of general legislation required by the community. It would be an advantage if the Government could grant a select committee, before which the subject could be thrashed out, and evidence taken.

Mr. SIBLEY said that in all other countries midwives were more or less under State control, but in England any woman, although ignorant and unqualified, might call herself a midwife, and practise as such. The Obstetrical Society and two or three other bodies now granted certificates, but it was most needful that all professing midwives should have to pass through a definite course of study and examination.

Mr. FELL PEASE, M.P., said he would be ready to withdraw the present Bill if the Government would appoint a select committee on the subject.

Dr. GRIGG said it had been found that of the number of women delivered in Edinburgh, for instance, 1 in 120 died within a month after delivery; and in other places he had found the proportion to be at least 1 in 100. It was often not until the last gasp that the medical man was called in.

Dr. JAMES AVELING said the services of midwives were indispensable to many of the poor who could not afford to employ medical men, and, moreover, the midwife combined the functions of the medical man and the monthly nurse. Public safety demanded legislation. There were in this country 900,000 births per annum, and of this number midwives attended about 500,000. The average mortality in childbirth was about 1 in 200; but it was found that in the cases undertaken by such trained midwives as were employed in lying-in hospitals the mortality was only 1 in 600. If this reduced rate of mortality could be extended generally, it would mean an annual saving of the lives of 3000 mothers. As midwives had at childbirth the care of two lives, it followed that the midwives of this country had annually under their care no fewer than one million lives. Surely this was a sufficient reason for legislation. It had been said that the medical profession was divided on this subject, but he believed the opposition to be an energetic minority, which did not include eminent obstetricians.

Dr. BARNES said he also thought it was most desirable that midwives should be made responsible to society through recognised bodies, so as to check illegal practices.

Dr. PLAYFAIR said he was quite satisfied that most of the objections which had been urged against the Bill were fictitious and untenable or capable of being easily overcome. It was clear that, as such a Bill could not be retrospective, existing interests must be recognised and protected.

Lord CRANBROOK, in reply, said he thought it might be taken for granted that there was an almost unanimous desire to improve the qualifications of midwives so far as it was possible to do so by legislation. More than twelve years ago there was an attempt in a Government Bill to deal with the subject, but that provision had to be taken out because of the opposition it encountered. He found there were now considerable objections taken to the County Councils having anything to do with the matter, nor was favour extended to the idea that the Privy Council as a lay body should decide the difficult question as to what was a *bonâ-fide* midwife. He would not himself like to venture upon a definition, and he did not know where he could get responsible medical advice which would enable him to lay down rules under which midwives could come upon the Register. Difficulties also arose in connexion with the protection of the interests of existing midwives, and from the fear that the legislation proposed might deprive many country districts of any midwives at all. Many of them might not be able to go to the expense of the prescribed education without making such increased charges as would disqualify them from getting such employment as they now obtained. Was it to be laid down that the mere fact of practising as a midwife after a prescribed date should be of itself considered an offence? Hitherto in this country there had been no such exclusion, and he could not help thinking that in a number of country districts the women who now undertook these duties would still be called in by the poor and would still occupy the position that they do now, even without the registration, on account of the cheapness and under a general belief that, after all, there were few cases in which serious difficulty arose. He had great difficulty in making out who was to lay down the proposed rules of education for midwives, who was to keep the Register, and who was to be responsible for it. Medical men were divided in opinion, and the Medical Council was understood to a certain extent to reject the position which would naturally be assigned to it. It would be impossible for the Privy Council to act satisfactorily in this matter unless it was supported in an official and responsible manner by the medical profession, which support at present was not forthcoming. With regard to the suggestion of a select committee, he could not at present give an answer to it, for he had not yet had an opportunity of laying the suggestion before his colleagues, and he would have to consult them. Speaking for the Government, he could not this year support the Bill which Mr. Pease had brought forward; nor did he think there would be a chance of amending it this year in a manner satisfactory to the medical profession, the public, or the midwives already in practice. With regard to the whole question, he would give it his careful consideration, and would be glad if he could meet the wishes of this and other bodies in a way which might be calculated to give the satisfaction which, he was afraid, they could not get by attempting to pass a Bill this year.

The deputation then withdrew after Dr. Farquharson had thanked the Lord President for receiving them. Earlier in the afternoon a large deputation of ladies from various nursing associations &c., introduced by the Countess of Aberdeen, had an interview with Lord Cranbrook for the purpose of urging reasons in favour of the same Bill.

THE LONDON HOSPITAL.

MR. J. H. BUXTON presided at the quarterly Court of Governors of this hospital on Wednesday last, and, in moving the adoption of the report, took occasion to correct an error he made at the last meeting in reference to the number of nurses who had been dismissed by the matron. What he should have said was that eight engagements had been terminated by the matron during the last two years. On the subject of nursing he had nothing to say except that it had been very much in the minds of the committee, who were always glad of advice and criticism, to do what they could to perfect that branch of the hospital. At the present time they were in the middle of a scheme for an alteration in that department. Nothing definite had yet been adopted with the exception of appointing two men to do certain work which had hitherto been done by the nurses.

Mrs. Hunter said that the chairman's correction was an important one, and if anything had been wanted to confirm her convictions respecting the nursing department, it had been furnished by the report. Undue responsibility had been laid on the nurses, who did not receive the pay, but had to do the work of the staff nurses, and the anxiety so occasioned tended to produce the collapse which finally occurred. The question relative to the sending of nurses to private patients had not been met by the report. She pointed out that one-fourth of the nurses, after having been selected by the matron, were afterwards rejected. She suggested that a subcommittee connected with the nursing department should be appointed to consider the questions relating to the nurses of that institution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6210 births and 4620 deaths were registered during the week ending Feb. 28th. The annual rate of mortality in these towns, which had increased in the preceding three weeks from 19·8 to 21·6 per 1000, further rose to 24·1 last week. The rate was 23·7 in London and 24·4 in the twenty-seven

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provincial towns. During the past eight weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·5 per 1000, and exceeded by 0·5 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·8 in Plymouth, 14·6 in Derby, 18·3 in Hull, and 18·4 in Portsmouth; the highest were 28·6 in Bristol, 30·4 in Huddersfield, 33·9 in Halifax, and 38·9 in Blackburn. The deaths referred to the principal zymotic diseases, which had increased from 332 to 381 in the preceding three weeks, further rose to 431 last week; they included 150 from measles, 139 from whooping-cough, 52 from diphtheria, 37 from diarrhœa, 30 from scarlet fever, 23 from "fever" (principally enteric), and not one from small-pox. No deaths from these diseases were recorded in Brighton, Norwich, Plymouth, Wolverhampton, and Cardiff; while they caused the highest death-rates in Leicester, Bristol, Huddersfield, and Blackburn. The greatest mortality from measles occurred in Leicester, Huddersfield, Bristol, and Blackburn; from scarlet fever in Derby and Preston; from whooping-cough in Leicester, Huddersfield, and Halifax; and from "fever" in Birkenhead. The 52 deaths from diphtheria included 32 in London, 4 in Birmingham, 4 in Manchester, 3 in Liverpool, and 3 in Sheffield. No death from small-pox was registered in any of the twenty-eight towns, and one case of small-pox was under treatment in the Metropolitan Asylum Hospitals on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1242, and showed a further decline from recent weekly numbers; the patients admitted during the week were 80, against 97 and 113 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding three weeks from 428 to 524, further rose last week to 685, and exceeded the corrected average by 202. The causes of 102, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Bristol, Sunderland, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Preston, Huddersfield, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·4 and 22·6 per 1000 in the preceding two weeks, further rose to 23·8 during the week ending Feb. 28th, but was slightly below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 17·0 in Perth and 18·2 in Dundee to 26·6 in Paisley and 27·8 in Glasgow. The 620 deaths in these eight towns showed an increase of 29 upon the number in the preceding week, and included 27 which were referred to whooping-cough, 18 to measles, 11 to "fever," 10 to diarrhœa, 7 to scarlet fever, 7 to diphtheria, and not one to small-pox. In all, 80 deaths resulted from these principal zymotic diseases, against 50 and 62 in the preceding two weeks. These 80 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·7 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 13 and 26 in the preceding two weeks, were 27 last week, of which 9 occurred in Edinburgh, 7 in Glasgow, and 5 in Leith. The deaths from measles, which had been 8 and 10 in the previous two weeks, further rose last week to 18, and included 9 in Glasgow and 8 in Paisley. The 11 fatal cases of "fever" also showed a further increase upon recent weekly numbers; 4 occurred in Edinburgh and 3 in Glasgow. The 7 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Greenock and 2 in Glasgow. Of the 7 fatal cases of scarlet fever, 4 occurred in Glasgow and 2 in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 138 and 140 in the preceding two weeks, further rose to 146 last week, but were 55 below the number in the corresponding week of last year. The causes of 49, or nearly 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding three weeks from 26·6 to 27·3 per 1000, further rose to 29·4 during the week ending Feb. 28th. During the first eight weeks of the current quarter the death-rate in the city averaged 31·8 per 1000, the rate for the same period being 23·6 in London and 20·9 in Edinburgh. The 199 deaths in Dublin showed an increase of 14 upon the number in the preceding week, and included 4 which resulted from diarrhœa, 3 from "fever," 1 from diphtheria, 1 from whooping-cough, and not one either from small-pox, measles, or scarlet fever. Thus the deaths referred to the principal zymotic diseases, which had been 3 in each of the preceding two weeks, rose to 9 last week; they were equal to an annual rate of 1·3 per 1000, the rate from the same diseases being 1·8 in London and 3·2 in Edinburgh. The 4 fatal cases of diarrhœa exceeded the number recorded in any week since November last. The deaths referred to different forms of "fever," which had declined from 4 to 0 in the previous four weeks, rose again to 3 last week. One fatal case of diphtheria was registered, corresponding with the number in each of the previous four weeks. The 199 deaths in Dublin included 42 of infants under one year of age and 57 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recently weekly numbers, while those of elderly persons showed a slight further decline. Four inquest cases and 5 deaths from violence were registered; and 53, or nearly a fourth, of the deaths occurred in public institutions. The causes of 20, or nearly 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

A TRIANGULAR BANDAGE.

Surgeon R. R. Sleman, M.A., of the 20th Middlesex (Artists) Rifle Volunteers, has recently brought out a Triangular Bandage with a printed key to it, in connexion with the Volunteer Ambulance School of Instruction. The various figures on the bandage clearly depict the methods of using it. The bandage can be obtained of Messrs. Savory and Moore.

THE AFGHAN CAMPAIGNS.

The *Journal of the United Service Institution of India* has a paper by Surgeon-Major G. J. H. Evatt, M.D., of the Medical Staff, describing that officer's personal recollections of the Afghan campaigns of 1878–79–80. The present is the first part of the report, and Dr. Evatt proposes in a subsequent paper to deal with the occurrences of the second campaign, where much progress was made, and apparently required, and the lessons learned in 1878–79 were largely made use of. The record is interesting as it sets forth what occurred when the medical service, mobilised in a hurry and with little cohesion or defined method of work, had suddenly changed over from our old system to an entirely novel one.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Geo. Paddock Bate, M.D., 5th Battalion, the Rifle Brigade (the Prince Consort's Own), to be Surgeon-Major, ranking as Major (dated March 4th, 1891).—The notification in the *Gazette* of Feb. 10th, 1891, that Surgeon William Duncan, M.D., F.R.C.S. Eng., ceased to be an Officer of the Army Medical Reserve of Officers, is cancelled.

INDIA OFFICE.—The Queen has approved of the following appointments to Her Majesty's Indian Medical Service: Surgeons on probation to be Surgeons, ranking as Captains (dated Jan. 31st, 1891):—Bengal: James Muir Crawford, John William Wolfe, Bawa Jiwan Singh, Hugh Robert Campbell Barber, Charles Henry James, Fredk. O'Kinealy, Christopher Clemons Cassidy, and Arthur Wm. Treminhere Buist-Sparks. Bombay: Ernest Gerald Robt. Whitcombe, Frank Erskine Murray, Henry James Younger, and Baman Das Basu.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeons: Wm. B. Drew to the *Trafalgar*, Richd. D. White to the *Collingwood*, and Henry C. Walsh to the *Neptune* (all dated March 2nd, 1891); William Bennett to the *Alexandra*, (dated March 8th, 1891). Surgeons: John P. J. Coolican to the *Vivid*, for the Royal Naval Barracks (dated March 7th, 1891); Alfred E. Weightman to the *Wildfire*, additional (dated March 7th, 1891); and William O'Meara to the *Alexandra* (dated March 8th, 1891); Mr. Joseph William Gallagher to be Surgeon and Agent at Kellybegs, and Mr.

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Thomas M. Pollard to be Surgeon and Agent at *Tribane* (both dated March 3rd, 1891).

ROYAL NAVAL ARTILLERY VOLUNTEERS. — (Clyde Brigade): Surgeon John MacIntyre, M.B., to be Staff Surgeon (dated Feb. 21st, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Cornwall (Duke of Cornwall's), Western Division, Royal Artillery: Acting Surgeon J. Quick resigns his appointment (dated Feb. 28th, 1891).—*Rifle:* 2nd (Prince of Wales's) Volunteer Battalion, the Devonshire Regiment: William Square, Gent., to be Acting Surgeon (dated Feb. 28th, 1891).—1st Volunteer Battalion, the Cheshire Regiment: Surgeon A. Craigmile, M.D., resigns his commission (dated Feb. 28th, 1891).—3rd Volunteer Battalion, the Cheshire Regiment: Acting Surgeon T. Fennell to be Surgeon (dated Feb. 28th, 1891).—4th Volunteer Battalion, the Cheshire Regiment: Acting Surgeon E. Chamberlayne, M.B., resigns his appointment (dated Feb. 28th, 1891).—1st Roxburgh and Selkirk (the Border): William Turnbull Barry, M.B., to be Acting Surgeon (dated Feb. 28th, 1891).—3rd (the Blythswood) Volunteer Battalion, the Highland Light Infantry: Acting Surgeon A. D. Moffat to be Surgeon (dated Feb. 28th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Edinburgh Division: William Henry Barratt, M.B., to be Acting Surgeon (dated Feb. 28th, 1891).

Correspondence.

"Audi alteram partem."

THE LATE MR. JOHN MARSHALL, F.R.S.

To the Editors of THE LANCET.

SIRS,—The former colleagues and many of the friends of the late Professor John Marshall wish to establish a memorial of him in connexion with his *alma mater*, University College, London. It is proposed that, primarily, the memorial should take the form of a bust, to be placed within the College. In the event of the contributions to the fund which is being raised for this purpose being more than enough, the surplus will be set aside for the foundation of a prize in the medical faculty of the College, to be called the Marshall Prize. As there are doubtless among your readers many of Mr. Marshall's friends and old pupils who will be glad to coöperate in this attempt to perpetuate the memory of his useful and many-sided labours, both within the profession and without, we beg to be allowed to state that subscriptions may be sent on or before April 11th next to the Treasurer of the fund, Mr. John Tweedy, 100, Harley-street, W.

We are, Sirs, yours truly,

THOMAS BARLOW, M.D.,
10, Wimpole-street, W.,
VICTOR HORSLEY,
80, Park-street, W.,
} Honorary Secretaries.

THE "REVISED SCHEME" OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Having served many years on the committees of Convocation and having given evidence before the Royal Commission on its behalf, may I again appeal to your readers on the most recent phase of the University question? The latest revised scheme of reconstitution which you have published in your columns has not yet been officially communicated to Convocation, and members of that house have been refused copies of it. This appears to be a suicidal policy upon the part of the promoters of the scheme directed towards a body which possesses, and no doubt will not hesitate to use if it see fit, the right of veto. It may, however, be consistent with the intention of first squaring all outside claimants, and then having thus cornered Convocation endeavour to compel its reluctant submission. Meanwhile opposition to the wholesale dissolution of the University is growing apace; arts and science and law graduates, who have no interest to serve save that of "the promotion of regular and liberal education throughout Her Majesty's dominions," are not slow to recognise the tendency of the new scheme to destroy the unity and high standard and independent character of our pass examinations. I ask permission to add a few criticisms upon the medical aspect of the scheme.

The Fellows of the Royal College of Physicians and the Council of the Royal College of Surgeons have approved the scheme. The former body, not, however, without the defection of a minority, appear to have swallowed their objection of last year to the delegation of the control of examinations by the Senate to a body partly outside itself. The Council of the College of Surgeons, without consulting the Fellows, in accordance with the newly recognised power, and the expressed desire of some of its number, appear to have approved without division the new scheme, with which, according to the chairman of their committee on the subject, his colleagues were very imperfectly acquainted.

Let us follow a hypothetical medical student's career through the curriculum which the new scheme implies, up to the coveted M.D. London. First of all, if procession to the preliminary scientific is to be conditional on matriculation, or what is to serve as its substitute, his *paterfamilias* will be wise in sending him to University, or King's, or some other constituent college in arts and science, with which an arrangement has been come to under Clause 46 for a modified matriculation. If he go to one of the other medical constituent colleges, or, if a woman, to the School of Medicine for Women, then the ordinary matriculation must be encountered. Now either the matriculation is to remain what it is, or it is to be lowered probably to the level of the College of Preceptors examination in arts. If it is to remain what it is, medical students will remain where they are, with the first gate remaining shut except to a better few, or they will drift into constituent colleges with an arts faculty and a modified matriculation; if the matriculation is to be lowered for medical students, and presumably then for all, it would save a great deal of misconception and mistrust by candidly saying so. Next, an undergraduate will come up for the preliminary scientific with its 50 per cent. of rejections. If he be a University or King's man he may take their collegiate intermediate B.Sc., perhaps, in lieu of this; if not, then under pressure from the corporations and medical colleges, anxious to prevent an exodus to Scotland, down will come the standard of the preliminary scientific. The intermediate and pass M.B. examinations, as conducted under Clause 47, must tend to simulate the ordinary examination for the M.R.C.S. and L.R.C.P., and will present little difficulty.

Even then the new "M.B. London" will find his heart's desire of the doctorate unsatisfied. The admonition of the University against M.B.'s assuming that title will disturb his conscience. The M.D. is to remain "under the absolute control of the University," for which may be read, under the control of the Standing Committee in Medicine, with its ten out of nineteen members representing the two London medical Colleges and English teaching bodies. Now, it is common knowledge that the demand for the title of "Dr." has filled the sails of the agitation for the Teaching University and carried it along. Will those teachers who have urged this popular demand rest content with this stoppage just short of the promised land? Of course they will not; they would be foolish if they did. Logic and psychology and mental physiology will be thrown to the winds, and the M.D. London of the future will exhibit only slight histological differences from the M.R.C.S. and L.R.C.P. All this is very sad, and comes of attempting the impossible—of incorporating metropolitan teaching colleges into a cosmopolitan examining university. Even the Vice-Chancellor, Sir James Paget, would appear not to have foreseen this inevitable result when in May, 1886, he assured the assembled graduates and undergraduates that "he was not one of those who advocated the lowering of the standard of excellence of the University; it was not proposed to interfere with the working of the University; it was proposed to add something better rather than create something different, and *it would certainly not tend to lower the standard in any one degree*"; nor the Chancellor, Lord Granville, when in 1887, amid loud cheers, he declared "*the high character of our degrees will be maintained.*" Sir Philip Magnus not so very long ago waxed eloquent over the "undue and preponderating influence" of the teachers, and the consequently imperilled standard of examination, as well as

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over the rights of Convocation as distinguished from outside bodies. Surely he cannot give a tacit assent to this scheme. Anyway, a committee of Convocation is organising opposition to the scheme, and either the honorary secretaries or myself will be glad to hear from any medical graduate who will join this committee.

I am, Sirs, yours faithfully,

W. J. COLLINS, M.S., M.D., B.Sc.

1, Albert-terrace, Regent's Park, March 1st, 1891.

P.S.—Since writing the above I have received from the University a "memorandum in explanation of the scheme for the reorganisation of the University," which, unlike the scheme itself, is not "confidential." This *pièce justicative* is presumably intended to anticipate objections on the part of Convocation. As, in dealing with the medical degrees, it states that the Royal Colleges and medical schools are solicitous of maintaining the standard and scientific character of these degrees, one can only conclude that the author of the document is a guileless innocent or a lawyer expert in compromise and totally ignorant of "the medical grievance."

TREATMENT OF CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—The statements made by Dr. Herman and others on the one hand, and Dr. Cullingworth, Dr. Bantock, and myself and others to the contrary, are so widely discrepant that it will be the wisest plan for all concerned, particularly for the sake of suffering women, that some inquiry be made as to what is the cause of the misunderstanding. By strict logical analysis of the statements, it becomes perfectly evident that one factor has not been properly estimated—that is, what may be called the personal equation. The one statement is to the effect that chronic inflammatory diseases of the uterine appendages in the majority of instances get well, and without any kind of surgical treatment. The statement, on the other hand, is that they rarely do get well, and my own conviction is that the exception is so remarkable that it may almost be discounted entirely. From these diverse statements of the case it must be perfectly evident that we are not speaking of the same thing, and that what Dr. Herman calls chronic inflammation of the uterine appendages, I certainly should not dignify by that term. Those of us engaged in the surgical treatment of these cases verify our diagnosis and justify our treatment of these cases by the display of the preparations, and these preparations indicate conditions of the disease which put the matter of diagnosis, at any rate, altogether beyond the question, whatever may be thought concerning the treatment. It is not so with Dr. Herman and his school, for they have so far presented no confirmation whatever of their assertions. The personal equation element then of the difficulty is that Dr. Herman does not diagnose as cases of chronic inflammatory disease of the uterine appendages those cases which we do; whereas we, on the contrary, disregard as altogether too trifling the class of cases which Dr. Herman considers to be deserving of that name. Such is my own explanation.

Personally, I see a very large number of cases which belong to the same group entirely as those of which I believe Dr. Herman is speaking, and they uniformly get well; but I never speak of these cases as coming within the category of chronic inflammatory disease of the uterine appendages. It rests with Dr. Herman to let us see some of the cases, as he understands them, in their initial stage, so that we may discover if possible where the misunderstanding lies. In fact, I do not think it would be at all a difficult matter to place a real value upon this personal equation. An experiment of a somewhat rough, but quite satisfactory, kind would settle the point. Let the two diverse schools of opinions be represented by two such persons as Dr. Herman and myself. Let Dr. Herman or anyone else of his school select a number of cases, say, twelve or twenty, or even a hundred, of what they call "chronic inflammatory disease of the uterine appendages." Let them be examined by the other representative person, say, by myself, and concerning each case on a particular date written opinions giving diagnosis and prognosis by Dr. Herman and myself shall be placed together in a sealed envelope, neither knowing what the other has written. This envelope shall be placed in the custody of a third person to be selected by the two. After an interval of six months or twelve months, or any time which may be agreed upon in any particular case, a second examination of the patient is to be made and similar written opinions concerning the diagnosis and prognosis shall be made by each of the observers, unknown in every instance to the other. An analysis shall then be made by the third person of each group of cases, and these shall be contrasted by the results to be ascertained by the person in whose custody the envelopes have been placed. The cases would always fall inevitably into two groups: those that had got well and those that had not, and the value of the personal equation will be determined, by one factor alone, upon which side the prognosis of recovery or the prognosis of non-recovery falls with the greater certainty. So far as my opinion goes, the treatment of either case is a matter of relative indifference so long as rest in bed during the menstrual period is made obligatory.

A personal equation of another kind seems inevitably to step in the moment the operation of removal of the uterine appendages comes to be discussed, and that has been very well illustrated in the case of Dr. William Duncan, whose critics have desired to show that he has had an improper because disproportionate number of cases of removal of the uterine appendages not affected by large cystic disease, as compared with those in which this large cystic disease had occurred, as if the two classes of cases had a constant relation to one another. Such an assumption is perfectly preposterous. The Middlesex Hospital has had for a very long time a number of beds devoted to cancerous diseases, and therefore cancerous cases have been attracted to that institution for very many years. It is more than likely, therefore, that the *clientèle* of the Middlesex Hospital will have a larger proportion of cases of malignant disease in it than will have the London Hospital, where there is no such special provision, and where the population is, on the other hand, subject to a disproportionate number of accidents. Any institution which had existed for nearly a generation, such as the Samaritan Hospital, with a large reputation for dealing with ovarian tumours, will have a disproportionate number of tumour cases, and so on indefinitely. A number of qualifying incidents can be exposed which would render a constant relation of any two classes of cases in any one experience, either hospital or individual, equally improbable. Such relation must depend largely upon reputation and upon other surrounding circumstances, many of which are quite inscrutable.

I am, Sirs, yours truly,

Birmingham, Feb. 25th, 1891. LAWSON TAIT.

THE FACTORY ACT AND CERTIFYING SURGEONS.

To the Editors of THE LANCET.

SIRS,—Kindly permit me briefly to supplement my letter of last week. The position of certifying factory surgeons was admirably defended by Sir Lyon Playfair, Sir F. Milner, and by many other members who followed, in the late debate in the House of Commons, and our thanks are due to them for their advocacy of our cause. But none of the speakers insisted sufficiently on one important point. It was argued that there was no reason for the existence of certifying surgeons, because there was little or nothing for them to do and their occupation was gone. It was stated that unhealthy "young persons" seldom or never presented themselves for examination or employment. This statement was by no means conclusively proved; but if true, why do the unfit decline to offer themselves? That is a crucial point, and one to which I wish to draw especial attention: plainly and clearly because employers and employed knew and know that it would be useless to do so in face of a law which requires a certificate not only of age but of health and fitness from a medical man. Abolish that deterrent influence, and as surely as night follows day you will behold a recurrence of the evils which that influence overcame and which it keeps so efficiently in check.

I am, Sirs, yours faithfully,

March 3rd, 1891. MALLEUS INJUSTITIÆ.

NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Would you allow me to endeavour to elicit through your columns the opinion of the profession on the following: The general adoption of the Notification of Infectious

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Diseases Act is bringing prominently forward in many localities the question of the provision of isolation hospitals. Practically the three diseases with which such hospitals everywhere will be expected to be prepared to deal at all times are scarlet fever, diphtheria, and typhoid fever, with possible outbreaks of small-pox and typhus. Without further reference to the two latter diseases, which could be regarded as exceptional emergencies to be dealt with accordingly, and admitting that typhoid fever may be safely treated in the same building with scarlet fever and *vice versâ* (although within the last few days I have seen a patient with typhoid fever, exposed very slightly to the infection of scarlet fever, contract that disease in a typical form), I would ask, Is it prudent and in accordance with what we would wish to have done in the case of our own children that scarlet fever patients should be received in the same building with diphtheria patients? I am assuming the case, not of a large hospital with detached blocks, but of a small hospital with an administrative staff necessarily more or less in common, and where precise and scientific isolation of one disease from the other could not be depended upon. It has long been a matter of observation with myself, and doubtless with others, that, given the presence of infection, however slight, nothing predisposes so much to the incidence of diphtheria as an inflamed and congested condition of the mucous membrane of the throat, and this fact has been demonstrated in France by experiments on the lower animals. Such a condition of throat is almost invariable in cases of scarlet fever, and as no one would think of introducing a case of erysipelas into a lying-in hospital, the question arises, Is there not a somewhat analogous connexion between diphtheria and scarlet fever? I am, Sirs, yours truly,

Shrewsbury, Feb. 25th, 1891. W. N. THURSFIELD, M.D.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—My experience agrees with those who have found dental disease the most frequent cause of this complaint. It is rare to detect it without caries of the corresponding teeth, whilst it is not unusual to have it developed without intra-nasal disease other than what may fairly be attributed to irritation of the nasal mucous membrane by the septic discharge from the antrum. In treating this disease it is a mistake to suppose that extraction of teeth and perforation and washings out of the antrum, with or without the insertion of a tube, are likely to lead to a speedy cure. These steps may suffice in very recent instances; but in the long-standing cases, which constitute the majority, other measures are necessary. The mucous membrane of the antrum ought to be thoroughly curetted,[1] and, after the sloughs and débris have been washed away, should be acted on by dry boric acid, applied by insufflation. Let anyone who has opened an antrum and finds the discharge of pus continue try the effects of these measures, and he will be surprised and delighted at the immediate result. After perforation, and in spite of frequent washings out, these cases frequently drag on for prolonged periods, and become sources of disappointment both to the patient and the practitioner. The application of the curette, which may be repeated if necessary, is rapidly followed by a healthy action and loss of pyogenic functions of the antral lining membrane. To admit of the carrying out of these procedures the tube inserted ought to have a wider bore than is usually the case. Some German surgeons say that it ought to be able to admit the little finger, but I think this is not necessary. The tube I am in the habit of using is about half that calibre. I may add that my dental colleague, Mr. G. W. Watson, who has rendered me valuable aid in the treatment of many cases of antral empyema, shares the above views.

I am, Sirs, yours obediently,

Edinburgh, Feb. 24th, 1891. G. HUNTER MACKENZIE.

INFLUENZA IN THE HINDU KHUSH.

To the Editors of THE LANCET.

SIRS,—You may be interested in hearing of the prevalence of this disease among the valleys of these mountains at the present time. Here, at Gilgit (4800 ft. above the sea), which is in the extreme north-west of Kashmir territory, the epidemic first made its appearance about Dec. 1st, having been brought by a party of Mussulman priests coming from Chitral, a country twenty marches (about 200 miles) west of this, where we have news of its prevalence. I cannot obtain information of its more remote origin, though the inference is that it is the dregs of the epidemic which appeared in India in the early part of this year, and did not at the time spread to these remote districts. The probability of its spreading to Kashmir and India is small, owing to communication with these being almost cut off by snow on the passes. The symptoms are pretty typical; the bronchial catarrh is well-marked and the coryza often absent, while pain over the frontal sinuses, with or without coryza, is pretty common. The temperature is high, often over 103°, and the course of the disease apt to be prolonged owing to the resuscitation of dormant malaria; the latter prevailing in these valleys even up to 7000 ft. above the sea. The winter season of these parts is characterised by cold, bright weather, frost at night, a slight snowfall in the valleys, where it lies above 5000 ft., and a great deal of snow on the peaks above. Lying beyond the influence of the monsoon, the Hindu Khush valleys are practically rainless, and dependent on the melting snows for their water-supply. The streams derived from this source are utilised for irrigation purposes; hence, in autumn, after the burning heat of June, July, and August (maximum 96°), the soil is laden with malaria, and fever is very prevalent. I am, Sirs, yours truly,

J. R. ROBERTS, F.R.C.S. Eng.,

Gilgit, Kashmir, Dec. 28th, 1890. Ind. Med. Service.

THE BORIC ACID TREATMENT OF GRANULAR LIDS.

To the Editors of THE LANCET.

SIRS,—Although I had some years ago given a trial to (and abandoned as useless) powdered boric acid in the treatment of granular lids, it was not until I read Mr. Beaumont's paper in THE LANCET of October 18th, 1890, that I tried what effect boric acid in conjunction with "massage" would produce in cases of this class. Mr. Beaumont, it may be remembered, advised that the boric acid powder should be dusted over the conjunctiva of the everted lids, and then well rubbed into the membrane (the so-called "massage") by the pulp of the forefinger for five or ten seconds. In support of this treatment, he cited three cases of trachoma which had received benefit; two of these cases were under treatment for a fortnight, the third for a month. I can corroborate Mr. Beaumont's statement that after one or two applications a tolerance on the part of the patient becomes established, and the boric powder certainly causes less pain than that which results from the employment of the usual remedies (cupric sulphate, silver nitrate, carbolic acid, &c.) to the conjunctiva. *Primâ facie* this treatment (and its theory of action) appeared to be so reasonable as to justify me in adopting it; and, with a view to test for myself its value, I selected eight cases of granular lids for experiment. In the selected cases the powder was applied in the manner recommended by Mr. Beaumont, the application being made once daily. The treatment was continued for four months in two cases, for three months in four cases, and for ten weeks and one month respectively in the last two cases. The changes present in the selected cases may be epitomised by saying that the palpebral conjunctiva was thickened and unduly red, and that small vesicular grains were present in the outer part of the lower lids, in the superior fornices, and along the fornical borders of the upper lids; the discharge amounted only to a little "gumming" together of the eyelids first thing in the mornings. They were, in fact, examples of what many surgeons call "follicular conjunctivitis." These cases were selected as appearing to me peculiarly appropriate for the use of a comparatively mild agent like boric acid, more especially, perhaps, since they seemed hardly serious enough to call for the use of stronger remedies. What was the result of the experiment? Five cases remained *in statu quo*, neither the anatomical appearance of the lids nor the amount of discharge being altered in any way. One child (after treatment for four months) had the discharge lessened; in another child the redness of the lids was somewhat reduced. In the eighth case, which deserves special mention since, together with the boric acid, hydronaphthol ointment was being used, some of the grains disappeared, the lids, however, remaining thickened and

[1] For this purpose I have used an antral curette, made at my suggestion by Mr. Watson, dental surgeon.

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congested. And I may at once say that this was the only case in which the grains were influenced in any way. It will be seen, therefore, that in my hands at least this treatment has given what amounts practically to a negative result.—I am, Sirs, yours truly,

SYDNEY STEPHENSON, M.B., F.R.C.S.Edin.

Central London School, Hanwell, Feb. 23rd, 1891.

ENGLISH MEDICAL PRACTICE IN FRANCE.

To the Editors of THE LANCET.

SIRS,—The facts shown in my friend's (Dr. Barnard) letter, in your issue of Feb. 21st, deserve consideration, as the interests of practitioners abroad are not so much at stake as those of the great mass of travelling English and Americans on the Continent. It would be well for all persons visiting Europe to obtain first the address of competent professional men before leaving home, as it can be stated as a fact that local advice is not always disinterested. Indeed, it is positive that most of the professional people recommended by servants, couriers, *concierges*, hotel-keepers, and chemists have to pay a commission to these people for the clients obtained, and, like the well-known 5 per cent., or *sou per franc*, given by commercial people in France to our servants, we can be sure it comes on our bills and not out of their pockets. These abuses are so well known now that people who settle in France put up with them like the *pourboire*, as a necessary evil, but they limit it as much as they can. It would be well if all persons who need a doctor abroad could first of all inquire as to the standing of anyone recommended of their consul or clergyman, and others, but many (indeed most hotel patients) are those who are taken suddenly ill, and who perforce must accept the hotel doctor, for the moment. If we were to put into print the really outrageous things that have happened and the charges made it would take too much of your space, but to hasten on the remedy proposed by Dr. Barnard it ought to be accepted for the special reasons given. It might be possible also to induce hotel-keepers and chemists to keep a framed list of the members of the Anglo-American Continental Medical Society, which includes most of the English and American doctors who are legally entitled to practise abroad. Hoping that some practical solution may be found to stop the present abuse,

I am, Sirs, your obedient servant,

Nice, Feb. 23rd, 1891. THOMAS LINN.

THE USE OF NITROUS OXIDE BOTTLES IN THE HORIZONTAL POSITION.

To the Editors of THE LANCET.

SIRS,—Dr. Sheppard has called attention in THE LANCET of Feb. 21st to some very practical points of embarrassment that are liable to occur at times with the supply of gas from horizontally placed bottles. My experience with the improved pedal attachment leads me to assert that it is unaccompanied by such objections. As the valve ends of the bottles are on a slightly higher level than the opposite ends, it is possible the aperture of exit of the gas is just above the level of the liquid nitrous oxide. The supply of gas is never fitful and irregular with it, but, on the contrary, can be regulated with the utmost facility. The screw is certainly liable to "set" in any bottle, but this can never be a source of inconvenience during the administration when the improved pedal attachment is used, for the reason that it is turned on at the commencement of the operation, the escape of gas being then controlled by the pedal screw valve.

I am, Sirs, yours truly,

PERCY EDGELOW,

Anæsthetist to the National Dental Hospital.

Old Burlington-street, W., Feb. 21st, 1891.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary and Owens College.

THE negotiations which have for some time been going on between these two bodies respecting the provision of increased hospital accommodation appear to make but little progress, and at present matters are almost at a deadlock. A conference held on the 17th ult. between the Infirmary and College authorities ended without anything definite being done, and the matter is further adjourned to consider certain suggestions made by Dr. Renaud. To all who have any intimate knowledge of either institution it is an open secret that there is a feeling of rivalry between certain sections of the two bodies which, unless some more cordial relations be established, augurs rather badly for an amicable settlement of the questions now in dispute. Shortly put, the position of affairs at present is this: The College wishes to have a more direct share in the control of the clinical instruction which must be given to the medical students, and they are desirous of having a new hospital erected on the site they now have for the purpose, whilst the infirmary authorities are unwilling to enter into any arrangements to forward such a scheme, but prefer to extend the present building in Piccadilly. It is admitted that some additional hospital accommodation is wanted, and will be still more wanted in a few years. The question in dispute is how and where it shall be provided. So far the public at large has scarcely been approached in the matter, but it is not unlikely that public opinion, as expressed through the general body of subscribers to the infirmary, will be averse to any further extension of the present building or the covering of any more of what is left of the open space around the infirmary.

Licensing Reform.

Important public meetings have recently been held "to unite in immediate practical efforts all those who are interested in the moral and social well-being of the people," with a view to obtain some speedy reform in our licensing system. The conferences were presided over by the Bishop of Manchester, and, as usual when the "drink question" is discussed, a wide divergence of opinion was found to exist as to the best practical steps to be taken to forward the ends which all had at heart. So keen was this divergence that at one time it seemed as though the present efforts would end in nothing, but at the last meeting (held on the 26th ult.) a series of resolutions were arrived at which may be briefly put as providing (1) for the extinction of all licences within seven years from the passing of a Bill; (2) licences to be granted only according to a fixed ratio of the population; (3) three-fourths of the inhabitants of a licensing district to have the power to veto all licences, and the licences to be granted only by representative bodies. A Bill upon these lines is to be promoted in Parliament.

Provident Dispensaries.

At the annual meeting of the Provident Dispensaries it was stated that there are at present 24,000 members. The receipts from members amounted to £4107, and the sum total paid to the medical staff, exclusive of confinement fees, was £2372. Eight of the nine branches are now self-supporting. The only disquieting reflection upon this report is whether any, and, if so, how many, of the above 24,000 members are in such position as to pay the ordinary fees of the general practitioner?—for complaints are still at times heard that persons are allowed to become members without sufficient inquiry as to their means and income.

The Workhouse Infirmaries.

It was recently noted in these columns that Dr. Reynolds had been appointed visiting physician to the Crumpsall Infirmary. This week another old infirmary "resident," Mr. Milner, has been appointed to a similar appointment at the Hope Hospital, belonging to the Salford guardians. Another vacancy has been caused at Crumpsall by the resignation of Mr. Hardie, who for many years has been visiting medical officer there. A singular item is down on the agenda for the next meeting of the City Council—i.e., the infirmary is to be told that in the opinion of the Council patients are not to be taken into the fever hospital from districts outside the city. As well might the districts outside the city who use the hospital in common with the corporation tell the infirmary that they consider the city authorities should no longer use the hospital, but provide one for itself and leave the present one for their exclusive benefit. A very fitting reply from the infirmary would be that if the corporation is not satisfied with the manner in which the hospital has hitherto been conducted and managed, they had better enter into negotiations for having it transferred to them, as at present the infirmary burdens itself with the care of a large infectious hospital—

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a business which is rightly none of theirs, but of the health authority of the district.

It is with much satisfaction one has to record that at last the corporation has provided a proper and more decent coroner's court than the stuffy, dingy room in John-street that has done duty, to the discomfort of all who have had to attend there for many years past.

The amounts collected on Hospital Sunday at present received are £4700, a slight increase over last year, when it reached only £4636. The Saturday collections are £3095, a falling off compared with last year's £3536. It is hoped, however, when all the collections have been sent in, the total may not be below the preceding year.

Manchester, March 3rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Pauperism in the North.

AT a late meeting of the Newcastle guardians, Mr. Knollys, Local Government inspector, brought forward some interesting statistics as to pauperism in the northern district, which included forty-four unions, practically Northumberland, Durham, the North Riding of Yorkshire, and two unions in Cumberland. At the end of 1884, when trade depression was about at its deepest, there were in the district 47,217 paupers, and at the end of 1888 there were 39,549, which was satisfactory, considering the severe winter which ended the year. The number of vagrants too had been reduced from 129,219 in 1888 to 86,000 in 1890. Mr. Knollys seemed to think that this reduction had resulted from improved administration, as the vagrants knew that they could not now get a good night's lodging without a good day's work being required from them in return.

Newcastle Surgical Aid Society.

The annual meeting of this young but useful Society has been held, and from its annual report, read by Dr. Arnison, it appeared to have supplied invalids of the poor and deserving classes with appliances of a most useful character. The Society, however, deserves better support from the general public, for it was shown in the report that but for the considerable sums contributed by the patients the funds would have been entirely absorbed.

The Sanitary State of Middlesbrough.

The medical officer of Middlesbrough reported to the sanitary committee that the total deaths were 215, giving a mortality for the month at the rate of 33·50 per 1000 per annum. The high death-rate was attributable to two causes—viz., first, all the deaths arising from the unprecedented severity of the weather at the beginning of the year fell within this month. This was shown, he said, by the deaths from diseases of the respiratory organs, and also by the number of deaths among infants and very old persons from extreme cold. The second cause of death was typhoid fever. The renewed outbreak of this disease, whilst not giving so many cases, was of a rather more fatal character. He also stated that the typhoid fever epidemic was gradually diminishing.

St. John Ambulance Work at Durham.

The ambulance class which was commenced at the Durham Railway Station towards the beginning of the year has been examined by Surgeon-Major Hutton, and forty-two received certificates of proficiency. The class was instructed by Dr. Jepson, who was complimented by Surgeon-Major Hutton on its knowledge of ambulance work.

The late Mr. John Fleming's Bequests.

It is stated that the whole of the charitable legacies left by the late Mr. John Fleming, solicitor, of this city, have now been paid over. Mr. Fleming, it may be remembered, died in February last year, and I noted the various charities benefited by his will in a former letter. The legacies amounted in the aggregate to £66,500, and this very large sum has been paid free of duty.

Newcastle-on-Tyne, March 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Edinburgh Public Health Committee.

AT a meeting of this committee last week it was reported that there were 274 patients in the city hospitals under treatment for infectious diseases, of whom 130 were cases of scarlet fever and 80 of typhoid fever. Arrangements have, it was stated, been made for giving a course of lectures to the nursing staff of the hospital. The drains in the vicinity of St. Bernard's Well are also being overhauled to settle the question, which from official statements were regarded as settled some time ago, whether the well is being contaminated or not by sewage.

Disposal of Edinburgh Refuse.

It has been intimated here that it was proposed to erect destructors in different districts of the city, and it is understood that these proposals are assuming practical shape, and that steps are being taken to acquire ground on which to erect them.

Royal Society of Edinburgh.

At the meeting of this Society on Monday, under the presidency of Sir Douglas Maclagan, Dr. A. Bruce made a communication on a case of Human Cyclopia, and Dr. Byrom Bramwell gave particulars of several cases illustrating the position of the visual centre in man.

Health of Edinburgh.

The mortality last week was 118, making the death-rate 22 per 1000. Diseases of the chest accounted for 50 deaths, and zymotic diseases for 15, of which 9 were due to whooping-cough and 3 to typhoid fever. The intimations for the week comprised—typhoid fever 29, diphtheria 6, scarlatina 27, and measles 40.

GLASGOW.

University Court.

At a meeting of this court held last week the following examiners in medicine were appointed, the appointment being in each case for four years:—In Materia Medica, Mr. Ralph Stockman, M.D., F.R C.P.Edin., &c., Edinburgh; in Chemistry, Mr. John Millar Thomson, F.R.S.Edin., &c., Professor of Chemistry, King's College, London; in Zoology, Mr. D'Arcy W. Thomson, B.A., Professor of Zoology, University College, Dundee; in Botany, Mr. George Murray, B.Sc., presently Examiner in Botany in the University; in Clinical Medicine, Dr. Ebenezer Duncan, M.D., Crosshill Professor in Anderson's College Medical School; in Clinical Surgery, Dr. A. Ernest Maylard, B.S., M.B. Glasgow. It is worthy of note that only one of these six gentlemen is a graduate of Glasgow University. Dr. E. Duncan has resigned his professorship in Anderson's College.

Loch Katrine Water and Tapeworm.

There have been at various times serious scares regarding the use of the matchless water-supply of Glasgow from Loch Katrine. At first it was said that the water was too soft and would give rise to rickets, but the fear of this has evaporated. Then it was the risk of contamination of the water by the inevitable discharges from the small steamers which ply on the loch in summer, but that, so far as is known, has led to no evil results. The most recent scare has arisen over the statement that the trout in Loch Katrine suffer very much from tapeworm, but the very unsavoury suggestion which this implies has been shown to be groundless by an investigation made by Professor Young and Dr. J. B. Russell, who find that, though the trout do undoubtedly suffer as stated, there is no risk so far as the propagation of tapeworm is concerned. Cases of tapeworm are certainly not more common in Glasgow than elsewhere; in fact, there is reason to believe they are rarer in Glasgow than in the country.

March 5th.

DISPOSAL OF REFUSE IN BRUSSELS.—The special commission appointed to report on the disposal of the refuse of Brussels has recommended the adoption of the Leeds system of destruction by fire. The furnaces will be situated in the vicinity of the city, but, except in times of epidemic disease, it is not proposed to burn the whole of the refuse.

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IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Address to Mr. W. J. Wheeler, F.R.C.S.

MR. WHEELER was last week presented with an illuminated address by the nurses of the City of Dublin Nursing Institution on his resigning the position of honorary secretary to that institution, expressing regret at his retirement, and gratitude for the impartial and kindly care and energy he had bestowed upon all that concerned their welfare. Mr. Wheeler, in replying, expressed his appreciation of the intelligence and efficiency with which the lady manager and nurses had carried on their arduous and useful work, and said that he would always take a keen interest in their welfare and individual prosperity.

National Eye and Ear Infirmary.

The committee, in their annual report, state that about a year since it was intended reflooring some of the wards and effecting other improvements, but, as it was found that more extensive changes were demanded, they were not carried out. The institution at present contains thirty beds, and the committee wish to enlarge it so as to provide at least double that number, and it is estimated that a sum of £7000 will be required. The union of St. Mark's Ophthalmic Hospital and the Eye Infirmary under contemplation means an outlay of a very considerable sum for the building of a proper hospital to contain 120 beds, and if it is to be carried out the public must contribute liberally.

Strange Freak of a Lunatic.

Insane people, it is well known, occasionally swallow foreign bodies, and a case in point occurred last week in the Cork Asylum, where an inmate of that institution had impacted in his throat several pieces of wood and a large stone. An operation removed the obstruction, but the patient died shortly afterwards during an attack of acute mania.

Fever in Cork.

The small number—thirty-three—of admissions last year to the Cork Fever Hospital is a fact worthy of special notice. During the last quarter there were only four cases of typhus admitted, a period of the year which usually shows the largest amount of sickness. There were fifty-three admissions during the year of enteric fever cases. A pure supply of water would undoubtedly greatly diminish the prevalence of this fever, as the river which supplies the city at present is contaminated along its banks, and cannot properly be supervised. It is satisfactory to learn that a registration of plumbers has been started in the city, and that domestic drainage will be carefully attended to.

Several cases of small-pox are reported to have occurred in the Magherafelt Union.

BELFAST.

The Sanitation of Belfast.

On Monday last a deputation from the Ulster Medical Society, consisting of the President (Dr. Dempsey), Dr. O'Neill, and Dr. Lewers, appeared before the corporation of Belfast, at the usual monthly meeting, to lay their views before the members in reference to the necessity of increased sanitary precautions. Dr. Dempsey, in his statement, said they were of opinion the death-rate of Belfast was too high. He thought, when the new drainage scheme came into operation, it would have a good effect, but they believed this effect would be much increased by the more frequent removal of accumulations of filth from the rear of their buildings. He thought the by-laws recently enacted were excellent, but one of them, he pointed out, had no scientific basis—that was the one which provided for the covering of ashpits. The death-rate of Belfast was 25·5 per 1000; that of Birmingham was 19 per 1000. If the mortality in Belfast could be reduced to that of Birmingham, the saving of human life would be 1500 persons annually. Dr. O'Neill pointed out how the system of the frequent removal of filth had in Edinburgh, Rochdale, and Birmingham led to a distinct lowering of the death-rate. After Dr. Lewers had spoken, the Mayor, in very courteous terms, thanked the deputation, and said he was sure their visit would prove profitable to the corporation. In reply, Dr. Dempsey urged the necessity of providing a steam steriliser for disinfecting the clothes of persons suffering from infectious diseases.

Public Health Committee.

In the report presented to the City Council attention was drawn to a memorandum drawn up by Dr. Torrens (Dispensary Medical Officer) in reference to the insanitary state of certain streets in his district, and it was stated rules had been made to obviate this in the future. Every precaution had been taken to prevent the spread of small-pox.

Proposed Hospital for Infectious Diseases.

In connexion with the recent outbreak of small-pox in Belfast, the necessity for an infectious hospital for non-pauper patients has been much felt. The Public Health Committee of the Corporation approached the Belfast Board of Guardians, suggesting that a joint committee should be appointed by the two bodies to confer on the matter, and this was strongly supported at the last meeting of the latter by Dr. Stafford, Local Government Board inspector. The guardians declined to comply with this request, on the ground that in their fever hospital there was ample accommodation for the pauper classes, there being at present 400 vacant beds there for cases of infectious disease. In reply to this it may be stated that this hospital does not meet the case of those who are not paupers and who would be willing to pay for treatment, but who would not enter a pauper ward. Further, it is urged that it is against modern scientific ideas that a fever hospital should be placed in the midst of a populous district, to the inhabitants of which, owing to their proximity to the hospital, the germs of disease might easily be spread. It was stated that when small-pox prevailed in Belfast before, it occurred to a larger extent in streets near this fever hospital than in other portions of the city. The guardians think they have to do only with the paupers, and that if an infectious hospital is to be erected for a class above the poor, the corporation have the right to do it.

March 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Danger of Unboiled Milk.

IN my own practice I have for some years been in the habit of recommending the boiling of milk as a matter of routine, epidemics of typhoid fever having been sufficiently often traced to a contaminated milk supply to warrant the adoption of this simple and efficacious precautionary measure. About a year ago the Académie de Médecine pronounced itself formally in favour of this practice. Many people, however, have a rooted objection to the taste of boiled milk, and, as a matter of fact, that liquid is generally drunk unboiled. The public will perhaps be more inclined to depart from the beaten track when they read of the following case brought to the notice of the Académie de Médecine by M. Ollivier, one of the physicians of the Hôpital des Enfants Malades. Clinicians are "moving heaven and earth" to exorcise the ogre tuberculosis, and, in our anxiety to discover an antidote for the ravages of the terrible bacillus, we are apt to forget the old adage, "Prevention is better than cure." The case related by M. Ollivier was that of a young lady aged twenty, whose family and personal health antecedents were excellent, but who had the misfortune of being brought up in a school where, in the space of a few years, six out of thirteen girls had fallen victims to tuberculosis, two being cases of tabes mesenterica. The young lady succumbed rapidly to tuberculous meningitis. An examination of the udder of the cow which had for nine years supplied the school with milk was, after death, found to be the seat of extensive tuberculous lesions. M. Nocard emphasised the contention of M. Ollivier that unboiled milk should be banned, however healthy the cow yielding it may appear, by relating how the lymphatic glands of a calf in seemingly excellent condition, which, to the great disappointment of its owner, had died after a few days' illness had been found stuffed with bacilli. A short time afterwards the mother of this calf—a fine beast, to which had been allotted numerous prizes—died in her turn, and the udders, lungs, and lymphatic glands were discovered to be tuberculous. The lesson taught by these two interesting communications is plain: avoid unboiled milk.

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Chloride of Ethyl as a Local Anæsthetic.

Chloride of methyl, introduced into the domain of therapeutics as a local anæsthetising agent by Debove, has the inconvenience of being costly and cumbrous, of producing a temperature unnecessarily and sometimes hurtfully low (– 40° C.), and, finally, of being explosible. Ethyl chloride, on the other hand, possesses the advantage of being a liquid whose boiling point is 10° C., the mere heat of the hand sufficing to volatilise it, thus doing away with the necessity of the expensive apparatus in which its rival is supplied. M. Monnet of Lyons has had the happy idea of utilising this easy volatility of the ethyl chloride by keeping it for use in glass capsules similar to those in which amyl nitrite is supplied. Each capsule contains ten grammes, and the breaking of the capillary tube in which it terminates allows of the escape of the vapour generated by the heat of the hand. The vapour, directed at a distance of twenty centimetres on to the part it is desired to anæsthetise, determines a fall of temperature of – 30° C. This new agent will be found useful in such small operations as the opening of abscesses, tooth extraction, avulsion of ingrowing toe-nails, &c. It will also, it is said, allay instantaneously the pain of facial and intercostal neuralgia.

The Bill of Mortality at the Pasteur Institute.

The statistics of the years 1886–87–88–89 show that of 7893 persons bitten by rabid animals and treated at the above establishment, fifty-three died—a mortality of 0·67 per cent. If patients in whom hydrophobia declared itself after the cessation of the treatment by inoculation be counted, the mortality rises to only 1 per cent. M. Leblanc tells us that of 336 bitten persons (years 1880 to 1885) treated by cauterisations or on the old expectant plan, thirty-nine succumbed—a mortality of 12 per cent.

The Action of Koch's Liquid on the Monkey.

The effects of Koch's liquid on a quadrumanous animal so vulnerable to the invasion of the bacillus as the monkey have been investigated recently by MM. Hénocque and Capitan at the Collège de France and the Hôtel Dieu respectively. M. Hénocque informs us that when his monkey entered the laboratory (Dec. 21st, 1890) auscultation yielded no physical signs denoting phthisis. Two days after the first injection a few râles and impaired resonance were noted at the right apex. The third injection determined dulness still more marked, and, in addition, slight dulness at the left apex. From this moment all the symptoms of acute phthisis manifested themselves (cough, anorexia, debility, intense fever), and eight days later the animal died, having lost a tenth of his weight. At the necropsy four tubercular masses of the size of a big pea were discovered in the right lung, the left organ in two-thirds of its extent being the seat of caseous pneumonia. Surrounding the lesions there were zones of red hepatisation, with marked exudation of red blood-corpuscles. Two guinea-pigs have been inoculated with portions of the pneumonic tissue, and both animals now present signs of cutaneous and glandular infection. The total quantity of fluid received by the monkey was six milligrammes — a quantity apparently quite capable of determining the onset of acute phthisis. M. Capitan's results differ somewhat from those obtained by M. Hénocque. One tuberculous monkey received in ten days three inoculations of one milligramme each. Death ensued on the tenth day, no reaction having been evoked. Tubercles were discovered in the mesenteric glands, the liver, and the spleen, all containing colonies of bacilli. The only pulmonary lesion was a small mass of grey granulations surrounded by an inflamed zone, and containing a few bacilli in the anterior edge of the left lung. Another monkey, supposed to be tuberculous, has up to the present time received four milligrammes of fluid, and seems none the worse for it. No reaction whatever was excited; indeed, the temperature has been noticed to descend 0·5° C. from four to five hours after an inoculation.

Paris, March 4th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Oscar Liebreich.

PROFESSOR OSCAR LIEBREICH, whose speech at the Berlin Medical Society is justly attracting so much attention at present, is one of the most eminent of the German pharmacologists. It was by Hoppe-Seyler, a well-known master of the subject, that he was initiated into the mysteries of medical chemistry. His first publication in 1864 announced his discovery of protagon, and was a highly important contribution to the chemistry of the brain. In 1869 he showed that chloral hydrate, which Liebig had discovered thirty-six years before, was an excellent soporific. He was led to this highly important discovery by studies of the connexion between the effect of chemical substances and their chemical constitution. Under certain conditions chloral separates into chloroform and formic acid, and Liebreich showed that this separation can take place in the bodies of human beings and animals. This pregnant observation afterwards enabled Liebreich to restore ethylene chloride, trichloride of acetic acid, and butylic chloral to the pharmacopœia; it also led Kolbe to the discovery of the therapeutic value of salicylic acid. One of Liebreich's later contributions to practical medicine was the application of lanoline as a basis for ointment. He is now engaged in very important investigations. He has observed that the chemical reactions in mixtures are not equally rapid in all parts, and he deems this observation significant in connexion with the biological processes in the cells. He was born at Königsberg in 1839, and educated there and in Berlin. He left school before finishing the full curriculum, studied chemistry, travelled for two years as a sailor, studied chemistry and medicine, and graduated in 1865. In 1868 he was appointed chemical assistant in the pathological institute here, established himself as a private lecturer in 1869, and was appointed professor in 1871.

Virchow on Koch and Liebreich.

At a meeting of the city deputies of Berlin last Thursday, at which the project of erecting a convalescent home near Berlin for patients treated by Koch's method was discussed, Professor Virchow, one of whose multifarious functions is that of a city deputy, said: "Everybody knows that public opinion as regards the success of Koch's method, which had somewhat fluctuated of late, has risen again within the last few days. This is due to the presentation of Liebreich's new medicament which was published yesterday, and which has been brought forward with such an abundance of good proofs that one may safely say it is likely to do at least as much for laryngeal phthisis as Koch's medicament, perhaps somewhat more." In the same debate Dr. Strassman stated that, of the 623 patients treated in the hospitals belonging to the city of Berlin, 36 had been cured, while 306 had improved in a greater or less degree.

German Death-rates in the Week ending Feb. 14th.

Aix-la-Chapelle 23·4, Altona 31·8, Barmen 26·0, Berlin 25·4, Bremen 17·4, Breslau 25·7, Chemnitz 29·3, Cologne 24·9, Dantzic 24·9, Dresden 17·1, Dusseldorf 24·6, Elberfeld 23·6, Frankfort-on-the-Main 20·5, Hamburg (with its suburbs) 22·7, Hanover 18·5, Königsberg 24·0, Krefeld 23·8, Leipsic 16·9, Magdeburg 18·3, Munich 27·4, Nürnberg 26·4, Stettin 28·0, and Stuttgart 22·8.

Prostitution in Berlin.

The number of women under police control (including medical supervision) in Berlin in 1875 was 2140; at the end of 1890 it had risen to 4068.

Professor Koch is expected back in Berlin at Easter, and will probably travel home *viâ* Italy.

Professor von Helmholtz has received the distinction of honorary citizenship from his native town of Potsdam.

Berlin, March 1st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Visit of Professor Koch.

DR. KOCH landed at Alexandria on February 11th at 8 A.M., and an hour later was at the Arab hospital looking at the cases on which the tuberculin fluid has been used. Dr. Koch reached Cairo on the evening of Feb. 12th, looking very thin and ill after five days' sea-sickness and all its attendant evils, but the following morning he felt so much better that he insisted on going to Kasr-el-Aini Hospital, where he very good-naturedly devoted an hour and a half to seeing and talking about the cases shown to him by Messrs. Milton and Sandwith. Among some twenty cases

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of lupus glands, bone disease, and phthisis there was material enough for him to teach about the manner and method of using the fluid, the increased quantities, the times for injection and for repose, and the continuance of the ordinary surgical and medical aids to recovery. He was much interested in the cases of tubercular glands of the neck, groin, axillæ, and pelvis, and was astonished to find so great a number of these cases in hospital. He warmly congratulated Mr. Milton upon the improvements in the hospital since his last visit in 1883, and was interested to find the kitchen and the pharmacy under competent German management. Later in the day he visited also the German Hospital in Cairo and saw the cases undergoing the Koch treatment. His chief criticism here, as elsewhere, was that the operators were a little too cautious and did not use sufficiently large doses of the tuberculin. Dr. Koch avoided all visits that were not absolutely necessary, and left Cairo on Feb. 14th for a fortnight's rest on the Nile. He has courteously declined to accept a dinner offered to him by the English military and civil doctors of Cairo, and only intends to spend three days here upon his return to Italy and Berlin, where he is due at the end of March to take up his new work.

Egyptian Immunity from the Exceptional Cold of January.

It is unnecessary here to refer to the cold weather lately suffered in Europe, but it may be worth while to note that the climate of Egypt has not been affected by the glacial period elsewhere. The newspapers and private accounts tell us of exceptional snow in Algiers and of six inches of snow at Tunis between Jan. 18th and 21st, occasioning the greatest misery among the Arabs, and snow clouds seem to have strayed as far as Bagdad. The December temperatures, as reckoned for invalids in Cairo, ranged from a minimum bedroom heat of 60° F. to a maximum outdoor temperature in the shade of 70°. In January the average minimum in a north bedroom without artificial heat was 58°, and twice fell as low as 56°; while the maximum temperature by day in the shade varied from 59° on two days to 74° on Jan. 17th. The absolute minimum out of doors in January was 36°, and the weather for two weeks seemed as cold as it has ever been in Cairo; but this was chiefly due to the clouds obscuring the sun by day. The heat at Assouan (south of Luxor) varied in January from about 60° by night to 80° by day, with an average heat of 71°, and at Wady Halfa, which is the furthest point on the Nile to which invalids travel, the January temperature has varied from 55° at night to 90° by day.

The Tourist Season.

In spite of the opening of fresh hotels and of a new line of Nile steamers, Cairo has never seemed so crowded as it is this winter. During four days last week no fewer than 500 people left the capital—250 to ascend the Nile, and of course return here later, and 250 others for Alexandria, to indulge their love of travelling, to Athens, Constantinople, and the Holy Land.

Cairo, Feb. 23rd.

Obituary.

RICHARD MIDDLEMORE, F.R.C.S.

ON March 1st, at Birmingham, Richard Middlemore, in his eighty-seventh year, broke the long chain connecting him with the past and peacefully went to his rest, full of all that should accompany age—honour, love, obedience, troops of friends. He was born on Oct. 12th, 1804, of an ancient family, whose records extend back to the time of Henry II. At the age of sixteen he was articled to a surgeon at Lichfield, subsequently becoming a dresser at St. Bartholomew's Hospital, where he also formed a friendship of a life-long character with Sir Richard Owen. Settling in Birmingham, he resolved, after mature deliberation and with the advice of his friend Joseph Hodgson, to devote himself to ophthalmic work exclusively; afterwards he was appointed assistant surgeon to the Birmingham and Midland Eye Hospital, and in 1835 honorary surgeon, which post he held until 1849, when he joined the consulting staff. He obtained the Jacksonian prize for his essay entitled "A Dissertation on the Diseases of the Eye and its Appendages, and the treatment of them," which was embodied subsequently into his well-known work, a "Treatise upon Diseases of the Eye." His enthusiasm and energy in all matters relating to the branch of which he was such an able exponent gave an impulse to his philanthropy, and stimulated others in the cause of which he was so interested. Thus the Asylum for the Blind at Edgbaston came to be founded, and received the benefits of his fostering care and services. In 1889 his undiminished zeal for this institution led him to give £2000 for the purpose of founding a trust fund for assisting poor deserving blind persons who shall have been inmates of the said institution by making grants to them on leaving, so as to enable them to earn their living by honest industry. In 1877 he also founded a prize to be awarded by the Council of the British Medical Association triennially "for the best essay on the scientific and practical value of improvements in ophthalmic medicine and surgery made or published during the previous three years." In 1888 he made a gift of £1000 to the Birmingham and Midland Eye Hospital to pay for the delivery of an annual lecture or a short course of post-graduate lectures, to be open to all recognised practitioners, on some subject or subjects connected with ophthalmic science and practice. Thus for fifty years he displayed a keen and devoted loyalty to his calling, and enriched its records with assiduity and experience of an unusual career. High-minded and honourable in character, with instincts true and unselfish, he gathered during his long life friends around him who now lament his death and look back with satisfaction upon his friendship with peculiar gratification. His memory remains as an unsullied example of an honest and useful life, and as a type of a Christian and a gentleman.

Medical News.

GUY'S HOSPITAL.—Mr. Edward Cock, senior consulting surgeon to this hospital, has sent a donation of £50 to the College library.

BATH EYE INFIRMARY.—The annual report (the 79th), just circulated, gives a favourable record of the condition and working of this institution during the year 1890, the first year, since entering on its new premises. There has been a marked increase of applications for treatment compared with the previous twelve months. The number of in- and out-patients shows an increase of 62 and of 120 respectively. The receipts from all sources (including a balance of £288 1*s.* 8*d.* brought forward from 1889) amounted to £999 0*s.* 6*d.*, and the disbursements to £470 12*s.* 1*d.*

THE LONDON CONFERENCE ON THE HOUSING OF THE WORKING CLASSES ACT.—The Special Committee on Defects in Houses appointed to prepare for the consideration of the conference a list or schedule of the conditions or defects which may be considered to render a house "so dangerous or injurious to health as to be unfit for human habitation" within the meaning of the Housing of the Working Classes Act held their first meeting at the Paddington Vestry Hall on Tuesday last. On the motion of Mr. Judge, Dr. T. Orme Dudfield was elected chairman of the committee. The committee sat for nearly three hours, and almost completed their draft report, which will be finally revised at a meeting to be held on Monday next, so as to be ready for the meeting of the conference fixed for Friday, March 13th.

DIPLOMA OF PUBLIC HEALTH.—The University of Cambridge has instituted a course of practical instruction in connexion with the requirements of the medical officers of health diploma. It includes the sanitary examination of water, air, and foods chemically and microscopically, the laws of heat, pneumatics, hydrostatics, and hydraulics. It further includes the preparation of different media used in the cultivation of micro-organisms. Short lectures will be given in explanation of the above subjects, and of analytical reports in general relating to water, air, and foods, and the interpretations to be put upon them. In addition to the six months' course, there will be a shorter one, beginning on July 8th, 1891, and ending in the last week of August. In the long vacation Professor Roy will lecture on Bacteriology thrice weekly, beginning on July 8th, for a period of six weeks.

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YELLOW FEVER IN WEST AFRICA.—A report from St. Louis announces that yellow fever is raging in the Cameroons and at the mouth of the Niger, and that grave fears are entertained of an outbreak at St. Louis.

THE ANIMALS' INSTITUTE.—At the Congress which was announced to take place at the Animals' Institute with relation to horse traffic, the committee decided to offer prizes for the best essay on draught (accompanied with models), and also for any improvements in appliances used for horse traction on the London streets.

CENTENARIANS.—Mrs. Kilham, of Mexborough, near Sheffield, celebrated her 103rd birthday on Monday.—Captain A. C. Littleton, R.N., of Cross Hayes, Hoar Cross, Burton-on-Trent, writes to a contemporary that there still lives at Armitage village, near Rugeley, an old man who entered his 104th year on Jan. 6th.—William Adam, a gardener by trade, died on the 22nd ult., at Taunton, in his 107th year. His age, it is stated, is well authenticated. He was born at Dunhead, in Wiltshire, on March 3rd, 1784, and removed to Taunton in 1820.

ESSEX AND COLCHESTER GENERAL HOSPITAL.—The report for the past year shows an excellent record of work done. The in-patients numbered 585 and the out-patients 1814. The total income for the year was adequate to discharge the expenditure, to clear off a small deficiency existing at the beginning of the year, and to leave a small balance in hand. The experiment initiated in January, 1888, of giving a salary (£200) to the physician in charge of the whole medical work of the hospital does not seem, judging from the report of 1890, to have injured either the finances of the hospital or its popularity, as the income of the institution has already exceeded that of 1887 by a sum slightly in excess of that accorded to the physician.

GREAT NORTHERN CENTRAL HOSPITAL.—The annual report for the past year of this hospital, which is situated in the Holloway-road, states that for want of adequate accommodation a great many serious cases seeking admission had been sent to other hospitals, or obliged to wait a long time before they could be received. The completion of the buildings had become urgent, and public assistance is solicited to enable the governors to carry out the work. The estimated cost is £20,000, and there is only about £1000 of this sum in hand. During the year there had been a large additional number of new cases admitted, equal, as compared with the previous year, to nearly one-sixth.

COTTAGE HOSPITALS.—*Bourton-on-the-Water Hospital:* Since the foundation, in 1861, of this hospital, 1107 patients have received treatment. At that period no similar institution existed in the county, but now, within a radius of about ten miles, there are four other cottage hospitals. Notwithstanding this addition, the average yearly number of cases has been maintained—namely, thirty-five in-patients. The financial position is satisfactory, a balance of £67 13*s.* 6*d.* remaining in hand.—*Bingley Hospital:* The first annual meeting of the subscribers was held recently. The annual report stated that since the opening of the hospital in September last thirteen patients had been admitted. The ordinary account showed a balance in hand of £137, and there was a credit balance of £384 on the building account. Promises of annual subscriptions had been received amounting to £160.

PRESENTATIONS.—On the 21st ult., at the distribution of the certificates of first aid in connexion with the St. John Ambulance Association, the members of the Duffield branch of the Derby centre gave a supper, and presented Mr. Robert Morrison, L.R.C.P. and L.R.C.S., with a handsome pollard oak writing case, bearing a silver plate with an inscription expressive of the pupils' appreciation of the services of the lecturer.—At a well-attended meeting of members of the committee and of the medical staff of the Royal South London Dispensary, held on the 3rd inst., a handsome clock bearing the following inscription was presented to Dr. C. Corbett Blades, late senior surgeon, and who has now been appointed consulting surgeon to the institution:—"Presented to C. Corbett Blades, Esq., M.D., by members of the committee and of the medical staff of the Royal South London Dispensary, in recognition of the assiduous and valuable services rendered by him during a period of thirty years as one of the honorary medical officers of the institution."

METROPOLITAN POLICE SURGEONS' ASSOCIATION.—A general meeting of the Association will be held at Cannon-street Hotel on Thursday, March 12th. The chair will be taken by Mr. Alex. O. Mackellar, F.R.C.S., at eight o'clock, when a paper on some cases of medico-legal interest will be read by Mr. H. Nelson Hardy, F.R.C.S. Edin.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.—A meeting of the general committee of the International Congress of Hygiene (of which the Queen has consented to become patron) will be held at 20, Hanover-square, on Monday, March 16th. His Royal Highness the Prince of Wales will preside, and will take the chair at 3.30 o'clock precisely.

THE SANITARY INSTITUTE.—A sessional meeting of the institute will be held at the Parkes Museum on Wednesday, March 11th, at 8 P.M., when a paper will be read on "The Prevention of Infectious Diseases" by Professor A. Wynter Blyth, M.R.C.S., medical officer of health for Marylebone. The paper will be followed by a discussion. Sir Douglas Galton, K.C.B., F.R.S., will occupy the chair.

SOUTHPORT INFIRMARY.—During the year 1890, 351 in-patients were treated, of whom 79 were cases of accidents. The out-patients numbered 2366. The total income on the general account was £2202 17*s.* 8*d.*, and the expenditure £2075 6*s.* 4*d.*, leaving a balance of £127 11*s.* 4*d.*, which had been transferred to the extension building account. This account now showed a debit of only £31 19*s.* 1*d.* During the year legacies and donations amounting to £399 2*s.* 7*d.* had been added to the investment fund, which now stands at £9379 8*s.* 11*d.*

EAST LONDON HOSPITAL FOR CHILDREN.—The twelfth annual dinner in aid of the funds of this hospital was held on Monday evening at the Hôtel Métropole. The Duke of Portland presided. His lordship, in proposing "Success to the East London Hospital for Children," referred to the ever-increasing benefits it brought to the very poor of the district in which it was situated. He urged the public not to desert old and well-tried institutions for unfledged schemes, which might or might not be of great utility. The Secretary, Mr. Whitford, announced donations to the amount of £4500, including one of £200 from the chairman, through whom no less than £1600 had been given to the institution.

EASTERN HOSPITAL INQUIRY.—The inquiry into the alleged maladministration of the Eastern Hospital has resulted in the production of very important evidence. Mr. Eldridge appeared for the complainants, and Mr. Gye for the Metropolitan Asylums Board. Evidence has been given by patients and former nurses, to the effect that the food supplied was inferior; occasionally the bread was mouldy or mouse-eaten. Cocoa was seldom supplied, and the fish was stated to be unfit for human food. Complaints relative to the bad quality of the food were made to the medical officer from time to time, but produced, as alleged, no definite reply except that patients could not expect to be supplied with food of the first quality. It was also alleged that bedsteads were removed without disinfection from one ward to another for the use of patients, and the result was in many cases outbreaks of infectious disease.

KING'S COLLEGE HOSPITAL.—The fifty-second annual meeting of the supporters of this hospital took place on the 25th ult., Mr. Richard Twining occupying the chair. The report, which was of a satisfactory character, showed that the hospital was now maintaining on the average more than 200 beds. The total number of cases under treatment in the hospital during 1890 was 2518, as compared with 2185 in the previous year. This increase, it may be explained, is due to the Cheere Ward having been opened, consequent on a gift (the fourth of its kind) of £1000 by Mr. Matthew Whiting, one of the vice-presidents of the hospital. The number of cases which had been under treatment was larger than in any previous year by about 250. The total increase of expenditure during 1890 was only £733 11*s.*, and in return for this the fifteen beds in the Todd Ward had been open during the whole year, and the fifteen in the Cheere Ward for the last two months. As regarded the nurses, under the new rules their hours would be reduced from 11½ to 9¾. The report was unanimously agreed to, and the rest of the business, which was of a formal character, having been gone through, the proceedings terminated.

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THE LONDON SANITARY PROTECTION ASSOCIATION.—The report of the Council for the year 1890 shows a further increase of membership in the tenth year of the Association's existence. The total number of members was 1588—an increase (after deducting withdrawals) of 81 on the previous year. There were 490 houses inspected for the first time during the twelve months. The special inspections numbered 457, against 439 in 1889. The cash statement showed a balance in hand of £680 5*s.* 7*d.*

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of several medical men practising in the neighbourhood of Highbury and Canonbury was held on Wednesday, Feb. 25th, at Northampton House, St. Paul's-road, convened by the council of the British Medical Temperance Association. The President, Dr. B. W. Richardson, gave an address, and an interesting discussion followed on the practice of total abstinence, in which several medical practitioners took part. Dr. Westcott stated that one-fifth of all the inquests held by him were on cases in which death was more or less due to drink. It is proposed to hold similar meetings in other districts of the metropolis.

YORKSHIRE COLLEGE, MEDICAL DEPARTMENT.—The Dean, Mr. Scattergood, presided at the twelfth annual dinner of the past and present students of the medical department of this College, which took place at the Queen's Hotel, Leeds, on the 27th ult. A large and influential company attended. The toast of "The Queen" having been honoured, Dr. Churton proposed "The Victoria University," which was responded to by Principal Bodington. Dr. Chadwick gave "The General Infirmary," and Dr. Eddison replied. Other toasts followed. During the evening, songs and musical selections were given, and the occasion was a complete success.

MEDICAL NOTES IN PARLIAMENT.

Local Government Provisional Order (Poor Law) Bill.

IN the House of Lords on Monday, March 2nd, this Bill was read a third time and passed.

Smoke Nuisance Abatement (Metropolis) Bill.

Lord Stratheden and Campbell moved the second reading of this Bill, which differed from its predecessors in that the intervention of the Home Office was dispensed with. The Earl of Kimberley thought the Bill should not be accepted. He explained that the Bill imposed a penalty on all householders who allowed opaque smoke to issue from their chimneys. He supposed all smoke was more or less opaque, and so the Bill contained a definition whereby "opaque smoke" was taken to mean "smoke of such volume and density as unnecessarily to impair the atmosphere." The Courts would find that definition somewhat amusing. He did not think it was much use to pass legislation which could not be carried out in practice. He understood the difficulty was that no fireplace had been invented which could consume its own smoke. The Marquis of Salisbury criticised the expression "opaque smoke" and the definition of the term in the Bill. There might be smoke with no density at all—it might be absolutely translucent. Was it to be said that such smoke, if it were emitted in volume, was to be considered opaque smoke? What was meant by impairing the atmosphere and doing so "unnecessarily"? The Bill omitted all reference to furnaces. Its provisions would require very careful reconstruction. The Bill was read a second time.

Inspectors of Factories and Workshops.

On Thursday, Feb. 26th, in the House of Commons, in reply to Mr. Leng, Mr. Matthews said that the existing Act gave him power to appoint female inspectors in factories and workshops, but there were strong objections to its exercise in that direction. In the Bill now before the House the sanitary supervision would be made over to the local authorities.

Ether as an Intoxicant in Ireland.

The Chancellor of the Exchequer, replying to Sir L. Playfair, said there would be no objection to the Select Committee on British and Foreign Spirits being put in possession of the report made to the Government on the use of ether as an intoxicant in Ireland.

Compulsory Vaccination Acts.

Mr. Ritchie, in answer to Mr. De Lisle, said that he had been in communication with the Royal Commission appointed to inquire into the working of these Acts, but there was no hope that their report would be presented to Parliament this session.

London Overhead Wires Bill.

On the occasion of the second reading of this Bill on Friday, 27th ult., Sir R. Lethbridge moved: "That it be an instruction to the committee to which the Bill is referred to consider the advisability of amending the Bill, so that its provisions may be in accordance with Part II. of the Public Health Acts Amendment Act, 1890." He said that as the Bill was admitted to be a compromise, the compromise would be more satisfactory, more complete, and more fair if the Committee were to be instructed to assimilate the provisions of the Bill as it affected the metropolis to the provisions of the law as it affected the provinces generally. The Public Health Acts Amendment Act was passed after a good deal of careful consideration, and its provisions had been found to work satisfactorily in various large towns. He therefore thought it would be well if they were extended to London. After some discussion the proposed instruction was carried by a majority of 16.

The Fog Nuisance.

In the House of Commons on Monday, in reply to a question by Viscount Wolmer and Sir H. Tyler, Mr. W. H. Smith stated that Her Majesty's Government were sceptical as to the value of a Royal Commission for the Investigation of the Fog Question. The evil arose mainly from smoke emitted by domestic fires, and the problem to be solved was whether it was possible by legislation to prohibit and prevent the production of smoke in this way. The Committee of 1887 showed that smoke could be prevented by the use of non-bituminous coal for heating purposes, or by the use of coke or gas, or by the use of an improved grate.

New Bills.

Mr. Ritchie has obtained leave to bring in the following Bills relating to the public health law, viz.: A Bill to Amend the Laws Relating to Public Health in London and the Public Health Law Consolidation Bill, a Bill to Consolidate the Laws Relating to Health in London. Both Bills were read for the first time.

Notices of Motions.

Mr. Atkinson's Bill to regulate the income of dowagers has given rise to considerable amusement among members of Parliament. Although the measure is not regarded in a serious light, Mr. Esslemont has given notice of a motion to the effect "that as dowagers have had no addition to fixed allowances from agriculture in prosperous times, it is unjust, unmanly, and unfair to compel them by legislation to accept a reduced allowance during the present depression."

Sir Walter Foster and Dr. Cameron have been peculiarly unfortunate in their efforts to obtain suitable places in the order list of the House of Commons for the motions in which they are interested. It is the wish of the former to call attention to the losses sustained by charities through the non-payment of rent charges, and of the latter to call attention to the state of our laws respecting the disposal of the dead. The ballot has been unkind to both gentlemen. It has given Sir Walter Foster fourth place on Tuesday, the 17th inst., and Dr. Cameron sixth place on the same day. The character of the motions having precedence makes it highly improbable that either Sir Walter Foster or Dr. Cameron will be heard then.

Mr. Gray will ask the Secretary of State for War on Tuesday next whether there is any foundation for the report that frozen meat, badly preserved or of inferior quality, supplied to soldiers at Colchester and other garrisons, has given considerable dissatisfaction, and whether he will consider the advisability of supplying the army with "fresh killed meat, which is obtainable in Great Britain and Ireland at from fourpence to sixpence per pound."

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday. Earl Sandhurst occupied the chair, and the other members of the Committee who attended were the Archbishop of Canterbury, the Earl of Kimberley, Lord Monkswell, Lord Saye and Sele, Lord Clifford, Lord Cathcart, Lord Zouche, Lord Thring, the Earl of Lauderdale, and the Earl of Erne.

University College Hospital.

Mr. N. H. Nixon, secretary of the University College Hospital, examined by the chairman, said that the institution was practically a free hospital. The qualification for admission was disease, although they had a system of governors' letters. The institution was started as a dispensary in 1828, and founded as a hospital in 1833. There were 207 beds in the hospital, the working number being 181. There were only two dispensaries in the immediate district, and the Middlesex was the nearest hospital. His salary amounted to £600. They had often to send away patients through want of room. In the course of last year they treated 41,732 new cases. As to the organisation of the hospital, there was an annual meeting of donors and subscribers. Then there was a fortnightly meeting of the Hospital Committee, which was composed of fourteen donors or subscribers, seventeen nominees of the Council of the University College, and three delegates from the Medical Committee. The Hospital Committee were practically the executive of the hospital. In the way of sub-committees, they had the House and Finance Committee and the Samaritan Fund Committee. The Sister Superior was summoned once a month to the House and Finance Committee. In the absence of witness the clerk and steward performed his duties. The total income of the hospital last year amounted to £19,334 and the expenditure to £19,560. Legacies had yielded about £4300 per annum during the past ten years. They found it profitable to be always advertising and applying for funds. The capital invested amounted to £112,042, only a small part of which could be used. They had not had to keep any beds empty through lack of funds. The resident medical officer admitted the patients, both medical and surgical. He received a salary of £150, with board and lodging. The officer of the staff who happened to be on duty admitted patients to the out department. If a case of scarlet fever presented itself, it was at once isolated, and a telegram was sent to the Metropolitan Asylums Board. They admitted cases of diphtheria when there was danger to life. They had separate wards for such cases. The contracts for food went before the House and Finance Committee, who made recommendations to the Hospital Committee. The food, as a rule, was taken in by the steward. He had never heard complaints from patients as to the food.—The Earl of Kimberley: Then you are quite perfect?—Mr. Nixon: I do not say so, but that I have never heard complaints. The question of the quality of food is dealt with before it reaches the patients. If there is any fault, the food goes back to the contractor.—Further examined by the Chairman, witness said that the surveyor of the hospital would be called in if any complaint were made as to the drains. They had a plan of the drains which was kept up to date. The hospital was nursed by a sisterhood associated with the Church of England. They found this arrangement to work excellently. No difficulties had arisen as to the division of authority. They had a Church of England chaplain, but they admitted ministers of all denominations at any time. They had a separate ward for children. Witness preferred to see children in a separate ward. Children disturbed adults to a considerable extent.—By the Earl of Kimberley: In 1879, and again in 1888,

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considerable alterations were made in the drainage system of the hospital. In the latter year the drains were examined by an expert sanitary engineer. No doubt it would be a good thing to have a yearly inspection by an expert sanitary engineer wholly unconnected with the hospital.—The Earl of Kimberley: Has there been no dissatisfaction on the part of the authorities with the buildings being old?—Mr. Nixon: Yes, but the buildings are as good as we can expect. The Earl of Kimberley: The buildings have been improved?—Mr. Nixon: Not structurally, but the drains have been put in thorough repair.—The Earl of Kimberley: But the buildings are structurally inconvenient?—Mr. Nixon: Yes, and it is contemplated to rebuild the hospital.—In further examination by Lord Kimberley witness said that the hospital was originally founded as the medical school of the University College. The Hospital Committee reported its proceedings to the Council of the College. The finances of the two bodies were kept entirely separate, the College merely acting as trustees of the hospital.—By the Archbishop of Canterbury: No difficulties arose in the relations between the College and the hospital.—By Lord Cathcart: On one side the hospital buildings abutted on some houses which he might say were being purchased by the hospital in view of the reconstruction scheme. The midwifery cases which they treated were not of the class that general practitioners cared for. The people were very poor. The wife of a man receiving £2 a week in wages would not be treated. They did not limit the cases to the teaching requirements.—The Earl of Kimberley: Is not that a directly pauperising arrangement?—Mr. Nixon: It is difficult to define the term pauper.—The Earl of Kimberley: Do you think it is a desirable thing to provide a system by which people shall know beforehand that they have not to provide for the expenses of confinement?—Mr. Nixon: I do not think that that enters into the consideration at all.—The Earl of Kimberley: So I observe; but don't you think it ought?—Mr. Nixon: Yes, perhaps it ought.—The Earl of Kimberley: Do you not think it is a very undesirable thing that in any hospital in London more cases of this kind should be taken than are necessary for the purposes of instruction?—Mr. Nixon: I find it difficult to answer that question, because I think the cases are really so poor.—By Lord Thring: He should like very much to see the floors renewed. No religious tests were applied to the nurses. Mr. Nixon here volunteered a suggestion. It occasionally occurred, he said, that patients became affected with mania, and were very noisy. Before they could be removed the whole machinery of the relieving office had to be invoked. All he wished to suggest was that it would be a great convenience to hospital staffs generally if the certificate of the officer under whom the patient had been in the ward were accepted as sufficient to send the patient in an ambulance to the infirmary or the workhouse.

Sister Cecilia, of the community of All Saints, examined by the Chairman, said that the sisterhood nursed the University College Hospital. Under the contract the sisterhood received £192 5*s.* per month for the work. There were nine ward sisters, fifty-six nurses, and thirteen probationers. They had one ward sister between two large wards. They did not employ ward maids, but had scrubbers. The sisters were practically on duty from six o'clock in the morning until 10 o'clock in the evening. In the sisterhood they had sufficient nurses for all the needs of the hospital. Apart from private nurses they had 112 nurses in the sisterhood.—By the Earl of Kimberley: Any complaint as to the conduct of nurses would be dealt with by witness.—By the Archbishop of Canterbury: The quality of the food in the hospital was excellent. If anything went wrong it was at once remedied. The sisterhood engaged nurses from all denominations.—By Lord Thring: She did not think the nurses were overworked. During the past nine years there had been only five deaths among the nurses. The average length of service of the nurses on duty was between six and eight years. She could not suggest any means by which the lives of the nurses could be lengthened.

Dr. Barlow, for ten years on the staff of the hospital, stated that the accommodation of the out-patient department was very satisfactory. The space available was by no means crowded. There was no systematic inquiry as to the circumstances of the patients. If he found a man in better circumstances he would treat him on the first application, but inform him not to return to the hospital. It might be desirable to have an inquiry officer, but he would require to be a superior person and not a mere mercenary individual. He was decidedly in favour of out-patient departments. He did not think they starved outside practitioners. He should certainly like to see a new hospital, although he considered the present building to be quite sanitary. He would not say that there were no cases of abuse of the charity which the hospital offered, but he would say that such cases were rare. He did not think that the poor suffered in the hospitals through the presence of students. On the other hand, he considered that the poor benefited by the presence of the students. Those hospitals which had medical schools attached were the most popular among the poor.—By Lord Cathcart: He considered that nurses were bad lives to insurance companies in the same way as were doctors. He did not think that as regards the University College Hospital there was any special wear and tear among nurses.

Mr. A. E. Barker, a surgeon on the staff of the hospital, expressed himself strongly in favour of out-patient departments. The complaint against out-patient departments came from a very undesirable fringe of the profession. He believed they interfered with this fringe, and he thought it proper that they should interfere. In his opinion the public had great confidence in the general hospitals of London.

Mr. Berkeley Hill, at one time dean of the medical school, gave evidence as to that institution.

The Committee afterwards adjourned.

Their lordships met again on Thursday, Earl Sandhurst presiding.

The Royal Free Hospital.

Mr. C. W. Thies, secretary of the Royal Free Hospital in Gray's-inn-road, examined by the Chairman, stated that their institution was a general hospital. The students who attended for clinical instruction were attached to the London School of Medicine for Women. It was entirely a free hospital. The governors had no privileges whatever in respect to the admission of patients. No letters were issued, all cases being admitted on the discretion of the medical officer. They had a weekly board, at the meetings of which six or seven governors usually attended. This board was practically the executive of the hospital. He called special meetings when necessary. In a case of insubordination he would undoubtedly suspend the officer, and immediately report the matter either to the weekly board or its chairman. There were 160 beds in the hospital, the working average being about 135. They admitted all diseases save infectious diseases. They had no special accommodation for special diseases. At the time of the last cholera epidemic in London the committee threw the hospital open entirely to cholera patients. In 1832 they admitted 700 cholera cases, in 1849 about 3000 cases, and in 1854 about 6000 cases. He could not explain how accommodation had been found for so large an influx of patients. They had not been compelled to keep beds vacant through want of funds. They kept things going by "eating the capital." The ordinary income last year amounted to £6048, and the legacies to £6855. From 1881 to 1890 the ordinary income averaged £5028, and the legacies £7370. The expenditure last year amounted to £10,671; the invested funds of the hospital amounted to £20,931. They were about to issue an appeal for funds upon a large scale. The hospital was founded in 1828. In 1842 the hospital was removed from Hatton-garden to Gray's-inn-road, where it occupied some old barracks formerly used by the Light Horse Volunteers. Owing to the receipt of legacies the committee were able to rebuild three sides of the quadrangle without appealing to the public. The remaining side was the present front, which was in such a dilapidated condition that unless they spent a very large sum of money upon it they would probably have the roof coming down. The committee now wished to rebuild this front. A staff nurse complaining of food would speak to the lady superintendent, who would report to witness or the weekly board. Minor complaints were received from time to time, but none of a serious character. The architect was responsible for the sanitary condition of the building. He would not describe that gentleman as a sanitary expert, but he had a thorough knowledge of all sanitary matters. They had a drainage plan which was kept up to date. The steward was responsible for the drains being flushed every week, and was required to report to witness in the event of finding anything amiss. The drains were tested about once a year. In connexion with their building scheme they contemplated a complete revision of the drainage system. He had never had any suspicion as to anything being wrong with the drains. He did not think that a bad odour could be detected in any part of the building. They had a lady superintendent and forty nurses. They had a system of training which extended over three years. At the end of that period, and after examination, nurses received a certificate. The question of pensions for nurses was being considered by the committee. The nurses on day duty worked from 7 in the morning until 8.30 in the evening. Every nurse was off duty for two hours per day, and had an allowance of two hours and a quarter per day for meals. The time spent in the wards, therefore, amounted to nine hours and a quarter per day. Every nurse had besides one whole day per month and four hours and six hours per month. The annual holiday extended to about three weeks. During the four years they had done their own nursing there had been only four cases of illness in the nursing staff and no deaths. They did not employ ward maids. The Earl of Kimberley: Why does the lady superintendent dine in what I may call this solitary grandeur?—Mr. Thies: It is merely a personal matter.—The Earl of Kimberley: Does she consider the nurses below her?—Mr. Thies: Oh, no, but she has to carve for the general body of the nurses, and it is hardly likely that she would care to eat her own dinner at the same time. She attends and carves at three dinners per day. By the Chairman: They did not supply patients with tea, sugar, or butter. It was a mere question of expense, and was now being considered by the board. By Lord Cathcart: He should like to see telephonic communication between the hospitals in London. They did not keep a ward temperature book. By the Earl of Lauderdale: There were 17,263 out-patients last year, and in addition 10,894 casualty cases. By the Earl of Kimberley: He estimated that the hospital saved the parish about £2000 a year, and on that ground he considered it would be free for parochial assessment. By the Chairman: He estimated the cost per occupied bed last year to have been £66 11*s.* Each out-patient, it was calculated, cost 1*s.* 3*d.* He should like to see greater uniformity in the accounts of the London hospitals. Comparisons at present were altogether fallacious. He had been in the out-patient department of every hospital in London, and he believed that there was very little abuse of charity. They were making a special appeal for assistance to the Great Northern Railway Company, whose *employés* were brought in large numbers to the hospital. He calculated that the patients from the Great Northern Railway Company cost the hospital about £500 a year.

Mrs. Garrett Anderson, Dean of the Medical School for Women, whose students receive their clinical instruction in the Royal Free Hospital, gave evidence as to the work of the school. There were, she said, 107 students, the number being on the increase. This year they had thirty-four new students, which was the largest number on record. The students paid £110 for the course of study, and of that sum £70 went to the school and the remainder to the hospital. There were forty-three students studying for the London qualifications.—By the Earl of Kimberley: Two ladies had passed the M.D. examinations, and a very large number the M.B. examinations. The course of instruction in the hospital was nearly the same as that in force in hospitals where male students were taught. Their students had a good deal of trouble in getting their out-door midwifery instruction.—By the Earl of Arran: There were about 120 qualified women on the Register, and they were nearly all in practice. A great number were abroad, but they were gradually scattering over the large towns of England. She thought that, as women went, the medical profession was a very good profession for women. Women were not so ambitious as men in the matter of making large incomes, and she thought they had every reason to be satisfied with the medical profession.

Mr. Calbert, assistant physician at the Royal Free Hospital, gave evidence as to the working of the out-patient department. He expressed himself as strongly in favour of the retention of out-patient departments. General practitioners could lose only very little through their existence, for the patients were extremely poor. The presence of the lady students in no way hampered the work of the out-patient department. As a matter of fact, the lady students were very useful.

Mr. James Berry, surgeon of the hospital, said he was quite satisfied with the sanitary condition of the hospital. As a rule, there was sufficient material for teaching purposes. He considered that it would be very advantageous to send the students round the infirmaries.—By Lord Monkswell: He approved of the appointments to the staff being limited to holders of London qualifications. It would be inadvisable to admit other qualifications.

The Committee then adjourned.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, W., F.R.C.S., has been appointed Consulting Surgeon to the Great Northern Central Hospital, Holloway-road.

BERRY, F. C., M.D., M.B, B.Ch., has been reappointed Medical Officer of Health, Lynton.

BOODEN, P. HAMILTON, M.B., C.M. Edin., has been appointed Medical Assistant to the Dundee Royal Lunatic Asylum.

COOKE, R. T. E. B., L.R.C.P., F.R.C.S. Edin., M.R.C.S., has been reappointed Honorary Consulting Medical Officer to the Royal Northern Sea-Bathing Infirmary, Scarborough.

DIXEY, ARTHUR CROSBEE, M.D. Mass., M.R.C.P., L.R.C.S. Edin., L.S.A. Lond., has been appointed Medical Officer for the Caldicot District of the Chepstow Union, Surgeon to the Severn Tunnel, Great Western Railway, and Tin Plate Company's Works; Certifying Factory Surgeon, Medical Referee to the Prudential Assurance Company, and Surgeon to Oddfellows, Foresters, and other Clubs, vice O. T. Slatter, resigned.

EVANS, M. G., M.D. Aberd., L.R.C.P. Lond., M.R.C.S., has been appointed Consulting Physician to the Brecon County and Borough Infirmary.

GRACE, HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Kingswood Urban Sanitary District of the Keynsham Union.

HICKMAN, HERBERT V., M.R.C.S., L.R.C.P. Lond., late House Physician, has been appointed Ophthalmic Assistant to Guy's Hospital.

LOVE, Dr. JAMES KERR, has been appointed Aurist to the Deaf and Dumb Institution, Longside, Glasgow.

MARSHALL, CHARLES DEVEREUX, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to University College Hospital.

MILLS, JOSEPH, M.R.C.S., &c., has been appointed Anæsthetist to St. Mark's Hospital, City-road.

READ, SIBLEY W., L.D.S. R.C.S. Eng., has been appointed Dental Surgeon to the Metropolitan Hospital.

SAUNDERSON, ROBT., Jun., M.D., L.K.Q.C.P. Irel., has been appointed Medical Officer to the Edenderry Dispensary, Edenderry Union.

SIMMONS, E. WALPOLE, M.B. Durh., M.R.C.S., has been appointed Honorary Physician to the Worcester Infirmary, vice Strange.

SMITH, E. M., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the York Friendly Societies' Medical Association, vice G. Scarr, resigned.

SYKES, J. H., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer of the Crumpsall Workhouse, and also Assistant Medical Officer of the Workhouse and Receiving Wards, Bridge-street, in the township of Manchester.

TAYLOR, J. W., M.D. St. And., M.R.C.S., has been reappointed Honorary Consulting Medical Officer to the Royal Northern Sea-Bathing Infirmary, Scarborough.

VERNON, A. H., L.R.C.P. Lond., F.R.C.S., has been appointed Honorary Surgeon to the Boscombe Hospital and Provident Dispensary, vice Nunn, resigned.

WEBB, F., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Doncaster Infirmary, vice Lund.

WHEATON, S. W., M.D. Lond., M.R.C.P., D.P.H., has been appointed Physician to the Royal Hospital for Children and Women, Waterloo-bridge-road, vice Dr. Dakin, resigned.

WOOD, W. D., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Combined Districts, Thame.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon. No salary, but board, lodging, fuel, and light provided.

BIRMINGHAM PROVIDENT DISPENSARY.—Medical Practitioner on the staff of the Balsall-heath Branch. (Apply to Rev. W. C. Thomas, Hon. Sec, Moseley, Birmingham.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Medical Officer for one year. Salary £80 per annum, with board and residence.

FOREST-HILL PROVIDENT DISPENSARY.—Medical Officer. (Apply to the Hon. Secretary, the Ridge, West-hill, Sydenham.)

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons to take charge of the out-patients.

HULL ROYAL INFIRMARY.—Ophthalmic Surgeon.

KING'S COLLEGE, London.—Demonstrator of Physiology.

LEITH HOSPITAL.—House Physician for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LEITH HOSPITAL.—House Surgeon for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LEITH HOSPITAL.—Surgeon for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the Hospital.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

NORFOLK AND NORWICH HOSPITAL.—Physician on the Honorary Medical Staff. (Apply to the Secretary, Norwich.)

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Junior House Surgeon for nine months, at a salary of £5 per month.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Junior Resident Medical Officer for six months. Board and residence provided in the Hospital.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House Surgeon and Secretary. Salary £80 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging, and washing.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Physician.

SUSSEX COUNTY ASYLUM, Hayward's Heath.—Junior Assistant Medical Officer. Salary £100 a year, with board, lodging, and washing.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY AND CONVALESCENT HOME.—House Surgeon (to act also as Secretary). Salary £40, with board and lodging.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing in the Hospital.

WEST HAM UNION.—Assistant (Resident) Medical Officer for the Workhouse. Salary £100 per annum, with the usual resident allowances. (Apply to the Clerk, Clerk's Office, Union Workhouse, Union-road, Leytonstone, E.)

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board and lodging provided. No salary.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided. No salary,

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

X. N P., THE LANCET Office, 423, Strand, W.C.—Medical Officer to take full charge of a Dispensary in the East of London. Salary £100, with partially furnished rooms, fuel, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BOYTON.—On March 1st, at 65, Seymour-street, Hyde-park, the wife of Ivan H. Boyton, L.D.S. R.C.S. Eng., of a daughter.

BURKE.—On Feb. 13th, at Civil Lines, Poona, the wife of W. H. Burke, M.B., Indian Medical Service, of a son.

CLARK.—On March 2nd, at Rahere, Brunswick-road, Gloucester, Mrs. Oscar Clark of a daughter.

GOULD.—On March 4th, at 10, Queen Anne-street, the wife of A. Pearce Gould of a daughter.

GUNN.—On March 3rd, at 54, Queen Anne-street, Cavendish-square, W., the wife of R. Marcus Gunn, F.R.C.S., of a daughter.

HUNTINGTON.—On Feb. 28th, at 43, South-street, St. Andrews, the wife of William Huntington, M.R.C.S., L.R.C.P. Lond., of a daughter.

VENN.—On Sunday, March 1st, at 122, Harley-street, W., the wife of Albert J. Venn, M.D., M.R.C.P., of a son.

WILLIAMSON.—On Feb. 26th, at Eldon-square, Newcastle-upon-Tyne, the wife of G. E. Williamson, F.R.C.S., of a son.

MARRIAGES.

POWER—CLUTTERBUCK.—On Feb. 26th, at St. Andrew's Church, Plymouth, E. R. Power, Surgeon-Major Army Medical Staff, only son of the Rev. E. R. Power, The Nant, Balbriggan, county Dublin, to Catherine Annie, only child of Surgeon-General J. E. Clutterbuck, M.D., Army Medical Staff (retired), of Newark Park, Wotton-under-Edge, Gloucestershire.

SAVAGE—BOUSFIELD.—On Feb. 9th, at St. Paul's, Capetown, S. Radford Savage, M.B., of Maseru, Basutoland, to Mary Isabel Bousfield, second daughter of the Bishop of Pretoria.

SIMPSON—MACNAUGHTON.—On Feb. 28th, at St. Peter's Church, Paddington, John Pollock Simpson, M.B., to Annie Johanna Stuart (Bennett), daughter of the late Alexander Macnaughton, J.P., Banker, Scotland.

DEATHS.

ALLAN.—On March 2nd, at 23, Milner-square, John Allan, M.D., M.R.C.P., in his 76th year.

ARCHER.—On Feb. 25th, at Boyne-terrace, Notting-hill, William Archer, F.R.C.S., in his 83rd year.

MIDDLEMORE.—On March 1st, at his residence, The Limes, Bristol-road, Birmingham, Richard Middlemore, F.R.C.S., in his 87th year.

PIERSON.—On Jan. 29th, at Shelabagh, Khojak Pass, Baluchistan, of typhod fever and pneumonia, Alfred Henry Pierson, Surgeon Indian Medical Service, eldest Son of the late Henry C. Pierson, of the India Office.

WAKEFIELD.—On Feb. 25th, at Alwyne-place, Canonbury, N., Thomas Wakefield, M.R.C.S., in the 82nd year of his age.

WOLFF.—On March 1st, at the residence of his nephew, North Audley-street, Grosvenor-square, Dr. Julius Wolff, in his 90th year.

WORTHINGTON.—On Feb. 26th, at Pattensweir, Enfield, Frederick Worthington, M.R.C.S., formerly of Liverpool, aged 81.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, March 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Mr. Mark Hovell: Chronic Suppurative Inflammation of the Middle Ear, and its Treatment. (Post-graduate Course.)
SOCIETY OF ARTS.—8 P.M. Prof. R. Meldola: Photographic Chemistry. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. The Adjourned Discussion on Dr. Douglas Powell's paper on Angina Pectoris will be reopened by Dr. Lauder Brunton.

Tuesday, March 10.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. T. Oliver: Lead Poisoning in its Acute and Chronic Manifestations. (Goulstonian Lecture.)
SOCIETY OF ARTS.—8 P.M. Mr. J. Starkie Gardner: Enamelling and Damascening.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. F. J. Sykes: Nature of Nuisances, including Nuisances the Abatement of which is Difficult.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. W. Hale White and Mr. C. H. Golding-Bird: Two cases of Idioglossia.—Dr. Frederick Taylor: A case of Defective Articulation.

Wednesday, March 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Norris Wolfenden: The Use of Electricity in Diseases of the Throat. (Post-graduate Course.)
HUNTERIAN SOCIETY.—8 P.M. Dr. Hughlings-Jackson will exhibit a Phonogram—talking of a patient the subject of Disseminated Sclerosis. Dr. J. Langton Hewer: A case of Chronic Osteo-myelitis of Tibia, with Specimen.—Dr. F. C. Turner: A Specimen of Ulcerative Aortitis. And other Specimens.
SOCIETY OF ARTS.—8 P.M. Mr. H. Newman Lawrence and Dr. Arthur Harries: Electricity in relation to the Human Body.

Thursday, March 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor C. Meymott Tidy: Modern Chemistry in relation to Sanitation.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Broadbent: Structural Diseases of the Heart, from the point of view of Prognosis. (Lumleian Lecture.)
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait: Further Observations on the Methods of Restoring the Perineum.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Mr. Treacher Collins: On the Glands of the Ciliary Body.—Dr. Benson (Dublin): On a case of Neuro-retinitis with High Tension simulating Intra-ocular Tumour. Mr. Cross (Clifton): On cases of Hydrophthalmos.—Mr. G. D. Johnston (Vancouver): Penetration of Eyelash into Anterior Chamber, removal by operation.—Mr. J. R. Lunn: Case of Coredialysis and Secondary Cataract. 10 P.M., Special General Meeting, to consider (1) Alteration of the date of the Bowman Lecture; (2) an address to Professor von Helmholtz on his seventieth birthday; (3) a motion by Mr. Tweedy (with the concurrence of the Council)—"That, in view of the course of medical study extending over a period of five years, it is expedient that the Ophthalmological Society of the United Kingdom urge upon the General Medical Council the desirability of making the subject of ophthalmic medicine and surgery a compulsory part of the ordinary curriculum."

Friday, March 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Mr. F. Bowreman Jessett: Surgery of the Intestines, with Demonstrations.
SOCIETY OF ARTS.—4.30 P.M. Capt. Abney: The Science of Colour.
CLINICAL SOCIETY OF LONDON.—8 P.M. Dr. Gowers: A case of Atrophic Spinal Paralysis and Multiple Neuritis.—Mr. A. Pearce Gould: A case of Simultaneous Gangrene of both Feet from Syphilitic Disease, amputation through knee-joints, recovery.—Mr. C. Mansell Moullin: Three cases of Septicæmia due to Sewer Gas.—Mr. A. T. Norton: A case of Popliteal Aneurysm in a Youth aged seventeen.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Diseases of Animals in relation to Meat Supply; Characteristics of Vegetables, Fish, &c., unfit for Food.
ROYAL INSTITUTION.—9 P.M. Dr. Felix Semon: The Culture of the Singing Voice.

Saturday, March 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 5th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 27	30·20	S.E.	40	38	81	60	34	..	Foggy
,, 28	30·30	S.E.	36	35	76	61	35	..	Foggy
Mar. 1	30·26	S.W.	48	46	81	56	36	..	Cloudy
,, 2	30·11	S.W.	51	50	69	58	47	..	Overcast
,, 3	30·25	S.W.	40	37	87	51	37	..	Bright
,, 4	30·39	W.	40	37	67	53	37	..	Overcast
,, 5	30·31	W.	50	47	85	57	40	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

DENTAL PRACTICE IN AUSTRALIA.

Medicus.—The Australian Dentists Act of 1887 provides that the following persons are entitled to registration as dentists:—1. All medical men or persons in the actual practice of dentistry at the date of the passing of the Act. 2. All persons over twenty-one years of age who have studied dentistry for four years, and passed the examination instituted by the Board. 3. All persons who for six months previously to the passing of the Act have been dentists or apprenticed to a dentist, and who shall continue in that capacity for a further term of three years. 4. Any person not domiciled in Victoria on showing that he has practised for ten years, and holds a foreign diploma.

Dr. A. Ogier Ward will see that the subject of his letter is fully dealt with in an annotation on p. 565.

Pauper should obtain a copy of the by-laws of the hospital.

Mr. J. B. Ball.—The paper will appear very shortly.

EXTREME HYPERPYREXIA.

To the Editors of THE LANCET.

SIRS,—The following may prove of interest to readers of THE LANCET. A. B——, aged twenty-two years, died on the sixth day of an attack of rheumatic fever. The temperature, taken a quarter of an hour before death in the axilla, was 109·2°. Taken again five minutes after death with a second thermometer it was found to be at exactly the same point. Both thermometers are perfectly reliable. There was no heart affection. I am, Sirs, yours faithfully,

Workington, March, 1891. C. MCKENOW, M.B., C.M.

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TUBERCULINE.

Dr. Wm. Ferguson has favoured us with a copy of the following lines and charade, which were written by one of the "cases" recently under treatment by Professor Koch's method at the Chalmers Hospital, Banff.

I feel this mundane sphere 's a fraud—
A gift not worth the giving;
That things are going to the bad,
And life's not worth the living.

It is not that the world is false,
Though false it is and vain:
That makes no riot in my pulse;
That brings my head no pain.

It is not that my love's unkind,
Though that is also true;
I bear *that* now with equal mind,
For it is nothing new.

It is not that I am in debt—
None ever gave me credit—
Nor am I turning crusty yet,
Though unkind folks have said it.

You ask: "Whence then this clouded brow?
This world dissatisfaction?"
I am inoculated now,
And this is the "Reaction"!

CHARADE.

I.

My *first* lies at the root of things,
With homely earth is soiled,
Yet at the festive board of kings
Is always welcome—boiled.

II.

My *second* o'er the level green
Impels the polished ball;
Where "cannons" rattle it is seen,
Yet loves the peaceful "stall."

III.

My *third* around the green earth lies,
No angel ever saw it;
'Twas never viewed by mortal eyes,
Yet men must somewhere draw it.

IV.

When wasting sickness crowns the ills
By hapless men endured,
My *whole* fresh strength and hope instils,
And whispers "Be thou cured!"

Mr. Reynolds (Leeds).—Dr. Liebreich's formula of his cantharidin solution is as follows:—Cantharidin, 0·2 grm.; potassic hydrate, 0·4 grm.; water, 20 cub centimetres. Add water up to 1 litre (1000 cc.). One cub. centimetre contains 0·0002 gramme, or 2 decimilligrammes.

Dr. Rentoul returns characteristically to a defence of his statement that many medical men are willing to take 7*s.* 6*d.* fees. We must leave the matter now to the judgment of the profession.

L.R.C.P. would do more good by bringing such facts under the notice of the Registrar-General or the Secretaries of the Defence Union.

Enquirer.—We cannot approve of such an alliance, or recommend it to our correspondent.

INSOMNIA.

To the Editors of THE LANCET.

SIRS,—Permit me through your pages to state a few particulars in reference to a case of above which has been exceedingly unyielding to treatment. I have prescribed in this case various preparations of opium, also chloroform, Indian hemp, the bromides, chloral, and hyoscyamus with only partial success. The opiates in full doses induced a moderate amount of sleep but required constantly increasing and were omitted subsequently in consequence of interference with secretions. The best results or hypnotic effects were obtained from the three last named in combination, but the doses required were very large, and some depression followed. A warm bath at a temperature of 96° F. just before going to bed, the use of a hot-water bottle to feet, and cold applied to head relieved headache and induced some sleep, but the effect was not maintained. These remedies were tried at commencement of attack with laxatives and alte atives before resorting to narcotics. Patient was formerly addicted to the use of alcoholic stimulants in excess, but this habit has been given up for some time, and the present attack is attributed to mental exertion in close application to scientific study (now prohibited) prolonged into the early hours of the morning for several months. There are no symptoms of organic cerebral disease, the headache being apparently functional, accompanied with dyspepsia, and relieved by remedies. Alkaloidal stimulants were freely taken by patient to relieve this symptom (chiefly strong tea), but now reduced in strength and quantity. Tobacco has been smoked largely, but the amount was reduced concurrently with that of alcohol. Although muscular and nervous debility exist, the present physical condition does not preclude out door exercise to a limited extent. I have had no experience of the therapeutic effects of sulphonal, hypnol, paraldehyde, or any of the recently introduced hypnotics. Perhaps one of your numerous readers would kindly suggest a remedy.

am, Sirs, yours truly,

Feb. 20th, 1891. M.R.C.S. 1858 AND L.S.A. 1859.

THE HEALTH OF FLORENCE.

Dr. Alexander R. Coldstream writes to us from Florence to the effect that an epidemic of enteric fever, lasting from Dec. 1st, 1890, to Feb. 25th, 1891, attacked 1477 persons, of whom 232 died from the disease out of a population of 181,000. The infection was derived from the contaminated water of an aqueduct supplied from an open stream in a mountain valley, about three miles from the city. The municipal authorities acted with decision and promptitude. As soon as the cause of the outburst became apparent the infected water was completely cut off from the city, and printed "hygienic precautions" were freely circulated throughout the town. A public furnace was erected in the outskirts of the city for disinfection of clothes and infected bed-linen at the municipal expense. The municipality has done its utmost in every way to mitigate the evil, and for some weeks boiled water has been gratuitously distributed to the poor. The reports of "typhus" which have appeared are erroneous, and were probably due to an error of translating the Italian *tifo abdominale* into "typhus." In other respects the condition of the public health is satisfactory. During the last month Florence has enjoyed glorious sunshine and blue skies, and the severity of the north wind has much diminished, the weather resembling, it is said, a June day in London.

RECIPROCITY BETWEEN MEDICAL PRACTITIONERS AND CHEMISTS.

To the Editors of THE LANCET.

SIRS,—If there were more reciprocity between medical men and chemists there would be fewer "medical and consulting chemists." A man must live, and if a chemist does business in a district where all the doctors dispense, and scarcely one writes a prescription in a year, he soon finds that it is but a poor living can be made out of penny-worths of salts and castor oil, and turns to counter prescribing or even visiting to increase the sale of his medicines and specialities. If all the medical men in a district would agree together to give up the (to them) usually distasteful work of dispensing, and either prescribe or employ the nearest trustworthy qualified chemist to make up all their medicines at a fixed rate per mixture, and thereafter to boycott any chemist who continued to entrench upon their legitimate sphere of work, I believe that it would prove beneficial to both parties. I know a practitioner in London who sends all his presciptions to a chemist and pays him quarterly at the rate of 3½*d.* per prescription; and I am of opinion that where there are three or four doctors to one chemist, it would pay the latter to do the dispensing at 3*d.* per prescription, bottles included, provided that the number of doses in each mixture be limited to six or eight, and that where twelve or sixteen doses are given the charge be doubled; expensive and unusual drugs to be charged at a special rate or paid for by the patients themselves.

Dispensing is degrading to the profession. The patient does not think, when he hands you his fee, that he is paying you for skilful advice and for the thoughtful consideration of his case. No, he is simply buying a bottle of medicine from you as he might buy a pound of butter from his grocer, and frequently seeks the "doctor's shop" where he will get it the cheapest. It is time that the public were educated into regarding members of the medical profession as something more than mere tradesmen; but that time will never come until we eliminate the spirit of the shopkeeper from our midst.—Yours truly,

Harpurhey, Feb. 25th, 1891. G. D. MACKINTOSH, L.R.C.P., &c.

L.R.C.P. (Reading).—The fee should depend partly on the means of the patient and the fee of the ordinary practitioner. It should not be less than one guinea, and as much more as is consistent with the above principles.

THE AMMONIO-CUPRIC TEST.

To the Editors of THE LANCET.

SIRS,—I should feel obliged if some of your readers, who have used Pavy's ammonio-cupric solution for the quantitative estimate of sugar, would assist me in the following difficulty. I find that the solution, after it is boiled and decolourised with the diabetic urine and is allowed to cool, again acquires a blue or bluish-green colour, accompanied with a flocculent deposit, which often has a reddish-yellow tinge. Is this as it ought to be? And if so, what is the re-colouration due to? I should add that I have applied the test not in a flask, as Dr. Pavy recommends, but in a large open test-tube.—Yours truly,

March 2nd. R. R.

DISINFECTANT DISTRIBUTOR.

To the Editors of THE LANCET.

SIRS,—With reference to the disinfectant distributor described in THE LANCET of Feb. 7th as a *new* invention, I beg to say I have had a similar apparatus in use for the last two years without requiring any attention except refilling with permanganate about every three months. My apparatus appears to differ in one or two particulars only. Firstly, that it is formed of non-corroding *metal*, and is therefore not porous, which it is quite unnecessary it should be, as its action is by the syphon tube. Secondly, it has a conical tube in the lid (which acts as both inlet and outlet for air) instead of the two holes, which appear to be much more likely to admit dust and dirt. Thirdly, it has a screw clip, by which it is attached to the side of the cistern.—Yours truly,

Ealing, Feb. 27th, 1891. B. POTTER.

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A PERPETUAL CALENDAR.

THE Actuary of the Rock Life Office has inflicted a most ingenious perpetual calendar upon his day and generation, and kindly intimates that a copy will be furnished to any medical man on application to him. For those whose business in life it is to ascertain how the weeks pieced into the years in bygone ages, and how posterity will solve this problem in the next millennium, it is simply invaluable, while its ingenuity and neatness will make it an object of interest even to those of us whose good fortune it is to escape such investigations. For ourselves we confess that perpetuity, so far as this calendar is concerned, begins with the somewhat uncertain date of the new style—an uncertainty which our instructions do not dispel; and while referring to the instructions we cannot refrain from observing that Mr. Crisford's rule for finding the golden number does not always work, and might be improved by adding the unit to the remainder, instead of to the dividend as he directs.

Fairplay.—Parties in this case were placed at a disadvantage by want of candour in the patient or his friends. Dr. A., we think, should accept the explanation of Dr. C., who acted *bonâ fide*, in urgent circumstances.

Dr. Santini (Rome).—The copy has been received.

ERRATUM.—The second name in the first line of our annotation on the Diagnostic Value of Fluorescein Dye in Diseases of the Eye, p. 447 *ante*, should have been printed Groenouw, not "Grovenonn."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Skene Keith, London; Dr. Boobbyer, Nottingham; Mr. J. Furley; Mr. R. Leigh, Liverpool; Mr. H. C. Jones, London; Mr. C. K. Bond, Liverpool; Mr. E. G. Byrne, Colon; Mr. Harcourt, Essex; Mr. Spowart; Dr. McKenow, Workington; Dr. Digby, Stafford; Messrs. Shelley and Co., London; Dr. Alex. Wallace, Colchester; Messrs. Richardson Bros., Liverpool; Dr. T. Oliver, Newcastle-on-Tyne; Dr. E. Warren Bey, Paris; Dr. Holden, Birmingham; Mr. B. Potter; Sir Walter Foster, Edgbaston; Mr. B. S. Ringer, Amoy; Messrs. Burroughs and Wellcome, London; Mr. A. T. Hunter, Edinburgh; Mr. Cleary, New York; Dr. H. Snow, London; Mr. J. Tweedy, London; Mr. D'Arcy Power, London; Mr. J. R. Roberts, Gilgit; Messrs. Richardson and Co., Leicester; Mr. Sleman; Dr. Atkinson, Surbiton; Messrs. Bush and Co., London; Dr. Collins, London; Dr. Ridge, London; Dr. Hale White, London; Mr. C. Cotton, Ramsgate; Messrs. G. Street and Co., London; Mr. Cropley, Northampton; Messrs. Smith, Elder, and Co., London; Mr. Haviland, Douglas; Messrs. Rock, Hawkins, and Thorpe, Hastings; Mr. H. H. Taylor, London; Dr. Gaddes, Palmer Lake; Dr. Coldstream, Florence; Mr. Shaw, Worthing; Dr. Ogier Ward, Tottenham; Dr. Sellers, Radcliffe; Messrs. Mitchell and Co., London; Mr. W. R. H. Stewart, London; Messrs. Carnrick and Co., London; Mr. James, Highfield; Mr. V. Horsley; Messrs. Ash and Sons, Golden-square; Mr. Reck, Melbourne; Mr. Laban, West Bromwich; Mr. Drewett, Paris; Mr. Duke, Dublin; Messrs. Kilner Bros., London; Mr. Matthews, Birmingham; Messrs. Blondeau et Cie., London; Mr. Ackrill, Harrogate; Mr. A. Frost; Messrs. Cox and Co., Brighton; Mr. Marshall, Uttoxeter; Messrs. Heilgers and Co., London; Dr. Favrat, Madeira; Mr. Obert, London; Messrs. Watkins and Osmond, London; Mr. Horner, Scarborough; Mr. Visser, South Africa; Mr. Cranny, Dublin; Dr. Williams, London; Messrs. Keene and Ashwell, London; Mr. Lloyd, Ventnor, I.W.; Messrs. Palmer and Sons, London; Mr. Sharpe, Matlock; Messrs. Mackey, Mackey, and Co., London; Mr. Gurner, London; Mr. Webb, Bury; Messrs. Flatau and Mankiewicz, Berlin; Dr. Windle, Halifax; Messrs. Coupland and Co., Burnley; Mrs. Theobald, Leicester; Messrs. W. H. Smith and Son, London; Mr. Thomas, Liverpool; Messrs. Paternoster and Hales, Hitchin; Dr. Newman, Capri; Mr. Nance; Messrs. Pimms and Co.; M. Battistini, Bologna; Mr. Bullivant; Messrs. J. Wright and Co., Bristol; Mr. Fox, Manchester; Matron, Portsmouth; Pauper; M.R.C.S., L.S.A.; Espec; Medicus; R. B.; Royal Albert Edward Infirmary, Wigan; M.D., M.B., C.M.; B.; Secretary, Norfolk and Norwich Hospital; A. C. G., Southsea; Alpha, London; A Qualified Assistant; M.B., Forest Gate; M.D., Newcastle-on-Tyne; Malleus Injustitiæ; Inquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Ross, Belfast; Mr. Wheeler, Manchester; Mr. Tully, Hastings: Mr. Evans, Llanerchymedd; Dr. Peacock, Kingswinford; Messrs. Burgoyne and Co., London; Mr. Forgitt, Lincoln; Messrs. Swan Sonnenschein and Co.; Dr. Johnson, Swindon; Mr. Orchard, Dublin; Dr. Baker, Forest Hill; Mr. Feeny, Bilston; Mr. Shannan, co. Durham; Messrs. King and Co., Horsham; Mr. Lockwood, Huddersfield; Messrs. Margrave Bros., Llanelly; Mr. Brown, Westgate-on-Sea; Messrs. Murray and Co., Paris; Dr. Bower, Bedford; Mr. Cowan, Glasgow; Messrs. Iles and Stradling, Watford; Miss Cotton, Bridgwater; Mr. Lowe, Upper Norwood; Mr. Walsh, Ireland; Mr. Perkins, Newport; Messrs. Rocke and Co., Hastings; Mr. Ramage, Largo, N.B.; Mr. Aspinall, West Kirby; Dr. Rentoul, Liverpool; Mr. J. Keegan; Messrs. Walker and Weller, Malvern; Mr. Tyte, Minchinhampton; Messrs. Fannin and Co., Dublin; Mr. Huntingdon, St. Andrews, N.B.; Messrs. Smith and Son, Birmingham; M. di Giacomo, Naples; Mr. Collier, West Kirby; Mr. Vert, Edinburgh; Mr. Boyton, London; Messrs. Eason and Son, Dublin; Dr. Leckie, Glamorganshire; Dr. Galbraith, Great Barmouth; Mr. George, Preston; Mr. Burcombe; Messrs. Hooper and Co., Pall Mall; Mr. Cochrane, Wigtownshire; Dr. Gibbes, Ann Arbor, Michigan; Mr. Forjitt, Lincolnshire; Messrs. Mann and Son, London; Mr. O'Meara, Loughborough; Mr. Young, Birmingham; Mr. Birchall, Liverpool; Mr. Griffith, Carnforth; Dr. Mygenc, Denmark; Mr. Smith, Fleet-street; Mr. Dinck; Mr. Heywood, Manchester; Mr. Thin, Edinburgh; Mr. Hornibrook, London; S. Pomfret; Country, London; Gavel, London; Bristol Infirmary; Birmingham City Asylum; Nurses' Institute, Leicester; Secretary, James Murray Royal Asylum, Perth; Beta, London; Z., London; Secretary, Devon Hospital, Buxton; Cicero, London; Ulna, London; Secretary, North Riding Infirmary, Middlesbro'-on-Tees; Oxon, London; Corporation of Birkenhead; Secretary, General Apothecaries' Co., London; Gordon Hotel Co., London; Hon. Secretary, Teignmouth; Secretary, Sheffield Public Hospital; M.D., Leeds; Alpha, Surrey; Secretary, Royal Eye Hospital, Manchester; Vere, London; Iota, London; Sigma, South Wales; M. M. B., London; Cantab, London; Delta, London; County Asylum, Rainhill; Alpha, Manchester; A. V. M., London; Doncaster General Infirmary; Muspratt, Brighton; Festino, London; Helix, London; Secretary, Portland-place; Iota, Folkestone; Ferndale, Torquay; Medicus, Holborn; Omega, London; M.D., London; Spes, London; Medicus, London; F. S. D., Leeds; A. B., London; Smilax, London; B. A. O., London.

NEWSPAPERS.—*National Guardian, Newcastle Daily Leader, Sheffield Telegraph, Manchester Examiner, The News, Liverpool Daily Post, Yorkshire Post, Scottish Leader, Insurance Record, Mining Journal, Hertfordshire Mercury, Surrey Advertiser, Leeds Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Sunday Times, West Middlesex Standard, Bristol Mercury, Builder, Broad Arrow, Chemist and Druggist, Metropolitan, Pharmaceutical Journal, Guy's Hospital Gazette, Architect, Spectator, Law Journal, City Press, Local Government Chronicle, Dundee Advertiser, Saturday Review, West Middlesex Advertiser, Manchester Courier, Lancaster Observer, Western Times, Taunton Courier, Army and Navy Gazette, West Breton Advertiser, Bury Standard, Hull Times, Rutland Post, Teesdale Mercury, Rochdale Observer, Antigua Standard, Royal Cornwall Gazette, Wolverhampton Chronicle, Nuneaton Chronicle, Health Sanitary Record, Melbourne Argus, Belper Chronicle, Natal Mercury, Bedworth Guardian, Buckingham Express, Shields Daily Gazette, Waterford Mirror, Staffordshire Sentinel, &c.*, have been received.

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ABSTRACT OF

The Milroy Lectures,

ON

DIPHTHERIA, ITS NATURAL HISTORY AND PREVENTION.

Delivered before the Royal College of Physicians of London.

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.

LECTURE IV.

MILK in connexion with the causation and diffusion of diphtheria was next discussed, Dr. Michael Taylor's and Dr. Ballard's experiences being referred to as the first in which any such cause was suggested as having to do with the specific fevers. Mr. Power has the credit of having first definitely shown a relation between occurrences of diphtheria and the use of particular milk services, and his investigations as to this in North London in 1878 were recorded in some detail, it being shown that the incidence of the disease on households taking the special milk and those having another service was at the rate of 60 and 5 per 1000 respectively. And when the various circumstances by which milk could at that date be regarded as liable to become infective had been discovered, the suggestion had even then been made that there had probably been some contamination of the milk by particular cows suffering, whether recognised or not, from some specific disease. The idea as to the existence of some relation between disease in the lower animals and man was, indeed, not altogether new. There was the analogy of foot-and-mouth disease, and some early experiences of Dr. Thorne were referred to, in which he had found that young pigs fed on the milk of cows suffering from the latter disease were killed by it, whilst children using it suffered from certain affections of the mouth and fauces. Other diphtheria outbreaks having somewhat similar histories were quoted, but no substantial advance was made until the occasion of an outbreak at Headon in 1882, which, having first been investigated by Dr. Cameron, was afterwards also inquired into by Mr. Power. Here again nine-tenths of the houses invaded received their milk from one dairy, the houses being those which were best circumstanced from a sanitary point of view. And here it was further noticed that there had been a special incidence of the disease on people, whether children or adults, who habitually consumed uncooked milk in large quantities. The source from which the milk had received its infection was again involved in much obscurity, but there were circumstances which led to the surmise that the infectiveness had possibly been brought about by causes operating through the cow herself, and enabling her to furnish a milk capable of inducing diphtheria and the allied sore-throat in the human subject; and the milk itself gave some physical indications of this. But no disease in the cow other than some possible trivial ailment, which, according to veterinary judgment, did not prevent the cow from being regarded as healthy, had as yet been made out.

So matters remained until 1886, when a very severe diphtheria epidemic appeared amongst the better classes living at York Town and Camberley. The onset was sudden, 88 marked attacks and 52 of lesser severity taking place in three weeks and a half. Of those attacked, 84·2 per cent. received their milk from one dairy, which thus came under suspicion, and during ten days of especial severity every one of the forty-eight houses invaded took the supply in question; and this speciality of incidence *qua* milk was quite different from any other incidence that could be made out. Here, again, the amount of milk consumed was seen to have to do with the risk of diphtheria. In some previous milk epidemics, where other infectious diseases had been concerned, Dr. Thorne had been led to believe that there was a special infectivity attaching to cream, which he thought had in its formation probably entangled the specific particles of disease, and so carried them to the surface. But this view could not account for all the circumstances noted at Camberley. Indeed, if any additional risk was incurred by mere cream-drinking, it was altogether overwhelmed by the danger attaching to the *storage* of milk, the skim milk resulting from the storage being as infective as the cream, and it seemed as if this storing gave opportunity for the cultivation of the specific organisms of disease which did not otherwise occur. Subsequent experiences of Dr. Klein have gone far to confirm this view.

In the meantime, diphtheria prevalences which could unmistakably be attributed to milk were increasing, and suspicion had arisen that a number of the lower animals might be concerned in it. The early experiences of the Medical Department of the Local Government Board having been referred to as to this, the observations of Dr. George Turner, Dr. Robinson, and others were quoted. The existence of a disease akin to diphtheria was found amongst fowls which had pecked at diphtheria sputa; amongst turkeys, from which the disease had apparently spread to the human subject; and also amongst other animals, notably cats. With regard to cats, the disease had appeared to be transmissible both from them to children, and from the latter back to cats, and a number of occurrences of diphtheria were quoted in this connexion. Noah Webster's writings in 1800 were also recalled as to the occurrence of fatal "angina" in man synchronously with a "pestilence amongst cats," and the more recent labours of the Medical Department of the Local Goverment Board, in so far as the special pathology of the disease was concerned, were then entered into in some detail. Latterly Dr. Klein had been experimenting on certain animals with the membrane of diphtheria, and though he had failed as regards birds, it was otherwise with cats, on the cornea and conjunctiva of which animals a disease, infective amongst cats, could be produced, by inoculation from human diphtheria membrane; and from this induced disease bacilli could be isolated resembling the Klebs-Löffler diphtheria bacilli. From this, Dr. Klein was led to study this bacillus more in detail, and he succeeded not only in confirming Löffler's view that the organisms hitherto regarded as one, included a bacillus potent to induce diphtheria and a pseudo-diphtheria bacillus, but he also showed that whilst the two forms of organisms were so far alike as to be indistinguishable microscopically and otherwise, they differed in their power of mutiplication when cultivated at different temperatures; the true diphtheria bacillus multiplying, in milk, for example, at the ordinary temperature of the air. This discovery had, it was pointed out, important bearings on the special virulence of diphtheria induced as the result of drinking an infective milk which had been *stored* for purposes of securing cream or otherwise. At this stage Dr. Thorne recalled the fact that in nearly all the carefully recorded cases of milk diphtheria there had been evidence either of some "trivial" ailment in the milch cows, showing itself, for example, on their udders and teats by means of vesicles, "chaps," &c., or some story of a physical alteration in the quality of the milk, such as was shown by a condition of "ropiness," which dairy farmers admitted to be due to some condition affecting the cow herself. And he then gave an account of Dr. Klein's most recent researches as to milch cows, researches which are to be fully recorded in Dr. Buchanan's forthcoming report on the proceedings of the medical department of the Local Government Board. Briefly told, they amount to this: Milch cows inoculated with human diphtheria membrane acquire a definite specific disease, which may or may not in the end be fatal. The milk apparatus of the animals continue to furnish abundant milk, but the udders and teats exhibit vesicles, "chaps," sores, &c., almost exactly like those found by Mr. Power and others in the milk diphtheria epidemics; and in the lymph of these udder vesicles the true bacillus diphtheriæ could be found. So, also, from the milk itself abundant colonies of the bacillus could be cultivated, whilst no other organisms could be detected. Then came a curious accidental experiment. Contrary to orders, two cats had been supplied with some of the cow's milk, and in these cats the disease called by Dr. Klein "cat diphtheria" resulted. This latter experiment is stated to be referred to by Dr. Buchanan as lacking scientific precision owing to its accidental character, but it is of much interest in connexion with the subject discussed, and it will doubtless be repeated. Reviewing the information resulting from these experiments on cows, "we are able," said Dr. Thorne, "to appreciate the import of those apparently trivial ailments in milch cows, to which so little importance has hitherto been attached by veterinarians and dairymen, but which have so commonly been discovered in association with epidemics of milk diphtheria.'

At this stage of the lecture Dr. Thorne laid down a series

of propositions embodying the points which he had brought forward, and he explained that time had not permitted him to deal with all the matters which were properly included in the somewhat comprehensive title which he had originally attached to this course. Prevention of diphtheria had not been touched upon, and he had desired to deal with a number of other points, such as the stability of the contagium, the vehicles by which it could be communicated, its possible diffusion aerially, the incubation period of the disease, and its relation to croup. And finally he announced his intention of publishing the course of lectures, in such form as would include these and other points which he had been compelled, by reason of time, to pass over without comment.

ABSTRACT OF THE

Goulstonian Lectures,

ON

LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians, March, 1891,

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,

PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, AND PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF DURHAM.

LECTURE II.

AT the close of the last lecture Dr. Oliver dealt with the peculiar susceptibility of women to the influence of lead, and he said that under any circumstances, once saturnine poisoning was induced, it was particularly apt to recur on exposure. Indeed, sometimes the symptoms reappear without exposure, the explanation being that lead which had been deposited as an inert compound had by some changes either in the blood or in the fluids become converted into a soluble lead compound, and in this form was reabsorbed. He said it was sufficient to state here that either in a state of solution, of fine subdivision, or dissolved in some volatilised agent, such as turpentine, lead is taken into the system. Of all the symptoms and physical signs of lead poisoning, the one physical sign above all others which indicates that the system is becoming impregnated with lead, and is suffering in consequence, is the development of anæmia, which becomes gradually confirmed, and is spoken of as saturnine cachexia. Almost from the first day of exposure to lead, hæmatosis is interfered with. He had never found in a lead worker the normal number of red blood cells. They vary from 2,500,000 to 4,000,000 per cmm. There is no marked increase in the number of white cells, but the colouring matter falls as low as 45 or 50 per cent. of the normal. The bones have in some cases contained lead, and to this fact the anæmia may be partially attributed. The physical sign of plumbism which is most looked for and generally met with is the presence of a blue line on the gums, noticed by Burton, but previously described by Tanquerel. When present it is a valuable sign. But it may be absent; it generally is when the teeth and gums are perfectly sound and the mouth is kept cleansed. And yet there may be colic and no blue line, or a girl may die from acute encephalopathy with no blue line present from first to last characteristic of the poison. There are two blue lines. One is a delicate line just at the margin of the gum. It is a deposit of sulphide of lead on, and not in, the gum. It is easily removed by cleansing the teeth and rinsing the mouth. The other, the characteristic line, is bluish black, and occurs also at the margin of the gum, where it is not in complete apposition with the teeth. There the gum is frequently ulcerated and irregular in outline. The lecturer had seen a blue line develop the day after a large dose of acetate of lead had been taken. It persisted for a few days, and then disappeared. It is difficult to say how long the blue line of plumbism will remain after removal of the individual from the influence of lead. In some of Dr. Oliver's cases it had disappeared very quickly—the earliest eight days, but in the severe forms three to six months. He had never succeeded in developing the blue line in plumbism by iodide of potassium when absent, as some authors are said to have done. He alluded to the line on the gums noticed in other forms of poisoning—bismuth and copper,—and showed a drawing in which a black or carbon line had been noticed on the teeth and gums of a coal miner admitted into the Newcastle Infirmary under the care of his colleague, Prof. Philipson.

One of the earlier symptoms complained of by patients suffering from plumbism is sudden and severe pain in the abdomen. Generally it is preceded by such prodromata as a metallic taste in the mouth in the morning and by vomiting, or only by a feeling of sickness and loss of appetite and constipation, and occasionally by diarrhœa. Colic occurs early after exposure to lead; in one of the lecturer's cases twelve days after. Pressure is said by most writers to relieve it, but sometimes the patient cannot bear to have the abdomen touched. There are two kinds of pain: the paroxysmal or acute pain, which is the true lead colic, and which is generally relieved by pressure; and the other is the dull, continuous pain, which follows it in the intervals. It is this pain which is usually aggravated by pressure. It is difficult to say what produces the acute pain in lead colic. A spasmodic constriction of the small intestine occurring at irregular intervals appears to be the cause of the pain in lead colic by pressure upon the nerves, and this is aggravated by the efforts made by the distended portions of the intestine to propel their contents into the contracted tube below. The lecturer gave his reasons for regarding the action of lead upon nerve ganglia as primary, and upon muscular fibre as secondary, and showed that the colic whilst aggravated by constipation that might be present was not caused by it, there being in not a few cases diarrhœa. The question of colic was, however, part of a much larger problem. During the attack of colic the pulse is known to become hard and resistant, and is very decidedly retarded. Slowing of the heart's action being part of this process, and explained by reflex inhibition through the cœliac and mesenteric plexuses, sphygmograms were shown in support of the opinions expressed. They showed the heightening of arterial tension that arises in the course of exposure to lead, the increase of the tension during colic, and in addition a peculiar difference in the pulses of the radial arteries whenever severe colic had been experienced—a difference far in advance of anything observed in health or in other diseases save aneurysm, and which (as it persisted in spite of concurrent heart disease) Dr. Oliver regarded as characteristic of lead poison, and dependent upon some alteration in the structure of the abdominal sympathetic ganglia. He also alluded to the almost complete suspension of the renal function during the attacks of colic, and drew attention to the difference in the pupils met with in lead poisoning.

An early symptom in lead poisoning is an alteration of the menstrual function. There is frequently menorrhagia, even in young girls. Others suffer from amenorrhœa. Lead workers miscarry in a far larger percentage than other women. Dr. Barnes[1] alludes to the subject, and quotes the experience of M. Paul as to fifteen pregnancies of four women who had worked in a type foundry. Ten of these ended in abortion, two in premature labour, one in still-birth, and the child died within twenty-four hours. Dr. Oliver gave details of several cases, showing how frequently exposure to lead induced abortion or the early death of the offspring from convulsions. He alluded to the post-mortem appearances met with in the liver and kidney of an infant whose parents were lead workers, drawing attention to the atrophied condition of the secreting structures of liver and kidneys.

The various forms of lead paralysis were subsequently discussed, from the classical wrist-drop to the generalised paralysis in which muscles of legs, back, shoulders, and arms were affected; and the lecturer showed a good illustration of the latter, which had occurred in the clinique of Prof. Philipson. The predilection of the extensor muscles to be affected was also discussed, but he showed that whilst the flexors and supinator longus, as a rule, escaped, the latter muscle occasionally became involved. His colleague Dr. Drummond had observed paralysis of the flexors. The muscles were affected in groups. Dr. Oliver discussed the primary seat of the lesion in lead paralysis; and whilst he regarded the probability of the lesion being in many instances a peripheral neuritis, he favoured the

[1] Obstetric Medicine and Surgery, vol. i., p. 496.

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view of it being a central lesion. The relation of optic neuritis and lead poisoning was discussed, and it was shown that long before albumen is detected in the urine there may be neuro-retinitis. Cases were detailed. One case, a female aged twenty-three, after having been blind for twenty-one weeks, gradually regained her eyesight. Optic atrophy is a frequent consequence of lead neuro-retinitis. There were many circumstances in operation at one and the same time in lead poisoning to cause neuro-retinitis; such as, for example, contracted cerebral arteries, imperfect emunction, disordered menstruation, and a peculiar influence of lead itself upon disc and retina that it was difficult to assign to each its proper share in the production of the neuritis. Attacks of acute lead encephalopathy were frequently preceded by hysteria. This the lecturer had often seen. Baumgartner of Newcastle had met with it. The symptoms gradually increase in severity and differ from those associated with functional derangement, becoming ultimately signs of some deep impression made upon the brain by lead. These cases frequently end in death within a few days of their first appearance. The lecturer then alluded to the question of toxic hysteria in general and of the sensory disturbances met with in lead poisoning, and concluded the lecture by drawing attention to the relation of lead poisoning with acute delirium and insanity; and in one case in particular to a peculiar loss of memory for names of places.

FIVE CASES OF DISORDERS OF THE FRONTAL SINUSES.

BY J. W. HULKE, F.R.C.S. ENG.

DISORDERS of the frontal sinuses, if we except the fleeting congestions of their mucous membrane, which are a part of "nasal catarrh," are of infrequent occurrence. They occur, indeed, so infrequently that many surgeons in large practices have never met with them, and few can claim much familiarity with them. Some of these disorders are unattended with symptoms sufficiently distinct to denote their presence, in others the local condition is merged in one of wider extent, and so escapes recognition. As an example of the former class may be cited the slight degree of hyperostosis which imparts to the normally smooth walls of the sinus a finely tuberculated roughness resembling that of shagreen, comparable to that which in anatomical preparations is better known in the antrum, where attention was called to it by Professor Hyrtl. Such, also, are the examples of excessive irregular bone growth in the walls of the sinus in certain instances of cranial hyperostosis—e.g., that characterising the condition known as "leontiasis ossea." In these and in allied conditions, whilst the cavity of the sinus is encroached on by the adventitious tissue and its capacity lessened, the walls of the sinus are thickened, and so the circumstances are completely different from those attending the presence of an exostosis within the sinus; for this latter, whether it originates within the sinus springing from its walls, or whether it intrudes into the sinus, its origin lying outside it in some neighbouring part, expands the cavity of the sinus as it fills it, and wastes its walls, even to making perforations in them. The clinical recognition of these two forms of inordinate bone growth in the sinuses is important, since the diffuse is beyond the reach of surgery, whereas "exostosis," even when of large enough size to attract attention, is removable by operation, in some instances at least, its relation to the walls of the sinus being throughout the greater part of its extent only one of close approximation of surfaces, organic connexion, when present, being usually very limited. The enlargement due to diffuse hyperostoses is usually not so extremely slow as that caused by exostosis, and the surface of the swelling, whilst uneven, has not that bossiness which is so characteristic of exostosis in this region. The excessive hardness of these exostoses has been a chief operative difficulty. Here the American dental engine is a valuable aid, "roses" and other forms of cutters larger than those employed by dental surgeons prove here extremely useful. Perhaps the commonest disorder of the frontal sinuses for which surgical aid is sought are the distension and expansion of the sinus by the accumulation of glairy mucus within it, occasioning the condition known as "mucocele." In this the orbital is commonly more displaced than the external wall. The encroachment on the cavity of the orbit thus caused occasions a corresponding displacement of the eyeball from its normal position. This, before externally evident on inspection, may early discover itself by diplopia—a symptom which, in conjunction with frontal headaches, has occasionally in these cases led to an unfounded impression of the presence of cerebral disease.

The etiology of (uncomplicated) mucocele of the sinus is frequently far from clear. In not a few instances a history is given of an antecedent mechanical injury—e.g., a blow on the forehead or upper border of the orbital opening, yet seldom sufficiently severe as to render probable a direct lesion to the infundibulum. In other cases a chronic inflammation of the nasal mucous membrane has been regarded as a causal antecedent. Of both these circumstances closure of the lumen of the infundibulum must be regarded as a possible consequence. It is, however, certain that obstruction of the infundibulum is not a necessary antecedent, since after a free passage has been made from the most dependent part of the sinus into the nasal chamber mucus may continue to accumulate in the sinus, as may be shown by syringing out this cavity. In such cases, however, the mucus is very glairy and tenacious; and this affords a useful therapeutic hint, for it is not until the secretion of the mucous membrane of the sinus has regained a normal tenuity that the cavity can be efficiently drained. Hence injections of astringent solutions, and in particular of zinc chloride, may often be usefully employed. Although in probably a majority of instances manifesting itself by external signs on one side only—possibly even in some of these instances both sinuses form a common cavity owing to imperfection of the septum between them,—yet instances do occur in which each sinus is the seat of a separate mucocele, as in the following case, where the completeness of the septum was certainly verified:—

A lady, aged fifty years, was seen by me, in consultation with Mr. Sibley, in June, 1889. She had at the upper and nasal angle of the right orbit, beneath the inner end of the eyebrow, an obvious swelling. It was smooth, of a subglobular figure, not distinctly fluctuating, yet so elastic as to suggest the presence of fluid. At its margin could be felt a hard edge, suggesting that it had perforated the bone. The left upper eyelid was œdematously swollen, red, and tender, and beneath the middle of the upper orbital border was a fixed, deeply placed swelling, in which an obscure fluctuation was discoverable. The known duration of the right swelling was about two years, and that of the left about three weeks. She had long had more or less severe frontal headache, which very recently had been more severe on the left side. The symptoms appearing to denote a double frontal mucocele, the right swelling was incised, giving escape to much very thick glairy mucus. An opening in the bone forming the external wall of the sinus was verified, and when this was enlarged so as to admit the finger, the cavity of the sinus was found much expanded and the septum complete. The swelling in the roof of the left orbit was then explored through an incision in the upper eyelid. It also proved to be a mucocele, which had made a considerable perforation in the orbital wall of the sinus. A perforation was next made through the most dependent spot in the floor of each sinus into the corresponding nasal chamber, and a rubber drainage-tube was passed from the external wound through the sinus into the nose, the lower end of the tube being brought out through the anterior nostril. The mucus was so viscid that syringing several times daily was required for its expulsion. When this was omitted, accumulation always occurred, notwithstanding the free communication between the sinuses and the nose. The progress was very slow. The rubber tubes were replaced by short vulcanite tubes suitably curved, but these were found less comfortable by the patient than the flexible rubber. After trial of several astringents, the use of a zinc chloride solution in water (one grain to the ounce) twice daily was quickly followed by improvement, but it did not appear prudent to lay aside the tubes until several months had elapsed. After they were discontinued the openings soon closed.

The above was a case of simple mucocele. In another class of cases the mucocele is complicated by the presence of a solid neoplasm, autochthonous or intrusive; of these,

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polypi resembling the mucous form of nasal polypus appear to be not very infrequent; whilst less frequently complex forms of tumours, combining cartilaginous, osseous, and myxomatous tissue, and also sarcoma, have been met with. That frontal, although frequently concurrent with nasal polypi may occur independently of the latter is certain. This may be seen in the first of the following cases, in which the nasal passages were perfectly free. This is probable, seeing that the mucosa in the two cavities is continuous, so that even when frontal and nasal polypi happen to be concurrent, the former are not thereby shown to be intrusive and not autochthonous; since the two "terrains" being essentially identical, the causes which lead to their evolution in the one may not be denied efficiency in the other. The following three cases illustrate the above affection of the sinuses.

CASE 1. *Mucous polypi in frontal sinus.*—A shoeblack aged eighteen years applied at the Moorfields Eye Hospital on April 18th, 1888, for a painful tender swelling of the roof of the left orbit attended with proptosis. No history of mechanical injury. The case was regarded as one of periostitis with suppuration. An incision was made into the swelling, some pus escaped, and the wound soon closed. The proptosis, however, remained. He continued under observation through the summer, and in October, the swelling having slowly increased, he was readmitted into the hospital, and the swelling was explored through a free incision. A large defect in the orbital roof was discovered, leading into the frontal sinus. Much viscid mucus escaped, and when the lips of the wound were separated with retractors a gelatinous polypus of the size of a grape was seen filling the opening in the bone. This and another were removed. A drainage-tube was inserted and the cavity syringed. Antiseptic precautions were observed, but the operation was followed by diffuse phlegmonous inflammation and pyæmia, from which he slowly recovered, and went to a convalescent hospital. In October, 1889, although a free passage into the nose from the sinus existed, and an examination of the sinus made it nearly certain that no polypi were present in it, the free secretion of viscid mucus still persisted, necessitating the continued employment of syringing and tube. The further history of the case is not known.

CASE 2. *Mucous polypi in frontal sinus.*—A gentleman aged seventy, by the advice of his family medical attendant, Dr. W. Bell of West Brighton, consulted me for a diplopia of six weeks' duration. On taking up his newspaper one morning he was alarmed by a "doubling" of the lines of type, and this continued up to the date of his coming to London. Its explanation was found in an evident proptosis of the right eyeball, the outward and also upward movements of which were restricted. The cause of the displacement of the eyeball was a fixed, circumscribed, elastic swelling, projecting downwards from the roof of the orbit within nearly the whole extent of the upper margin of this cavity, and bulging most at its inner or nasal end. At the inner and upper angle of the left orbit was a similar but smaller swelling. The nasal tone of the patient's voice led to an examination of his nasal passages; they were found plugged with mucous polypi. The objective characters of the orbital swellings taken in concurrence with the presence of nasal polypi favoured the idea that they were due to expansion of the frontal sinuses, with absorption of their orbital wall, by similar polypi within them. The patient mentioned that in 1852 (twenty-six years previously) he had had polypi taken from the nose by Professor Syme of Edinburgh, and he was afterwards advised not to allow any other surgeon to interfere with them, though they recurred. To this advice he obstinately adhered, notwithstanding Mr. Syme's death, and he could not be brought to entertain the idea of having the orbital swellings explored, but he promptly returned home. Shortly after this he was attacked by what was regarded as phlegmonous cellulitis over the left swelling. The skin sloughed, and necrosed masses of polypi were thrown off from the sinuses. His state was for some time very critical, but he recovered, and in March, 1879, Dr. Bell wrote that the undue prominence of the eyeball was less, and the opening between the sinus and the external surface had become fistulous. The further history is unknown.

CASE 3. *Mucous polypi in frontal sinus.*—A bakeress aged sixty was received into the Middlesex Hospital on Jan. 15th, 1889, on the recommendation of Mr. E. Snell of Ketton. Her right eyeball was distinctly advanced; its mobility was unimpaired, its vision good. There was troublesome epiphora. At the upper and nasal angle of the orbit was a hard, fixed swelling, circumscribed, extending outwards to beyond the supra-orbital notch, at its outer end elastic. The space between this and the upper and outer angle to half the height of the outer orbital border was occupied by a movable swelling, the figure, size, and consistence of which suggested it to be the displaced lacrymal gland. The left nasal passage was completely, and the right almost completely, obstructed by mucous polypi. She said that the prominence of the eyeball had been first noticed three years previously. She had attributed it to a strain through coughing violently. Two years later (March, 1888) finding her "nose stuffed" so that she could not breathe through it, she consulted Mr. Snell, who took several polypi from both nostrils. On the hypothesis that the orbital swelling was the cause of the proptosis, against which view there were not any apparent grounds, and that the woman's statement as to its duration (three years) was trustworthy, the present size of the swelling indicated a very slow rate of increase. This was unfavourable to the idea of a sarcoma, which in the orbit has usually a rapid course. The objective characters of the swelling harmonised with the idea that it was the expanded frontal sinus, and the concurrence of nasal polypi suggested that mucous polypi might be the cause of its expansion. The nasal polypi having been removed on Jan. 16th, the orbital swelling was exposed through an incision parallel to the eyebrow; a smooth, dark-bluish body came into view. On slitting this open a small quantity of glairy mucus escaped, and a mucous polypus of the size of a small grape protruded itself through the opening. It was removed, and the opening enlarged by cutting away its bony margin until the finger-tip could be passed; it entered the greatly expanded frontal sinus, which enclosed other polypoid masses. These also were removed, and the cavity was thoroughly cleared. At this moment the patient's respiration and heart failed so much that the exhibition of the anæsthetic had to be stopped and measures taken to restore her. Her critical condition made it prudent to at once terminate the operation, and the establishment of a free opening between the sinus and the nose which had been intended was deferred. She rallied and quickly recovered from the immediate effects of the operation, and a fortnight later returned and placed herself under Mr. Snell's care. For a few months it was hoped that no further inconvenience would remain than the presence of a small fistula under the eyebrow, discharging a little mucus; but in the spring of 1890 she re-entered the hospital, with renewed distension of the upper eyelid and greater protrusion of the eyeball, which had become inflamed and was then disorganised. The eyeball was enucleated and the sinus thoroughly explored through the wound. The orbital plate of the sinus was found largely defective, and the cavity packed with mucous polypi. These were removed, and the walls were thoroughly scraped with a sharp scoop. Some thickening of the postero-superior border of the opening into the sinus gave a probability to the idea of sarcoma, as originally suspected by Mr. Snell. She recovered, and soon went home. Mr. Snell writes on Dec. 28th, 1890: "On March 29th I removed through the uncloseed wound three polypi of the size of large currants, and again on April 7th three or four others. I also re-established the opening between the sinus and nose which had closed. Carbolic acid injections appeared to be useful in diminishing the quantity of mucus secreted. Glandular swellings, which in the spring had appeared in the neck, have disappeared. There is now not the slightest sign whatever of any abnormal growth in the sinus or orbit. She is now in better health than for the past three or four years."

These cases show how much more grave is the occurrence of mucous polypi in the frontal sinuses than in the nose; that in these they have a similar obstinate tendency to recrudescence which they exhibit in the latter; and that, owing to their more strict confinement in the sinuses, they more quickly expand and waste the bony walls than they do those of the nose, where their restriction is less. Their differential diagnosis from simple mucocele of the sinus, except in very advanced stages, is probably impracticable, but the presence of nasal polypi affords a useful clue. For their efficient treatment, free access must be gained to the sinus by an incision along the upper orbital margin.

Old Burlington-street, W.

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THE HYDERABAD CHLOROFORM COMMISSION.

BY SURGEON-MAJOR EDWARD LAWRIE,
PRESIDENT OF THE COMMISSION.

SINCE the publication of my clinical lecture in THE LANCET of Nov. 29th, 1890, I have received numerous letters from Europe and from different parts of India requesting me to draw up authoritative rules showing briefly the method of chloroform administration which experience, based upon Syme's principles and upheld by the Hyderabad Commissions, has shown to be uniformly safe:—

1. The chloroform should be given on absorbent cotton stitched into an open cone or cap. 2. To ensure regular breathing the patient, lying down, with everything loose about the neck, chest, and abdomen, should be made to blow into the cone held at a little distance from the face. The right distance throughout the inhalation is the nearest which does not cause struggling, or choking, or holding of the breath. Provided no choking or holding of the breath occurs, the cap should gradually be brought nearer to, and eventually may be held close over, the mouth and nose as insensibility deepens. 3. The administrator's sole object while producing anæsthesia is to keep the breathing regular. As long as the breathing is regular, and the patient is not compelled to gasp in chloroform at an abnormal rate, there is absolutely no danger whatever in pushing the anæsthetic till full anæsthesia is produced. 4. Irregularity of the breathing is generally caused by insufficient air, which makes the patient struggle, or choke, or hold his breath. There is little or no tendency to either of these untoward events if sufficient air is given with the chloroform. If they do occur the cap must be removed, and the patient must be allowed to take a breath of fresh air before the administration is proceeded with. 5. Full anæsthesia is estimated by insensibility of the cornea. It is also indicated by stertorous breathing, or by complete relaxation of the muscles. Directly the cornea becomes insensitive, or the breathing becomes stertorous, the inhalation should be stopped. The breathing may become stertorous while the cornea is still sensitive. The rule to stop the inhalation should, notwithstanding, be rigidly enforced, and it will be found that the cornea always becomes insensitive within a few seconds afterwards. It is only necessary to add that the patient should be so dressed for an operation that his respiratory movements can be seen easily by the chloroformist. In the climate of India this is not difficult to manage, but it is difficult to manage in the climate of Europe; so that in this respect, and in this respect alone, the chloroformist in England is placed at a distinct disadvantage compared with the chloroformist in India. Proceeding in the above way, chloroform never produces any bad effects, and its administration, in any case which is fit for an operation, is entirely free from danger.

I have drawn attention to the danger of taking the circulation as a guide as to the effect of chloroform,[1] and should not further allude to it but for an article on chloroform administration by Dr. Dudley Buxton in THE LANCET of Dec. 13th, 1890. This article is by far the cleverest that has yet appeared from our adversaries, but Dr. Dudley Buxton's teaching condemns itself. His plan of giving chloroform is—"(1) To use Lister's open method or Krohne and Sesemann's recent and useful modification of Junker's inhaler; (2) to test the vigour of respiration by placing my hand over the mouth; (3) to watch the colour of the patient's face and ears; (4) to keep a finger upon an artery—always testing the initial rate and force of the pulse in that artery at the commencement of the operation."

The first remarkable point in these rules is that no fixed principle of chloroform administration is laid down. The chloroformist may employ indiscriminately the open method or an inhaler, according to his fancy. In the second place, if the chloroformist places one hand over the mouth to test respiration, and keeps the finger of the other upon an artery, as Dr. Buxton recommends, it is difficult to understand how the anæsthetic is to be administered, unless the patient is to do it himself. The severest condemnation of the method, however, is to be found in Dr. Dudley Buxton's own words. He says: "Proceeding in this way I have sometimes found that the heart flags even when the respiration, judged by the eye and the plan above mentioned, shows no alteration; that not only is there evidence of general feebleness of circulation, but that distinct and unmistakable cardiac enfeeblement occurs. Further, this is progressive, and likely, it has appeared to me in more than one case, to end in cardiac syncope, unless prompt and vigorous measures were used." This shows plainly that the plan is faulty, if not impracticable; in fact, it stands self-condemned. There is never any dangerous enfeeblement of the general circulation or of the heart in the method of giving chloroform recommended by the Hyderabad Commission. Dr. Dudley Buxton can readily satisfy himself of the truth of this statement by giving our method a thorough and impartial trial. None of our critics have done this yet, but if one fair-minded man of Dr. Buxton's calibre were to do so, he would infallibly convert himself to our views, and the conversion of the rest of London would follow in time as a matter of course. Dr. Buxton states that "having once seen the heart relax and dilate under chloroform, as in Professor McWilliam's experiments, one recognises the anatomical counterpart of the procession of events which one has encountered again and again in the operating theatre." This statement goes far to prove that there must be some fallacy about Professor McWilliam's experiments. As a surgeon I care very little what happens to the heart when it is subjected to such abnormal treatment as is involved in laying open the thorax and pumping chloroform into the lungs in order to prove that it is directly affected by chloroform. We might just as well pump in boiling water, and then tell old women they are not to inhale steam when they get bronchitis. But it is interesting to be told by such an authority as Dr. Dudley Buxton that Professor McWilliam's results form the anatomical counterpart of a method of chloroform administration which causes general feebleness of the circulation and of the heart, and there is very little doubt that they do. Professor McWilliam's premiss that heart failure is not necessarily accompanied by a fall of blood pressure is manifestly unsound, and his description of rhythmic cardiac relaxation and dilatation, under chloroform, is open to the fatal objection that he has not shown that the movements of his base line, by which they were estimated, were not produced by relaxation of the diaphragm, pushing up the heart through his artificial opening. If his heart dilatation can really occur without fall of pressure, or when chloroform is properly given, it must be a natural condition and free from risk.

The Hyderabad Commission has proved that there is no such thing as chloroform syncope, and that in death from an overdose of chloroform the respiration always fails before the circulation. What the harmless fall of blood pressure in normal chloroform administration is due to, as well as what happens to the heart after the respiration failed from overdosing, which are the only two points left open to discussion by the Hyderabad Commission, must be entrusted to physiologists to determine. In the telling words of Dr. Bomford, "it is sufficient for us as practical men to know (1) that the heart is the very last organ to give in under the action of chloroform, and (2) that there is no more danger of permanently paralysing it in chloroform administration, than there is of paralysing the legs and giving the patient paraplegia."

[1] THE LANCET, Nov. 29th, 1890.

PRACTICAL NOTES ON THE ADMINISTRATION OF ETHER AND CHLOROFORM.[1]

BY RICKARD W. LLOYD, M.R.C.S. &c.,
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IT is my intention to make some remarks upon the considerations which guide us in cases about to be operated upon under general anæsthesia by ether or chloroform, and then to proceed to describe briefly some details of their administration. Ether and chloroform are not free from danger; but any patient upon whom it is determined to operate is suitable for anæsthesia, or, at any rate, a trial of it. One is guided in selecting the anæsthetic by the state of the patient's health as to chronic disease, lung and heart mischief, alcoholism, and the nature of the operation, as well as the age of the patient. The chief danger in patients

[1] A paper read before the West London Medico-Chirurgical Society, Feb. 6th, 1891.

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suffering from chronic disease and wasting disease is in prolonged operations, especially when they involve any considerable loss of blood, as these patients have not the same rallying power, and special precautions against their collapse should be taken. They generally take the anæsthetic well, however, and require less of it than stronger persons. Patients suffering from acute disease, attended by shock or collapse, require all the attention of the anæsthetist, as their failure is often sudden. Operations undertaken in such cases are to give the patient the best hope of life, and probably could not be accomplished without anæsthesia, which is sufficient justification for the risk entailed. Ether is as a rule preferable in these cases, and often seems to improve the condition of the patient. Heart disease should not preclude the administration of an anæsthetic. In such a case the circulatory and respiratory symptoms may become alarming, so that the observation and confidence of the anæsthetist will be fully exercised, and sometimes, although rarely, it may be prudent to discontinue the administration altogether. Ether is to be preferred. In chronic or acute lung disease chloroform would be much more suitable than ether, and, especially in the latter class of cases, should be given cautiously, care being also taken not to administer more than is requisite. This remark applies also to cases of empyema, in which it is advisable to give only so much as is absolutely necessary. Another class of cases in which it is important to give as little as will suffice is that of brain surgery, and chloroform here has the advantage over ether in lessening congestion and hæmorrhage. It is remarkable how small a quantity of chloroform is sufficient for these patients, especially if a small dose of morphia has been previously given. In chronic renal disease chloroform has caused coma, and ether is therefore to be preferred. It is true that in abdominal surgery greater muscular relaxation and less tendency to cough will be obtained with chloroform. But I prefer ether. In many of these cases in which I have given it I have been quite satisfied, but I have often commenced with ether and found it necessary to change to chloroform.

In operations about the mouth and throat, as for removal of the tongue or extirpation of the larynx, if the surgeon considers it expedient to perform tracheotomy as a preliminary, and a sponge be lightly placed in the pharynx or a Hahn's tube be placed in the trachea, the difficulties and dangers of administering the anæsthetic in such cases are very much lessened, as blood is thereby prevented from getting into the air passages, and the effect of spasm of the glottis is removed. In all such cases, whether tracheotomy be performed or not, chloroform is the preferable anæsthetic, and when the patient has been anæsthetised in the ordinary way the supply of chloroform may be kept up from a Junker's inhaler through a tube without the face-piece. Take care that the bottle of the Junker's apparatus is only one-third filled with chloroform, and that the indiarubber tubes are properly applied to the metal tubes each to each, or liquid chloroform instead of vapour will be administered. The danger of the accident does not require to be pointed out here by me. Ether is scarcely available, as the apparatus would be too often in the operator's way, and when the actual cautery is in use its inflammable nature makes it very dangerous. Alcoholic patients present difficulties on account of their becoming more congested, often struggling greatly, being more liable to spasmodic actions, and on account of the far larger quantity of anæsthetic they require, but once under generally give little further trouble. Ether suits them better than chloroform. The age of the patient also influences the selection of the anæsthetic. For infants and young children chloroform is always used. In older children and adults ether is also available, and in old age chloroform again has greater favour. For fairly healthy aged patients chloroform is best, but when there is evidence of considerable circulatory failure ether should be used; and in the absence of bronchitis an old man with an extremely weak, very irregular and intermittent pulse, with much anæmia, may even be improved by the ether, as happened in such a gentleman, nearly seventy, weighing 16 st., who had a leg amputated for gangrene, and to whom I gave ether. In that case I believe chloroform would have caused alarming, if not fatal, symptoms, whereas I had no cause for anxiety during the administration of ether. Anæmic patients are generally quieter than others in taking an anæsthetic, but they have the disadvantage of failing more rapidly and suddenly. Whenever possible patients should always be properly prepared for anæsthesia. In cases that are not urgent it may even be thought advisable to improve the patient's general health before operating, and it would be well if all patients were rested in bed for a day or two before any major operation.

For the immediate preparation, care should be taken that only a light meal of beef-tea and dry toast, or the like, at least three hours previously to, and exceptionally a little stimulant shortly before, the operation, be given. In some extreme cases an enema of brandy and beef-tea administered previously to operation is serviceable. There should be nothing tight or constricting in the garments of the patient to interfere with thoracic or abdominal respiration, and the administrator should satisfy himself that there are no foreign bodies in the mouth, such as food or false teeth. Have at hand a pair of tongue forceps, and, as sickness is generally sudden, a basin, soap-dish, or bowl of some kind, before commencing. The temperature of the operating chamber should be 60° to 66° F., and loss of body heat be prevented, as far as possible, by avoiding undue exposure of the patient and the use of blankets. My experience of anæsthetising patients who have recently received morphia does not encourage me in the practice, except perhaps in brain cases. All physical examinations should be made before the patient is on the table, when it is well not to delay the administration, and any conversation in the patient's hearing then often seems to give rise to trouble by unnerving him. The anæsthetic may be administered to the patient in the several positions of the horizontal, supine, lateral, or prone, and in the oblique or sitting posture. The horizontal supine position with the head slightly raised is the most convenient and best. It may be useful to raise the shoulders when the lungs are embarrassed; but the great point is to see that the patient is lying comfortably, otherwise resistance and struggling will be encouraged. When it is necessary for the operation that the patient be in one of the other positions, except the oblique, I prefer to change the position after administering in the horizontal supine. If the head be kept on one side the escape of saliva and mucus from the mouth is facilitated, and falling back of the tongue less likely to occur; but unless there is necessity for turning the head on one side, I think it better not to do so. Raising the patient during or soon after anæsthesia from a recumbent to a sitting or upright position is likely to give rise to syncope, and should be avoided. I have seen this occur after the administration of ether for only ten minutes. In the removal of post-nasal growths I am accustomed to let the patient's head hang over the end of the table, that the considerable hæmorrhage which takes place may escape from the nostrils, and not have the opportunity that it might otherwise have of flowing into the larynx and trachea. In these cases I do not deeply anæsthetise the patients, and have always used chloroform for them.

For the administration of ether I use Clover's small apparatus, and as a rule sprinkle chloroform on a piece of folded lint about the size of a closed sheet of note-paper. The actual rate of administration of ether or chloroform depends greatly upon the depth and frequency of the respirations and the influence of temperature, the volatility of ether being especially increased by warmth. Anæsthetics affect individuals in different degrees from causes some of which have already been referred to. The approximate effect of these factors should be closely observed, and the administration conducted accordingly. The complications that arise in administering ether or chloroform are numerous. The patient may be nervous and afraid of the anæsthetic, and resist the presence of the apparatus, especially when physical examinations are made upon the patient while still conscious, or if conversation is going on around, or should the administrator appear at all diffident. Confidence can be given by a word or two of encouragement, firmly expressed. If the breath be held at this stage, ask the patient to breathe deeply, or appear to take no notice, whichever seems best; and in either case the patient will soon commence to breathe or proceed to give forcible resistance, when it is better to remove the apparatus and after a little encouragement make another attempt, which is generally successful. When ether is employed it is well to allow the patient to respire several times the air contained in the bag before turning on the ether, which should be gradually increased as the patient becomes accustomed to it. When the patient has lost consciousness there may be spasm, involuntary resistance, and more or less arrest of respiration, in which case the jaw should be raised, which

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often has the effect of causing respiration, and the anæsthetic pressed. So long as the pulse is good the supply of fresh air may be limited, notwithstanding considerable cyanosis. In regard to chloroform any cyanosis calls at once for more air. Should any doubt arise in the mind of the administrator while the respiration is arrested or irregular, the pulse and pupil will guide him as to interference. Coughing may be stopped by diminishing the supply of ether or, if necessary, allowing a breath or two of fresh air. When anæsthesia is complete, the corneal reflex is abolished; and, if extreme, the pupil, which has been variable during the administration, becomes dilated and fixed, and under chloroform the pulse is slowed. Cyanosis should be avoided by removing the apparatus during two or three respirations when it appears necessary. More excitement, spasm, cyanosis, and arrest of respiration occur when the patient receives during administration a larger admixture of air than is perhaps intended. When chloroform is used, fifteen drops to a drachm may be sprinkled on the lint, which is then held several inches from the face during several respirations, and gradually brought nearer until it forms a dome over the mouth and nose, the edges falling lightly upon the face, more chloroform being sprinkled on the lint from time to time previously to its being turned over. The respiration should be carefully watched, and any cyanosis, as before stated, calls at once for a greater supply of air. The patient often rambles in speech, and more or less spasm of the muscular system occurs, the patient struggling to get up, while at the same time respiration is often arrested. Soon this stage is succeeded by deep respiration, passing off of the spasm, and the completion of the anæsthesia, when the pulse will be found to be slow, the corneal reflex abolished, and the pupil fixed, though not necessarily dilated. Should the chloroform be suddenly discontinued or unduly diminished up to this time or now, what is known as primary chloroform syncope is likely to occur, and is to be carefully avoided.

The influence of anæstheeia upon respiration and circulation is so great and important that I need offer no apology for introducing here one or two physiological deductions. Experiments show that dyspnœa occurs when there is no obstruction to the exit of carbonic acid, and that, if plenty of oxygen be supplied, dyspnœa does not occur, although the carbonic acid may be in excess. The respiratory centre in the medulla oblongata governs respiration independently of consciousness, and is evidently stimulated by deficiency of oxygen in the blood; it may also be influenced by impressions made on the nerves of the skin. The organism after a time adapts itself to vitiated air, but this can only take place at the expense of a depression of all the vital functions; and when therefore the respiration is shallow during the induction of chloroform anæsthesia, the administrator must be on the look out for cessation of respiration and syncope. It may be well, also, to recall briefly the effects of the quantity and quality of the blood upon the vaso-motor centre. It has been found by experiment that, although the blood pressure sinks whilst large abstractions of blood are taking place, as soon as the bleeding ceases it rises rapidly, and speedily becomes normal, due to the regulation of the peripheral resistance of vaso-motor nerves. The small arteries contract—due to the stimulation of the vaso-motor centre—from diminution of the supply of blood, and therefore of oxygen. Failure of the blood pressure to return to normal in the case of too great abstraction of blood must be taken to indicate exhaustion of the centre and consequent want of regulation of the peripheral resistance.

The quality of the blood supplied to the heart has a distinct effect upon its contraction, as too watery or too little oxygenated blood must interfere with its action. The agents during an operation influencing the general condition of the patient are therefore in part attributable to the anæsthetic and in part to the operation, the deprivation of oxygen from the respiratory and vaso-motor centres being brought about by the administration of the anæsthetic and loss of blood combined, both tending in this way to the exhaustion of these centres. The anæsthetist has some control over the amount of deprivation of oxygen in his method of administration, and so over the respiratory and vaso-motor centres; but the loss of blood, over which he has no control, may exhaust them.

During the administration of an anæsthetic untoward symptoms may at any moment arise. For undue cyanosis or arrest of respiration, whether on account of spasm of the glottis or falling back of the tongue, the anæsthetic should be wholly or partly temporarily withdrawn and the jaw raised, which manœuvre is often followed by a deep inspiration. If necessary the tongue should be drawn forward, and if matters are not now improving—i.e., if respiration is not re-established—artificial respiration must be at once resorted to, care being taken to perform it slowly; this latter precaution is most important, as is also that of keeping the tongue drawn forward during its performance. When the failure is primarily from syncope, the inversion of the patient, the taking up of a small child by the legs, for instance, and holding it head downwards, is easily done, and in several instances I have found this most effective. Should it appear to have no good effect after half a minute I would resort to artificial respiration, or this may be applied at the same time. I have heard medical men say they would not practise inversion, and understood their reason to be that the sending of blood to the brain charged more or less with chloroform cannot improve matters. I believe the increased supply of blood to the vaso-motor centre, although this blood be charged with chloroform, has made the difference between life and death. Where the recovery from failure of the heart or respiration is rapid, it may not be necessary to administer brandy; but when it is not, it should be given by the mouth or rectum, or both, and where the failure is supervening gradually the anæsthetist must estimate whether it is necessary to administer brandy or not. An injection of brandy per rectum has a marked effect upon patients who are collapsed from the length of an operation, shock, or loss of blood. On one occasion, some three years ago, when inversion and artificial respiration in the ordinary way had failed, I restored the child, two years of age, by closing its nostrils, holding the tongue forward and blowing through the mouth of the patient, so expanding the lungs, then pressing the air out and repeating this until respiration was re-established. It was an hour and a half before the collapse was sufficiently recovered from for me to leave the patient. Wood of Philadelphia, in his paper on Ether and Chloroform read at the Berlin Congress last summer, showed an apparatus for this purpose. Of electricity in restoring patients I have no experience. Nitrite of amyl stimulates the respiratory and cardiac centres and causes dilatation of the peripheral vessels, thus also relieving the heart. I have occasionally used it with apparent benefit.

SOME EXPERIMENTS ON CHLOROFORM AND ETHER.

BY ARTHUR R. CUSHNY, A.M., M.B. ABERD.
(FROM THE PHYSIOLOGICAL LABORATORY OF BERN UNIVERSITY).

THE report of the Hyderabad Chloroform Commission has been read with interest not only in England and America, but also in Germany and Switzerland, where it has aroused widespread discussion and comment. In the latter country especially, which is at present in the throes of a discussion as to the respective merits of the rival anæsthetics, the report of the second Commission was awaited with anxiety and received with much approbation by the numerous advocates of chloroform. On the decision of the Commission becoming known, Professor Kronecker of Bern, whose pupils, Ratimoff and Schmey, had already shown the poisonous action of chloroform on the heart, suggested that I should make a few experiments on the subject. The details of these will be published elsewhere, and I will here state merely the general results.

By the Hyderabad Commission no experiments seem to have been made with chloroform vapour of ascertained concentration, and, as this factor seems to be of considerable weight, I have used an apparatus[1] in which it could be exactly regulated. This consists of two wash-bottles, one-third filled, the one with chloroform, the other with water. Part of the air inspired by the animal passes through one, part through the other, and becomes saturated with chloroform fumes or water vapour accordingly. The proportion of the chloroform saturated to the moisture satu-

[1] Ratimoff and Schemey used the same apparatus in their experiments.

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rated air is regulated by two graduated stopcocks (Kroneckner's *Schiebhahn*). The two currents unite, and are led by a short tube to the tracheal cannula. Expiration is provided for by a small hole in the sheath of the latter, which is covered by a flap of moist goldbeater's skin, to prevent the inspiration of air which has not first passed through the apparatus. In order to exclude all chance of asphyxial complications, and to allow a regular amount of chloroform to be absorbed in a given time, the air was driven through the apparatus by a machine for artificial respiration. The animals used were dogs and rabbits, and the experiments were carried out at ordinary room temperature (15° to 17° C.). The movements of the heart and respiration were recorded by a heart needle and diaphragm lever, and tracings were taken in almost all the experiments. In the respiratory tracing the curves formed by spontaneous respiration were combined with those caused by the artificial inflation of the lungs, but could be easily distinguished, and the moment of cessation of the former ascertained. When this occurred artificial respiration was generally stopped for a few seconds, to see if any spontaneous movements occurred. I may here state that the heart needle was not found to be an accurate index of the heart beat, as in some cases it continued to vibrate after paralysis of the ventricles, owing to the continued pulsation of the auricles communicating a motion to the ventricles through which the needle passed. In all cases, therefore, in which there was any doubt as to the condition of the heart, artificial respiration with air was resumed, and the heart observed directly by opening the thorax. As soon as chloroform was applied to a rabbit (except when the vapour was greatly diluted with air), the animal began to struggle and the respiration became irregular with expiratory gasps, or almost ceased for a few seconds. Very soon the stage of rapid respiration described by Knoll set in. In those cases in which the air was saturated with chloroform (i.e., in which all the air inspired passed through the chloroform bottle), this stage only lasted from twenty to sixty seconds. In cases in which a lower concentration was used it lasted much longer, sometimes for two hours, but in *all* the spontaneous respiration gradually got shallower without getting slower, till it ceased entirely. The condition of the heart at this moment varied with the concentration in which the vapour had been blown into the lungs. Of seventeen rabbits chloroformed with saturated air, in five the whole heart continued to beat, in nine one or both auricles were in rapid motion while the ventricles were still, in one the left auricle alone was paralysed, while in one the whole heart was in diastolic standstill. In rabbits which were anæsthetised with a mixture of chloroform vapour and air—i.e., in experiments in which the stopcock on the water-bottle was partially open—the whole heart was invariably found beating, but the more chloroform the mixture contained the weaker was the heart beat. Even when only four parts chloroform-bearing air were mixed with ninety-six parts pure air the respiration ceased, though only after from two hours to two hours and a half's exhibition of the drug. With lower concentrations than this I could not obtain narcosis, and did not attempt to find how long an animal could be exposed to the vapour. Ratimoff found that rabbits could be kept narcotised for six hours without the respiration ceasing. Paul Bert, on the contrary, found that dogs died after two hours and a half's constant inhalation if the narcosis was complete. Several dogs were chloroformed by the same method, and in all of these, however concentrated the chloroform vapour, the respiration ceased, while the heart could still be felt pulsating. A rather higher concentration was required to keep dogs narcotised than was necessary for rabbits.

In regard to the restoration of spontaneous respiration, in both dogs and rabbits, I found that success depended not so much on the length of the interval between the cessation of the spontaneous and the recommencement of the artificial respiration as on the concentration in which chloroform had been given. In dogs inflation of the lungs was successful in all cases. In rabbits, on the contrary, it was impossible to restore life when chloroform-saturated air had been used, however soon after paralysis of the respiration restorative measures were taken. When a half-and-half mixture was used, three out of eleven animals could be resuscitated, and with lower concentrations the proportion of recoveries increased till below 25 per cent. all animals could be restored. In one case, in which a 4 per cent. mixture was used, an interval of three minutes elapsed before artificial respiration was begun, and the animal still recovered. The chances of recovery after paralysis of the respiration, in fact, depend entirely upon the condition of the heart, and therefore on the concentration in which the drug has been used. If, as is the case in rabbits, the heart is very much weakened by very concentrated administration, it is impossible to restore the respiration. If, on the other hand, the heart is comparatively unaffected, as in dogs, or in rabbits in which the drug has been administered in a more diluted form, the animal can always be revived provided the necessary measures are taken within a reasonable time. The essential point is that the drug be given in sufficient dilution to avoid its action on the heart, and if this dilution can be sufficiently provided for, observation of the pulse is not absolutely necessary. Although I cannot agree with the Hyderabad Commission that the heart always continues to beat after respiration ceases, yet the difficulty in maintaining the concentration necessary to paralyse the heart simultaneously with the respiration is extremely great, and I should think that in ordinary chloroform administration such a simultaneous paralysis can never occur.

As, in the great majority of my experiments, death was due to the respiration alone, some experiments were made to find the condition of the medulla oblongata during chloroform narcosis. This question was approached by an examination of the reflexes connected with it. I found that these all ceased before the respiration, and returned (in cases where the animal was revived) some time after spontaneous respiration had set in. The more concentrated the mixture, the shorter the interval between their disappearance and that of respiration. The first to cease to act was the corneal reflex, then that on the respiration from the nasal branch of the trigeminus, then the swallowing reflex from irritation of the soft palate or of the superior laryngeal nerve; and, last of all, Traube's active expiratory reflex from expansion of the lungs. The reflexes in dogs were not so carefully noted as in rabbits, but in general presented no marked differences.

The respiratory centre, as Knoll has pointed out, is affected differently in different stages of chloroform narcosis. At first it is acted on by the reflexes first from the nose then from the trachea and lungs. Then the rapid stage of respiration sets in. This occurs after division of the vagi, and is due to stimulation of the vagus roots in the medulla, and not to stimulation of the respiratory centre itself; for, if the latter were the case, the result would be, as Marckwald has pointed out, respiratory spasms; whereas, after section of the medulla above the centre and division of both vagi, chloroform breaks up the resulting spasms into regular respirations exactly as weak tetanisation of the vagi does. Last of all, the centre is paralysed by chloroform, and fails to respond to electrical stimulation of the medulla. The blood pressure was registered in several experiments in which the drug was administered in weak concentration, and I found that there occurred a slight rise and then a very gradual uninterrupted fall. In very weak form (4 per cent.) chloroform caused no preliminary rise, but a slow fall from the very first, though so gradual was the change in pressure that it could only be seen by comparing the curves at intervals of ten minutes. No such sudden falls of pressure were seen as have been noted by some critics of the Commission, which is perhaps to be explained by the abundant and uninterrupted supply of air to the lungs. I may remark that in those experiments in which the movements of the heart were registered directly, they never showed any sudden change, but a gradually increasing weakness, which culminated in paralysis or passed off, according as chloroform was continued or shut off.

For the sake of comparison a few experiments were made with ether, and the same stages were observed as with chloroform, death occurring equally rapidly if undiluted ether vapour was used, and being due to paralysis of the respiration alone or with accompanying heart paralysis. In one case delirium cordis was observed after a minute and a quarter's inhalation. Rabbits anæsthetised with pure ether vapour could not be revived by artificial respiration. Dogs always ceased to respire while the heart continued to beat, as also did rabbits to which diluted vapour had been given, and the majority of these could be revived. The reflexes appear to behave in the same way as in chloroform narcosis. Ether was borne in higher concentration than chloroform, and the respiration could be more certainly restored. For example, in one case 8 per cent. was

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given for two hours without killing the animal, while with chloroform 5 per cent. was fatal after one hour and a half. This fact is the more striking because a very much larger quantity of ether than of chloroform is given in a concentration of 8 per cent. Theoretically, 2·7 times as much ether as chloroform should be carried to the lungs by a given quantity of air, and by actual experiment I found a proportion of 2·61:1. In both anæsthetics the action on heart and respiration seems the same, a difference in degree only being perceptible. Ether can be given in greater *quantity* with safety; but so long as the *proportion* of drug to air is kept low enough either can be used with safety. The concentration necessary to keep rabbits and dogs "under" chloroform is respectively four and eight parts chloroform vapour (at from 15° to 17°C.) to ninety-six and ninety-two parts pure air. Since, however, the concentration necessary to maintain narcosis varied in different species of animals, no inference could be made as to that necessary for men, and my results would have been incomplete had I not been enabled through the kindness of Professor Girard and Dr. Niehans to carry out some experiments in their operating theatre in Bern Inselspital. In these experiments the anæsthetic was given in the same way as in my experiments on animals, with the exception that, instead of a tracheal cannula, a Y-shaped glass tube was used, the two ends fitting tightly into the patient's nostrils. Expiration was allowed through the mouth, but inspiration through it was prevented by a valved respirator. The patients in general did not object to the method, and one who had to be anæsthetised again some days subsequently begged that the apparatus might be used again instead of the mask. Narcosis was attained in from five to twelve minutes by a mixture of 15 to 20 per cent. of chloroform, and could be kept up by continued inhalation of 5 to 7 per cent. in children and of 7 to 10 per cent. in adults. Almost no excitement occurred. Throughout the narcosis the face and conjunctiva remained red, and in several cases the concentration necessary to keep up insensibility with retention of the corneal reflex was maintained. With ether adults were narcotised with difficulty, and only after prolonged inhalation. Anæsthesia was afterwards kept up by a concentration of 10 to 15 per cent. Children presented less difficulty, requiring 25 to 30 per cent. to induce insensibility, which continued uninterrupted with a concentration of 10 to 15 per cent. In all cases the usual increased secretion of tears, saliva, and mucus was manifested. The difficulty in inducing narcosis with ether seems to confirm the theory of many observers that ether alone is insufficient for this purpose, and must be aided by a partial asphyxia.

The results of these narcoses may be summed up shortly by saying that, to maintain narcosis with chloroform, a concentration of five to seven and seven to ten parts of chloroform saturated to ninety and ninety-five parts pure air must be adopted for children and adults respectively; while, if ether be used, a concentration of ten to fifteen parts saturated to ninety and eighty-five parts pure air is suitable for all ages. The drug may be inhaled in a slightly higher concentration to induce narcosis, but, as soon as the eyelid reflex disappears, the above proportions should be given. The use of the above apparatus (which will be more fully described in the *Zeitschrift für Biologie*) offers an easy method of regulating the strength of the inhalation, but, if the usual method is adopted, the anæsthetic should be poured on frequently and in small quantities rather than at longer intervals and in larger doses. By the latter method of administration the narcosis is rendered unnecessarily, and often dangerously, deep for a short time, and then quickly passes off; while by the former it is kept at approximately the same depth throughout.

SUICIDE OF A SURGEON.—An inquest was held on the 2nd inst. at Berkeley-square, Clifton, on the body of Mr. Walter R. Thomas Hawkins, M.R.C.S, aged twenty-nine years, who committed suicide on the previous day. He had been in practice at North Tawton, Devon, but had lately relinquished it, and on the previous Saturday returned to his mother's residence in Berkeley-square, apparently in good health. On Sunday morning he was found lying on the floor of his bedroom with his throat cut, a razor being by his side. The deceased had no pecuniary difficulties, and it appeared he had committed suicide whilst suffering from a fit of temporary insanity.

A NOTE ON THE BONE LESIONS (USUALLY INSIDIOUS) OF MAMMARY CARCINOMA.

BY HERBERT SNOW, M.D. LOND., &c.,
SURGEON TO THE CANCER HOSPITAL.

(*Concluded from p. 539.*)

THE second physical sign—"the sternal symptom"—which indicates marrow infection in an early stage is not usually noticeable until a period of many months subsequently to the preceding, but is far more conspicuous. A portion of the sternum for about two inches downwards (in the first instance) from the upper margin of the second costo-sternal articulation becomes prominent and seemingly hypertrophied. The condition slowly but progressively increases, so that the upper and lower portions of the bone being unaffected, a marked prominence and curvature result. The deformity is most conspicuous in a broad and well-developed thorax, and can hardly, in a well-marked instance, escape observation on exposure of the chest. I beg to exhibit photographs (for which I am indebted to Dr. T. Johnston English, an able amateur photographer) of five typical cases. The condition I am describing occurs long anterior to fixation of the mamma to the thoracic wall, and when there can be no suspicion of infiltration by contiguity of tissue. (See figure in previous number, p. 538.)

When the mamma has become fixed to the thoracic wall, the appearances may be at first accentuated, but are eventually masked by general infiltration of the parietes. The patients seldom complain of tenderness on pressure or of pain in the part affected; and, indeed, do not appear usually to notice the deformity unless this becomes extreme, the alteration taking place very slowly and gradually. I have known actual tumour formation take place only in four instances; one of the photographs exhibited displays, in addition to the regional curvature above described, a small, irregular, bossy growth from the right lower half of the gladiolus, the primary lesion being situated in the left breast. We sometimes find non-cancerous women with exceptionally prominent sterna; in these, however, the *manubrium* is also commonly implicated, the prominence commencing at the very top of the bone. In malignant cases its upper border, as above stated, is on a level with the upper edge of the second costo-sternal articulations—i.e., a little above the junction of the manubrium and gladiolus. The gradual development of the physical sign in patients kept under observation for a year or two differentiates it from any natural condition of the parts; and it is often seen after an operation, when all the other tissues (excepting perhaps the humerus) seem perfectly healthy. Though not incompatible with several years of life, it usually contraindicates, I consider, any operative procedure of gravity. Marked physical weakness, lassitude, and inability to perform ordinary daily tasks are always concurrent, even when no palpable emaciation has taken place. Unless physical signs of intra-thoracic deposit or of pleural effusion coexist, there is no attendant dyspnœa. In explanation of the exemption of the manubrium I need hardly remind you that this is, to all intents and purposes, a distinct bone until very advanced age. Of the twenty-one cases referred to nine exhibited this sternal prominence.

The most typical illustration of bone disease secondary to mammary carcinoma with which I am acquainted is to be found in the museum of St. Thomas's Hospital. No. 673 is the plaster cast of the body of a woman who died in that institution subsequently to excision of the right breast for scirrhus. *No tumour formation is apparent*, but the bones of the trunk have become frightfully distorted. The right humerus and both femora have undergone fracture—the broken ends having subsequently united almost at right angles. The sternum and ribs have sunk until the former appears almost in contact with the vertebral column, the whole thorax being flattened out transversely. The pelvis seems similarly widened and flattened. From the position of the cast, the state of the vertebral column cannot be ascertained; and I have been unable to discover the history of the case. The position of the right breast is occupied by a seemingly healthy scar. The half section of one femur had fortunately been preserved in spirit; and Mr. Shattock has been kind enough to have this

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microscoped for me. He finds the growth to be a "typical spheroidal-celled carcinoma of the firm kind, a growth similar to an ordinary carcinoma of the breast." The remaining half of the same bone, the other femur, right humerus, and one patella are mounted as dry specimens, and constitute excellent examples of the so-called "fragilitas ossium," supposed to be the result of carcinoma.

The custom of mounting such examples of malignant bone lesion as dry specimens necessarily prevents their being subsequently available for microscopic investigation. Most pathological museums appear to contain one or more, but the instance alluded to is the only case I have met with in which a portion of the affected bone has been preserved in spirit alongside of the white, spongy, skeleton framework with which you are familiar. The so-called "rheumatic" pains of cancerous disease appear to be a characteristic feature of *mammary carcinoma*, and restricted to cases of the latter neoplasm. So, also, secondary deposits in distant bones would seem to be almost peculiar to the same, instances of malignant new growths arising primarily from bone or periosteum being of course excluded. I have not myself encountered any examples of the phenomenon, except in connexion with breast cancer. The museum of the Royal College of Surgeons contains specimens taken from two cases. No. 1687[1] is a tumour in the parietal bone of a child, secondary to medullary carcinoma of the testis. Nos. 1687A and 1687B are deposits in the skull and left femur of a man, considered to be secondary to primary carcinoma of the prostate. According to the record, however, the fact seems a little doubtful. Three or four other museums at which I have made inquiries do not appear to possess any example of secondary bone deposit, except in connexion with mammary carcinoma. On the other hand, the museum of St. Thomas's Hospital contains twelve specimens of "carcinoma of bone," taken from seven cases. In six of the cases the deposit is secondary to breast carcinoma. That of the College of Surgeons has eleven specimens (Nos. 1670, *et seq.*) also from seven cases of secondary deposit of carcinoma in bone. Two of the latter have just been alluded to; the remaining five are sequential to primary growths in the mamma. Again, of six specimens in connexion with the breast, two are of deposit in the femur, two in the humerus, one of malignant cells infiltrating the dorsal and lumbar vertebræ, and one of nodules attached to the posterior surface of the sternum, but not seemingly growing from the bone itself. In advanced cases of mammary carcinoma, bone symptoms are rarely absent, though, like all the other phenomena of malignant disease, subject to material variations of degree in individual examples.

The conclusions which I beg to submit are — (1) that bone lesions in connexion with breast carcinoma are not exceptional, but an ordinary phenomenon of the later stages of this disease; (2) that the condition depends not solely upon absorption of calcareous salts, but is the result of actual deposit of malignant cells in the marrow; (3) that the marrow, when thus infected, forms a species of "nidus for the resting spores" of the neoplasm, in which the cancer cells insidiously flourish, it may be for several years, without any conspicuous indications of their presence.

APPENDIX OF CASES REFERRED TO.

CASE 1. *Photograph of anterior chest wall exhibited.*—Mary E—— (living), a woman aged sixty, married, cook; no family history of cancer. A scirrhous tumour of the left breast, as large as an orange, of a year's duration, following a blow, was excised in October, 1888; it was freely movable. There was a lymph gland in axilla, of the size of a hazel-nut; the axillary contents were removed at the same time, and the patient was discharged well to all appearance on Dec. 27th, 1888. To the present time (July, 1890), the cicatrix, left axilla, and external tissues of the left chest wall have remained perfectly healthy. The woman is rather stout, has a broad chest, and the mammæ are large and pendulous. In December, 1888, the patient began to complain of aching pains in the left shoulder (shooting down the arm) and across the loins. On Jan. 14th, 1889, thickening about the upper epiphysis of the left humerus and sternal prominence in the site above described were both very marked. On May 6th, 1889, a tumour was found in the right breast. This now (July 2nd, 1890) implicates the whole gland tissue of the mamma, the skin being adherent, but still retains perfect mobility on the chest wall, so that no question of infiltration by contiguity of tissue can arise. There is deposit in the lymph glands of the right axilla. The patient is invalidish, and is unable to follow her occupation, but has no very marked objective indications of failing general health or of visceral contamination. There is a general feeling of lassitude and weakness, for which the obvious tumour formation seems insufficient to account.

CASE 2. *Photograph of anterior chest wall.*—Elizabeth G—— (living) aged fifty-seven, was admitted into the Cancer Hospital on June 24th, 1890. She is a spare woman, with small atrophic mammæ and advanced scirrhous disease of the left breast, noticed one year, but evidently of much longer duration. The whole mamma is infiltrated and becoming adherent to the parietes; a large mass of lymph glands completely blocking up the left axilla and firmly fixed. No ulceration, but considerable œdema of left arm and forearm. Prominence of the sternum, but not so marked as in the preceding case; the epiphyses of both humeri seem fuller than normal, the left slightly more so than the right. No infiltration or œdema of tissues between the mamma, and sternum apparent. "Rheumatic" pains in arm; not in loins.

CASE 3. *Photograph of anterior chest wall.*—Susan D—— (living) aged fifty-three; very short woman, with broad chest; married; nine children, six living; no family history of cancer. The right breast with contents of axilla excised by Dr. Purcell, in March, 1890, for scirrhus, noticed seven months; probably of much longer duration. On July 7th, 1890, marked prominence of sternum at second costo-sternal articulation, over this three small reddish nodules in skin, freely movable, apparently composed of keloid tissue (not of scirrhous); near these two small white scars. The right humerus showed very marked fulness and thickening of the upper epiphysis. The cicatrix healthy, and no palpable malignant deposit in soft parts. No œdema of arm or forearm; no lumbar pain, but continuous gnawing pain like that of rheumatism—worse at night, and then preventing sleep—felt "in the bone" of the right arm as far as the elbow.

CASE 4. *Photograph of anterior chest wall.*—Jane R—— (living), aged fifty-three, single; a spare, much emaciated woman. Atrophic scirrhus of the left breast, of six years' duration, not operated on. No family history of cancer. No injury, much mental distress, and hard work as seamstress. Small mammæ; the left completely infiltrated, shrivelled looking, and adherent to the chest wall. Skin and axillary glands also diseased; the latter small, but firmly fixed. A large goitre, present from childhood. The sternum presents (July 7th, 1890) general curvature and prominence from the second costo-sternal articulation to the attachment of the ensiform cartilage. Close to the latter, on the right of the middle line, is a prominent irregular hard boss growing from the bone; noticed one year and a half; slightly tender. Deposit of scirrhus at base of left lung; just above the crista illi, on each side, a small subcutaneous nodule of the same, movable. Marked thickening and prominence of right sacro-iliac articulation. No tenderness; this not previously noticed by the patient. Marked lumbar rheumatic pains, complained of for previous twelve months; no pain in the shoulder and no "humerus symptom." (An out-patient at the Cancer Hospital, under the care of Mr. Bowreman Jessett.)

CASE 5. *Photograph of anterior chest wall.*—Mrs. O—— (living), age fifty-three. No cancerous family history; great domestic trouble for several years previously; no injury. In February, 1889, the left breast was excised for advanced scirrhous disease, which had been noticed two years. The whole of the mammary parenchyma was then infiltrated, but the gland was still movable; the axillary lymph glands were considerably enlarged, and were removed at the same time. They were then found to be softened and breaking down, were implicated as high as the clavicle, above which was a slight suspicious fulness. There had been discharge from the nipple of a purulent character (not hæmorrhagic) for four months, and a small cyst was found near the root of the nipple. Examination of humerus negative and no sternal prominence noticeable. A rapid recovery from the somewhat severe operation. On Oct. 25th, 1889, the cicatricial tissue healthy, but three small subcutaneous secondary nodules above and below the scar were destroyed with potassa fusa. The sternum showed marked prominence over the second costo-sternal articulation. On June 7th, 1890, the upper epiphysis of

[1] Pathological Catalogue, vol. ii., part 4.

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the left humerus was found to be much thicker in appearance than the right. On July 19th, 1890, the photograph was kindly taken by Dr. T. Johnston English. The sternal prominence and condition of the left humerus remained as before; the upper epiphysis of the right humerus seemed to be also slightly fuller than the normal. The sternal prominence was tender on pressure and the patient also complained of aching down the left upper arm. A fulness just below the left clavicle, evidently due to deposit in the lymph glands upon the axillary bloodvessels; this was the sole manifestation of malignant deposit in the soft parts. General lassitude, but little or no pain; the patient able to get about well, being kept under the influence of small doses of opium.

CASE 6. *Microscopic sections from cancellous tissue of head and shaft of right humerus, ditto of left, from marrow in both bones, from cancellous tissue of lumbar vertebra; the portions of bone from which the sections had been taken also exhibited.*—Sarah J——, a woman aged fifty-one, with no family history of malignant disease, was admitted into the Cancer Hospital on May 2nd, 1890. On examination she was found to have an ulcerated scirrhous tumour of the right breast, about two inches in diameter (including surrounding area of livid skin), becoming fixed to the chest wall. Several glands in the axilla as large as hazel-nuts. Extensive tubercular disease of the left lung was also present, and after admission the patient was found to be insane. No œdema of the arm existed; the disease had been present three years and a half and had been ulcerated two months. The patient had led a hard life, and had received several blows. She was much emaciated. After causing considerable trouble, the patient died on May 24th. The rapid termination was largely brought about by the coexisting cerebral and pulmonary conditions. The amount of malignant disease present should, under ordinary circumstances, have permitted a much longer lease of life (as evidenced by the total absence of arm œdema). No bone symptoms existed during life. The acute mania present precluded complaint of rheumatic pains, and no outward and visible physical sign existed to draw attention to the bones.—*Necropsy:* An emaciated slightly built woman, with small mammæ. In the right breast an ulcerated scirrhous tumour, not very large or prominent, and still retaining some degree of mobility on the thoracic parietes. In the right axilla a cluster of lymph glands, movable, as large as hazel-nuts; in the left one such, the size of a horsebean. Seven or eight small nodules in the subcutaneous tissue of the trunk; several, also of small size, in the liver. No other visceral malignant deposit. The left lung extensively excavated by tubercular disease; the right healthy. Examination of the brain gave negative results. On incision over the upper epiphysis of each humerus an alteration in colour was apparent, the grey epiphysis contrasting with the white shaft of the bone. The point of the scalpel passed readily into the former, which was evidently in great measure decalcified. No change in the consistence of the shaft was noticeable. Under the microscope scirrhous cells (arranged in the typical acini) were found in the above sites, being most abundant in the right humerus, less so in the left, and least in the vertebra (lumbar).

CASE 7. *Section of marrow taken from femur exhibited, showing small group of scirrhous cells; also section of rib.*—Mildred W—— was admitted into the Cancer Hospital on Jan. 15th, 1883, under the care of Dr. Purcell. Malignant tumour of the left mamma as large as a cocoa-nut noticed one year; deposit in axillary lymph glands. Two soft elastic bossy masses grew from the left half of the sternum. In the course of a few months similar tumours appeared on left parietal bone, at the angle of the left scapula, and on the shaft of the right femur. The latter bone underwent spontaneous fracture below the trochanters about a fortnight before the patient's death in Nov. 1883. The microscopic appearances of the primary tumour were those of encephaloid carcinoma—i.e., exuberant proliferation of epithelioid cells, with scanty residual fibrous tissue, a larger proportion of the cells being, however, small and nuclear in appearance than is usually the case. Beside the bone tumours alluded to extensive deposits were found in the lungs and kidneys, the liver and other viscera being healthy. No tumour existed at the spot where the marrow section was taken; a portion of the shaft seen by the section to be of normal calibre. It was obtained and mounted as a specimen of presumably healthy marrow; infection was not then suspected, and the malignant cells were discovered only incidentally. No enlargement of the rib existed, the fragmentary state of the specimen indicates the fragile condition of the bone, reduced to a thin shell of periosteum and bone matrix, enclosing a few loose masses of parenchyma, stained red by picro-carmine. (It is not certain in the case of this last specimen that infiltration by contiguity tissue may not have taken place.)

CASE 8. *Microscopic sections of cancellous tissue in head of left humerus, stained by picro-carmine, also by picro-carmine and logwood.*—Emma B——. Scirrhus of the left breast, with brawny œdema of left arm. Extensive visceral deposits. Bone decalcified; the head of the bone divided by the knife as readily as the soft parts, so disarticulation from the glenoid cavity effected only with difficulty. Microscopically the cancellous tissue eroded by what appears to be cancerous parenchyma, the normal marrow stroma absent.

CASE 9. *Sections of head and upper part of shaft of left humerus; stained by picro-carmine.*—Mary F——. Scirrhus of left breast, with brawny œdema of arm. Same appearances as in the preceding.

CASE 10. *Thin sections of seventh cervical vertebra, infiltrated by scirrhus of mamma; logwood stain.*—Martha S——, aged forty-one. In April, 1888, the left breast was excised for a scirrhous growth, noticed for preceding ten months. In September, 1889, readmission into hospital with a mass of glands above the left clavicle, infiltrated and fixed; some axillary reappearance and an ill-defined fulness over the sixth and seventh cervical vertebræ. The symptoms mainly consisted in progressive weakness and paraplegia. For several weeks before death (in October, 1889) there were incontinence of urine and fæces and also marked cerebral derangement (dementia). The vertebræ in question were found decalcified and infiltrated, with scirrhous cells of typical acinar distribution. No distinct tumour was produced. (No. 1684 in the Pathological Catalogue of the College of Surgeons' Museum, vol. ii., part 4, is a somewhat similar specimen of secondary vertebral deposit with mammary carcinoma, also without tumour formation. The Museum of St. Thomas's Hospital contains an example of the same occurrence.)

ON THE

USE OF PETERSEN'S RECTAL BAG AS AN AID IN SOUNDING FOR STONE AND IN LITHOTRITY WHERE THE BLADDER IS POUCHED OR SACCULATED.

BY REGINALD HARRISON, F.R.C.S.,
SURGEON TO ST. PETER'S HOSPITAL, LONDON.

WHERE the prostate is large and the posterior wall of the bladder considerably pouched or sacculated, as is often the case, it is not always easy to bring the point of a metal sound in contact with a stone which may thus be concealed. In this way a stone often escapes detection, whilst the searching for it, by reason of the elevation of the floor of the prostate, is not only thus rendered futile, but at the same time is frequently an extremely painful process. In the same way during lithotrity fragments of stone may become trapped in these spaces, and lead to the persistence of cystitis and the formation of another calculus. I have found the use of Petersen's rectal bag distended after its introduction into the bowel with two or three ounces of water extremely useful in turning out sacculated stones into the larger cavity of the bladder, and in preventing the lodgment of fragments during a lithotrity. By this means the depressed posterior wall of the bladder is brought up almost on a level with the prostatic urethra, thus facilitating the movement of sounds and other rigid instruments, and at the same time tending to turn any sacculation that may exist in this part with its contents, so to speak, inside out. I have tested these points now on several occasions. About the time I was making some observations bearing upon this point I was seeing a patient from whose bladder on two occasions, at short recent intervals, I had removed phosphatic calculi of small size. The prostate was large, there was a con-

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siderable amount of residual urine requiring the use of the catheter, and the posterior wall of the bladder was pouched and irregular. As the relief following each of these operations was only very temporary, and the urine was most offensive by the large amount of blood and muco-pus it contained, it seemed probable that there was more calculus in the bladder than could be got at in the ordinary way, and I thought it likely that some form of cystotomy which would admit exploration of the bladder with the finger with subsequent drainage might yield more permanent results. Wishing to avoid this, and considering it possible that a stone might be lodged in a sacculus, I introduced Petersen's bag, as used in supra-pubic cystotomy, and turned out into the general cavity of the bladder a phosphatic stone, having a diameter of an inch and a half, which was readily crushed and evacuated in the ordinary way. The ease with which the manipulations both with the lithotrite and the evacuating catheters were carried on compared most favourably with the two previous occasions. It is now nearly four months since the last operation; the patient remains quite well, and the urine is normal. Previously to this last operation the patient could not sit down with any comfort, by reason, I presume, of the pressure of the fixed stone on the prostate. He can now dispense with the catheter, and as the amount of residual urine does not exceed an ounce, I conclude the sacculation, having once been properly emptied, is becoming less. However, he takes the precaution of washing out his bladder every day with an antiseptic. I do not see how I could otherwise have removed this stone without opening the bladder, or without the use of the lithotrite in a manner which I should deprecate.

Lower Berkeley-street, W.

A NEW METHOD OF NASAL IRRIGATION.

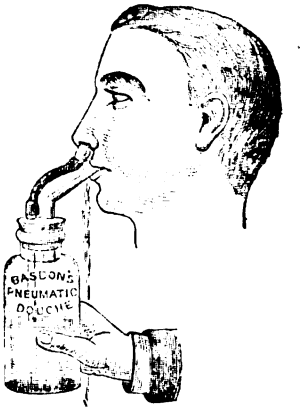
By JAMES B. BALL, M.D., &c.

WHATEVER difference of opinion there may be as to the amount of direct benefit which medicated fluids are capable of producing, by being brought in contact with the mucous membrane of the nasal passages, there is no room for questioning the importance of cleansing the passages of secretions in every disease in which these tend to accumulate, and more especially if there be decomposition and fetor. For the purpose of cleansing the nasal passages and the naso-pharynx a tepid alkaline lotion is generally preferred, with or without some antiseptic ingredient. Various modes of applying such fluid are in use, such as the spray apparatus, some form of syringe, and the nasal douche. There is no doubt that a hand-ball spray apparatus, throwing a powerful coarse spray, is, when properly used, an efficient means of cleansing the nasal passages in many cases, and it is free from some disadvantages attending other methods of irrigation. Where, however, there is much viscid or inspissated secretion to remove, it is desirable to pass a stream of the lotion through the nasal passages, so that it may enter at one nostril and, passing round the naso-pharynx, flow out at the other. The method in general use for this purpose is the ordinary nasal douche, and with certain precautions it is a safe and efficient method. Unless these precautions be observed, there is some danger of forcing the fluid into the Eustachian tube, or into one of the accessory sinuses, and thereby setting up trouble in these regions. We also find that in many people the contraction of the soft palate, whereby the naso-pharynx is cut off from the lower pharynx during the passage of a stream through the nose, is by no means so continuous and complete as is necessary to prevent some of the fluid from passing downwards, leading to fits of coughing and choking. I have met with persons who, even after much practice, were unable to use the nasal douche with comfort and efficiency.

I was impressed with a description of a simple and ingenious method of nasal irrigation, devised by Dr. Pins of Vienna, which appeared in the *Wiener Medicinische Wochenschrift* of April 19th, 1890, and I determined to give it a trial. Dr. Pins describes his method as one by which a stream may be passed through the nose and naso-pharynx, with not too great force, and by which the naso-pharynx is easily and effectually shut off from the throat below. The apparatus consists of a bottle of suitable size, fitted with an indiarubber cork, through which pass two glass tubes of unequal length. The longer tube reaches to the bottom of the bottle, and is furnished at its upper end with an olive-shaped nozzle to fit the nostril. The shorter tube does not quite reach the upper surface of the fluid, and its upper end is bent to form a mouth-piece. The patient takes the mouth-piece between his lips, while the olive-shaped nozzle is filled into one nostril. He then blows into the bottle, *with cheeks distended*, and the fluid is forced up into the nose, and flows out at the other nostril. With short pauses for respiration, in which he takes in a full inspiration, a pint or more of fluid can be passed through the nose in a few minutes.

It is known that when one expires forcibly, with the mouth closed and the cheeks blown out, the soft palate is firmly contracted and shuts off the naso-pharynx. In using this apparatus the expiratory force meets the resistance of the fluid in the bottle, and is sufficient to force it through the nose. At the same time the force with which the fluid enters is not excessive, and not likely to cause trouble. The shutting off of the upper pharynx is very effectual, the soft palate being strongly contracted and its under margin firmly applied to the posterior wall. The Eustachian is also thereby kept closed, and fluid is prevented from entering it.

I have for some time past used an apparatus (see engraving) constructed at my suggestion on Dr. Pins's principle by



Mr. Basdon (Carr and Co., 171, High Holborn). I have uniformly found that patients use the apparatus with great ease from the first. There is none of the choking and coughing which I have so often found with the ordinary douche. I can confirm Dr. Pins's statement that children very readily learn to use it. Obviously if either nasal passage is completely obstructed the apparatus cannot be used, and if one passage be much less free than the other it is well to observe the same rule as with the ordinary douche, and to use the narrower passage for the in-flow. The apparatus can be fitted with a bottle of any size. Hitherto I have used a 16-oz. bottle, which nearly always contains a sufficient quantity for any one application. In many cases this quantity is sufficient for several applications, and the fluid is warmed by standing the bottle in hot water each time before use.

Wimpole-street, W.

LEEDS GENERAL INFIRMARY.—A highly satisfactory report was submitted to the annual meeting, held on the 5th inst. The receipts amounted to £19,694, and the expenditure to £20,458. The in-patients treated were 5266, and the out-patients 26,585; 784 in-patients were transferred to the Ida Hospital during the year. The average daily number of beds occupied was forty. With reference to the extension of the hospital, for which nearly £31,000 had been promised by the public, the estimates for the work exceeded the amount originally calculated, but tenders, amounting altogether to £32,000, had been accepted. To complete, however, the cost of building and furnishing, a further sum of £7000 will have to be provided. The building is making rapid progress, and it is expected some portion at least may be ready for occupation within the next twelve months.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

FRACTURE OF STERNUM, LEFT CLAVICLE, AND SEVERAL RIBS, DISLOCATION OF SCAPULA; RECOVERY.

(Under the care of Mr. W. SQUARE.)

THE occurrence of multiple fractures such as those described in this case is very rare, even as a consequence of severe and rapidly fatal injury. Generally a hopeless prognosis would be given, for fracture of the upper ribs is dangerous on account of the important structures adjacent; and fracture also of the clavicle and of the sternum in the same patient implies an amount of shock from which few could rally. For the following notes we are indebted to Mr. W. Gifford Nash, house surgeon.

W. C——, aged forty-five, a navvy, was admitted on Jan. 7th, 1891, with a history that whilst at work about an hour previously a ton of frozen earth fell on him, crushing his chest. Half an hour was occupied in extricating him. When admitted he was very collapsed, the pulse only just being perceptible. There was great difficulty of breathing. The upper half of the left side of the chest was much damaged, it felt like a bag of bones, and flapped in and out with respiration. There was a slight amount of surgical emphysema in the left clavicular region, and a large effusion of blood. The sternum was broken transversely about the junction of the manubrium and gladiolus. The left clavicle was broken one inch from its sternal end, and at its outer end the ligaments were torn, so that the scapula was dislocated below it. The four upper left ribs were broken near their junction with the sternum, and also near the anterior axillary border. The chest was at once firmly strapped horizontally and obliquely over each shoulder, so as to fix the clavicles. The left arm was bandaged to the side. For the first few days there were great dyspnœa and collection of mucus in the air tubes. Carbonate of ammonia and twelve ounces of brandy daily were given, and morphia occasionally to relieve pain and produce sleep. The effect of the morphia was very beneficial, as during the day there was great dyspnœa, but, as soon as morphia produced sleep, the breathing became quite tranquil. A catheter was required for a fortnight. At the end of three weeks the strapping was changed, and at the end of five weeks omitted. There was then firm union of all the fractures, the acromio-clavicular joint was in perfect position, and the movements of the left arm perfect. The patient is now quite well.

Remarks.—This case at first seemed quite hopeless, and a very bad prognosis was given. The firm strapping gave great relief and kept the very movable fragments at rest. The beneficial effect of the morphia in relieving the dyspnœa was a marked feature of the case. The perfect position of the acromio-clavicular joint after dislocation is also a satisfactory result.

CHALMERS HOSPITAL, BANFF, N.B.

REPORT OF CASES UNDER DR. KOCH'S TREATMENT.

(Under the care of Drs. FERGUSSON and DINGWALL)

THE following series of seven cases in which tubercular disease was present gives the result of treatment by the method of Dr. Koch, and forms an interesting addition to the evidence as to the value of the treatment. In each the effect of the injections was marked, and in some the ultimate result was most satisfactory. We hope to be able to report later that the improvement was permanent.

CASE 1. *Hip joint disease.*—W. S——, aged seventeen, a boatbuilder, was admitted on April 2nd, 1890. The disease had lasted since childhood. On admission there were numerous sinuses over the region of the left hip-joint, from which there was a profuse discharge. The femur was dislocated upon the dorsum ilii, and ankylosed. The patient was treated with complete rest and generous diet, but little improvement resulted. On May 1st the sinuses were thoroughly laid open, and scraped with Volkmann's spoon. They did well for a time, but gradually returned to the old condition. They were again operated on on Oct. 3rd, and for a time promised to do well, but when the first injection was made (Dec. 28th) the discharge was profuse, and there were as many as eight sinuses. Between these lay raw patches with the characteristic tint of tubercular wounds. Temperature before first injection had been normal for several weeks. The patient was in fairly good health. He suffered a considerable amount of pain when the affected limb was moved.

Treatment.—From Dec. 28th to Feb. 20th he received thirty-one injections. The first was 0·0025 gramme, and the last 0·1 gramme, the latter injection being repeated several times. The reactions have been very variable, the highest being after the second injection (0·0045), when the temperature rose to 101°, and the pulse to 108. There have been reactions with all the injections except the fourth, sixth, tenth, and the last four. There have been few general symptoms. After the first injection the patient had slight frontal headache, and nine hours after he was sick and vomited. He has felt somewhat dull and heavy after several of the injections, but suffered no further inconvenience. Locally there was a marked reaction after the earlier injections. For about two inches around the wounds the skin took on an erysipelatous look, and the discharge from the sinuses became more profuse. Here and there at the edges of the wounds appeared gelatinous-looking nodules, which gradually broke down and disappeared, leaving a healthy, raw surface. He felt the parts hot and burning during the reaction, but afterwards the parts felt easier than before. After the later injections there has been very little local reaction, and the discharge has now almost ceased. The wounds are now reduced to about one-fourth their original extent, and there is but one sinus an inch in depth. The wounds have not made the same progress lately as they did at first, but they continue to improve. Patient expresses himself as feeling much better and stronger. He has now no pain at the hip, and can lie on the affected side and move the leg, which he could not do before. He has gained flesh considerably, and has lost the careworn expression he had before the treatment was begun.

CASE 2.—M. C——, female teacher, aged thirty-two, single. Admitted to hospital on Dec. 27th, complaining of cough, expectoration, general debility, and slight night sweats. Disease of six years' duration. Sputum muco-purulent, and containing numerous tubercle bacilli. Sputum three ounces during twenty-four hours. Cough at times severe. No hæmoptysis. Her sister died of phthisis. On the anterior aspect of left infra-clavicular region there was much flattening, diminished expansion, little or no vesicular murmur to be heard for the numerous moist sounds present during the whole respiratory act, the crepitations being largest between the first and second ribs. Same condition, but not so pronounced, in supra-spinous region. Breath sounds fairly normal in lower parts of lung. Breathing at right apex slightly harsh, but no moist sounds. Temperature for two days before treatment normal.

Treatment.—From Dec. 30th to Feb. 20th she has had thirty-five injections. Marked reactions have followed the third, sixth, seventh, and ninth, the temperature rising to 101·2° after the sixth, and the pulse to 104, but latterly the symptoms were less marked. There have been but slight reactions following the tenth and remaining injections. After the first injection patient felt very dull and heavy, and inclined to sleep. She had also headache. There were a few streaks of blood in the sputum on the second day after the first injection, but none have appeared since. The first injection was 0·001 gramme, and the last 0·1 gramme. Although after several of the injections the general reaction was slight, still, as far as one could judge by auscultation, a local reaction had taken place. This was evinced by diminished respiratory sounds and increase of the moist râles, although not to nearly such an extent as previously to treatment. On the day following the injection the sounds were again dry and harsh. The natural respiratory murmur extends higher up than it did before treatment. She can now lie with ease on the affected side, which she could not do for several years before treatment

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was commenced. The sputum is now reduced to three drachms, and bacilli can only be detected with difficulty. Very few moist sounds of any kind are to be heard, but there is loud, harsh, bronchial breathing, along with a creaking noise which seems to be superficial. Dulness less marked, not so extensive. Patient thinks herself much stronger than on admission, and is now gaining flesh. She is up and moving about the hospital, but not out, owing to coldness of weather.

CASE 3. *Lupus of face.*—W. R——, female, aged thirty-nine, was admitted to hospital on Dec. 29th. The disease has lasted for twenty years. Began as a small patch on right cheek, and has gradually spread over the whole of both cheeks, nose, lips, and left side of chin. Parts of the cartilages of the nose are eaten away; they have been scraped several times with little or no permanent benefit. General health fairly good. No chest symptoms.

Treatment.—The patient has received eleven injections: beginning with 0·003 gramme, and the last injection 0·07 gramme. The first reaction was well marked; the temperature of the fifth reached 101·4°. Four hours after the injection the patient complained of oppression in the chest, with slight cough, and a little later she was sick and vomited. The local reaction was very marked, presenting the usual well-known appearances. On each cheek is a large, thick, yellow scab; that on the left cheek is of considerable thickness, and is beginning to separate. From below the scabs there is a considerable muco-purulent discharge. March 7th: Scabs removed ten days ago, leaving raw surfaces, which have now entirely healed under boracic acid ointment. This patient is much improved, but there are still tubercles studded about.

CASE 4. *Lupus of face and leg.*—C. G——, aged twenty-two, female. Disease of thirteen years' duration, and began as a small, hard nodule on the right cheek. Face has been blistered repeatedly, but never scraped. Admitted Dec. 31st. Patient in very good health. Chest normal. Both cheeks, nose, and chin are affected. There is also a large quiescent patch on the posterior aspect of the right ankle and a small patch on the back of the left shoulder. Towards the centre of the affected parts the disease seemed quiescent, while towards the edges tubercular nodules could be seen and felt. The disease also affected the gums, roof of mouth, uvula, and tonsils, these being red and granular. Part of the uvula had been eaten away.

Treatment.—On Jan. 2nd she received a first injection of 0·003 gramme. An hour after the injection the temperature fell to 96·4°, and then began to rise. In eleven hours it reached a maximum of 102·2°, with pulse 108. It kept as high as 102° for fourteen hours, when it gradually fell to normal. On the day after the injection a measly rash appeared over her chest and back. It lasted for about twelve hours. The local reaction was very marked. The gums were very red and swollen, and the patient complained of feeling her teeth "loose." The nodules have disappeared considerably, but are still present, and the diseased parts are, with the exception of the nose, now quite on a level with the surrounding healthy skin. The last injection, given on March 4th, was 0·4 gramme, the largest dose by far yet given at this hospital. In this case no raw surface has been caused, but a great deal of whitish scaly débris has been thrown off. The affected mucous membrane now appears quite normal, and shows no reaction after injection. The patch on the ankle has several times become slightly red, but lately has shown no change, and looks quite cured; no tubercles whatever discernible.

CASE 5. *Pulmonary phthisis.*—J. W——, female teacher aged thirty-eight; no family history of phthisis. Admitted Jan. 3rd, complaining of cough and expectoration. She has also been much troubled with dyspnœa. She has been under Dr. Fergusson's observation for five years, during which time the physical signs have shown very gradual though intermittent extension of the disease. On admission she was much thinner than she had ever been before. The temperature has never been high, even at night. She was most anxious to try the treatment, as she felt herself gradually becoming weaker. Bacilli were found in the sputum. On examination flattening and diminished expansion of left side in infra-clavicular region were found, dulness well marked down to fourth rib, and in supra-spinous fossa behind. Tubular breathing over infra-clavicular region, with cavernous breathing between first and second ribs. Large and small moist sounds over the whole of the same area. Harsh breathing at right apex, with occasional moist râles in supra-spinous fossa. Diminished respiratory murmur in lower lobe behind on left side. Otherwise the chest sounds were fairly normal.

Treatment.—She has received thirty-three injections, ranging from 0·001 gramme to 0·1 gramme, the last being repeated ten times. The highest reaction has been after the fourth injection, when the temperature rose to 100·5°. She has shown no general symptoms beyond feeling somewhat dull and heavy after the injections. Sputum on admission was four ounces and is now six drachms. No marked change has taken place in the physical signs, but the dyspnœa has been entirely relieved, the patient herself saying that it is now a pleasure to breathe compared with what it was before admission. The cough is also much relieved. This patient still reacts to 0·1 gramme, her temperature being normal the intervening two days, and rising to about 100° on the day of injection. She is up and walking about the corridors.

CASE 6. *Lupus of back and nose.*—A. M——, single, aged forty, fishwoman. Disease of fourteen years' duration. First appeared as small nodule on the back of the left shoulder, and has gradually spread since. It has never been quite whole on the back. About five months ago a small nodule appeared on the right ala of the nose. This shortly after broke down, forming a small ulcer. Admitted Jan. 17th, in good health; chest normal. On centre of right ala was a roundish deep ulcer with pouting edges. At the edge of the right nostril was a slight erosion not so deep as the former. Around these were several small hard nodules, and the surface around them had a red appearance. The redness also extended for about an inch and a half upon the right cheek. Over the whole of the back of the left chest were seen old scars, white and seamed, and over the supra-spinous region of the same side was a reddish surface about the size of the palm of the hand, with a small active patch towards its outer edge. Over the right shoulder and extending downwards upon the deltoid region was seen a similar scarred appearance with two active patches.

Treatment.—The patient has received thirteen injections, the first being 0·003 gramme and the last 0·07 gramme. Little reaction followed the first three, but marked reactions were got with the fourth, fifth, and sixth. There was slight local reaction after the first three injections, but after the fourth the affected parts on the nose became much swollen, and the surrounding redness more intense. The ulcer became quite filled up with a brown scar. The active patches on the back and shoulder also became red and congested, but have now ceased to react. The nose is much improved, and shows but slight reaction.

CASE 7. *Pulmonary phthisis.*—P. L——, aged twenty-five, admitted Jan. 22nd. No family history of phthisis. His first illness was in the spring of 1887, when he had a bad cold, and spat up a little blood in the morning for a few days. In Sept. 1887, he had severe hæmoptysis, and consulted a medical man, when perceptible signs of disease in the right apex were found. On the doctor's advice he went to South Africa, but returned in June, 1890. He had no bad symptoms whilst in Africa. On admission the physical examination showed dulness in the right infra-clavicular region, but no difference could be seen on inspection. The breathing in the same region was bronchial, but there were no moist sounds. Bacilli were found in the sputum.

Treatment.—Patient has received nineteen injections, the first being 0·001 gramme, on Jan. 23rd, and the last, 0·1 gramme, on Feb. 20th. He has never felt any difference from the injections, except that after the eighth (0·01 gramme) he had slight difficulty in breathing with inclination to sit up for relief. On auscultation after this injection fine moist sounds were heard for the first time, but these could not be detected three days later. After the tenth injection he had slight cough but no expectoration. The temperature has never been high; after the tenth injection it rose to 100·2°, then fell to normal, and next day rose to 100·6°, which has been the highest reached. Since the fourteenth injection there has been no reaction at all. On physical examination it is now impossible to detect any difference between the two sides beyond a slight difference in the percussion note. No bacilli can now be detected in his sputum. This patient left as "cured" on March 7th.

Besides these cases, there are at present six cases of phthisis, three of lupus, and two of tubercular disease of femur under treatment, but they have not been sufficiently long under treatment to render a report on their progress of sufficient interest for publication.

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Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Annual General Meeting.

THE annual general meeting of this Society was held on March 2nd, the President, Mr. Timothy Holmes, in the chair.

The minutes of the last annual meeting having been read and approved, the report of the President and Council, together with the financial statement, were presented. The latter had been duly audited, and showed that the pecuniary position of the Society was satisfactory. The permanent endowment fund, which had been established only a little over twelve months, had received some substantial additions. The President then moved that the alterations in the by-laws proposed by the Council be adopted. They were, for the most part, purely technical, and had become necessary owing to the altered circumstances in which the Society found itself. On the ballot being taken, they were declared duly carried. He then delivered his annual address, to which allusion will be found in our last week's number. A vote of thanks for this was proposed by Sir Edwin Saunders, and seconded by Mr. Thomas Smith, who alluded to the desirability of developing the Society in a social direction. The President having been thanked for his gift of a magnificent table for the meeting room, and the usual votes of thanks having been accorded to the retiring officers of the Society, the meeting adjourned. The following were elected to serve as officers during the ensuing year:—President: Mr. Timothy Holmes. Vice-presidents: Drs. J. Langdon Down, George Harley, and Messrs. Howard F. Marsh and Alfred Willett. Treasurers: Dr. Charles John Hare and Mr. John Ashton Bostock. Honorary secretaries: Dr. Frederick Taylor and Mr. J. Warrington Haward. Honorary librarians: Dr. Samuel Jones Gee and Mr. John Whitaker Hulke. Members of Council: Drs. Walter Butler Cheadle, W. R. Gowers, Norman Moore, John Williams, George Vivian Poore, and Messrs. William Harrison Cripps, Charles N. Macnamara, Henry Walter Kiallmark, Herbert William Page, and Knowsley Thornton.

Idioglossia.

An ordinary meeting of the Society was held on March 10th, the President, Mr. Timothy Holmes, in the chair.

Dr. HALE WHITE and Mr. GOLDING-BIRD described two cases of Idioglossia. The patients, who were brothers, were thought by their parents to be suffering from deaf-mutism. This was not so. They heard well, and expressed themselves in articulate sounds. The sounds were unlike those of any known language, but the same sound was always used by the same child to express the same word. Each child had thus a language of its own, and consequently the authors had (at Dr. Perry's suggestion) named the condition "idioglossia." The elder sister of these boys was slightly affected. All the children were remarkably intelligent, and could read any book, understanding what they read, and writing English correctly. There was no observable physical defect; one of them was left-handed. There were traces of insanity in the family. The treatment adopted had been careful training, and the boy who had been longest under treatment showed marked improvement. Owing to the kindness of the Edison Phonograph Company the authors were able to show the phonograms of the children, taken before any treatment was adopted. These exactly reproduced the original speech. The following tables show the speech recorded phonetically:—

Alfred P——.

(*a*) The alphabet. When not otherwise indicated the letters have their usual value:—

a	b	c	d	e	f	g	h	i	j	k	l	m
ah	b	c	d	e	ahth	yee	ahsee	ah	eeyah	tah	ahl	ahm

n	o	p	q	r	s	t	u
ahdĭ	ŭ (as in frugality)	p	tū	ah	ahsee	t	u (as in few)

v	w	x	y	z.
yee	dahbeyew	aht	eeyah	yahddĭ.

(*b*) The Lord's Prayer:—

Our	Father,	which	art	in	heaven,
Ah	Sahyee,	yee	ahtee	ee	ahyah,

hallowed	be	Thy	name.	Thy	kingdom
hahdō (o as in hero)	bee	Dah	ah.	Dah	tdō (o as in hero)

come.	Thy	will	be	done	in	earth,
tōm (o as in son).	Dah	yee	bee	dah	ee	ahtsee,

as	it	is	in	heaven.	Give	us	this
ah	eet	tee	ee	ahyah.	Yee	ahtsee	deesee

day	our	daily	bread.
dah	ah	dahdĭ	bahdĭ.

Forgive	us	our	trespasses,	as	we
Dōsōyee (os as in hero)	ahsee	ahee	sahpeedee,	ah	yee

forgive	those	who
dōsōyee (os as in hero)	dō (hero)	ū (as in frugality)

trespass	against	us.	Lead	us
sahpee	ahdahthō (hero)	ahsee.	Leedĭ	ahsee

not	into	temptation;	but	deliver
out (ou as in loud)	eetō (hero)	tahptahdĭ;	baht	deedĭ

us	from	evil:
ahsee	soum (ou as in soul)	eeew (ew as in Matthew):

For	Thine	is	the	kingdom,	the
Soud (ou as in soul)	Dahdĭ	ee	dee	teedō (hero),	dee

power,	and	the	glory,	for
pardĭ,	ahd	dee	doudĭ (ou as in loud),	sō (hero)

ever	and	ever.	Amen.
ahyah	ahdĭ	ahyah.	Ahyah.

Robert J. P. P——.

(*a*) The alphabet. Unless otherwise stated the letters have their usual value.

a	b	c	d	e	f	g	h
ahsee	b	c	gee	e	f	dzee	aisee (a as aye, i as eye)

i	j	k	l	m	n	o	p	q
aee (a as aye)	zaee (a as aye)	kee	l	m	n	o	p	q

r	s	t	u	v	w
ah	ees	kee	ū (u as in frugality)	wee	dahbeeyew

x	y	z.
ĕs	y	z.

(*b*) The Lord's Prayer. (The words are spelt the same when he pronounced them as ordinary persons do.)

Our	Father,	which	art	in	heaven,
Ah	Fahwee,	wis	aht	ee	eewee,

hallowed	be	Thy	name.	Thy
hahdee	be	Di (i as eye)	nahĭm.	Di (eye)

kingdom	come.	Thy	will	be
keedŏm (o as in got)	come.	Di (eye)	wĕll	be

done	in	earth,	as	it	is	in
gahd	ee:	ef,	ahsee	eet	ees	ee

heaven.	Give	us	this	day
eewee.	Zwivĭ (first i as eye)	ahsee	dĭs	gaee (a as aye)

our	daily	bread.	Forgive	us	our
ahee	gayee (a as aye)	bĕd.	Forgive	ahsee	ahee

trespasses,	as	we	forgive	those	who
sahpeesees,	ahsee	we	forgive	dōsee (o as in hero)	who

trespass	against	us.	Lead
sahpĭs	agaeesee (both a's as aye)	ahsee.	Eedee

us	not	into	temptation;
ahsee	not	eekew (ew as in Matthew)	keekasŏm (a as aye);

but	deliver	us	from	evil:	For
baht	geewee	ahsee	vŏm	eewĭl:	For

Thine	is	the	kingdom,	the	power,
Dahee	is	dee	keedou (ou as in loud),	dee	pahdĭ,

and	the	glory,	for	ever	and
ahd	dee	gōri (or as in anchor),	for	eewee	ahd

ever.	Amen.
eewee.	Ahmee.

Dr. FREDERICK TAYLOR reported a case of Defective Articulation similar to those communicated by Dr. Hale White and Mr. Golding-Bird. The patient was eight years and a half old, and had no physical defect beyond a very slight arching of the palate. He had three fits at the age of eight months, and had measles and scarlatina at four years. He had never talked properly, and when he came first under observation was almost unintelligible. He, however, understood what was said to him, could read little words, and could write in a child's round hand. When he first came under notice his pronunciation of many consonants, especially p, t, k, s, was defective, and he added the syllables "īdă" and "ēdă" to nearly every word that he spoke. He had been submitted to a modified oral instruction, and was after some months much better. His pronunciation, of two kinds, of the Lord's Prayer, on Dec. 20th and Feb. 3rd, was shown:—

	Our	Father,	which	art	in	heaven
Dec. 20th.—	Ouarda	Farada,	id	arda	a	haida,
Feb. 3rd.—	Ouer	Faerda,	we	ad	a	evven,

	Hallowed	be	Thy	name.
Dec. 20th.—	Howarda	beda	Adarda	dene.
Feb. 3rd.—	Alloēda	be	Thy	name.

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The author regarded this as mainly a defect of articulation, the centres for which might be regarded as less apt for education than those of average individuals. The patients were shown and made to speak out loud, and by means of the phonograph their speech both before and after treatment was demonstrated for comparison.

Dr. PYE-SMITH agreed with Dr. Taylor in doubting if idioglossia was the best term to employ in describing this affection. It was not a peculiar language, but only a perversion of one which was not peculiar. It was only English imperfectly pronounced. The recognition of the peculiarities of pronunciation would have been easier if the authors had adopted a more consistent method of notation. The vowels were difficult to be sure of, but the method of pronunciation of the consonants was not widely different from the imperfect English spoken by children. The prefixing of an initial vowel was peculiar, but it was common in the language of the South Sea Islands, and it also occurred in old French. As to the curious suffixes, these peculiar terminations of words were to be found in the Mexican and even in the Italian languages. If the initial and terminal syllables were omitted what was left was practically English "baby language." He thought that the explanation bore on the question of general development and philology rather than on peculiarity of organs. It was not a want of power in the instruments of speech or in the central organs, but was connected rather with the imperfect speech of children learning to talk, of idiots, and of foreigners, and it perhaps bore some relation to "aglossia," a term he applied to the condition of foreigners who came to England, did not properly learn English, and forgot their native pronunciation. The interest in them therefore was physiological rather than pathological, and as to therapeutics, the efforts of those who had tried to instruct these cases were to be admired.

Dr. HADDEN had met with three cases of this affection during the last eighteen months; they were all of the same kind, all intelligent, with no defect of the palate and with normal hearing. He showed one of them, a boy eight years of age, who spoke before the meeting. He was slovenly in ending his words, and would sometimes transpose letters at the end. Another boy was much worse and made but little attempt to form words. He agreed with Dr. Pye-Smith that the alphabet was not a good test; there were in all about fifty elementary sounds, and an endeavour should be made to find out which of these were impossible of pronunciation. It was noteworthy that in one of the cases he had published, when the boy was asked to write to dictation, he would begin all right, and then would go on to write up and down strokes with no meaning, or would write words which would suggest the language he usually spoke. Some of these patients if speaking deliberately would pronounce well, but if they attempted to speak quicker they would get confused. He thought that much of the language that children learnt was acquired by the oral system, the mother deliberately pronouncing the words so that the child could see the mechanism. Some letters, such as g, j, q, and w, were difficult, and were acquired later, because the mechanism of their pronunciation was concealed. He doubted if these cases were simply instances of persistency of infantile blundering, but they were very like it. In none of his cases could the patients trill the r. The association of left-handedness was worthy of being borne in mind. There was probably no gross change in the brain, and the chief success of the treatment was due to the completeness of the isolation.

Mr. SPENCER WATSON said that though deaf-mutism had been excluded in these cases, yet there might be some defect of the sense of hearing short of deafness, and in this condition certain labials and dentals would be difficult to distinguish. The condition, therefore, would be somewhat analogous to errors of refraction and would be diminished by education. He suggested that imitation might account for part of the peculiarity, and that in one case, at least, the obstruction in the naso-pharynx by adenoid vegetations acted as a causative factor.

Dr. WILKS considered the condition a defect rather of speech than of language; to suppose that children could invent a language of their own was difficult to believe; it was merely a modification of an ordinary known language. But now and then the defect might be deeper; he had seen four cases of children who had never spoken at all, though they were otherwise intelligent. He referred to the case of a boy, the child of French parents, who went to an English school and spoke English well; though he thoroughly understood French he could not speak a single word of it. When a man was drunk, though his expressions were indistinct, he believed that he still followed a rule of speech.

Dr. LANGDON DOWN had had a great deal to do with non-speaking children, but they were mostly of feeble intellect. The cause he thought in the present cases was a defect of hearing, and the effect of the therapeutics pointed in the same direction. He had known of one case to which the term "idioglossia" could perfectly correctly be given; it was that of a girl who spoke a gibberish language of her own, though her sisters could translate it for her to other people.

Dr. MATHESON, as the result of examination of a large number of cases of defective articulation, came to the conclusion that there were usually two elements present: a neurosis, such as insanity or hysteria, with some nasal or pharyngeal obstruction as the exciting cause. Very slight causes such as acute or chronic rhinitis were efficient.

Dr. HALE WHITE, in reply, said that the name proposed had been recommended to him by Dr. Perry as the most suitable. Whether the peculiarity constituted a language or not was merely a question of degree, for many languages were only slightly differentiated from one another. The point was that each of these children had its own language, which was peculiar to each of them. The condition was distinct from defects of speech, such as that in general paralysis, where patients who were once correct were now defective. The view he put forward was strongly supported by Romanes, who had pointed out that occasionally one got "sports" in language. No deficiency of hearing could be detected, and if it were due to this the condition should certainly be commoner. The curious association with left-handedness took it out of the category of mere defects of speech; it was something deeper. His patients were unable to trill the r. He could not make out that it could be explained by imitation. There was no condition of nose or naso-pharynx which could account for the defect.

Dr. TAYLOR, in reply, said that there was no evidence of physical defect in his case. It might perhaps be a congenital failure on the part of the individual to make the most of his opportunities of learning the language; he had not the same cerebral capacity as his fellows for articulating ideas, and in this way proficiency in speaking might perhaps be compared to the varying proficiency amongst different performers on the piano.

MEDICAL SOCIETY OF LONDON.

Adjourned Discussion on Angina Pectoris.

AN ordinary meeting of this Society was held on March 9th, the chair being taken by the new President, Dr. Douglas Powell.

Sir JOSEPH FAYRER proposed, and Dr. DE HAVILLAND HALL seconded, a vote of thanks to Mr. Knowsley Thornton, the retiring President.

Dr. LAUDER BRUNTON proposed a vote of thanks to the retiring officers of the Council. This was seconded by Dr. MITCHELL BRUCE, and Dr. GILBART SMITH replied.

Dr. DOUGLAS POWELL, in a few well-chosen words, thanked the Fellows of the Society for the honour they had done him in electing him President.

Dr. LAUDER BRUNTON reopened the discussion on Angina Pectoris. He observed that it was very rare for a third night to be devoted to discussion in any society, and the fact that the Medical Society had done so on this occasion showed its indebtedness to Dr. Douglas Powell for the admirable paper by which he had introduced the subject. He agreed with Dr. Powell and with the other speakers that the subject of angina pectoris should be treated on a wide basis. In discussing the subject much help might be obtained from the analogy pointed out by Professor Grainger Stewart between the heart and the bladder. Both were hollow, muscular organs, contracting and dilating at fairly regular intervals, and expelling liquid contents. In both slight distension formed a stimulus to contraction, but if the distension became excessive it might cause pain varying in amount from slight discomfort to extreme agony. The sensation of pain was always central, for it depended on a condition of the brain which might be ex-

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cited by a peripheral irritation like a diseased joint, but might exist quite apart from any peripheral disease, as in hysteria. A mixed condition might exist which was both central and peripheral, as in the vesical crises of locomotor ataxia, and possibly a similar condition might occur in the heart. Usually distension either of the bladder or the heart not only caused contraction in them, but through the nervous system lessened the resistance of the sphincter in the case of the bladder or of the arterioles in the case of the heart. Disturbance of this nervous relationship might cause excessive distension or pain in either organ, apart from organic disease, giving rise to spasmodic retention or vaso-motor angina. But while the spasmodic character of angina pectoris indicated its nervous origin, it was so frequently associated with diseased coronary arteries and fatty heart that these evidently played a great part in its causation. Angina pectoris might be said to be due neither to high tension alone nor weak heart alone, but to weakness of the heart in relation to the resistance it had to overcome, and it might be brought on either by weakening the heart or increasing the resistance, or both together. In tracing out its pathology the analogy with the bladder was useful. The resistance which the heart had to overcome depended upon the contraction of the systemic arterioles. Of these there were three subdivisions—cutaneous, visceral, and muscular,—and the latter was the most important in relation to the attacks of angina. One of the most striking symptoms of angina was the ease with which it was brought on by muscular action. The first effect of this was to prevent the passage of blood through the muscles and to raise the tension, although afterwards the vessels of the muscles dilated and the tension fell. To this primary rise Dr. Brunton attributed the occurrence of anginal attacks on exertion, and their passing off if exertion could be continued was, he considered, due to the subsequent dilatation of the vessels of the muscles with consequent fall of blood-pressure and lessened resistance. He thought that atheroma of the coronary arteries was so powerful in causing angina because it prevented the supply of blood to the heart being increased on exertion as it ought to be in muscles generally. The pain of angina he considered to be due to distension of the heart, and its more common occurrence in the left than the right side of the heart to be due to the greater ease with which the tricuspid valves became incompetent than the mitral when the ventricles became dilated. Angina pectoris was very rare in children, but one case was recorded of a boy of fourteen in which there were aortic regurgitation and mitral stenosis, and another in a boy of eleven, where there was ossification of the auriculo-ventricular groove, conditions which would prevent dilatation of the mitral orifice and insufficiency of the valves. He agreed with the previous speakers in regard to the necessity for the elimination of waste products, and also for restricted diet in gout, and for the use of iron and arsenic in feeble heart; but he regarded the nitrites as the most efficient remedy during a paroxysm, and, on the whole, iodide of potassium as the most useful in the interval. He showed a tracing which appeared to indicate that it lessened the rise of blood-pressure on exertion, and mentioned a case illustrative of its remedial action.

Dr. MITCHELL BRUCE said that he intended to confine his remarks to some practical clinical points. He dealt first with the cases of vaso-motor angina pectoris. He had seen some instances of this character, but he thought that the majority were associated with cardiac lesion. He did not gather from Dr. Powell what proportion he considered these two groups bore to one another, but in his own experience cases of simple vaso-motor angina were excessively rare. The term "vaso-motor angina pectoris" he ventured to consider an unfortunate one, and it was apt to be misleading. An attack of angina was determined not so much by the vaso-motor condition as by the relation of the state of the pulse tension to the state of the heart behind it. It was really a matter of relation between the pressure ahead and the driving power, and in the great majority of instances it was the fault of the heart and not of the periphery. If the term "vaso-motor angina pectoris" were used to express this condition, it was obvious that it overlooked the most important factor in regard to both the pathology and the treatment. He had not found the pulse particularly tense in patients with vaso-motor angina; they possessed usually rather a soft and poor pulse. In aortic cases with angina the pulse was, as a rule, anything but tense, and in Bright's disease the angina only came on when the heart began to fail. If the heart were carefully examined in most gouty people there would be found physical signs of some organic change, not necessarily valvular disease, but enlargement with weakness. The typical gouty people who suffered with angina were men between forty and fifty years of age, who had led an anxious but not active life, and who, having been successful, found themselves now entitled to ease with free living. Such people soon broke down, and presented signs of irregular gout, complaining of diarrhœa, insomnia, eczema, and flying pains. They likewise had palpitation, sometimes actual angina, and were despondent and nervous, with a feeble pulse. It was worthy of remark that the first attack of angina was often associated with a definite act of over-exertion. In many cases they were stout men who, in order to counteract their obesity, took to exercise in an ill-judged way, such as excessive rowing, tricycling, &c., and in this way strained themselves, and afterwards became the subjects of gouty heart. It had often been noted that before an attack of acute gout there was increased pulse tension, but during this period of increased tension the patient was better of his angina. Lastly, the effect of treatment bore out the importance of keeping the cardiac element well to the front. Under certain circumstances iodide of potassium was more valuable than nitro-glycerine, and between the attacks regular gentle muscular exercise was good, the patient attending strictly to his diet. As to purges, he agreed with Dr. Ord as to their value, and if in the treatment of this affection he were limited to one drug, he would select blue pill, which acted wonderfully in irregular gout with angina, though he was unable to explain its method of action. In classical angina he had been struck with the frequency of the small attacks and with the comparative rarity of the large and severe ones. The occasional appearance of gastro-intestinal phenomena in both gouty and organic angina should be borne in mind. He referred to the case of a man aged fifty-six with a weak heart and an intermittent mitral murmur, who suffered from attacks of angina both of slight and of violent degree. One evening, when walking home on a level road, he was suddenly seized with increased pain in the chest and in the left arm. He passed a large motion, became unconscious, and this was followed by vomiting. The temperature rose, cough developed, and moist sounds were present over the base of one lung. He had known of a similarly sudden development of gastric disturbance in three other cases. He considered that instances of pseudo-angina pectoris were deserving of some attention in a debate on the subject.

Dr. DE HAVILLAND HALL, in speaking of gout of the stomach, said that Dr. Brinton, in his classical work on "Diseases of the Stomach," had pointed out that there was really no such thing, but that a certain proportion of cases so called were instances of angina pectoris, while others were cases of gall-stone colic, and that these two affections were often confounded. He himself had collected a number of cases of angina pectoris, and found that two of them gave a distinct history of gall-stone colic. He had known of several attacks which had been directly induced by exposure to cold, and in these cases nitroglycerine answered particularly well.

Dr. SEYMOUR TAYLOR said he had been working at this subject for years past, and he had found that these cases grouped themselves under three headings: the first class were those in whom the symptoms were referable mainly to the cardio-vascular system, the second formed a neurotic group, while the third owned a reflex origin. The majority of the cases commenced between the ages of fifty and sixty, at a time when tissue expenditure overbalanced tissue income; they were of the male sex, and in the better class of life. He agreed that the affection was rare in association with mitral disease, and common in connexion with aortic lesion. In some instances he thought that the cause might be a local degeneration of the vessels of the heart wall. He had seen angina develop in patients the subjects of epilepsy and assume a form akin to tic; in other cases it was associated with glycosuria, or bowel trouble. As to treatment, rest he considered the most important thing; nitrite of amyl should be used with great care and not indiscriminately, and he had seen great relief follow bleeding and calomel purges. With regard to diet, the patient should be treated as if he were being trained for an athletic performance.

Dr. F. LITTLE quoted three cases which illustrated from a practical point of view some of the points mentioned by previous speakers.

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Dr. DOUGLAS POWELL, in reply, said that two opinions seemed to be current as to the nature of the pain—one that it was due to spasm or distension, and the other that it was of the nature of a neuralgia. He confessed that to his own idea the theory of spasm or distension presented the most attractive features, and the more he thought over it the more difficult he found it to conceive of the pain as being of neuralgic origin. The majority of the arguments eloquently used by Professor Grainger Stewart against tension or spasm could with little difficulty be applied with equal force against the neuralgic theory. He admitted, however, the difficulty of the objection that the heart sometimes preserved its equability of action during angina, though Dr. MacVail's observations as to the condition of striped muscle under faradaic contraction to some extent disposed of this difficulty. He was unable to agree with Dr. Broadbent and others as to the rarity of mitral regurgitation in angina. He could recall instances of angina in which mitral lesion alone existed, and he thought that in the degeneration commencing in elderly gonty people the mitral valve was usually the first to give way. With regard to treatment, he gave preference to nitroglycerine over nitrite of amyl in most instances, and it might be pushed, with great caution and strict watching, to very large doses with great benefit. In one instance under these conditions in the intervals between the attacks seven minims were given three times daily, and during the attack as much as thirty-five drops repeated at a short interval. As to the eliminative treatment, all would be agreed, and, on the question of exercise in purely vaso-motor cases, regulated exercise according to the constitution of the patient was often of great value; but where there was definite disease of the heart or a definite rise of peripheral pressure, then the greatest caution should be observed in this respect.

Professor GAIRDNER of Glasgow, who was unable to be present at the debate, wrote to say that in the article he contributed some years ago to "Reynolds's System of Medicine" he stated his reasons for not accepting Nothnagel's angina pectoris vaso-motoria as a true clinical description of facts running parallel with Heberden's angina. He was at the present time of the same opinion, and thought the name given a most misleading one. In Heberden's angina there was, no doubt, a vaso-motor element superinduced as a rule upon organic or structural change. Perhaps the most curious point about angina pectoris which had become known to him since writing his article was in reference to the claim so generally maintained in France in almost all dictionaries and monographs, on behalf of a certain M. Rougnon to have anticipated Heberden in the description of the disease as a cause of sudden death. He had dealt with this claim in a note at the end of his article, and had shown it, he thought, to be quite untenable even on the secondhand data then known to him, not having found it possible at that time to obtain access to the original of Rougnon's letter to M. Lorry, dated 1768. The letter, indeed, was rather difficult to procure even in France, as there were only one or two copies of it known to be in existence. But in a conversation he had in Paris with his friend Dr. Lereboullet he managed to interest him in the subject so far that he was kind enough not only to consult the original for him, but to have an extract made of all that was important in it as bearing on this question. Professor Gairdner added that, according to Dr. Lereboullet's judgment, as well as his own, there was no trace of anything like a clinical description of angina pectoris in M. Rougnon's letter, and that the one case of unexpected death he referred to gave no evidence of its being due to that cause. It was impossible to suppose that of the very numerous authorities that had affirmed this claim on behalf of M. Rougnon even one could have intelligibly read the single document on which the claim had been represented as resting. It was quite certain, as was shown long ago by Parry, that Morgagni in 1761 did describe an individual case of angina pectoris, and it was equally certain, he thought, that M. Rougnon in 1768 did not; and yet both in France and Germany the latter had been generally accredited with being the first to make the discovery.

Dr. JAMES ROSS of Manchester likewise wrote regretting his inability to take part personally in the discussion, as he desired to present a theory to account for the distribution of the pains in angina and in other visceral diseases. He stated that his theory was that when a viscus was diseased there was local pain which might be regarded as of splanchnic origin (præcordial pain in the case of the heart). In addition the irritation was conducted to the portion of the spinal cord from which the viscus derived its splanchnic nerve, and thence spread in the grey matter of the posterior horns, whence by the law of excentric projection it was referred to the termination of the somatic nerves derived from the segment of the cord—the second and first dorsal in the case of the heart. This explained the pain shooting between the shoulders and down the inner side of the arm (second dorsal) to the elbow and the ulnar border of the forearm and hand and ulnar fingers (first dorsal). The left was the one most usually attacked, because the left ventricle was the diseased one in angina. Besides these pains, the irritation was conducted inwards along the afferent fibres of the pneumogastric and reflected outwards to branches of the fifth cranial nerve as vertical headache. The close association of the function of the pneumogastric and phrenic might give rise to other disorders. Some cases of angina were, he thought, attended with spasm of the diaphragm, a muscle which derived its nerves from the second and third cervical segments of the cord. Whenever the diaphragm was affected, whether it were by spasm or by inflammation, as in pleurisy, pericarditis, or abscess of the liver, the chief pain was referred to the shoulder and back of the neck, in the region of distribution of the second and third cervical nerves (sensory branches). He thought that this shoulder pain was present in some cases of angina. He followed Gaskell in believing that the splanchnic nerves (visceral) were derived from the cells of Clarke's vesicular column, and whenever these columns were absent in the cord there were no reflected pains.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting was held on Feb. 6th, Mr. T. Gunton Alderton, President, in the chair.

Observations on certain Cases of Fatty Heart.—Dr. CLEMOW read a paper on this subject in which details were given of a case of fatty heart associated with obesity and hepatic enlargement and severe dyspnœa. The treatment adopted and recommeded by Dr. Clemow was rest at first, followed by exercise, Oertel's diet, restricted fluid, digitalis, and strychnia. The patient lost weight and girth and gained strength, being able to take long walks without breathlessness or other untoward result.—Dr. TRAVERS agreed with Dr. Clemow, but where there was high specific gravity of urine fluids must not be restricted.—Drs. Campbell Pope and Batten took part in the discussion, and Dr. Clemow replied.

Notes on the Administration of Chloroform and Ether.—Mr. R. LLOYD in his paper (which is printed in full in another column) laid down the axiom that anyone on whom it was desirable to operate was at least fit for attempted induction of anæsthesia. The choice between ether and chloroform depended on the nature of the disease or injury calling for operation, the presence or absence of complications—e.g., heart, lung, or renal malady,—and on the site of the operation. Posture, method of administration, and the effects on the respiratory and vaso-motor centres of anæsthetics were alluded to, and it was urged that morphia should not be given before administration of anæsthetics save in certain traumatic cases of brain surgery.—The paper elicited a prolonged and animated discussion, in which the President, Drs. Orr, Hewitt, C. Pope, Batten, and Silk, and Messrs. Keetley, Edwards, and Benham took part.—Mr. Lloyd replied.

Pathological specimens were shown by Mr. Percy Dunn.

The meeting on March 6th was a clinical evening, Mr. T. Gunton Alderton, President, in the chair.

Mr. STARTIN showed a case of Morphœa.—Dr. CAMPBELL POPE: A case of Skin Disease in a woman exhibiting Scorbutic Symptoms.—Mr. BRUCE CLARKE: A case of Extensive Skin Grafting on the Leg of a Child, who had been run over by a tramcar and denuded of two-thirds the circumference of the skin of the leg, which was subsequently reproduced by grafting strips of epidermis shaved off from another part by a razor, and closely applied to the granulating surface of the wound. Large grafts, as opposed to minute particles of skin, were advocated by Mr. Bruce

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Clarke in all cases of skin denudation.—Mr. EDWARDS showed two patients on whom he had operated after inoculation with Koch's tuberculin for Strumous Joint Disease.—Dr. ABRAHAM showed a boy the subject of Extensive Lupus of the Face treated by injection of tuberculin with the best results hitherto obtained by Koch's method. The patient, who was subjected to the most careful scrutiny by many of those present at the meeting, exhibited no trace of the disease, and was an object of great interest to the members of the Society present at the meeting.—Mr. KEETLEY showed a case of Healed Tubercular Index-finger of the Left Hand in a boy where there had been ulceration for six years. The finger healed after the sixth injection. The case was cited, with another, by Mr. Keetley as an example of the value tuberculin injection should prove to surgeons in modifying the tuberculous tissue, and thus aiding the removal of diseased matter. An animated discussion followed the exhibition of this and the previous case, in which Drs. Travers and Alderson and Messrs. Startin, Bruce Clarke, and Lloyd took part.—Dr. BALL showed a patient in whom scraping once only for Lupus of the Tip and Septum of the Nose had removed the disease. No deformity was recognisable in the patient, whose appearance before operation was illustrated by a coloured sketch.—Mr. PICKERING PICK exhibited a patient, whose history he related, on whom he had operated for traumatic epilepsy in 1884. No fits had occurred since fourteen weeks after operation.—Dr. HERRINGHAM showed a case of Multiple Neuritis, probably of alcoholic origin. Drs. Campbell Pope, Symons Eccles, and Mr. Keetley took part in the discussion.—Dr. MCADAM ECCLES showed a case of Multiple Epiphysitis, of syphilitic origin, in a child.—Dr. BATTEN showed a case of Disseminated Sclerosis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Medical Section was held on Dec. 19th.

Case of Left Hemiplegia with Aphasia.—Dr. BEATTY exhibited a young girl, an example of left hemiplegia with aphasia. There was complete loss of taste and smell on the left side, and left hemianopsia was present and symmetrical.

A Case of Scleroderma.—Dr. NIXON read the notes of a case of unilateral scleroderma, in which there was hemiatrophia facialis, atrophy of one side of the body, and alopecia confined to the side of the head corresponding to that of the body implicated. The patient was exhibited, and the existing features of the case dwelt upon. Large patches of morphœa were engrafted upon the sclerodermatous skin. Dr. Nixon gave the reasons why the affection should be regarded as a trophoneurosis, and mentioned the evidences which lent support to the view that trophic nerves existed. He thought it probable that the distribution of trophic nerves was closely related to that of the sympathetic. In his case the treatment adopted was the administration of cod-liver oil and a mixture containing muriate of quinine, tincture of the perchloride of iron, and the liquor of the hydrochlorate of arsenic. The local treatment consisted in the use of warm baths, with shampooing, and rubbing the indurated skin with lanolin. The patient was kept warmly covered, and warned to avoid wet or cold.—Dr. TWEEDY said it was well known that if those cases did not proceed to atrophy they underwent spontaneous evolution, and the thickness of the skin eventually disappeared.—The PRESIDENT said he had never seen a case similar to that of the boy exhibited, but he had seen one of general scleroderma of the whole body, and, beyond interfering with the free movement of the joints and the action of the muscles, there were no contractions or deformities.—Dr. C. J. NIXON, in reply, said no doubt the history of cases of scleroderma showed a tendency to spontaneous evolution. The scleroderma became gradually absorbed by a natural process independently or in spite of the use of drugs, which were of little avail in its treatment.

Cystinuria.—Dr. WALTER G. SMITH read a paper on Cystinuria. The condition is a rare one, and scarcely seventy cases are upon record. A boy aged eight years was reported by his mother to have passed urine of a fragrant orris-root odour, and depositing a greenish sediment. The boy's health was excellent in all respects, and there were no symptoms of urinary irritation. Out of six occasions upon which the child's urine was examined, once only was cystin found. The crystals were identified by their form, solubility in ammonia, and insolubility in acetic acid. Dr. Smith discussed in some detail our present knowledge of the physiology and pathology of cystin. He maintained that—(1) Cystin, or a cystin-like body, occurs in small amount in human urine as a normal product of proteid metabolism; (2) no relationship exists between uric acid and cystin; (3) associated with cystinuria, pathologically, is the occurrence, in the urine and fæces, of certain ptomaines belonging to the class of diamines—viz., (*a*) penta-methylene diamine (cadaverin), $C_5H_{14}N_2$; (*b*) tetra-methylene-diamine (putrescin), $C_4H_{12}N_2$; (4) normal urine and fæces never contain diamines, nor do they occur in cystin calculi; (5) the formation of diamines is due to the agency of specific bacteria in the intestine; (6) the exact nature of the correlation between cystinuria and diaminuria has not yet been determined; (7) cystinuria may persist for years without apparent injury to the health of the patient; (8) the therapeutical indication is to disinfect the contents of the bowel.—Dr. SMITH exhibited some microscopic slides showing the characteristic crystals of cystin.

A meeting of the Obstetrical Section was held on Feb. 6th.

The late Dr. J. A. Byrne.—The following resolution of sympathy with the family of the late Dr. J. A. Byrne was passed *sub silentio*:—"That the Obstetric Section of the Royal Academy of Medicine desires to record its deep regret at the loss it has sustained by the recent death of Professor Byrne, and to express its sincere sympathy with his widow and family."

Parovarian Dermoid Cyst.—Dr. MORE MADDEN exhibited a Dermoid Cyst which he had removed seven days previously from a young unmarried woman at the Mater Misericordiæ Hospital. The patient, a very stout country woman, had been in fair health until a year before admission, when she first noticed a small swelling in left hypogastric region. This increased in size rapidly, its development being accompanied by a continual, dull, wearying, abdominal pain, which subsequently became more and more troublesome, and was then frequently intensified by paroxysms of acute suffering, until she was thus compelled to seek admission into the hospital. On examination, a firm globular intra-peritoneal tumour, then apparently as large as the fœtal head, and freely movable in every direction, was discovered. On laying open the abdominal walls, which were coated by about three inches of fat, the tumour came at once into view, and was punctured with a Wells' trocar, giving exit to about four pints of thin, dark-coloured fluid, and thus enabling the withdrawal of the solid portion of the cyst through a very small abdominal wound. The pedicle was then ligatured, divided from its attachment, the peritoneal cavity washed out, and the wound closed in the ordinary way. Some hours subsequently obstinate and uncontrollable vomiting set in, her pulse rose to 150, and never fell below 140 to the time of her death, three days after the operation. On post-mortem examination, the wound was found fairly united, the peritoneal walls and intestines somewhat congested, but not sufficiently to account for the result, which was probably largely attributable to the fact of the heart and kidneys being found very extensively affected by fatty degeneration. The solid portion of the tumour, on examination by Dr. M'Weeney, proved to be a dermoid cyst, containing hair, a plate of bone, and fatty matter, for the investigation of which he was indebted to his colleague, Dr. M'Weeney.—Dr. W. J. SMYLY showed a Uterus extirpated per vaginam for Carcinoma of the Cervix.—Dr. BAGOT exhibited an Ovarian Cyst which he had removed at the Rotunda Hospital from a young woman aged twenty-two years. She had made a perfect recovery.—Dr. BAGOT also read a paper on "Massage as applied to the Treatment of Incontinence of Urine in Females." He had cured three cases by the use of Brandt's system, omitting some of the steps which he considered useless. He related particulars of these cases which had been treated by Brandt's method, and afterwards directed attention to Dr. Sänger's method. In all cases in which the treatment had been performed by him a cure was stated to have been the result.—Dr. MORE MADDEN felt bound, as a gynæcological practitioner and teacher, to express in the most distinct terms

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that he could employ without giving any offence to those from whose opinions he ventured to differ his most emphatic dissent from Dr. Bagot's views with respect to the use of massage in the treatment of incontinence of urine in females, as described in the paper. Apart from the many serious, and by no means merely medical, objections to which the speaker referred at some length as being, in his opinion, almost inseparable from any procedure involving any frequent or prolonged manipulation, whether within or even in the immediate vicinity of the female genital tract, Dr. More Madden believed that the great majority of cases of incontinence of urine in females, when not resulting from parturient injuries or causes, resulted from cystitis; and he was strongly of opinion, from clinical experience, that such cases (as he had elsewhere shown) might generally be more effectually and better treated by other and rapidly curative methods of treatment.

Reviews and Notices of Books.

Studies in Statistics: Social, Political, and Medical. By GEORGE BLUNDELL LONGSTAFF, M.A., M.B., Cert. Preventive Medicine, Oxon., F.R.C.P. With Maps and Diagrams. London: Edward Stanford. 1891.

[SECOND NOTICE.]

THE chapters on the Growth of Nations form, when taken together, a really remarkable narrative. A table, setting forth the different order of precedence of the Great Powers by population in 1850 and 1880, shows in the former year Russia at the top and the United States at the bottom of the list; whereas in 1880 the United States stands second among the Great Powers. France in 1850 occupied the second place on this list, and the United Kingdom the fifth. In 1880 France occupies the fifth place. The political significance, as Dr. Longstaff remarks, of this table is evident. It is intensified by the fact that Germany and Italy, two congeries of petty States in 1850, are now solid nations, while the Austro-Hungarian Monarchy is much more consolidated than it was. At the next census the population of the United Kingdom will be very nearly equal to that of France.

As regards the United States, the author calls attention to the very rapid increase of the coloured population, and its concentration in certain States, as constituting a grave social and political danger to the future of the Republic; "in more than one sense a black cloud may be said to hang over it." And Dr. Longstaff points, by way of illustration, to the abortive experiments in self government by negroes in recent history. We can only briefly touch upon the history, statistical, social, and political, of the French, German, Irish, Scandinavian, and other races in the United States, and in Canada, South Africa, and Australasia, but readers will find much in this history to interest and ponder over. One consideration, at any rate, will occur to them, that as the leopard cannot change his spots, so neither does a race change its real character, temperament, or those habits of generations that have become specific and distinctive, as it were, by being transplanted into a new environment. What does change is not the real but the apparent and factitious; the pretended aspiration or the assumed motive and political grievance soon disappears in a new soil, but the qualities of character remain. The "staying power," the enterprise, persevering energy, and thrift that characterise some races are much the same in the new country that they were in the old. The regret is, however, that it is not the more robust in intellect and character, but the weaker races in these respects, that are the most prolific. Looking at this migration question from the British Empire point of view, it is important to bear in mind that the political centre of gravity is slowly shifting. The populations of our great self-governing colonies in North America and Australasia increase much more rapidly than that of the mother country, so that if the population of the United Kingdom at each census be taken as 100, it will be seen that the united populations of British North America and Australasia, which in 1841 corresponded to 7, in 1881 corresponded to 21. A large proportion of Irish emigrants go to the United States, of English to Australasia, and of Scotch to Canada. The facts, figures, and deductions contained in this section of Dr. Longstaff's book have a direct bearing on the question of Imperial federation.

But we must pass on to other portions of the volume more directly connected with sanitary, medical, and social subjects, and these are all present in the chapter on the Growth of Modern Cities. The same movement appears to be almost universally in active operation. Dr. Longstaff's explanation of the remarkable growth of cities in recent times is that, under modern conditions, with improved culture, better means, and increased facilities of communication, a much smaller fraction of the people is able to provide the food required by the whole body. Then, again, those set free from agriculture apply themselves to supplying the innumerable new requirements of a people living up to a far higher standard of comfort than that which contented their fathers. We have already called attention to the chapter on the Population of London, in connexion with which the author has a word to say as to the health of this mass of humanity. The metropolitan area extends over some twelve miles from north to south, and some seventeen miles from east to west; within this space thirty-nine governments so rule the houses, roads, and drains of their three millions and three-quarters of subjects that for the last ten years the death-rate has been only 22½ per 1000, or but 1 per 1000 in excess of that of the whole country. In the seventeenth century it is believed that the deaths exceeded the births in London, and the death-rate was then about 49 per 1000, or more than double what it is now, and higher by far than the mortality rates of the unhealthiest cities of Europe of to-day. This is a marvellous and creditable stride, and "by patient continuance in well-doing" on similar lines there is every reasonable hope of accomplishing still more. Dr. Longstaff does not take an altogether optimistic view in regard to the enormous scale on which social problems present themselves to the London philanthropist. He would wish that something could be done to prevent the increase in the number of the inhabitants, so as to render it possible to deal with the vast mass of arrears that neglect has allowed to accumulate. His own ideas incline to emigration as the only practicable remedy, only he cautions us to beware of aiding emigration from London itself, as in that case, for every family sent from Whitechapel or Poplar two families will rush in from Norfolk, Devon, or Ireland. It would be far better to stop some of the eighty people daily coming into London from the country, and ship them off to the Antipodes.

As regards Food Supply and Malthus' famous essay, which appeared nearly a century ago, the author evidently considers that the time will come, and that before the end of the next century, when men will once more think seriously of Malthus and his warnings. The growth of population proceeds in a geometrical progression, like compound interest. During the past century the population of the United States has doubled itself in every twenty-five years. The area and resources of the country are very great, but they are not without limit. The demand for food increases every year, not merely in Europe, but even more rapidly in those countries which we are too apt to look upon merely as the granaries of Europe.

We pass over the chapter—and an excellent one it is—on Suggestions for the Census. Chapter XIV., on the Recent

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Decline in the English Death-rate, considered in connexion with the Causes of Death, was read before the Royal Statistical Society in 1884, to which Dr. Longstaff has added a postscript in 1890. At page 252 *et seq.* he reduces the chief inferences to be drawn from the facts under review into *précis* form. The decline is mainly to be attributed to the diminished mortality from fever (chiefly enteric) and phthisis, and in a less degree to scarlet fever, diarrhœal diseases, small-pox, diphtheria, and measles. On the other hand, deaths from diseases of the lungs, heart, kidneys, and cancer have increased, the number of deaths now attributed to the last-named disease being double that of forty years ago.

Chapter XV. is on the Causation of Summer Diarrhœa, and the subject is well and lucidly discussed in connexion with three questions: Where, when, and whom does it kill? The opinion is definitely expressed that summer diarrhœa is caused by the pollution of air, water, and food with some product or other of the decomposition of organic matter during very hot weather, and is not simply due to the effect of heat on the nervous system.

Omitting all notice of the chapter on some Statistical Indications of a Relationship between Scarlatina, Erysipelas, Puerperal Fever, and certain other Diseases, except to remark that it is admirably illustrated by coloured diagrams, we come to Chap. XVII., on the Geographical Distribution of Diphtheria in England and Wales, being a reprint of the author's studious and exhaustive supplementary paper to the seventeenth annual report of the Local Government Board. The subject has been so much discussed of late years that our readers are familiar with its general history, embracing as it does some very interesting and curious facts. The distribution of diphtheria is altogether peculiar, and its mortality is not apparently regulated by the same causes that influence the general mortality. Density of population is not a factor of primary importance in the production of fatal diphtheria. On the contrary, its predilection for scattered rural populations and for exceptionally healthy districts, and the striking tendency which the disease has shown of late to invade cities and towns, are well-known and remarkable facts. These are well set forth and illustrated by Dr. Longstaff. The centripetal flow of population from country to cities, the growing aggregation of children in connexion with the Public Education Acts, the long periods over which the poison possibly retains its activity, its increased potency and active evolution under certain undetermined favouring conditions, and the increasing facilities for its spread, are all subjects of extreme interest at the present time. Chapter XVIII. treats of Phthisis, Bronchitis, and Pneumonia: are they Epidemic Diseases? Chapter XIX. deals with the Communicability of Phthisis from a mathematical and actuarial point of view; Chapter XX. with the Seasonal Prevalence of Continued Fevers in London; XXI. with Hydrophobia Statistics, and XXII. forms the concluding chapter of a very laborious, useful, and really remarkable book.

Lehrbuch der Allgemeinen und speciellen Pathologischen Anatomie. Von. Dr. ERNST ZIEGLER. Sechste Auflage. Zweiter Band. Jena: G. Fischer. 1890.

THIS bulky volume comprises special pathological anatomy, and its appearance completes the sixth edition of a work that must be regarded as the foremost text-book of pathology of the present day. By judicious editing and revision there is not much increase in the number of pages, although one cannot fail to be struck with the numerous additions to the text and the more systematic arrangement employed in several sections. The number of illustrations, all of which are original, has been considerably increased. The author states that several of the chapters have been entirely rewritten, whilst the bibliographical references (of inestimable value to workers) are more clearly indicated.

It would obviously be impossible to deal in detail with a work which covers so wide a field; but it may serve a useful purpose if, for the sake of showing how thoroughly the author treats his subject, we rapidly run through one of its sections—that, namely, of the pathological anatomy of the lungs. It opens with a brief description of the normal structure of the lungs and of their congenital defects, special stress being laid upon "hypoplasia" or "agenesis" of the respiratory parenchyma, which may be the foundation of a diffuse or cystic bronchiectasis. In rare cases, says the author, the development of the lung may remain rudimentary or in portions—the alveoli be little if at all developed. Then follows a description of atelectasis, congenital and acquired, and after that emphysema receives a full share of attention. Then come the changes due to disorder of the circulation. Congestive hyperæmia is shown to depend upon diminished resistance in the pulmonary circuit, or to the presence of irritants in the inspired air or in the blood itself; and it is a condition which is generally fatal. Hyperæmia from stasis, on the other hand, is not so transitory; it is due to enfeebled cardiac action or to difficulty in the venous outflow. Œdema may result from such stasis, but œdema may also be caused by septic agencies (probably through increasing the permeability of the bloodvessels), or to inflammation, as seen around pyæmic foci. Hæmorrhagic conditions, infarction and brown induration are naturally next considered. Pneumonokoniosis is treated, together with focal broncho-pneumonic processes, the alliance of those diseases, due to dust inhalation, with those of other forms of more acute broncho-pneumonia from inhalation of septic and inflammatory (e.g., bronchitic) products being clearly brought out. It is shown, too, how the type of lung inflammation and its subsequent progress is modified according to the nature of the inhaled material. The whole description of broncho-pneumonia is thus made more intelligible when its etiological relationships are studied side by side with its anatomy and distribution. Lobar croupous pneumonia is defined as "an infective lung disease, which is in the majority of cases caused by the diplococcus pneumoniæ (Weichselbaum, Fraenkel), but may also be excited by other bacteria," notably the bacillus pneumoniæ (Friedländer), as well as streptococcus and staphylococcus pyogenes. How these micro-organisms act has still to be determined; but their occurrence in the sputa, the inflammatory exudation, and in other organs suggest that they may enter by the air passages, and perhaps also by the blood-stream. The rare terminations in suppuration and gangrene are ascribed to special infection; whilst caseation is held not to occur except in tubercular infection. The outcome in induration is evidently regarded as not being so very exceptional. Other forms of pneumonia, septic and metastatic, are next described, and then the pleurogenic interlobular conditions. Tuberculosis heads the list of infective granulomata, and is very carefully and thoroughly dealt with. It is shown how variations in anatomical features are impressed by the mode of entrance of bacilli—whether by bloodvessels, lymphatics, or through the ordinary channels of respiration; and how the tubercular products are mingled with secondary broncho-pneumonic foci; and how, again, in chronic phthisis the occurrence of caseation, excavation, and induration disguises the primary and essential tubercular characters. Syphilitic disease, actinomycosis, tumours, and animal parasites are discussed in turn, the whole section being admirably complete, as well as beautifully illustrated.

This systematic and thorough method obtains through the whole volume, and we cannot avoid expressing the hope

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that, when the time arrives for a new edition of the English translation to appear, Dr. Macalister will be enabled to present us with the whole text of this publication, which has (since the earlier editions) undergone such extensive revision as, in the author's words, to constitute it almost a new book.

The Right Honourable Arthur MacMurrough Kavanagh: a Biography. By his Cousin, SARAH L. STEELE. With Portrait. London and New York: Macmillan & Co. 1891.

THIS plain, unpretending narrative is fraught with interest to the medical educationist, to the student of character, to the country gentleman, and to the statesman. Its subject was one of the most striking personalities of the nineteenth century. By an intra-uterine complication, wellnigh unique in the annals of gynæcology,—the umbilical cord constricting and amputating legs and arms alike, just below their upper third,—he was brought into the world with all the disadvantages incident to defective means of locomotion and prehension. On the other hand, by the compensation which nature seldom fails to give in such cases, he had a nobly proportioned head and trunk, and intellectual and moral powers specially adapted, it would seem, to overcome every physical imperfection. The best surgical and orthopædic resources of the day were invoked, but ineffectually, to provide artificial substitutes for the missing extremities, and nothing remained but to make the best of what was given. "By sheer principle and pluck," as his biographer puts it, young Kavanagh trained himself to do nearly everything of which his more favoured fellows were capable—aided, it also appears, by the judicious upbringing vouchsafed him by his singularly gifted mother. In sensory and motor power his muscles acquired a development equal to the most various uses, and while little more than a boy he could write, draw, guide a horse from the saddle or from the box of a carriage, shoot, fish, work a ship, and, in short, perform all the functions and take part in all the sports congenial to his class. An active, open-air life, it will be readily understood, was essential to the maintenance of his health, and this was provided him not only in the extensive and beautiful demesne of his birthplace, but on frequent and prolonged visits to the country seats of his relatives, and, above all, by foreign travel under the eye of his sagacious and accomplished mother.

Mrs. Steele touches lightly on these details, not so much describing to us, as leaving us to infer how he proved equal to the life of travel and adventure to which he was thus early inured. We think the interest of the book would have been increased if the authoress had given a few particulars of the methods employed to overcome as far as possible the physical defects which characterised the hero of the narrative. His letters from Egypt, the Syrian Desert, and the Holy Land, and, better still, his diary of exploration and sport, while still in his teens, from Russia to Northern Persia, from Kourdistan, down the Tigris and Persian Gulf, to the Bombay presidency, teem with evidence of the skill and self-reliance to which his perseverance and energy had trained him, ashore or afloat, on the mountain or in the jungle, facing a gang of Kourdish robbers or a tiger at ten paces. This part of the biography, indeed, in which Mrs. Steele wisely lets him tell his own tale, abounds in dramatic incidents, rare in any book of travel, and absolutely unprecedented in the history of one to whom Nature had denied, and, at the same time, vouchsafed, so much.

His moral development went *pari passu* with his physical. As Mrs. Steele points out, his head and heart were ennobled and refined by the discipline to which he put himself. Instead of the jealous, suspicious, often morose disposition characteristic of those whom nature has visited with corporeal defects, his cheerfulness, *bonne camaraderie*, sense of fun, and benevolence to all, were equally remarkable with his bodily prowess and versatility. Here, again, the influence of his mother is made manifest—in the religious training which culminated in the simplest, manliest, most self-sacrificing piety of which the human soul is susceptible. His entries in his diary, where he seems to hold communion with his "Great Taskmaster," are among the most touching passages in literature, one especially, when, on the eve of completing his thirtieth year, he reviews his past life and owns his indebtedness to God with a resignation and a thankfulness which goes to the reader's heart as it came straight from his own.

We have dealt with the points in which the medical educationist and the student of character will find special interest. The details which address themselves more particularly to the country gentleman and the statesman are less within our province. Even here, however, illustration is not wanting of the salutary self-discipline he underwent to retrieve his disqualifications. When still a mere youth, a younger son without immediate command of money—earning his livelihood, in fact, as a carrier of Government despatches over vast solitudes in India,—he made a remarkable vow, which seems to imply a foreknowledge of what his career was to become. And when that position in life to which he aspired was fulfilled to the letter, he set himself late and early, in leisure moments as in active hours, to discharge its duties aright. He became not only what Sir Charles Russell, in his famous speech before the Parnell Commission, designated him, "a landlord of landlords," but also a statesman, in and out of Parliament, of whom Mr. Gladstone declared publicly that he always spoke with the highest respect. While on the one hand he entered into the *vie intime* of his very numerous tenantry, guarding their interests, advising them in perplexity, visiting and relieving them in sickness, constituting himself, in a word what they fondly called him, "the father confessor," he vindicated them in Parliament, and promoted or averted legislation according as it seemed calculated to do them good or harm. So little of a party man was he that, though nominally a Conservative and generally voting on that side, he was often found supporting liberal measures, and exercising an independence in the debates and the divisions not very agreeable to the official whip. Again, when excluded from Parliament in the general election of 1880, his public activity continued the same, though exerted through other channels, such as the press and the platform; while in critical moments in the government or administration of Ireland he was consulted, as his correspondence amply reveals, by those high in authority to whatever party they belonged.

The biography—in which Mrs. Steele has wisely resisted all temptation to book-making—reads like a romance, and ought, as she hints in the preface, to yield a salutary lesson to young men. Rare, indeed, are the examples in which disadvantages seemingly so hopeless were more successfully overcome—in which physical imperfection became so triumphantly "the crown of moral completeness." An Irishman *pur sang*, Arthur MacMurrough Kavanagh was an honour to his country and his compatriots, and as such will long be remembered after the passions and polemics of the day have receded into oblivion.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—On the 9th instant the annual meeting of this charity was held at the offices, Charing-cross. The secretary read the report, which expressed regret that, owing to lack of funds, two wards had been closed. This year, however, it is proposed to found a special endowment fund of £50,000, to celebrate the centenary of the institution. Towards this sum Mr. J. Barton of Guildford has promised £1000, on the condition that sixteen donors of £250 each are forthcoming. The number of patients treated during the year was 654. The percentage of cases cured annually increases, it having risen from 23·5 per cent. in 1866 to 52·35 per cent. last year.

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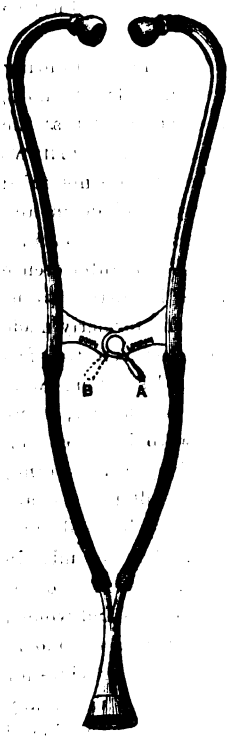
New Invention.

AN IMPROVED BINAURAL STETHOSCOPE.

THE weak point of the binaural stethoscope, as usually constructed, is the spring. If strong enough to keep the instrument in position, its constant pressure hurts the ear, and if made weak enough to be harmless to the user, it fails to keep the stethoscope properly applied to the auditory meatus. These remarks apply equally to the common elastic loop and to the metal spring which is now in more general use; besides which, the former has the fault of always slipping out of position, while the latter invariably causes loud musical sounds, which materially hinder accurate diagnosis. I venture to think that I have succeeded in overcoming these drawbacks to the use of the binaural stethoscope by doing away with the spring and substituting a clamp at the joint. This is actuated by a hanging tail-piece or lever, moved by the second finger of the right hand, the arm being held between the first finger and thumb; the other arm is held between the corresponding fingers of the left hand. When the lever is in the position A, the hinge is loose, and the instrument can be applied to the ears and adjusted to press as lightly or as heavily as desired. The lever being then moved into the position B, the instrument is fixed, and remains in position. It can then be easily removed from the ears and closed without touching the lever. A minor improvement consists in enlarging the orifices in the ivory ear-pieces, so that the bore of the instrument may remain in continuity with the axis of the auditory meatus during the rotatory movements round the said axis made in altering the position of the stethoscope.



Messrs. Down Brothers, of St. Thomas's-street, have carried out my idea completely to my satisfaction, and produced an instrument which does everything that I anticipated.

West-street, E.C. GEORGE HERSCHELL, M.D. Lond.

CASE OF ALLEGED POISONING BY ARSENIC.

AFTER a short interval following the many cases of poisoning which occurred in 1889 and the previous years comes the report of another trial for murder by arsenic, this time from Scotland. The trial took place at the High Court of Justiciary, Edinburgh, extending over Feb. 17th, 18th, and 19th, the presiding judge being the Lord Justice Clerk (Lord Kingsburgh). The accused was John Webster, tenant of the Newton Hotel, Southmuir of Kirriemuir, and the following is a brief recapitulation of the principal facts revealed in the evidence. The household consisted of the prisoner, his wife (the deceased), two children, one female servant, and the barman. Neither of the two latter slept in the house. The prisoner and the deceased effected in October, 1889, a joint policy of insurance for £1000 in the Prudential Insurance Company, the amount of the policy being payable to the survivor on the decease of the first. Two premiums of £24 14*s.* 2*d.* were paid, one before the policy was issued—on Oct. 31st, 1889—and the second six months after. The deceased and her husband had a serious quarrel in the following April (1890), which led to a temporary estrangement, but subsequently the prisoner returned to her, and she was in her usual health on Thursday, July 31st. On the following day the servant, Helen Grant, on first seeing her mistress, thought her looking pale. Later on Mrs. Webster, saying she felt sick, lay down on the children's bed and vomited. She ate very little dinner, and in the afternoon vomited again, the vomited matters being, according to the witness Grant's description, "grey and white mixed stuff." The vomiting continued the following day, though potash and milk were taken to allay it, and the deceased also complained of thirst. She had some "brandy toddy" that night, but next day (Sunday) the vomiting continued in spite of repeated doses of potash and milk. That evening about 7 P.M. she was seen by Dr. Clark of Kirriemuir, who had not attended her previously, she and her husband being perfect strangers to him. He found her very pale, weak, and exhausted, complaining of vomiting and retching which she said had commenced on the morning or forenoon of the previous day. She complained of uneasiness and pain in the stomach, which was slightly intensified on pressure. The thirst was very great, and there were no indications of intemperance. Dr. Clark ordered six powders of subnitrate of bismuth, one to be taken every three hours in milk. When he saw her the next day (Monday), between 10 and 11 A.M, the vomiting and retching were slightly relieved, but she was weaker. The powders had been all taken, and Dr. Clark now prescribed oxalate of cerium in doses of one or two grains, to be given every three hours on jelly or buttered bread. When he next saw her, between 1 and 2 P.M. the same day, she was in a state of complete collapse, but conscious. She was very feeble, cold, and pallid. He ordered stimulants to be given and hot applications to the feet and hands, but she died soon after. Dr. Clark certified the death as from gastritis of four days' duration, and the body was buried. But subsequently, in consequence of some suspicions as to the real cause of death and other circumstances, it was exhumed on Nov. 27th and examined by Dr. H. D. Littlejohn of Edinburgh and Dr. Clark. It was found remarkably fresh and free from putrefactive odour, this being partly due to the wet condition of the grave, partly also to the presence of arsenic which was subsequently found by Dr. Littlejohn and Mr. Falconer King, analyst to the city of Edinburgh. As the necropsy had revealed no appearances of death from any natural disease, Dr. Littlejohn removed the stomach, intestines, liver, kidneys, spleen, one lung, and the uterus for chemical inspection and more minute examination. The stomach was empty; there was externally a yellow patch the size of a florin, internally some dark mucus. Dr. Littlejohn found the presence of arsenic in the stomach, and, on communicating with the Crown Office, was associated with Mr. Falconer King. They found arsenic in all the abdominal viscera and in the lungs. Unfortunately they made at first an erroneous calculation as to the quantity, making that found in the stomach as three-fourths of a grain, whereas upon verification it was found to be less than half a grain. A further examination was made by Professor Crum Brown of the Edinburgh University, with the result that he also found arsenic in all the viscera, and he estimated that, calculating from what he found, the total would be 1·764 grain of arsenic for the whole stomach. Marked quantities were also found in the duodenum and intestines. It was therefore clearly proved that death resulted from arsenical poisoning, the symptoms observed during life, the appearances seen after death and four months' burial, and the chemical examination all bearing out this conclusion. The possibility of accident was apparently excluded, and that of suicide almost equally so. The barman, Peacock, who would have been an important Crown witness, committed suicide by drowning a few days before the trial was first fixed, and his depositions (or precognitions) do not appear to have been tendered in evidence. The prisoner was ably defended, and there were points in his favour, especially the entire absence of any proof of the purchase or possession of arsenic by him. The verdict of "Not guilty" was therefore justified. Seeing that Dr. Clark had only seen the deceased for the first time the day before her death, and only three times altogether, and bearing in mind how often gastritis has been caused by poison, it would have been more satisfactory had a post-mortem examination been asked for before a certificate of death was given.

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THE LANCET.

LONDON: SATURDAY, MARCH 14, 1891.

THE five Bills before Parliament, all dealing with our factory legislation, will, we fear, not suffice to do away with the evils of the sweating system. Even if the best clauses of each Bill are grafted on to the Government Bill we shall still have an imperfect measure. No one has studied the question of sweating without realising that, from every point of view, the greatest evils are to be found in the domestic workshops or among the home workers. Even the disciples of the extreme individualistic school are on this point at one with those who, on the contrary, rely principally on the interference of the State. Both sides are aware that the sweater's victim cannot alone free himself from his economic thraldom; but the one party urges that the State should help him, and the other side argues that he should help himself by forming a strong organisation such as a trade union. While, however, the workers are separated one from another, hid away in the noisome dens of the sweater or toiling in their garret or cellar dwellings, they cannot be brought together into an organisation. From the sanitary point of view, it is the working at home in bedrooms and in private dwellings which most offends against the laws of decency and of health. The first object, then, of any measure dealing with sweating should be to reform the present dangerous condition of domestic workshops. Yet Mr. MATTHEWS deliberately exempts domestic workshops from the operation of his Bill. Clause 29 of the Government measure does contain an important alteration exempting from the future Act "a room solely used for the purpose of sleeping therein," whereas the existing law exempts "a place solely used as a dwelling." The sweater can now, on the approach of the inspector, hide his workwomen and "young persons" in any part of his private dwelling adjoining his workshop. In future he will have to hide the women and children he is employing after regulation hours, not in his dwelling generally, but only in his bedroom. There, by Mr. MATTHEWS' considerate clause, the inspector will not be able to follow them. But, says Mr. MATTHEWS, "the Bill does not deal with what is commonly called domestic workshops," and it would seem that he agrees with Lord DUNRAVEN'S definition that a domestic workshop is a place, perhaps merely a bedroom, where only members of the same family work together. Places sufficiently good for a family to live in are, according to the Home Secretary's opinion, sufficiently good for a family to work in. This, we maintain, is not at all the case. First of all, it does not in the least matter whether the workers are of the same family or not. Their relationship to each other does not in any way lessen the amount of oxygen they consume in breathing. We never heard that less ventilation was required for a family gathering than for a gathering of strangers. Nor are the germs of disease less infectious because they emanate from the same family. Also, what are the limits of family relationship? How many times "removed" may cousins be who work together? and does Mr. MATTHEWS seriously imagine that a British magistrate will ever be able to unravel the intricacies of family relationship between the Polish Russian Jews, who, to the number of several thousand, have taken refuge in the East-end of London? It will be found quite impracticable to make distinctions between members of the same family and strangers; and as the dangers to health are the same in both cases such distinctions should not be attempted.

Some of the suggestions which we pressed forward during our campaign against sweating have, we are glad to note, been adopted. On many occasions we have urged that the local authorities are the principal offenders. Mr. MATTHEWS now proposes that where the local authorities do not fulfil their duty the central Government may send down any number of inspectors to "sweep the Augean stables clean." This, too, is to be done quickly and without the interference of local magistrates. Mr. MATTHEWS is further to be congratulated on abolishing the distinctions formerly made between factories and workshops, and between the factories and workshops where adult males alone were employed, where women were employed, and, finally, where "young persons" worked. All are now to be placed on the same level with regard to ventilation, overcrowding, cleanliness, limewashing, &c. Where alterations are necessary, the inspector may cause these to be made and recover the cost by summary procedure. But we miss in the Government Bill a clause which is to be found in other projects of law—to the effect that where men and women are employed there shall be separate sanitary accommodation for each sex. Again, the Bill, though it provides for ventilation in a vague manner, does not lay down any rule as to the minimum cubic space that should be allowed to each worker.

In dealing with the work of women, the Government Bill proposes to do away with the existing difference made between the factories where only women work and those where young persons also work. In both cases the hours of work shall be twelve, with one hour and a half for meals. This will simplify matters, for formerly, where only women worked, the hours were fifteen, with four and a half for meals, and it was no easy matter to ascertain whether the women really did enjoy to the full the four hours and a half of relaxation, as stipulated by the law. These are, however, all very small advantages compared with what we had a right to expect. For instance, no promise is made as to the increase in the number of inspectors; though, on the other hand, the certifying factory surgeons are to be abolished. This very unfortunate proposal was the subject of special criticism in our last issue. There are actually 134,000 factories and workshops registered, and the visits made by the inspectors last year were in all 114,000. Thus the average is less than one visit a year, though a visit every three months would not be too much. Nor is it easy to understand why the Government did not follow the recommendation unanimously given by the Berlin Labour Conference, that children should not be allowed to work before they had reached the age of twelve. Mr. MATTHEWS

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allows half-timers to commence work when they are only ten years old. Mr. MATTHEWS also showed himself far too tender towards "season pressure," which is generally a mere question of fashion, of ignorance, and indifference on the part of purchaser and tradesman as to the suffering this pressure entails. If dresses during the season had to be ordered a few days sooner, this would be no great hardship, and it would save many a workwoman from over-pressure, with its inevitable and mischievous consequences on health.

The Government Bill is, in a word, wanting in grasp and scope. It altogether fails to deal with the worst grievance—i.e., the domestic workshops,—though the registration of outworkers and of ordinary workshops is imposed. But if lists of places that should be visited will thus be forthcoming, there is no provision made for appointing inspectors to pay these visits. Finally, if these inspectors are appointed, what is to replace the unwholesome workshops which will be condemned? As we pointed out when the Lords' Committee was appointed, a constructive as well as a destructive policy is necessary. Workshops, like rookeries, must when destroyed be replaced by better accommodation, and no hint whatsoever as to how this phase of the subject will be treated is to be found in the measures before us. Perhaps the discussion in Committee will help to impart greater strength and a wider scope to the Factory Bills now before the House of Commons.

THE debate which has occupied three meetings of the Medical Society, and has just been concluded, deserves attention, not only from the intrinsic interest of the subject—angina pectoris,—but in no small degree from the remarkable breadth of view taken of it by most of the speakers. For it is singular how restricted have been the opinions held in past time concerning angina pectoris, and how, in this respect, medicine has been apparently influenced by that feature which so strikes the popular imagination—we mean the liability to sudden death. No one, however, who has followed this debate can aver that English physicians adhere to any such narrow conception, and many doubtless would agree with Dr. MITCHELL BRUCE in the desire that the term "angina pectoris" could be got rid of. That being impossible, the next best thing is to deprive it of its application to any single morbid state, and, if not adopting Sir WALTER FOSTER'S notion of its being a "mode of death," to at least employ the phrase in a merely clinical sense, as expressive of paroxysmal precordial pain. Obviously, then, the sufferer does not die from the symptom itself; but from the cardiac conditions that underlie it—conditions that may be of organic origin, or of hardly less serious functional derangement. The mechanism of the circulation is suddenly disturbed, and the expression of the heart's difficulty is to be found in the anguish experienced by the patient. With one notable exception the speakers at this debate agreed with the opener of the debate, Dr. DOUGLAS POWELL, in attributing angina pectoris to some defect in the harmonious coöperation of heart and vessels in the work of the circulation. At the same time there were certain divergencies of view as to the precise form of this derangement. All, however, concurred in including under the anginal seizure attacks of the most varied kind, having the one feature of pain in common. The chief points of difference related to the question whether the cardiac condition during the attack was one of muscular spasm or one of over-distension of the cavities; as to the precise share taken by the state of arterial blood pressure in initiating the seizure, and as regards the integrity of the muscular substance. Dr. DOUGLAS POWELL, for instance, attributed many cases to a condition of undue vaso-motor irritability, whereby under comparatively slight influences the arterial blood pressure, previously in most cases unduly high, is increased, leading therefore to a sudden call for increased effort on the part of the heart. Such cases, he maintained, were numerous, and though alarming in symptoms, were seldom fatal. In them the heart muscle was healthy, and they contrasted with the graver type associated with cardiac degenerative changes. Dr. LAUDER BRUNTON'S comparison of the heart with the bladder went further, in explaining the *rationale* of the pain produced by over-distension, but he admitted a predisposing state of heart weakness owing to which the increased arterial resistance, such as is produced in the first stages of muscular contraction, is sufficient to cause undue distension of the cavities. Sir WALTER FOSTER lucidly and simply referred the immediate cause of the attack to over-distension of one or other of the cavities, although in many cases he recognised that the heart was degenerate. Dr. BROADBENT did not allow that heightened arterial tension was at all a constant feature; he laid stress on the dangers of a weakened heart, and candidly confessed that some cases afforded no reasonable explanation. Dr. ORD seemed willing to admit all factors, vascular and cardiac, as provocative of attacks, but distinguished two main groups, dependent upon whether exertion was or was not the exciting cause. Dr. MITCHELL BRUCE contended for an underlying weakness of the heart, which was generally enlarged, and declared that symptoms of vaso-motor disturbance and of increased arterial tension were generally wanting. Indeed, it was manifest that no single theory could explain the varied conditions under which an anginal seizure may arise. The "gouty heart" seemed to Dr. BRUCE to best describe the condition most often present.

Professor GRAINGER STEWART was almost alone in pleading the neuralgic theory, and he would even extend angina to include pain ascribed to aortitis apart from heart disease. The distinction he drew between muscle pain and nerve pain does not seem a very tenable one, and since all the conditions named by him as exciting attacks are equally well explained on the muscular hypothesis, it is somewhat difficult to see the reason for retaining the notion of cardiac neuralgia. The question whether the pain be due, as Dr. MCVAIL argued, to excessive contraction, or, as Dr. SEYMOUR TAYLOR held, to spasm of the heart, or to the mechanical effect of over-distension, like that experienced in the bladder on Dr. BRUNTON'S analogy, is to a certain extent immaterial, except that it emphasises the notion that the condition of the muscular wall rather than that of the cardiac nerves is the primary fact

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Dr. MCVAIL attempted to contrast the attacks of pain with the nerve storms of epilepsy, and urged that the mode of onset and the character of the pain should be more carefully studied. The central fact of the whole discussion turns, however, less upon the character of the pain than upon the condition of the heart and bloodvessels; and we believe the views held by the majority of speakers as to angina pectoris being an index of cardio-muscular difficulty are those most in harmony with facts. The only ground for resorting to the neuralgic doctrine advanced by Professor GRAINGER STEWART is that it forms, as it were, a loophole of escape from the difficulty which other theories encounter in the fact that each of the several cardio-vascular conditions described may exist apart from angina. Thus angina pectoris does not occur as a result of the heightened arterial tension of Bright's disease, nor usually from the distension of cavities due to valve defects, notably the mitral valve; whilst cardiac degeneration with or without disease of coronary arteries may most certainly exist, and lead to a fatal issue without ever being characterised by anginal seizures. Obviously there is much to learn yet concerning the nature and immediate causation of angina pectoris, but its association in fatal cases with manifest organic lesion of heart or bloodvessel and, in non-fatal attacks, with clinical evidence of defective circulation and heart enfeeblement, and the rarer event of breast pang—sometimes with fatal result—from sudden and violent exertion, seems to point conclusively to its origin in disordered mechanical conditions of the circulation, with consequent strain on the cardiac power.

Therapeutically, there is general agreement as to the lines to be adopted in dealing with these cases, and the utility of the nitrites is admitted by all as usually affording the most speedy and sure relief from the anginal pain. The prescription of iodide of potassium and of eliminant measures, the due regulation of diet and exercise, proportioned, of course, to the degree of integrity of the heart, were also spoken of with more or less approval and unanimity.

THERE are few more curious or more obscure departments in the wide field of anthropology than the subject of the physical expression of the emotions. Why tears should express grief, laughter joy, a blush shame, pallor fear, are questions which we hardly ask, thinking, very incorrectly, that we have sufficiently explained such facts when we have said that they are "natural." But the further question obviously arises, Why are they natural? Why should an emotion of one kind cause an overflow from the lacrymal gland, while an emotion of another kind causes dilatation of the bloodvessels of the face or a certain definite contraction or relaxation of the facial muscles? Such facts can hardly be regarded as ultimate and final, needing no explanation, and admitting of none. Rather, inasmuch as all analogy teaches us that nothing is arbitrary or purposeless, we are inclined to suspect that there must be some link between an emotion and its physical embodiment, some purposive relation between the outward expression and the inward feeling. And the further we go the more light do we find in tracing such a relation. The labours of Sir CHARLES BELL and CHARLES DARWIN have shed a flood of illumination over this obscure subject, and have not only explained many things which seemed at one time impenetrable mysteries, but have indicated sure and fruitful lines for further advances.

DARWIN has laid down three broad principles under which he believes may be included the explanation of most cases of emotional expression. The first of these is that "certain complex actions are of direct or indirect service under certain states of the mind, in order to relieve or gratify certain sensations, desires, &c.; and whenever the same state of mind is induced, however feebly, there is a tendency through the force of habit and association for the same movements to be performed, though they may not then be of the slightest use. Some actions ordinarily associated through habit with certain states of the mind may be partially repressed through the will, and in such cases the muscles which are least under the control of the will are the most liable still to act, causing movements which we recognise as expressive." Two of the clearest illustrations of this law may be quoted from the lower animals. A horse paws the ground when about to be fed in his stall, an apparently meaningless proceeding. But the explanation in all probability is that the horse learnt to paw the ground as a sign of eagerness to start upon a journey, the pawing being an obvious anticipation of the muscular acts necessary for rapid movement. Hence pawing becomes associated in the equine mind with the idea of eagerness in general, and the act is performed under circumstances in which it serves no purpose. The other instance is from the cat. This animal dislikes having its feet wet, and will shake its paws violently if water be thrown upon them. But if water be poured into a glass close to a cat with the characteristic noise, it will shake its paws, although the act has in this case no meaning or utility. The explanation is that the association in the mind of the cat between the pouring of water and shaking its paws is so strong that the act is instinctively performed even when it serves no purpose. Examples of the same law are found in the case of man. If a person has forgotten a name and is vainly endeavouring to recall it, he frequently looks upward and rolls his eyes about, probably an unconscious effort to increase his field of vision, experience having shown him that in other matters this is one means of discovering some desired information. A young child when enraged shuts its eyes tightly in the act of crying. This is probably to protect the eyeballs against the increased pressure in the bloodvessels, which results from the violent expirations in crying. The same child, if only slightly annoyed, will wrinkle the skin about the eyes, a partial performance of the act performed in violent crying, but under circumstances in which it serves no useful purpose.

DARWIN'S second principle is that of antithesis: "Certain states of the mind lead to certain habitual actions, which are of service according to the first principle. When a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these are of no use." He gives as an illustration of this law the fawning movements of a dog when caressing his master, which may be explained as the antithesis of the movements of the same dog when approaching another dog in a threatening and

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hostile manner. In the latter case back and tail are erect, the body is stiff, and the hairs stand up; while in the former case the movements are supple and flexuous, and the hair is smooth. This principle is a very ingenious one, and would fairly explain the facts, but it does not seem to rest upon the same solid foundation as the former principle. We should be inclined to suspect that the fawning movements of the dog have some purpose and utility *per se* rather than believe that they are a sort of designed antithesis to other movements. This latter idea seems to us too artificial and hardly in accordance with the laws of evolution.

The third principle enunciated by DARWIN is that "when the sensorium is strongly excited, nerve force is generated in excess, and is transmitted in certain definite directions, depending on the connexion of nerve cells and partly on habit. ..... Effects are thus produced which we recognise as expressive." This is undoubtedly a sound principle, of which the illustrations are many. Trembling from fear is a case in point, or the violent action of the heart under any powerful emotion. Neither of these is serviceable—rather the reverse,—and they are most probably explained as the result of the overflow of nervous force along various channels. The effect of fear or joy upon the various secretions is another instance of the same principle. It would seem that if under the influence of a powerful emotion, a large amount of nerve force is generated, it must "find vent" in some outward and physical manifestation, whether tears, cries, laughter, muscular movements, or the like. This principle readily accounts for such facts as "crying for joy," laughing as the result of nervousness or embarrassment, the twitching of the muscles under strong excitement, the passing of large quantities of urine in hysterical attacks, the relaxation of the bowels as the result of terror, and a host of kindred phenomena.

THE acute divisions of the gynæcological world are a subject of anxiety and regret to the rest of the profession. Schism is schism, whether in the Church or in science; and, if anything, it is more unseemly and unpardonable in the region of science than elsewhere. Here we are supposed to be all philosophers, men in humble personal search after truth and wisdom, too painfully conscious of the difficulties of the quest for anyone to be impatient or intolerant of another. Such a rent as we now see in the gynæcological branch of medicine—or shall we say surgery—seems to us schism in the worst form in which it can affect or afflict a profession. In every department of medicine unity and harmony are virtues so essential as to have been insisted on by every authority in the science. It is not always possible for medical men not to differ, but it is always possible for them to agree to differ, and to use all diligence to abate the cleavage of disputes. This mutual attitude of members of the profession who differ is binding, as we have said, in all branches of medicine. But if there be one section of medical work more than another in regard to which it is most binding, it is the gynæcological section, and this for very obvious reasons. It concerns parts deeply situated, of extreme delicacy and interest, and in regard to which diagnosis is obviously difficult. And, finally, the operative proceedings arising out of such diagnosis often are mutilative and defunctionising to an extent comparable to few other operations in surgery. The responsibility of the operator is extreme. The most distinguished gynæcologists differ among themselves as to points that would seem not to be so abstruse. One authority says it is quite easy to define an ovary—another not so. One says serious disease of the appendages is attended with menorrhagia, another with amenorrhœa. One sees danger in flushing the peritoneum, another does it almost daily; one says drainage should be abolished, another that it is most valuable. More than this, the teaching of experts as to errors in the organs of reproduction has undergone a wholesale change within a very few years, and the incidence of blame has been transferred largely from the uterus to its appendages. There is yet no guarantee that we shall not have other equally great changes announced. Our point here is this: if there be all this difference of practice, as we know there is difference of diagnosis and prognosis among gynæcologists themselves, what slight control can the general practitioner have over the fate of a patient supposed to be affected with disease of the appendages? In most other cases his opinion as a man of large experience will enable him powerfully to guide his patient. Here the sufferer is much more dependent upon expert opinion. For all these reasons it is important that those who devote themselves to this branch of the healing art should be controlled by the strictest ethical traditions of the profession. They should be extremely reluctant to remove parts which they cannot restore, or to act without giving most respectful and careful consideration to the opinion of those who hold different views from theirs, either as to the possibilities of medical cure, or the right of the profession to remove organs whose function is only less precious than life itself, and in the absence of which the whole outlook of life is changed. We shall be told here that it is no worse for the operator to remove appendages than for nature to disorganise them. The case is very different, and nature can bear a much heavier responsibility than any poor human being. Besides, is it not true that many of these cases undergo remarkable changes within a reasonable time? and is it not often the case that women for years sterile lose their sterility and become the happy mothers of children? For all these reasons we hold that at this juncture in gynæcology it is the duty of experts themselves and of their colleagues to surround these operations with precautions and hindrances over and above those of other operations. The exact nature of these need not be defined, but they should include due consultations concerning any projected operation, a full statement of the history of the case and the diagnosis of each case before operation, an exhaustive pathological report by the pathologist of the particular hospital of every specimen removed, and an equally careful report of the progress of the case immediately afterwards, and for as long a time as it can possibly be traced.

We are not unmindful of the easy-going conservatism of older minds, which are apt to lose faith in the progress of our art, especially when their own fame and ease are assured. This conservatism has to be fought against, and we are prepared to fight against it, and to join all careful workers who advance the medical art on sound lines. What is more, we are prepared to believe that in this very

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controversy this conservative spirit does count for something. But we believe that it does not count for much, and for the following reasons. First, the natural objections to the operation under discussion are strong enough to explain the antipathy that exists in most minds to them. Secondly, many of the chief objectors are young men who have a keen love of surgical procedure when entirely justifiable. Thirdly, mere blind conservatism and satisfaction with the actual are not the force now that they were, say, in the days when ovariotomy first came to be practised. Great revolutions in surgery have happened since then. The greatest revolution of all is in the growing conservatism of surgery itself, that spares so much that it used to sweep away, and saves what it used to amputate. We take up no extreme position. We admit that there are cases which justify the mutilation in question. But we submit that the whole effort of gynæcologists and of the profession should be to reduce them to a minimum, and that these operations should not be undertaken without such precautions as we have indicated.

Annotations.

"Ne quid nimis."

THE CERTIFICATION OF FITNESS FOR CHILD LABOUR.

IT is only uttering a truism to say that fitness alone can qualify for work, yet this very obvious truth appears to be doubted by the authorities concerned in the regulation of child labour. Up till the present time the employment of children under the Factory and Workshop Act has been subject to their certification in respect of sufficient school education, age, and physical fitness. It has recently been proposed to reduce even the modest compass of this inquiry. This will be accomplished by limiting it to the two conditions first mentioned, the mutual interest of parent and employer being relied upon to protect a weak or unhealthy child against the consequences of overpressure. Experience, we fear, will not justify this reliance. The evident assumption is, nevertheless, that the child in his teens must be able to work, and no longer requires to be certified or inspected. He will do for what he has to do. This argument, however, though plausible in its general aspect, does not adapt itself to the case before us. It must be remembered that the whole structure of State regulation as applied to labour is founded on the necessity of maintaining due adaptation between the worker and his work. Fitness is its very key-note. Whatever is omitted, therefore, we cannot agree that official supervision with regard to this primary consideration can be dispensed with, but would rather witness its closer application. As matters now stand, indeed, cases might be quoted which will amply suffice to prove that many parents are quite unable to gauge the working power of their children, and that a real necessity exists for the services of the certifying surgeon.

Messrs. Rickards, Hall, Nunneley, and Wright, the certifying surgeons under the Factory Acts of the Leeds district, have set an example which may well be followed by the factory surgeons of other districts. After intimating that if time be given them they will be able to tabulate the number of rejections they have felt it their duty to make, they mention various cases in which they pass persons with qualifications, or stop them in some trades, as the flax and ready-made clothing, for short periods to clear them of itch, ringworm, sore eyes, &c. For this work the public, if not the employers, ought to be thankful to them. They stop convalescents from scarlet fever and other infectious diseases from returning prematurely to work. Among recent cases they specify the following, which ought to open the eyes of the Government. Six cases of syphilitic sores of the mouth have been detected in glass blowers. Men and boys alternately use the same blowpipe. A case of scarlet fever fully developed has been prevented working amongst a large number of women and children. A convalescent from small-pox still infective. A girl who had previously lost one eye has been prevented working among dust. Her other eye was found unhealthy by the surgeons, not by her friends or the foreman. A girl in an early stage of consumption has been prevented working in a dusty flax mill. Two epileptics have been prevented working among machinery, in spite of the urgent solicitations of the parents and foreman. It is by such instances as these rather than by great array of figures that the function and uses of the factory surgeons are to be demonstrated. The time between now and Easter should be used to accumulate such information for the benefit of the committee to which the Factory and Workshop Bill has been referred.

THE COLD BATH TREATMENT IN TYPHOID FEVER.

MR. F. F. HARE, M.B., resident medical officer of Brisbane Hospital, Queensland, contributes to the *Practitioner* (March) a very well ordered study of the effects of cold baths in the treatment of typhoid fever. The number of cases dealt with is surprisingly large, and affords every opportunity for arriving at reliable statistical results. Thus a contrast is made between the cases treated during the sixteen months, August 1st, 1888, to Dec. 31st, 1886, on the "expectant plan," and those from Jan. 1st, 1887, to Dec. 31st, 1889, when the bath treatment was thoroughly carried out according to Brand's directions. The gross result was an improvement in mortality amounting nearly to 50 per cent. Thus on the expectant plan there were treated 586 cases, deaths 85, mortality 14·50; under the bath treatment 1173 cases, deaths 92, mortality 7·84. Dr. Hare points out certain fallacies which are likely to arise in every such inquiry, particularly those due to a too liberal extension of the term "typhoid," and those to the varying severity of the disease at different periods; and then discusses the special value of the treatment, the success of which is proportionate to its commencement early in the disease. He shows that the liability to intestinal perforation and hæmorrhage is unaffected, so that no reduction in the general mortality below 5 per cent. (the rate due to these accidents) can be expected. The greater liability of males to these complications gives a vastly better prognosis under the bath treatment to female cases; but at the same time he points out that in moderating the diarrhœa and in sustaining the vital powers the patient is better enabled to resist the effects of hæmorrhage and "other not necessarily fatal intestinal conditions." Lastly, he reaffirms the position assumed by former advocates of the measure as to its chief effect in reducing mortality, for he says: "The vast bulk of the reduction in mortality is due to the prevention of those complications and modes of death which, being more or less common to the febrile state, however induced, have been termed pyrexial. Thus (*a*) fatal pneumonia has been less than one-fourth as frequent, this being chiefly due to the rarity of the bronchial form; (*b*) brain complications have been less fatal and brain symptoms (delirium, stupor, &c.) enormously reduced in frequency; while (*c*) it is no exaggeration to say that simple cardiac failure would have been practically expunged from the list had all the cases admitted come under treatment during the first week of the disease."

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THE CIRCULATION OF THE BLOOD IN THE BRAIN.

DR. B. LEVY has published in *Virchow's Archiv* an extensive series of careful mathematical researches, the result of which entirely contradicts that previously obtained by Geigel, who contended that constriction of the arteries produces an increased blood-supply, and that their dilatation causes the supply to decrease. Dr. Levy insists that physiological supply of blood to the brain is regulated in the same way as in all other organs—that is, the dilatation of arteries produces an increase, and their constriction a decrease, in the current of blood. Venous congestion leads to arterial anæmia. Acute compression of the brain, caused, for instance, by a foreign body penetrating the skull, causes arterial anæmia. Dilatation of arteries beyond certain limits—caused, for instance, by inflammation—produces arterial anæmia. Extensive depletion of the capillaries leads to a perversion of the blood-supply; so that dilatation of the arteries then produces anæmia, while contraction leads to hyperæmia. The supply is consequently not influenced physiologically by the fact of the enclosure of the brain in a firm unyielding case. The opening of the cranium likewise does not alter the supply.

THE LINCOLN WATER-SUPPLY.

THE attitude of the Lincoln Corporation towards the subject of their water-supply must be judged of from two points of view. The first is that of widespread publicity such as is involved in a letter which has been carefully drafted in committee, and which is to be sent to the Local Government Board. This letter practically says that the diarrhœa complained of in the city cannot be proved to have been caused by the water-supply; that all the water does not come from the river Witham; that the sewage effluent received into this river does not affect the water to an extent that would secure its condemnation by the chemist; that even if the complaint were just the circumstances of the past season were exceptional; that the power of the central authority to compel the city to get a supply from other and less suspicious sources is limited by certain statutory restrictions; but that, notwithstanding all this, a special committee shall inquire further into the matter. It is, we fear, not difficult to read between the lines of this letter. It practically means that the majority of the committee prefer running a risk such as that involved in the meteorological conditions of the past season, to spending money on providing a supply that shall not, in part, consist of sewage effluent, which on occasion has been found to be chemically altered before consumption. But the debate which followed, and which will not accompany the official document, opens up another phase of the question. The want of unanimity in the compilation of the letter became evident, one councillor stating that he had opposed it in committee, and that he still objected to it. Another said that although no "very disastrous results" had ensued from the use of the water, they ought to have a "purer" supply; and Dr. Lowe, who in his speech evinced the utmost desire to save Lincoln from the effect of any exaggeration of the facts, could do little more than explain that so far as mere results, as shown by actual death-rates, were concerned, the habit of using a water "drawn from a source which might at any time become dangerous" had not yet done the mischief which such supplies have often done before and such as has recently been done so disastrously in the valley of the Tees. It is admitted that owing to the attitude of THE LANCET, amongst other papers, Lincoln stands medically condemned. It can only remain so until its water-supply is such as to make it impossible for any medical man to refer to this necessary of life and health in terms so significant of risk and of danger as those which are embodied in the sentence which, according to the local press, emanated the other day from one of Lincoln's town councillors, who spoke with the authority of one who has had medical training and experience.

THE EPSOM COLLEGE NATURAL HISTORY SOCIETY.

AN interesting appanage to the Epsom College is the Natural History Society, the report of which for 1890 is now before us. Under the fostering care of Mr. J. S. Jackson, the President, in conjunction with the Head Master of the school and other gentlemen, the Society has acquired a very useful position, and must prove a valuable adjunct to the educational advantages of the College. The report contains epitomes of instructive lectures on various topics germane to the scope of the Society, such as one on Luminous Animals, by Mr. F. A. Heron; another on the Identification of Birds, by Mr. Macpherson; and a third on the Flight of a Bird, by Mr. W. Hubert; whilst Sir E. H. Sieveking has contributed a paper on Epsom Salts, in which paper, after premising that "Epsom" is a Cockney corruption of "St. Ebbisham," he pleasantly recalls the history of the place with its famous sulphate of magnesia well. A summary of meteorological observations during the past year concludes a report which is as satisfactory in its contents as it is indicative of the healthy activity of the College.

HEAT CENTRES IN THE NERVOUS SYSTEM.

AT a meeting of the Cambridge Philosophical Society, on Monday the 9th inst., Dr. J. G. Adami read a preliminary communication upon certain points in regard to the functions of the cerebral heat centres. After indicating how uncertain is our knowledge concerning not only the position and exact nature, but also the very existence of, definite cerebral heat-regulating or heat-producing centres, he described certain experiments made by him in M. Metschnikoff's laboratory at the Institut Pasteur, Paris, to determine whether substances inducing typical fever in the intact animal lead to any rise of temperature when injected into the animal deprived of its hemispheres. Employing for this purpose the hen, he found that for the first few days after the removal of the cerebrum, when evidently the shock caused to the system is still persisting, the temperature-regulating mechanism is thoroughly disorganised. Place the hen in a chamber warmed to 22° C. (71·8° F.) and the rectal temperature rapidly rises in the course of a few hours to, it may be, several degrees above the normal; remove it to a room at 16° to 18° C. (60–65° F.), and for some hours the temperature as rapidly falls, though there is a tendency for it to eventually rise again. No corresponding temperature changes, it is needless to say, occur in normal hens when exposed to such slight variations of external warmth. Give the animal 15 ccm. (two drachms) of cold water by the mouth and the temperature as measured in the rectum falls through 1° F. or more in the course of forty minutes. Again, feeding with warmed egg—a rich proteid diet—induced a rapid rise of body temperature. The temperature being so liable to variation it was difficult to determine the suitable moment at which to inject substances which, in the ordinary hen, cause a transient experimental fever—as, for example, sterilised cultures of the vibrio Metschnikovi. Yet Dr. Adami managed to gain clear indications that these substances, when injected under proper conditions into the hen deprived of its hemispheres, do lead to a marked rise of temperature—a rise of as much as 2° C. (3·6° F.) in the course of six hours, continuing afterwards at a slower rate for some considerable period. Whether such rise is

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truly febrile or not (which can only be determined rightly by calorimetric observations), and whether it can be produced in fowls minus their hemispheres at a later period, when the system is in a more stable condition, are matters which have yet to be investigated, and which Dr. Adami hopes to determine in due time. In the discussion which followed Sir George Humphry, Professor Roy, and Dr. Lea took part.

THE VOLUNTEER MEDICAL STAFF.

IT is only natural that a feeling of disappointment should possess the members of the Volunteer Medical Staff Corps, who have this year been excluded by an order from the War Office from their usual share in the Easter manœuvres. The reason assigned—namely, that it is desirable to test by actual practice in the field the efficiency of the trained men ordinarily included in the brigades—carries at best a sort of unsatisfactory conviction. It is doubtless well that the field ambulance men should have their due share of practical training, but need this imply the enforced idleness of the Staff Corps? For the purpose of training, which, we take it, is the primary object of manœuvres, the attachment of a few additional members to the strict numerical strength of the regiments engaged could not fail to promote the efficiency of all concerned in rendering aid to the wounded. If, on the other hand, the field operations are intended to gauge the proficiency attained by the ambulance men when thrown on their own resources, what are we to understand as the function allotted by authority to the medical staff in a general mobilisation? Are the latter intended as reserves for the field service? Then in that case they should surely be afforded an opportunity of seeing actual field work with a force, and arrangements might have been made to provide the required hospital accommodation. An omission of this kind is a conspicuous want in the system of training by means of manœuvres, and, in our opinion, the War Office would do well to reconsider the matter.

THE SEWAGE OF GUILDFORD.

THE urban sanitary authority of Guildford have taken a substantial step in a direction that has long been needed, both in the interests of the town and of those who dwell on the river Wey. They have unanimously passed a resolution to purchase from the Earl of Onslow a definite plot of land for the purposes of dealing with their sewage. As yet they do not tie themselves to any special process of dealing with the contents of the sewers when they reach the site in question, but it is understood that the scheme will involve some chemical process.

THE GENERAL MEDICAL COUNCIL.

THE minutes of the recent meeting of the Executive Committee of the Medical Council contain references to several subjects which must shortly engage the attention of the Council itself, and which meantime have interest for the profession. A severe rebuke on the subject of defective preliminary education comes from an unexpected quarter. The Secretary of War intimates to the Council that he has had before him a report from the Director-General of the Medical Staff on the "manifest deficiency in orthography prevalent amongst the young medical officers of the army." This fault has of late so obtruded itself on the notice of the military medical authorities that a special clause has been introduced into the regulations for admission to the Army Medical Staff, to the effect that the Secretary of State reserves to himself the power of making bad spelling a cause of rejection. The defect in question has long been recognised by the Medical Council. It is often very apparent in the examination papers. But it must now be brought home to the bodies whose carelessness in the preliminary examinations allows of this scandal.

The Local Government Boards of England and Ireland and the Board of Supervision in Scotland have given very favourable replies to letters from the late President of the Medical Council, seeking to gain permission for the sanitary officers under their control to give instruction in the practical details of sanitary work. The Registrar laid on the table stitched copies of the Medical Register, the Dentists' Register, and the Medical Students' Register, which, he stated, he had got into type much sooner than had ever before been accomplished. We defer, however, any notice of these works until they are completed.

THE PORT OF LONDON.

IN the report on the Port Sanitary District of London for the second half of 1890 we learn that 7914 vessels were inspected, and that, amongst other results which were brought about, 103 structural alterations were effected, besides 84 which were not completed and approved at the date of the report. The admissions into the Port Hospital for Infectious Diseases were 22 in number; and the system of compulsory notification of disease which is carried out led to the adoption of numerous precautionary measures which benefited the port, the crews, and other persons afloat, and also the population of the metropolis, which would otherwise have been largely at the mercy of imported infection. In short, the sanitary administration of the Port of London, which is carried out under the immediate supervision of Dr. Collingridge, is steadily effecting improvements which are far-reaching in their influence. As to the Thames, Dr. Collingridge has nothing good to say. If the attempts to deal with a portion of the huge mass of sewage coming from the metropolis have been of any benefit, such benefit is counterbalanced by the increasing flow of sewage which goes on year by year; and the sewage is reported to be, for any practical purposes, unaffected by the chemical processes carried out. In dealing with the canal boats, Dr. Collingridge points out the measures taken to effect the improvements permissible under statute, but he still maintains that such craft cannot possibly, by reason of the size of the cabins, ever be made fit places for young women and children to live in.

SYRINGOMYELIA.

IN a recent number of the *Progrès Médical* there is reproduced a lecture by Charcot on this obscure and interesting condition. This lecture, however, has more than a passing interest, for it directs attention to a series of signs and symptoms not formerly described, so far as we are aware, in association with the condition known as syringomyelia. The patient who was the subject of the lecture was first seen in 1875. He was at this time twenty-five years of age, an officer, presenting weakness of the whole of the left side of the body. The leg was much weaker than the arm, there was marked rigidity, difficulty in directing the foot in a given direction, and a great tendency to inversion of the foot. The knee-jerk was exaggerated, and the whole condition, Charcot says, was suggestive of infantile hemiplegia, with a certain amount of athetosis. In the previous history of the patient there was nothing to throw any light on the present state. He had always been strong, and came of a healthy stock. He was very fond of horses, and had had several accidents in connexion with them, but apparently nothing of any moment. He had first noticed slight weakness of the left side when he was of the age of ten, but this had not been marked; and although it had increased, it was not sufficient to prevent him from serving with his regiment in the Franco-Prussian War. While on service, however, he had one day

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great weakness of the left side of the body, and although this passed off to a great extent in the course of the day the weakness had again increased until he came under observation in 1875. He was not seen again until last year, and during the fifteen years that had elapsed considerable changes had taken place. He now had a well-established condition of left hemiplegia with rigidity and contracture, greater in the leg than in the arm, exaggerated reflexes, and naturally almost complete loss of power in both leg and arm. The limbs on the right side were quite normal. There was no muscular atrophy, but there was almost complete loss on the left side of the sense of temperature, and much impaired sensibility to painful impressions. There was also a peculiar condition of the left hand. It was broad and clumsy-looking, there was enlargement of the finger-joints, and the hand, in short, closely resembled that of a patient suffering from acromegaly. There was also some trophic change in the cicatrices in the lumbar region where the cautery had been applied in 1884 or 1885, and it is noteworthy that this application had been unaccompanied by anything more than very slight pain. It is evident that this case presents many points of difference from what is regarded as the type of syringomyelia. In the latter, while the impairment of temperature sensibility and of sensibility to pain are present, they are usually accompanied by muscular atrophy. In this case the absence of this cardinal sign is noteworthy, and so is the one-sidedness of the lesion. Of course, there is no absolute proof that the diagnosis is correct, but if the further progress of the case should confirm it a good deal of light will probably be thrown on the considerable class of cases of lateral sclerosis of slow and gradual onset; for the patient under consideration, when seen fifteen years ago, showed nothing more than well-marked symptoms of such a condition. As the changes in sensibility and in the trophic functions are, however, the only signs which are relied upon for the diagnosis, it is evident that in the present state of our knowledge of the tract by which such impressions are conveyed an absolute conclusion can scarcely be arrived at.

THE MEDICAL SERVICES.

AMONG the latest items of intelligence from India we are not surprised to learn, according to *The Times'* correspondent that the medical officers in India are not at all satisfied with Mr. Stanhope's concessions, which they regard as valueless. A feeling of disappointment and irritation, it is alleged, pervades both the British and Indian medical services, and it is understood that a defence fund is to be raised in order to promulgate and support the views entertained by the medical officers on this subject.

DAMAGES AGAINST PRINCIPAL AND ASSISTANT.

AT the Manchester Assizes a very painful case was tried in an action for damages by Mr. Moses Brierley for the death of his daughter, caused by her taking prussic acid, which had been given her negligently and in mistake for medicine by Mr. Myles, the assistant of Dr. Clegg. Dr. Clegg was called to see the deceased and used the stomach pump, but without avail. The lamentable mistake happened in the most casual way. The deceased was barmaid at an hotel where Mr. Myles called for refreshment. But finding the barmaid ill, Mr. Myles volunteered to fetch some medicine for her. He made some up at the surgery, and at the same time filled a bottle with prussic acid for use at another branch. He left the wrong bottle with Miss Brierley, without any label on it. Before he had time to correct the mistake she had taken the dose he had instructed her to take, with of course a rapidly fatal result. The father claimed damages for the loss of her services. The jury awarded him £100—£75 against Dr. Clegg, whose assistant Mr. Myles was, and £25 against Mr. Myles. The judge had laid down that Dr. Clegg was liable for the acts of his assistant. We deeply lament the accident, and, with all respect to the judge, venture to doubt the absolute accuracy of his ruling. It is a striking proof of respect for Mr. Myles that in connexion with this incident he was presented by the inhabitants with a sum of thirty guineas.

THE PHONOGRAPH IN MEDICINE.

THE applicability of the phonograph to the record and demonstration of defects in speech has been well illustrated during the past week at the Royal Medical and Chirurgical Society and at the Hunterian Society. At the first-named Dr. Hale White and Mr. Golding-Bird were enabled by means of this instrument to allow the Fellows present to hear the curiously defective speech of two children, and to contrast this with the improvement effected by treatment, for the subjects were present, and after the phonograph had given their past utterances, their present speech was demonstrated *vivâ voce*. The papers read by the above gentlemen and that by Dr. F. Taylor led to an instructive debate, which was further illustrated by some marked cases introduced by Dr Hadden. The outcome seemed to be that these defects in articulation are probably of central origin, and not due to any mechanical interference with the organs of speech. Whether, as suggested by Dr. Langdon Down and Mr. Spencer Watson, the defect was primarily one of audition is a question certainly worthy of consideration. Another point raised was whether the defect should be considered one of speech or language, and some exception was taken by Drs. Taylor, Pye-Smith, and others, to the use of the term "idioglossia," which, however, was ably defended by Dr. Hale White. The other phonographic demonstration at the Hunterian Society was by Dr. Hughlings Jackson, who thus reproduced the characteristic speech of a subject of cerebro-spinal sclerosis. There can be little question that the phonograph will ultimately prove very useful, especially in the preservation of certain anomalies of articulation, and its further extension to other sound phenomena in the range of clinical medicine may be justifiably hoped for.

HEMIOPIC HALLUCINATIONS.

IT is several months since Dr. Peterson of New York published a case of delusional insanity in which the visual hallucinations always appeared in the right fields of vision, and in a recent number of the *New York Medical Journal* he takes occasion to refer to the occurrence of this condition in association with symptoms other than those of mental disturbance. Although in the case which Dr. Peterson published hæmianopsia was not present, it is only natural that the two conditions should as a rule be associated. Thus in Dr. Seguin's case, that of a woman who after the birth of a child experienced a sudden "snap" in the left temple, and who subsequently had right hæmianopsia, there were at first in the blind fields visual images of a few simple objects, such as a chair, a chicken, &c. In another case, which appears for the first time in the paper under notice, a woman soon after the birth of a child experienced pain in the head and began to have trouble with her vision, everything appearing blurred and indistinct. When this had lasted some time she observed that to the left of the middle line all was dark, and a month after she noticed that visual images appeared in the blind region. The images were those of cats and dogs and

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children, who arranged themselves in rows and formed processions, the children moving in circles, the animals remaining still. This continued, except of course during sleep, for four weeks, the vividness of the scenes and the distinctness of the images being increased by fatigue and during attacks of headache. Reference is also made to the occurrence of similar phenomena in epilepsy and migraine; and, in conclusion, four cases of hemiplegia with hemianopsia, in which visual images appeared in the blind fields, are quoted from the recent work of Henschen. In two of those cases there were necropsies, and although in both there was found a diseased condition of the occipital lobe, other lesions were present. In his remarks on the cases Dr. Peterson offers the explanation that those hemiopic hallucinations are the result of irritation of the cortex, such irritation in organic disease being produced at the seat of the lesion, while in a disorder like migraine vascular spasm and consequent anæmia are regarded as the cause of the irritation. To explain the occurrence of the phenomena in his case of delusional insanity, Dr. Peterson supposes that some mild nutritive disturbance of the occipital cortex took place—a disturbance similar to what may account for the hallucinations of ordinary delirium, not widespread as in the latter condition, but limited to one part of the cortex.

THE NOTIFICATION OF MEASLES.

THE health officer for Newcastle-upon-Tyne has brought under the notice of his town council the subject of the notification of measles, with a view to the prevention of this disease, and at their request he has sought information on the subject from a number of other boroughs. We cannot say that the main body of this information is particularly helpful, for it amounts to but little more than statements from towns where the system has not been tried, and where, in consequence, no experience on the subject was available. There seems, however, a pretty general consensus of opinion that school attendance diffuses the disease on a wide scale, and that, in order to prevent this, children who come from infected houses must be kept away from school. It is difficult to see how such a scheme can be successful unless notification is carried out, for it is, above all, the early attacks that it is so needful to control, school closing at the height of an epidemic being a much more clumsy and doubtful remedy. Seven large towns with no notification of measles are dissatisfied with their existing method of dealing with the disease, and although there is no such expression of dissatisfaction from towns where notification is carried on, yet the information supplied rather tends, by reason of its paucity, to imply that systematic effort to deal with the information when it is acquired is by no means so general as it should be. On the whole, we think that a good case is made out by Mr. Armstrong for notification of measles, but if it is adopted it should be put to a thorough test by the strict application of exclusion from school of all children having any signs of measles or coming from infected houses, and this should be maintained for a sufficient period of time to enable a proper judgment of its value to be come to. Where this is not intended it will probably be of little use to adopt the system, and the difficulties attendant on the needed organisation have probably induced a number of health officers to say that they hardly advocate the system at the present moment. A very common reason alleged against it is the expense that would be involved. As to this, we would observe that expenditure incurred in the prevention of infectious disease is by no means an altogether unremunerative one, and it must also be remembered that the annual average of some 13,000 deaths from measles in this country, besides involving a great waste of human life, must also necessitate a great and a useless expenditure. When this number is multiplied by ten, so as to give a total of 130,000 cases—which is probably a low estimate—the waste of money in connexion with a preventable sickness is seen to be enormous.

MEDICAL SOCIETY OF LONDON.

THE annual dinner of this Society, which took place at the Whitehall Rooms of the Hôtel Métropôle on Saturday last, was certainly the most successful in its annals. The Fellows of the Society and their guests were present to the number of over 150, a pleasing innovation being introduced, that of inviting as guests distinguished members of professions other than the medical. Mr. Knowsley Thornton occupied the chair, and amongst those present were Sir James Paget, Sir George Humphry, Sir Andrew Clark, Sir William Savory, Sir Joseph Lister, Sir William Roberts, Sir Joseph Fayrer, Sir J. Crichton Browne, Sir Dyce Duckworth, Dr. Douglas Powell, the President-elect, and the Presidents of the sister societies. Sir H. Selwyn-Ibbetson, M.P., Sir John Bridge, the Master of the Merchant Taylors' Company, Mr. H. A. Giffard, Q.C., and Colonel Melville, R.E., were also present. In proposing the Medical Society of London, the President made feeling allusion to the loss the Society was sustaining in the retirement through ill-health of the registrar, Mr. Poole, who had performed his duties most ably for a great many years. A long toast list was successfully disposed of, many of the speeches being of a high order of merit, and an excellent musical programme, arranged by Dr. Charles Beevor and Dr. Charles Sheppard, added greatly to the enjoyment of those present.

THE CANTHARIDIN TREATMENT OF TUBERCULOSIS.

AT the meeting of the Berlin Medical Society on the 4th inst. some members related their experiences with Professor Liebreich's new remedy for tuberculosis, the cantharidinate of potash; and one cannot fail to be struck not only by the caution displayed by the speakers, but by the manifestly slighter disturbance produced by this remedy as compared with Koch's tuberculin Dr. Saalfeld showed the case of a child with lupus of the cheek; there had been five injections, commencing with half a decimilligramme, and the only effect so far had been some flattening of the elevations, some shrinking of the affected area, and a paler colour. Dr. Landgraf gave his experience of the remedy in laryngeal cases, and summed up his results in the declaration that the remedy in repeated doses produces œdema of the mucous membrane when this is chronically inflamed; that even small doses cause increased expectoration, and that the signs of œdema rapidly disappear. His evidence confirms Professor Liebreich's statement that the action of the drug is to promote exudation of serum from bloodvessels, but Dr. Landgraf considered that the curative effect of this was still an open question. Dr. Lublinski, who had injected sixteen cases, alluded to the fact that there was some pain excited by the method, and he had seen headache, diarrhœa, strangury, and slight hæmoptysis follow it, although he had never exceeded two decimilligrammes. He, too, had noted increased expectoration in laryngeal and pulmonary cases, and had seen ulcers in the larynx rapidly heal, and a diminution take place in the size of lupus patches. Dr. B. Fraenkel had noted improvement in cough and diminution of râles in a case of pulmonary phthisis, and in two others a notable subsidence of the hectic fever. He had met with strangury and albuminuria as a consequence of the treatment, which, in view of the renal troubles, he urged should be employed with the greatest caution. Professor Liebreich referred to a case of lupus which was

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showing marked improvement, and dwelt upon the fact that no rise of temperature is caused by the injections. As to the cantharidinate being a specific, he said that it was so in the sense of its acting upon the *locus affectus*, but not in the sense of its powers being limited to one special form of disease; and he hinted that "serum therapeutics" might be found applicable to many other diseases besides tuberculosis.

ENGLISH MEDICAL PRACTICE IN PARIS.

THE editor of the Anglo-American "Annual" (248, Rue de Rivoli, Paris) writes us to say that the "Annual" contains a list, supplied by Dr. Bull, the hon. secretary of the Continental Anglo-American Society, of all the English and American practitioners. The "Annual" has been sent gratis to all the principal hotels of the city. The list, revised and corrected, may be seen on page 65 of the "Annual." It is a matter of importance that, if such a list must be published, it should be as destitute of mere advertising qualities as possible. The bare name, qualifications, and address should be given, without pretences of specialism. We think the diplomas and their sources should be stated. We regret that such an expedient should be called for, but the recent revelations as to the interested and haphazard way in which Anglo-Americans are informed as to available medical help renders this course almost justifiable. We should advise all our compatriots to seek disinterested advice in the selection of a medical man from responsible and respectable residents. But failing this, and in emergencies, the list given in the "Annual" should be asked for and consulted.

"A NEW DANGER TO LONDON."

UNDER the above heading we have recently published a letter protesting against the creation of a depôt for dust-bin and other refuse on the ground left vacant by the demolition of Millbank Prison. Further correspondence on this subject has now reached us, which, however, is too voluminous to publish. One correspondent, we are pleased to note, withdraws the title of a "new" danger to London. The danger, in point of fact, is about as old as vestrydom. In the autumn of 1883 we published a Special Commission Report on the Dustyards of London, and therein denounced grievances even worse than that which now seems to alarm some inhabitants of the Pimlico district. Not far off, on the other side of the river, there are huge refuse deposits close by filtering beds of the Southwark and Lambeth water-supply. The dust blowing over into the drinking water-supply is a more serious danger than anything our correspondent mentioned. Also the positions occupied by many dustyards in various parts of the metropolis are worse and more dangerous than the site of Millbank Prison. Indeed, this new site is likely to prove less objectionable than the wharf formerly used by the same sanitary authorities, and which is situated within a stone's throw of the Houses of Parliament, and is surrounded by a dense population of very poor people. Such causes of insalubrity are likely to prove more mischievous in very poor and crowded districts than in the broader and comparatively well-to-do streets such as are to be found near the site of Millbank Prison. We do not by this mean that our correspondent has no cause of complaint. The pity of it is that his grievance, though quite genuine, is apparently not so great as that which previously existed. This brings us to the conclusion we have so often urged before—namely, that there should be no dustyards whatsoever in any part of the metropolis. Dust sorting and sifting is an unwholesome industry, and as such should be classified and not tolerated in any great city. By water or by rail the refuse can be sent off to a safe distance, or there are destructors by which it can be burnt on the spot and thus rendered innocuous. To wage war against one particular dustyard can only result in transferring a danger from one district to another, and we should not care to assume the responsibility of deciding which neighbourhood is best able to bear such a cause of contamination. We aim at a higher purpose—that of altogether removing the danger, not from one district, but from the entire metropolis and from all large towns.

INTUBATION AT ZURICH.

AT a meeting of the Medico-Chirurgical Society of Zurich, on the 31st ult., Dr. W. von Muralt, consulting surgeon to the Children's Hospital, read an interesting paper on Intubation. A demonstration of O'Dwyer's case of instruments was followed by a short historical account of the development of this system of treatment of acute laryngeal stenosis, and the results obtained in various hospitals on the Continent and in America were mentioned. He said that it was not without some apprehension that in February, 1888, he had introduced intubation at the Children's Hospital in lieu of tracheotomy, but he was glad to be able to report that his fears had not been realised. It had now been tried in a series of 56 cases, and 21 of the patients, or 37½ per cent., had recovered. In 18 of the above cases intubation failed to afford any relief, and was followed by tracheotomy; only one of the cases recovered. He had means of a fair comparison of the results obtained by tracheotomy and intubation, both being performed at the same hospital by the same operator and on the same principle. From 1874 to 1888 there had been 318 tracheotomies performed at the Children's Hospital, and 113 patients, or 35½ per cent., recovered. Dr. von Muralt also treated a few cases of chronic laryngeal stenosis with success. In the ensuing discussion, Professor Krönlein said that although in some suitable cases he had had recourse to intubation, he still considered tracheotomy the sovereign method, and did not think it would be superseded by intubation. His operative results were relatively favourable, there being about 40 per cent. of recoveries in the last 300 or 400 cases of tracheotomy performed *ex indicatione vitali*. He had been rather discouraged by unfavourable results of intubation reported from surgical departments of German hospitals, and mentioned that some of the statistics collected from dozens of different hospitals in different countries were inaccurate, and had not the same value in his eyes as those cases which had been reported by Dr. von Muralt.

THE TREATMENT OF UNCONVICTED PRISONERS.

THE English law holds that, however strong the evidence may be against him, a man must be considered as innocent till such time as the verdict and sentence are pronounced. This being the case, it is surprising that better care is not taken to provide suitable accommodation for unconvicted persons awaiting their trial. The rough treatment of prisoners in police cells is a constant subject of complaint, while the cells under the Central Criminal Court, which have just been officially visited by Mr. Justice Grantham and Mr. Sheriff Harris, consist of solitary boxes about 7 ft. high and 4 ft. square, with only a little hole to admit fresh air. So impressed were both judge and sheriff that they have brought the matter to the notice of the Lord Mayor, and the Court of Aldermen discussed the subject. Surely Newgate is large enough to supply convenient rooms for prisoners awaiting their trial. With the telephone at hand there is no need to keep the prisoners cooped up just under or close to the court. They can be brought from the prison cells rapidly enough for all practical purposes. It is not fair, it is not humane, to torture a prisoner just before his trial by such close and cruel con-

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finement. At such a moment the prisoner should be spared from all disturbing influences, so that he may collect his thoughts and be in a frame of mind to make the best defence possible. But if the prisoner is to be subjected to prolonged suspense and confinement, not in a cell, but in a sort of box, it can scarcely be said that he has a fair trial. Nor does an unconvicted prisoner deserve such treatment. We are glad, therefore, to note that this grievance has attracted the attention of the Court of Aldermen, and that they have summoned the governor of Newgate and the chairman of the City Lands Committee to attend their next meeting, to discuss the matter. Much has been said of late in the lay press concerning the barbarous treatment of prisoners in Russia; perhaps it would be well if we put our own house in a little better order.

EXPERIMENTS ON THE ORIGIN OF PERISTALTIC MOVEMENTS OF THE INTESTINES.

DR. C. LUDERITZ publishes in *Virchow's Archiv* the result of experiments on rabbits, to elucidate the nature of those spontaneous movements of the intestines which carry their contents downwards, and to decide if there is also a contraction of the annular muscles, which, though tending downwards, does not depend on the intestinal contents, but is entirely automatic. The author finds that the excito-motor nerve apparatus, situated in the intestinal wall, whenever acted on by any kind of exciting cause, is affected not merely in the place directly acted upon, but, according to the intensity of the exciting cause and the existing irritability, also in a more or less extended sphere between the original seat of stimulus and the pylorus. This tendency of the stimulus to travel upwards can be plainly observed only with exciting causes, which lead to a contraction of the annular muscles. The nerve apparatus experiences is affected by irritation, like the grey substance of brain and medulla, the excitation gradually accumulating until it produces muscular contraction. A nerve-exciting cause, applied to a circumscribed spot of the intestine, leads consequently, if sufficiently strong, to contraction of the canal for some distance towards the pylorus. When, however, the exciting cause acts upon a larger portion of the nerve apparatus and in the whole circumference of the intestinal canal, as in congestion of a segment, the sum of the exciting causes becomes greater at the proximal end of the segment, and contraction of the annular muscles begins here, and takes a downward peristaltic direction. This drives the contents of the intestines to the lower end of the segment. The peristaltic movements are visible in the full intestinal coils, not in those which are empty. The author accepts the conclusion Nothnagel arrived at from his experiments in reference to antiperistaltic movements as correct.

DANGERS OF DOMESTIC REMEDIES.

POPULAR delusions, although frequently possessing farcical characteristics, mostly end in producing disastrous results. The craze for economy is widespread, and perhaps inevitable when the income is small and expenses are great. The general practitioner protests against the prescribing chemist, and the chemist in turn is never-ending in his denunciations of "stores." According to their means and opportunities, members of the public glide down the scale from the top to the bottom, ever seeking a cheaper market. Necessarily a certain amount of danger attends the downward path, but the danger is greatest when the individual essays both diagnosis and treatment, especially if he attempts to prepare his own remedies. Doubtless there are some simple modes of treatment which may be safely carried out; but in the oral transmission of the details of domestic medication the risk of a missing link has always to be reckoned with, and, to the experienced onlooker, the problematic nature of the sequel is intensely interesting. Happily, it is not often that ignorance is so fatal as in the recent instances in Cheshire. Two men have died, and a third lies in a precarious state, as the result of attempted self-medication. Imagining that they were suffering from itch, the advice of a fellow workman was taken, and some nitric acid and quicksilver were procured, mixed and applied to the skin. The druggist had labeled the bottles "Poison," but he does not appear to have made any inquiry as to the purpose for which the substances were to be used. A verdict of "Death from misadventure" was passed, and strong comments on the ignorance displayed were made by the coroner. To attempt to fathom the stages by which such ignorance has been reached may seem futile, and yet it appears within the bounds of possibility that this sad accident is really the result of confusion. Ammoniated mercury ointment and nitrate of mercury ointment have widespread uses. It seems just possible that with lapse of time simple directions for the preparation of the former have been muddled into the latter, and that in place of a precipitate a highly corrosive and poisonous liquor has been made. The substitution of nitric acid for ammonia, both being in common use, seems a fairly natural error, although the selection of liquid mercury for the solution of the perchloride of mercury is more difficult to follow. As it stands, the case sufficiently demonstrates the dangers and folly of attempting to compound remedies in complete ignorance of the properties they possess.

WHAT IS "CHEWING GUM"?

THE fine distinctions required by legal definitions frequently threaten confusion, even when the facts appear to be perfectly clear. There is no room for doubting the inconvenience and danger which may arise from the accumulation of a mass of paraffin wax in the intestines; and yet when any legal interference with the sale of chewing gum, containing 50 per cent. of this substance, is attempted, the charming uncertainties and quibbles which arise are more amusing than edifying. In a recent prosecution at the Hanley Borough Police-court it was first contended that the 14th section of the Food and Drugs Act, which relates to the division of the substance in the presence of the seller at the time of purchase, had not been complied with. Then it was submitted that the article was not one of food, since it was sold simply for chewing. Then it was suggested that, as sweets are so utterly indefinite in their composition, it was impossible to deal with them as ordinary articles of food. And the climax was reached in the contention that it was not sold to the prejudice of the purchaser, as the complainant said he did not intend to eat it. This was extremely ingenious, but the purchaser happened to be the inspector of nuisances, who was merely collecting evidence. The case ended for the present with the imposition of a fine, on the ground that the substance was sold to the prejudice of the purchaser, inasmuch as it was not in the nature of the substance and quality of the article demanded by the purchaser, who asked for gum and got paraffin wax. If the case is ever taken to a higher court, it is quite possible that it may be argued that the complainant did not ask for "gum," but for "chewing gum;" that he did not get "paraffin wax," but only 50 per cent. of "paraffin wax," and the remaining 50 per cent. of unknown ingredients which sufficiently bring the substance within the legal meaning of "chewing gum." But what is "chewing gum"? The following definition might be suggested: A substance of very variable composition, ignorantly employed by children, which, when containing paraffin wax, may lead to very grave dangers, and the sale of which should be prohibited.

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FOREIGN UNIVERSITY INTELLIGENCE.

Giessen.—Dr. Philipp Stöhr of Zurich has accepted an invitation to the chair of Anatomy.

Vienna.—Dr. Eugen von Bamberger, son of the late Clinical Professor, has been appointed *Primararzt* in the Rudolf Hospital.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Wilhelm Stricker, the well-known medical writer, at Frankfort, at the age of seventy-six, suddenly.—Dr. E. T. Schurry, physician to the Saxon Court, at the age of sixty-one.—Dr. N. Toloki, Professor of Midwifery in the University of Moscow.

IN his report on the chemical and bacteriological examination of the waters supplied to the inner and portions of the outer circle of the metropolis during the month of January, Dr. E. Frankland, F.R.S., states that the water taken from the Thames by the Southwark and Lambeth Companies was inferior in quality to that delivered in December; while that supplied by other companies was of a superior quality. The water of the New River maintained a high degree of chemical purity, and compared favourably with the deep well waters. The results of the bacteriological examination by the method of gelatine-plate culture devised by Dr. Koch showed that one cubic centimetre of the water developed the following numbers of colonies of microbes:—Kent, 27; New River, 68; East London (river supply), 93; West Middlesex, 180; Chelsea, 264; Lambeth, 595; Grand Junction, 1029; and Southwark, 2088. This process is an exceedingly delicate test of the efficiency of filtration, both natural and artificial, and the efficiency may, *ceteris paribus*, be taken as inversely proportional to the number of microbe colonies.

WE have been asked to state that the first volume of the Transactions of the Tenth International Medical Congress is now ready for distribution among the members and associates. Personal application may be made at the office, Jerusalemstrasse 38, Berlin, S.W., or those who desire that their copy should be forwarded by post are requested to intimate this to A. Hirschwald, publisher, Berlin, transmitting the postage for the volume, which for the German kingdom and Austria-Hungary amounts to 30 pfennigs, and for foreign countries 90 pfennigs (about 10½*d.*). Due notice will be given of the publication of the sectional proceedings.

DR. C. S. SHERRINGTON, Lecturer on Physiology at St. Thomas's Hospital, has been appointed Superintendent of the Brown Institution, vice Mr. Victor Horsley, F.R.S., who has resigned.

Pharmacology and Therapeutics.

THE GUBER MINERAL WATER.

DR. H. PASCHKIS publishes in the *Wiener Klinische Wochenschrift* an analysis of the Guber water of Srebrenica in Bosnia. It is clear, colourless, without odour, and has an acid and astringent taste. The latter is so slight that the water is taken undiluted, and even children like it; it may, however, be taken with wine. The absence of all unpleasant taste is due to the comparatively small quantity of iron. This is a great advantage, as small quantities of iron may be absorbed, while larger quantities interfere with the digestion and cause constipation. Four tablespoonfuls contain a third of a grain of iron and about $\frac{1}{100}$th of a grain of arsenic. These small quantities make it immaterial at what time of day the water is taken. The author calls attention to the fact that when the effect is to be a local one, on the stomach or intestine, the water must generally be taken fasting. If the effect aimed at is a general one, it should be taken with food. According to his experience, nervous dyspepsia and any kind of dyspepsia in neurasthenic people are the most appropriate cases for treatment by Guber water. In four cases—one man and three women—improved appetite, a more healthy appearance, and increase of weight were observed after treatment of from four to six weeks. Most remarkable was the effect of the water on a young woman of twenty-eight, with neurasthenic troubles, insomnia, and entire absence of appetite. All the symptoms had twice entirely disappeared, but reappeared when she ceased to take the water, and again disappeared on the resumption of the treatment. Three cases of simple chlorosis were cured in eight weeks. The success in struma is doubtful. Brilliant results were obtained by systematic treatment by the water in two cases of oxaluria with slight traces of sugar, the cure, according to the author, clearly not being due to any effect of arsenic on diabetes. Good results were also obtained in furunculosis. No results, however, were obtained in two cases of slight psoriasis; the author considers this want of success entirely due to the small quantity of arsenic contained in three or four glasses of the water, the largest quantity taken in a day. Altogether, the Guber water is a valuable addition to the materia medica. It is generally at the beginning of the treatment taken in doses of from two to four tablespoonfuls by adults or teaspoonfuls by children, undiluted or with water or wine. The best time to drink it is just before or soon after meals, or it may be taken early in the morning. A favourable result is generally obtained in from six to eight weeks. As in the administration of all preparations of arsenic, the dose may gradually be trebled and then decreased again.

ALCOHOL IN ALBUMINURIA.

Dr. Guvich has examined very minutely the effects of giving alcohol in a number of cases of both chronic and acute forms of nephritis in the wards of the Obukhoff Hospital in St. Petersburg, and comes to the conclusion that in both classes of cases moderate quantities—that is to say, from three to six ounces of spirit containing 40 or 50 per cent. of alcohol—may be given daily for a fortnight without in any way acting injuriously on the kidneys, and without increasing the amount of albumen in the urine. It does not, he finds, exert any effect upon the quantity of urine secreted.

DEODORISATION OF IODOFORM BY CREOLIN.

Dr. Ludwig Váczi, a practitioner in Nagy-Karoly, communicates to the *Medicinish-chirurgische Rundschau* his discovery of the power of creolin to deodorise iodoform. He had prescribed an ointment consisting of one part of creolin, two of iodoform, and twenty-five parts of vaseline. On the following day he was surprised that not only was the usual colour of iodoform ointment changed, but that there was no smell of iodoform and only a slight smell of creolin. He points out how important it is in many cases that the presence of iodoform should not be known by its odour, and considers creolin the very best of all deodorising drugs for the same. It not only does not irritate, but it is also itself a good disinfectant.

GLYCERINE FREE FROM ARSENIC.

It is said that arsenic may be removed from glycerine by adding a certain amount of recently precipitated ferric oxide, and allowing the mixture to stand for several hours in a warm place. The product is then filtered, and the filtrate, which is now free from arsenic, is evaporated till it has the ordinary specific gravity of glycerine, or rather the water derived from the hydrated iron oxide is driven off at a moderate heat until the desired specific gravity is obtained.

TEST FOR COCAINE.

According to a pharmaceutical contemporary cocaine may be found even in small quantities in any substance which contains it by the following method. The substance or residue supposed to contain cocaine is first purified or concentrated by any of the ordinary methods until a dry or nearly dry residue is obtained likely to be pretty rich in cocaine if the latter is really present. A few minims of fuming nitrate acid (sp. gr. 1500) having been added, the magma is cautiously evaporated to dryness. The residue (in a small test-tube, capsule, or watch-glass) is then stirred with two or three drops of a very strong alcoholic solution

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of potassa, and slightly warmed. If any trace of cocaine be present a very characteristic odour will be observed, which greatly resembles that of oil of pepperment.

THE TREATMENT OF TYPHOID FEVER BY CHLOROFORM.

Dr. Stepp of Nurenberg gave some time ago a lecture on the internal administration of chloroform, which in his hands had not only proved a most useful ingredient in lotions for the mouth and in gargles, but was also most successfully administered in acute diseases of the digestive organs, in chronic ulceration of the stomach, in croupous pneumonia, and in typhoid fever. Of the latter he had experience of six cases when he gave his lecture, which a year later, when he made a communication to the Munich *Medicinische Wochenschrift*, had increased to eighteen. In most of these cases he gave about six drops of chloroform in two ounces of water thrice daily, but occasionally he made a slight change by the addition of a scruple of quinine. The result of this treatment, even in the severest cases, was that in a few days drowsiness and delirium disappeared, the dry-coated tongue became moist, and the general state considerably improved. The temperature fell considerably in from eight to ten days, the stage of remissions was cut short, and convalescence accelerated. Relapses were unimportant. One case, that of a girl of thirteen, was fatal. On the average the fever lasted nineteen days in severe cases, and eight days in slight attacks. The longest continuance of the fever was thirty days, the shortest eight days. Dr. Stepp inclines to the belief that chloroform passes through the system without decomposition, and so exercises an anti-bacterial effect. He never saw any ill effects from its administration, and considers it a useful stimulant. It is, he thinks, impossible that the daily administration of one scruple of chloroform could have a deleterious effect on the blood by dissolving the corpuscles, which might very well result from the inhalation of enormous quantities of the anæsthetic.

APPLICATION FOR ACNE ROSACEA.

Dr. Unna of Hamburg has produced what he believes to be an ideal preparation of ichthyol for application in cases of acne rosacea. It is prepared by combining it with starch in the following manner:—Forty parts of starch are moistened with twenty parts of water, and this is well rubbed up with forty parts of ichthyol, and finally, one or one and a half parts of a strong solution of albumen intermixed with it. This is applied to the skin at night; it dries in about two minutes, and can be easily washed off in the morning. As there is no fatty matter in this varnish it is eminently suited as an application in lupus erythematosus, or, as Unna calls it, "ulerythema centrifugum," in which fatty matter is to be avoided.

THE STRUCTURE OF INSECTS IN RELATION TO RECENT VIEWS ON THE ORIGIN OF THE VERTEBRATES.

PROFESSOR BENJAMIN THOMPSON LOWNE, F.R.C.S., delivered last week at the Royal College of Surgeons three lectures on the Structure and Development of the Skeleton of the Head, the Nervous System, and Sensory Organs of Insects in relation to Recent Views on the Origin of Vertebrates, giving the results of work in which he has been engaged for at least fifteen or twenty years. His views are that the vertebrate and the arthropod stand in a genetic connexion with each other. He said: "If we seek for links uniting these two great subkingdoms, we must look for them amongst the most generalised groups in each: in the vertebrata amongst the amphibia, and especially the perennibranchiate forms; in the arthropods and in the king crab "Limulus," which hold a zoological position between the arachnids and the crustacea." The lecturer compared the embryos of the axolotl, as figured by Professor Parker with arthropod embryos, and showed many points of similarity. He then adverted to the fact that both Drs. Gaskell and Patten had independently arrived at the conclusion that the king crab stands in a genetic relation to the vertebrata.

The existence of a notochord in the chordata has been looked upon as of primary import in the question of the descent of vertebrates from an invertebrate type. Adopting, however, Gaskell's views, and holding that the central canal of the spinal cord represents the arthropod alimentary canal, the lecturer showed at some length that the proctodeum of the insect embryo corresponds with the mesenteron of the vertebrate; and he held that a notochord should rather be regarded as a secondary character, resulting from an invagination of the epiblast, than as a structure of high morphological significance; and he showed that a rod of cartilage, similar to a notochord, is actually developed on the dorsal surface of the invaginated head capsule of the blowfly larva, whilst those structures in invertebrates which have been supposed to represent a notochord have a similar origin. He pointed out that the structure which supported the nerve centres in Limulus, is composed of cartilage very like the cartilage of the vertebrata, and it could only, with great difficulty, be distinguished from it. Professor Ray Lankester was the first who made out this peculiar form of cartilage, which he said was developed from the mesoblast; while the lecturer, judging from the relation the structure bears to the same parts in insects, believed it to be an epiblastic structure. This led him to accept the view put forward by Dr. Patten in America and by Dr. Gaskell in this country, that the ventral surface of the anterior somites of the arthropods represents the basis cranii of the vertebrata. The relationship between the nervous system in the vertebrates and the arthropods led him to adopt Dr. Gaskell's hypothesis, inasmuch as it harmonised many things which had formerly puzzled biologists. For many years it had never occurred to him to compare any parts of the arthropods with the functional corresponding parts in the vertebrata. As soon as Dr. Gaskell showed that there were strong reasons for believing that the central canal of the spinal cord corresponds with the primary intestinal canal, the difficulty considerably diminished, and many parts of the insect were found to correspond so closely to parts of the vertebrate, that it was no longer possible to ignore the correspondences between the structures, both in development and in relation to their anatomical parts. Having given a description of the insect brain, Professor Lowne referred to the idea that the antennæ of insects were homologues of the ventral appendages. The evidence against that idea was becoming stronger and stronger every day. They were not lateral appendages, in the usual sense—a fact long since recognised by Professor Balfour,—but olfactory organs, corresponding point by point, more especially in relation to the nerve ganglia, to the olfactory organs of the vertebrata. Neither did the eyes of the insect represent ventral appendages; they bore no relation whatever to them.

The lecturer entered at great length into the details of the structure and development of the arthropod brain, and showed that it possesses many points of similarity with the cephalic nerve centres of vertebrates; that it is developed from three vesicles; and that median, pineal, eyes are developed in the wall of the middle vesicle. That there is actually a third ventricle from which the nerve of the median eyes, ocelli, arises.

The lecturer finally dealt with the development of the eye. The sensory organs of arthropods were usually developed by the process of invagination of the epiblast, just in the same way as the sense capsules of vertebrates were developed. The eyes first appeared as a single layer of cells in a kind of cup-shaped cavity, divided into at least two layers; from the surface layer a series of lenses was developed about 4000 to 6000 in number, instead of one great lens. In some insects there were as many as 24,000 to 30,000 separate lenses. These form the compound cornea. The lenses were very remarkable in their structure, and appeared to consist of a stroma very much like the stroma of the red blood-corpuscle of a vertebrate, and a substance which has a very highly refractive power, and which is fluid and soluble in ether. This substance gradually passes out through the stroma after the insect dies, and impregnates the other tissues, but in a living insect the cornea has the same kind of brilliancy as in the vertebrate; but as soon as the insect dies the brilliancy rapidly fades, and in a quarter of an hour it has become quite dull. The stroma consists of proteid substances, but as development progresses the albuminous material gives place to this highly refractive, probably oily material, and then the lenticular portion of the cornea becomes reticular after having been treated with such reagents as will dissolve out this interfibrillar substance. About twelve years ago, when examining the

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lateral portions of the compound eye of the lobster, he continually found thickenings beneath the rod-like bodies which united the corneal portion of the eye with the nerve centres beneath, and he became convinced that no nerve structure passed through this membrane, and then it struck him that, in trying to make out that this structure was retinal, he was doing very much the same thing as examining the minute structure of the crystalline lens of the vertebrata, and coming to the conclusion that the rod-like fibres of that lens were in themselves not merely a portion of the refractive structure, but were actually the terminals of the optic nerve. He regards the whole of the structure developed from the superficial epiblast as a refracting organ, and with that view he had termed it the dioptron, or the refractive portion of the compound eye. In some insects which do not undergo metamorphosis the great compound eye is at first small, and consists only of a few facets, but a new portion of the eye is developed at each shedding of the integument. The nerve also gradually passes to the surface, encircles the old nerve, and forms a new retina. This goes on until at the last the optic nerve is found very much spread out. During the last shedding of the skin the whole of the retina undergoes degeneration, and a new one takes its place; so that new sets of facets are developed at each skin shedding, and a new retina is developed from the nerve centres beneath the dioptron.

In expounding the various theories of insect vision, the lecturer explained that Müller's theory of "mosaic vision" was not in itself tenable, because, in the first place, the images produced would be blurred, and surfaces of eight or ten inches square, would only be visible as points at very moderate distances—say, ten or twenty feet. The theory which the lecturer propounded was that an inverted subcorneal image was formed beneath each corneal facet, and the great rods of the dioptron produced a magnified erect image of that portion of the subcorneal image which lies in the axis of each. The integration of these images produces the retinal image upon what he had described as the "neuron." This image had actually been demonstrated by Sigismund Exner of Vienna, who first showed it at the Cologne Congress of Naturalists. The "mosaic view," or Müller's theory, announced about 1826, assumed that the tubes of the dioptron only permitted axial light to pass through them; so that each tube of the dioptron produces one distinct stimulation of the nerve, and there could only be as many separate sensations of light as there are tubes to the dioptron, a supposition which is quite incapable of explaining vision in an insect which has perhaps only fifteen or twenty lenticules of the eye, some only having five or six, although others have as many as 24,000 to 30,000. Even in those which have the largest number, the acuity of vision is not sufficiently explained by Müller's theory.

VIRCHOW TESTIMONIAL FUND.

THE following additional subscriptions to the above fund have been received:—

	£	s.	d.
Robert Munro, M.D.	1	1	0
W. Collier, M.D.	1	1	0
Sir George Paget, K.C.B.	1	1	0
Thomas Oliver, M.D. ..	1	1	0
Sidney Martin, M.D. ..	1	1	0
A. C. Maclaren, L.R.C.S.	2	2	0
H. Charlton Bastian, M.D.	1	1	0
Thomas Barlow, M.D. ..	1	1	0
Thomas Oliver, M.D. ..	1	1	0
Sidney Martin, M.D. ..	1	1	0
A. C. Maclaren, L.R.C.S.	2	2	0
H. Charlton Bastian, M.D.	1	1	0
Thomas Barlow, M.D. ..	1	1	0
R. Felkin, M.D.	1	1	0
E. Klein, M.D.	1	1	0
P. W. Latham, M.D. ..	1	1	0
Sir John Simon, K.C.B., F.R.S.	1	1	0
T. Sympson, F.R.C.S. ..	0	10	6

The Committee has been joined by Dr. Priestley and Dr. Samuel West.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Condition of Wells, by Mr. SPEAR.—This report deals exclusively with the sanitary circumstances of this little Norfolk town, which is a small fishing and shipping centre. The sewerage cannot be commended, especially in such matters as lack of ventilation and flushing, but the authority has secured the abolition of the majority of the cesspools and privy pits which were formerly so general. The latter have unfortunately been replaced by tank closets, which cannot be regarded as a wholesome arrangement; but the object in contriving these, as also in remedying many of the old leaky drains, appears to have been the protection of the water-supply, which is exclusively derived from local wells. As to these, Mr. Spear points out that pure water is hardly to be expected from shallow wells sunk in a soil that has been occupied by human beings for ages, and which has until a comparatively recent time had its surface perforated by cesspools, privy pits, and faulty drain-pipes. Some samples of water were, it appears, sent to Dr. Frankland for analysis, and he was obliged to class them as "dangerous." And even as regards wells that are not so obviously fouled in so far as their chemical constituents are concerned, it is assumed that they only escape similar condemnation because the soil in which they are sunk is kept fairly clean by reason of an ebb and flow induced by tidal action. It is to be feared that locally no especial dissatisfaction prevails as to this water-supply, acquiescence in which would seem, Mr. Spear judges, to express the popular sense of the general wholesomeness and sufficiency of a water-service. No special outbreak of disease has recently occurred in Wells, but in 1884–85 a prevalence of enteric fever was found to have its focus in a well that was ascertained to be contaminated. It is stated that during the summer there is some influx of visitors into Wells. For this reason alone the local board of health should provide the town with a water that is above the suspicion of unwholesomeness; and such action on their part would certainly confer benefit on the resident population to an even greater extent than on occasional visitors.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6149 births and 4547 deaths were registered during the week ending March 7th. The annual rate of mortality in these towns, which had risen in the preceding four weeks from 19·8 to 24·1 per 1000, declined again to 23·7 last week. The rate was 23·4 in London and 23·9 in the twenty-seven provincial towns. During the past nine weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·5 per 1000, and exceeded by 0·5 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 16·6 in Brighton, 17·3 in Wolverhampton, 17·4 in Nottingham, and 17·6 in Hull; the highest were 31·6 in Newcastle-on-Tyne, 32·5 in Huddersfield, 33·1 in Cardiff, and 33·9 in Halifax. The deaths referred to the principal zymotic diseases, which had increased in the preceding four weeks from 332 to 431, further rose last week to 470; they included 161 from whooping-cough, 160 from measles, 55 from diphtheria, 36 from scarlet fever, 32 from diarrhœa, 25 from "fever" (principally enteric), and one from small-pox. The lowest death-rates from these diseases were recorded in Wolverhampton, Norwich, Derby, and Birkenhead; the highest rates in Halifax, Salford, Blackburn, and Huddersfield. The greatest mortality from measles occurred in Sheffield, Portsmouth, Salford, Bristol, Blackburn, and Huddersfield; from whooping-cough in Halifax, Huddersfield, Birmingham, and Salford; and from "fever" in Halifax. The mortality from scarlet fever showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 31 in London, 7 in Liverpool, 4 in Manchester, and 3 in Birmingham. One death from small-pox was registered in London, but no small-pox patients were under treatment in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1184, and showed a further decline from recent weekly numbers; the patients admitted during the week were 87, against 113 and 80 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding four weeks from 428 to 685, were 673 last week, and exceeded the corrected average by 181. The causes of 76, or 1·7 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Leicester,

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Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Blackburn, Sheffield, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding three weeks from 21·4 to 23·8 per 1000, further rose to 24·1 during the week ending March 7th, and was 0·4 above the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 12·3 in Perth and 13·5 in Leith to 28·3 in Glasgow and 37·1 in Paisley. The 628 deaths in these eight towns showed an increase of 8 upon the number in the preceding week, and included 34 which were referred to whooping-cough, 16 to measles, 10 to scarlet fever, 8 to diarrhœa, 6 to "fever," 5 to diphtheria, and not one to small-pox. In all, 79 deaths resulted from these principal zymotic diseases, against 50, 62, and 80 in the preceding three weeks. These 79 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·6 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had increased from 13 to 27 in the preceding three weeks, further rose last week to 34, of which 16 occurred in Glasgow, 7 in Edinburgh, 4 in Dundee, and 4 in Leith. The deaths from measles, which had been 8 and 18 in the previous two weeks, declined last week to 16, and included 10 in Paisley and 4 in Glasgow. The 10 fatal cases of scarlet fever exceeded by 3 the number recorded in the preceding week, and included 7 in Glasgow and 2 in Paisley. The deaths referred to "fever," which had risen in the previous three weeks from 6 to 11, declined again last week to 6, of which 3 occurred in Edinburgh, where 3 of the 5 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had risen in the previous three weeks from 138 to 146, were again 146 last week, and were 35 below the number in the corresponding week of last year. The causes of 53, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding four weeks from 26·6 to 29·4 per 1000, declined to 28·2 during the week ending March 7th. During the first nine weeks of the current quarter the death-rate in the city averaged 31·4 per 1000, the rate for the same period being 23·6 in London and 21·0 in Edinburgh. The 191 deaths in Dublin showed a decline of 8 from the number in the preceding week, and included 2 which resulted from diphtheria, 1 measles, 1 from diarrhœa, and not one from small-pox, scarlet fever, whooping-cough, or "fever." Thus the deaths referred to the principal zymotic diseases, which had been 3 and 9 in the preceding two weeks, declined to 4 last week; they were equal to an annual rate of 0·6 per 1000, the rate from the same diseases being 1·8 in London and 2·8 in Edinburgh. The 2 fatal cases of diphtheria exceeded the number recorded in any of the preceding six weeks. The death from measles was the first recorded in any week since the end of January. The 191 deaths in Dublin last week included 32 of infants under one year of age and 46 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those returned in the preceding week. Three inquest cases and 2 deaths from violence were registered; and 65, or more than a third, of the deaths occurred in public institutions. The causes of 23, or more than 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF. — Surgeon Robert Hippisley Cox resigns his commission (dated March 11th, 1891).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Philip Barnett Bentlif, Royal Jersey Artillery Militia, to be Surgeon, ranking as Captain (dated March 11th, 1891).

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Fleet Surgeons; Walter Reid, M.D., to the Royal Artillery Barracks, Eastney, and James Trimble to the *Camperdown* (dated March 10th, 1891). Staff Surgeon Alexander R. Joyce to the *Thunderer* (dated March 17th, 1891). Surgeons: Robert H. J. Brown to the *Thunderer* (dated March 17th, 1891); Horatio S. R. Sparrow to the *Rapid*, for the *Mildura;* Henry G. Jacob to the *Curaçoa*, for the *Wallaroo;* Thomas Austen to the *Curaçoa;* and Henry S. Jackson to the *Katoomba* (undated); Herbert P. Shuttleworth to the Royal Marine Artillery, Eastney (undated); Edward B. Hazleton, M.D., to be Surgeon and Agent at Clovelly (dated March 5th, 1891).

VOLUNTEER CORPS. — *Rifle:* 6th Volunteer Battalion, the King's (Liverpool Regiment): Acting Surgeon E. W. Barnes to be Surgeon (dated March 7th, 1891).—2nd Volunteer Battalion, the Lincolnshire Regiment: Acting Surgeon T. P. Greenwood resigns his appointment (dated March 7th, 1891).—1st (Hertfordshire) Volunteer Battalion, the Bedfordshire Regiment: Acting Surgeon H. O. F. Butcher resigns his appointment (dated March 7th, 1891). — 4th Volunteer Battalion, the Hampshire Regiment: Surgeon H. G. Dyer, M.D., is granted the rank of Surgeon-Major, ranking as Major (dated March 7th, 1891). — 5th Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Acting Surgeon D. McMillan, M.B., to be Surgeon (dated March 7th, 1891).—1st London (City of London Rifle Volunteer Brigade): Edgar Alfred Hughes, Gent., to be Acting Surgeon (dated March 7th, 1891).

Correspondence.

"Audi alteram partem."

THE FACTORY ACT AND CERTIFYING SURGEONS.

To the Editors of THE LANCET.

SIRS,—Much misrepresentation of the duties of certifying surgeons has been laid before the public in letters and reports of the proceedings of chambers of commerce by men who would be the first to cry out for impartial arbitration, should any question touching their own duties and incomes arise. In the first place, these writers state that the duties of the surgeons consist merely in making certain clerical entries, which work they consider can be fully as well done by a clerk; they either are ignorant, in which case they should be silent, or they deliberately ignore for their own purposes the fact, that in each separate certificate the surgeon states by his signature that he has personally examined each child or young person, and is of opinion that such child or young person is not incapacitated by disease or bodily infirmity from working the time allowed by law in that particular factory. This no member of any chamber of commerce in the kingdom can truthfully contradict. With a well-grounded fear these statements may be insufficient, these same men proceed to tell us that the certifying surgeons never or hardly ever refuse for disease or bodily infirmity to pass a child, and should they have done so, that it is merely by reason of recent agitation. In answer to this I would mention some few cases out of many in my own practice as certifying surgeon. In the month of July, 1881, nearly ten years ago, I was obliged to write to H.M. inspector in a case where an employer defied my refusal, and insisted on working a boy with heart disease and serious eye disease (bad case of mitral incompetence, with double coloboma anterior and posterior and nystagmus), for which I am happy to say he was fined. On another occasion a bad case of heart disease and chorea, or St. Vitus's dance, was refused, and very soon ended fatally. On one occasion I have been threatened with legal proceedings by the father of a girl, who had an epileptic fit in the mill office, while I was there for purposes of certifying; in another with a boy who was totally unfit for factory employment who had been three times presented to me for certificate, in the hopes he might pass by a "fluke"; in another case the parents offered to indemnify the employer against consequences if accident or death from machinery should ensue to a girl suffering from deaf-mutism and debility. Had I passed any of these the cry might well have been, "What is the good of these surgeons?" Cases of heart disease, consumption, rheumatism, spinal disease, epilepsy, eye disease, and skin disease, of undergrowth, and under-

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development repeatedly are under notice and observation. For rather more than ten years I have been engaged on factory work, and during the whole of that period I have been in the habit of refusing or keeping under observation all children or young persons whom I have thought unfit, with, I consider, distinct advantage to all concerned. I always give the child the benefit of the doubt, as every small addition of wages to a house means more food, and by inquiry from time to time ascertain how its health progresses.

Another objection has been raised to the office; we are asked, "What good are these surgeons? They see a child at ten, and again at thirteen. What can they say as to its fitness between these ages?" This may be a point against the imperfection of existing legislation, but the answer under the circumstances is decisive—the surgeon if he sees a child at ten unfit for work, refuses it, and refuses it until he sees that it is fit for work, and similarly again at thirteen, should the health unfortunately have failed between the two ages. And, again, to this objection, among the better cared-for children of the more provident operatives, who are not in the habit of migrating from mill to mill in a district, there is, as a rule, a better condition of health; they are frequently only seen twice, because they seldom change their employment, and are less in need of re-examination than the worse cared-for children of the slums, who migrate from mill to mill in a district, and therefore, fortunately for themselves, come oftener under observation. Other causes and influences at work to keep up a constant circulation of children do not come under the surgeon's scope, and are more connected with the social and moral questions of divided authority and small premiums or commissions on employment. Lancashire and Yorkshire employ 137,000 half-time children, as against 41,800 for all the remainder of England and Wales, and it is certain that they employ young persons under sixteen years of age in like or probably larger proportion, with constant circulating changes taking place in these important, smoky, crowded districts. I often examine as many as 100 in a week, occasionally as many as 200. It is obvious that the certifying surgeon must inspect these children as a whole more frequently than twice, and when it is remembered that from ten to seventeen is probably the most critical period of youthful development the importance of this can hardly be over-estimated as a matter of State hygiene. Then the question of payment of the surgeon's charges by the parent has been raised. The Act says that the employer may deduct 3*d.* from the wages of such child as its share towards the payment of the surgeon's fee. This is frequently evaded, and the full fee or its proportionate part demanded from the parent as a condition of employment, dividing the whole cost among one or more parents. In some cases the employer makes a very fair profit on the surgeon's visits, as he takes the full fee from each child or young person. I have known the employer take half-a-crown each from the parents of five children and pay me the half-crown fee (sixpence each), putting ten shillings into his own pocket, and on some occasions I have been personally upbraided by the parents as the perpetrator of this atrocity. I am glad to say that, though too frequently adopted, this plan is only carried out by a minority of employers in this district; but this last fact has naturally strongly influenced the operatives themselves, who are unaware that the maximum cost to themselves is, or ought to be, threepence for the surgical certificate, and that they are overcharged by the employer on a mere pretext. The question of expense to the employer has been mentioned. In the above cases he is shown to profit; but mills are hinted at, not named, which pay the surgeons sums varying from £20 to £40 a year for certifying. I cannot doubt that any surgeon in whose district this has occurred will be glad of the opportunity of confirming and explaining or denying it. Personally, I will believe the statement after it has been proved. The charges are laid down in Section 74 of the Act, and I have frequently, when asked, pointed out this and other details of the Act in my own copy to men who do not possess one, and whose knowledge even of the short abstract is very limited, and it cannot be doubted that our visits are a valuable aid to H.M. inspectors, whose duties are so extensive that they could not without us be kept in such close and continual touch with all parts of their district as is now the case.

I write as a representative factory surgeon, living in a manufacturing centre, and well aware employers and employed are as a rule alike ignorant of elementary sanitary matters and consequently incompetent to form opinions of any value upon them. Otherwise the one class would not create, nor either tolerate, our smoke-defiled atmosphere, polluted streams, and other unwholesome conditions of existence. They may confer with advantage on work and wages, but where their personal health is in question they do not consult self-created chambers of commerce or mutually prescribe for each other. Yet according to the speech of an Under-Secretary of State, numbers and not knowledge are sufficient to constitute "the most influential" deputations on important public questions which lie behind their intelligence and experience, and involve in our case the sudden sacrifice of efficient public servants upon the altar of, shall we say, a general election?

I am, Sirs, yours faithfully,

Rochdale, March 7th, 1891. WILLIAM STANWELL.

THE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—It is impossible from the nature of the case for one who thinks that a disease has been present and ended in recovery to bring evidence of the fact convincing to the incredulous. By inflammation of the uterine appendages I mean what I think most medical men understand by it. It has long been known that the commonest cause of perimetritis is inflammation of the Fallopian tube; that matting together of tube, ovary, and adjacent parts is very commonly seen on the post-mortem table; and that tender fixed lumps by the side of and behind the uterus, with symptoms such as Mr. Tait has described as those of distension of the tubes, are very often met with during life. Mr. Tait has himself admitted that it is often impossible until the abdomen has been opened to say what these lumps are—whether they contain blood, pus, or serum; whether this is in the tube, the ovary, or in a cavity bounded by adhesions in their neighbourhood, and sometimes this latter point cannot be determined even after the parts have been removed. These lumps are what I mean by inflammation of the uterine appendages. The great majority of them, if sufficient time and rest be given, end in diminution in size or even practical disappearance of the lumps and cessation of symptoms. I do not doubt that there are some cases which can only be cured by operation; but I believe that the more patient the trial allowed to the *vis medicatrix naturæ*, the fewer will these cases be found to be.

I am, Sirs, yours faithfully,

Harley-street, March 10th, 1891. G. ERNEST HERMAN.

THE TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—I am a constant reader of THE LANCET, and have been following with marked interest the controversies upon Koch's cure and the various theories as to its mode of action. I beg to record a case in which the cure was effected, not by strong measures like those of Koch, or by the empirical methods from Paris by dog's serum and goat's blood, but recovery has been brought about by what I must call an accident of Nature in the course of the disease.

The case is shortly as follows:—J. W——, aged twenty years, male, came under my care towards the end of October last year, when I recognised he was suffering from phthisis of the lungs, and his illness shortly after took an acute form, manifesting all the symptoms of that terrible disease. I need not indicate his symptoms more than to refer to the temperature, which ranged from 103° to 101° F. night and morning the first month, and afterwards from 102° to 100° and 99° after that. The patient was going steadily down hill and was markedly weak, and to show the extent of his disease the trophic centres became affected, as illustrated in paresis of the bladder, and ere long a large bedsore formed over the sacrum. There were tubercle bacilli in the sputum, but afterwards many other kinds of bacteria were to be seen in the expectoration. The bedsore became a large slough about Nov. 29th, and from that day it very much engaged my attention, requiring all manner of dressings &c. On the 16th, 24th, and 29th the temperature rose to 103·8° and 103°, and was brought down by antipyrin. On

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the last occasion it did not come down to a satisfactory point till Dec. 9th. On Thursday, Dec. 11th, I found the patient changed. By this time the slough was removed. His face was livid and suffused, the veins standing out on his temples, and the temperature registered 104·6°. There were moist crepitant sounds in the lungs. I administered a full dose of antipyrin, and by evening I had the satisfaction to see the temperature down to normal, and the patient looked his usual again. From that day the temperature has remained at normal or below it, and ere long the symptoms began to disappear—the cough, spit, sweating, &c.—and in two weeks the bedsore was a large healing wound. The patient began to get back his appetite, and though stimulants were administered there was a return to strength. The patient seemed to pass through a stage of hyperæsthesia until he got fairly on the road to recovery. To bring the case to a conclusion, the wound has gone on slowly but steadily healing up, and with return of appetite the patient has gained strength and weight, so that now he is able to walk about the house. There has been no cough, and the patient has not been so well for many months. It has been pointed out that small-pox &c. have been known to cure phthisis, and erysipelas has driven away lupus. I beg to place this case on record as a case cured by incipient septicæmia, for I can regard as no other these rises of temperature when the bedsore was covered in greater part with a black slough, and such was my diagnosis at the time when I saw the state of the wound. It would seem that some principle like sepsine was formed and circulated in the blood, and, reaching the tuberculous areas, acted as an antagonist to the disease and killed the tubercle bacilli. Hence the disappearance of the symptoms. Is it not possible that Koch's liquid may not be a genuine specific for phthisis, but merely one of the numerous fever agencies which bring about phenomena when they find a proper nidus in the organism? Whatever may be said, it is not the only agency which kills the tubercle bacilli and cures phthisis. It may be that this case I record will be of interest to those deeply versed in the etiology and cure of tuberculosis.

I am, Sirs, your obedient servant,

Leith, N.B., Feb. 19th, 1891. JAMES W. MARTIN, M D.

THE TREATMENT OF PHTHISIS BY THE INHALATION OF SUPERHEATED AIR.

To the Editors of THE LANCET.

SIRS,—Dr. J. Cranstoun Charles in his article in THE LANCET on the above treatment of phthisis, after explaining the *rationale* of the method, proceeds to say: "Without going into the question of the temperature of this heated air when it reaches the lungs &c." It is somewhat surprising that Dr. Charles did not remind your readers that there is very good evidence that air, at whatever temperature inhaled, reaches the lungs very slightly, if at all, above the temperature of the blood. By some experiments carried on at the Consumption Hospital, Brompton, the result of which I read before the Clinical Society last session, this all-important point was pretty definitely settled.

"There was a patient under the care of Dr. Mitchell Bruce[1] with well-marked bronchiectatic excavation of the base of the left lung. Mr. Godlee had successfully tapped it after removing a piece of rib. On illuminating the interior of the cavity two openings could be distinctly seen, and a probe could be passed up them, and appeared to reach somewhere near the trachea, and caused coughing. Air passed very freely in and out of the cavity. When the patient inhaled peppermint it could be smelt at the wound, and when it was blown through the opening he almost instantaneously tasted it. This showed that there was a very free communication between the mouth and the cavity. Inspection of the lung, which was removed after death, clearly shows how very free this communication was. This patient was set to inhale hot air, which he did at about a temperature of 300° F. A thermometer was placed free in the cavity, and carefully plugged in. At the end of one hour the thermometer only rose 1°. The patient thought it was a form of treatment which suited him, so we had no difficulty in repeating this experiment several times, and always with the same result. Another case soon occurred which gave us further opportunities of trying experiments. A patient was admitted under the care of Dr Tatham, also with a cavity at the base of the left lung. Its exact nature was never determined, as he fortunately made a complete recovery. It was tapped by Mr. Godlee after resecting a piece of rib. In this case also there was a free communication with the mouth, but not quite so free as in the preceding case, as he did not taste the peppermint quite so instantaneously. A probe could be passed up towards the trachea, which he said he felt, and it caused much coughing. The same experiments were repeated on him, but in his case the thermometer never rose at all. I think that these experiments show what most of us would have expected—viz., that the temperature of superheated air is rapidly dissipated in the mouth, pharynx, and larger air-tubes. These structures are extremely vascular, and the rapidity with which the blood circulates appears quite able to carry off any superfluous heat, and reduce the air to the normal temperature of the blood before it reaches the smaller bronchi and pulmonary tissue. It follows, then, that the inhalation of superheated air can have no influence over the course of phthisis."

[1] Clinical Society's Transactions, vol. xxiii.

Some experiments have also been made by Dr. Ernest Schowald of Jena on dogs, and the conclusions he came to were the same as my own. I should not have troubled you with this communication but an inventor of one of these hot-air machines is actively advertising it.

I am, Sirs, faithfully yours,

Brighton, March 9th, 1891. H. H. TAYLOR.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—Dr. Hunter Mackenzie, in his interesting letter in your issue of the 7th inst., tells us that, from his experience, it is rare to detect pus in the antrum without caries of the corresponding teeth. It is always instructive to have the opinion of so careful and trustworthy an observer; but I think his statements would prove of even more value if he would give us some idea of the number of cases of empyema of the antrum he has observed and treated. Such a statement appears to me to be essential to the great question among rhinologists—viz., whether disease of the teeth or some gross inflammatory affection of the nose is to be considered the commoner cause of suppuration in the antrum. In my forty cases I have never held a simple coexistent rhinitis to be responsible for the mischief, although, as Dr. Mackenzie suggests, such is often apparently caused by the irritation of the septic discharge through the ostium maxillare. Nor do I consider it fair to assume that a coexistent carious tooth is necessarily the cause of the suppuration. We ought at least to have a periostitis of the fang, with suppuration around it, or penetration of the fang into the cavity above, before we can, on pathological grounds, assume that dental disease is responsible for the mischief. Unfilled carious teeth are so common among hospital patients that it is unusual to find no carious teeth in either a case of empyema of the antrum or any other disease. In fact, Sirs, I do not hesitate to affirm that the large majority of cases of nasal polypus, associated with a purulent discharge from the nose (I do not say mucopurulent), will be found to be associated with pus in the antrum; and, as I have remarked before, I believe it is the frequent coexistence of nose disease, which might in itself be considered sufficient to account for the suppuration without supposing the antrum to be involved, that explains why so many cases of empyema of that cavity are overlooked.

I am, Sirs, yours truly,

Harley-street, March 9th, 1891. GREVILLE MACDONALD.

ETIOLOGY OF ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—In December I was sent for to see a boy whose symptoms turned out to be those of typhoid fever. He is recovering, but a younger brother is now ill with the same complaint. Notice was given to the urban sanitary authority, and the medical officer of health visited the house where these patients live and found nothing amiss with its drainage or water-supply. For years there has not been a case of this fever in the town, and there is none existing in the neighbourhood. The boys have not been outside the town for many months. About the time when the boy first attacked was taken ill there had been occasional most unpleasant smells in the parish church, where he is a choir boy. Some thought the stench came from the sewer leading from the schools, and into which the church tower drain pours; others maintained the smell was not sewer smell at all, but was due to mouldering Christians buried in and closely around the church. But as these two boys are the only individuals who have contracted typhoid fever, it would seem improbable that the church smells were causative. No other guess has been hazarded as to the origin. The drinking water they used is that common to Trowbridge and many neighbouring villages, as well as this town. There is, and

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has been, no typhoid fever at the farm from which their milk is supplied. It would seem, then, as if the first of these cases had originated *de novo;* the second contracted from the first.—I am, Sirs, yours obediently,

Melksham, Wilts, Jan. 27th, 1891. SAMUEL GROSE.

AMBULANCE CLASSES FOR THE MERCANTILE MARINE.

To the Editors of THE LANCET.

SIRS,—I read with much interest the letter of Mr. C. H. Leet in THE LANCET of Feb. 28th, and I should be very glad to learn that the efforts of himself and those who are working with him meet with the encouragement they deserve, as there is no class to whom first-aid instruction is more necessary than the officers and men of the mercantile marine, especially those on board vessels which do not carry a doctor. Some years ago I assisted, on behalf of the St. John Ambulance Association, in the inauguration of this work at Liverpool and other ports, but there was a very great difficulty in finding officers who could give sufficient time to attend the lectures, although the syllabus was altered and compressed to meet their special requirements. With regard to this subject, I received in 1882 a letter from the Marine Department of the Board of Trade, which contains the following paragraph:—"With reference to the correspondence, and to your recent interview, with officers of this department on the subject of the instructions of masters and mates in the mercantile marine, I am directed by the Board of Trade to acquaint you, for the information of the committee of the St. John Ambulance Association, that the Board of Trade, after careful consideration of the subject, are disposed so far to assist the Association in this matter as to authorise the placing by the Registrar-General of Seamen of an endorsement upon the certificates of such officers as are reputed by the Association examiners to have passed successfully in this subject. I am, at the same time, to state that before conveying such authority to the Registrar-General of Seamen they will require to have before them some further information as to the character of the instruction, and of the examination which will be employed, and of the arrangements generally, bearing in mind the limited time at the disposal of officers of the mercantile marine for acquiring knowledge of this kind."

This is such a valuable concession that I am sure it will strengthen the hands of those who are now taking up this important matter.—I am, Sirs, yours faithfully,

March 4th, 1891. JOHN FURLEY.

MEDICAL MEN AND THE NOTIFICATION OF DISEASES ACT, 1889.

To the Editors of THE LANCET.

SIRS,—The recent vexatious prosecution instituted against me by the vestry of Clerkenwell, which is fully reported in THE LANCET of the 7th inst, shows the necessity and great advantage derived from belonging to such an institution as the Medical Defence Union. On my informing one of the hon. secretaries (Dr. Bateman, of 64, Longridge-road, S.W.) that a summons was about to be issued against me, he immediately took steps for my defence, and neither trouble nor expense was spared to make the case a winning one. It frequently happens that medical men are saddled with heavy costs in defending their professional reputation and private character against unjust prosecutions, necessitating their appealing to their professional brethren for assistance; whereas, by belonging to this excellent Society, they would be saved much of the anxiety attending such prosecutions and the humiliating position of having to appeal under such circumstances.

I am, Sirs, your obedient servant,

March 9th, 1891. F. L. MILBURN.

ERYSIPELAS AND TOTAL ABSTAINERS.

To the Editors of THE LANCET.

SIRS,—My absence from England has prevented my taking notice before now of Dr. Ridge's letter in your issue of the 21st ult. He seems to have "run amuck" on the subject of alcohol generally. I do not see the point of his letter, and did not advocate the immoderate use of alcohol. I am quite aware that alcohol in large doses, especially in the high temperature produced by disease, lowers the temperature of the body, but unaware that small doses of alcohol, well diluted, in health do so; in fact, the evidence goes to prove the contrary. The statistics he quotes on the rate of invaliding in India do not, I imagine, separate the moderate from the immoderate drinkers, and, if not, are worthless as far as the present question goes. Reference to any of the standard works on the subject will probably tell him why alcohol in small doses is classed as a heat-producing agent. Dr. Parkes, who experimented largely on the subject of alcohol, found that a man in health could take about 2 oz. of pure alcohol daily without any deleterious effect, and the question I asked was whether, under certain conditions, it was not beneficial. I should recommend Dr. Ridge, instead of instituting fresh experiments, to study what is already known on the subject; his knowledge on this particular point seems to require, to say the least of it, revision. I regret that my absence abroad will for the present prevent my continuing this discussion, which promises to be both amusing and instructive.

I am, Sirs, yours faithfully,

Montreux, March 3rd, 1891. H. R. WHITEHEAD.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Society for the Prevention of Cruelty to Children.

DURING the month of February the local Society for the Prevention of Cruelty to Children, which is the first of its kind, took up 62 new and 61 old cases, the former involving the welfare of 92 and the latter that of 72 children. Among the complaints were—4 of assault, 58 of general neglect, 1 of begging by night, 49 of selling at night, 40 of exposure, 8 of sleeping out, 4 of dangerous surroundings. Great efforts are being made to prevent children trading by night, a form of cruelty practised by many idle and vicious parents, who, instead of providing for their children, expect the latter to provide for them.

Legislation for Midwives.

There is a phase of the present controversy respecting midwives which appears to have escaped notice. Not many years ago the average hospital and workhouse nurse was a drunken, ignorant old hag. Without any legislation all that has been changed, hospitals and workhouses being now supplied with well-educated, thoroughly trained young women, many, indeed, being ladies in the strictest sense of the word. Moreover, private nursing has been developed to a most extraordinary extent, quite as greatly to the advantage of the rich as the improved hospital and workhouse nursing are to the poor. In Liverpool an attempt was made almost a century ago to improve the status of midwives by the aid of the Ladies' Charity, the midwives of which were previously trained and examined by the surgeons before being appointed to office. Later on the Lying-in Hospital carried on this educational process, extending it also to monthly nurses, whose position has greatly improved in recent years. But in this, as in other cities and towns, many women little, if any, better than the midwife of old, still practise among the poor, and among those who, not being poor, are still foolish enough to employ them. The records of our coroner's court within the last twenty years would furnish material enough to fill many columns of THE LANCET with sad illustrations of the fatal results caused by the ignorance and, what is worse, by the persistent recklessness of these women in refusing to send for medical aid when it is imperative. It is bad enough in large towns and cities, but what must it be in remote villages and hamlets far away from medical aid? Legislation is absolutely necessary to prevent ignorant and incompetent women from practising for gain to the danger of those women who employ them. A drunken old hag could not obtain a situation as nurse to a hospital or workhouse, but there is nothing to prevent her putting a brass plate with "Midwife" under her name on her door. In this simple fact lies the whole question to be solved.

The late Assistant Recorder of Liverpool.

Mr. Leofric Temple, Q.C., whose death occurred on the 6th inst., was well known to the medical profession here, in London, and elsewhere. Formerly he was engaged as

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counsel in many remarkable trials. As Assistant Recorder here he was most courteous and considerate to medical witnesses, doing his utmost to save them from loss of time and the many other annoyances to which medical witnesses are liable.

The Spring Assizes.

In charging the grand jury, Mr. Justice Day complained of the accommodation provided for prisoners before trial at the Assize Courts. Though much better than that of other assize cities, it is not worthy of such a city as this, or consistent with the other parts of the magnificent hall (St. George's) in which the courts are situated. It is to be hoped that his lordship's attention will next be called to the inadequate provision made for witnesses, even professional ones, which is most miserable. Medical practitioners have to wait for hours on a landing at the top of a flight of stairs amid a crowd of other witnesses, and in a most polluted atmosphere, waiting their turn to go before the Grand Jury. The room for witnesses near the Crown Court is a comfortless and unhealthy apartment, and medical witnesses have to choose between sitting in court on a seat generally overcrowded, or walking about the passages.

The Anatomical Rooms of the Medical Faculty, Liverpool University.

During the winter session now approaching its close the anatomy class of the School of Medicine has been well attended. Professor Mitchell Banks continues to lecture on this very important branch of medical education, and he is ably supported by Mr. Thelwall Thomas. The rooms are furnished with every requisite for the teaching of anatomy. Altogether, the anatomical department of the Liverpool School of Medicine will compare not unfavourably with those of metropolitan schools.

Liverpool, March 10th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Barber Surgeons.

AT the last meeting of the Newcastle Society of Antiquaries Dr. Embleton read an interesting and amusing paper on the Incorporated Society of Barber Surgeons &c. of Newcastle. It described the customs and rules of this ancient Society, and their practice as to bloodletting &c. The records show that the barbers were fined for trimming their customers on the Sabbath day, and fines were also imposed when members used "ill words" to each other. For "giving" members the "lie" fines respectively of from 3*d.* to 6*d.* had been made. Dr. Embleton has promised to read a second paper on the subject.

The Health of Tynemouth.

The medical officer of health for Tynemouth writes to the *Newcastle Daily Chronicle* to explain a misapprehension which has taken place from confusing the borough of Tynemouth with Tynemouth Village as to sanitary reports. The borough of Tynemouth, he explains, includes the whole of North Shields and several adjacent villages, and contains a population of 50,000 people. In Tynemouth Village itself there were only two deaths in the year from any of the chief zymotic diseases, and during the last months only two cases of infectious diseases have been reported in the borough, one of scarlet fever and one of typhoid fever, the latter imported. The Village of Tynemouth stands high, and deserves to do so as a watering-place and health-resort.

The Notification of Measles in Newcastle.

It is a considerable period now since the medical officer of health for the city of Newcastle (Mr. H. E. Armstrong) was requested by the Sanitary Committee of the Corporation to obtain particulars as to the extent to which the notification of measles was in force elsewhere, and on other points bearing on the general question. This he has done by addressing a series of questions to the principal large towns in England and Scotland. These replies, together with opinions given in the annual reports of several health officers, he has collected and summarised in a very careful, fair, and painstaking manner, and presented as a report to the Sanitary Committee. Mr. Armstrong, in some appended remarks as to the general question of the notification of measles, says that "the fact that few towns have notification of measles is no argument against the principle." The same, he says, was said only eight or ten years ago of notification of infectious diseases of every kind. In conclusion, he gives several very strong and forcible reasons for the notification of measles, and recommends his committee to give it a trial in Newcastle for a period of, say, five years.

The Newcastle Health Society's Lectures.

The lectures given under the auspices of the Newcastle Health Society have now concluded. Two lectures have been given since I wrote last on the subject. The first by Mr. R. Clark Newton, on "Exercise and Athletism: Use and Abuse," at which Dr. Arnison presided. The concluding lecture of the series was given on Saturday last, on "Dangers to Health from Defective Drainage," by Mr. R. Laing Hay, architect, North-Eastern Sanitary Inspection Society, and Dr. Hume presided. The course has been highly successful; the lecturers are men of acknowledged ability, and their selection of subjects was judicious; while the public throughout have shown appreciation by a crowded attendance.

Hypnotism in Newcastle.

We have lately had some public exhibitions of "hypnotism," so called, in Newcastle, but to any middle-aged person these exhibitions differ little from the mesmeric performances of several years ago. The performer is most successful, or, as he says, has most power over his own travelling company. Several medical students went on the platform, but he could do nothing with them,—a sign that they were, I suppose, a very "hardened" set as regards nervous impressions. The Rev. Dr. Ross, one of our leading ministers, takes the matter up very seriously, and writes a condemnatory letter on the subject to the *Newcastle Journal*. He does not discuss the scientific aspect of the question, but concludes that all public exhibitions of hypnotism should be legally prohibited; that the medical use of it should be strictly limited to properly qualified members of the profession, and to certain districts or institutions; and that there are strong reasons against the public practice of hypnosis as a source of entertainment.

Gateshead.

Only a fortnight ago I noted the death of the oldest practitioner in Gateshead, Dr. Dixon. I now have to mention the death of a very promising young physician, who might be said to be on the threshold of professional practice, Mr. Charles Wilson, M.B. Lond., son of Dr. R. H. Wilson, Gateshead, and a leading practitioner there. Dr. C. Wilson acted as house physician to the London Hospital, in which capacity he unfortunately contracted a post-mortem wound which led to empyema and ultimately to fibroid phthisis, causing his death on the 5th inst. at his father's house.

Koch's Treatment of Tuberculosis.

With regard to Koch's treatment of tuberculosis in Newcastle, I have spoken to a leading physician here, and he assures me that he knows of one undoubted cure of pulmonary consumption from the treatment. The case, he said, had progressed so far as to have cavities, and these appeared to heal up under the treatment, and all symptoms of phthisis have also disappeared.

Dr. William Robertson, who had a serious accident from a corrosive acid some time ago, has now quite recovered.

Newcastle-on-Tyne, March 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medico-Chirurgical Society.

AT the meeting of this Society last week a number of interesting specimens and cases were shown, including a case of Friedreich's ataxia in a boy; two cases of brain tumour, the position of one of which was diagnosed by the area of the field of vision affected and the position of the unaffected area, and the other a cerebellar tumour with a distinct history of five years' duration; and photographs of a case of facial hemiatrophy. These were shown by Dr. Bramwell. Dr. Affleck showed a patient with vasomotor disturbance of the hands and lividity, due probably to injury, and which he regarded as being probably allied to Raynaud's disease. Dr. W. Russell showed a lung with mul-

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tiple sarcomatous tumours secondary to sarcoma of the thigh, which had been removed by Mr. Duncan, the lungs being the only organs affected. A paper was read by Mr. Duncan on Stricture of the Œsophagus and Gastrostomy. He reviewed the various causes of stricture, and dwelt mainly on the differential diagnosis of malignant stricture. As regarded operative interference, he preferred gastrostomy to any other procedure. He considered it a mistake to make two operations—a preliminary one and a second for the purpose of opening the stomach. He completed the operation at once, and only made a small opening in the stomach, into which he put a tightly fitting tube. Out of seven cases on which he had operated five had lived for months, had put on flesh, and had their symptoms greatly ameliorated, although they had ultimately died from extension of the disease or from some intercurrent affection. The two that had died were in a very prostrate condition, and he thought that the bad result in them was in part due to the double operation, instead of making it a single one. The second paper was by Dr. Byrom Bramwell, on the Symptoms of Myxœdema and of Exophthalmic Goitre contrasted. After reviewing the symptoms in the two conditions he regarded them as antithetic. Professor Greenfield regarded exophthalmic goitre as due to disease of the thyroid gland, but this view did not find favour with the other speakers or with Dr. Bramwell. Mr. Duncan gave his experience of electrolysis of the thyroid, and thought it might be of benefit in exophthalmic goitre, for he had had one case in which it had been.

The Edinburgh Sanitary Protection Association.

The annual meeting of this Association was held at the end of last week, Professor Sir Douglas Maclagan presiding. The Council's report was of a very gratifying kind, and alluded to the remarkable success which had attended the efforts made to establish an institution which had been of so much benefit to the community. It and its various branches had done much to educate public opinion and to arouse the attention of officials to the means of resisting disease and of increasing comfort and security in their dwelling-houses.

Health of Edinburgh.

The mortality last week was 109 and the death-rate 21 per 1000. Diseases of the chest caused 35 deaths and zymotic diseases 16, of which 8 were due to whooping-cough. The intimations comprised 20 cases of typhoid fever, 6 of diphtheria, 33 of scarlatina, and 68 of measles.

Paisley Infirmary.

Dr. Fraser, senior physician to the infirmary, has forwarded a letter to the president of that institution, stating that a gentleman, who wished to remain unknown, had intimated his intention of giving £1000 towards the extension of the institution.

Edinburgh, March 10th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons in Ireland.

ON Saturday last the President, Mr. H. Gray Croly, J.P., entertained at a banquet his Excellency the Lord Lieutenant and a large number of distinguished guests. The entertainment was a very brilliant one, and his Excellency's speech in response to the toast of his health was well received by those present. An interesting feature in connexion with the table decorations was a valuable collection of silver cups &c. won by Mr. Croly's horses at various exhibitions. General Viscount Wolseley, speaking on behalf of the Army, said that the president, in proposing the toast, had drawn some distinction in his remarks between the combatants and non-combatants of the army. That was a distinction unknown in the army, for they looked upon the doctors as the most valuable members of their profession. The members of the army owed a deep debt of gratitude to the members of the medical and surgical profession, not merely because some of them owed to them the fact that they were alive that day—he himself was one of these,—but because they had done so much for the army in times of peace. It was a well-known fact that it was owing to the members of the medical profession the question of the housing of the soldiers had come to be considered. The barracks in the United Kingdom had been a disgrace to civilisation and to the British Government, and he was glad that this reform had been brought about, not by coercing or bringing great pressure to bear upon the Government, but by the outspoken manner in which the question had been treated by the medical officers of the army. When the soldiers were better housed than they are now, and in a manner that becomes the great nation which has the privilege of paying for those houses, it would be a great satisfaction to men like himself that in bringing about this state of things they were largely indebted to the profession which was so well represented. He thanked them most cordially for the army, and he begged to include in his thanks the medical officers of the profession to which he had the honour to belong.

Death of Mr. Henry J. Gogarty, F.R.C.S.I.

This gentleman died on Saturday last at his residence, 6, Rutland-square, Dublin, after a few hours' illness. He had been attending patients on the day he died, and on his return home in the evening was seized with the attack which resulted fatally very shortly afterwards. Mr. Gogarty was about fifty-four years of age, and leaves a widow and four children to mourn his untimely decease.

Rotunda Lying-in Hospital.

A considerable amount of money being urgently required for the purpose of carrying out certain necessary alterations and improvements in this institution, it has been arranged by a committee to hold a bazaar and kuklos this week, which will last four days. As almost all the counties will be represented, and as substantial help has been promised from many influential friends, it is expected that a very large amount will be obtained for a thoroughly deserving charity.

Molluscum Contagiosum.

At a meeting of the Medical Section of the Royal Academy of Medicine last week Dr. Joseph O'Carroll exhibited a patient suffering from a rather rare malady—viz., molluscum contagiosum, the mycosis fungoides of M. Alibert. The patient, a young man about twenty, a hairdresser's assistant, showed an eruption of small tubercles on the pubes and scrotum. Each elevated spot was slightly umbilicated, and on pressure exuded a whitish fluid from the apex. The disease was of three months' duration, and has not spread.

An Irish Journal of Sanitary Science.

The first number of a new monthly journal, the *Health Record*, is published to-day, and the publication has been undertaken to assist in promoting the all-important questions relating to sanitation. The present number contains articles by Sir Charles Cameron, Dr. Cosgrave and Mr. Edgar Flinn, and others, notably one by Mr. W. Kaye Parry, on a very important subject—viz., "On Sanitary Defects in Tenement Dwellings." The editor is Mr. Edgar M.R.C.S.I., &c., Flinn of Kingstown, who has had considerable experience in sanitary subjects.

Dublin Sanitary Association.

The annual general meeting of this Association will be held on Thursday, the 12th inst., when the report for the past year will be presented, and the President, Mr. F. W. Pim, will read an address entitled "A Sketch of Sanitary Progress in Dublin."

North Infirmary, Cork.

A debt of £900 has been incurred, and the committee have issued an appeal for funds; if this is not responded to, a reduction of the number of beds by one-half will be necessitated. As the hospital is an excellent one and managed with due economy, it is to be hoped that the necessary funds may be forthcoming, and that the committee may be speedily relieved from their financial embarrassment.

Waterworks for Mitchelstown.

A scheme has been proposed for the introduction of a proper water-supply for Mitchelstown, county Cork. The water can be obtained two miles outside the town at an estimated cost of £4849, which will include the erection of twelve public fountains and twenty hydrants; and as the inspector of the Local Government Board has reported favourably of the scheme, the matter will be accomplished without much delay.

Control of Lunatic Asylums.

The grand jury of county Sligo have adopted a resolution,

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to the effect that as they learn that the governors of lunatic asylums as representatives of cesspayers have not only no voice in preparing the plans for any addition to or alteration of the structure of their asylum, but that they are not entrusted with the duty of even appointing a clerk of works to superintend the execution of the work, they are strongly of opinion that the law, as it at present exists, requires to be amended. Copies of the resolution have been forwarded to the Chief Secretary and the Lord Lieutenant.

March 10th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Rôle of the Optician.

THE legal status of the optician is in France, as elsewhere, a somewhat anomalous one. In this country, so long as the functions of this craftsman are limited to determining for a customer the kind of glasses necessary to correct errors of refraction, no charge of illegally practising the healing art can be preferred against him. But a recent judgment delivered by the Correctional Tribunal of Havre declares illegal the giving by an optician pathological information on the state of the eyesight, and the prescribing for any visual trouble a combination of lenses. In other words, the optician is free to pose as a physiologist, but he is debarred from correcting any deviations from normal vision which he may discover in a given case. This is refining with a vengeance, and I do not envy the judge who may be called upon to settle a controversy of this kind.

Prognosis of Syphilitic Pseudo-paralysis.

The late M. Parrot, whose little patients were drawn from a class in which *la misère physiologique* was the rule, appears probably for this very reason to have taken too gloomy a view of the prospects of cure in the disease which he christened as above. At the last meeting of the Société Médicale des Hôpitaux three authorities on pediatrics enunciated the opinion that, provided the hygienic surroundings of the little sufferer be favourable, the chances of complete recovery are great. M. Comby related the case of an infant of six weeks who was brought to him with his body covered with characteristic syphilitic stigmata, and whose right arm was completely powerless, the upper extremity of the radius being swollen and painful. The mother, who enjoyed good health, had been *enceinte* ten times, the first child, born free from syphilitic taint, together with the subject of this communication, being the only survivors, all the other children having been stillborn before term. The father is syphilitic. The infant in question was treated by daily inunctions and by sublimate baths (fifteen grains to each bath), with the result that improvement was clearly manifested from the sixth day, and recovery was complete on the fifteenth. M. Cadet de Gassicourt, physician to the Hôpital Trousseau (for children), opines that one reason for the greater frequency of cures nowadays lies in the earlier recognition of the nature of the affection. He has, moreover, seen the disease undergo in one instance a spontaneous cure, the paresis transferring itself, however, from one member to its fellow. M. Sevestre, also of the Hôpital Trousseau, while concurring with the views of the previous speakers, warns against reliance being placed, for diagnostic purposes, on the presence of syphilides, which are more commonly conspicuous by their absence. He also protests against the employment of the word "paralysis" to designate the affection, the loss of power being analogous to the weakness found in ordinary fractures. M. de Gassicourt further criticised the treatment applied by M. Comby, and stated that he had always found inunctions sufficient, without mercurial baths, which were useful only when cutaneous excoriations were present.

Thoracoplasty: a New Method

At the last meeting of the Académie de Médecine, M. Quénu described a new proceeding for closing a pleural fistula, the relic of empyema. The principle of the operation consists in the resection of small fragments of each extremity of several ribs, so that the intervening segment, thus rendered mobile, may recede, and so determine the filling up of the suppurating cavity. In the case upon which the communication of M. Quénu was based the operation was thus conducted:—The patient being anæsthetised, a vertical incision 15 centimetres in length was made behind the posterior axillary fold, against the axillary border of the scapula. The incision was then carried between, without greatly involving, the fibres of the latissimus dorsi, and the serratus magnus was incised transversely. The ribs exposed were approximated, and about two centimetres of seven (the fourth to the tenth inclusive) excised by means of Farabeuf's costotome, thus laying bare the thickened pleura. Anteriorly, a corresponding vertical incision was made posterior to the nipple line. Some fibres of the pectoral muscles being drawn aside, the ribs, with three digitations of the serratus magnus, were exposed, and a width of from one centimetre and a half to two centimetres was resected from six ribs. The mobility of the bony parietes separating the two vertical incisions having been proved by the effects of pressure with the hand, the fistula was united to the anterior incision by a transverse cut, the corresponding rib was excised in its entirety, and the pleural cavity opened. This cavity was then scraped with a curette and swabbed with a solution of zinc chloride. The edges of the two vertical wounds were accurately brought together with sutures, a large drainage-tube being inserted into the most dependent part of the posterior one. The transverse incision was likewise sutured, a large drainage-tube being passed through it into the pleural cavity. A dry iodoform dressing completed this ingeniously contrived operation. The patient recovered completely in forty days.

Hypnotic Experiments and the Law.

Does the speculative or speculating layman who indulges in experiments in hypnotism expose himself to the risk of a prosecution for illegally practising medicine? This question was discussed in solemn conclave by the Paris Bar on Monday last, and the answer was in the affirmative. These psychological exhibitions are very popular at the numerous fairs held in the neighbourhood of this capital. It remains to be seen if the authorities, armed by the collective opinion of Messieurs les Avocats, will make an attempt to put a stop to a practice not devoid of social dangers.

Life Assurance and the "Secret Professionnel."

Autre pays, autres mœurs! In France the medical man cannot be compelled to divulge, even in a court of law, the nature of the disease for which he has treated a patient. Should he do so without the consent of his patient (or his representatives after death) he incurs the risk of being prosecuted for damages. The following legal pronouncement will give your readers some idea of the protection extended to French practitioners in this respect. Our French *confrère* is a real father confessor. On Feb. 4th the Paris Court of Appeal confirmed a verdict pronounced by the Tribunal of Commerce against an assurance company which had refused to pay the insurance money due to the widow of a policy-holder on the ground of the non-production of a medical certificate stating the nature and duration of the malady to which the deceased had succumbed. The widow could not produce the document in question for the simple reason that the medical attendant had, for reasons best known to himself, declined to indite it. The Tribunal of Commerce ruled that the doctor, bound by the rules of professional secrecy, is not compelled to furnish a death certificate, it being left to his sole judgment to decide if information revealed to him by his patient comes within the limits of *le secret professionnel*.

Paris, March 10th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Collection of Clinical and Pathological Reports on Koch's Method.

DR. VON GOSSLER, Prussian Minister of Religion, Education, and Medical Affairs, ordered last December that the heads of the Prussian university clinics and policlinics in which Koch's remedy for tuberculosis had been used should report their experience to him. The heads of the pathological institutes were also requested to report everything of importance observed by them at necropsies, or otherwise bearing upon Koch's method. Besides the heads of the university clinics, Professor Fraentzel, of the Charité, who was the first to try Koch's method in consumptive cases, and Dr. Paul Guttmann and

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Professor Sonnenberg of the Moabit Hospital, who has practised the method under Koch's superintendence, were requested to report their experience. Fifty-five reports were sent in, and have been edited by Professor Guttstadt and published by Springer of Berlin in a volume entitled, "The Efficacy of Koch's Remedy for Tuberculosis." With very few exceptions the reports confine themselves to the time before Jan. 1st, but the results of the first half of that month are once or twice alluded to. Dr. Guttstadt has extracted the most important items from the reports, and summarises them in an appendix. In the hospitals to which the reports refer 2172 persons were treated with tuberculin during the time in question, and they received more than 17,500 injections in all. The greatest number of injections received by any one patient was 54; the greatest total quantity 3·826 grammes. The diseases treated were tuberculosis of the lungs, the larynx, the peritoneum, the intestine, the cerebral meninges, the kidneys, the bladder, the lymphatic glands, the soft parts, and the bones, lupus, leprosy, pernicious anæmia, pleurisy, and corneitis. The pulmonary patients are divided into three groups—those with incipient phthisis, those with moderately advanced phthisis, and those with very far advanced phthisis with cavities. Of those of the first class, 242 were treated with tuberculin; 9 were cured, 72 considerably improved, and 59 improved. Of the second class, 444 were treated; 1 was cured, and 68 more or less improved. Of the third, 230 were treated; 7 were considerably improved, 31 improved, and 30 died. Many of these patients had laryngeal phthisis too. Of 18 patients who had laryngeal phthisis alone, 1 was cured, 2 were considerably improved, and 10 in a less degree. The number of lupus patients treated was 188, of whom 5 were cured, 78 considerably and 84 less decidedly improved. The book contains reports of necropsies from the pathological institutes of Berlin, Bonn, Breslau, Göttingen, Halle, Königsberg, and Marburg.

Dr. Wilhelm Stricker.

Dr. Wilhelm Stricker of Frankfort-on-the-Maine, a literary physician of mark, died last week. The themes of his numerous writings are the History of Medicine in Frankfort; the lives of Soemmering, Neef, and Stiebel, Itaar, and other miracle doctors; Ettner's medical novels; the Care of the Sick in the Wars of the Past; Taylor, Ludwig Hoernigk, Burggrave, Haller, Zimmermann; the mortality of children, suicide, marriages between blood relations, medical statistics, hermaphroditism, hairy men, small-pox, vaccination, labial cancer, the effects of lightning on the human organism, the history of his native city of Frankfort, the life of its greatest son, Goethe, &c. He was born in 1816, studied at Dresden, Göttingen, and Berlin, travelled for several years in Italy, established himself as a medical practitioner in Frankfort in 1844, and spent the rest of his life there.

Berlin, March 10th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Treatment.

THE trials of Koch's liquid in the treatment of tuberculosis have been brought to an end here in the course of the last two or three weeks, and "Kochin" is now only rarely administered at the Vienna hospitals, and the official report on the treatment will shortly be published. At the last meeting of the Vienna Society of Physicians, Professor Billroth presented his case of actinomycosis, which had been treated with Koch's liquid and which has been mentioned in previous letters to THE LANCET. It was the case of a labourer twenty-six years old, who had been at first admitted to the wards of Professor Nothnagel on account of some abdominal disease, combined with vesical and rectal symptoms. By the examination of the urine the presence of actinomycosis could be detected, and the patient was sent to the wards of Professor Billroth. As there was an extensive infiltration of the abdominal walls, an incision was made on August 2nd, and the actinomycotic tissues were scraped out; by the infiltration extending deeply throughout the abdominal muscles and fascia, a perforation of the bladder was produced. The wound, as well as the vesical fistula, in a short time began to heal; but after some weeks the abdominal walls became infiltrated again, so that a tumour of the dimensions of 16 cm. by 12 cm. by 2½ cm. was found on the left side of the abdomen. Then on Dec. 5th the first injection of Koch's fluid was made, the initial dose being 10 milligrammes, and a considerable local and general reaction resulted from it. The tumour, at first exceedingly hard, became softer and decreased in size after repeated injections of the fluid, so that after fifteen injections the infiltration had perfectly disappeared in the first days of February. The dose had been increased to 250 milligrammes. At the present time, the patient having been under observation for four weeks in the wards, no relapse has occurred, and he seems to be healed. At the last meeting of the Vienna Dermatological Society Dr. von Hebra demonstrated three of his cases of lupus treated by Koch's fluid. One of them was a young man in whom the first injection had been made in Vienna on Nov. 21st. He then showed a very remarkable reaction, both local and general, after the application of 3 milligrammes. This reaction diminished with each later injection, and from the time when 10 milligrammes were injected no reaction at all could be observed. At present a dose of 80 milligrammes was used without any effect. The lupus efflorescences themselves have scarcely diminished under the treatment. Before the treatment both hands were affected; there was along the dorsum of the fingers a lupus infiltration raised a quarter of an inch above the healthy skin; that had not disappeared. The second patient, a boy of seventeen years, with a lupus vulgaris occupying the entire right cheek, suffered very much in the course of the treatment from pains in his bowels, dyspepsia, and diarrhœa, so that several times the treatment had to be stopped for a couple of days. The lupus had decreased in size, but a considerable part of it remained unchanged, and at the same time new lupus nodules made their appearance on the previous healthy chin, and the enlargement of them could not be checked by the injections; in this patient also a dose of 80 milligrammes had been used after twenty-seven injections. The third patient, a very pale lad twelve years old, with a lupus patch of the size of the bowl of a tablespoon on the plantar surface of his left foot, and one on the inner side of his left knee, was also suffering very much from affections of the bowels in consequence of the injections. After the first injections in this patient his lymphatic glands (axillary, inguinal) became tumefied to the size of walnuts, and very painful, but never suppurated. With every increase of the dose he suffered from asthmatic fits lasting from three to seven hours. It was impossible to increase the dose as quickly as in the other patients, the highest dose used till now being 25 milligrammes. The reaction was very slight, and the lupus of the plantar pedis increased in size, and new nodules appeared in the neighbourhood of the lupous patch of the knee. Dr. Hebra also mentioned a case in private practice—that of a young lady with multilocular lupus vulgaris, in whom the doses could be rapidly increased up to 70 milligrammes after ten injections without any effect whatever. In opposition to Koch's statement, that the diminishing of the reaction is not due to accommodation but to the diminishing of the quantity of tuberculous tissues in the body, Dr. Hebra found that, although this diminution had been comparatively small, the reaction was nevertheless less marked even when eighty times larger doses had been used.

The Cantharidin Treatment.

Experiments are now made here with the injections of cantharidin in cases of laryngeal tuberculosis and other tuberculous affections, at the General Hospital, as well as at some private institutions, and, as I am informed, the results obtained till now seem to be favourable. On the other side a series of other irritant substances obtained, including even jequirity, have been also experimented with for the treatment of tuberculosis since November last, but the results obtained are not yet published.

Vienna, March 11th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The late Sir William Fitzherbert, K.C.M.G., M.D.

THERE are few of the early pioneers of the colony now left to us, and of these sparse survivors the most distinguished has passed away. It is not generally known—at any rate

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in the colony, for he never practised his profession—that the late Sir William Fitzherbert was a member of the medical profession, having graduated in Medicine and Surgery in 1840. It is therefore not as a medical man that Sir William Fitzherbert's name will be handed down in the pages of the history of New Zealand. He, nevertheless, took a deep interest in the advancement of science generally. He was a staunch supporter of all movements pertaining to the efficient management of local medical and sanitary offices. Born in England and educated at the University of Cambridge, where he obtained a Fellowship at Queen's College, the deceased had for a great many years been identified with the interests of the colony from a political and social point of view. Mr. Fitzherbert emigrated to New Zealand in 1842. He soon gathered round him men of light and leading. Bishop Selwyn, although by no means always agreeing with Sir William Fitzherbert's conduct of native affairs, had the highest opinion of his capacity. The Maoris, in the early days, had great confidence in him, and often undertook long journeys to seek his advice. During the Maori war—a critical time in the history of the colony—Mr. Fitzherbert was Sir George Grey's ablest counsellor, and, together with the late Dr. Featherstone and Sir William Fox, constituted the celebrated "three F.'s." The early settlers had few of the advantages which we now possess. The chief event in those days was the arrival of the English mail, and greedily indeed the news it brought was devoured by all, and by none perhaps more so than by a gentleman of culture and refinement like Sir William Fitzherbert. How different is it now when events occurring in Europe are flashed to the Britain of the South in a few hours. In 1864 Sir William Fitzherbert was appointed colonial treasurer, but resigned that office the following year. In 1866, however, he was reappointed to the same office. He came to England as Agent-General in 1867, and right well were his duties undertaken. But it is in the colony that his power of work and versatile genius are best known; for his life has been devoted to the development of her interests. After his return to the colony from England in 1876 he became Speaker of the House of Representatives, and in 1879 he was advanced to the position of Speaker of the Legislative Council. In 1877 he was made a Knight Commander of St. Michael and St. George, having been previously, in 1872, created a Commander of the same order. Sir William Fitzherbert in 1887 represented New Zealand as delegate at the Colonial Conference held in that year in London. This was his last visit to the old country. In politics he favoured the Whig party. Few colonial politicians have done more to advance the mutual interests of the Maori and English races, and it is to men of the intellectual calibre of Sir William Fitzherbert that all the credit is due of making the colony what it now is. No natives of any colony have ever been better considered by the English-speaking race than the Maoris have been. Their interests from the first have always been fairly weighed. It was the knowledge of this fact that really saved the early English settlers at the Hutt, Wellington, when the celebrated chief "Te Puni" stayed the hands of the natives under him and prevented the contemplated massacre. The deceased "roughed it" in these early days, and he paved the way nobly and well for his successors. He has clearly shown that he was a staunch friend, a genial companion, and a most able adviser. Few young men arriving from home and armed with a letter of introduction to Sir William Fitzherbert failed to be received with the greatest hospitality and to get the best of advice for their future career in the colony.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Climate and Temperature.

THE climatic conditions of the world appear to be topsy-turvy. While you in Europe are being scourged by weather so severe that even the "oldest inhabitant" remembers not such another winter, we here are passing through quite a cold summer. Last year at this time a heat wave was passing across this continent, and for weeks the temperature was between 90° and 110° F. in the shade; this year the weather is wintry, and up to the present there have been only three or four hot days.

Typhoid Fever in Melbourne.

In consequence of this cool weather, the annual typhoid fever outbreak which usually occurs in Melbourne about this time has not been so virulent. What may happen if a heat wave similar to that of last year visits the colony it is impossible to forecast. All the elements for the generation and spread of typhoid fever are present in Melbourne and its suburbs. "Melbourne," its inhabitants boast, "is a marvellous city," and so it is in many respects. Outwardly it has put on fine raiment, but this fine raiment covers a multitude of impurities. Here is a city picturesquely situated—having fine wide streets, splendid public buildings, spacious parks, a most complete cable tramway system, and no beggars, yet under all this a system of sanitation that even a Kalmuck Tartar would blush at. The river Yarra, on which the city is built, is from Melbourne to the sea one huge cesspool. In comparison with it the Liffey at Dublin is a crystal stream. When stirred by the screws of the numerous steamers that throng its banks, it is said to emit no less than sixteen distinct odours! In his address to the Victorian Branch of the British Medical Association the retiring president, Dr. Le Fevre, touched on this matter, and his words are worth quoting:—"A matter requiring immediate consideration, and one to which he had frequently called attention in Parliament, was that of providing for the prevention of the pollution of our rivers. The present condition of our streams was simply disgraceful, as well as disgusting. There was probably no other country in the world where such a state of things was allowed to prevail as that to be witnessed in and about Melbourne. The Government was spending thousands of pounds on our defences, while at the same time no adequate machinery was provided for coping with an insidious enemy, which was continually lurking in our midst. Typhoid fever had been extending year by year, and would continue to extend until they adopted some measures of sanitary reform which would bring about better results than any we have yet achieved. In fact, unless this were done, we feel quite certain there would be such an epidemic one of these days as will arouse us to a sense of our duty." Open-pan earth closets are generally in use, and it not infrequently happens that the nightmen deposit their loads of night-soil surreptitiously on or near the main thoroughfares, and thereby save themselves the journey to the proper depôts some miles out of town. Moreover, at the last meeting of the Central Board of Health for Victoria Dr. Gresswell, the Board's medical expert, reported that during his investigations into an outbreak of typhoid fever at one of the suburbs he was astounded to find that the excreta of the typhoid fever patients, instead of being destroyed, were superficially buried in the back yards. Your readers will thus readily understand why typhoid fever and other intestinal diseases are so very rife and so very fatal in the capital of Victoria.

The Melbourne Hospital.

The staff of the Melbourne Hospital have been taken to task very severely quite recently by the city coroner, *apropos* of a death from chloroform in that institution. The patient was an elderly woman seventy years of age, and chloroform was administered by one of the house surgeons for the purpose of incising a carbuncle at the nape of the neck. The doctor averred that "the woman took the anæsthetic well, but that just after taking it she died of suffocation, and the post-mortem examination showed that the glottis was diseased." It seems that another death under chloroform occurred at the same institution a little while ago, and although no one was held to blame, the coroner suggested to the staff the advisability of appointing a teacher of anæsthetics. This the staff have not done, for, in reply to a question asked by the coroner, one of the number stated that the staff, having talked the matter over, had decided that such an addition was quite unnecessary. The coroner thereon intimated to the hospital authorities that they were neglecting their duties to the public and to the students themselves in omitting to teach in a practical manner a most important part of medical practice.

Professor Koch's Remedy.

Dr. Koch and his remedy, after monopolising the cablegrams for many weeks, have been dropped entirely by the newspapers, but the interest is certain to be revived when the doctors who are hurrying out from Berlin with supplies of "parataloid" arrive and give demonstrations.

Melbourne, Jan. 27th

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Obituary.

JOHN ALLAN, M.D., M.R.C.P. LOND.

BY the death of Dr. Allan, of Milner-square, Islington, the profession loses a type of a class of practitioner the leaven of whose influence is always working for our good, and it behoves us to note such men with reverence and honour as one by one they pass away. A fine specimen of a true Scot, Dr. Allan was nevertheless born in the West Indies, and he passed little of his lifetime in Scotland. His parents and an uncle, who was a medical man, were residing in Antigua during the early part of the century, and there on Oct. 10th, 1815, the subject of our memoir was born. He lost both father and uncle during his early childhood, and was then brought by his mother to Europe; his school days were passed chiefly in France. He commenced his medical education in Paris, and was wont to relate many interesting anecdotes of the medical and surgical worthies of that day. After a time he went to Edinburgh, where, in 1836, he passed the College of Surgeons. In 1837 he graduated at St. Andrews, and subsequently, in 1860, he became a Member of the Royal College of Physicians of London. About fifty-two years ago he commenced practice in Islington, and his sterling character, kind-heartedness, and unsparing self-denial soon won for him a wide circle of attached patients and friends. During his early days he held the post of physician to the Islington Dispensary. He had also been for many years physician to the Church Missionary Children's Home and to the Church Missionary College. One of his marked characteristics was his stern sense of professional right and wrong, but his uncompromising mode of denouncing any deviation from his ideal was sometimes misunderstood. Among his friends, however, who knew him well, apart from his nobler qualities, his ready humour, his fund of anecdote, and that cheery eye of his will not soon be forgotten. His health had been failing for some time, although he continued to practise to within a few weeks of the end. He died of disease of the heart on the morning of March 2nd, at his residence in Milner-square, leaving a widow and three daughters.

FREDERICK WORTHINGTON, M.R.C.S. ENG.

Although it is more than eleven years since Mr. Frederick Worthington left Liverpool and retired, after upwards of fifty years' practice, the tidings of his death were received there with much sorrow by his professional brethren and his numerous friends. The son of a local surgeon, he became a student of the infirmary long before it acquired its royal title, and before the first local School of Medicine was founded, though lectures on anatomy and other medical subjects were given. He subsequently studied in Paris, at a time when the late Philip Ricord was beginning to acquire fame, and learned what must have been of much value to him subsequently. Returning to Liverpool, he was in 1832 elected surgeon to the newly completed lock hospital in conjunction with the late Mr. Simon, and held that office until his resignation in 1873, when he was elected consulting surgeon, and continued in private practice until towards the close of 1879, when he left Liverpool for Enfield. He had very fair health until recently, and at the time of his death was in his eighty-second year. Many former students will remember his quaint anecdotes of the old treatment of venereal diseases which he used to detail—mercury given for gonorrhœa, even to the most profuse salivation; and the inoculation experiments of Ricord, which were also practised at Liverpool Lock Hospital. He also gave vivid descriptions of the nursing of his student days, which amply confirmed the descriptions of the immortal Sarey Gamp and Betsy Prig. Mr. Worthington had a very large practice, both special and general, for many years, among his patients being many leading citizens. He leaves a widow, three daughters, and one son, who is a member of the medical profession.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday, the 12th inst., the minutes of the meeting of the 12th of February were read and confirmed.

The report of the Committee on the Extension of the College Premises was approved, adopted, and entered on the minutes. The report set out that, plans having been prepared by Mr. Salter for altering and enlarging the College forecourt, and estimates for carrying out such plans having been obtained, the committee recommend the Council to sanction an expenditure of £1894 for this purpose.

A report was read from the committee on the form of the report of the Council to the annual meeting of the Fellows and Members of the College. The committee are of opinion that it is desirable that the report should be written in narrative form and should record the work done by the College in its various departments during the past Collegiate year; that it should contain contributions from the chief officers of the various departments on the following subjects—viz.: Museum, Library, Laboratories (at the College and at the Examination Hall), Examinations, Finance, Lectures, Obituary Notices, College Prizes and Honorary Elections, and other subjects of interest contained in the minutes of Council; and that the report be edited by a committee to be appointed by the Council.

Mr. T. Bryant, President of the College, was elected a representative of the College on the General Medical Council in the vacancy occasioned by the death of Mr. John Marshall.

The report from the Committee of Management, with regard to the arrangement of studies and of examinations during the extended curriculum of five years, was referred to a committee of ten members of the Council, including the President and Vice-Presidents, to report thereon to an extraordinary meeting of the Council.

A letter of the 18th ult. from Dr. Liveing was read reporting the adoption by the Royal College of Physicians on that date of the revised scheme for the reconstitution of the University of London.

A letter of the 17th ult. was read, addressed to the President, from Mr. Hutchinson, offering to present to the College his collection of clinical and pathological drawings, on condition that the College will make them useful by displaying them in well-arranged classification in such a manner that they may form the nucleus of a far more nearly complete series. This letter was referred to the Committee on the Extension of the College Premises to report thereon to the Council.

The President reported a correspondence between himself and the President of the Royal College of Physicians in reference to the grievances of Army Medical Officers.

In pursuance of his notice on the 12th ult., Mr. T. Smith proposed that the proceedings of the Council in relation to the scheme for the reconstitution of the University of London be placed before a meeting of the Fellows and Members summoned for the purpose, and that the date of the meeting be determined by the President and Vice-Presidents. This was seconded by Sir W. S. Savory, and carried by a majority of 16 to 5. It was also agreed, on the motion of the Vice-Presidents, that, prior to the meeting, as soon as the date of the meeting has been fixed, a copy of the scheme for the reconstitution of the University of London be sent to each Fellow of the College, and to any Member who may apply for the same.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was, at the ordinary meeting of the Council on the 12th inst., admitted a Fellow of the College:

Caddy, Arnold, L.R.C.P. Lond., of St. George's Hospital. Diploma of Member dated August 4th, 1887.

MEDICAL MAGISTRATE. — Dr. Alfred Sutton, Government medical officer and medical officer of health at Bernleigh, Queensland, has been appointed a Justice of the Peace for the colony of Queensland.

FIRE AT A HOSPITAL.—On Sunday last a fire broke out in the Bowdon branch of the Manchester Hospital for Consumption. Fortunately, two only of the seventeen beds were at the time occupied, the remainder of the patients being in the day-room. Though much damage was done to the building, the flames were eventually subdued without loss of life.

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EPSOM COLLEGE.—A. C. Knight, of this school (sixth form), has just been elected to an open classical scholarship of £80 at Queen's College, Oxford.

ST. BARTHOLOMEW'S HOSPITAL.—At a meeting of the Commissioners of Sewers on Tuesday a motion calling attention to the alleged insanitary condition of this hospital, and recommending that the matter be referred to the Sanitary Committee for immediate consideration and report, was rejected.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-ROAD.—The annual meeting of this institution was held at the Mansion House last week, the Lord Mayor presiding. The annual report stated that the income had exceeded that of the previous year by £604, and of that amount £300 had been added to the extension fund. The in-patients numbered 509 and the out-patients 6710; there were 27,154 attendances and 310 dental cases. His lordship, in reviewing the history of the hospital, said it had a great claim upon the City of London, as it was founded within the City boundary in 1816 by Dr. Bunnell Davis, and it well deserved liberal financial support. Annual subscriptions were announced amounting to ten guineas, and donations to £270.

THE DENTAL HOSPITAL OF LONDON.—The twenty-third annual meeting of this institution was held this week at the hospital, Leicester-square, under the presidency of Sir Edwin Saunders. In the report, which was unanimously adopted, the managing committee congratulated the governors on the continued success of the institution; also on the great benefits which the hospital continues to afford to the suffering poor, 48,764 cases having been treated during the year 1890, a large number of them painlessly (under anæsthetics); being 26,770 in excess of the number treated in 1874, when the hospital was removed to its present site. Unfortunately, there was £2500 remaining of the mortgage debt on the hospital incurred for the necessary extension of the hospital. The managing committee had pleasure in announcing the continued increase in annual subscription.

PRESENTATIONS.—Mr. J. Hay Caird, L.R.C.P., L.R.C.S. Edin., parochial medical officer for Lochgoilhead district, received on the 28th ult., at the close of the second course of Ambulance Lectures under the St. George's Rules, Glasgow, a handsome presentation from the members of his class in recognition of his zeal and success as a lecturer.—The members (*employés* at the Lincoln Railway station) of the Great Northern Railway Ambulance Class have presented Dr. Lowe with a silver card salver, in acknowledgment and appreciation of his lectures to them on "First Aid."—Mr. Arthur Cox, M.R.C.S., of Long Buckby, Rugby, has been presented with a cheque for twenty guineas, a copy of Fagge's "Principles of Medicine," and an illuminated address (framed), by the inhabitants of that town and neighbourhood, in testimony of his unvarying kindness and attention in the discharge of his professional duties to all classes during his practice in the district, covering a period of thirty-two years.

OUTBREAK OF SMALL-POX AT SEA.—The four-masted barque *Kelton*, 1776 tons, was detained in Melbourne by the authorities on account of an outbreak of small-pox on board. The *Melbourne Argus* gives a circumstantial account of the "terrible experiences," which have been undergone on board that unfortunate vessel. The vessel sailed from Glasgow for Rio Janeiro with a cargo of sewage pipes. Six weeks after leaving Rio a man named Duncan McColl, twenty-seven years of age, was taken ill of small-pox. No epidemic had existed at Rio, and the crew had been ashore at that port only a few hours. Some days after McColl's death others were attacked, and ultimately the whole of the crew were seized. Captain Young himself caught the disease, and was unconscious for about twenty days. The ship was well supplied with medicines, spirits, and all requisites for the sick. All on board had been vaccinated in early childhood, the captain amongst the number. At the quarantine stations the patients were attended by Dr. De Burgh Griffith and two nurses, sent from Melbourne, with the greatest possible kindness. The chief officer and one of the crew were not sufficiently recovered to join the ship on its departure from Melbourne.

SUPERANNUATION GRANTS.—Mr. T. J. Cottle, M.R.C.S., lately district medical officer of the Cheltenham Union, and Mr. H. V. Ellis, M.B., C.M. Aberd., lately medical officer for the western district and workhouse of the Gower Union, have been granted allowances of £100 and £23 3*s.* per annum respectively.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on March 10th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	240	54	..	42	2	338	448
North-Western Hospital	193	37	—	8	..	238	443
Western ,,	154	19	—	13	2	188	286
South-Western ,,	147	23	—	11	.	181	340
South-Eastern ,,	168	20	—	24	3*	215	461
Northern ,,	223	19	..	15	..	257	680
Totals	1125	172	—	113	7	1417	2398

* Infant and mother.

MEDICAL NOTES IN PARLIAMENT.

Lodging-house-keepers' Registration.

ON March 5th, in the House of Commons, the Chancellor of the Exchequer, in reply to Lord H. Bruce, said that it would be impossible to make any concession now in favour of those who, under these circumstances, failed to comply with the conditions demanded by the law. But, of course, they will be able to secure the benefits of the lower charge in future by registering themselves each year within the proper time.

The Royal Commission on Vaccination.

Mr. Ritchie will propose the appointment of a member of the Royal Commission to take the place of Mr Bradlaugh.—In reply to Mr. Channing, Mr. Ritchie stated that he was aware that Mr. Bradlaugh was accepted as a representative of those who were opposed to vaccination, and felt bound in making the selection to give weight to that consideration.

Fever in India.

On Monday, the 9th, in reply to Mr. Conybeare, Sir James Fergusson said the statistics of deaths in India, which will be found in the statistical abstract, do not show a progressive increase in each year in the total number of deaths nor in the number of deaths from fever, and the latter depend in great measure upon the season.

Leprosy and the Price of Salt in India.

In answer to Mr. Conybeare, Sir J. Fergusson said: In the Presidency of Madras the price of salt has risen from 9 annas and 8 annas per maund in 1800 to 2 r. 11 a. in 1890. The Secretary of State cannot give information for the earlier years of the century, but if the hon. member wishes it, he can place at his disposal statistics going back to 1841. There is no certain information as to the increase of leprosy. Lepers were counted at the census of 1881, but the results of the census taken last month are not known. The Commission now sitting will doubtless consider the question of the connexion which has been stated to exist between insufficient salt and the prevalence of leprosy.

Excessive Drinking at Public-houses.

In answer to Mr. Rowntree, Mr. Matthews said: The Commissioner of Police assures me that every effort was made for the efficient enforcement of the law, and the figures quoted show that the police are not inactive. But the hon. member is doubtless aware that there are great difficulties of proof in cases where publicans are charged with permitting drunkenness, and I do not think those difficulties will be removed by alteration of the law.

Interment of Stillbirths.

On Thursday, the 12th inst., Dr. Cameron asked the President of the Local Government Board whether his attention had been called to the statement of Dr. Rentoul to the effect that in the year 1889 6321 stillborn children were interred in seventy-one burial board cemeteries; that there are 1100 board cemeteries in England; and that the larger number of such interments take place in parish churchyards, and asked for returns on the subject.—Mr. Ritchie: My attention had not previously been called to the statements which have been published by Dr. Rentoul. The births of stillborn children are not registered by the registrars of births and deaths, and consequently no returns of these births are made to the Registrar-General. I am therefore not in a position to give a return of the number of infants interred as stillborn in 1890, nor to state what proportion of these infants were born respectively in and out of wedlock.

Vaccination.

Mr. Channing asked the President of the Local Government Board whether his attention had been called to the case of Mr. Punshon, of 37, Darwin-street, Old Kent-road, S.E., whose infant child is medically

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certified to have died on Feb. 26th from blood poisoning, from vaccination performed by a public vaccinator; and whether he had directed an inquiry to be made into this case; if so, with what result; if not, whether it was his intention to direct that such inquiry be held by his department.—Mr. Ritchie: I have received a copy of the entry in the Register of Deaths in the case of the child referred to. The cause of death as certified by the medical man was vaccinia and pyæmia. The case has been brought under the attention of the Royal Commission on Vaccination; and it is, I understand, to be investigated by one of the medical men employed by the Commission for such inquiries.

Food and Drugs Act.

In reply to Mr. Herbert Gladstone in reference to the case of Police v. Cannon, in which the defendant was charged with adulteration under the Food and Drugs Act, and which was dismissed by the magistrates, Mr. Ritchie recapitulated the facts of the case, and said: As regards the question of legislation, I am not prepared to propose that any legal proceedings should be taken under Section 20 of the Sale of Food and Drugs Act, 1875, upon a single unsupported analysis. Section 22 already gives power to the justices before whom any complaint is made under the Act upon the request of either party to cause an analysis to be made by the chemical officers of the Inland Revenue Department of the article of food alleged to be sold in contravention of the Act, and to obtain a certificate as to the result. This power was conferred upon the justices to enable them to obtain an independent analysis whenever the circumstances appear to require it.

THE METROPOLITAN HOSPITALS INQUIRY.

THE Committee of the House of Lords on the Metropolitan Hospitals resumed their inquiry on Monday. Earl Sandhurst presided.

The Admission of Nurses to University College Hospital.

Mrs. Alison appeared before the Committee to give evidence bearing on the statement of Sister Cecilia, that in admitting nurses to the staff of University College Hospital no preference was given on account of religious profession. In October, 1883, she applied to be taken as a probationer, and she was objected to on the ground of being a Nonconformist.—By the Earl of Kimberley: She saw the head of the nursing department, and she had been told that the lady was Sister Cecilia. She received no answer in writing. All that occurred was a personal interview. The lady told her that she, being a Nonconformist, was ineligible. No other question was discussed. She did not make any representation to the authorities of the hospital.—By Lord Cathcart: The lady she saw was dressed in the uniform of the All Saints' community. Witness was accompanied by her aunt, Miss Body, who was at that time a sister of All Saints' Community.—By Lord Thring: She did not think she could identify the lady.—By the Chairman: According to her experience the statement made to the Committee by Sister Cecilia was a misrepresentation. She expressed no opinion as to the justice of the rule. She merely wished to contradict the statement which had been made to the Committee.

At a later stage in the proceedings, the Chairman read the following letter which the Clerk of the Committee had received from the Sister Cecilia—viz.: "Dear Sir,—In reply to your letter, I beg to state that on April 6th, 1889, the Mother Superior of All Saints decided that it would be well to admit nurses of all creeds to the paid staff of the hospital. Mrs. Alison, of whom I have no recollection, must have applied previously to this decision. Prior to April 6th, 1889, we trained nurses of all creeds, but did not take them on our paid staff."

The Metropolitan Hospital.

Mr. C. H. Byers, examined by the Chairman, said he was secretary to the Metropolitan Hospital. He had been four years in that position, having previously been engaged in business. Until recently the institution was called the Metropolitan Free Hospital. It was started in 1836, originally as a dispensary, by the present chairman, Mr. Joseph Fry. The present buildings were completed in 1886. They cost something like £36,000, and accommodated 160 beds. The sanitary arrangements were thoroughly good. Each ward was isolated. There were two fire hydrants on each floor, and a fire drill was conducted by Messrs. Shand, Mason, and Company, in which all the nurses as well as the porters took part. At the governors' meeting at which the name of the hospital was changed there was only one dissentient. Every accident and urgent case was taken in on its merits irrespective of the social status of the patient, and at the same time every person who came to the hospital was seen for the first time by the doctor on duty, prescribed for and received seven days' medicine. After that certain questions were asked, and it was optional on the part of the patients to answer them. They had a provident department intended for persons living in the hospital district who were unable to pay the usual fees of medical men. Inquiries were made, if necessary, as to the circumstances of those who took advantage of the scheme. It was generally understood that no single person earning more than 21*s.* per week, and no man, wife, and family earning more than 35*s.*, would be allowed to become a member of the provident department. There were ninety medical men in the district, and when the scheme was being arranged they were invited to meet and discuss it. Only seven of the ninety attended the meeting. Undoubtedly the medical men of the district objected at first to the scheme as likely to interfere with their practices, but lately he had heard no complaints from them. The position the committee took up was that while the hospital was conducted on the old lines abuses certainly occurred, and they wished to put a stop to them. The experience they had already obtained had demonstrated that their provident department was the right thing for the hospital, and he thought that the medical men in the district were beginning to see that they had no desire to take money out of their pockets. Members of the provident department were treated as out-patients, or at their own homes, or in the hospital, as the circumstances of their ailments required. The great difficulty under which the scheme laboured was the shifting of the population, but he thought a proper system of collection would overcome that difficulty. He saw no reason why the scheme should not be a great success. The amount received in provident department payments last year was £670, and the previous year £653. The total expenditure of the hospital amounted to £7500 last year. Jews had been very good to the hospital, and when the new buildings were erected they reserved forty of the 160 beds for people of the Jewish faith, and made special arrangements for cooking the food of Jewish patients. Of the seventy-eight beds now in occupation twelve were occupied by Jews. Witness received a salary of £300. His assistant, who acted in his absence, had a salary of £80, with board and lodging. Witness could not suspend a nurse, but could recommend the matron to do so. Undoubtedly complaints had been made by patients as to the food they received, but they had never been of a serious character. Their building being new they had no drainage plan. It seemed desirable to have one, and the matter would be attended to immediately. Three members of the committee of the hospital accompanied the surveyor in his inspection of the drains last autumn. He admitted the desirability of having an inspection by some outside and expert officer. The system of nursing was similar to that in force at University College Hospital. The work was undertaken by contract by the All Saints' Community, Sister Dorothea being the Sister Superior. At present the nursing staff consisted of thirty-two persons—one sister superior, one night superintendent, three ward sisters, twelve nurses, thirteen probationers, and two lady pupils. They actually paid for sixteen nurses, and received an allowance from the board of the other sixteen in the hospital. The net payment for nursing last year amounted to £135. They were quite satisfied with the nursing arrangements, which had been in force for two years. There had been no deaths among the nurses during that period, and no epidemic.—Lord Cathcart: The weak part of your system seems to be that for fourteen hours per day you have in charge only your clerk, with a salary of £60 a year.—Mr. Byers: £60, with board and lodging. Continuing, witness said that from his own knowledge he could say that their nurses were of mixed religions. They were by no means all extreme persons holding very extreme views. They had no students at the hospital.—By the Chairman: They had a deficit last year of £1300, which they hoped to wipe off by appealing to the public. As a matter of fact, they hoped to get rid of it by the usual and inevitable festival dinner. However much members of the committee might object to the festival dinner, they could not do without it. As a rule they derived about £2000 from the festival dinner.

Mr. D. H. Goodsall, for seventeen years on the staff of the hospital, said, in answer to the Chairman, that he regarded the buildings as admirably suited for the purposes of a hospital. They received all serious cases without comment. When a patient had been seven days in the hospital he was told he must either go elsewhere or join the provident scheme. As a rule the member of the provident department paid 2*s.* annually. This income paid the salaries of the medical officers who attended the department and the drug bill. The out-patient department was not so crowded now as when no provident scheme existed. He thoroughly approved of out-patient departments combined, as in the case of the Metropolitan Hospital, with provident schemes.—By Lord Cathcart: Practically all objection to the provident department on the part of the local medical practitioners had disappeared. He agreed with the view that medical practitioners were the most sensitive people in the world with regard to any trespass upon their practices.—By Lord Monkswell: He thought it desirable to maintain the London qualification in the appointment of the staff. The attendance of students at their hospital was not recognised by the licensing bodies.—By the Chairman: The accommodation for the sick in the district was, in his opinion, very deficient.

The Lock Hospital.

Mr. Algernon Coote, secretary of the Lock Hospitals in Dean-street and Harrow-road, gave evidence as to that institution. The hospital, he said, was founded in 1746. They had 140 beds for females and 20 for males, their working average being about 100. The funds did not admit of all the beds being occupied, although at the present moment they were not refusing cases. In the past it had been their habit to hold a quarterly meeting, open only to governors, but this year for the first time they would hold an annual meeting, open to reporters. The average annual cost per bed for females was between £40 and £45, and for males was about £60. The comparative lowness of cost was due to the fact that 75 per cent. of their patients were able to assist the nurses, and they had to employ only seven nurses. They had neither investments nor endowments, and since the repeal of the Contagious Diseases Acts they had received no Government support. They had a debt of £4000 due to their bankers and tradesmen. Their out-patient department was almost self-supporting.

Their lordships then adjourned.

Their lordships met again on Thursday, Lord Sandhurst presiding.

Brompton Consumption Hospital.

Mr. H. Dobbin, secretary of the Brompton Consumption Hospital in Fulham-road, examined by the Chairman, said that he was in receipt of a salary of £500 a year. The hospital was founded in 1841. They admitted cases of consumption and all diseases of the chest, including heart disease. They admitted the diseases in every form and every stage. The buildings were regarded by the staff as thoroughly satisfactory. They had 184 beds in the old building and 137 in the new building. When the hospital was full their daily average of beds occupied was about 300. They had four meetings each year of governors, open to all the governors and representatives of the press. The committee of management, which might be regarded as the executive of the hospital, consisted of twenty-five elected members, the whole of the medical staffs numbering sixteen, the president, the treasurer, and the chaplain. Five or six was a common attendance of the committee. The average would be hardly as many as a dozen. They generally found that the larger the committee the less satisfactorily was the work got through. The committee met once a week. The treasurer was an honorary officer. He did not take the same position as the treasurers of such large hospitals as St. Bartholomew's or Guy's. He was merely the custodian of the hospital funds and the person who signed receipts for legacies &c. They had five auditors elected by the annual court of governors. The auditors were men of business, with a knowledge of accounts. The audit took place every three months. There was no professional audit. The patients were all free patients who were not supposed to be able to pay for medical advice. They had a very large out-patient department. Patients were admitted on governors' letters. The governor made a statement to the effect that the patient was unable to pay for medical advice. Some patients were admitted as acute cases without a

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governor's letter. In such cases they required the signature of three of the medical officers. Patients were questioned as to their religious belief in order that they might have the benefit of the ministrations of priests or ministers of their own religious persuasion. The committee of management made the contracts for food. The contracts were not advertised but sent round to a number of respectable tradesmen in the neighbourhood—usually to five or six of each trade. The cost of the hospital last year was £24,495. Their income included ground rents £932, rents £198, dividends £3590, annual subscriptions £8050, donations £5206, and legacies £9594. The legacies for the last ten years averaged in cash and stock £14,900. The collector had a percentage of 5 per cent. upon all old subscriptions, and nothing upon new subscriptions unless they came through his hands, which was very rare. He received nothing more than five shillings upon any one subscription. Their outlay for salaries and wages represented about two-thirds of the return from annual subscriptions. The hospital was situated in two parishes—namely, Kensington and Chelsea. In the former parish they paid on a rateable value of £834, the amount being £212 16s. Formerly they were assessed at only £40. In the Chelsea parish they paid £387 10s. on a rateable value of £1500. In this way £600 of hard-got subscriptions went in rates. They did their own nursing. The lady superintendent resided in the hospital. She had a salary of £150, and everything found. She had a special fee of twenty guineas for lectures to the nurses, and in recent years, in respect of extra duties in connexion with the private nursing department, the committee had given her a special gratuity of fifty guineas. The lady superintendent had just left the service of the hospital in order to get married. They employed seven sisters for day duty and two for night duty, sixty-one staff nurses and probationers, and nine extra nurses. The day nurses were on duty from seven in the morning till nine at night. They were off duty three times a week from six to eight o'clock in the evening, once a month from two to ten o'clock, once a month from twelve to ten o'clock, and one Sunday in the month from six to nine o'clock. They enjoyed an annual holiday of sixteen days. The lady superintendent had told him that she hoped to be able to allow the nurses off duty every day of the week. They found it an advantage to have children among the adults. The children amused the adults, and were themselves as happy as they could possibly be in the circumstances.—Lord Sandhurst: Supposing that you considered a certain medical officer in the establishment to have committed a very serious breach of discipline, have you power to suspend him pending the meeting of the committee?—Mr. Dobbin: I do not remember such a case. I remember a gentleman who did not conduct himself satisfactorily, and he was told to go. I do not think the matter came before the committee.—Lord Sandhurst: Supposing that a certain officer committed a serious breach of discipline, would he go on with his duty until the committee met?—Mr. Dobbin: No, I don't think he would. We really have never had such an instance.—The Earl of Kimberley: If one of the medical officers were found to be drunk while in the discharge of his duty, would you allow him to remain?—Mr. Dobbin: No, I don't think so. We have never had a case of the sort.—The Earl of Kimberley: But it might happen?—Mr. Dobbin: If it did the matter would be treated by the immediate suspension of the officer.—By Lord Saye and Sele: The only case of trouble which he remembered was that of a young physician who was inclined to flirt with a nurse. He was packed off at once. The young medical officers did not have latch-keys. The hospital gates were closed at ten o'clock, and any one arriving after that hour had to ring the bell. The door was opened by the night sister, and consequently the condition of all persons entering was observed. They got a superior class of people. They were different from what were termed ordinary medical students.—By Lord Monkswell: They did not employ an inquiry officer for the in-patients. He did not think that their charity was abused. It was he who sent the contracts out among the tradesmen in the neighbourhood.—By Lord Cathcart: He felt certain that no servant of the hospital had ever attempted to get reward or fee from any of the tradesmen who supplied the food. The drainage of the hospital was in a thoroughly satisfactory condition. He did not see that any advantage could be derived from having a professional audit. Nothing could be more searching than their system of conducting the audit. He had not heard of any servant who contracted consumption through attending the patients.—Lord Thring: Your bill of fare is rather monotonous. Do you use nothing save leg of mutton?—Mr. Dobbin: Leg of mutton is what is called ordinary full diet.—Lord Thring: Is it supposed to be particularly good for consumptive patients?—Mr. Dobbin: It is considered to be very digestible.—By the Chairman: The chaplain received a salary of £300 and a house. Patients came to the hospital from a great distance—from the extreme north of Scotland, from Spain, and Germany. A patient arrived some time ago from the post-office in Vienna. Last year they admitted 1528 in-patients and treated 13,753 persons in the out-patient department. The cost per bed amounted to £89 1s. 3d.

Dr. Theodore Williams, senior physician to the hospital, said that there was no chance of infection in the hospital owing to the construction of the building and the system of ventilation. The patients had good food and tonics, and the temperature was always kept up to a certain degree. They made a point of keeping the patients as much as possible in the dining and other rooms rather than in the wards. The three great essentials for consumptive patients were, dryness of temperature, efficient ventilation, and good food. In all those respects the Brompton Hospital was quite satisfactory.—By Lord Clifford: He would not say that consumption could be cured, but the condition of the patients was often greatly improved, and they were enabled to live long enough to die of something else. Darwin had attacked hospitals on the ground that they kept living a lot of people who ought not to be allowed to increase and multiply.—The Earl of Kimberley: Has not the same argument been used against the medical profession?—Dr. Williams: I have heard some of your lordships say that they are beneficial in the opposite way.—By Lord Monkswell: He defended the arrangement limiting the staff appointments to men holding London qualifications. He thought no injustice was caused to licentiates of Dublin or Edinburgh.

The Committee, after examining Dr. Fowler, adjourned.

ERRATUM.—In our report last week of the evidence of Mr. Nixon, secretary to University College Hospital, the witness is represented as stating that the fortnightly meeting of the Hospital Committee was composed in part of "seventeen" nominees of the Council of University College. The number should have been stated as *seven*.

BOOKS ETC. RECEIVED.

AMERICAN ORTHOPÆDIC ASSOCIATION, Philadelphia.
Transactions of the American Orthopædic Association. Fourth Session, 1890. Vol. III. pp. 242.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand.
The Pocket Pharmacopœia. By C. E. A. Semple, M.B. Cantab., M.R.C.P. Lond. pp. 192.

CHURCHILL, J. & A., New Burlington-street, London.
Surgery. By C. W. Mansell Moullin, M.D. Oxon., F.R.C.S. 1891. pp. 1413.

CROSBY LOCKWOOD & SON, Stationers'-hall-court, London.
Ventilation; a Text-book to the Practice of the Art of Ventilating Buildings. By W. P. B. Buchan, R.P. Illustrated. pp. 226. 1891.

DORNAN, W. J., Philadelphia.
Transactions of the American Gynæcological Society. Vol. XV. For the year 1890. pp. 411.

HIGGINBOTHAM & Co., Madras.
Clinical Manual for India. Compiled for the use of the Students of the Madras Medical College. By Deputy Surgeon-General C. Sibthorpe, F.K.Q.C.P. Third Edition. 1890. pp. 420.

LEWIS, H. K., Gower-street, London.
The Middlesex Hospital Reports for the year 1889. pp. 272. Price 2s. 6d.

MACMILLAN & Co., London.
A Biography: The Right Honourable Arthur M. Kavanagh. Compiled by his Cousin, Sarah L. Steele. With Portrait. 1891. pp. 349. Price 14s. nett.

SPRINGER, JULIUS, Berlin.
Die Wirksamkeit des Koch'schen Heilmittelsgegen Tuberkulose. 1891. pp. 905.

VOSS, LEOPOLD, Hamburg and Leipzig.
Bakteriologische Diagnostik. Von Jas. Eisenberg. 1891. pp. 509.

WRIGHT, J., & Co., Bristol; SIMPKIN, MARSHALL, & Co., London.
Lectures on Diabetes. By Robert Saundby, M.D. Edin., F.R.C.P. Lond. With Illustrations. 1891. pp. 232.
The Medical Annual and Practitioner's Index. 1891. Ninth year. pp. 667.

The Baths of Balneoville; by A. H. Idyot, M.R.C.S. (Simpkin, Marshall, and Co., London, 1891).—Igiene dell' Crecchio; per il Prof. C. V. Cozzolino (Filinto Cosmi, Napoli, 1891).—Social Reform in the North; by Lala Baij Nath, B.A.; second edition (Printed at the "Voice of India" Printing Press, Bombay, 1890).—Index Medicus, Authors and Subjects, Vol. XIII.; No. 1, January, 1891 (Trübner & Co., and Lewis, London).—Catechism Series; Materia Medica, Part II., Anatomy: Head and Neck, Part III. (E. and S. Livingstone, Edinburgh, 1891); price 1s. each.—After Four Centuries, the World's Fair. The Discovery of America. To be commemorated by an International Exposition, Chicago, Ill., U.S.A., 1893 (J. M. W. Jones, Chicago).—The Anglo-American Annual; a Directory and Handbook for Residents in Paris, 1890-91 (Neal's Library, Paris).—New South Wales; its History and Resources (Special edition of the Year-book of New South Wales, prepared for the New South Wales Government, 1891).—Polytechnics, or Technical and Recreative Institutes; by Howard Seth-Smith (B. T. Batsford, London, 1891); price 1s. 6d.—Bourne's Handy Assurance Manual, 1891; by W. Bourne, F.S.S. (A. Trengove, London); price 1s.—L'éther, est-il préférable au Chloroforme? par M. le Dr. Julliard, de Genève.—Die Peptone; von Dr. Med. V. Gerlach (L. Voss, Hamburg und Leipzig, 1891).—Journal of the Leprosy Investigation Committee; edited by P. S. Abraham, M.D., B.Sc., F.R.C.S.I. No. 2, February, 1891 (Macmillan & Co., London); price 2s. 6d.—Magazines for March: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister), Boys' Own Paper, Girls' Own Paper (Religious Tract Society), Scribner's.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, P., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Whitley and Monkseaton Urban Sanitary District of the Tynemouth Union, vice Fraser, resigned.

ALLEN, JAMES D. C., M.B., C.M. Edin., has been appointed House Surgeon to the Wirral Children's Hospital, Birkenhead.

BATE, H. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Biddenden District of the Tenterden Union.

BEVERIDGE, A. T. G., M.B., C.M. Aberd., has been appointed Medical Officer to the Aberdeen General Dispensary, vice Gibson.

CALCOTT, L. B., M.R.C.S., has been reappointed Medical Officer of Health for the Oundle Rural and Urban Districts.

CLARE, JOHN, L.R.C.S. Edin., has been appointed Medical Officer of Health for the County Borough of Hanley.

CULLIN, R. B., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Tiverton.

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DENDLE, FRANK, M.B., C.M. Edin., has been appointed Medical Officer to the Rosewell Coal Company, Lochgelly, Fife, vice J. Stiell, M.D., resigned.

EAST, C. H., M.D. Durh., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Dore Union, vice Walker, resigned.

ELLIOTT, E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Bromsgrove Union.

GABRIEL, ARRATOON, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Borough of Donolly, Victoria, Australia, vice Manson, resigned.

HARPER, J. MAURICE, M.R.C.S., has been appointed Honorary Medical Officer to the Eastern Dispensary, Bath, vice H. G. Terry, F.R.C.S. Edin., resigned.

HARRIS, J. R., M.D. Brussels, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Bear-yard Workhouse, Strand Union.

HILL, T. EUSTACE, M.B., C.M. Edin., has been appointed Medical Officer of Health for the County Borough of South Shields.

HODGSON, VICTOR, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Scarborough Hospital and Dispensary.

HUGHES, SAMUEL, M.B. Edin., M.R.C.S., has been appointed Medical Officer of Health for the City of Coalville, Utah, United States of America.

JAMES, F. P. R., L.K.Q.C.P. Irel., has been appointed Medical Officer for the Fourth District of the Hunslet Union.

JOHNSON, RAYMOND, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Surgeon to the Great Northern Central Hospital.

KEMPE, A., M.D. Brussels, M.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health to the Budleigh Salterton (Exmouth) Local Board.

KNOX, A. W., M.B., C.M. Aberd., has been appointed Medical Officer for the Smallburgh District of the Smallburgh Union.

LANSDOWN, F. POOLE, has been reappointed Surgeon to the Bristol General Hospital.

LINDSAY, D. MOORE, L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Healtb for Wasatch County, Utah, United States of America.

MACLACHLAN, S. F., M.B., C.M. Glasg., has been reappointed Medical Officer of Health for the Longtown Rural District of the Longtown Union.

MORTON, EDWIN, M.D. Edin., has been appointed Medical Officer of Health for the Reddish Urban Sanitary District of the Bromsgrove Union, vice Smith, resigned.

PALMER, H. L., M.R.C.S., has been reappointed Medical Officer of Health for the Newton Urban District of the Newton and Llanidloes Union.

PEARCE, ARTHUR, M.R.C.S., has been reappointed Medical Officer of Health for the Salcombe Urban District of the Kingsbridge Union.

PRICHARD, ROBT. DAVID, L.R.C.S., L.R.C.P. Ed., L.F.P.S.Glasg., has been appointed Surgeon to the Resolven and Ynisarwen Collieries.

REYNOLDS, E. S., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed Superintendent Medical Officer at the Royal Infirmary, Manchester.

RUSSELL, JAMES W., M.B., B.C. Camb., has been appointed Resident Medical Officer to the Birmingham General Hospital.

SAWYER, JAS. A. F., L.K.Q.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health for Clevedon.

SPACKMAN, CONISTON, M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer to the Union and No. 1 District of Faringdon, vice F. C. Spackman, resigned.

STEWART, W., M.D. Glasg., L.R.C.P. Lond., has been appointed Medical Superintendent to the Oamaree Hospital, New Zealand.

STYLE, F. W., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for Hucknall-Huthwaite.

SUNDERLAND, OLIVER, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Bexley Urban District of the Dartford Union.

THOM, JAS. M., M.B., C.M. Edin., has been appointed Medical Officer and Bursar of Trinity College, Glenalmond, vice Lowe.

THOMSON, THEODORE, M.B. Lond., L.R.C.P. Edin., has been reappointed Medical Officer of Health for Sheffield.

TYNDALE, W. R., M.B. Aberd., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Hampton Urban Sanitary District of the Kingston-on-Thames Union.

WARREN, WM., M.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Borough of Kew, Victoria, Australia, vice Walsh, resigned.

WEBB, C. F., M.D. Durh., F.R.C.S. Edin., has been reappointed Medical Officer for the First District of the Basingstoke Union.

WELCH, J. R., M.B. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Handsworth Urban Sanitary District.

WILEY, A. O., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer for the Rural Sanitary District of the Knaresborough Union, vice Cantley, resigned.

WISE, N. V., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for Trowbridge.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon. No salary, but board, lodging, fuel, and light provided.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary Surgeon. Salary £100 per annum, with board.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer for one year. Salary £80 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants. The fee is 3 guineas for a period of three months.

COUNTY ASYLUM, Prestwich, Manchester.—Dispenser.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officers. Salary commences at £100 a year, with prospect of an increase of £25 at the end of the first year and £25 at the end of the second, with further increase according to promotion, together with furnished apartments, board, washing, and attendance.

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £90 per annum, and board and lodging.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Obstetric Physician to Out-patients.

GUY'S HOSPITAL MEDICAL SCHOOL.—Two additional Anæsthetists for the Dental Department.

HOSPITAL, King's Lynn.—House Surgeon and Secretary. Salary £80 per annum, rising to £100, with board, lodging, and washing in the Hospital.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing.

KING'S COLLEGE, London.—Demonstrator of Physiology.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance. (Apply to the Secretary, Leith Offices, 24, Moorfields, Liverpool.)

M.R.C.P., THE LANCET Office, 423, Strand, W.C.—Assistant Medical Officer in a Metropolitan Private Asylum.

METROPOLITAN ASYLUMS BOARD.—Clinical Assistant at the South-Eastern Fever Hospital, New-cross-road, S.E. Board, lodging, and washing.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £120 a year,

NORFOLK AND NORWICH HOSPITAL.—Physician on the Honorary Medical Staff. (Apply to the Secretary, Norwich.)

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone, N.W.—Resident Medical Officer for four months. Salary at the rate of £60 per annum, with board and residence in the Hospital.

ROYAL SOUTH LONDON DISPENSARY.—Honorary Surgeon.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Resident Medical Officer. Salary £70 per annum, with board and residence.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Anæsthetist and Registrar for one year, honorarium of 70 guineas being voted at the end of that term.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, W.—Surgeon.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician.

TOWNSHIP OF MANCHESTER.—Resident Assistant Medical Officer at the Workhouse at Crumpsall. Salary £100 per annum, with furnished apartments, fire, light, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On March 3rd, at Lancaster House, Goole, the wife of Dr. Macdonald Brown, of a daughter (prematurely).

FLETCHER.—On March 6th, at Hyde-park-mansions, the wife of H. Morley Fletcher, M.A., M.B., of a daughter.

FOX.—On March 10th, at Brislington House, near Bristol, the wife of Dr. Bonville Fox, of a son.

GRAY.—On March 9th, at Holsworthy, North Devon, the wife of Walter G. Gray, M.R.C.S., L.R.C.P.E., of a daughter.

HARGREAVES.—On March 6th, at Melrose, Merton Park, Surrey, the wife of M. K. Hargreaves, M.D., of a daughter.

RUSHBROOKE.—On March 6th, at Dresden House, Stamford-hill, N., the wife of Thomas Rushbrooke, M.A. Cantab., M.R.C.S., L.R.C.P., &c., of a son.

STEIN.—On March 6th, at Beckenham, the wife of Dr. C. Guthrie Stein, of a son.

MARRIAGES.

DANIELL—WOOKEY.—On March 9th, at St. Mary's, Hornsea, Henry Pywell Daniell, L.R.C.P., fourth son of the late Alfred Horatio Daniell, M.R.C.S., of Kegworth, Leicestershire, to Elinor Mary, only daughter of James Wookey, of Potter's Bar, Middlesex.

DEACON—POOK.—On March 4th, at West Croydon Church, John Gillespie Deacon, M.D., Army Medical Staff, to Carrie, eldest daughter of Fred. Pook, of Lisburn, Thornton Heath.

DEATHS.

HAWKINS.—On March 1st, at Berkeley-square, Clifton, Walter R. T. Hawkins, M.R.C.S., aged 29.

HOLLINWORTH.—On March 2nd, at High-street, Lees, Oldham, John Hollinworth, M.R.C.S.

MORRIS.—On March 4th, at Hereford, David E. Morris, M.R.C.S.

OSBORN.—On March 11th, at 2, Anglesea-place, Southampton, Henry Osborn, M.R.C.P., for twenty years Medical Officer of Health for the Borough of Southampton, aged 78. No flowers.

ROBERTSON.—On March 5th, at The Birklands, Hillsea, Cosham, Hants, Frederick Freer Leslie Robertson, M.B., M.R.C.S., aged 46.

TREWMAN.—On March 8th, at Greville Villa, Exmouth, George Robert Trewman, M.R.C.S. and L.S.A., in the 84th year of his age.

WILLETT.—On March 6th, lately residing at Manchester-street, Marylebone, Charles Verrall Willett, M.R.C.S.

WILSON.—On March 5th, at Walker-terrace, Gateshead, Charles Wilson, M.B. Lond., aged 25.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, March 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. J. W. Bond: Hoarseness and Loss of Voice. (Post-graduate Course.)
SOCIETY OF ARTS.—8 P.M. Prof. R. Meldola: Photographic Chemistry. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Edmund Owen: A fatal case of Litholapaxy in a Child.—Surgeon-Major Keegan (Indore): Litholapaxy in Children, illustrated by Specimens of Calculi and by various Instruments.

Tuesday, March 17.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Broadbent: Structural Diseases of the Heart, from the point of view of Prognosis. (Lumleian Lecture.)
ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, Jermyn-st., S.W.).—7.45 P.M. Dr. Frederic J. Mouat: Prison Ethics and Prison Labour.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Professor A. Bostock Hill: Trade Nuisances.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Lauriston Shaw: Malignant Disease of the Œsophagus.—Mr. A. A. Bowlby: Symmetrical Periostitis with peculiar formation of New Bone.—Dr. A. F. Voelcker: Scurvy Rickets.—Dr. S. West: Liver with two Hydatids, the Sacs communicating, but not the Cysts.—Mr. A. E. Barker: Malignant Polypus of Nose.—Dr. Galloway: Syringomyelia.—Mr. E. Solly: Myeloid Tumour of Tibia, with Secondary Growths.—Mr. J. Hutchinson, jun.: Syphilitic Disease of Occipital Lobe with Perforation of Cranium.—Mr. Roger Williams: Median Supernumerary Nipple in Male. Card Specimens:—Dr. S. West: Plastic Bronchitis.—Mr. Edgar Willett: Secondary Scirrhus of Bone.—Dr. A. F. Voelcker: General Peritonitis after Perforation of Vermiform Appendix.

Wednesday, March 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Greville MacDonald: Hay Fever and Paroxysmal Sneezing. (Post-graduate Course.)
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. E. F. Willoughby: A Retrospect of the successive Epidemics of Cholera in Europe and America from 1829 to 1889.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. T. Charters White: New Method of Demonstrating Cavities in Dental and Osseous Tissues.

Thursday, March 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor C. Meymott Tidy: Modern Chemistry in relation to Sanitation.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Broadbent: Structural Diseases of the Heart, from the point of view of Prognosis. (Lumleian Lecture.)
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. Rayner Batten: (1) A case for Diagnosis (? Disseminated Sclerosis); (2) A case of Trachœitis with Dry Crust Formation in a Laryngoscopic case.—Dr. Ewart: (1) Friedrich's Disease, with increased Knee-jerk; (2) The Symptoms of Paralysis Agitans in a Hysterical Subject. Cases will also be shown by Drs. Cagney, Quarry Silcock, Maguire, Sidney Phillips, and Mr. Keetley.

Friday, March 20.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL (Fulham-rd., S.W.).—4 P.M. Mr. W. H. Flam: Malignant Disease of Breast.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Law, English, Scotch, and Irish; General Enactments; Public Health Act, 1875; Model Bye-Laws, &c.
ROYAL INSTITUTION.—9 P.M. Professor Victor Horsley: Hydrophobia.

Saturday, March 21.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 12th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 6	30·09	W.	42	40	88	56	40	..	Cloudy
,, 7	29·73	W.	47	44	69	53	42	..	Cloudy
,, 8	29·61	N.E.	41	40	..	42	40	·46	Raining
,, 9	29·78	N.E.	37	35	49	40	35	·08	Overcast
,, 10	29·39	E.	32	..	69	35	30	·22	Snowing
,, 11	29·29	E.	34	33	81	40	31	·39	Snowing
,, 12	29·73	N.E.	31	..	70	40	29	..	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

SPECIMENS OF MEDICAL ADVERTISING.

THE following card is stated to have been widely circulated at Balham. It is said to be a new thing at Balham, and we trust the specimen will remain a unique one:—

"Endlesham-road Surgery, No. 103, Endlesham-road (Balham end). A resident physician always in attendance. Hours of consultation: Morning, 9 to 11 A.M.; evening, 7 to 9 P.M.; Sunday evening, 7 to 9 P.M. Usual small fees. Vaccination each Wednesday at 11 A.M. Advice and medicine one shilling."

We would also direct attention to the following advertisement:—

"Consulting Rooms for Cancer and Diseases of the Skin, Kensington-chambers, Simmons-street, Blackburn. Physician, Dr. Hindle, Lic. Royal College of Physicians, Edin. Hours, 2 to 5 P.M. daily"

A yet bolder departure from professional usage is a long circular purporting to be written by Mr. Charles Oakes, M.B., C.M., L.S.A., and L.M., 38 and 40, Millman-street, Bedford-row, W.C. It sets forth the author's unusual opportunities of studying all sorts of diseases. But the specialty on which he obviously most prides himself is ulcers of the legs, of which he has permanently cured 500 cases, and never yet met one to fail him.

The following is from a Hobart (Tasmania) newspaper:—

"[A card] Dr. Charles Watson, Surgeon (General, with Speciality for Cancer, Tumours, &c.), begs to announce that having recently arrived from London, he has taken 41, Davey-street, Hobart, where he may be consulted from 9.30 to 11 A.M., or by appointment, daily."

We can only ask the attention of the bodies whose qualifications are held by this group of advertisers to the above specimens.

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TUBAL PREGNANCY IN A BITCH.

To the Editors of THE LANCET.

SIRS,—Seeing in Mr. Bland Sutton's Erasmus Wilson lecture that tubal pregnancies in the lower animals are unrecorded, I think it may be worth while to note a case which I have always hitherto regarded as tubal, and which occurred in a bitch. It was a valuable little black-and-tan bitch, the property of a friend at whose house I was for a time staying. This was to be the third litter; the second had consisted of one puppy only. She had been now in great pain for some hours, and was forcing out some brownish fetid fluid from the vagina. As the animal was so valued, I advised a veterinary opinion, which was obtained, the gentleman declining, however, to interfere. With a button-hook and a small sequestrum forceps I got away three puppies that apparently had been dead about a week. Much gas and fluid escaped with them from the uterus. In the night the bitch died. Next morning I found on opening the abdomen that a pulpy mass covered with very thin membrane lay toward the right side among the intestines, and attached at its lower part by a small peduncle to the uterus, which was firmly contracted and apparently normal. I opened up the mass, and found it contained much of the same sort of fluid that had escaped, and also a puppy, which was macerated and had all its hair and cuticle quite loose. It was bigger and had been more developed than the ones I removed, and evidently, from these facts and being so much more decomposed, had belonged to a previous litter. My reasons for believing it to be tubal were that the uterus seemed normal, and that it would have long before set up peritonitis if intra-peritoneal, besides which it was almost free in the cavity, except by the uterine peduncle and a small adhesion at the back. My investigation caused disgust in the house, and all the parts were surreptitiously conveyed away and buried, so that unfortunately I am unable to produce the specimen.—I am, Sirs, yours faithfully

GUSTAVUS G. GIDLEY, M.R.C.S., L.R.C.P.

Honiton, March 4th, 1891.

Mr. C. M. Fegen.—Our correspondent has no claim upon the guardians in the case mentioned by him. It is only when the knife is used in the operation that an extra fee is granted.

Dr. John W. Ogle.—The paper has been received.

"THE AMMONIO-CUPRIC TEST."

To the Editors of THE LANCET.

SIRS,—Your correspondent "R. R." in last week's issue asks for an explanation of the gradual reacquisition of a blue colour by Pavy's ammoniated cupric test solution after the liquid has been decolourised by boiling with diabetic urine. The explanation is simple. The cupric oxide originally present in the blue liquid becomes reduced, on boiling with a saccharine fluid, to the lower or cuprous oxide, which is held in solution by ammonia, yielding a colourless liquid. The cuprous oxide, however, in contact with air rapidly passes by reoxidisation into the cupric oxide, and in so doing reacquires a blue colour. For this reason, as also for the purpose of preventing the rapid dissipation of the ammonia, the solvent, the operation should be performed in a small flask fitted with delivery and escape tubes, and not in an open vessel. If the ammonia is too rapidly driven off, the red cuprous oxide is precipitated, interfering with the perception of the terminal point of decolouration. Obviously the reoxidation and reappearance of blue colour occurring only after the determination is completed are of no account. Your correspondent will find a full description of the process, with a sketch of the apparatus employed, in THE LANCET of March 1st, 1884. I am, Sirs, yours faithfully,

W. S. ROWNTREE.

The Laboratories, Examination Hall, March 10th, 1891.

To the Editors of THE LANCET.

SIRS,—In answer to the inquiry of your correspondent "R. R.," I write to say that having some time ago been in doubt as to the meaning of the recolouration after cooling of the solution, I wrote to Dr. Pavy, who very kindly replied as follows:—"The blue colour may reappear after cooling, and is thus explained: Decolourisation takes place as the result of the reduction of the oxide of copper to the state of suboxide. This reduced suboxide is very ready to take oxygen again. Indeed, an ammoniacal solution of suboxide of copper is used by chemists as a test for oxygen. As the oxide is re-formed by the absorption of oxygen the blue colour is restored."

I am, Sirs, yours truly,

March 9th, 1891. H. C. H.

M.O.H.—Unless the district has at the census preceding the election a population of at least 50,000, no diploma of Public Health is necessary, although sanitary authorities for districts of smaller populations often give preference to candidates holding such diplomas. The diploma is also not needed if for three consecutive years before 1892, when the requirement comes into operation, the candidate has held the post of medical officer of health for a population of not less than 25,000.

A Westminster Student.—The method suggested has been in use for many years.

Dr. Helm's paper is marked for insertion.

M.R.C.P.—Yes, shortly.

MEDICAL OFFICERS OF HEALTH AND MEDICAL PRACTITIONERS.

AN interesting correspondence has been sent to us—too long for insertion—between a medical practitioner who had notified and the medical officer of health, in which the practitioner complains that the medical officer of health visited his cases and criticised, and sometimes questioned, his diagnosis in cases of diphtheria, saying in one case just after Dr. —— had cleared patches off with sulphurous acid: "Dr. —— has diagnosed diphtheria, but I can see no patches." In another case he took a gentleman with him, and they reported "that they could not see anything." In another case he said his eyes were weak, and the "match" gave a very bad light. "The other gentleman felt her neck about, but did not look in the throat, and said he did not think it was *that*." The next day, however, the patch was still there. In another case, in a house where one had died of the disease, the medical officer of health examined a child and said there was nothing the matter. The next day the case proved a very severe one of diphtheria, and the parents said they would have sent sooner for the medical man but for the opinion of the medical officer of health. Such interference as this is intolerable, and should be sternly condemned by the medical authorities of the Local Government Board. The correspondence discloses a series of cases in a small place with several deaths. The practitioner was right in regarding every case, in such a place, with membranous patches as one of diphtheria. The correspondence is a very striking illustration of the inconvenience of divided responsibility in diagnosis. If medical officers of health wish to visit notified cases, they should put themselves in communication with the practitioner in attendance. The smaller fee in pauper cases is according to law.

Messrs. Wright and Mackenzie.—The case being one of infectious disease rather than of blood-poisoning, we are of opinion that a claim would not stand.

INSOMNIA.

To the Editors of THE LANCET.

SIRS,—Having seen in your last issue the letter of a correspondent requiring some advice in a case of insomnia, I would advise what I found of great benefit in a case in which I did not care to administer narcotics or sedatives. I simply prescribed liq. strychniæ, ♏i.; aquæ, ʒii. This dose every two hours. Also ext. ergotæ liq., ♏i.; aquæ, ʒii. This dose every two hours also, alternately with the former. It may have been a little extra trouble for the patient having to take medicine every hour, but the result was most satisfactory. In less than twenty-four hours natural sleep ensued. In the case given by your correspondent I would advise substituting for tobacco cubeb cigarettes. If possible recommend the patient a hot sea-water bath for ten minutes, followed immediately by a cold sea-water plunge, or a couple of gallons poured over the patient will do instead. The patient should then be rubbed with a rough bath towel for half an hour or more. This bath to be taken every morning about two hours after breakfast, the temperature of the water commencing at 100°, and rising one degree every two days up to 105°. For diet as much milk as possible; fish three times a day, and as little meat as possible. No stimulants, and as much out-door exercise as possible without fatigue. I understand that if sulphonal be given it must be taken in hot water to be effective. It leaves no ill effects. I am, Sirs, yours faithfully,

Ealing, March 9th, 1891. T. H. FORD.

A CONCESSION TO INFIRM SIGHT.

To the Editors of THE LANCET.

SIRS,—Please allow me to draw attention in your columns to a new penny monthly paper, published by Messrs. Simpkin, Marshall, & Co., called "The Old Folks' Monthly Chit-Chat." It is printed with special large type (great primer), to suit the eyes of those whose sight is impaired from old age or other cause. To me there seems to be ample need and room for such a publication. Doubtless some will think it might with advantage be conducted on somewhat broader lines, so as to be acceptable to others besides members of the Church of England. I enclose for your inspection copies of the three numbers already published, and have only to add that I have no personal interest in the success of the paper.

I am, Sirs, your truly,

GEO. ABBOTT,

Surgeon to the Tunbridge Wells Eye and Ear Hospital.

March, 1891.

SURGICAL TREATMENT OF GRANULAR LIDS.

To the Editors of THE LANCET.

SIRS,—I have treated several cases of granular lids, principally with the "lapis divinæ," and although a cure resulted in most, the time occupied was very long. During the last two months I have treated three cases in the following way. After eversion of the lids, I make a number of short deep incisions parallel with the edge of the eyelids, and then thoroughly scrape away the granulations with as little damage as possible to the conjunctiva. A cure resulted in each case under the fortnight. I think this method will compare favourably with any other. I am, Sirs, yours truly,

Newhaven, March 7th, 1891. ARTHUR G. MOSSOP.

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Mr. T. G. Harrison.—The heat-diffusing fireplace mentioned in our issue of Jan. 3rd can be had of Mr. Binnie of Wokingham. Or a grate of similar construction suggested by Mr. Teale of Leeds can be had through the manufacturers of these grates at Leeds. There is also another form of heat-diffusing fireplace manufactured by Messrs. Bishop and Barnard of Norwich.

Dr. Macfarlane's paper will appear very shortly.

G. C. P.—No, not on general subjects.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, London; Dr. J. W. Ogle, London; Mr. Hulke; Dr. Gordon Holms, London; Dr. McCall Anderson, Glasgow; Dr. Hingston Fox, London; Mr. B. Sutton, London; Dr. C. Steele; Mr. Colcott Fox, London; Mr. Barrow, London; Dr. Herman, London; Sir James Sawyer, Birmingham; Dr. M. Cohn, Berlin; Dr. Herschell; Dr. G. Macdonald, London; Sir G. M. Humphry, Cambridge; Dr. Broadbent, London; Dr. Dimmock, Harrogate; Mr. P. Edgelow, London; Mr. E. Glave, Abadeh; Mr. H. J. Collins, Norwich; Dr. W. B. Haward, California; Mr. Pugin Thornton, Canterbury; Dr. S. Dixon, Philadelphia; Mr. J. B. Pike, Loughborough; Mr. Newnes, London; Mr. Hepworth Collins, Manchester; Mr. A. C. Hartley, Liscard; Messrs. Clarke and Hodgson, Leicester; Dr. G. Dean, Vienna; Messrs. Haasenstein and Vogler, Frankfort; Dr. Gemmel, Lancaster; Messrs. C. Mitchell and Co., London; Dr. J. G. Horder, Cardiff; Messrs. Walter, Thorp and Co., Glossop; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Langridge and Freeman, London; Mr. K. Thornton, London; Dr. Gourley, West Hartlepool; Mr. Ford, Ealing; Mr. Evans, Akyab; Messrs. Isaacs and Co., London; Dr. Bowlan, Newcastle-on-Tyne; Messrs. J. and H. Grace, Bristol; Mr. J. E. Cornish, Manchester; Messrs. John Wright and Co., Bristol; Mr. F. A. Davis, London; Messrs. Wright and Mackenzie, Romford; Dr. Brett, Watford; Messrs. J. Richardson and Ce., Leicester; Surgeon-Major A. Duncan; Dr. Williamson, Manchester; Dr. Altomeyan, Aleppo; Mr. Milburn, London; Mr. Gidley, Honiton; Mr. Eminson, Scotter; Mr. Stanwell, Rochdale; Dr. De Renzy, Dublin; Mr. W. H. Brown, Leeds; Mr. Whitehouse, Birmingham; Mr. Haviland, Douglas; Mr. Cardew, London; Mr. Rowntree, London; Mr. Tubby, London; Dr. R. Favell, Sheffield; Mr. Southam, Manchester; Mr. Ball, London; Dr. Walmsley; Mr. Edwards, Birmingham; Dr. Crowther, Hobart; Mr. Birchall, Liverpool; Mr. C. H. Leet, Liverpool; Dr. Gramshaw, Easingwold; Messrs. Darnton and Bottomley, Ashton-under-Lyne; Mr. Ryan, London; Messrs. Cooke and Sons Winsford; Mr. H. Green, London; Dr. J. MacMnnn, Crouch End; Mr. Gurner, London; Mr. Thomas, Leeds; Messrs. Barker and Sons, London; Mr. Hime, Bradford; Mr. Glover, Tyrol; Dr. A. S. Taylor, Surbiton; Mr. Hornibrook, London; Miss Fernie, Macclesfield; Mr. Macfarlane, London; Mr. Griffith, Carnforth; Mr. Osborn, Southampton; Dr. Evans, Bradford; Mr. Gates, London; Mr. Smith, Oldham; Mr. Kelly, London; Dr. Garman, Kendal; Mr. O'Gorman, Kilkenny; Mr. Lewis, Rainhill; Mr. Koshe, Manchester; Mr. T. B. Browne, London; Mr. Macdonald, Manchester; Dr. Boghill, Birmingham; Miss Hooper, London; Mr. Weller, Colchester; Mr. J. C. Neill, Haslingden; Mr. Sheine, Philadelphia; Mr. Sell, London; Mr. Everard, Athlone; Mr. Bullivant; Mrs. Harvey, London; Mr. Fox, Manchester; Bristol Drug Co., Ansonia, U.S.A.; Notification Act; T. H. J. P.; Ubique; C. F.; H. C. H.; M.O.H.; Secretary, Norfolk and Norwich Hospital; R. D., London; Attendant, London; Sick of Dispensing; H.; F.R.C.S.; Peno, London; Oxon, London; Bedford Infirmary; The Author of "Flemish Interiors"; Secretary, West-end Hospital, Welbeck-street; A. V. M., London; Anglo-Swiss Condensed Milk Co., London; Bradford, London; House Surgeon, Kidderminser Infirmary; F. F., London; Dunelm, London; One who Subscribes to Charities; Alphabet, London.

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ABRIDGED REPORT OF

The Lumleian Lectures

ON THE

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

By W. H. BROADBENT, M.D., F.R.C.P. Lond.

After introducing the subject matter of the lecture, Dr. Broadbent said: The muscular walls of the heart are liable to changes of various kinds, some of which constitute diseases which shorten life and give rise to much suffering. Of these structural alterations, some are extremely common—hypertrophy, dilatation, fatty degeneration; others rare—cancer, syphilitic gumma, abscess, aneurysm, and localised fibrotic induration. We shall concern ourselves only with those which are comparatively frequent; the others, obscure as well as uncommon, are very seldom recognised during life, and a diagnosis is only made when an exceptionally clear case comes under the notice of an exceptionally acute observer. Even when the common and familiar affections—hypertrophy, dilatation, and degeneration only—are taken into consideration, we find ourselves on far less secure ground than when dealing with lesions of the valves. The latter we can localise with great confidence; and knowing partly by experience, partly by the application of mechanical principles, their effects and tendencies, we can, by making out how far such effects are manifest, form an opinion as to the probable course of the symptoms and as to the future of the patient. On examination after death, again, we can understand the connexion between the lesion and the symptoms, and can follow the sequence of secondary changes in the heart and vessels which are set up by the original valvular defect. In the case of structural changes, on the contrary, we are often left in some degree in the dark even by a post-mortem examination. In one patient fatty degeneration has apparently proved fatal at so early a stage that the naked-eye characters of the condition are scarcely perceptible, and it is only by the microscope that its existence is definitely established; in another the change has proceeded so far that the fingers sink into the pale greasy walls, and the muscular fibres have almost disappeared, so that it is scarcely conceivable how the heart has been able to impress any movement whatever on the blood or how life has been sustained through the intermediate stages of disintegration. So with regard to dilatation: there is no fixed relation between the degree of enlargement of the cavities and thinning of the walls found after death and the interference with the circulation observed during life. One man will live for years with a heart which has reached the extreme limits of dilatation, while another succumbs when it is but moderately advanced. If, therefore, we could make out with great exactness the dimensions of the heart, the size of its separate chambers, and the thickness of their respective walls, which is no easy task, we could not, on these grounds alone, compare one case with another and decide upon the relative danger.

Many other considerations of extreme importance will come into the estimate—the functional vigour of the muscular walls as well as their thickness, the liability to palpitation, the state of the vessels, the degree of peripheral resistance, the presence or absence of reflex irritation of the heart from gastric or other derangement. It is of the utmost consequence that such approximation to a forecast of the prospects of life as is possible should be an object of serious endeavour. The cases are numerous, far more numerous at and after middle age than of valvular disease, and everything which has been said as to the importance of prognosis in general applies here. An early recognition of these changes, indeed, is often of greater service to the subject of them than in the case of valvular affections, since it reveals also the tendencies which are in operation, and often at a time when they can be successfully combated by treatment. Too commonly, however, no attempt is made to recognise the existence and extent of degeneration or dilatation. The symptoms due to derangement of the circulation force themselves upon the attention of the medical man, but no murmur being detected, the only diagnosis ventured upon is that of "weak heart," a vague term which covers the entire ground, from temporary functional debility to disease inevitably and imminently fatal. Such a diagnosis reacts unfavourably upon the mind of the observer who rests upon it, and makes him less exact and trustworthy, while it may be full of danger to the patient. A further justification of the prominence given to prognosis is that the grasp of all the facts of the disease and of the individual case, which is necessary to the formation of a just forecast of the result, is the best guide for treatment, whether this may demand chiefly patience and caution or must be energetic and prompt. Prognosis is not merely a well-instructed conjecture as to the ultimate issue, it is a deliberate judgment as to the processes and tendencies of the disease and as to the constitutional soundness and strength of the patient; the foresight which relates to the dangers which attend the attack, to the course which it will run, and to the influences and contingencies which make for or against the sufferer.

Hypertrophy.—The prognosis of cardiac hypertrophy is that of its cause. The character and degree of hypertrophy are important as indicating the existence of some condition which has given rise to the hypertrophy. The causes which bring about hypertrophy of the *left ventricle* are: (1) Valvular diseases; (2) stenosis or insufficiency of the aortic valves; (3) mitral insufficiency; next in frequency will be (4) protracted high arterial tension, the evidence of which is manifested by large, thickened, tortuous radial and temporal arteries or a dilated ascending aorta, the causes of which may be renal disease, incipient and confirmed gout, and the prognosis and treatment depend on the identification of the underlying condition; (5) adherent pericardium, which is difficult to diagnose, may be a factor in the causation of sudden death, and its recognition therefore is a matter of interest. Hypertrophy of the *right ventricle* arises from (1) valvular disease, chiefly mitral stenosis, or insufficiency; and from (2) conditions which give rise to obstruction in the pulmonary circulation, such as emphysema or bronchitis. The hypertrophy is rarely dissociated from dilatation, which is the primary effect of the obstruction in the pulmonary capillaries. Collapse of a portion of the lungs, contraction of a lung from pleural adhesions, fibroid phthisis, or any condition which throws considerable area of lung surface out of gear, will in a certain degree give rise to overwork and consequent hypertrophy of the right ventricle.

The diagnosis between dilatation and hypertrophy requires notice. In hypertrophy the pulse will be of that condition which has given rise to the hypertrophy. If it has arisen from arterio-capillary obstruction, from renal disease, gout, lead poisoning, or pregnancy, the pulse will be one of high tension. The artery will be full between the beats, not easily compressed, and has a cordlike feel. The pulse will not have a violent ictus, but will rise gradually and subside slowly, so much so that it is frequently described as weak. Regarding the physical signs, bulging is sometimes recognisable over the cardiac area. The apex beat is depressed to the sixth or seventh space, and may be displaced outwards. It is a circumscribed gentle heave. Palpation is always an extremely important part of the physical examination, by means of which the apex beat can be further defined and felt as a powerful but deliberate thrust in the space. When the flat of the hand is laid over the cardiac region a general bearing impulse can usually be felt. When the left ventricle is alone or mainly affected, the impulse is not very conspicuous. When the aorta is dilated pulsation may be felt in the second and third spaces near the sternum. Occasionally when the hypertrophy is considerable neither apex beat nor impulse can be seen or felt. The results of percussion must be correlated with all the other evidence as to the size of the heart. Auscultation, besides teaching the character and intensity of the sounds, must be made to contribute to the information by careful noting of the seat of maximum intensity of the sounds in the apex region. The first sound of the left ventricle, as heard at the apex, is less distinct than in a normal state of the heart; either the mass of muscle enters into contraction less simultaneously, and, the muscular tension being less sudden, yields a duller sound, or the thickness of the walls masks the sound produced by the sudden tension of the valves and tendinous cords. The second sound, which at the apex is aortic only, is, on the contrary, usually louder than normal, and is often

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heard at and near the apex more distinctly than in the right second space. When the first sound is prolonged and muffled, and especially when it can be described as "impure" (a very objectionable term) or murmurish, careful examination will usually reveal that it is reduplicated, the first two sounds of the right and left ventricle not coinciding. This indicates that the left ventricle is no longer quite equal to the extra work imposed upon it and marks the supervention of a tendency to dilatation. At the base of the heart the left ventricle first sound is still less distinct than at the apex, and is, indeed, frequently quite inaudible, while the accentuation of the second is rendered more evident by the absence of a first sound. As has already been said, however, the aortic second sound may be even more distinct at the apex than in the aortic area. When this sound is not only accentuated but low pitched and ringing, the root of the aorta is more or less dilated, and the sound will be heard for some distance to the right of the edge of the sternum, perhaps over a great part of the chest and along the spine.

The sounds of the right ventricle undergo no modification of sufficient importance to require notice. Various symptoms are described as resulting from hypertrophy of the heart. Discomfort in the region of the heart, tenderness, throbbing sensations in the head and neck, pulsatile noises in the ears, audible pulsation of the carotid and other arteries, undue frequency, abrupt, irritable, and irregular action, and proneness to palpitation: some of the symptoms being the result of the size of the organ and of the vehemence of the heart beat, others being due to the cause of the hypertrophy, and others to various affections of the heart. The question of prognosis in relation to hypertrophy mostly resolves itself into this: whether the compensation which it establishes is adequate and efficient, and how far it promises to be durable. Compensation is efficient when there are no symptoms of embarrassment of the circulation, and when the heart responds to all ordinary calls upon it without undue shortness of breath or respiratory distress. The effects of exertion are an important criterion, due allowance being made for the greater liability to breathlessness which is natural to some individuals, or is produced by bodily conformation or results from a sedentary mode of life.

The sounds of the heart usually give notice when it is overtaken by the resistance to the onward movement of the blood. The interval between the first and second sound may be prolonged, the systole requiring more time than under ordinary circumstances to complete itself. So long as the normal proportion between the systolic and diastolic pauses is not disturbed, there is no indication that the heart is unequal to its work, or is suffering from the stress put upon it; but when the systolic pause is lengthened at the expense of the diastolic, so that the sounds are equidistant, the period of repose and reconstitution of the muscular fibres of the ventricle is shortened, and their nutrition must in time suffer. During systole the blood is squeezed out of the walls of the heart, and it is during the diastolic relaxation that it obtains free access to the cardiac fibres. Another evidence that the heart is yielding to the strain of overwork is reduplication of the first sound. The prognosis becomes serious when the first sound is broken up in any very considerable degree. But when the cardiac hypertrophy has been brought about by high arterial tension, whether associated with renal disease or gout, or other cause, there must be taken into consideration the possibility that the powerful heart may rupture diseased vessels in the brain.

Treatment for hypertrophy as such has always appeared to me to be out of place. The functional vigour and energy of the overgrown and over-strong heart could no doubt be reduced by various means—low diet, enforced rest, and such drugs as aconite; but, unless it is clear that the hypertrophy has gone beyond the requirements of the condition which has given rise to it, the advantage of this procedure would be more than doubtful. Even in the attempt to relieve the incidents of hypertrophy—palpitation, throbbing sensations in the chest or head, irritable or irregular action of the heart, præcordial oppression—the employment of direct cardiac depressants is rarely of service, and is at times attended with danger. In aortic stenosis, for example, I have known aconite, given with a view of quieting tumultuous action of the heart, so far to reduce the contractile energy of the left ventricle that it was no longer able to cope with the obstruction, and death quickly followed from cardiac asthenia, the pulse becoming imperceptible, the extremities livid, and the surface of the body cold and damp. This would be less likely to occur where the cause of the hypertrophy was obstruction in the peripheral circulation, as the arteries and capillaries are relaxed by such agents as depress the action of the heart.

We have really to consider, not the treatment of hypertrophy or its cause, but the treatment suggested by the hypertrophy. We shall recognise, for example, the necessity of diminishing the volume and improving the quality of the blood by appropriate diet and hygiene, and, if necessary, by tonics. We shall recognise also the desirability of diminishing the resistance to the onward movement of the blood in the arterio-capillary network by care in diet, again by aperients and by eliminants of various kinds. In some cases the resistance in the peripheral circulation may be further lessened with advantage by the physiological relaxants of the arterioles and capillaries, such as nitro-glycerine and the nitrites. By these means the work thrown upon the heart is reduced, and, if necessary, the heart may then be strengthened by such remedies as strychnine and digitalis.

All these measures are specially required when the hypertrophy is no longer equal to the task which it had originally been developed to perform, and the reduplication and other modifications of the sounds are present.

Dilatation.—When spoken of as a form of heart disease this usually means dilatation of the ventricle with or without dilatation of the right. There may be an attempt at hypertrophy of the walls, compensatory of the dilatation itself, and not infrequently the hypertrophy has produced the dilatation. More important than the anatomical condition is the physiological or functional condition, the special characteristic of which is that the ventricle does not complete its systole, but only expels a portion of its contents. In well-marked cases the chambers of the heart are always full, and, little blood being received and expelled, there is a stagnation in the auricles and ventricles which may allow of the deposition of fibrin among the fleshy columns and pectinate muscles. It has seemed to me that the imperfect emptying of the ventricles has not always been fully realised as the special feature of dilatation, but it will be seen that if a dilated ventricle launched the whole of its contents into the arterial circulation, the amount being much larger, the rate of movement of blood would be greatly accelerated, whereas the contrary is the case. The dilatation attending aortic regurgitation belongs to a different category, and, instead of aggravating the difficulties of the circulation, it is a part of the compensatory arrangement. It is clear that if a certain proportion of the blood projected into the aorta at each systole returns to the ventricle during diastole, it is an advantage, and indeed a necessity, that the capacity of the ventricle should be increased, so that, in spite of the reflux, a normal amount of blood may remain in the arteries and be distributed to the tissues. The dilatation, however, in aortic regurgitation is accompanied by hypertrophy, which enables the ventricle to contract perfectly, so that the characteristic of dilatation—the partial and imperfect emptying of the ventricle—is not present.

Dilatation is, I think, usually understood to be the result of a gradual yielding of the walls of the ventricles, either from their own inherent weakness or from undue resistance to the onward career of the blood. It is often supposed also, when dilatation exists, that it is an established and more or less unvarying or progressive condition. Both these ideas require modification. But the circumstances which are capable of producing a temporary distension of the ventricles in a sound and vigorous state of the organ are those which will be competent to give rise to dilatation when it is weak and flabby and other conditions are present which tend to dilatation, and it is more likely that the weakly ventricles give way from time to time under stress, and fail to recover perfectly than that the yielding is gradual and continuous. Arterial tension, dilatation at an early period, is comparatively rare, which would scarcely be the case were continuous resistance to the emptying of the ventricle the most efficient cause.

In violent exercise the pulse, in becoming extremely frequent, also becomes extremely soft; the arterioles and capillaries are relaxed in order to facilitate the rapid movement of the blood, which is necessary to supply fuel and oxygen to the muscles during exertion and the arterial tension is lowered. The resistance to be overcome by the

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ventricles is thus reduced to a minimum, which diminishes the liability to over-distension.

In the production of dilatation a common and important, if not a constant, factor is habitual high arterial tension. A second factor, less constant, perhaps, but more important, is inherent weakness in the ventricular walls. With these proximate causes, to use an old-fashioned term, will coöperate very varied influences — exertion, excitement, chills, imprudence in eating and drinking, constipation, augmenting the stress on the heart; anæmia, anxiety, and depressing emotions diminishing its power of resistance. Acute dilatation of the heart is more common than is generally supposed. There are grounds for supposing that dilatation has been induced at once in a heart not previously affected.

A certain degree of dilatation of the left ventricle usually occurs at the onset of acute renal disease, under the combined influence of the resistance in the peripheral circulation and of the enfeeblement of the heart. In other acute diseases this may happen.

A common cause of dilatation of the heart is anxiety. Nothing is more certain than the influence of prolonged mental depression upon the heart, and the sensation of aching, oppression, and weight which attends griefs and anxiety, and which was considered to point to the heart as the seat of emotion generally, is indicative of an injurious effect upon this organ; it is almost literally true that people die of a broken heart. The combination of overwork, excitement, worry, and trouble often met with in city life, especially on the Stock Exchange or in the mercantile or financial circles during a commercial or financial crisis, brings us many cases of cardiac dilatation among men, and it is needless to say that domestic anxieties, grief on account of children who have died or given trouble, have the same effect among women. Among the special causes of dilatation of the heart, acting no doubt on pre-existing tendencies, which have come under my notice are injudicious hydropathic treatment, the so-called "Banting" method of reducing obesity, and inhalation of the fumes of Himrod's powder for the relief of asthma. In one case a gentleman suffering from dyspeptic symptoms, probably due to cardiac weakness and consequent sluggish circulation in the abdominal viscera, underwent a routine treatment by baths, wet cold packs, and compresses, under which attacks of dyspnœa came on and œdema set in. He had previously been under the care of competent observers who had not found any serious degree of dilatation. The dropsy advanced in spite of treatment, and when I saw the patient was considerable, and the physical signs gave evidence of extreme dilatation and thinning of the left ventricle. Death occurred suddenly during a paroxysm of dyspnœa.

One of the most extreme cases of dilatation I have ever met with was in the case of a lady who had undergone an amateur course of "Banting" treatment for obesity. Apparently habitual high arterial tension had been exaggerated by an exclusively nitrogenous diet, and under it the ventricle had given way. It may perhaps be well to add that in the treatment of obesity by beefsteak and copious draughts of hot water there has not been, according to my experience, increase of arterial tension, but the reverse.

Dilatation of the heart.—The diagnosis of dilatation of the heart is comparatively easy to anyone who has had a fair amount of experience and who is prepared to exercise sufficient care in making the requisite physical examination. Certain precautions are necessary, which will be pointed out later. When, however, the dimensions of the heart have been made out, and an estimate has been made of the relative degree of dilatation and hypertrophy, and of the comparative condition of the two ventricles, a small step only has been taken towards the attainment of the knowledge which is necessary in order to forecast the course and issue of the case and to direct the treatment. There may be hereditary tendency to weakness of the heart, or the heart may be worn out by an unhealthy mode of life or by protracted emotional strain, or the patient's tissues generally may lose their nutritional value early. Facts of this class are not revealed by physical signs; some of them may be known to the family medical man, but otherwise they are ascertained only by persevering and careful inquiry. It is obvious, then, that many other considerations enter into a true and thorough diagnosis of dilatation of the heart besides its anatomical condition.

The pulse in advanced dilatation of the heart is usually irregular in rhythm and unequal in force of beat, and is sudden, short, unsustained, and usually easily compressed. The artery at the wrist may be large or small; it will be specially large when there has been antecedent high tension which has dilated the arteries. The significance of a pulse of this character is not absolute, as all these characters may be present when there is no recognisable change in the walls, cavities, or valves of the heart, apparently from disordered nervous influence only. The pulse, again, need not be irregular in advanced dilatation of the heart, so long as the patient is in repose and the breathing is tranquil and easy. The regularity, however, is easily disturbed by exertion or effort, or by bronchitis, or merely by deep breathing. In moderate and slight dilatation the pulse may be regular; but while irregularity is the rule, there is no such constant relation between the degrees of regularity or irregularity of the pulse and the amount of dilatation of the heart as to make one diagnostic of the other.

Palpation in most cases of dilatation furnishes information which contributes more to precision of idea as to the actual state of the heart than any other branch of physical exploration. The right hand should be applied closely over the entire cardiac region, the palm over the right ventricle, the fingers, spread out and close together alternately, over the appendix region. Distinct impulse over the right ventricle, while it indicates more or less obstruction in the pulmonary circulation, indicates also some degree of vigour in this ventricle available for compensatory work. A mere vibration has a converse significance. The first object of attention, however, will be the identification of the point of maximum impulse in the apex region, and a careful estimation of the area over which the apex beat extends, and of its force and character; whether, for example, it is a mere concussion of the chest wall or a more or less distinct thrust at any point. According as the apex is capable of giving a distinct thrust or of communicating only a diffuse shock, and according as the beat is well defined or steady, or vaguely felt over a considerable area, will be the estimate of the degree of dilatation, and of the thickness or thinness of the heart wall. Not unfrequently neither impulse nor apex beat can be detected, or the impulse is so vague that it cannot be localised; unless this is due to overlapping lung, it indicates great weakness of the muscular walls of the heart.

By percussion the outline of the heart can be mapped out. It is more rounded in the apex region than normal, and the area of dulness is greatly extended to the left. When no impulse of any kind can be felt, we may have to depend entirely on percussion for information as to the size of the heart. I have found continuous deep dulness outwards as far as the mid-axillary line, and downwards to the seventh space, shown to be cardiac by the intensity of the sounds at the extreme limits, and, when the heart had gained strength, by an apex beat recognisable by palpation at the furthest point. The characteristic modification of the sounds of the heart produced by dilatation is that the left ventricle first sound becomes short. Usually it is also louder than normal. Probably from this change in the character of the left ventricle first sound it is almost always audible in the aortic area, contrasting in this with hypertrophy. It is audible also to the left of the apex beat. When no impulse or apex beat can be felt, the sounds, and especially the first, must be made use of to ascertain how far to the left the left border and apex of the heart have been carried by the dilatation, and in what degree the enlargement is due to dilatation or hypertrophy. Percussion, of course, maps out the deep dulness and shows approximately the limit of the heart and its extension to the left, but the point of maximum intensity of the sounds and the area over which they are audible will corroborate or correct the idea formed as to the size of the heart from percussion, and percussion yields no information whatever as to the kind of enlargement, but leaves it to be supplied by the character of the sounds on auscultation. Not uncommonly dilatation of the left ventricle is accompanied, and gives rise to a systolic apex murmur obviously due to mitral incompetence. This is induced by imperfect accomplishment of the constriction of the orifice which is part of the normal contraction of the ventricle and which coöperates with the curtains of the valves in preventing regurgitation into the auricle. Now, mitral valvular disease is attended with precisely the same combination of conditions—incompetence of the valve and dilatation of the ventricle—and of physical signs—a systolic apex murmur and displacement of the apex beat with increased cardiac

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dulness. The prognosis is very different in the two cases, and it is therefore extremely important to distinguish between them. This cannot be done with any degree of confidence by means of physical signs alone, and the discussion of the diagnosis must be reserved; but it may be said that the presence of the left ventricle first sound in primary dilatation and its absence in primary valve lesion will sometimes be of great service as a factor. There is nothing in dilatation of the cavities of the heart to affect specially and directly the second sound; but in proportion as this condition of the ventricles impairs the propulsive energy of the systole, the second sound will be enfeebled; and the aortic second sound is usually weak as compared with the left ventricle first sound. The relative loudness of the sounds, therefore, enters into the considerations from which may be calculated the efficiency of the ventricle.

Very important information is often supplied by observation of the intervals between the first and second and the second and the first sounds—the short and long pauses respectively. When with dilatation of the left ventricle there is resistance in the arterioles and capillaries, which is very commonly the case, the interval between the first and second sound may be prolonged; and, as this marks the duration of the systole, it shows that the ventricle is endeavouring to cope with the difficulty and to complete its contraction. The short or systolic pause may be so prolonged as to equal the diastolic or long pause, and the sounds thus become equidistant; the first also having become short and sharp, the only difference between the sounds is one of emphasis or of pitch, and it is often difficult to say which is which. The sounds may be compared, when the heart is acting slowly, to the ticking of a clock, when rapidly, to the puffing of a distant locomotive. On the other hand, the first and second sounds may be approximated, and as we cannot suppose that a dilated and enfeebled ventricle completes its systole in a shorter time than normal, the only possible explanation is that it is quickly brought up short by the resistance in the arterial system and expels but a small proportion of its contents. This abbreviation of the systolic pause is therefore a serious indication of failure of the ventricles, and when carried to an extreme, so that the second sound follows the first immediately and almost seems to overtake it, is significant of immediate danger. In two successive attacks of symptoms due to dilatation of the heart, when the degree of dilatation appears to be exactly the same, a difference in the length of the systolic pause is sometimes the chief if not the only point which makes a difference in the prognosis. The first and second sounds are spaced in the first attack, which is survived, and approximated in the second, which proves fatal.

To what extent dilatation may go without giving rise to symptoms, provided the heart wall retains sufficient vigour to give a distinct impulse and apex push, may be illustrated by a case seen within the last fortnight. A gentleman of seventy-two consulted me on account of irregular pulse and action of the heart, with breathlessness on slight exertion. The pulse was extremely irregular and small, but rather tense; the rate about 120 per minute. The action of the heart was also hurried and irregular both in time and force, many beats not reaching the wrist. The impulse, however, could be felt and the apex beat could be defined. It seemed to me that peripheral resistance and imperfect action of the liver and bowels were contributing to the embarrassment of the heart, and a mild pil. hydrarg. and colocynth pill was ordered. The patient has taken this twice a week ever since, has continued to follow his profession, and presented himself at the age of seventy-five simply to show how well he was. The pulse was still frequent and irregular.

NATIONAL HEALTH SOCIETY.—At the annual meeting of the Society recently held, Mr. Frederick Treves being in the chair, the report showed a most satisfactory increase of work. During the past year lectures had been given to educated audiences in drawing-rooms and elsewhere, on subjects relating to the care of the health, first aid to injured, home nursing, &c., as well as many hundreds of homely talks and simple practical addresses to the poor throughout London on the care and management of children, the value of fresh air, food and cookery, &c.

ABSTRACT OF THE

Goulstonian Lectures,

ON

LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians, March, 1891,

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,

PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, AND PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF DURHAM.

LECTURE III.

DR. OLIVER dealt somewhat exhaustively with the symptomatology of lead poisoning; he said it now devolved upon him to draw attention to the channels by which lead in its various forms is introduced into the system. It gains entrance into the human body by the skin, by the lungs, or by the digestive organs. Tanquerel does not admit that any absorption of lead occurs through the skin. He says that colic has never been known in the practice of the surgeons of the Paris hospitals to follow the local application of lead. The experience of the lecturer was the opposite of this. He regarded the skin as a very suitable surface for the absorption of lead. In two of his patients, lead was found by Professor Bedson in the perspiration. If lead is capable of being eliminated by the skin it must be capable of entering the system by the same channel. As regards the entrance of lead by the respiratory organs there is no doubt. People who have slept a few nights in newly painted rooms have suffered from colic. It was thus he sought to explain the *colique sèche* noticed on board French men-of-war. Lead dust disseminated through the atmosphere whilst entering by the digestive organs may also pass into the system by the respiratory mucous membrane. The insoluble lead carbonate is carried into the trachea and bronchi and probably into the air-cells of the lungs; but, in whatever part of the respiratory passages it is deposited, it comes under the influence of heat and moisture; it is moistened by alkaline fluids rich in carbonic acid coming from the lungs, and the lead carbonate is converted into a bicarbonate which is fairly soluble. A similar change in all probability occurs with the fumes of the molten metal. It has been stated that absorption by respiration is more productive of deleterious consequences than any other method of receiving the metal into the system. On this point the lecturer offered no opinion. Sir Joseph Fayrer, remarking on Dr. Oliver's paper on Lead Poisoning read two years ago at the Royal Medico-Chirurgical Society, alluded to the case of a gentleman who was anæmic, and who was supposed to be suffering from the effects of malarial fever or climatic disturbance. Some time afterwards, when seen by Garrod, the symptoms were found to be those of plumbism; and, as the patient was an inveterate snufftaker, the source of the poison was found to lie in the leaden envelope in which the snuff was encased. When this was remedied the patient soon recovered The channel *par excellence* by which lead is passed into the system is the digestive canal. Under any circumstances the amount of lead absorbed is small, and when absorbed it is freely eliminated by the kidneys. Lead is generally present in the urine of leadworkers. With the object of determining the chemical conditions under which lead enters the system through the digestive canal Dr. Oliver had a series of experiments carried out for him by Mr. Best, under the direction of Professor Bedson, of the College of Science, Newcastle. How, for example, do lead compounds behave in contact with the various secretions which are poured out during digestion? In the experiments which follow lead carbonate was employed, and as nearly as possible in all of them the same quantities of lead carbonate and animal juices were employed. It was found that human saliva had a slight solvent action upon white lead. Its influence is greater when no other ingredient is present. During the digestion of starch by saliva in the presence of lead carbonate, it was found that less of the metal was dissolved than where saliva operated upon lead alone. Two double sets of experiments

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were performed with gastric juice, artificial and natural. The experiments were performed in test tubes and in parchment tubes, as recommended for digestion experiments by Sheridan Lea of Cambridge. When lead carbonate was digested with gastric juice for three hours at blood heat more or less of the lead was always dissolved.

DIGESTION EXPERIMENTS: CARBONATE OF LEAD.

(A) *Gastric Juice—(a) Natural, obtained from Fistula in Stomach of Dog. One part of filtered gastric secretion mixed with two parts of water. Digestion in test tubes.*

	Amount of carbonate of lead.	Conditions of digestion. Grains of diluted gastric juice.	Amount of lead dissolved. Grains per oz. of gastric juice.
(a)	15·4 grains	154	0·00312
(b)	15·4 ,,	154	0·00206
(c)	15·4 ,,	154	0·00298

(b) *Gastric Juice (Artificial: Merck's).*

	Amount of carbonate of lead.	Amount of artificial juice.	Amount of lead dissolved. Grains per oz.
(a)	15·4 grains	154 grains	0·001916

(B) *To show that the Active Agent in effecting the Solution of Lead Carbonate in Gastric Digestion is Hydrochloric Acid.*[1]

Amount of lead carb.	Amount of pepsine.	Amount of HCl (in terms of solution).	Lead, in grains, per oz.		Total dissolved. Grains per oz. of solution.
			Diffused.	Non-diffused.	
15·4	15·4	0·3 per cent.	4·22	1·25	5·47
15·4	7·7	0·3 ,,	3·28	2·05	5·33
15·4	3·85	0·3 ,,	3·32	2·16	5·48
15·4	Nil.	0·3 ,,	3·56	2·31	5·87
15·4	15·4	Nil.	Nil.	Nil.	Nil.

These experiments were repeated with varying amounts of pepsine, but with the same percentage of hydrochloric acid; and the results indicate that the active agent throughout is the hydrochloric acid contained in the gastric juice, converting the lead carbonate into lead chloride. They also illustrate the easy diffusibility of lead chloride. When pepsine is alone present with lead carbonate, none of the metal is dissolved. The active agent therefore is the acid, and the influence of pepsine is rather to diminish than increase the amount of lead dissolved. The next question was to determine the influence of the digestion of proteids upon the amount of lead carbonate acted upon. The presence of proteid in gastric digestion was found to reduce considerably the amount of lead dissolved. It is in the form of lead chloride that lead chiefly passes into the system from the stomach, and neither as albuminate or peptonate, both of which are insoluble.

Dr. Oliver then alluded to the form in which lead passes into the system in drinking water contaminated with lead. He thought it was generally in the form of bicarbonate. The solvent influence of bile and pancreatic juice was dealt with. Digested with bile, a relatively large quantity of lead carbonate was dissolved. Bedson and Best found that three times more lead was dissolved with bile than with gastric juice. A purely duodenal digestion was then dealt with, in which gastric juice, pancreatic juice, and bile acted upon lead carbonate, albumen, and fat. Dr. Oliver then alluded to the results obtained by experimental investigation. Animals were fed upon carbonate of lead. From the first nutrition was interfered with. The animals (rabbits and rats) rapidly emaciated; one rabbit became paralysed in all its limbs. Nearly all of them lost their appetite at an early stage, and the animals drank water greedily. They generally died in convulsions. Dr. Oliver then gave the details of the post-mortem conditions met with, and showed microscopical drawings of sections of the liver and kidneys in support of his views as to the influence of lead as a poison. There was, generally speaking, to be observed in the liver of animals that had died of lead poisoning and in lead workers an atrophy of the cells—sometimes a fatty degeneration of the hepatic cells and an increase of the connective tissue, the appearances being not unlike those seen in cirrhosis of the liver. The kidneys presented appearances that are most interesting. Dr. Oliver thought that interstitial nephritis was too much regarded as the renal lesion met with in plumbism. Both in animals and in women he had found that the earliest pathological changes occurred in the renal cells. The epithelia of the convoluted tubules exhibited cloudy swelling, fatty granular degeneration, slight shedding and disintegration of the cells, and, as time went on, Bowman's capsule became thickened and laminated. The cells lining Bowman's capsule underwent proliferation, as also those within the coils of the Malpighian glomeruli. In nearly every instance the lecturer had observed a considerable accumulation of leucocytes around the afferent arteriole of the glomerulus, so that he could not but regard it as in a sense more or less characteristic of saturnine poisoning. It is upon the liver and kidneys that the brunt of the effects of lead must primarily fall. Lead is being constantly eliminated by the urine of those who work with the metal. The strain upon the kidney from the first is great, and the cells in consequence soon degenerate. So long as the kidneys are eliminating lead, the patient runs little risk from lead poisoning. Potter, of the College of Science, Newcastle, has demonstrated the pernicious effects of lead upon plants. He injected 1 cc. of a 1 per cent. solution of lead nitrate into datura stramonium, and he noticed that the flowers on the branches thus injected fell off, whereas the flowers on the other branches which had not been touched continued to bloom and reached maturity. The relationship of lead to deranged metabolism was dealt with, and particularly the association of lead and gout. Sir Alfred Garrod's observations in regard to the deficient elimination of uric acid in plumbism had been confirmed by numerous observers, but particularly by Haig, and also by Ralfe, who had shown that the alkalinity of the blood is diminished in lead poisoning. Dr. Oliver laid considerable stress upon the fact that gout in lead poisoning was not a frequent symptom in the north of England; but gout itself, he remarked, was not so frequently met with there as it is in London. He questioned whether, after all, it was a true gout that occurred in lead poisoning. He rather supported the view recently put forward by Sir Wm. Roberts—viz., that the gouty diathesis and lead poisoning have a tendency or vice in common—a tendency to uratosis or precipitation of crystalline urates in the tissues or fluids of the body. A saturnine uratosis, therefore, would be simply saturnine poisoning reinforced by a previously existing gouty tendency. The daily amount of urea passed in plumbism was deficient, generally speaking; and Mr. Wm. Turnbull, who had carried out an extended series of observations on Dr. Oliver's patients in the Newcastle Infirmary, had noticed how much increased in severity headache became when urea was intermittently discharged in abnormally small quantities.

In the first lecture Dr. Oliver alluded to the relation of intemperance and plumbism. Combemale and François have shown how very susceptible dogs are to the influence of lead, and how very rapidly nervous symptoms are developed in them. They become the subjects of hallucinations and illusions of sight, and are extremely liable to become epileptiform or choreiform. The interesting point brought out by these observers is the influence shown by alcohol in precipitating epileptiform seizures. In a guinea-pig Dr. Oliver had noticed that the administration of small quantities with the food, which contained lead, precipitated a fatal termination. If there is one class, therefore, to whom the results of clinical experience and experimental research apply it is to lead workers. To them alcohol is a poison; it must in many instances have determined epileptiform seizures terminating fatally which complete abstinence would either have postponed or altogether prevented.

The lecturer, in bringing his subject to a close, drew the attention of his hearers to what he regarded as the explanation of acute lead encephalopathy. He admitted that lead was found in the brain and in the various organs of the body. The charts exhibited showed all this; but he did not think that the epileptiform seizures and death which took place in these cases were due to the presence of lead in

[1] The results obtained are not intended to be compared with the experiments made with artificial and natural gastric juice.

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the brain. In one of his most recent cases, where a girl had only worked for forty days in a lead factory, no lead was found in the brain on the most careful chemical analysis. It appeared to him that lead deranged the functions of the liver and kidney; their power as emunctories failed; the secretion of urine gradually lessened—sometimes even it ceased altogether; and the eclampsia—even whilst up to the commencement of the attack the urine was found to be free of albumen—could only be explained by the circulation of animal poisons that had been retained. Cerebral anæmia or hydræmia was invariably present after death, the surface of the brain appeared compressed, and the arteries contracted. These were circumstances which doubtless aided in bringing about a fatal termination.

To the use of preventive measures he had little to add, or to the treatment of saturnine paralysis by electricity. He had noticed that opiates, with castor oil, iodide of potassium, and sulphate of magnesia, gave satisfactory results in colic. Alum was not a successful remedy for colic in his cases. Lithia had increased the amount of urinary secretion, but had had no effect upon paralytic conditions. In the cases of acute lead encephalopathy nothing gave such satisfactory results as the inhalation of nitrite of amyl. Convulsions were frequently warded off by it. Pilocarpine had been successful where convulsions with complete suppression of urine had occurred.

INTESTINAL OBSTRUCTION CAUSED BY TUMOUR; ILEOSTOMY; DISAPPEARANCE OF TUMOUR; SUBSEQUENT ENTERORRAPHY; RECOVERY.

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THE following case is remarkable as an example of the spontaneous disappearance of a solid abdominal tumour of considerable size after abdominal section. A few such cases have been recorded, but they have been received either with open incredulity or great hesitation. It is necessary, therefore, in this instance to supply a full clinical account of the case which has been throughout under the observation and treatment of my colleagues and myself at the Bristol Royal Infirmary.

Lionel L——, aged twenty-five, shop assistant, was admitted to the Bristol Royal Infirmary on June 1st, 1889, complaining of pain in the abdomen, with frequent vomiting. Seven weeks previously the patient first felt pain in the hypogastric region; this gradually increased till, a month ago, he had to give up his work in London and go home to Wells. The day after his return home the pains became very severe, and in the evening he vomited a good deal of brown fluid. Dr. Fairbanks of Wells saw and prescribed for him, and he improved for a few hours. The pain and vomiting returned the next afternoon, but under treatment again abated, and he continued fairly well, though confined to bed for a week. At the commencement of the following week—that is, three weeks prior to admission—pain and vomiting recurred, and continued daily at intervals, chiefly in the afternoon and evening, up to the time of his admission. The bowels had been acting regularly but not satisfactorily. A fortnight previously he had on two occasions noticed that some whitish glairy fluid passed before the motion. Family history unimportant. The patient was a thin, pale man, with an anxious, pinched countenance. Pulse about 100; temperature 99° F. Abdomen distended to the utmost, measuring 31 in.; muscles very tense, almost brawny. Exaggerated resonance all over the abdomen, except over an area measuring 2 in. in diameter a little above the left anterior superior iliac spine. In this dull area a hard mass could be distinctly felt, but, on account of the abdominal distension and the muscular rigidity, could not be fully palpated. The tumour could just be felt by the finger in the rectum.

Progress of the case.—June 2nd: Temperature 98·5°. Urine, sp. gr. 1032; neutral; no albumen; trace of sugar. No action of bowels since admission. A seidlitz powder was administered and an unsatisfactory action followed. Sickness and pain at 3 P.M., for which morphia was administered. Another severe attack of pain at 8 P.M., with vomiting, for which morphia was given. The vomited matter was light-brown in colour and odourless. Diet to consist of peptonised liquid foods.—3rd: Temperature 98·8°. Bowels acted once slightly after seidlitz powder. No sickness. Chloral draught at night.—4th: Temperature 98·2°. Urine, sp. gr. 1020; no albumen; trace of sugar. Pulse 76. Seidlitz powder followed by severe pain. Chloral draught was immediately vomited. Severe pain and vomiting at 7 P.M. The pain continuing, and getting worse, an injection hypodermically of ¼ gr. of morphia was administered at 8 P.M.; relief of pain, but no sleep.—5th: The abdominal distension is, if possible, more marked; violent peristalsis, with loud gurgling noises, the intestinal contractions being visible through the parietes. As the patient was evidently losing ground, and would soon be in a condition when operation would be impossible, it was decided after consultation of the surgical staff to operate, with the view of relieving the obstruction, which, although not absolute, was evidently becoming so.

At 1 P.M. on June 5th, the patient being under the influence of chloroform, the following operation was performed: An abdominal incision, beginning 1½ in. below umbilicus, 2 in. long, was made; the parietal peritoneum was thickened and vascular, chiefly towards the left side. Occupying the left side of the abdomen and extending from the pelvis upwards towards the umbilicus was a hard, rounded tumour as large as a cocoa-nut, to which several coils of small intestine were firmly adherent. The growth was fixed below, and could not be moved from its position. The abdominal opening being dragged to the left the growth was exposed to view, and was seen to be covered with thickened peritoneum of a dusky hue, and with large vessels coursing over it. An aspirator needle inserted into its substance showed it to be solid; the puncture bled rather freely. A piece of distended ileum as close to the tumour as possible was pulled to the surface and fixed to the abdominal wound, with a view to subsequent opening. Fixation was made by two sutures passing through the parietes and outer coats of the bowel at the top and the bottom of the wound; and by two Halsted sutures passed through the outer coats of the bowel, and fixed to strapping at the sides of the wound. There was no suturing of parietal peritoneum to skin, and no sutures were placed in the incision beyond the two, which also passed through the outer coat of the bowel. Dressing of boracic lint and absorbent wool.—June 6th: Temperature normal; pulse 102. Vomited twice. Hot water rectal injection at 2 30 A.M. to relieve thirst; restless night.—7th: Temperature normal; pulse 76; no vomiting; a good night.—8th: Temperature 97·5°; pulse 69. Passed a good night. Intestine opened and a No. 8 celluloid catheter bent in hot water to a sigmoid curve was passed into its lumen. An indiarubber tube was attached to the outer end of the catheter and conveyed the intestinal contents into a bottle placed by his side. The intestine was firmly glued to the parietes, and there was no fouling of the wound by escaping fluids during the opening of the bowel. Bowels opened twice naturally after the intestine was opened.—9th: Temperature 98°; passed a fair night. Free escape of intestinal gases and fluids into the bottle.—10th: Temperature subnormal; pulse 74. Wound dressed, quite healthy and free from inflammation. A large piece of rubber tubing placed in the intestinal opening instead of the small catheter. Free discharge of brown fæcal matter; abdomen nearly flat. Bowels acted naturally twice.—11th: Temperature subnormal. Not much discharge through the tube till the evening, when a pint of brown stercoraceous matter was rapidly ejected. This matter on being tested showed the presence of bile pigment. Bowels acted slightly after a simple enema.—12th: Temperature 97°. Patient improving in every way. Distension nearly gone.—13th: Temperature 97·5°. Continued improvement. Tube acting satisfactorily; discharge distinctly stercoraceous.—14th to 19th: Steady progress. About a pint of stercoraceous matter discharged daily through the tube into the bottle. No action of the bowels for five days till the 19th, when there was a slight action.—23rd: Free action of the bowels after soap enema continued daily till the 29th, when he was discharged with a small fistula,

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through which a little yellow fæcal matter escaped at intervals during the day. The bowels acted normally and regularly. All abdominal distension was gone, and there was no pain or nausea at any time. The tumour, now that all distension was gone, caused a quite visible bulging in the left lower abdomen, and was easily palpable. It had apparently increased in size, certainly it had not decreased.

From time to time the patient came to the infirmary for inspection, when we were surprised to find the growth gradually diminish in size, till in August, 1890, no trace of it could be felt. The patient himself had greatly improved in health, being then quite robust, well nourished, and, with the exception of the intestinal fistula, in perfect health. During this month he stayed in the infirmary for a week, when an attempt was made to close the fistula by Mitchell Banks' method, which failed.—Dec. 2nd: He returned with a view to having the fistula closed. Not more than a drachm of fluid came through it daily; but this had ceased to diminish in amount, and his work could not be satisfactorily performed while it existed. For a few days a diet was administered which left little residue, the bowels were kept acting freely, and enterorraphy was performed on the 8th. Chloroform anæsthesia; thorough scrubbing with soft soap all around fistula, and washing with 1-20 carbolic lotion. A small sponge with string attached passed into the fistula and pulled outwards, so as to keep it plugged. Abdominal incision an inch below fistula, and extending downwards for two inches more. Numerous adhesions between bowel and parietes carefully separated, working upwards towards fistula, where adhesions were so dense that they had to be divided by cutting. Incision carried an inch above fistula; bowel freed, brought through the wound, and closed above and below the fistula by Makin's clamps. Opening in intestine closed by Lembert's sutures arranged along axis of bowel. Parts well irrigated with warm boracic lotion. Bowel returned, and parietal wound closed with silkworm gut sutures.—10th: Progress entirely satisfactory, except that he complained of pain in the penis in passing urine and for a short time afterwards. Temperature 98°. Urine acid; sp. gr. 1033; no albumen; urates.—13th: Progress continues satisfactory, with normal pulse and temperature. Still pain on micturition. Urine smoky and acid; sp. gr. 1028; contains some albumen and blood. Wound dressed; stitches removed. Perfect union, except at seat of fistula, where a minute orifice exists, which is granulating.—16th: All pain on micturition now gone. Urine normal.—Jan. 3rd, 1891: Patient getting up and having ordinary diet.—13th: Patient discharged well; wound quite firm and dry.

Remarks.—What the nature of the tumour was I cannot say. It was perfectly solid, globular in shape, nearly as large as a child's head at birth, and had naked eye characters such as we associate with sarcoma. In the opinion of my colleagues who saw it and myself, it was malignant, and this opinion was conveyed to the relatives of the patient. The result proves that it was not malignant, however. It was certainly not fæcal, and there were no evidences that it had an inflammatory origin, either simple or specific—indeed, all the signs were against this. Believing that the tumour was sarcomatous, and finding the bowels closely adherent to it, and therefore probably infected with the growth, I did not attempt removal. Ileostomy seemed to be most likely to relieve the patient of the great distension from which he suffered and from the recurring storms of intestinal contraction which caused so much pain. The operation performed in the manner described above was of the simplest character, and added little risk to the patient's condition. I am convinced that the elaborate methods of suturing usually recommended in this operation are quite unnecessary, even when the bowel is to be opened at once; and I have with perfect success still further simplified the mode of operation which I employed in this case eighteen months ago. The subsequent operation of enterorraphy was delayed until it seemed certain that the further maintenance of the fistula was unnecessary. Indeed, the fistula would probably have closed spontaneously at the end of three or four months had it been permitted to do so; at the end of a year the tissues around had become very hard and dense, and after failure of a simple method had been proved, enterorraphy was performed. It may be added that at this operation, with the fingers inside the abdomen, there was no trace of tumour to be felt.

Clifton

REMARKS UPON THE PROGNOSIS IN CROUPOUS PNEUMONIA.

By DAVID DRUMMOND, M.A., M.D.,
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THE opinions advanced in this short paper are the outcome of a series of observations made in hospital and private practice over a considerable number of years. The prognosis of pneumonia is a subject of the deepest interest, and the fact that the disease is both short and acute—one in which the hopes and fears are crowded into a very few days, gives it a fascination that belongs to but few other medical topics. I am not concerned now with the statistical question of the mortality in pneumonia, but rather with the clinical grounds upon which a prognosis may be attempted. This much I may say, that in my opinion the rate of mortality in pneumonia is generally placed too low. Some statistics give a loss of but 8 per cent., others as low as 3½ per cent., whilst Hughes Bennett recorded 105 cases without a death. Of course it will be recognised that the mortality varies very much in different years and at different seasons, but my experience has led me to look upon pneumonia as one of the most fatal of acute diseases. At the outset I wish it to be understood that my remarks refer to what I may call fairly typical croupous pneumonia. I would rather not involve the subject by including complicated cases—as, for example, pneumonia arising in the course of Bright's disease, or after traumatism or surgical operations, or that complicated by ulcerative endocarditis. Nor do I propose to include that interesting group of cases in which empyema follows an attack of pneumonia.

It will, I think, be conceded that we all undertake the management of a case of uncomplicated pneumonia in the most hopeful spirit, and that our reply to questions raised by anxious friends, during the first few days, as to the risk is almost invariably reassuring, except in the case of the drunken, the aged, and the otherwise enfeebled. Yet few there are who have not had their minds rudely disabused, and their predictions falsified, by the appallingly sudden, because unexpected, termination to what promised to be a favourable case in a robust person. It would undoubtedly be a great gain if we could recognise indications of approaching danger some little time before the end is upon us, and thus diminish the number of so-called sudden and unexpected deaths in pneumonia, and so lessen the reproach that *prognosis* is one of the weakest phases of our art.

Naturally, the first point to be considered is the general condition of the patient—his ability to resist so serious an illness. Here, of course, the gross abuse of alcoholic stimulants plays a most important part, and for the special reason that in the great majority of fatal cases the result is due to cardiac failure, to which necessarily previous alcoholic excesses largely contribute. Then weak and elderly people are always insecure, though it must be admitted that, like the drunkard, the old and feeble will sometimes battle successfully with the storm in a manner that surprises the doctor and friends alike. These must therefore be prognosed with the utmost care, for assuredly no general rule founded on shattered constitution will apply. The same may be said of those liable to bronchitis, particularly if the subjects of emphysema to any extent, for although the risk is decidedly increased, few would think of condemning the patient on this ground alone. In this connexion it should be borne in mind that most of the expectoration in pneumonia is from the bronchial mucous membrane, which is stimulated to secrete in nearly every case, more or less, but particularly in cases of old-standing bronchorrhœa; and that this excessive secretion has a most damaging effect upon the portions of lung that are carrying on respiration. Further, old-standing cases of emphysema have associated with a general change in the vessels of the lung a condition of heart by no means favourable for withstanding an attack of pneumonia.

In venturing to offer an opinion as to the result in a case of pneumonia it is most important to determine the day of the disease, as symptoms of little or no prognostic moment at one time prove to be of the greatest value at another. It is not always an easy matter to say what day of disease the case has reached, for although the initial rigor will prove a useful guide in the majority of cases, it not unfre-

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quently happens that there is no distinct rigor at all, and again in some instances the rigor is postponed for a day or two after the beginning of the illness. It must be freely admitted that at times it is absolutely impossible to fix the commencement of the attack. So many cases are preceded by catarrhal complaints, particularly bronchitis, with a general feeling of illness, that we are often informed that the patient has been ill for eight or ten days when the pneumonia has probably just developed. We are, therefore, compelled, in the absence of a conclusive statement, to determine the day of the disease as accurately as possible by a careful consideration of all the main features of the case, attaching due weight to the history of a rigor. The occurrence of an antecedent or prodromal illness does not appear to influence the prognosis to any extent, except in so far as it serves to lower the patient's vigour. Nor is much importance to be attached to the period of incidence of the consolidation, though it is not without some significance. In the majority of cases the third day is reached before consolidation can be clearly demonstrated, whilst it is not unfrequently the fourth. In my experience dulness on percussion, with tubular breathing, is to be regarded as unfavourable when it occurs very early in the course of the disease. And it will be found occasionally that the cases in which the dulness is decidedly postponed run an unsatisfactory course; these, however, are not reliable prognostic factors.

I am not satisfied that the situation of the consolidation is a guide of any practical value in prognosis. As is well known, some attach great importance to the apex lesion, in which case it is the custom to shake the head with ominous gravity. In my own practice, however, apex consolidations have not proved especially fatal. I refer, of course, to cases in which the upper portion of the lung is affected in the first instance, for I admit at once that extension of the disease upwards in basic pneumonia is a very serious event. We all watch the expectoration with interest, and it will, I think, be conceded that lessons of importance are often to be learnt from its nature. A total absence of expectoration is both rare and significant. It is rare, for as a rule in cases in which we are shown an empty spitcup or stainless handkerchief the patient has swallowed the expectoration. This he may do as the result of impaired vigour, or it may arise from inattention due to mental hebetude; in either case it is important. But some patients appear to have no free secretion to expectorate, and they seldom do well. On the other hand, a large quantity of frothy bronchial secretion is to be regarded with suspicion; for although some have strength enough to carry them through, notwithstanding this and other obstacles to their recovery, many are so hampered by the incessant coughing, sleeplessness, cardiac difficulty, and increased respiratory effort, all of which are the usual accompaniments of copious secretion in pneumonia, that the balance is turned against them. The superabundant expectoration in these cases is shown by noisy râle and almost constant cough. The patient is pale and haggard, with increasing cyanosis, and is worn out for want of rest. My own observations have led me to favour in the main the view that the prognosis is unfavourable in cases in which the expectoration is of a dark prune-juice character; but I have so frequently seen this indication falsified that I am not disposed to rely upon it in the absence of other grave signs. A thin watery fluid, especially when it is heavily charged with blood-colouring matter and profuse, is a serious omen, indicating as it does an extensive œdema of the lung. The cases that run the most satisfactory course to convalescence are those with a moderate amount of arrowroot-like expectoration, stained a rusty or yellowish-fawn or orange-juice colour. It should always be recollected that a falling off in the expectoration when the râles are on the increase, especially towards the sixth day, is most unfavourable.

Although not of so much importance as some other indications, the temperature is not to be despised in prognosing a case of pneumonia. A continued high temperature from the first (at or about 104°) is suspicious, and if it reach 105° on two consecutive days without any material decline it is highly dangerous. So also is a fall about the sixth or seventh day, if associated with an increased respiratory rate. Marked acceleration in the respiration is no doubt a symptom of danger, and in the adult the outlook is serious when a rate above 50 is maintained. But it is the pulse that furnishes us with the most reliable information, and were I restricted to one sign I would unhesitatingly select the indication afforded by the pulse in venturing on a prognosis. It yields no uncertain sound. By it we recognise the heart failure that is so much to be dreaded, and is so often the cause of death from the sixth to the eighth day. In considering the pulse it is most important to keep ourselves informed as accurately as possible as to the day of disease. For a good steady pulse of 100 or 110 may mean nothing on the third or fourth day, whereas on the seventh or eighth it seldom fails to indicate recovery. On the other hand, a rising pulse at this time is a warning not to be mistaken, while the same phenomenon on the third or fourth day may have no real significance. Few who have watched with anxiety the course of a severe attack of pneumonia—say, in a valued friend, when perhaps frequent observations are made—can have overlooked the rise in the pulse-rate that almost invariably ushers in unfavourable symptoms about the sixth, seventh, or eighth day. This rise is essentially progressive, as shown by the addition of a few beats in the minute as hour succeeds hour. A pulse of 120 in the morning of the sixth day is 130 in the evening, or perhaps more, rising to 140 during the succeeding twelve hours, and as it rises becoming smaller, with the running character, or perhaps intermitting, or it may be full and bounding, though compressible. Whatever particular quality indicative of failure it may possess one is almost constant—viz, increasing rapidity. Now, as already remarked, this sign to be of prognostic value should be a feature of that particular period of the illness when the pneumonic consolidation is at or is approaching its height—usually from the sixth to the eighth day. And it should be observed that the unfavourable indication lies in the fact that the rate is constantly rising. I have repeatedly, for example, known of cases that made an excellent recovery with a rapid and very empty pulse, maintained at about 130 to 135 on the seventh day. The observation that the pulse is not rising is particularly valuable in cases marked by extending consolidation at the time of an expected crisis, for these not unfrequently do well, which is seldom the case when the pulse-rate rises rapidly *pari passu* with the pneumonic extension. A very rapid pulse from the beginning is disquieting, as the heart is apt to fail at the critical moment. The urine should be examined often for albumen, and due weight attached to its presence if in any quantity.

It is essential to watch closely the progress of the pulmonary lesion, as a constantly extending area of dulness after the sixth day is decidedly ominous. It is no doubt difficult in many cases to determine whether or not the disease is extending, partly owing to the medical attendant's dislike to making frequent examinations, and partly because the consolidation often sets in rapidly, for a little harsh breathing in the area subsequently affected may be the sole premonitory sign even a few hours before the exudation solidifies. Notwithstanding the difficulties, it will amply repay the practitioner to give special attention to this point. The later the period in the attack the extension takes place, the greater the importance to be attached to it. Thus, for example, an extension from the lower to the upper lobe on the eighth day is a prognostic sign of much greater moment than on the sixth. It is most important in weighing the significance of extension as a prognostic criterion to determine accurately the condition of the portion of lung primarily affected. If we find that the tubular breathing at the base has been replaced by a feeble respiratory sound accompanied by medium crackling râles, and that the dulness, though still pronounced, is diminishing—in other words, that the process of repair has set in satisfactorily in the part of the lung first consolidated (say, on the seventh or eighth day), notwithstanding the extension of the lesion,—the prognosis is by no means so bad as when the consolidation is still active, as shown by a continuation of the tubular breathing and pectoriloquy.

Much valuable aid is derived from the nervous symptoms of pneumonia. Delirium is unfavourable in the main, but particularly when it is constant throughout day and night, and occurs early in the course of the attack—say, on the second or third day. It is generally recognised with truth that quiet delirium confined to the night time is a symptom of little importance; but, on the other hand, all practical men dread the advent of wild, noisy delirium with constant restlessness. Sleeplessness, a very common symptom, is usually associated with delirium when it presages a fatal termination; but in any case it decidedly adds to the gravity of the illness, and has its weight in the prognostic scales. The pupils are frequently altered in cases with an unfavourable bias. They may be contracted—a condition often associated with cyanosis, a small rapid and empty

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pulse, and quiet delirium. Or they may be dilated and sluggish, when the delirium is generally noisy and irrepressible, with much excitement. As the end approaches there is not unfrequently rigidity of the limbs, which seldom lasts long and may be associated with spasm of the abdominal muscles and involuntary fæcal discharge.

To recapitulate. A prognosis can only be attempted, save on general grounds, when the lung mischief is approaching its acme—after the fifth day. The principal factors are the patient's general condition, the pulse, and the amount of albumen, as the indices of the circulation, and the limits of the lesion. But every symptom is no doubt of value, and requires to be carefully considered; for it is unfortunately only too true that with the utmost attention to every point we are often taken unawares. Patients will succumb, passing into a state of rapid collapse with little or no warning, even after they have passed through what appears to be a satisfactory crisis. It is noteworthy that in some cases the disease is protracted much beyond the usual limits, the pulse and temperature declining about the tenth day and the general symptoms improving to a certain extent, but with a continuation of the dulness on percussion and a degree of illness that still excites uneasiness. In the great majority of instances these cases turn out to be purulent effusion (empyema) following on the attack of pleuro-pneumonia. This is a point of the greatest practical importance, for if not recognised and dealt with, the patient may sink exhausted in a few weeks. I have expressed my opinion elsewhere that the ordinary cases of empyema that come under treatment as chronic or subacute chest affections are the outcome of pleuro-pneumonia, and my later observations have convinced me of the truth of this statement, and if such be the case, the prognosis of pneumonia embraces the prognosis of empyema—an exceedingly difficult task.

Newcastle-on-Tyne.

AN EXPERIMENTAL INQUIRY INTO THE INFLUENCE OF THE PULMONARY BLOOD PRESSURE UPON THE COLLAPSED LUNG.

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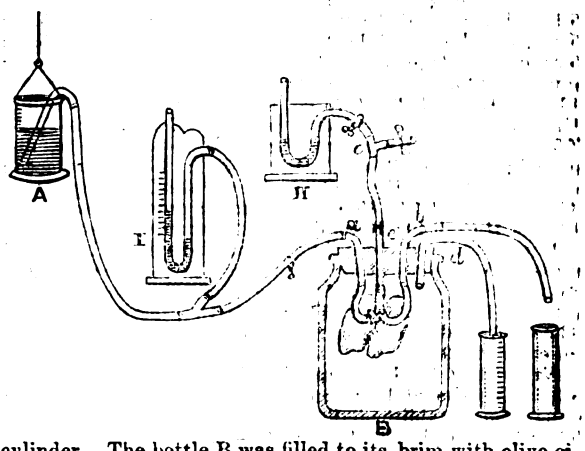
(From the Physiological Laboratory, Surgeons' Hall, Edinburgh.)

IN a lecture which I published on the "Method of Cure in Empyema"[1] it was pointed out that a satisfactory termination can only be brought about in that affection by the combined action of several factors. It is not necessary to discuss these factors in detail; all of them are well known and more or less understood. Their mere mention will suffice. Normal expiration aids to a certain extent; forced expiration and coughing are of special importance; while possibly a valvular action at the wound, and the absorption of a certain quantity of air between the intervals of dressing, if these intervals be sufficiently long, may also be of service. As further adjuvants we have the formation of pleural adhesions, and in some cases the falling in of the chest wall, and the return of the heart to its normal position, should that organ have been displaced by the pleural effusion. All these factors are of importance; but there is, I believe, another which plays a considerable part in the expansion of a lung when we make a thoracic fistula—namely, the action of blood pressure in the pulmonary artery and its branches. I have arrived at this conclusion as a result of an experimental inquiry made into the subject.

Method.—The apparatus employed resembled in many respects the oncometer of Roy (Fig. 1). It consisted of a bottle filled with olive oil in which the lungs were suspended while blood was circulated through them. The increase in the volume of the lungs was measured by the amount of oil displaced during the experiment. The lungs of rabbits recently killed were used, and both lungs were employed, because it was found inconvenient to work with one lung only. The contents of the thorax were removed. The heart was then cut across at about one-third from its base, and two cannulæ were introduced—one into the pulmonary artery, and the other into the left auricle towards the pulmonary veins. A third cannula was introduced into the trachea. Before commencing the experiment the volume of the lungs was first ascertained by measuring the quantity of water they displaced. The three cannulæ were connected by indiarubber tubing to glass tubes fitted into the cork of a large bottle. The tube (*a*) in connexion with the pulmonary artery was fitted into a piece of tubing leading to a vessel (A) containing a mixture of equal parts of defibrinated blood and normal saline solution, and also connected by means of a T-tube with a mercurial manometer (1). The pressure in the pulmonary artery could be varied by lifting the vessel containing the blood and salt solution to any desired height. The tube in connexion with the pulmonary vein (*b*) was fitted with a piece of tubing, and the blood as it flowed out of the lungs collected in a vessel. The third (*c*) tube was tied in the trachea, and a fourth (*d*) served to conduct the oil displaced during the experiment into a graduated



cylinder. The bottle B was filled to its brim with olive oil and the cork then carefully inserted, and when oil had ceased dropping from the outflow tube the experiment was begun by removing a clamp which had been placed on the tubing in connexion with the pulmonary artery. The experiments were commenced with the pressure at 12 mm. of mercury. The actual blood pressure in the pulmonary artery of the rabbit is, according to Knoll, 12·07 mm. mercury.[2] When oil ceased to be displaced by a pressure of 12 mm., the vessel containing the blood was gradually raised until in some experiments it reached 30 mm. After the experiment was completed the volume of the lungs was again taken with the trachea tied. The quantity of oil displaced was added to the initial volume of the lung. This should correspond to the volume of the lung after the experiment, and the difference between the two gives the limit of experimental error. This on an average was 4·1 per cent., and it is mainly due to the occurrence of a leak in Experiments 3 and 5.

Experiment 1.—Large rabbit. Lungs displaced 10 cc.—12.18: Experiment begun; pressure 12 mm. Hg.—12.20: Circulation established and oil displaced simultaneously.—12.23: 3 cc. oil displaced.—12.25: 3 cc.; pressure raised to 15 mm.—12.28: 3 cc.; pressure raised to 30 mm.—12.29: 30 mm.; 4 cc. oil displaced; volume of lungs after experiment 14·5 cc. Leak occurred; experiment stopped.

The lungs were ecchymosed, and the circulation was not established until two minutes after the experiment was begun. Quantity of oil displaced by normal pressure 3 cc., indicating an increase in volume of lung of 33 cc. Total displacement of oil with increased pressure 4 cc.; added to 10 cc. initial volume of lungs gives 14 cc. Actual volume of lungs at end of experiment 14·5 cc.; an error of 3·4 cc.

Experiment 2.—Large rabbit. Lungs displaced 14 cc.—6 P.M.: Experiment begun; pressure 12 mm. Hg.—6.0.5: Circulation established; pressure 12 mm. Hg.—6.1: 5 cc. displaced; pressure 12 mm. Hg.—6.3: 5 cc. displaced; pressure 12 mm. Hg.—6.5: 5 cc. displaced; pressure 15 mm. Hg.—6.10: 6 cc.; pressure 20 mm. Hg.—6.12: 9 cc.; pressure 25 mm. Hg.—6.14: 19 cc.; pressure 25 mm. Hg.—6.15: 20 cc.; experiment stopped; pressure 25 mm. Hg. Lungs displaced 35 cc.

Circulation became established in half a minute, and 5 cc. of oil were displaced in one minute. No further displacement took place until the pressure was increased. Quantity of oil displaced by normal pressure 5 cc., indi-

[1] Edinburgh Medical Journal, December, 1888.

[2] Sitzgsb. d. Wiener A. math. med. Wissensch., Bd. xcvii., Abt. 3, 1888.

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cating an increase in volume of lung of 28 per cent. Total displacement of oil with increased pressure 20 cc.; added to 14 cc. initial volume of lungs gives 34 cc. Actual volume of lungs at end of experiment 35 cc.; an error of 2·8 cc.

Experiment 3.—Large rabbit. Lungs displaced 18 cc.—6.12: Experiment begun; pressure 12 mm. Hg.—6.17: 4 cc. displaced; pressure 12 mm. Hg.—6.18: 4 cc. displaced; pressure 12 mm. Hg.—6.20: 5 cc. displaced; pressure 15 mm. Hg.—6.25: 9 cc. displayed; pressure 20 mm. Hg.—6 30: 12 cc. displaced; experiment stopped; 20 mm. Hg. A leak occurred. Lungs displaced 32 cc.

Quantity of oil displaced by normal pressure 5 cc., indicating an increase in the volume of lung of 36 cc. Total displacement of oil with increased pressure 12 cc.; added to 18 cc. initial volume of lungs gives 30 cc. Actual volume of lung at end of experiment 32 cc.; an error of 6 cc.

Experiment 4.—Large rabbit. Lungs displaced 17 cc.—5.13: Experiment begun; pressure 12 mm. Hg. — 5.15: 5 cc.; circulation established; pressure 12 mm. Hg.—5.15: 5 cc. displaced; pressure 12 mm. Hg —5.17: 6 cc. displaced; pressure 13 mm. Hg. — 5.19: 6·75 cc. displaced; pressure 13 mm. Hg. — 5.20: 6·75 cc. displaced; pressure 17 mm. Hg.—5.23: 7·5 cc. displaced; pressure 17 mm. Hg.—5.25: 7·5 cc. displaced; pressure 20 mm. Hg.—5.26: 10 cc. displaced; pressure 20 mm. Hg. — 5.27: 10 cc. displaced; pressure 30 mm. Hg.—5.30: 11·5 cc. displaced; pressure 30 mm. Hg. — 5.34: 15·5 cc. displaced; pressure lowered to 10 mm. Hg.—5.40: 16 cc. displaced; experiment stopped.

Lungs displaced 34 cc. Quantity of oil displaced by normal pressure 6 cc., indicating an increase in volume of lung of 28 per cent. Total displacement of oil with increased pressure 16 cc.; added to 17 cc. initial volume of lung gives 33 cc. Actual volume of lung at end of experiment 34 cc.; an error of 2·9 cc.

Experiment 5.—Large rabbit. Lungs displaced 13 cc.—5.28: Experiment begun; pressure 12 mm. Hg.—5.28.5 cc.; circulation established, flow, in drops only, 12 mm. Hg.—5.30: 3 cc. displaced; 12 mm. Hg.—5.35: 3·5 cc. displaced; 12 mm. Hg.—5 36: 5 cc. displaced; 15 mm. Hg.—5.40: 6 cc. displaced; 18 mm. Hg.—5.45: 7 cc. displaced; 20 mm. Hg.—5.48: 10 cc. displaced; 25 mm. Hg.—5 51: 12 cc. displaced; 30 mm. Hg.—5 54: 15 cc. displaced; 30 mm. Hg.—5.58: 18 cc. displaced; 35 mm. Hg.—6.0: 22 cc.; experiment stopped. A leak occurred.

Lungs displaced 37 cc. Quantity of oil displaced by normal pressure 5 cc., indicating an increase in volume of lung of 26 per cent. Total displacement of oil with increased pressure 22 cc.; added to 13 cc. initial volume of lungs gives 35 c.c. Actual volume of lung at end of experiment 37 cc.; an error of 5·4 cc.

The following table gives a summary of the results of the experiments:—

With Pressure of 12 mm. Hg. (Normal).

Experiment.	Duration of experiment in minutes.	Initial vol. of lung in ccm.	Oil displaced in ccm.	Per cent. increase in vol. of lung.
1	7	10	3	30·0
2	5	14	5	35·7
	8	18	5	27·2
	4	17	6	35·2
5	8	13	5	38·1
—	32	72	24	165·2
Average	6·4 minutes.	14·5 cc.	4·8 cc.	33·2 per cent.

With Increased Pressure.

Experiment.	Duration of experiment in minutes.	Maximum pressure.	Total vol. of lungs.	Total oil displaced.	Error in cc.
1	4	30	14·5	0·4	0·5
2	10	25	35·0	20	1
3	10	20	32·0	12	2
4	23	30	34·0	16	1
5	24	35	37·0	22	2
—	71	140	152·5	74	6·5
Average	142 minutes.	28 cc.	30·5	14·8	1·3

The question next arises, Was the increase in the volume of the lung due to a true expansion of the alveoli or to the development of an œdema? To determine this a series of experiments were performed similar to the foregoing, but in addition the glass tube in the trachea was connected by means of indiarubber tubing with a water manometer (2). A T-tube was placed in the connecting tube so as to allow of an adjustment to the level of the fluid in the limbs. The results of these experiments corroborated in every respect those of the first series, and at the same time it was found that when the blood circulated through the lungs at the normal pressure (12 mm. Hg.) the water in the arm of the manometer next to the trachea rose, on an average, three centimetres, indicating clearly that an expansion of the air vesicles was occurring.

We thus have under the influence of the normal pulmonary pressure an expansion of the lungs of the rabbit to the extent of 33 per cent. of their volume in the collapsed state. We can only have the full benefit of the action of blood pressure when the thorax is opened, for until the pleural effusion is evacuated, the lung is surrounded by a medium which is incompressible, and which renders expansion impossible.

My thanks are due to my friend Dr. Noël Paton for the use of his laboratory, and for much valuable assistance in carrying out this research.

Edinburgh.

THE DIAGNOSTIC VALUE OF THE PHYSICAL SIGN "TRACHEAL TUGGING" IN THORACIC ANEURYSM.

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(*Concluded from page 536.*)

3. *Tracheal tugging may be present when many other physical signs and symptoms are absent.*—Examples to prove the truth of this statement are afforded by the following cases:—

CASE 17.—J. T—— (Dr. Molson's patient).—This was a Norwegian sailor, aged thirty-one, admitted on Dec. 24th, 1889, complaining of chills, pain in the left side of the chest, and cough. He was in good health and doing hard work up to six months ago, when he began to cough, and this was soon followed by persistent and severe pain in the left side of the chest. No night sweats or other evidence of phthisis. There was a history of chills and headache, and on admission his temperature was 100·2°; pulse 90; respiration 30. A frothy expectoration, at no time viscid or rusty, accompanied the cough; a few streaks of blood were seen in the sputum on one occasion. This feverish attack lasted a few days, and he recovered from all the symptoms but the cough and the pain in the side.[1] Physical examination of the chest was entirely negative, but tracheal tugging was well marked. On Jan. 29th the left vocal cord was found to be fixed in the middle line and devoid of movement. He remained in the Montreal General Hospital until the spring without the development of any further evidences of aneurysm. A few days ago (Dec. 1st, 1890) Dr. Molson was kind enough to inform me that he had found this man living in the city, and that well-marked physical signs of transverse arch disease were present.

In Case 4, already cited, the only physical signs were slight dulness and loss of vocal resonance at the left front, together with weak breathing at the base of the left lung. Tracheal tugging afforded strong additional evidence of pressure on the left bronchus.

4. *Tracheal tugging does not occur in aneurysms which do not involve the transverse arch.*—In eight cases tracheal tugging was never found. In but one was there evidence of disease of the transverse arch. Two necropsies were obtained, but in neither was there pressure upon the left bronchus.

CASE 18 (Dr. MacDonnell's patient).—J. K——. This case has already been reported in detail.[2] There was no tugging. The aneurysm was on the transverse arch, but

[1] Influenza was epidemic at the time.
[2] New York Medical Journal, Oct. 18th, 1890.

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situated quite behind the point where the arch crosses the bronchus. Dr. Johnston, who made the necropsy, was able to demonstrate the left bronchus moving quite freely under the aorta. The aneurysm involved the third part of the arch, and caused death by rupturing into the posterior mediastinum, causing pressure on the left vagus. Both vocal cords were paralysed.[3]

CASE 19 (Dr. Wilkins' patient).—L——. No tracheal tugging. Symptoms and physical signs point to aneurysm low down the thoracic aorta. Vomiting, epigastric pain. Visible pulsation in upper epigastrium.—*Necropsy:* Fusiform aneurysm of aorta above and below the diaphragm. Hæmorrhage into both pleuræ.

In the next series of four cases the patients were lost sight of after leaving hospital. In these, however, the symptoms and physical signs pointed to aneurysm elsewhere than the transverse arch.

CASE 20 (Dr. MacDonnell's patient).—James S——. No tracheal tugging. Distinct evidences of aneurysm of the innominate. Dislocation of the sternal end of the clavicle preceded by attacks of the most severe pain in the shoulder, right side of the neck and head, and behind ear. No evidence of pressure on left bronchus, the breathing specially noted as being quite free. Right pupil smaller than left.

CASE 21 (Dr. MacDonnell's case).—R——. No tracheal tugging. Innominate aneurysm. A prominent area to right of mid-line under the sterno-clavicular articulation; dull on percussion. Partial dislocation of the sternal end of the clavicle. Wasting of the right arm. Began with pain in the right arm, shoulder, neck, and behind right ear. No difference in radial pulses. The superficial veins on the right side of the chest become varicosed whenever coughing occurs.

CASE 22 (Dr. MacDonnell's patient).—David J——. This case has been already reported in detail.[4] The aneurysm was evidently in the descending aorta. There were never any symptoms specially pointing to the transverse arch. The airless condition of the left lung was probably due to direct pressure of the third part of the aorta or of the thoracic aorta, both of which were probably enormously enlarged.

CASE 23 (Dr. MacDonnell's patient). — W. H. B——. Aneurysm of the innominate. Pulsating prominence under the inner end of the right clavicle. Pain in the right side of the head, behind the ear, and down the arm. Complete obliteration of the subclavian and carotid arteries of the right side. No laryngeal paralysis.

The next two cases afford negative evidence. Case 24 is probably an aneurysm of the first part of the arch. No laryngeal examination was made. In Case 18 we have laryngeal paralysis without tracheal tugging.

CASE 24 (Dr. MacDonnell's patient). — Joseph C——. Probably an aneurysm of the first part of the arch. Radials unaffected. Visible pulsation; dull area; systolic murmur and thrill at the junction of the second right costal cartilage with the sternum. The dull area extends an inch to the left and two inches to the right of the mid-line of the chest. No laryngeal symptoms, but brassy cough. This patient had been sent from the country for consultation, and his career after leaving the hospital is unknown to me.

CASE 25 (Dr. MacDonnell's patient).—John A——. A case of aneurysm of the innominate or of the first part of the aorta. The pain was in the right side of the chest. Inability to lie upon the left side owing to cough and dyspnœa. Enlargement of veins of upper chest and left side of abdomen. Pupils unaffected. Local bulging at second rib and right side next the sternum. Paralysis of left vocal cord. No evidence of interference with the left bronchus.

5. *Direct pressure on the trachea does not cause tracheal tugging.*—A clinical observation above mentioned affords evidence upon this point. The patient was the subject of Hodgkin's disease. A large thoracic gland behind the sternum pressed upon the trachea so as to cause stridor of the breathing, and to give rise to danger from suffocation. The projection of the tumour into the lumen of the trachea could be distinctly seen with the laryngoscope.[5] If aneurysms pressing directly against the trachea could produce tugging, then it would become an accompaniment of aneurysm of the innominate, which we can readily understand when we consider the relations of that artery to the trachea. In all cases I have seen in which aneurysm of the innominate could fairly be diagnosed tugging was absent. Tugging would therefore prove a valuable assistance in arriving at a decision as to the locality of an aneurysm. Those affecting the innominate artery are sometimes treated surgically, but such measures as ligature would hardly be adopted in full knowledge of the fact that the arch was involved. Here is a case in point, the particulars of which I take from one of the journals. A man entered hospital with symptoms of innominate aneurysm. Ligature of the carotid and subclavian was advised by the members of the surgical staff. The patient declined to submit to any operation. A few months later he died suddenly. It was found after death that not only did the aneurysm involve the innominate, but also the transverse arch. Tracheal tugging might here have pointed out the inutility of surgical interference.

These are the proofs which the clinical experience of our hospital enables me to bring forward in support of the statements I have made as to the great value of this physical sign in the diagnosis of aneurysm. A few more points require consideration. Tracheal tugging is a very early sign in the history of the case. In all the cases in which it was present it was detected on admission. I can find no history of its gradually appearing after admission. And as compared with laryngeal manifestations, it appears still more valuable, since the tug can be detected by anyone accustomed to practise physical examinations; while a reliable opinion as to paralysis of the cords can be given by a specialist or a person thoroughly skilled in the use of the laryngoscope. The two symptoms exist together in most instances. One case cited affords an explanation of how there may be laryngeal paralysis without tugging. Here (Case 18) the tumour was situated beyond the left bronchus and pressed it from behind instead of from above, thereby causing the weak breathing at the left base. The vagus was not subjected to pressure until the sac burst into the posterior mediastinum, pressed upon the nerve, and caused the adductor spasm which nearly proved fatal. In another case (25) there was absent tugging and laryngeal paralysis; but here, as there was no post-mortem examination, it would be useless to guess at an explanation. In another case there was tugging and no laryngeal paralysis. Here, again, there was no necropsy.

In conclusion, I trust that those who read this imperfect attempt at establishing the value of a new physical sign will search for its presence amongst the cases within their observation and bring forward their results, whether they support the views I have expressed or not.

Montreal.

[3] Vide Transactions of the Pathological Society of London, vol. xxiii., p. 66, vol. xxiv., p. 42. Cases are here recorded by Baumler and by George Johnson where pressure on the vagus and recurrent on one side produced paralysis on both sides.

[4] American Journal of the Medical Sciences, March, 1888; also June, 1890.

[5] Montreal Medical Journal, Nov. 1890, p. 349.

ON KOCH'S TREATMENT.[1]

BY DR. McCALL ANDERSON,
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THE extravagant laudation with which the treatment of tubercular diseases by means of Koch's fluid was ushered in has given place in many quarters to an equally absurd depreciation of its merits. Considerable practical experience of its results having been gained in the hospitals of Glasgow, it is right that we should take stock of our knowledge and compare notes with one another, in the hope that we may arrive at just conclusions. But as our experience is necessarily a short one, it follows that whatever views may be expressed must be taken as provisional, and liable to modification when a larger number of cases has been dealt with, and when they have been under observation for a longer period of time. Before bringing any cases under notice, it may be well to indicate, in a general way, some of the conclusions which, I think, may be derived from them. When a patient is inoculated for the first time with an appropriate dose of the fluid, there result, in typical cases—(1) elevation of temperature, (2) a series of other constitutional symptoms, and (3) local reaction. But, in a considerable number of

[1] Being an abstract of remarks at the opening of a discussion at the Glasgow Medico-Chirurgical Society, March 13th, 1891.

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instances, one or more of these sets of symptoms may be absent, or only present in a minor degree. Thus it is not uncommon to find decided reaction at the diseased part with little, if any, constitutional reaction and fever. Or there may be an absence of fever, but other well-marked constitutional symptoms; or local reaction may be alone observed. But, as a rule, the more pronounced the fever and other general symptoms the more decided is the local reaction, and *vice versâ*.

With regard to the body heat, the first effect of the inoculation in many cases is to produce a temporary lowering of the temperature, but this soon gives place to a rise, which reaches its maximum generally within twelve hours—sometimes not until the following day; or there may be a primary rise of temperature the day after the inoculation, and a secondary one the following day, which may even be greater than the first. First inoculations are likely to lead to a slower rise and one of longer duration than subsequent ones, in which the tendency is towards a rapid rise and an equally rapid fall of temperature. It is not, in my opinion, desirable to encourage an elevation which exceeds 104° F., and in this connexion it must be borne in mind that an inoculation frequently produces a greater rise than the preceding one, although the dose is not increased. The other constitutional symptoms observed varied in different cases, but the most common were chilliness or rigors, headache, pains in the back and throughout the body, sickness, vomiting, and prostration. In two cases what has been described as a measly, but which is really a roseolous, rash made its appearance, but in no instance was a scarlatiniform eruption induced. As regards the local reaction, we can best observe it when the lesion is on the surface, although the symptoms arising when internal organs—such as the lungs—are affected, leave little room for doubt that similar changes take place in them. The first result—in a case of lupus, for example—is the occurrence of redness and swelling which are not limited to the affected part, but spread to the skin in the vicinity, which often assumes an erysipelatoid appearance, and a serous exudation takes place from the diseased surface which dries into crusts. Each succeeding inoculation is followed by less inflammation, and when serum ceases to exude, the crusts become very dry, contract, and finally fall off, leaving a dry, scaly, rosy surface, the cicatrix being smooth, and less pronounced than after any other local treatment with which I am acquainted. When any isolated lupous nodules lie embedded in cicatricial tissue, the inoculations may fail to destroy them, the poison being apparently unable to get at them; and what may be done under these circumstances is to penetrate them with a pointed stick of caustic, and then to inoculate again, when a certain amount of reaction ensues, generally making short work of them.

From what I have said it may be inferred that, when the lupous nodules are confluent, the result is better than when they are discrete, and the best cases of all are those in which the whole patch is in a state of ulceration; that is to say, the worse the case the more brilliant is likely to be the result. But, while tuberculin is often in a position entirely to destroy the existing disease, it seems to have little influence in the way of preventing relapses, which must be warded off by endeavouring to improve the general health, especially by giving anti-strumous remedies—above all, cod-liver oil—just as we have been in the habit of doing formerly in connexion with the use of local applications. A patient who cannot take cod-liver oil in full doses—say, to the extent of 3 oz. daily—has a poor chance of being permanently cured. As regards phthisis, the time is much too short to entitle one to formulate very positive conclusions, but I am quite sure that it is undesirable to treat advanced cases in this way. Indeed, I have no doubt that such treatment is dangerous; or, at any rate, it is very apt to leave the patient in a worse plight than before. But there is equally little doubt that if we get a case at the very commencement, before excavation, with a very limited amount of lung tissue involved and the general health not being undermined, the best results may often be obtained. In considering the propriety of carrying out this treatment in a given case of phthisis it must never be forgotten that the extent of the disease is almost invariably considerably greater than the physical signs would seem to imply. Indeed, in most of the patients treated, moist râles, with or without evidences of consolidation, have made their appearance at parts where, previous to the commencement of the inoculations, there were no traces of pulmonary mischief. These new physical signs cannot certainly *always* be attributed to the development of new centres of disease, the result of setting free tubercle bacilli to work mischief elsewhere, because they sometimes appear immediately after the first inoculation.

With regard to diagnosis, there can be no doubt that Koch's discovery is a most valuable one, because, although it cannot be asserted that the fluid exclusively attacks tuberculous tissue, it is *certain* to inflame parts which *are* tuberculous when the appropriate dose is reached, and it undoubtedly often ferrets out quite unsuspected foci of disease.

As to the dose, I think it may be laid down as a good rule that not more than one or two cubic millimetres of the 1 in 100 dilution should be given as a first injection, especially if internal organs are involved, or if the patient is weakly; but the appropriate dose varies in different persons, just as we find in connexion with the administration of medicinal substances. It is much better to start with a dose which may fail to yield any result, than with a large one which produces violent local and constitutional reaction, it being always safer to feel one's way at the outset. We are all cognisant of the fact that the system soon becomes habituated to the use of certain drugs, so that after a while doses may be taken with impunity which might have poisoned the patient at the outset. And there can be no doubt, with reference to tuberculin, that a remarkable tolerance is speedily established; so much so, that we can often ultimately give an inoculation without any result one hundred times stronger than that which at first produced well-marked local and general reaction.

When I commenced to inoculate patients I made use of the syringes recommended by Koch, and with which we are all familiar; but I found that they were somewhat troublesome and uncertain in their manipulation, especially when not manufactured with the greatest care. So that most of my inoculations have been made with an ordinary subcutaneous syringe, graduated for the purpose, which has none of the drawbacks of the other, and from the use of which I have experienced no inconvenience, while inflammation at the seat of puncture has never occurred.

In conclusion, I may be permitted to say this much, at least, with regard to tuberculin, that, whatever the ultimate verdict of the profession may be with regard to the scope of its utility in diagnosis and treatment, it is possessed of most remarkable and unique properties; and no one who has had much practical experience of it, can grudge the encomiums and the honours which have been showered upon its discoverer.

[Dr. Anderson concluded by showing a series of cases, upon the treatment of which the above remarks were based.]

ON ADDISON'S DISEASE.

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THE following cases came under my care in the Salford Royal Hospital:—

CASE 1.—William A——, aged nineteen, was admitted on July 23rd, 1889. Family history good, no phthisis. The patient had suffered from no previous illness. In December, 1888, he noticed his face becoming darker in colour; the hands next became discoloured, and subsequently the dark hue spread over the whole body. The abdomen has been darker than the rest of the body as long as the patient can remember. About a month ago he noticed that he was getting thinner, and for the last three weeks he has vomited every day. He has had pain in the abdomen from time to time.—Present condition: The patient looks fairly healthy, weighs 101½ lb. The colour of the whole skin is a dark yellowish-brown, like that of a mulatto; the scrotum and penis are of a peculiarly dark-slate or indigo tint. The nipples also are darker than the rest of the skin. With these exceptions the colour is fairly uniform over all the body. The inner margins of the lips are bluish, and there are small scattered patches of pigmentation on the palate. On each side the buccal mucous membrane shows a horizontal band of pigmentation corresponding

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to the meeting line of the teeth. The cervical and submental glands are slightly enlarged. The pupils are rather large. The superficial reflexes are normal; the knee-jerk is absent. The pulse (76) is small. The temperature is normal. There are no physical signs of phthisis. Whilst in the hospital the patient had repeated attacks of vomiting, and occasionally of diarrhœa, the bowels being constipated in the intervals. For a time he felt much better, and was free from sickness. He gradually lost weight, however (being now 94½ lb.), and looked emaciated. On several occasions he had severe pain in the abdomen. The urine was of normal appearance and amount, sp. gr. 1012, acid, no albumen, no excess of chromogens; urea averaged 280 grains in the twenty-four hours. The vomiting returned, and occurred at frequent intervals, the patient becoming much weaker. Death from asthenia took place on Oct. 16th, 1889. Two days before death the blood was examined; the proportion of white corpuscles to red was not increased; the red were numerically decreased 72 per cent., otherwise there was no abnormality. The patient was moderately anæmic towards the last, but not to any great extent. — *Necropsy:* The external appearances were as already described. Internal appearances: Heart normal. The pleura showed signs of old adhesions. The lungs were free from tubercular deposit. The anterior mediastinum contained several small glands, undergoing calcification, situated at the bifurcation of the trachea. The liver and kidneys were normal. The glands of the intestines were prominent. There were no pigmentary patches in the alimentary tract. The right adrenal was nearly double the normal size; it was irregular in shape, and the surface was nodulated. The left adrenal was as large as a kidney bean; it was caseous, and contained pus in a broken-down cavity at the lower part. The solar plexus and semilunar ganglia showed no macroscopic changes. In the upper part of the abdomen the retro-peritoneal glands showed signs of incipient caseation. The spleen was friable, but otherwise healthy. The membranes of the brain were hyperæmic; they showed no pigmented areas. The brain substance was normal. The adrenals and semilunar ganglia were removed for microscopic examination.

CASE 2.—Annie B——, aged eighteen, unmarried, a tailoress, was admitted on Sept. 21st, 1889. Family history: Father healthy; mother delicate; two sisters both weakly; one has lupus of the face, and the other has had convulsions (epilepsy?); only one brother, an infant, who is healthy. Personal history: Patient has never been strong; she had bronchitis and convulsions when a child. Has been subject to attacks of vomiting as long as she can remember, for which she has stayed at home from time to time for a week or more at once. In June last she had a sick headache of unusual violence, after which she felt excessively prostrate, and for a time was unable to work. At this date a change in her complexion was first noticed. She continued to work until the middle of August, when she went away for a change of air; on her return, being still poorly, she was admitted into hospital. Present condition: The patient is a small-made girl of childish appearance, fairly well nourished, but says she has gone thinner lately. She weighs 87lb. The skin is uniformly dark without patches, except round the eyes and nipples, on the temples, and over several of the vertebral spines, where it is darker; in the last-named position evidently from friction against the clothing. There is no pigmentation of the tongue or of the lips; but there is a line corresponding to the meeting of the teeth along both sides of the buccal mucous membrane, as in the last case. The appetite is good, but the patient feels weak. Pulse 72, very small; temperature normal. She has no pain. The bowels are regular. She has not menstruated since June last. The lungs and heart are normal. Superficial reflexes normal; knee-jerk absent. For a time the patient improved. The vomiting ceased for five weeks, and she gained in weight, being now 89½ lb. The urine was of medium colour, sp. gr. 1013, acid, no albumen, no excess of chromogens. Average amount forty-eight ounces, and average excretion of urea 248 grains, in the twenty-four hours. On Nov. 4th she complained of severe frontal headache, and felt very sickly, the pulse being excessively small and feeble. The patient was now decidedly anæmic. The anæmia was not only perceptible in the palpebral conjunctivæ, but at the folds of the skin at the base of the fingers when interposed between a bright light and the eye of the observer. From this time she rapidly got worse; she vomited at frequent intervals, and was very cold to the touch. She also became much darker in colour, and complained of extreme exhaustion. The respiration was slow, and the radial pulse was imperceptible. Death from asthenia took place on Nov. 21st, 1889. For a few days before death the breath had a strong "ethereal" odour. Two days before death an abnormal amount of indican appeared in the urine; 880 c.c. were treated after Jaffe's method, and yielded 0·0047 grm. of indigo. Continuous observations enable me to state that the amount of indican in the urine before this date was never above normal. On Oct. 15th the blood was examined with the hæmocytometer. The red discs were in normal percentage; the white corpuscles were relatively increased, being 1 to 250. (I am indebted in both cases to Mr. Percy Stocks, late house surgeon to the hospital, for the examination of the blood with the hæmacytometer.)—*Necropsy:* The external appearances corresponded with those observed during life. Internal appearances: The heart showed no pathological changes. In the apex of the right lung were two small caseous nodules, otherwise the lungs were healthy. The intestines were normal, with the exception of some small brownish patches of pigmentation on the peritoneal coat. The liver was small and pale, otherwise healthy. The spleen was small and firm. The kidneys were pale. The adrenals were much enlarged, especially the left, which showed signs of breaking down. No macroscopical changes were observed in the semilunar ganglia and solar plexus. The uterus was of the infantile type. On the upper part of the posterior wall of the vagina, behind the cervix uteri, were small patches of pigmented mucous membrane. The external genitals were like those of a young child. The ovaries were small and showed one or two cicatrices, but not of recent formation. The adrenals and the semilunar ganglia with some of the adjacent nerves were removed for microscopical examination.

I am indebted to the kindness of my friend, Dr. Arthur Robinson, of Owens College, for his valuable assistance in preparing and examining sections from the semilunar ganglia from the above cases, together with the ganglia from a case of about the same age, not of Addison's disease, for control observations. The exhaustive investigations made by Dr. Robinson establish beyond question the accuracy of the conclusion he has arrived at. He was also good enough to prepare a number of sections of skin and mucous membrane from the same cases.

Dr. Robinson's report.—At Dr. Dixon Mann's request I prepared and examined three pairs of semilunar ganglia. The first pair was from a man who had died from Addison's disease. These ganglia had been placed in methylated spirit. I transferred them to Müller's fluid and afterwards back again to spirit, but evidently the first spirit in which they were immersed had produced such an effect that the sections made from them did not stain properly when subjected to Weigert's hæmatoxylin method. The second pair of ganglia was from a girl who died from Addison's disease, and the third pair from a man affected with phthisis. Both the latter pairs of ganglia were placed first in Müller's fluid, and afterwards in methylated spirit. When the hardening process had been completed in the spirit all the ganglia were transferred first to absolute alcohol, thence to turpentine, and finally to paraffin melted at 55·5° C. The embedded ganglia were cut into sections by means of the rocking microtome, and the paraffin was removed from the sections by passing them through warm turpentine into absolute alcohol, thence into methylated spirit, and afterwards into 70 per cent. spirit. The sections were transferred from the 70 per cent. spirit to the various staining solutions that were used, sections from each case being passed through exactly the same solutions. The sections were stained in six different ways: (1) By Weigert's method; (2) in aniline blue black; (3) in a 4 per cent. solution of methyl blue, after which they were washed in a saturated solution of picrate of ammonia; (4) in borax carmine; (5) in borax carmine, and after dehydration cleared in oil of cloves containing picric acid in solution; (6) in hæmatoxylin. When the staining was completed it was found that all the ganglia presented exactly the same microscopical appearances. There was no excess of fibrous tissue either in their capsules or in their interiors. There was no excessive pigmentation of the ganglion cells. The ganglion cells were not shrunken. The nuclei and the processes of the ganglion cells were distinct. The nerve fibres passing through the ganglia showed no traces of degeneration. The capsules of the ganglion cells presented all their usual features. In

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short, so far as the implication of the semilunar ganglia in the production of Addison's disease is concerned these cases presented negative evidence only, nothing abnormal was found in the ganglia. The adrenals from the two cases of Addison's disease were examined with the following result: The normal tissue was almost entirely replaced by tubercular deposit partially broken down. Tubercle bacilli were sought for, but none were found.

It will be seen from the description given that these two cases are typical examples of Addison's disease, uncomplicated by other derangement. They may, therefore, serve as a basis for the discussion of the morbid physiology of the disease. Whilst desirous of avoiding as far as possible ground already covered, it is necessary to formulate concisely the views held with regard to the pathology of the disease. They are three. First, that the symptoms are immediately due to disease of the adrenals. Second, that they are caused by certain changes in the semilunar ganglia or in the abdominal sympathetic nerves, which may be primary or may be caused by mechanical pressure from a neighbouring morbid growth, but are more frequently referred to extension of slow inflammatory processes from the adjacent adrenals. In the latter case the adrenals are still to be regarded as the initial seat of the disease. Third, that they arise from the presence of a toxic agent or agents in the blood. According to this view, also, disease of the adrenals would probably be the first link in the morbid chain. Some pathologists consider that the specific character of the morbid processes which take place in the adrenals is the true determinative of the symptoms. Wilks[1] holds that infiltration of the adrenals with an albuminous material, which subsequently may undergo caseation or cretification, is the only pathological change in them which can occasion Addison's disease. It is supposed by some that slow inflammatory processes thus set up spread to the neighbouring semilunar ganglia. Greenhow[2] supports this view, by which he accounts for the absence, for the most part, of the symptoms of Addison's disease when the adrenals are the seat of hæmorrhage or of malignant deposit, these processes being non-inflammatory.

In the two cases narrated, the changes in the adrenals were of the kind usually met with after death from Addison's disease. The semilunar ganglia, however, presented no abnormality. Microscopic sections from the ganglia of these two cases could not be distinguished by expert observers from sections of normal ganglia. Many pathologists at the present time refer the symptoms of Addison's disease exclusively to morbid changes in the semilunar ganglia. Kahlden,[3] after critically reviewing the reported cases, and substantiating his deductions by results obtained from two cases of his own, has no hesitation in localising the disease in the semilunar ganglia. He very properly declines to accept any but skilled examination of the ganglia as evidence, and further suggests, to make the evidence valid, that it should be founded on direct comparison of the ganglia under examination with normal ganglia from individuals of like age. In my two cases these precautions were fully carried out. I emphasise this as it is obvious that some alteration of nerve function offers the only reasonable explanation of the symptoms under discussion, and the semilunar ganglia, from their anatomical relations, are naturally the organs on which suspicion rests. In many instances this suspicion has been verified: the ganglia have been found both macroscopically and microscopically changed. Disease of the semilunar ganglia would account fairly well for most, if not all, of the symptoms, although the exact mode in which interruption of their functions could occasion some of the symptoms is not quite clear. Still the assumption of a causal relation is justifiable, and if the nerve cells of the semilunar ganglia were atrophied in every case of Addison's disease, its pathology would be simplified. When we find, however, in a number of cases of Addison's disease, in which all the cardinal symptoms were present, that the semilunar ganglia are intact, it is obvious that structural changes in these organs do not constitute the essential factor of the disease. It is not to be forgotten, moreover, that more or less pigmentation, atrophy, and other morbid appearances in the semilunar ganglia are seen under many pathogical conditions apart from Addison's disease. Hale White's[4] observations on this subject are very remarkable. Of thirty-three semilunar ganglia, taken indiscriminately from persons dying from various diseases, three were from children and were quite normal. Of the remaining thirty, the nerve cells were normal in six; all the rest showed more or less degeneration of the cells, which in many cases were reduced to minute masses of non-nucleated granular pigment, lying free in the middle of the capsules. A few of the sections were crowded with leucocytes, for the presence of which no cause could be ascertained; the appearance of the section had no relation to the cause of death. The inference drawn is that the semilunar ganglia in the lower animals and in the young human subject are functionally active. In the human adult the nerve cells degenerate and are functionally inactive, but the nerve fibres always retain their structure and function. As the evidence afforded by the semilunar ganglia in my cases was negative, it becomes necessary to discuss the claims of the adrenals to the position of causal agents. These bodies are pathologically changed in such an overwhelming majority of cases of Addison's disease that it is impossible to regard the conjunction as a mere coincidence. There is evidently a close relation; whether one of cause and effect is an open question. Many modern pathologists have ceased to regard disease of the adrenals as a possible immediate cause of the symptoms of Addison's disease. The very ambiguity of the physiological functions, and even of the anatomical structure of the adrenals, makes it so much the easier to eliminate them from consideration. They are regarded as ductless glands, as organs belonging to the nervous system, as partaking of both characters—the medullary substance being a network of nerves and the cortex a vascular and glandular structure,—and, finally, as having solely embryonic functions. The most recent investigations tend to show that the adrenals are functionally active in adult life, at least in some of the lower animals. Tizzoni[5] observed a tendency to redevelopment in injured adrenals, and even after they had been removed. In some more recent experiments[6] on rabbits he removed one adrenal only in each animal, some of the animals living upwards of a year. After death he found infiltration of the pia with small round cells, especially in the neighbourhood of the vessels. There was also a fibrinous exudation in the subarachnoid space, and important changes in the floor of the fourth ventricle, the grey substance of which was in some places replaced by these small cells. He further found degeneration in the peripheral nerves. Tizzoni attributes these changes to alteration in the bloodvessels. Stilling[7] divides the adrenals into glomerular and fascicular zones. In animals the glomerular zone contains cells charged with pigment, which are very like the pigment cells of the choroid. In man the pigment is found between the cortical and medullary substances. The pigment cells are star-like in appearance, and they lie outside the walls of the capillaries. The pigment is limited to these cells; the gland cells themselves contain no pigment. The deepest pigmentation of the adrenals occurs in those animals which are piebald; in such animals there are often spots of pigment in the throat, but all the internal organs, except the adrenals, are free from pigmentation. Another series of experiments made by Stilling[8] tend to disprove the view that the adrenals are only active during embryonic life. In a number of young rabbits one adrenal respectively was removed, and the animals were allowed to live for several months after the operation. On examination after death, the remaining adrenal was found considerably hypertrophied, due, as Stilling considers, to compensatory hypertrophy, one gland having to perform the duties of two. When one of the adrenals was incompletely destroyed, the fragment that remained had a tendency to develop, sometimes to the size of the normal adrenal. After removal of an adrenal, accessory adrenals frequently develop on the cava or in the neighbourhood of the kidneys.

Chemical examination of the adrenals reveals in them the presence of certain colouring matters, the nature of which is not yet determined. Vulpian,[9] Arnold,[10] and others observed peculiar colour reactions with solutions obtained from the adrenals, indicating the presence of a substance, or substances, not found in the other tissues of the body. Mac Munn[11] detected hæmo-chromogen, which he regards as an effete blood product, the inference being that the adrenals

[1] Guy's Hospital Reports, 1862. [2] On Addison's Disease.
[3] Virchow's Archiv, vol. cxiv., 1888.
[4] Journal of Physiology, 1889.
[5] Gazz. degli Ospitali, 1884. [6] Arch. per le Scienze Med., vol. x.
[7] Virchow's Archiv, Bd. cix. [8] Ibid., Bd. cxviii.
[9] Comptes Rendus, 1856. [10] Virchow's Archiv, Bd. xxxv.
[11] British Medical Journal, 1888.

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are employed in its elimination. According to this view, if the adrenals are diseased there ought to be evidence of incompletely metabolised pigment in the excretions. In two cases of Addison's disease Mac Munn found in the urine a derivative of hæmatin, which he names "urohæmatoporphyrin." This substance may be found in the urine under two conditions: (1) when excess of effete hæmoglobin or of histohæmatin is present in the circulation, the blood-metabolising glands being healthy but incapable of dealing with the excess of pigment; (2) when the pigment is not in excess, but the blood-metabolising glands are diseased, as is assumed to be the case in Addison's disease. In this case other effete or abnormal products are assumed to be present in the blood, and to exercise a toxic effect on the organism, and so produce the asthenia and other symptoms. Krukenberg,[12] amongst other products, extracted from the adrenals a chromogen which possesses many properties in common with pyrocatechin. The coloured derivatives of this chromogen, with one exception, are of a very fugitive character, much more so than the pigment deposited in the skin in Addison's disease. Krukenberg considers that the identity between the above-mentioned chromogen and pyrocatechin completely excludes the possibility of any chemical relation existing between the pigment obtained from the adrenals and that deposited in the rete cells in Addison's disease.

(To be continued.)

CASES ILLUSTRATING THE UTILITY OF LANG'S KNIVES IN EFFECTING DIVISION OF ANTERIOR SYNECHIÆ.

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OPHTHALMIC SURGEON TO THE ROYAL CORNWALL INFIRMARY.

A FEW months ago Mr. Lang of Moorfields introduced to the profession, through the Ophthalmic Hospital Reports, some knives which he had found useful in his practice. Their special design was to assist in dividing the adhesions which produce an anterior synechia in the eye. They do this by allowing the division to be made whilst the aqueous is still retained in the anterior chamber. One knife has a sharp point, with which an incision is made in the cornea; and on its being withdrawn a second knife with a blunt point is inserted through the hole made by the first sharp-pointed knife. The two knives being of exactly the same size, one fits well into the opening which has been made by its predecessor. This admits of almost any adhesion being divided by the blunt-pointed knife, the aqueous being retained by it. I have recently had under my care in the Royal Cornwall Infirmary two cases which well illustrate the usefulness of these knives.

CASE 1.—A. B——, a girl aged fourteen. About a year ago she ran the prong of a fork into her right eye. The fork wounded the lens and cataract ensued. When she came under my care the larger portion of the cataract had been absorbed. In the end, however, a large piece of opaque capsule and some débris of the lens remained behind. This completely blocked up the pupil, and was, moreover, adherent (1) to the back of the cornea, just where the wound was originally made by the entering prong of the fork; (2) it was also adherent to the iris at its upper part and at the sides, the lower portion of the iris being quite free from adhesions. All vision was of course obstructed by this capsule, and even in October, 1890, the eye was commencing to diverge. She is a good-looking girl; therefore it was necessary that something should be done to clear away the opacity and so, in all probability, remove the divergent strabismus. The first thing to do evidently was to free the capsule from the back of the cornea. This I attempted with the ordinary appliances, but failed to accomplish it in consequence of the escape of the aqueous. The tension of the eye and of the cicatricial band became so altered that I could not get the band to present any resistance to the knife. I had also to remember that if I used too much force I might easily have an escape of vitreous. Subsequently, however, on using Lang's knives and retaining the aqueous there was not the slightest difficulty in freeing this band from the back of the cornea. After allowing the eye to rest for a week or ten days I made an incision into the cornea as for iridectomy, and with the iris forceps withdrew the capsule from the anterior of the eye. It was, however, so firmly adherent to the iris that I was compelled to withdraw the iris through the wound and then to snip a portion of it off. The ultimate result is very good, and I discharged her from the infirmary on Nov. 12th. Probably now that light is admitted to the eye, it will no longer diverge.—Feb., 1891: I have just seen this patient, who has an excellent eye; but the divergence continues. This of course can be rectified.

CASE 2.—C. D——, a worker at a tin smelting works, was hit in the left eye twelve months ago by a splutter of molten tin on the lower segment of the cornea. The burn was of course very slow to heal, and ultimately the resulting ulcer opened the anterior chamber, and the iris became adherent to the back part of the scar. On Oct. 25th, 1890, it was impossible to see the exact position of the synechia, as it was obscured by an opacity of the cornea, which extended over a larger area than was originally represented by the scar of the ulcer. The pupil was excentric and oval, and displaced downwards. The upper portion of the iris was seemingly much stretched. He had constant circumorbital pain on each side of the head and face. The right eye was on several occasions inflamed, and he described it as having watered very much. No doubt it was the subject of sympathetic irritation. Ophthalmoscopic appearances of it were natural. Right eye, $V=\frac{6}{6}$; left eye, $V=\frac{6}{6}$. He was admitted into the Cornwall Infirmary on Oct. 26th, 1890, with the object of having the anterior synechia detached from the back of the cornea of the left eye. This I was fortunately able to do by the aid of Lang's knives, though it was haphazard work, as I could not see the exact position of the synechia on account of the opacity of the lower segment of the cornea. No aqueous escaped, and on Oct. 28th he expressed himself as being quite free from pain. Indeed, he described the pain as having entirely ceased immediately after the operation.—Oct. 30th: On testing I now found the vision of the right eye $\frac{6}{9}$, as contrasted with $\frac{6}{6}$ on the day before the operation. Atropine has been instilled into the left eye morning and night, which resulted in the pupil becoming perfectly sound and well dilated in all parts of its circumference. The opacity of the cornea is also largely clearing away, so as to allow a sight of the lower portion of the iris. Nov. 2nd: He insisted on being discharged. He has since called upon me, and the improvement continues. This case is interesting as showing the injurious effect on the sound eye of an anterior synechia. For here is a case in which vision was only $\frac{6}{6}$, yet after the division of the synechia it almost at once becomes improved to $\frac{6}{9}$. I do not say that the division of the synechia could not have been done without using Lang's knives; yet they undoubtedly rendered it much more easy of accomplishment, and they have moreover allowed me in the second case to restore to its owner an unmutilated eye—for the only alternative, had I failed, would have been an iridectomy. As it is now, the patient has a perfect pupil, and this, with perhaps a gradual improvement of the corneal opacity, will give him a fairly useful eye.

[12] Virchow's Archiv, Bd. cl.

ON A METHOD OF APPLYING WEIGHT EXTENSION IN THE TREATMENT OF OBLIQUE FRACTURES OF THE TIBIA.

BY G. H. R. HOLDEN, M.A., M.B., B.C. CANTAB.,
RESIDENT SURGICAL OFFICER AT THE GENERAL HOSPITAL, BIRMINGHAM.

THAT oblique fractures of the tibia often present great difficulties in treatment is, I think, a proposition which no one will deny; and few will maintain that the methods of treatment in ordinary use are satisfactory in bad cases. To prevent the upper fragment of the tibia riding over the lower extension is necessary in some cases, and three forms have been used:—(1) Extension by means of a screw attached to a movable foot-piece; (2) extension by means of elastic bands; (3) weight extension. Undoubtedly of these the equable steady traction of a weight has the greatest advantage, both mechanically and physiologically. Hitherto the great difficulty in using weight extension has been the

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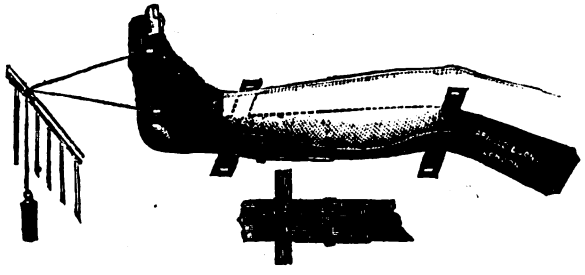
absence of a satisfactory method of applying it to the leg. Messrs. Arnold and Sons have made, at my request, a splint which, I think, meets all requirements, and I have used it in several difficult oblique fractures with excellent results—results which are as good as those obtained in ordinary transverse fractures. The splint, as shown in the engraving, is similar to a Neville's back splint, but has a sliding foot-piece. The "purchase" for the extension is got from a padded leathern "spat," which is laced on to the foot. In applying the splint the spat is placed behind the heel, and the foot and leg are fixed in the usual manner, care, however, being taken that the bandage does not interfere with the free play of the foot-piece. The spat is then laced up, the splint swung from a cradle, and side-splints applied. Next, a weight of from 4 lb. to 8 lb. is



attached to the spat by means of a cord and pulley. In the engraving the cord is seen to be attached to two pairs of rings, but in practice it will be found better to attach it only to the lower or posterior pair, as then the line of traction is directly in the line of the long axis of the limb, and so the heel is kept well down against the foot-piece and the fragments are made to drop into good position.

To illustrate the above I will quote one case in which I used this method while senior house surgeon at St. Bartholomew's Hospital.

W. B——, aged forty-two, was admitted into the Harley ward, under the care of Mr. Willett, on Aug. 11th, 1890, suffering from compound fracture of the left leg. The tibia was very obliquely fractured about its middle third, and the sharp end of the upper fragment was protruding about 1½ in. through the skin. Attempts at reduction under an anæsthetic failed until the tip of the upper fragment had been sawn off. The wound was irrigated with corrosive sublimate lotion (1 in 2000) and dressed with sal alembroth gauze and wool, and the leg put up on a Neville's splint and side splints, and swung from a cradle. No constitutional disturbance followed, and the leg was not interfered with for fourteen days, when on the removal of the dressings the wound was found to have nearly healed, but the position of the fragments was far from good; in fact, the upper overlapped the lower by an inch, and it was not found possible to keep them in good position without extension. The splint above described was then applied with a weight of 8 lb., and the fragments came into good position within twenty-four hours. The weight was reduced to 4 lb. twelve days later. On Sept. 11th the fracture was found to be united in excellent position, and the wound healed, so a Croft's plaster splint was applied. The patient left the hospital three days later.

From the above and several subsequent cases of simple oblique fracture treated in this way I have every confidence that weight extension used with a splint such as I have described may be found useful in cases where other splints fail.

Birmingham.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD.—The work done by this charity is daily increasing, but the income is inadequate to meet the constant addition to the expenditure. The annual report (the seventy-seventh) states that during 1890 5696 out-patients were admitted, and the total attendance was 23,666. The in-patients numbered 523, of whom 50 had died. The debt which last year existed upon the new wing had been liquidated by the generous efforts of Mr. Hope Morley and Mr. T. Andros De La Rue. The hospital is now the property of the governors. There are still two wards closed for want of funds. The financial condition is a source of anxiety to the council of management, there being a large deficit. The funded capital of the charity does not exceed £3200 from bequests.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RANDIA DUMETORUM.

BY SIR JAMES SAWYER, M.D., F.R.C.P., F.R.S.E.,
CONSULTING PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

IN Messrs. Southall's exhibit at the meeting of the British Medical Association in Birmingham last summer there were some interesting Indian drugs, comparatively or quite unused or unknown in England, which had been collected by Mr. David Hooper, the eminent Oriental pharmacologist, who has been for some time engaged in India in the office of quinologist to the Madras Government. I examined these drugs, and considered the information I could gather about them, and one of them—namely, randia dumetorum—appeared to me to be worthy of further investigation and trial. Under my directions, Messrs. Southall prepared a series of tinctures of the drug, and one of these, a tincture made with the spirit of ether, B.P., I have been using in practice as a nervine calmative and antispasmodic in cases in which the vegetable antispasmodics, such as valerian or assafœtida, appeared to be indicated. I now desire to invite my brethren to examine this drug for themselves, and to say my experience of its employment points to its proving a useful addition to our repertory of nervine antispasmodics and cardiac excitants. The fruit of randia dumetorum has an ancient repute as a popular medicine in India, being given in large doses as an emetic. The pericarp, especially when fresh, has a powerful and penetrating odour, due to valerianic acid. The active principle of the drug is said to be allied to saponin, which is a glucoside found in soap bark, and also contained in senega and sarsaparilla. We may remember that saponin has been shown to possess some very marked physiological potencies, of a kind which point to valuable and numerous therapeutic applications. For example, Dr. Lauder Brunton describes saponin in various places in his well-known text-book of therapeutics as a respiratory excitant and depressant, as a sternutatory, as a stimulating expectorant, as a depressant of the cardiac inhibitory ganglia and of the vagus ends in the heart, and as a cardiac antagonist of digitalin. In the official pharmacopœia of India, prepared under the direction of Dr. Waring, of the India Office, 1868, I find randia dumetorum described as a non-officinal drug. Randia appears to be a common shrub in most parts of India, growing, as its second name states, in thickets. The fruit is held in high esteem by the natives on account of its emetic properties. The following note upon its use was communicated to Dr. Waring's pharmacopœial committee by Dr. George Bidie:—"The fruit is about the size of a crab apple, round, two-celled, many-seeded, and crowned with the rim of the calyx. It has a peculiar sweetish sickly smell, which increases after the fruit has been kept for a few days. It is very commonly used as an emetic by the poorer classes in Mysore, and is said to be safe and speedy in its action. I have myself seen it used several times, when it produced emesis in about fifteen minutes The dose is one ripe fruit, well bruised, which may be repeated if necessary. It is apparently an irritant emetic." Dr. Waring also adds:—"According to Ainslie, an infusion of the bark of the root is used by the natives to nauseate in bowel complaints. Roxburgh mentions that the bruised fruit thrown into the water intoxicates and even kills fish, which, however, are not considered less wholesome in consequence." I have had four tinctures of randia made—namely, with spirit of ether, rectified spirit of wine, aromatic spirit of ammonia, and proof spirit respectively, and of the strength of one part of the drug in five parts of the tincture. When any one of these tinctures is diluted with water and acidulated with acetic acid, the odour of valerian is very apparent; and it is most apparent in the tincture made with spirit of ether, and this is the tincture I have selected for therapeutic use. The dose of tinctura randiæ dumetorum ætherealis is from fifteen to sixty

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minims diluted with water, with which it makes a milky-looking mixture. The tincture has a strong and characteristic odour and taste, and is of a bright maize colour. It may be given with iron, if a greenish colouration be permissible.

Birmingham.

A SINGULAR CASE OF AURAL GROWTH.

By GORDON HOLMES, M.D.,

PHYSICIAN TO THE MUNICIPAL THROAT AND EAR INFIRMARY, LONDON; CONSULTING PHYSICIAN TO THE SHEFFIELD EAR AND THROAT HOSPITAL.

THE following case is probably unique in the published annals of ear disease, and therefore deserves to be placed on record.

In the latter end of 1889 T. A. H——, a healthy-looking and well-grown boy of fifteen, was brought to me on account of deafness of one ear, which had only just been discovered. On examining the right meatus I found the entrance veiled by a film of purulent discharge. When this was cleared away a growth came into view, having the appearance of an ordinary polypus and filling up the meatus to within a couple of lines of its external outlet. To the probe this growth evinced an unusual firmness, and I concluded that I had to deal with a polypus of remarkable toughness. I applied Wilde's snare, however, in the ordinary way, but brought away only about a quarter of an inch of the growth. Again I essayed, but the second time removed only a thin slice, less than a line in thickness. Exploration with a probe now revealed the fact that the meatus was blocked at about a third of its length from the outside by a solid body, presenting all the characteristics of an exostosis, from the external face of which the soft growth had arisen. Under suitable treatment with astringents &c. the raw surface healed up, and as soon as the parts were clear of all discharge it was found that hearing was as perfect, or nearly, as with the sound ear. Nevertheless by ocular inspection it was scarcely possible to detect a crevice through which the sound waves could reach the tympanum. No doubt there is a cavity behind the projecting bone, and, on the principle of hydraulics, a very small aperture is sufficient to influence fully from outside the body of air contiguous to the tympanic membrane. Whether the stenotic condition of the meatus is due to some congenital deformity or to an ordinary exostosis it seems not easy to determine, but I incline to believe that there is a morbid growth from the bone. I have recently heard of the case, more than a year having elapsed, and it appears that the boy has suffered no inconvenience since the local treatment was finished, so that up to date the ear remains practically as useful as if unaffected. An operation is therefore deferred *sine die*, unless further symptoms arise which may demand it.

Cases of exostosis of the auditory meatus are extremely rare—from my own experience,—not more than one in 3000 ordinary instances of ear disease. In two previous cases I have seen there was a purulent discharge, apparently from behind the growth. In such instances I have read that a soft polypus has been discovered posterior to the exostosis after its removal. Ordinary polypus of the ear is decidedly frequent—fully 2 or 3 per cent. of all ear cases. They occur at all ages up to about forty, and I have seen at least one in an infant of a few months old. I do not remember seeing a case after forty, nor do I think they often have their origin much beyond the period of adolescence.

Finsbury-square, E.C.

A CASE OF MONSTROSITY.

By W. ARMSTRONG, L.R.C.P., L.R.C.S. &c.

ON Feb. 7th I was called to attend on Mrs. C—— at 2 P.M. in her second confinement. She did not expect the birth till the end of March. About 11 A.M. the membranes had ruptured, and a large amount of fluid escaped; from that time until my arrival there had been regular though slight hæmorrhage. On examination the rectum was found to be loaded with fæces, the os being about the size of a threepenny piece. An enema of soap and warm water was administered, and the bowels were freely opened. As there were no pains for an hour and a half I left, promising to call later on. I returned at 7 P.M. The patient had had strong pains since four o'clock. On vaginal examination I felt in the vagina a rounded mass, which I took to be a shoulder, and on pushing the finger onwards I felt four or five sharp bony prominences, above which was a soft mass. I then pulled on the arm, and brought down a very small hand. I then introduced three fingers, and hooked on to the fœtus and pulled it down. The placenta was dislodged in a similar way. In this case there was no history of shock or fright during pregnancy. The previous (first) confinement was characterised by complete inertia, and the child was stillborn. Patient is always very anæmic. The fœtus presented the following appearance:—Sex, male. Length between seven and eight inches. The head was continuous with the body, back, and front, the neck being absent. The limbs were long, and feet and hands relatively large; the abdomen much swollen. With these exceptions the body was normal in appearance. The face resembled that of a frog, the eyes very protuberant, and the tongue protruding

from the mouth. Immediately above the eyes the head presented a flattened surface at right angles with the face. The skin of the face was continued over this surface to about the level of the ears, from which line backwards extended a thin red membrane, which had evidently contained fluid, and formed a sac, and this membrane continued backwards down the spine, forming the roof of the open vertebral canal. Just behind a line drawn between the two ears were two bony prominences on each side, projecting vertically considerably above the flat upper surface of the head. Immediately behind the remains of the sac, in the occipital region, was a deep depression, and thence down the spine extended a broad open groove, bounded on either side by six bony prominences, and terminating just above the sacrum. The sketch conveys a very good idea of the appearance of the monster.

Pontesbury, Salop.

CASE OF PUERPERAL FEVER COMMENCING NINE DAYS AFTER DELIVERY.

By GEO. H. SALTER, L.R.C.P.ED., M.R.C.S.ENG.

I THINK a few notes on this case may be of sufficient interest to find a place in the columns of THE LANCET.

On Aug. 30th at 7.30 A.M. Mrs. D—— gave birth to a male child, this being her fifth confinement. She was attended by a midwife. On Sept. 8th at 11 A.M. by request I first saw Mrs. D——. The woman in attendance told me "the labour had been easy, the afterbirth coming away half an hour after the child, and that until 9 o'clock that morning the mother had been doing splendidly. At that time she began to shiver, looked strange about the eyes, and talked queerly. She had had plenty of milk, had suckled the infant several times through the previous night,

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and there had been no bad smell about the discharge." On examination I found the patient looking terribly ill, dorsal decubitus, knees not being drawn up; she was more or less delirious. Skin moist, tongue thickly furred. Temperature 104°; pulse 140; respiration 40 per minute. Abdomen was not swollen, and there was not the least tenderness on pressure above the pubes. The lochia were not offensive, but the condition of the bedclothes was not so clean as one could wish. This I saw remedied, ordered her the usual diet (milk and meat broth), and ordered a mixture containing ten grains of salicylate of soda with two minims of tincture of aconite every two hours, promising to call again in the evening. At 7.30 P.M. I found her in much the same condition. She had been delirious through the day, but had taken freely of nourishment without vomiting. Had passed two copious and offensive motions. Temperature 105°; pulse 160; tongue dry. I syringed her with diluted Condy and ordered an ounce of brandy every four hours. On the 9th I visited her twice. The temperature at 11 A.M. was 105°; at 8 P.M. 104°. Her general condition was much the same. The breasts were soft and contained very little milk. The lochia had ceased. There was no swelling of the abdomen or tenderness. She had taken nourishment freely, and the bowels had not been moved. She had not vomited. Had dozed at times, and been less delirious during the later part of the day. She was syringed morning and evening. On the 10th, at 11 A.M., she expressed herself as feeling much better, and certainly looked so. She had taken plenty of nourishment without vomiting, and had slept fairly well during the night. Temperature 102°; pulse 108. I syringed her as before, and gave a mixture containing five grains of quinine every three hours, and promised to call the following morning. On the 11th I was sent for at 8 A.M., and found her condition as follows: Face anxious; slightly jaundiced tint; lips bluish; skin moist; dry tongue, with sordes about the teeth. She was quite conscious, and complained of cough and of pain about the wrists, elbows, and knees, which were slightly swollen. The abdomen was much swollen. There had been some diarrhœa, but no vomiting, through the night. The nourishment had been taken freely. Temperature 102°; pulse 130; respiration 40 per minute. The sputa were brownish, and on percussion and auscultation there were well-marked signs of pneumonia in both lungs. From this time onward she went from bad to worse, and died on Sept. 14th at 11.30 A.M.

I have seen many cases of puerperal fever during the time I have been practising, and in all previous to this my experience has accorded with what is stated in the works I possess on Midwifery. That the initial rigor in this case did not take place until the ninth day I cannot doubt, as the patient told me she had never felt better than she did until the morning of Sept. 8th. Information gained from those who had seen her on the 6th and 7th tended to corroborate this. No doubt the exciting cause of the disease was lack of cleanliness; and I imagine, as the woman was very stout and flabby, the reparative process was more slowly accomplished, and thereby the susceptibility to septic influences unduly prolonged. So good an authority as Lusk[1] writes:—"The third day is the one upon which ordinarily the beginning of the fever is to be anticipated. After the fifth day an attack is rare, and at the end of a week patients may be regarded as having reached the point of safety." Other authors I have at hand take much the same view, and although they agree in saying that the disease may occur later, I fancy a case in which it commenced on the ninth day is sufficiently rare to make it worthy of record.

Learmonth, Victoria, Australia.

[1] The Science and Art of Midwifery, by Wm. Thompson Lusk, M.A., M.B.; 1st edition, p. 620.

THE ROYAL SURREY COUNTY HOSPITAL.—The annual report for 1890 is satisfactory. The continued generous support received has relieved the committee from present financial anxiety. The receipts on current account—£4204 17*s.*—have been adequate to discharge the disbursements and leave a balance of £84 8*s.* 1*d.* in hand. The house surgeon's report showed that the in-patients numbered 774. The home patients on the books were 409 and visits made 1395. The total of out-patients was 4640 and attendances 11,006. The proposal to abolish the attendance of the house surgeon on home patients residing within a mile of the Town Hall, Guildford, has been referred to a committee to consider and report to a special meeting of the governors.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

EASTERN FEVER HOSPITAL, HOMERTON.

A CASE OF PURPURA FULMINANS; NECROPSY; REMARKS.

(Under the care of Dr. COLLIE.)

PURPURA of the severity exhibited in the case of this patient is fortunately of very rare occurrence in this country, and the resemblance which it bears to the cases described by Dr. Henoch is pointed out by Dr. Collie in his remarks. A more recent contribution to the literature of the disease will be found in the *Archives of Pediatrics* for December of last year by Dr. Jackson, of Boston, U.S.A. His communication was founded on the observations of the case of a boy aged five, who had died under his care on the fifth day of the disease. The patient had suffered from severe hæmorrhages from the mucous membranes (epistaxis, hæmatemesis, melæna, and hæmaturia), as well as from large subcutaneous extravasations of blood. The following account is from notes by Miss Fleury, assistant medical officer.

F. B. D—— was admitted into the hospital about 9 P.M. on Nov. 11th last. About Oct. 20th he had an attack of scarlet fever, which he appeared to be passing safely through when the "eruption" which is about to be described was observed on Nov. 10th, about three weeks from the commencement of the scarlet fever. On admission the patient was a pale, thin boy, nine years of age. His expression was placid, and his intelligence remarkably acute. Over the extensor aspect of the left elbow a large ecchymosis extended some way down the forearm. There was an extensive ecchymosis over the right hip, and one on the calf of each leg. The ecchymoses appeared to be recent, and at their margins the extravasated blood was of a bright-red colour. There was extreme tenderness of the skin, but otherwise the patient made no complaint of pain. The tongue was fairly clean, and the gums sound. There was no hæmorrhage into the conjunctiva, and there was none from the mucous membranes. The pulse was fairly good, and the temperature 98·6° F. There was a little branny desquamation on the face. Mind clear. He passed a restless night, but took his nourishment readily, apparently being very thirsty. He complained of "pins and needles" sensation all over, but at 7 A.M. he was reported to have been bright and cheerful. He passed two ounces of urine free of blood during the night, and there was no motion from the bowels. About 8 A.M. violent vomiting came on. He cried much when moved in bed, and complained of pain in the abdomen. At 11 A.M. a new ecchymosis was observed behind the left ear. His face was now very pale, pinched, and drawn, and generally he appeared to be in great distress. It was clear that he was sinking, but his mind continued clear. He died about noon; that is, about sixteen hours after admission, and about forty-eight after the appearance of the "eruption."

Necropsy, forty-eight hours after death.—Rigor mortis was very marked. There was a large ecchymosis on the back extending downwards from the right shoulder; also one over the left hip. The patches were somewhat symmetrical. There was some fluid in each pleural cavity, but more in the right than in the left. Lungs were anæmic, but otherwise normal. The heart contained no clots, but the walls were somewhat thin and flabby. The liver and kidneys were anæmic. Spleen not enlarged. Intestines were very anæmic, containing a little feculent matter, walls very thin. There were a few drops of urine in the bladder, no fluid in the peritoneal cavity. Patchy congestion of the tonsils. On examination of the brain, the arachnoid was found to be milky, the convolutions somewhat flattened, and a small quantity of serum in the ventricles. There was no extravasation of blood in any of the internal organs.

Remarks by Dr. COLLIE.—The interest of this case is

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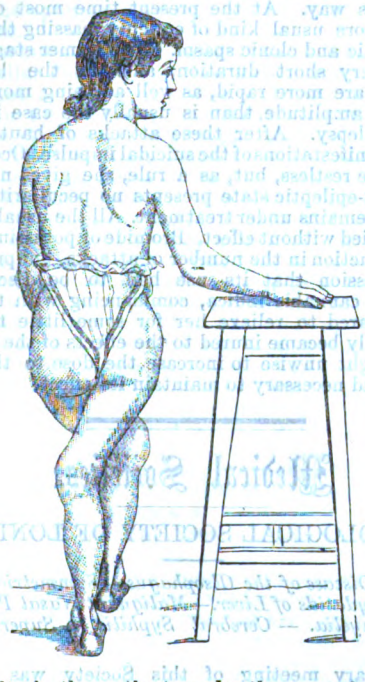
that it appears to be one of a class of rare cases which have been described by Dr. Henoch of Berlin. (For this reference I am indebted to Dr. Donkin.) Henoch says: "In recent years I have seen two cases of extensive hæmorrhage into the skin, both of which were rapidly fatal. I have termed them 'purpura fulminans.' A third case was communicated to me by Dr. Michaelis, and a fourth has been published by Charron. All these cases had this in common—that hæmorrhage from the mucous membranes was wanting, and that extensive ecchymoses, from which within a few hours all the extremities became of a blue-black-red colour and the skin tolerably hard from infiltration of blood, occurred with great rapidity. In two cases there were sero-sanguineous blisters on the skin, which blisters never became gangrenous, or even stank. The course of these cases is very rapid, scarcely twenty-four hours elapsing between the first appearance of the blood spots and death. The longest case lasted four days. There were no complications, and post-mortem examination, with the exception of general anæmia, gave negative results; in particular there was no trace of embolism or thrombosis. The etiology is as obscure. One of my cases showed itself two days after the complete crisis of a pneumonia, the other a week and a half after a very mild scarlatina. For the two other cases no etiology could be suggested."[1] Henoch adds in a footnote that two similar cases have been observed by Ström and Arctander, one of which followed a scarlatina, and according to Heroé three quite similar cases have been published by Guelliot.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

CROSS-LEGGED DEFORMITY; OPERATION; GOOD RESULT.

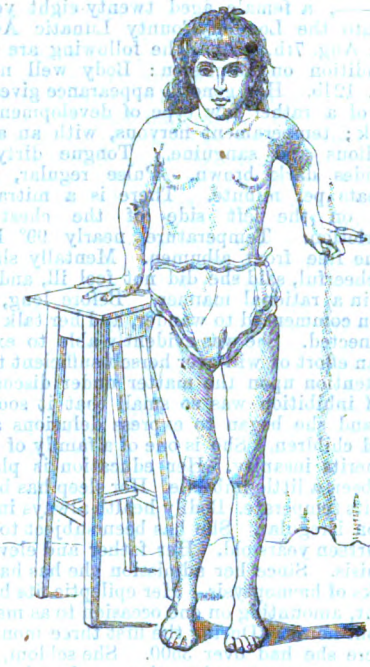
(Under the care of Mr. FREDERICK PAGE.)

RECORDED examples of the cross- or scissor-legged deformity resulting from ankylosis of the hips in the adducted position are few. The better recognition of the principles of treatment and the increased facilities for obtaining treatment in cases of disease of both hip-joints make it improbable that the deformity will ever be otherwise than rare, disease affecting both hips being of itself a rarity. Most of our readers will remember the account of



the deformity in the patients under the care of Mr. Lucas, who brought the condition to the notice of the profession in 1880,[2] and the description of Dr. Tuson's[3] case published in the following year. The eversion of the limbs, which was such a marked feature in those cases, does not appear to have been present in the patient whose history is here given. For the notes of this case we are indebted to Mr. J. Hindhaugh, house surgeon.

J. B——, a schoolgirl aged thirteen years, was admitted in August, 1890, suffering from cross-legged deformity due to ankylosis of both hip-joints. Six years ago she was confined to bed for eight months by an attack of acute inflammation of both hip-joints, and during the illness the deformity arose. The engraving fairly represents her condition on admission. The legs could not be separated, and in consequence the child was much inconvenienced. She was in good health. On Aug. 21st the neck of the right femur was subcutaneously divided with Adams' saw, and the leg straightened. The neck of the left femur was similarly divided, but the limb could not be straightened until the origin of the adductor longus was severed. The legs were then secured in a box splint with starched bandages. The wounds healed at once, without any constitutional disturbance. In six weeks the splint was removed for the first time, and the result, as shown by the following engraving, leaves little to be desired.



Remarks by Mr. PAGE.—Cross-legged deformity, from ankylosis of both hip-joints, is fortunately rarely met with, and its treatment is not always satisfactory. In this case the patient's condition has been materially improved. She walks less awkwardly and much more readily than she did before the legs were straightened, and in other respects she is in a more satisfactory condition, though the hips are still ankylosed, and there is slight genu valgum on the right side.

LONDON COUNTY LUNATIC ASYLUM, HANWELL.

A CASE OF SUICIDAL EPILEPSY.

(Under the care of J. PEEKE RICHARDS, M.R.C.S., Medical Superintendent, Female Department.)

THE presence of certain definite coördinate movements which arise while the patient is in a state of epileptic unconsciousness is a point of peculiar interest in this case. She does not continue what she may happen to be doing before the onset of the petit mal, as is usual in such cases, but commences an entirely new act, the whole end and object of which has always been self-injury or destruction. Moreover, these movements are always preceded by a state of muscular relaxation (which sometimes commences with very slight spasm) which invariably renders the patient helpless and

[1] Kinderkrankheiten, fünfte Auflage, p. 810, Berlin, 1890.
[2] THE LANCET, vol. ii. 1880, pp. 696, 1009.
[3] Ibid., vol. i. 1881, p. 700.

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causes her to fall if going about, this again differing from the common forms of epilepsia mitior. It is, perhaps, fortunate that up to the present her unconscious impulses have always been directed towards suicide. Had they been homicidal, it seems not impossible that a serious medico-legal question might have arisen in regard to them. As she often makes very definite plans for self-destruction there is no reason to doubt that, had she been homicidally inclined, she would have done the same thing, and in such a case, although totally ignorant of, and therefore irresponsible for, her actions, there would have appeared so much method in her madness as to render the proof of her innocence a very difficult, if not impossible, task in a court of law and before the public. It is also interesting to note the unusually prolonged duration of a state of quiet, calm, unconsciousness which is nearly always a marked feature of the attacks of petit mal in this patient. During the intervals between her fits, and at such periods as they are few in number, she shows not the slightest indication of a suicidal intent. She is occasionally low-spirited and depressed, but this is exceptional at such times, and her normal state seems to be bright and cheerful. For the notes of the following case we are indebted to Dr. Percy J. Baily, under whose immediate charge the case is.

Clara H——, a female aged twenty-eight years, was admitted into the London County Lunatic Asylum at Hanwell on Aug. 7th, 1890. The following are the notes of her condition on admission: Body well nourished; weight 8 st. 12 lb. Her general appearance gives one the impression of a rather low type of development. Complexion dark; temperament nervous, with an admixture of the bilious and sanguine. Tongue dirty; pupils normal; irides dark brown. Pulse regular, soft, but full; 84 beats per minute. There is a mitral systolic bruit, and on the left side of the chest a little pleuritic friction. Temperature nearly 99° F. Skin moist; urine free from albumen. Mentally she seemed bright and cheerful, said she did not feel ill, and for some time spoke in a rational manner. Before long, however, her attention commenced to wander, and her talk became a little disconnected. She was evidently able to exert for a short time an effort of will over herself sufficient to concentrate her attention upon the matter under discussion, but her power of inhibition was so small that it soon became exhausted, and she began to express delusions about her husband and children. She is one of a family of eighteen, and she inherits insanity. Her education is plain. She has always been a little imbecile. Her sleep has been good, and her habits temperate. Bodily health always indifferent. Menstruation irregular. She has been subject to fits since she was fourteen years old. Her father and eleven sisters died of phthisis. Since her admission she has had several slight attacks of hæmoptysis. Her epileptic fits have been very frequent, amounting on one occasion to as many as 171 in twenty-four hours. During the first three months of her residence here she had over 3500. She seldom, however, shows any very great exhaustion, a few hours' sleep restoring her wonderfully. For some time after her admission the majority of her attacks affected chiefly the consciousness—in other words, they were attacks of epilepsia mitior or petit mal. They lasted from five to ten minutes, and were generally accompanied by some slight convulsive movement of the arms and neck. She rarely made a faint cry at the commencement of an attack, but never called loudly; if going about she would fall down. It was thought that she never had an aura, as she gave no warning before the actual onset of the first stage of the fit. If she happened to be spoken to shortly before the approach of an attack, it was sometimes possible to notice a slight alteration in her manner, her cerebration appeared to be slowed, she did not seem to comprehend what was said to her, and, either from this reason or because she was not able to frame her words, she would not answer when addressed. This condition of semi-consciousness usually lasted only a very short time (two or three minutes), but passed into a state almost resembling coma, either with or without the slight convulsion above mentioned. She would then lie back in the bed entirely free from spasm; her respiration was calm and easy, but a little deeper than usual; her pulse was slightly increased in frequency, and was full, soft, and regular; her pupils were moderately contracted and did not react to light; her corneæ were quite insensible to touch; her skin remained cool, and there was no tendency to any marked increase in the secretion of sweat; the smaller vessels of the face were contracted, giving rise to a marked pallor. After remaining in this state for two or three minutes the patient sat up, opened her eyes, and began gazing about her as if looking for something. There is every reason to suppose, however, that during this stage of the attack she had entirely lost the sense of sight, as all her actions appeared to be led by that of touch. It was now that the most peculiar features of the case revealed themselves. While still remaining in a state of complete unconsciousness she would go through a series of perfectly coördinated movements, all of which were of a suicidal kind. Taking one of her sheets by one corner in one hand (always the left), she felt about with the other in order to find its borders, and, having discovered these and arranged them satisfactorily, suddenly, by drawing the sheet through the right hand, converted it into the semblance of a rope, and, throwing it rapidly over her head, pulled so vigorously upon the two extremities as most effectually to prevent all possibility of respiration. So determined was she in thus attempting to strangle herself that it was almost impossible for two people to overcome her muscular action and disentangle the sheet from her neck until by partial asphyxiation she became weakened and exhausted. Then followed a slight spasm of the muscles of the gullet, giving rise to a peculiar gulping sound, after which the patient rapidly regained consciousness, waking up as if from a prolonged sleep. She remained for a short time much confused mentally, was entirely ignorant of all that she had been doing, mistook the identity of persons, forgot the names of the nurses by whom she was constantly attended, had no idea of what time of day or night it might happen to be, and could not tell where she was or how long she had been in the asylum. Occasionally she had hallucinations either of sight or hearing or both. She would talk to and about her husband and children as if she both saw and heard them. After her admission the character of the fits gradually changed; she gave up attempting to strangle herself, and instead would end these attacks of epilepsia mitior by jumping out of bed and rushing with all her might against a brick wall or other obstacle. In this way her head had received some rather severe contusions, and she has lately varied their termination by attempting to swallow anything within her reach. Being under constant supervision she has not been able to do herself any harm in this way. At the present time most of her fits are of the more usual kind of epilepsy, passing through the stages of tonic and clonic spasm. The former stage is, however, of very short duration, and in the latter the movements are more rapid, as well as being more regular and of less amplitude, than is usually the case in typical cases of epilepsy. After these attacks of haut mal she shows no manifestations of the suicidal impulse. Occasionally she is a little restless, but, as a rule, she gives no trouble, and the post-epileptic state presents no peculiarity.

The case remains under treatment. All the usual remedies have been tried without effect. Bromide of potassium made a sensible reduction in the number of attacks, but produced so much depression that its use had to be discontinued. Tincture of cannabis indica, commencing with ten-minim doses, appeared to relieve her for some little time; but she so rapidly became inured to the effects of the drug that it was thought unwise to increase the dose to the extent which seemed necessary to maintain its effect.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Malignant Disease of the Œsophagus.—Symmetrical Periostitis.—Hydatids of Liver.—Malignant Nasal Polypus.—Syringomyelia. — Cerebral Syphilis. — Supernumerary Nipple.

AN ordinary meeting of this Society was held on March 17th, the President, Dr. Dickinson, in the chair.

Dr. LAURISTON SHAW showed two cases of Malignant Disease of the Œsophagus. The first was a sarcoma which appeared as an ulcer with well-defined margins, destroying an extensive area of the mucous membrane of the gullet, and perforating the posterior wall of the trachea just above

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its bifurcation. There were secondary deposits in the neighbouring mediastinal lymphatic glands, and in the lungs and kidneys. The patient from whom the specimen was taken was a female aged thirty-eight years who had suffered from dysphagia for six months, and died two days after her admission to Guy's Hospital in 1855. The histological characters of the growth were those of a sarcoma with round and oval cells, and as such was a rare condition, only one other primary sarcoma of the œsophagus having been shown at the Pathological Society. The second specimen shown was an ordinary squamous-celled epithelioma, which was worthy of notice on account of the existence of a large mass of growth protruding into the lumen of the gullet, and thus producing œsophageal obstruction. The growth, which was cylindrical in shape, measured 2½ in. from above downwards, and 1½ in. across, and completely filled the tube, so that a small tube could barely be passed by its side. The tumour was attached to the hinder wall of the œsophagus by its lower and posterior surface, and for the rest was free, and presented a nodular, sloughy appearance. There was a ring of ulceration around the œsophagus below the attachment of the tumour. The patient was a male aged fifty-five who was admitted under Mr. Charters Symonds in 1890 for dysphagia of five months' duration. When admitted he was extremely emaciated and quite unable to swallow, and it was found impossible to pass a bougie into the stomach. He died fourteen days after admission, and at the necropsy the lungs were found partially consolidated by broncho-pneumonia. There were no secondary deposits. The specimen illustrated an unusual form of obstruction of the œsophagus by malignant disease, and one which would be particularly difficult to overcome by intubation.—Dr. GALLOWAY said he had been investigating the way in which malignant disease of the viscera spread. The growth sometimes, though rarely, incrusted the viscera without invading them, or at other times the muscular structure alone might be involved. He referred to a case of sarcoma in which the growth spread over the whole of the peritoneum without penetrating the muscular substance; and in two cases—one of sarcoma and one of carcinoma—the muscular coats of the stomach had been invaded; the carcinoma, however, appeared to destroy the muscle fibres to a far greater extent than the sarcoma did.—Mr. SHATTOCK said that most sarcomas springing from the submucous tissue belonged to the small round-celled class.—The specimen was referred to the Morbid Growths Committee.

Mr. BOWLBY showed specimens of Symmetrical Periostitis with Peculiar Formation of New Bone. The patient was a male infant aged one year, and had been ill for about a week prior to admission into the Metropolitan Hospital. There was slight pyrexia, and the legs were swollen from œdema. The lower part of each thigh was greatly swollen, the right being the larger. On this side there was fluctuation, on the other there was none, and an incision liberated pus from the former. The child suffered from bronchitis, and died eighteen days after admission. A post-mortem examination showed a complete ring of new bone on the right side separated by a large interval from the shaft of the femur, to which, on transverse section, it bore the same sort of relation that the tyre of a wheel did to the axle. On the left side was a similar but smaller formation. The complete ring of bone was evidently due to a separation of the periosteum in an intact state from the shaft of the femur, and was of great thickness. It was apparently formed with great rapidity, as the whole duration of the illness did not exceed four or five weeks. There was no evidence of any constitutional disorder.—Mr. JONATHAN HUTCHINSON, jun., asked if the pus evacuated had been examined for micro-organisms. He referred to the case of a young infant suffering from pyæmia whose clavicular joints at both ends were full of pus, and yet there was a considerable wall of new bone round the affected joints which must have been formed with extreme rapidity.—Mr. SHATTOCK said that if the case had been one of acute periostitis the central bone ought to have undergone necrosis. He suggested that the periosteum had been primarily separated by an effusion of blood which had softened, and then, perhaps, an infective inflammation had been set up.—Mr. BOWLBY, in reply, said he had not examined the pus. There was absence of any sign of scurvy rickets, no clot being evacuated and the pus remaining uncoloured. He thought that the periosteum had been raised by a passive serous effusion, and for that reason the bone did not die, as it was not inflamed.

Dr. S. WEST showed a Liver with two Hydatids, in which the sacs communicated but not the cysts, taken from a girl aged sixteen, who had been in good health until two years before she came under treatment. At her first admission to hospital she was tapped and much relieved, but she returned seven months later with an enormous abdominal swelling, there being a prominence in the epigastrium which was soft, boggy, and fluctuating. The girl, who suffered much respiratory embarrassment, was tapped in one of the right intercostal spaces and a large quantity of fluid removed, which was clear and of hydatid character; then something appeared to burst and the fluid became bile-stained. At three successive tappings large quantities of fluid were evacuated, but as it reappeared an incision was made and a cyst connected with the liver emptied of decomposing membrane. There were found to be two cysts, one in the liver and one above it. Drainage proved to be a very difficult matter, and a fortnight after the operation the patient sank and died. At the necropsy there were found two sacs, one in the substance of the liver and one beneath its capsule below the diaphragm. There was a communication between the two large enough to admit a finger, but the cyst in the upper sac was quite separate. The pleura was not obliterated, and hence the upper cyst could not have been opened through the intercostal spaces.—Mr. WILLIAMS had seen a case of hepatic hydatid so large that it filled the abdomen and pelvis, and was operated on in mistake for an ovarian tumour.—Dr. OPENSHAW had seen hydatids between the liver and diaphragm. He suggested injection of iodine into the pleura, so as to obliterate the lower part of the sac and thus allow the cyst to be drained from a intercostal space.—Dr. STEPHEN MACKENZIE remarked that the removal of a small quantity of fluid from an hydatid cyst usually led to its death. If one withdrew a quantity of fluid from a liver cyst whose walls were so placed that they could not collapse, something must take the place of the removed fluid; in some cases not merely serum would transude into the sac, but also a number of corpuscular elements, causing the formation of abscess. He asked Dr. West what was the basis of his assumption that the cyst was alive after the tapping. True multilocular hydatids were rare in this country, though they were commonly met with abroad.—Dr. VOELCKER said that at the Children's Hospital last year Mr. Pitts excised a portion of rib, stitched off the pleura, and then drained a hepatic hydatid through the opening; the patient recovered.—The PRESIDENT referred to a case of hydatid of the liver which occurred in a child of six. It was tapped with an aspirator and a large quantity of fluid drawn off; the child died three days later of what was thought to be acute peritonitis, but at the necropsy the cause of the fever was found to be, not peritonitis, but suppuration of the cyst.—Dr. WEST, in reply, said that on the second tapping the fluid was serous, and therefore probably the cyst was still living, but at the third tapping the fluid was albuminous. He had never seen a multilocular hydatid in this country. He knew of cases in which hepatic hydatids had been drained through the healthy pleura.

Mr. A. E. BARKER gave an account of a peculiar Polypus of the Nose which he had met with in a lady aged forty, in the autumn of 1888. The polyp had been present for about a year, according to the history of the symptoms. The tumour, when seen *in situ*, appeared to be an ordinary polyp of the nose, except for some small hæmorrhagic spots on the surface. At the operation for removal it was found to be friable and inelastic, and came away in little pieces. It could not be torn away *en masse*. There was very profuse hæmorrhage, thirteen ounces of blood being lost altogether. After the operation the patient had remained well for six or eight weeks. In November, 1888, the nose was again completely blocked, and death occurred in February, 1889, when there were secondary growths in the cheek and throat. The growth had not penetrated through the ethmoid bone. The tumour possessed epithelium both on the surface and in the interior. The whole was supported and mounted on a stroma. There was no limiting membrane. The epithelial elements were irregular, but not columnar. In parts the epithelial cells had undergone degeneration, especially where they were packed most closely together. The stroma was fibrous and myxomatous. The specimen was a very uncommon one, and he thought that it most likely belonged to the class of tumours known as "carcinoma myxomatoides."—Mr. BOWLBY had seen two similar cases, one in a

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lad aged nineteen, who was admitted with exceedingly vascular polypi, which were removed. Thirteen months later he came back with a large growth blocking the nose, and he died of meningitis, the growth, a myxosarcoma, having fungated through the ethmoid bone. In the second case a man of twenty-two had suffered from polypi for years, and presented himself with a sarcomatous mass in the nose. The growths, as far as possible, were removed, but the patient became comatose and died. This also proved to be sarcoma, which had perforated the ethmoid bone and set up meningitis. A third case had come under the care of Mr. Butlin, while others had been mentioned in a clinical lecture by Sir William Savory published some time ago.—Mr. R. WILLIAMS thought the growth should be called adeno-myxosarcoma.—Mr. BARKER, in reply, said the only other case known to him had been under Mr. Erichsen's care, and the ethmoid bone was perforated.—The specimen was referred to the Morbid Growths Committee.

Dr. GALLOWAY showed a specimen of Syringomyelia. The patient from whom it was taken, a male aged forty-three, suffered during life from general paralysis of the insane, and died on account of exhaustion from acute mania complicating this condition. He suffered also from alteration of sensation, which, being probably exaggerated on account of his mental condition, caused him to tear his skin in various places and to inflict severe injuries on himself, his complaints being that he had been placed in Cayenne-pepper bottles, or that the devil was inside him and wanted to get out. Post mortem it was found that the brain showed the ordinary appearances associated with general paralysis of the insane, and in addition showed dilatation of the lateral ventricles. The spinal cord, to naked-eye appearance, seemed almost normal, except in the dorsal region, where it appeared flattened antero-posteriorly. On making transverse sections, however, it was found that a central cavity extended along the cord from the upper cervical to the upper lumbar region. In the dorsal region the cavity was most extensive, and on this account allowed of the flattening of the cord like a collapsed tube. In the cervical, lower dorsal and upper lumbar regions the cavity was small, and did not affect materially the shape of the cord. The cavity was surrounded by a ring of tissue, firmer and whiter than the surrounding cord substance, and which on microscopical examination proved to be composed of characteristically branched neuroglia cells. The neuroglia ring varied inversely with the size of the cavity, being almost inappreciable in the mid-dorsal region, where the cavity extended into and replaced most of the grey substance of the cornua. The rod of morbid neuroglia, with its cavity, was situated posterior to the central canal of the cord, which was normal, except in the dorsal region, where it was absorbed in the widely extended cavity. The primary lesion seemed to be the formation of the rod of neuroglia at the base of the posterior median fissure of the cord behind the central canal, probably as a relic of the embryonic filling up of the posterior extension of the original central canal. The usual explanation, that the cavity was formed by the subsequent liquefaction and absorption of the central parts of the column of neuroglia, was difficult to accept in this case, as the cells of the neuroglia showed no signs of degeneration at any point, and the growth was well supplied with bloodvessels. The spreading of the cavity into the grey matter of the cornua to such an extent in the dorsal region was probably due to a secondary myelitis followed by absorption of the inflamed grey matter. A characteristic feature of the neuroglia tissue surrounding the abnormal cavity was that its inner layers seemed condensed, and formed a sort of the lining membrane, which showed a very contorted outline, and which somewhat resembled the elastic coat of an artery.—The PRESIDENT had seen dilatation of the cord in two or three cases of nervous disease, notably in one instance of chorea.

Mr. J. HUTCHINSON, jun., showed the Skull-cap and Brain from a case of Inherited Syphilis, the right occipital lobe being almost entirely replaced by a huge gumma which was adherent to the dura mater. Thinning had occurred as a result of this through the parietal bone, and a large oval aperture one inch and a half in long diameter had been formed, through which the membrane and subarachnoid fluid had protruded. There had never been any ulceration over this, though the scalp was extremely thinned; during life the swelling had pulsated. The ventricles were much dilated, and the left lateral one was continued back into the perforation of the skull. The left lobe of the cerebellum was implicated by extension of the gummatous process through the tentorium. There was no general meningitis, and the process had been a very slow one, the aperture in the skull having formed five years before the patient's death, when she was sixteen years old. The symptoms during life were, besides this peculiar form of meningocele, (1) paraplegia varying from time to time and incomplete, no doubt due to intra-ventricular pressure of fluid; (2) double optic neuritis leading to atrophy and blindness; (3) albuminuria and anæmia. Sections showed that the left occipital cortex was in large part replaced by fibrous and characteristic gummatous material with considerable calcareous degeneration. The patient was under the care of Dr. Buncombe in the City of London Infirmary, and the case had been diagnosed as syphilitic, although the teeth and eyes presented no characteristic features of inherited syphilis. She had some years before suffered from (?) gummatous ulcers on the back and neck, which had healed with extensive scarring. Allusion was made to the rarity of extensive perforation of the skull from syphilis apart from actual necrosis and from cranio-tabes in infantile periods, and a somewhat similar specimen referred to in the London Hospital museum, in which an aperture had formed in one frontal bone over a gumma in the cortex. In this case (under Dr. Hughlings Jackson) a similar pulsating swelling had been present during life.

Mr. R. WILLIAMS read an account of a Supernumerary Median Nipple and Areola, the patient being exhibited at the last meeting. He was a man aged sixty-seven, who presented not only this median nipple and areola as large as a shilling over the lower part of the sternum, two inches below the level of the normal nipples, but also a small rudimentary nipple, devoid of areola, four inches below the left nipple, and rather internal to it. The normal pectoral pair of nipples were of great size, as large as a woman's, and there was a recurrent epithelioma of the lower lip and glands of the neck. Median mammæ were of very rare occurrence in human beings, only three other cases having been recorded. In each of these the supernumerary structures were rudimentary, and occupied the same position as in this case—namely, over the lower part of the sternum. In the animal world median mammæ were almost unknown except among the marsupials. According to Darwin, nipples were first acquired by marsupials after they had diverged from and risen above the monotremes, and were by them transmitted to the placental mammals. The occasional appearance of supernumerary median mammæ in human beings was regarded as due to reversion to this ancient ancestral arrangement. There was no evidence that redundant mammary structures could arise just anywhere as mere "sports" from ordinary sebaceous follicles; but they were met with only in certain definite situations, which corresponded with those normally occupied by the glands of polymastic animals.—Mr. JONATHAN HUTCHINSON, jun., felt sure that the case was one of pigmented mole, and hoped that the diagnosis would be verified with the microscope.—The PRESIDENT suggested that if possible this course should be pursued, and the result reported later to the Society.

The following card specimens were shown:—

Dr. S. WEST: Casts from Plastic Bronchitis.

Mr. EDGAR WILLETT: Microscopical specimens of Secondary Scirrhus of Bone.

Dr. A. F. VOELCKER: (1) Rickets with General Tuberculosis; (2) General Peritonitis after Perforation of the Vermiform Appendix.

Dr. NEWTON PITT: (1) Anthrax Œdema of Stomach; (2) Gangrene of Lung Secondary to Bronchiectasis.

CLINICAL SOCIETY OF LONDON.

Atrophic Spinal Paralysis and Multiple Neuritis.—Symmetrical Gangrene of Feet.—Septicæmia due to Sewer Air.

AN ordinary meeting of this Society was held on March 13th, Sir Dyce Duckworth, President, in the chair.

Dr. GOWERS read an account of a case of Acute Atrophic Paralysis (acute anterior poliomyelitis), in which there was also a primary multiple neuritis. The patient was a boy aged seven, in whom the paralysis developed after several days of constitutional disturbance. The first symptoms of

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this commenced within twenty-four hours of a quite cold bath, to which he was unaccustomed. The weather at the time was very hot. The atrophic paralysis involved the whole left arm and shoulder muscles and the right deltoid, triceps and biceps. At the end of a fortnight these muscles and all those of the left arm presented the reaction of degeneration, and their paralysis and wasting proved permanent. Simultaneously with their palsy the legs became weak, although all movements could be performed. The knee-jerks were preserved throughout, and when the palsy had existed for a week they had become excessive, and a foot clonus had developed on each side. This continued for some months, although the legs gradually regained power; so that the child was able to walk in two months from the onset, and the legs ultimately became quite strong. The symptoms thus showed cervical anterior poliomyelitis extensive and severe on the left side, and on both sides involving slightly the adjacent white substance, so as even to cause some secondary descending degeneration in the pyramidal fibres, transient, and due to damage that passed away. The interest of the case, however, rested in the indications of neuritis. Even before the palsy was discovered the arms and legs became extremely tender, chiefly in the neighbourhood of the elbow-joints and knee-joints, and thought to be in them because every movement and manipulation of the joints caused great pain. Careful examination showed, however, that it was entirely in the nerves—in the sciatic and popliteal nerves of the legs, and the ulnar and median especially in the arms. The tenderness lessened upwards and downwards, and was much slighter at the brachial plexus. The nerves of the left arm were more tender than those of the right. There was no anæsthesia or other evidence of damage to the conducting fibres of the nerves. These symptoms lessened in the course of a few weeks and passed away entirely, although the atrophic palsy persisted in almost its initial degree. They were certainly due to a multiple perineuritis, affecting the nerves in the middle of their course, primary, and developing simultaneously with the spinal lesion in consequence of the same cause. In commenting on the case, Dr. Gowers remarked on the probability that the pain and tenderness met with in other cases of poliomyelitis, and usually referred to the joints, was really seated in the nerves, which suffer mechanical disturbance at every movement of the joints. Although poliomyelitis was probably produced through the agency of a blood state, the latter was certainly often generated by exposure to cold, and effective chiefly in the hot season of the year, which in some way predispose either to the susceptibility of the individual or to the production of a toxic influence. Exposure to cold was capable also of causing the other and more common form of multiple neuritis, the parenchymatous variety, in which the nerve fibres suffered primarily, the sheaths scarcely or not at all, except in their nerves, and the incidence of the effect was peripheral and more perfectly symmetrical. A difference must exist in the blood state due to cold in the two classes of neuritis, and it was important to note the associations of the two forms thus produced. In this connexion the author referred to the leading features of the two forms of neuritis, the parenchymatous and the adventitial, using the latter term as a designation for the variety in which the connective tissue elements were primarily affected. Recent researches were referred to which suggested that there were two varieties of poliomyelitis, the primary affection in one being of the nerve cells, in the other the basis substance of the grey matter, the former being analogous to the parenchymatous, the latter to the adventitial forms of neuritis, and reasons were given for regarding the poliomyelitis in the case described as of the second class. The paper concluded with an allusion to the probability that an actual organised virus sometimes produced the adventitial form of neuritis by the direct influence of the organisms on the connective tissue elements, and especially on the sheath, as was seen in leprosy, and might be the case in syphilis; while, on the other hand, the parenchymatous form was certainly often due to a product which the organisms produced by their growth in the body, as one active agent, alcohol, was produced out of the body. The question was suggested, as deserving study in this connexion, whether diphtheritic neuritis commencing during the primary disease was not chiefly adventitial, and that which began when the disease was over in greater degree parenchymatous, and the contrast was noted between the adventitial neuritis of the active stage of syphilis and the parenchymatous later form which often constituted part of the lesion of tabes.—The PRESIDENT said that he would be glad to have known more about the treatment adopted in this case.—Dr. BEEVOR said he had never seen a similar case. He asked whether there was any anæsthesia in the affected limbs, and whether Dr. Gowers looked upon the neuritis as secondary to inflammation of the anterior horns or as something quite separate. He wished to know also whether the supinator longus was affected, remarking that it was a very useful muscle in determining whether the lesion was central or not. He pointed out that if the deltoid and biceps were paralysed the supinator longus nearly always followed suit when the lesion was central, whereas if not central it was usually not affected.—The PRESIDENT asked whether Dr. Gowers supposed that the pain so commonly associated with the early stage of atrophic spinal paralysis was dependent upon neuritis.—In reply, Dr. GOWERS mentioned one point in treatment often neglected—the importance of not permitting the spinal cord, when the seat of acute inflammation, to be the lowest part of the body. The evidence was conclusive that the neuritis was primary and not secondary to the spinal lesion, and also that the conducting fibres of the nerve were not involved. In regard to the grouping of the muscles affected, as bearing on the central or peripheral nature of the lesion, he stated that the rule of association according to function in poliomyelitis was one to which exceptions were met with, in which the distribution of the palsy was more or less random, and indicated an irregular position of the lesion in the grey matter, by which groups of cells were partially and irregularly damaged.

Mr. PEARCE GOULD read a paper on a case of Symmetrical Gangrene of the Feet from Obliterating Disease and Thrombosis of the Arteries and Veins. The patient was a draper's traveller, forty-three years of age, who, with the exception of an attack of mania some years ago, enjoyed good health until Christmas, 1889, when he suffered from influenza. This was followed by mental depression, and on June 22nd he was admitted into the Newington Infirmary, suffering from hallucinations and mania. Two days later he was transferred to Grove Hall Asylum under the care of Dr. Mickle. On Jan. 29th he complained of severe pain in the right knee, down the leg, and into the foot. Two days later the right foot was found to be cold and blue, and no pulsation could be felt in either tibial artery. He now complained of pain in the left foot. On Feb. 2nd the right foot was gangrenous, and the left foot was cold and blue, and quickly became gangrenous. On Feb. 22nd the patient was transferred to Mr. Pearce Gould's care in Middlesex Hospital. Both feet were black and gangrenous to above the malleoli; the tips of the toes were mummified, the rest of the part being soft, but without much swelling, vesication, or crackling; the left leg up to the knee pitted on pressure. On the right side pulsation was felt along the whole length of the femoral artery, and the popliteal trunk was a hard pulseless cord. On the left side pulsation was felt as low as the level of the knee-joint, and there abruptly ceased. The other arteries of the body, the heart, and the urine were found to be healthy. The patient was febrile, the temperature ranging from 100° to 101°. The mania and hallucinations had disappeared with the onset of the acute pain in the feet. The legs were amputated through the knee-joint by Stephen Smith's method, at a week's interval, and the patient made a complete but slow recovery. (He was shown at the meeting.) Dr. Sidney Martin examined the vessels of the diseased limbs, and exhibited microscopical specimens of several of the vessels which showed a widespread endarteritis and endophlebitis affecting both large and small vessels, the change being more marked in the veins than the arteries. Many of the diseased vessels were plugged with organising thrombi. Commenting on the nature of this case of spontaneous gangrene, Mr. Pearce Gould said that many causes, such as atheroma, calcareous degeneration, ergotism, and diabetes, could be at once excluded. Although the symmetry suggested Raynaud's disease, there was nothing else to support that view. No previous attacks of ischæmia; no hæmoglobinuria. There was also no history or evidence of constitutional syphilis. Although but little was known of the disease called "primary arteritis obliterans"—cases of which had been reported by Dr. Hadden and himself to this Society, and by Burow, Jaesch, and Winiwarter in Germany,—he felt that at any rate provisionally it must be placed in this category, in spite of the symmetry and acute onset of the gangrene, in which it differed markedly from the above-mentioned cases. The pathological evidence

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of a primary endarteritis and endophlebitis was the main argument in support of this view. The treatment pursued —amputation well above the gangrene—was opposed to the general rule of surgery in cases of spontaneous gangrene. It was held to be justified by the relief it afforded from the blood poisoning from the gangrenous parts, by the distinct indications of the limitation of the vascular disease, and also by the special merits of Stephen Smith's amputation.—Dr. MICKLE said the case had been under his care before passing under that of the author. The patient was evidently predisposed to insanity, having had previous attacks lasting for a month. With regard to the case being produced by syphilitic disease of the arteries, he remarked that there was apparently no connexion between the medical and the surgical aspects of the case. The case was not like those he had seen of syphilitic disease of the arteries giving rise to secondary diseases of the brain with nervous and mental symptoms and gangrene of the lower extremities. The only case of this kind which he had seen was one in which, in addition to brain lesion attributable to syphilitic disease of the cerebral arteries, there was syphilis of the heart. Mr. Gould's patient had suffered severely from influenza, and the attack was followed by great depression, to which was superadded a good deal of worry in consequence of his having lost his place. This worry led to a second severe attack of insanity. When admitted he had a number of bruises on the limbs and also on the trunk, but he incurred none afterwards, every care having been taken by placing him in a padded room &c.—Dr. CHURTON of Leeds said he had at the present moment, in the Leeds Infirmary, under his care, a case which had given him a good deal of anxiety. It somewhat resembled that related by Mr. Gould. The patient was a woman of forty-two, married, exceedingly stout, full-blooded, and strong. She was brought in complaining of loss of power and sensation in the left leg, which was dark and discoloured. The limb was cold and insensitive, and sensation in the back of the limb extended three inches lower than in the front. There were patches like blisters and superficial ulceration, but she had had some turpentine applied before admission, and he was uncertain how far this local irritation had been caused thereby. She had had one child twenty years ago, and none since. No miscarriage and no signs of syphilis. The arteries could not be examined on account of her obese condition, but there was distinct thickening in the line of the femoral. The heart was enlarged, and there was a systolic bruit at the apex; at the base there was a slight aortic clank. No œdema or disease of the veins, but there was a little albumen in the urine. The attack began on Feb. 1st, with pain in the right foot, numbness and tingling. The limb was rubbed and the sensation disappeared. The same day the left foot began in a similar manner and could not be got rid of by rubbing; on the contrary, in a very short time it began to be discoloured. It was thought that she was about to have gangrene, and he was urged to consent to amputation, but he waited for eight days. He supposed that it was an endoarteritis of the femoral artery above the profunda. It was not until Feb. 12th, when the skin was becoming mummified and the foot was shrinking, that he consented, and the leg was amputated by Mr. Mayo Robson. A soft clot was found in the artery, but it itself was healthy. A few days later the right foot began to show symptoms of gangrene, but this gradually passed off. The patient had been given blue pill, and this seemed to have some effect in causing it to clear up; she was otherwise in a very good condition.—Mr. LUNN said that he had shown a case at this Society some time ago for purposes of diagnosis. It was a man with cold, black feet associated with agonising pain, requiring large doses of opium for its relief. The general opinion was in favour of its being due to Raynaud's disease. The man was quite unable to get about. One foot got very black and enlarged up to the ankle-joint. He amputated the foot, and the man got so much better that he amputated the other. The last few months he had begun to get his old pain again, and the stump was still extremely cold, a fact which inspired him with some apprehension. His legs were perfectly sound at present, but were very cold. This case was far more chronic than the one related. He asked what was the cause of the delirium in Mr. Gould's case; the man had told him that he was liable to get very wet feet.—Mr. LONGHURST suggested that it might be due to a dyscrasia of the blood associated with gout, diabetes, or syphilis. He thought the symptoms pointed to a complaint having a nervous origin.—Mr. GOULD, in reply, observed that it must be always a matter of doubt as to what was the precise cause. His own opinion was that there was a blood state giving rise to an inflammation of the arteries in the lower limbs, and then that the blood state *plus* the state of the arteries led to thrombosis. There was no evidence of trophic change or anything to indicate a nervous origin. He was glad Dr. Mickle had given his experience of the case, for when the man was admitted to the hospital his memory was markedly imperfect, and he could give no details of his past history—so that he was unaware of his having suffered from influenza, a very important detail. Dr. Churton's case was one of extreme interest, and was a parallel to his own. As to the coldness of stumps, he would not be inclined to lay much stress on this, it being very common and not necessarily inspiring any apprehension.

Mr. C. MANSELL MOULLIN read the notes of three cases of Septicæmia due to Sewer Air. The first was a compound comminuted fracture into the ankle-joint in a healthy boy aged twelve; the second, a large, cold, subgluteal abscess (probably originating in the bursa) in a man aged fifty-two; the third, a compound dislocation of the metacarpus in a boy aged seventeen. The three cases were admitted, the first on Oct. 9th, the second on Nov. 6th, and the third on Dec. 2nd, 1879. They occurred in the same bed in the same ward, and there was no other case in the ward either then or since, although at the same time, and in beds immediately opposite (but on the windward side), were such injuries as compound fractures of both legs and primary amputation of the leg, trephining for injury to the frontal bone, and fractured jaw. The first and the last case (those in which the injury was confined to the limbs) were treated by prolonged immersion in baths of perchloride of mercury (1 part in 10,000), the first for two hours twice a day, the last continuously. The abscess was drained thoroughly and irrigated with carbolic lotion. In all three the symptoms presented a striking resemblance. In the first (treated by baths twice a day) the temperature rose at once and rapidly assumed a severe remittent character. In the second it rose, not when the abscess was opened, but two days later, when the wound was exposed, and followed the same type. In the third it remained normal so long as the limb was immersed, but each time an attempt was made to leave off the bath it rose at once. The first recovered after amputation; tetanus set in on the twelfth day after the injury, and the symptoms rapidly increased in severity until the limb was removed; then they began to fall at once, although it was nearly a fortnight before they disappeared. The second and the third died, the latter of the two suffering for the last week before death from rigors, which recurred twice a day with the regularity of ague. The cause was found out by Dr. Parkes in the course of an independent investigation ordered by the Hospital Committee. Underneath the flooring close by the bed was a cistern with an overflow pipe running straight down, without trap or bend, into an old sewer. This had formed part of some long since forgotten system of drainage, and had many years before been (very inefficiently) adapted to the wants of the hospital. The pipe acted as the ventilating shaft, and under the flooring there was a strong current of air setting in the direction of the bed. The pipe was sealed and no case had occurred since. Mr. Mansell Moullin pointed out that the poison must have been absorbed through the wound without causing any local inflammation; there was no cellulitis, lymphangitis, or phlebitis; there was no sign of any secondary abscess or of any visceral inflammation (although one patient suffered from diarrhœa), and no gross lesions of any kind (other than slight granular disease of the kidneys) was found in the post-mortem examination of the second case. Unfortunately permission could not be obtained for the third.—Mr. BRUCE CLARKE said that about six or seven years ago there had been an extraordinary number of cases at the West London Hospital, and never since. He observed that all the cases had occurred in two or three beds at one corner of the ward, and on attention being directed to the sanitary conditions it was noticed that there was outside the window in that corner a dustheap upon which a number of bones had been flung, and on to which drained a pipe from the post-mortem room; the air from it passed into the window. This was rectified, and there had not been a case since.—Dr. DONALD HOOD narrated a series of cases showing the deleterious effects of sewer air. Sometimes it produced simple, unexplainable oscillations of temperature, the morning tem-

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perature generally being the higher. In other cases he showed that it had a very marked effect in prolonging and aggravating diseases, such as measles, normally of a mild character. In one family in which measles lingered for a considerable time one member of it died from a malignant form of the disease, but they all rapidly recovered on being removed to the country. He thought it was most important to recognise the effect of sewer air upon the natural course of any disease.—Mr. MANSELL MOULLIN, in reply, said he had seen several outbreaks of tetanus, in each of which only one of three or four persons was attacked in the same ward. He had been unable to trace any connexion in the matter of contagion or infection. He presumed that there was no doubt at the present time that tetanus was a disease which was caused by external agents acting upon wounds.

MEDICAL SOCIETY OF LONDON.

Litholapaxy in Children.

AN ordinary meeting of this Society was held on March 16th, Dr. Douglas Powell, President, in the chair.

Mr. EDMUND OWEN reported a fatal case of rupture of a boy's bladder, which accident occurred during the performance of the operation of Litholapaxy. The patient was an unhealthy child of something less than five years, who for two months had been troubled with frequent and painful micturition, the urine being thick and offensive. He had been taken to a large hospital, where, the mother said, circumcision had been advised; but it was also suggested that the boy was not at that time in a fit state to be operated on. He then came under Mr. Owen's care, and, on sounding him, a small stone was discovered. Slight bleeding followed this examination. The boy was put to bed and fed up for twelve days in order that his strength might be so much improved that he could the better stand the operation of litholapaxy after the manner of Surgeon-Major Keegan. At the end of this time chloroform was administered, a No. 6 lithotrite was introduced, and the stone was effectually and efficiently dealt with. The bladder was then washed out, and the fragments were removed by a No. 9 evacuation tube. The operation was thus practically at an end. A final washing was being performed, however, when an ominous gurgling was heard, and an unmistakable wave ascended behind the anterior abdominal wall. All resistance, moreover, to the flow from the evacuator had ceased; and on detaching the wash-bottle, only a trifling amount of water escaped by the tube. There could be no doubt that the bladder had given way, and that the best chance of the boy's recovery probably lay in opening the abdomen and sewing up the rent. Accordingly, a three-inch incision was made in the linea alba above the pubes. The peritoneum was opened, and a search was made for the collapsed bladder in the depths of the pelvis, nothing being seen of the bladder until the peritoneum had been traversed. The rent, however, was eventually discovered in front of the peritoneum, and at the root of the urachus. It was also made out that the irrigation-fluid which had escaped from the bladder had infiltrated itself along the subperitoneal connective tissue, none of it having entered the peritoneal cavity. The rent in the bladder—which was about one-eighth of an inch long—was sutured, and the abdominal wound was closed. It was deemed expedient to secure absolute rest for the bladder by a perineal drain. A lateral incision was therefore made through the prostate, and on passing the finger through it into the bladder a few insignificant fragments of stone, which were to have been removed by the final washing, were detected. The boy died of collapse in about eight hours. Mr. Owen attributed the calamity to the fact that in the temporary absence of a wash-bottle of a size appropriate to childhood he was using one designed for the adult. He had no extenuating circumstances to urge. The case had been a great grief to him, and he had come to the conclusion that the only way in which he could atone for the misadventure, in however slight a degree, was by openly reporting it. Perchance his experience, thus being placed on record, might be the means of averting a similar catastrophe at the hands of others.

Surgeon-Major KEEGAN of Indore then read a paper on Litholapaxy in Children, which he illustrated by specimens of calculi and various instruments. We give here an abstract of the communication. The collection which he showed consisted of 117 out of 125 litholapaxies which he had performed in males below fifteen years of age. They varied from one year and nine months to fourteen years, the average being 6·38 years. The average weight of the calculi removed was 89·15 grains. The average number of days spent in hospital after operation was 4·6, and the percentage of mortality was 3·2. The four deaths were not the result of any accident during the operation, but were due in each case to organic disease of the kidneys. There was but one recurrence of stone in the series, and this was not more likely to happen than in lateral lithotomy, provided no detritus was left behind. This absence of recurrence in children was due to the fact that their bladders were seldom hypertrophied, sacculated, or fasciculated, and they did not, of course, labour under enlargement of the prostate, which were the main causes of recurrence in the aged. He gave preference to this procedure over the lateral, median, and supra pubic operations for two reasons: the rapidity of cure and the freedom from the objections and dangers inherent in all surgical operations in which the knife was used. But though he thus advocated crushing in preference to cutting, he could not recommend surgeons who had had no experience of the former operation to attempt it on a young male child the subject of a calculus of considerable size and hardness. Such a surgeon would act more wisely if he adhered to the lateral or supra-pubic methods of procedure. He also showed a collection of lithotrites and evacuating catheters, and one or two aspirators. He held that no surgeon should set about attempting to perform litholapaxy on a child trusting to one lithotrite and one evacuating catheter; for a lithotrite which would pass readily enough into a boy's bladder at the beginning of an operation might not do so towards its termination, when the urethra had perchance become swollen and congested by the frequent passage of instruments. He showed five lithotrites, Nos. 4½, 5, 6, 7, and 8, and five evacuating catheters, Nos. 5, 6, 7, 8, and 10; also two aspirators. For most cases two or three lithotrites and three cannulæ would probably suffice. Fully fenestrated lithotrites should be used, and cannulæ fitted with large stylets to prevent clogging with débris. He had found by experience that the narrowest part of a child's urethra, except the meatus, was at the junction of the penile with the scrotal portions, about two and a half to three inches from the meatus. His manner of procedure was as follows. The child's bladder should be emptied of urine and two or three ounces of water at blood heat should be thrown in. When the lithotrite had been withdrawn after the crushing, the cannula fitted with a stylet was introduced. The stylet being withdrawn, nearly all the water in the bladder was allowed to drain off. The aspirator, filled with water at blood heat, was then attached to the cannula, and an assistant pressing gently over the bladder, the aspirator was steadily and gently worked. The stylet should be run home before the cannula was removed, the last particles of stone being first well searched for. A finger introduced into the rectum would frequently be found to dislodge some small fragments resting near the neck of the viscus. The height of the operating table should be such that the surgeon should not be compelled to stoop. A light hand was essential, and anything approaching to forcible introduction of lithotrites or cannulæ into the bladder was fraught with danger. To illustrate what had been stated he briefly sketched the salient points connected with the operation of crushing a few out of the large number of stones he exhibited. (Particulars of these cases will be found in THE LANCET, vol. ii. 1890, pp. 716–717.) He likewise showed the débris of calculi from girls aged respectively three and seven, and a few large ones from his collection of stones from the adult male bladder. In conclusion, he emphasised the necessity of attention to the details of structure of the instruments employed already mentioned above, and added that four or five ounces of water should be the maximum quantity in the bladder at any given moment, injection never being practised while the patient was straining, that extreme gentleness and care should be taken in practising all manipulations in the bladder and urethra, and that it should be ascertained that not a grain of débris was left behind in the bladder. Upon attention to all these conditions would depend the measure of success obtained.

The PRESIDENT asked if these cases came from a large or from a restricted area, and if stone was particularly prevalent in Central India. Was its formation connected with the diet, and was he in the habit of prescribing to prevent recurrence of the calculus.

Mr. MARSHALL of Nottingham said he had been very

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pleased with the result of his lateral lithotomies, having had twenty-six without a death. He had performed one supra-pubic operation, which proved fatal. But an increasing experience of litholapaxy in children made him feel that it must be the operation of the future; the rapid way in which they recovered in three days instead of an average of three weeks, as with lithotomy, being a great point in its favour. He had only had one untoward circumstance with lithotomy: his lithotrite bent when he was crushing a white oxalate stone. He therefore removed the instrument, and performed a lithotomy instead. He could not see the advantages of the supra-pubic over the old lateral method. With the exception of one case of hæmorrhage, one of fistula, and three or four of incontinence, he had had no trouble at all from his cases of lateral lithotomy. As to the question of emasculation by the lateral operation, he knew of no data bearing on that point, but amongst the fathers of the boys he had cut were two who had also been cut for stone. The supra-pubic was said to be an easier method, but he did not admit that it was freer from danger, and so few of the cases that had been operated on had been published. With regard to recurrence, he had had only one, and that was amongst his earlier cases, where the stone had been crushed imperfectly. He asked Mr. Keegan if he regarded chloride of sodium as a preventive of stone, and if the abuse of the farinacea and abstention from water were causative agents.

Mr. MORGAN said that in children a cutting operation should if possible be avoided, and though the lateral operation was successful, nevertheless certain calamities resulted from it. Hæmorrhage, for instance, to a serious extent had happened, and he recollected five or six cases of fistula between the bladder and the rectum. As to emasculation, tangible proof had been given of its occurrence. The supra-pubic operation was not to be advised save under exceptional circumstances, such as where the stone was too large or constantly avoided the lithotrite. The objections to litholapaxy were none where the stone was suitable. Practically no force was necessary to bring out the fragments with the aspirator, the slightest pinch causing extensive movement of the fragments. The only objection to the procedure that had been made was that small fragments might remain and form a nucleus for a fresh calculus. In London but very few cases presented themselves, the average at Great Ormond-street being only four and a half per annum.

Mr. BUCKSTON BROWNE held that all honour was due to Mr. Owen for his surgical honesty in publishing his case. He did not expect to hear that the rupture was extra-peritoneal. As the incision was being made he asked Mr. Owen if he noticed water in the tissues, and he inquired also the reason of making the perineal opening. The proper performance of lithotrity depended upon complete anæsthesia, so that the patient could not strain. This was especially important when washing out was being done. With regard to the evacuating catheters shown, he thought that for children they might be shortened one half, and thus get the stone over in less time. It was useful to have a clean spare aspirating bottle to use for the last washing, and thus make absolutely sure of emptying the bladder of fragments.

Mr. REGINALD HARRISON said that he was sceptical as to the application of lithotrity to such young subjects until Mr. Keegan's paper was published. He had performed the lateral operation thirty-five times on children with a mortality of only one, and he had no complication or after consequence which had been cause of regret. The facts, however, which had been brought forward were of such a cogent nature that he was induced to take to lithotrity, and the more he had seen of it the more he could recommend it. He had performed it thirteen or fourteen times, and the results as to rapidity of recovery compared most favourably with the lateral operation. He had, however, only used it at present for comparatively small stones.

Mr. OWEN, in reply, asked Surgeon-Major Keegan if he had ever met with a medium-sized stone in a child which he had been quite unable to crush, and for which lithotomy had to be done. He himself had met with such a case; the calculus being of the mulberry variety. It had been said that the supra-pubic operation had no statistics, but more appalling results than those published from Russia could not be imagined. He would put the operation altogether on one side, and use the lateral operation for children where litholapaxy could not succeed. He noticed water in the extra-peritoneal tissue as he cut down. The incision in the perineum was perhaps a mistake, but it should be remembered that he had already opened the peritoneum, and that therefore a very efficient drain was desirable.

Surgeon-Major KEEGAN, in reply, said that stone in Central India was common, and that a number of dispensaries fed the hospital of which he had charge in Indore. The number of cases of calculus in the whole of Madras probably did not amount to more than 24 a year, while in Scinde and Hyderabad there were as many as 180 or 200. In Lower Bengal stone was not common, but it was very prevalent in the North-West Provinces, in the Punjaub, and along the Bombay coast. He was unprepared to state the cause of stone, though no doubt food, geological formation, clothing, and meteorological conditions all played a part in its production. On one or two occasions he had seized a stone which he had failed to crush, and so he had resorted to lateral lithotomy. His first fatal case of litholapaxy he published in the *Indian Medical Gazette* in 1888, the death being due to disease of the kidneys, but no post-mortem examination was allowed. He hoped that those who had performed the supra-pubic operation for cases of small stones would also place their cases fully on record.

OBSTETRICAL SOCIETY OF LONDON.

Presidential Address.

A MEETING of this Society was held on March 4th.

The following specimens were exhibited:—

Mr. BLAND SUTTON: A case of Tubal Pregnancy.—Dr. HAYES: (1) An Intra-uterine Sessile Polypus; (2) Sub-peritoneal Pediculated Fibroid Tumour of the Uterus.—Dr. CRAWFORD: Ovarian Tumour, with a Polypus in the Uterus, and a Small Tumour and a Fibroid Tumour.—Dr. GRIGG: (1) Cyst (Tubo-ovarian?); (2) Pyo-salpinx complicating Pregnancy; (3) Double Pyo-salpinx, with Tubo-ovarian Cysts; (4) Matted Appendages.

The PRESIDENT (Dr. Watt Black) then delivered his address. He thanked the Society for the honour conferred upon him. He congratulated them upon the prosperous condition of the Society. He then dealt with the subject of puerperal fever and septic poisoning. In ancient times puerperal fever had been described as suppression or retention of lochia. It had been referred to in the seventeenth century. According to Copland, the first satisfactory account of it was contained in Halle's "Dissertatio de Febre Puerparum" published at Leyden in 1689. The first writer who had given an adjectival name to puerperal fever was Richard Morton. Edward Strother was the first writer who used the name "puerperal fever." The numerous outbreaks of puerperal fever which had occurred in the second half of the last century had led to the production of a considerable number of monographs on the subject, especially in this country. The chief of the writers were John Hall, 1755; Thomas Denman, 1768; Nathaniel Hulme, 1772; Charles White, 1773; John Leake, 1773; Thomas Kirkland, 1774; William Butler, 1775; Philip Pitt Walsh, 1787; John Clarke, 1793; and Alexander Gordon, 1795. In these writings puerperal fever was referred to as erysipelas, putrid fever, putrefactive fever, pituitous fever, bilious fever, gastrobilious fever, typhus fever, typhoid fever, nervous fever, inflammatory fever, peritoneal fever, hysteritis, uterine phlebitis, lymphangitis, and many different diseases such as existed under other circumstances, but modified by the puerperal state. References were then made to the writings of Dr. Nathaniel Hulme and Dr. William Butler. Puerperal fever had been attributed to many causes. Amongst them might be mentioned suppression, retention, and putrefaction of the lochia, retention of secundines, retention or metastasis of milk, severe labour, tight binder, rising too soon after delivery, mental emotions, errors of diet, use of stimulants, exposure to cold, epidemic influence, miasms, and hospital air. Veson attributed the mortality at the Hôtel Dieu to the fact that the lying-in ward was over the ward for the wounded; also that the number attacked with puerperal fever was greater when the air was moist. Dr. Kirkland had recommended that the patient should sit up two or three times a day in order to facilitate discharge of the lochia, clots, &c. Charles

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White, F.R.S., surgeon to the Manchester Infirmary, was the first to assert the infectiousness of puerperal fever (1773). Other writers had previously discussed it, but only to discard it. Some supported the view, but it was Dr. Alexander Gordon of Aberdeen who brought facts to prove its infectiousness. He also had given an admirable account of the relation of erysipelas to peurperal fever. In 1851, when forty-five cases of puerperal fever occurred in the practice of one man, while none of the patients of the other practitioner in the same place had been attacked, no other explanation had been required than that it was a dispensation of God's providence. A belief in its infectiousness had led to precautions being taken, and thus outbreaks had been frequently arrested or checked. The next most important advance was the tracing by Semmelweis of the infection to the introduction of decomposing animal matter into the genital passages by the attendant. The revelations of bacteriology and the proved prophylactic efficacy of antiseptics have set the question at rest. Many interesting facts in bacteriology were then given. The experiments of Ahlfeld were related, in which he showed that the inner surface of the uterus possessed its greatest absorbent power on the third, fourth, fifth, and sixth days after labour. Edmund Falk had also shown that the endometrium possessed remarkable absorbent powers, while the vagina had very little and the mucous membrane of the cervix scarcely any. It had not yet been ascertained to what cause was due the great diversity in the anatomical changes produced by puerperal fever in different cases. In all cases of puerperal fever microbes of the coccus order were to be found, and most frequently of all the streptococcus pyogenes. As the microbes came from outside, the autogenetic origin had been virtually abandoned. Of late, however, it had been revived in a modified form. Czerniéwski had examined the uterine lochia of eighty-seven perfectly healthy women, and had found no microbes of any sort, except in one case in which there were streptococci, and in two cases in which there were the bacillus subtilis and sarcinæ. He had examined the uterine lochia of seventy-seven women suffering from slight illness, and had found streptococci in forty-nine, staphylococci in two, and non-pathogenic forms in a few others. He had examined the uterine lochia in ten women who were suffering from severe illness, and had found streptococci in all. Homen found the number of bacteria much greater in the first day of menstruation than before menstruation had begun. Dr. William Taylor of Edinburgh believed that he could trace certain cases of puerperal fever to the want of proper cleanliness on the part of nurses who happened to be menstruating at the time. The results of experiments by several observers were then given. Hausmann had found that serum from the body of a person who had not died of septicæmia did not produce fatal results when introduced into the vagina of gravid rabbits, while pus from the abdomen of a woman who had died of puerperal fever had proved rapidly fatal when similarly injected in the second half of pregnancy. It had no effect when injected into the vagina of rabbits only two weeks pregnant. The conversion of non-pathogenic into pathogenic microbes, under altered conditions, was then referred to; also the relative resistances of healthy and diseased or injured tissues to the influence of microbes. The influence of microbes in the production of mastitis and of various infantile diseases was fully described. Natural immunity was next discussed, as well as acquired immunity, or the exhaustion theory.

A vote of thanks was given to Dr. Watt Black, on the motion of Dr. Playfair, seconded by Dr. Champneys.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the State Medicine Section was held on Feb. 13th.

The Midwives' Registration Bill.—In the absence of Dr. Atthill through illness his paper, on the Education of Midwives considered in connexion with the Midwives' Registration Bill, was read by Dr. COSGRAVE, hon. sec. of the Section.—Dr. FOOT thought it would be the duty of the Medical Council to lay down regulations for the education of midwives. The chief interest of the discussion would lie in the direction of the points of contact between the proposed educated midwives and the general practitioners.—Dr. QUINLAN said that as the Bill did not extend to Ireland it appeared to him that the principal point was to protect the right of practising in England and Scotland, now belonging to the diplomated midwives and nursetenders who had been licensed by the two chartered Dublin hospitals, and also by the Royal College of Physicians of Ireland. At present these Irish diplomates were legally authorised to assume the title of midwife in any part of England and Scotland. If this Bill were passed, the rights of these diplomates would be swept away in the two sister kingdoms. He thought that the institutions referred to ought to see to this either by petition or some other way.—Dr. J. W. MOORE severely criticised the Midwives' Registration Bill, more particularly in reference to the unsatisfactory provisions contained in it for the framing of rules respecting the examination of midwives, the appointment of examiners by county councils, and the wholesale registration of existing midwives for a fee not exceeding 2*s.* 6*d.* The Royal College of Physicians of Ireland had taken active steps against the present Bill on public grounds, and had urged the necessity of referring the whole subject of the education and registration of midwives to a Select Committee of the House of Commons before legislation on so momentous a matter is undertaken. The speaker considered that this was the wise and proper course to pursue.

Note on Illness caused apparently by Aniline Coloured Sweetmeats.—Sir CHARLES CAMERON, after pointing out that numerous cases of illness had been attributed to aniline colours used in clothing and for colouring food, explained that the toxic action of the dyes was generally attributed to the arsenic used in the preparation. The author had investigated three distinct cases of illness in which the symptoms were attributed to the use of coloured confections. The children in three distinct families were taken ill with vomiting and purging after eating coloured comfits and sugar balls. Some of the cases were treated in Mercer's Hospital. Analysis revealed in the confections no mineral poison; but it was noted that the colouring matter was very large in quantity. It proved to be fuchsine. The author thought that these cases rendered it not improbable that fuchsine might be toxic even when free from arsenic.—Dr. FOOT said he thought the injurious effects of aniline dyes, especially fuchsine, might be due to the affinity for this colouring matter on the part of the protoplasmic matter of cells, which imbibition and staining might reasonably be expected to interfere with their physiological or biological action, and therefore be detrimental to various bodily functions.—Dr. QUINLAN said that the colouring of confectionery was a very interesting subject. One of his earliest recollections was the banquet given in Dublin to the soldiers coming from the Crimea. On that occasion the tables were decorated with confectioned edifices, which, perhaps, contained as much plaster-of-Paris as sugar; in compliment to this country, they were mostly coloured green, that colour being due to Scheele's green. Through a window left open for ventilation the boys of the locality got in after the banquet, feasted on the confectionery, and as a result there was extensive arsenical poisoning. Fortunately, none of these cases proved fatal, but they gave great anxiety. He thought that the use of aniline colours in confectionery was much to be deprecated. Aniline colours were very powerful, and very small quantities were required for colouring confectionery; still, we have available vegetable and animal colours which are absolutely safe; and with these resources he thought that aniline colours ought to be let alone until, at all events, we knew more accurately the details of their toxic effects. Of course, it was unnecessary to add that the use of metallic pigments by the confectioner was simply a crime which ought to be severely punished in all cases where it was detected.—Dr. FALKINER and Dr. LENTAIGNE also spoke.

Civil Service Insurance Scheme.—Dr. MACDOWEL COSGRAVE read a paper on the recently instituted Civil Service Insurance Scheme. The committee of the Civil Service Insurance Fund have arranged with the North British and Mercantile Insurance Company to insure, up to £1000, the lives of all civil servants applying within two years, without any medical examination, without any declaration of health, and without any reference to friends. After the two years have expired all joining the Civil Service will be insured on the same terms any time within five years of having passed the medical examination made on entering the service. In both cases a reduction of 15 per cent. on the first premium and on renewals is given. The author pointed out the probable result,

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that whilst bad lives—i.e., those rejected or required to pay higher premiums by other offices—would be certain to take advantage of this chance, first-class lives would probably prefer offices taking only healthy lives, and so more likely to pay good bonuses. Several lives rejected or loaded by the author, which had since entered under the new scheme, were cited. If the scheme succeeded, it would cause other companies to relax their medical examinations, and would tend to place insurance in the hazardous condition it occupied early in the century. It would also injure first-class lives by putting them in the same category with the indifferent and bad lives.—Dr. LENTAIGNE was greatly interested in Dr. Cosgrave's paper; he would add that he felt very uneasy at what seemed to him a very reckless and dangerous policy.

Reviews and Notices of Books.

New Official Remedies, containing all the Drugs and Preparations contained in the Addendum (1890) to the British Pharmacopœia of 1885, with Pharmacological and Therapeutical Notes adapted for the Use of Students and Practitioners. By RALPH STOCKMAN, M.D., F.R.C.P.Edin. Pp. 67. London: Percival and Co. 1891.

THE above title, expressed in every possible variety of type, appears almost sufficiently cumbersome to weigh down a book of such small size, and yet has apparently only been decided upon as an afterthought, since it differs from the title given on the first page of the text. Here we find "New Official Remedies contained in Pharmacological and Therapeutical Notes on the Addendum (1890) to the British Pharmacopœia of 1885." Both titles seem rather unhappily chosen. The remedies are scarcely "contained in" the Notes any more than the drugs and preparations are "contained in" the Addendum. Under any other name the rose would smell as sweet, so perhaps the definition attempted is scarcely worth troubling about. The book is apparently intended to supply a guide to those to whom the Addendum to the Pharmacopœia has come with a shock of novelty. The pharmacological notes seem to have been compiled with a certain degree of care from numerous well-known authorities. Although the prefatory note says nothing of the indebtedness of the author, it is easy to trace the source of the various quotations. The therapeutical notes are less satisfactory. It is difficult to determine whether the author thinks that the time is hardly ripe for dogmatic statements, or whether he feels that the pharmacological action is of such importance that the question of therapeutics may be comparatively neglected. Certain it is that in too many instances the account of the therapeutic uses, as given here, fails to afford sufficient justification or explanation of the need of the Addendum. The Pharmacopœia was never intended merely as a collection of substances possessing interesting pharmacological actions, and yet the impression left by this book is that the author regards the Pharmacopœia as a pioneer, opening up new districts for further investigation.

The alphabetical arrangement of the Addendum is closely followed; the only deviation being the grouping of the official preparations under the heading of the various substances from which they are obtained. An interesting account of acetanilide gives in some detail the explanation of the term "phenylacetamide"; in the description of the tests, however, it is left doubtful whether the perchloride of iron test is to be applied to a hot or a cold solution. In this the first issue of the Addendum is followed, although the error was indicated in Squire's Supplement and corrected in the subsequent reissue of the Addendum. The account of the pharmacological action of acetanilide is very full, though, perhaps, greater space might have been found for the interesting discussions which have been raised upon the reduction of temperature in fever. The possibility of "increased heat-dissipation" appears to merit more than the bare mention. Its therapeutical uses are considered under two headings: as an antipyretic, and as an analgesic, but no mention is made of its employment as a hæmostatic. In the consideration of the treatment of poisoning by this substance a serious warning is given against the administration of alcohol by the mouth, "as it dissolves up the antifebrin and hastens its absorption." This is curious, as immediately above directions are given for emptying the stomach and bowel, after which, if efficiently performed, there should be no such risk as that indicated. With regard to lanoline, although the account is very full, even going back to the "ancient Greeks and Romans," there is an uncertainty of expression which is disappointing. "It mixes well with most drugs, either in solution or powder, and the mixtures are readily absorbed by the skin. It is doubtful, however, whether absorption takes place more readily with it than with lard." And yet a little further on it is stated that "in those cases of cutaneous disease where rapid absorption is a disadvantage, wool fat is, of course, contraindicated." The activity of eucalyptus gum is attributed solely to the tannin it contains, and its utility as a local astringent and styptic is properly indicated. On the other hand, the value of euonymus bark, and the dry extract of euonymus scarcely receive due attention; the beneficial effects deserve more note than the remark "any purgative will relieve the condition, and hence the value of euonymin in these cases." Nor is it quite clear why, after having just stated that "the name 'euonymin' is inappropriate for this preparation," the author should proceed to employ an "inappropriate" term. Of gluside or saccharin the description is short, and not well arranged; the statement that its prolonged use is very apt to cause gastric irritation and dyspepsia is certainly not in harmony with the experience of those who have employed this substance largely and judiciously. The pharmacological and therapeutical notes upon hamamelis are also very brief, and although the properties of hazeline (which is obtained by distillation) are adduced to combat the assertion of Bartholow that the action is due to tannin, this does not advance matters materially, as no single volatile substance is mentioned under the heading of "chemical composition." Hydrastis is dealt with in greater detail, the contrast of the effects of berberine and hydrastine affording greater scope; but amongst the therapeutic uses, it is stated that "Marfori has shown that the frequent administration of small doses keeps the spleen in a condition of constant contraction." Surely it would have been better to indicate in this place in what diseases, if any, it is desirable to keep the spleen in such a condition. Dr. Stockman agrees with most pharmaceutical authorities in disapproving of the composition of the castor-oil mixture. Of phenazone the accounts given are unusually full and satisfactory, but strophanthus is dealt with in a disappointing way. The composition upon which so much work has been done is dismissed with five lines; while about the same space is devoted to its therapeutical uses. Throughout the book signs of undue haste are only too frequently apparent. Perhaps, however, these are sufficiently to be indicated from the change in the title and from the curious misprint on p. 17, where the "alimentary *cancel*" is mentioned. To those unacquainted with recent literature, no doubt the book will be of service.

Studies from the Physiological Laboratory of Owens College, Manchester. Vol. I. Published by the Council of the College, and edited by Professor WM. STIRLING. Manchester: J. E. Cornish. 1891.

WE should have been disposed to name this book vol. ii., since a work with a similar title from the same College was

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published in 1877 by Professor Arthur Gamgee. Many of the articles have appeared in other scientific journals, but some are original, and it is very convenient to have all the memoirs that have issued from the Manchester school in a collected form. One of the original papers is by Dr. G. N. Stewart, in which he treats of the conditions which affect the loss of heat by radiation from the animal body. Dr. Stewart shows that the temperature of the surface of the clothes in man and of the hair in animals is a very important element in determining the amount of radiation, and this depends chiefly upon the temperature of the epidermis, the conductivity of the coverings, and the temperature of the air. In small animals, he says, such as rabbits and guinea-pigs, it is astonishing how little an increased heat production can supply the loss of a considerable part of the protective covering, or make up for an alteration in it which increases the outflow of heat. It has long been known that a rabbit dies when its skin is varnished. The superstition still lingers in some text-books that this is due to interference with the excretory functions of the skin. This explanation may perhaps hold good in the case of animals like the horse. It is not necessary in the case of the rabbit and the guinea-pig. For without varnishing at all, if the hair be removed from the greater part of the body of either of these animals by rather close clipping, or still better by shaving, and the animal be kept in an empty box so that it cannot cover itself, it dies in summer weather with an air temperature of 15° to 18° C., and that sometimes in from twenty to thirty hours. Such an animal can be restored to health if before the cooling process has gone too far it is placed in a warm atmosphere. The paper contains much information of a practical character. Dr. Stewart also contributes an article on Electrolysis of Animal Tissues, and shows how and why the process is likely to prove serviceable in various forms of disease—as, for example, in uterine fibroids;—and supplies another important article on Polarised Nerves. Professor Stirling himself contributes a memoir on Red and Pale Muscles in Fishes, which, having been published in the reports of the Scottish Fishery Board, has not probably come under the notice of many readers, though it offers many points of interest. Mr. Cooke, the Platt physiological scholar, describes "the action of various stimuli on non-striped muscle." Mr. Marshall presents a reprint of his observations on the Histology of Striped Muscle, and Mr. J. Edkins describes a Fat-extraction Apparatus. The book is altogether a very good contribution to physiological science, and a creditable result of the work in the physiological laboratory of Owens College.

The Year-book of Treatment for 1891: a Critical Review for Practitioners of Medicine and Surgery. Pp. 480. London: Cassell & Co.

THIS year the bulk of Cassell's well-known Year-book of Treatment is the first thing to strike attention. Hitherto the size of the book has varied slightly, ranging from 300 to 320 pages; but this year a sudden bound has been made, and the book is half as large again as it has ever been. In view of such a change, the prefatory explanatory note that the original plan of the book has not been altered is somewhat reassuring, although it was scarcely necessary to add that it is not intended to be either a dictionary or a text-book on medicine. Four names have dropped from the list of contributors—viz., those of Sir Dyce Duckworth, Dr. Goodhart, Dr. McBride, and Mr. Frederick Treves; and three new names appear—Mr. Barclay Baron, M.B., Mr. Stanley Boyd, and Dr. Archibald Garrod. While many of the sections have an increased space allotted to them, the most noteworthy increases occur in the sections devoted to General Surgery and to Midwifery. Last year these respectively occupied nineteen and twenty-three pages; this year the section on General Surgery is swollen to fifty-six pages, and that on Midwifery to fifty-two—an amount of space which is scarcely consistent with the idea of a concise epitome which has hitherto ruled the production of the Year-book of Treatment.

In dealing with Diseases of the Heart and Circulation, Dr. Mitchell Bruce now adopts a very simple and useful classification. The most valuable portion of this section is that which treats of the selection and employment of cardiac tonics and diuretics; in this a very lucidly written account appears of the work of H. C. Wood, of Nothnagel and of Fürbringer, together with several valuable annotations on Strophanthus by Bucquoy, Moncorvo, and Rothziegel. The question of exercise as a therapeutic agent in cases of chronic cardiac disease had been much advanced by the writings of Loomis, Sansom, and Nothnagel, although Oertel now advocates massage of the heart as a safe method whereby the same nutritive and circulatory benefits are obtainable as from hill-climbing. Dr. Markham Skerritt writes the epitome upon Diseases of the Lungs and Organs of Respiration, and summarises several American views of the value of cocillana as an expectorant. The ice-bag treatment of pneumonia, the open-air treatment of phthisis, and the employment of creasote and guaiacol receive due notice. Necessarily, a great deal is said of Koch's treatment of tuberculosis, but of this the reporter concludes: "It is evident that a long period must elapse before any definite conclusions can be drawn as to the ultimate value of this method of treatment." Tillmanns' very striking case of the surgical treatment of tuberculosis of the lung and pleura is described, but without comment. Dr. James Ross and Dr. Septimus Reynolds are responsible for the section on Diseases of the Nervous System, and at the outset they indicate how largely the published literature has been directed to the treatment of locomotor ataxia and of insomnia. On the whole they speak favourably of suspension for the relief of certain symptoms of tabes, even though it is not to be regarded as a cure. Chloralamide, chloralimide, sulphonal, hyoscine, uralium, somnal, hypnal, and urethane are the more important remedies which have been suggested for the treatment of insomnia. The opinions of Gaudineau and Fraser upon exalgine are followed by a somewhat lengthy list of cases in which this drug is considered to have produced toxic effects. Dr. Maguire's account of Diseases of the Stomach, Intestines, Liver, &c., is usefully critical, and the same applies to the work of Dr. Ralfe, Dr. Archibald Garrod, and Dr. Sidney Phillips. The section on General Surgery, as above indicated, appears rather lengthy, but a large amount of space is devoted to the discussions which resulted from the publication of the report of the second Hyderabad Chloroform Commission. Amongst the very numerous important advances which may be mentioned here are those connected with abdominal surgery, more particularly those dealing with intestinal obstruction and perityphlitis. Pressure of space compels us to pass over the sections by Mr. Walsham, Mr. Edmund Owen, Mr. Reginald Harrison, Mr. Alfred Cooper, Dr. Berry Hart, Dr. Herman, Mr. Malcolm Morris, Mr. Henry Power, Mr. George Field, and Mr. Barclay Baron, M.B. These writers are in most instances sufficiently well known for their names to ensure thorough and careful work. The volume concludes as usual with a summary of recent therapeutics, chiefly in reference to new remedies, compiled by Dr. W. G. Smith.

Viewed as a whole this book forms a very worthy successor to those which have preceded it, and it will doubtless be received by the medical profession with the favour extended to the volumes of previous years.

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Diabetes: its Causes, Symptoms, and Treatment. By CHARLES W. PURDY, M.D., Queen's University. With Clinical Illustrations. Philadelphia and London: F. A. Davis. No. 8 in the Physician's and Student's Ready Reference Series.

THOUGH we know very little about the immediate or remote causes of diabetes or of the true remedial methods to be employed for its cure, the literature connected with the subject is very extensive, and the views advanced by many workers in different countries are numerous and varied. The subject is one, moreover, which is specially fitted for investigation by physiological experiment and by wide observations amongst different races and in various climates. Added to these features is the fact that cases of diabetes are not of everyday occurrence, though they are met with often enough to excite the interest of every practitioner, and the manifestations of the condition are often more remote and indirect than are the symptoms of many better defined diseases. All these things tend to render the study of diabetes very difficult to those who have not the advantages of leisure and literary opportunities, and, to such, a volume of this kind is of inestimable value. The work has been well sifted, so that the mind is not confused by too many or too trivial statements, but the attention is concentrated upon the main facts and currents of opinion which are given in a very lucid style without the sacrifice of conciseness. The various observations and opinions are so marshaled that it is easy to see how far they support or are consistent with one another, and the gaps in our knowledge, where they exist, are sufficiently distinct, though sometimes filled in with conjecture.

A statistical report shows that during forty years the mortality from diabetes in the United States has increased from 72 to 191 per 100,000 deaths, and the statistics on which this statement is based afford a very valuable comparison between the death-rates in the different States whose climates vary widely in temperature, humidity, and elevation. The States offer another advantage in the several races which occupy their territories, and a consideration of the subject shows that the incidence and severity of diabetes vary greatly among the different races.

The chapters into which the subject naturally divides itself are well written, and Dr. Purdy, besides supplying a comprehensive epitome of diabetes in its various forms, writes of the disease from points of view that are both novel and suggestive. The notes of cases appended furnish excellent illustrations of the features recorded in the text, and the publishers of the "Physician's and Student's Ready Reference Series" are to be congratulated on the addition of this volume to their list.

LITERARY ETHICS

To the Editors of THE LANCET.

SIRS,—I forward you some correspondence upon a subject of great importance to authors, which I trust you will insert in an early number of your journal.

I am, Sirs, yours faithfully,

Grosvenor-street, March 16th, 1891. THOMAS BRYANT.

DEAR MR. MOULLIN,—My attention having been drawn to your work on "Surgery," I have been looking over it, and find that you have utilised in a very free way the drawings I had made for my own work on "The Practice of Surgery," all of which were copied from either original drawings or from those at Guy's Hospital. As I read in your preface that you had Messrs. Churchill's permission to use the blocks made from my drawings and which belong to them, I can probably find no fault with your having done so; but I must venture to express my supreme surprise that you should not have recognised the necessity of acknowledging the source from which you drew them, and so of guarding against the imputation to which you have exposed yourself of passing off upon the uninitiated my drawings as your own. You may possibly have been led into this error by the fact that of late years this kind of acknowledgment of other men's work has often been forgotten; but surely the sins of others in a small way can in no sense justify such a wholesale appropriation of my work as you have been guilty of without acknowledgment. I regret much to have been obliged to call your attention to this blot upon a book which in other respects may be worthy of commendation, and shall be glad to hear from you on the subject.

Yours faithfully,

C. W. M. Moullin, Esq. THOMAS BRYANT.

Wimpole-street, W., March 11th, 1891.

DEAR MR. BRYANT,—I am exceedingly sorry you should think I have been guilty of discourtesy or of any intention of appropriating to myself work done by others. I had understood from the publishers that, provided I made an acknowledgment in the preface, I was at liberty to make use of the blocks illustrating your book, in the same way as those of Fergusson and Astley Cooper. I can only express to you my deep regret that I should have misunderstood them to such an extent. Immediately on the receipt of your letter I went to consult them, and I have arranged that the preface shall be cancelled at once, and that a new one shall be written specifying the illustrations that I have appropriated.

May I ask you, therefore, kindly to look over the list of illustrations in the copy of my work that I am sending with this? I have marked either with "Life" or "Bryant" all those of the origin of which I am certain; but would you let me know whether the others I have marked in pencil, which were printed from blocks in the publisher's possession, were all of them made from originals of yours? I cannot tell you how deeply I regret the occurrence, and I trust you will think that I am doing my best to amend it. With kind regards, Yours faithfully,

C. W. MANSELL MOULLIN.

Grosvenor-street, March 12th, 1891.

DEAR MR MOULLIN,—I have done what you asked and marked with my initials one hundred and forty-one (141) of the illustrations in your book which have been printed from blocks made and used for my "Practice of Surgery." In doing this I have found that I am the only living author from whom you have borrowed (?) woodcuts without acknowledgment. Can you explain how this came to pass? Was it by accident or design? You say in your note of yesterday that you have been misled by your publishers, but I can hardly accept such an excuse as valid, although you might fairly have expected them to have saved you from such an error as you have committed. You have, however, made good use of my woodcuts, for many chapters of your book would have been poorly illustrated without them. What you propose to do with your preface in future numbers may be of some service, but it cannot undo the evil you have done, for any student of your book will as he reads take my woodcuts for your own, as there is nothing to distinguish them. If you have any further remarks to make upon this wholesale piracy of my work I shall be glad to have them. Yours faithfully,

THOMAS BRYANT.

Wimpole-street, March 13th, 1891.

DEAR MR BRYANT,—The list of illustrations is being printed again with your name attached to all those that you marked. The number of copies issued at present is under one hundred. The new list shall be inserted in all the rest in place of the old one.

I am, yours faithfully,

C. MANSELL MOULLIN.

Any comments upon these letters are unnecessary; they speak for themselves. T. BRYANT.

CLEVEDON.—The work of the Convalescent Home is to be extended by a third house, Montpellier, Highdale-road, being added as a home for men; Belmont and Ellacombe, the two former homes, being reserved for women and children. This will afford considerable extra accommodation, but will also entail at least £150 per annum more expense, besides alterations and furnishing.

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THE LANCET.

LONDON: SATURDAY, MARCH 21, 1891.

THE voluminous reports[1] which have just been issued, at the request of the Prussian Government, from the University clinics and pathological institutes of that country, afford an opportunity for reviewing the situation with regard to the efficacy of the remedy for tuberculosis introduced by Professor KOCH. It must, however, be noted that these reports for the most part deal only with cases injected up to the close of the year, and therefore do not embrace much more than a period of observation extending over six or eight weeks. It says much for the eagerness with which the remedy was adopted that the total number of patients injected in the fifty-five clinics amounted to no less than 2172, of which number about 1700 may be regarded as having been under treatment sufficiently long to afford some indication as to the efficacy of the plan. At the same time this unique testing of a new remedy, and this remarkable example of collective investigation, cannot be considered as embodying a conclusive judgment. For the reports, which bear names of men of well-tried capacity and experience, are mostly cautious and guarded in their conclusions—all admitting the impossibility after so brief a trial of arriving at a positive result; added to which is the fact that in many instances there has been no selection of cases. Thus, as regards phthisis, it is clear that the essential condition imposed by Professor KOCH to obtain a curative result—namely, that the cases treated should be quite in the initial stage—has been far more honoured in the breach than in the observance.

It would be a difficult and wearisome task to analyse the contents of this bulky volume in any detail, even if our space afforded it. The book is within the reach of all interested, and it will doubtless receive careful study at their hands. Nor shall we attempt to reproduce any of the elaborate statistics which give in striking form the number of cases treated, their nature, and the extent to which they were influenced for good or ill by the use of the new method. All we can do here is to avail ourselves of the admirable summary of the reports compiled by the editor, Dr. ALBERT GUTTSTADT, and to extract therefrom some of the chief opinions expressed by eminent authorities as to the value of tuberculin in the diagnosis and treatment of tubercular diseases. For this purpose it will be convenient to follow Dr. GUTTSTADT's plan, and deal in turn with cases of internal tuberculosis, and then with those of tubercular disease of external parts.

The importance of a new aid to the diagnosis of tubercular disease within the body is obvious, not only as enabling one to differentiate it from allied conditions, but as a guide to the early adoption of therapeutical measures. In KOCH'S "tuberculin" it was hoped that we should possess a divining-rod which would reveal the hidden foci of an insidious malady; and there were many who declared that therein would lie its chief value. Experience, however, as embodied in these reports, compels but a guarded acceptance of this opinion. A few observers, such as Professors LICHTHEIM and SCHREIBER of Königsberg, and Dr. P. GÜTTMANN of Berlin regard it as an efficient test, but Professor LEYDEN (Berlin) thinks it cannot be solely relied upon, and Professor GERHARDT says that no reaction was observed in some cases when bacilli were present. Professor EBSTEIN (Göttingen), who appears to have been the least impressed of all with the value of the remedy, does not think there is any absolute certainty in its use for diagnostic purposes. Professor BIERMER (Breslau) is also very cautious; he had two cases of undoubted tuberculosis with bacillary expectoration which gave no reaction, either local or general; whilst in another case, of alcoholic tabes, with no suspicion of tubercle, there was a marked general reaction. Professor QUINCKE (Kiel) thought it gave more certain indications in cases of slight lung disease, but could not admit that there was latent tubercle in every case in which a general reaction followed the injections. The Greifswald professors—MOSLER, STRÜBING, and PEIPER,—speak with somewhat more confidence, whilst Professor SCHULTZE of Bonn thinks it a test "within limits," and Professor WEBER of Halle that it is far less certain diagnostically in internal than in external tubercle. Professor FINKLER of Bonn met with but few exceptions to the rule of reaction among cases of commencing phthisis, and did not regard the absence of reaction in chronic phthisis as diminishing its value in diagnosis. Lastly, Professor RUMPF (Marburg) believed it was a test which should always lead to greater care in physical exploration of the chest and in the search for bacilli. On the whole, then, it would seem as if the position taken by Professor LEYDEN was the correct one. There is general agreement as to the fact of reaction (local or general, or both) whenever tubercle is present, thus bearing out the singular selective property of the substance; but cases have undoubtedly occurred in which in the presence of tubercle there has been no reaction, or in which the converse has obtained. The reaction therefore is not pathognomonic, and the test cannot be absolutely relied upon.

The experiences gained of the value of tuberculin as a therapeutic agent will be eagerly scanned. The unreasonable hopes excited on the first announcement of the discovery have in many minds given way to almost as unreasoning a rejection of its utility; and it must be admitted that these reports, on grounds above stated, are inadequate to determine the question one way or the other. Still, when every allowance is made for the duration of the treatment, for the elimination of cases which were wholly unsuitable for trial, or of those in which improvement might well have taken place without any other than dietetic treatment and good nursing, there is no gainsaying the fact that the results here given are on the whole favourable to the cautious use of tuberculin in phthisis. Professor LEYDEN abstains from giving any definite judgment, and notes that, although cases of early phthisis improved, yet the change was not striking, and bacilli were still being

[1] Die Wirksamkeit des Koch'schen Heilmittels gegen Tuberculose. Amtliche Berichte der Kliniken, Polikliniken und Pathologisch-anatomischen Institute der Preussischen Universitäten. Berlin: Verlag von Julius Springer. 1891.

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expectorated. Professor SENATOR, on the other hand, is more hopeful, especially if a longer period be allowed for the treatment. Indeed, the cases of "cure" in the records are so few as to hardly enter into the reckoning; whereas the cases of *marked* benefit were considerable, and those of "improvement" without such qualification still more numerous. Professor EBSTEIN, to be sure, is sceptical even as to the latter, but he stands almost alone in this respect. Professor BIERMER cites a case of tubercular pleurisy with effusion, which rapidly got better under the treatment. Dr. P. GUTTMANN, of the Moabit Hospital, who worked in conjunction with Professor KOCH, is the one who gives the most striking results of improvement in these pulmonary cases; and others, as Professor LICHTHEIM, regard the results as remarkable. One cannot fail to be struck by the fact that the improvement was often more manifested in the general condition of the patient, and especially in his subjective sensations, than in the local signs as derived from physical examination. The indications derived from auscultation and percussion have been variable. Some report a frequent diminution in the dulness and râles; others note an increase in these signs, but often independently of the more constitutional effects. There is a preponderance of testimony to the influence the treatment had in diminishing or wholly arresting night sweats; whilst the observations on the sputum fairly agree in the fact that after the first increase in its amount and its bacillary constituents, it generally diminished in both respects. Some lay stress on the degenerative changes undergone by the bacilli, but others (more correctly) think such changes of no special significance. There is a not inconsiderable difference as regards the question of the weight of the patients under treatment, for whereas some state that a certain proportion gained in weight, others note that this never increased, and that it either remained stationary or there was a loss (MOSLER). Dr. FRAENTZEL says that as a rule there is loss in weight so long as reaction occurs, and after that a gain. Dr. GUTTMANN notes that many patients increased in weight, some notably so; and Professor GERHARDT, dealing with sixty-one cases, gives twenty-two as gaining, seventeen as stationary, and twenty-two as losing, in weight. These are only a few of the conclusions arrived at with respect to the most interesting question of the applicability of the remedy in pulmonary phthisis. It must be remembered that the most favourable results occurred in those in whom the disease was least advanced; but that the proportion of cases in which "no improvement" took place was not strictly in harmony with the extent of the disease may be gathered from the following record: of 242 cases of commencing phthisis, 93 were not improved; of 444 cases of moderately advanced phthisis, 278 were in this category, together with 11 deaths; and of 246 very advanced cases, with cavities, there were 162 unimproved, and 30 deaths. It will be seen that there is very little difference, except in respect to mortality, between the two latter series. It must also be remembered in estimating the degree of improvement in the early stages—and, indeed, in all classes—that the hopes excited by the new treatment may in some cases have led to a temporary rally of the forces of the patient without any real material advance towards the cure of his malady. When all is said, however, it would seem that tuberculin has a place in the treatment of pulmonary tubercle, but one which is much more limited than was at first thought likely; and if the catalogue of cases which do not improve under it is to be in any way diminished, it will have to be by a most careful discrimination in the selection of suitable cases. The problem is whether the advantages derived from its use are sufficient to counterbalance the possibility, so strikingly brought forward by Professor VIRCHOW, of harm arising from the use of an agent that exerts a disintegrating action upon tubercular deposits. The opinions expressed in the late prolonged debate at the Berlin Medical Society represent, we imagine, more clearly the standpoint at which the remedy is regarded at present than do the reports contained in the volume before us, which were the first fruits of the discovery.

So far we have confined our survey of this interesting work almost solely to pulmonary phthisis, perhaps the most difficult class of tubercular disease of all upon which to obtain a definite judgment. Next week we propose to deal more especially with the other forms of tuberculosis in which the remedy was employed, and in some of which the results have been more satisfactory.

TWO Bills relating to the public health administration of London have now been published, the one consolidating the many London Acts, the other an amendment Bill which gives to the metropolis not only most of the advantages now possessed by urban authorities in England and Wales, but in some respects places it in advance of all other districts in the kingdom. The powers for dealing with nuisances are very comprehensive, and in future the fact that a condition is "dangerous to health" is to warrant proceedings for its removal. The County Council is, moreover, empowered, for the prevention of nuisances of various kinds, to make by-laws which are to be enforced by the sanitary authorities, and if these duties be honestly performed, London will be free from many of the unwholesome conditions which are to be found in some of its localities.

The provisions of the Infectious Diseases Prevention Act of last year replace those which sanitary authorities previously administered, and the County Council is permitted to extend these powers as respects London to any infectious disease not specified in that Act. An important amendment is made in the sections relating to unsound food, by which it is made penal to offer for sale any article intended for the food of man which is unfit for human consumption; and further, the retail vendor is protected against the wholesale dealer if it can be shown that the food when purchased from the latter was in the same condition as when it was seized. The limitation imposed by the existing law has hitherto prevented proceedings being instituted against the sale of much unwholesome food.

The apathy of sanitary authorities in respect to mortuary provision will not be allowed longer to prevent any district in London being provided with proper accommodation for the temporary deposit of the dead, and sanitary authorities may also be required by the County Council to provide a suitable building in which post-mortem examinations can be made.

A motor power has at length been created by which

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sanitary authorities which are lax in the performance of their duties can be stimulated. The County Council, if satisfied that any sanitary authority has neglected to discharge any ty under the Act, may institute any proceeding and do ny act which the authority might have instituted or done for that purpose, and is entitled to recovery from the sanitary authority all the expenses thus incurred; and, where this power is found to be insufficient, the Council may make representation to the Local Government Board, and the Board may make an order to be enforced by writ of *mandamus* limiting a time for the performance of the duty by the Sanitary Authority, or may appoint the County Council to perform it. It need not be doubted that the creation of this power by Parliament will go far to remedy many of the faults of London administration, and it may be anticipated that the County Council will not hesitate to perform its part should the necessity arise. The City of London is not subject to all these provisions, nor indeed has it ever been shown that the Commissioners of Sewers have dealt ungenerously with the question of sanitary administration, but there would have been advantages in dealing uniformly with all London districts in a measure relating to the public health.

In future medical officers of health and sanitary inspectors are not to be appointed for a limited period only, and will be removable only with the consent of the Local Government Board, if appointed or reappointed after the passing of the Act; thus there will therefore be greater security of tenure of office.

No one will study these measures without being impressed by the sincere effort which has been made to give all the powers that are needed for improving the health conditions of London. If there should be failure in the future, it will be the fault of Londoners in neglecting to return proper representatives to constitute the sanitary boards and the County Council. London owes a debt of gratitude to Mr. RITCHIE for the benefits he has conferred by his efforts to improve the sanitary law, and this debt will be further increased if at an early date he decides to give to the County Council the same powers as to open space about houses which are now enjoyed by every urban authority throughout England and Wales. This is, perhaps, the most pressing of metropolitan wants, for it is the absence of such provision that has in the past and will in the future impose heavy expense on the ratepayers by necessitating improvement schemes. The work Mr. RITCHIE has already performed has raised the hope of all interested in the public health that he will not deal less generously with this question than he has with the general sanitary law.

IN an annotation in our issue of Jan. 3rd reference was made to an epidemic of chorea which occurred some months previously among the children attending a school at Wildbad. Twenty-six children in all were affected (eighteen girls and eight boys), the majority slightly, but some cases were severe. Many of the patients continued their attendance at school, and there is little doubt that imitation, unconscious perhaps in the first instance, had considerable influence in evoking the manifestations of the disorder, a view which receives confirmation from the fact that those who were kept away from school rapidly improved, and were soon completely restored to health.

The outbreak of such an epidemic as this naturally carries the mind back to long bygone days when the dance of ST. VITUS was a disorder very different from that to which the term is now applied. In those days the term mania was not at all inapt as applied to the dance of ST. VITUS and the similar dance of ST. JOHN, and we may congratulate ourselves on the fact that nowadays our civilisation has advanced so far and our power of self-control has become so strong and so well developed that such outbreaks as occurred in these earlier times are, so to speak, impossible. Yet the occasional occurrence of such a mild epidemic as that just referred to in the school at Wildbad, and the not uncommon association in those latter days of extravagant gestures and loud cries with religious observances, show that deep down in our organisation there still lurk the remnants of that nerve instability in which the dancing epidemics of the Middle Ages had their origin.

Although there were doubtless outbreaks more or less severe of this dancing mania in earlier times, it was only in the year 1374 that the dance of ST. JOHN assumed that severe and epidemic character which has made it memorable. In this year bands of men and women from different parts of Germany appeared at Aix-la-Chapelle. They paraded the streets, and besieged the churches. They joined hands, and, regardless of observers, indulged in the wildest gestures and the maddest dancing until they fell down in a state of exhaustion. They rolled upon the ground foaming at the mouth and gnashing their teeth. They groaned as if in the agonies of death, and relief could only be obtained by tying a band tightly round the waist of the sufferer. The object of this was to relieve the tympanites, which was a prominent symptom, but other and more forcible methods, such as thumping and trampling upon the parts affected, were not uncommonly resorted to for the relief of this condition. While the dancing continued its votaries were in a state of ecstasy. They were oblivious of their surroundings, they saw signs and visions; to them the heavens were opened, and the Saviour enthroned with the Virgin became visible. From Aix-la-Chapelle the epidemic quickly spread over the Netherlands, and all the arts and rites of the Church were invoked against it. Orders were promulgated against the wearing of various things to which the fanatics showed aversion, such as red garments or pointed shoes, and, whether by reason of Church exorcisms and secular regulations or by natural exhaustion, the epidemic gradually subsided.

It was forty years later that a similar epidemic broke out at Strasburg, and to this the name of the dance of ST. VITUS was first applied. The name had reference to the fact that this saint was supposed to have special power in overcoming the disease, and his shrines in various places became the resort of the afflicted. The association of this saint with the affection was no doubt due to a legend, in all probability invented for the occasion. ST. VITUS was a Sicilian who had suffered martyrdom in the fourth century, and, according to the legend which now

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became current, just as he bent his neck to the sword he prayed that he might protect from the dancing mania all who kept his commemoration day and fasted upon its eve. In answer to this a voice was heard to say, "VITUS, thy prayer is answered," and henceforth ST. VITUS became the refuge and protector of all who suffered from this dancing mania.

Italy had an epidemic of its own, almost contemporaneous with the dance of ST. VITUS, and it has had, perhaps, more lasting effects than either of the others. This was the epidemic of tarantism. It was supposed to be the result of the bite of a ground spider, the tarantula; but, as has been suggested, it is more likely that the fears of the consequences of the bite—fears arising easily in the gloomy and despondent temper of the time—had more to do with the causation of the malady than the bite itself. Those bitten became stupid, dull, and lethargic, or they became excited and went about laughing and dancing. All were keenly sensitive to music of a certain kind, became wildly excited when it was played, danced and sang, shouted and screamed until they were exhausted. Music was the only remedy, and it was supposed that the poison was expelled in the perspiration produced by the violent exercise. It soon became customary for bands of musicians to traverse the country at the proper season, and the "women's little carnival"—for women made all the arrangements—was eagerly looked forward to, and became quite an institution. It thus died out as an epidemic, and became almost a recognised popular festival. That, too, in process of time was dropped, but the merry notes of the "tarantella" still survive in more forms than one, fortunately now deprived of the unpleasant associations of earlier times.

Such were the great dancing epidemics of the past, and their origin is lost amid the myths and superstitions of those remote ages. When we remember, however, that they first assumed their important and striking characters at a time when the Black Death had devastated Europe and left it in a condition of extreme nervous exhaustion and consequent susceptibility to all disturbing influences, at a time, too, when the Church was doing its best to substitute sacramental rites and saints' days for the rude barbarian observances which had up till that time been the festivals of the people, we probably recognise the two great factors in their causation. Thus the ancient heathen custom of the "kindling of the nedfyr," forbidden by the Church, had been engrafted in some modified way on the festival of ST. JOHN'S Day. To him who had leaped through the flames and smoke of the "nedfyr" was granted immunity for a year from fever and pestilence, and it may be, as HECKER suggests, that the dance of ST. JOHN was really this leaping run mad.

The dance of ST. VITUS does not seem to have differed materially from that of ST. JOHN; in both there was much that was objectionable. But when we reflect how prominent a place in all ancient festivals dancings and processions occupied, how the wild bacchantic dances and the rude phallic rites were really a part of the ritual in the heathen worship of nature, we can understand how the dancing epidemics came to have associated with them much that was sensuous and coarse. It is interesting to trace the gradual decline of those epidemics, and how, as they declined, the name still adhered to the changed malady; so that we have now in the usually mild disease chorea the lineal descendant, at least in name, of the wild and turbulent ST. VITUS'S dance.

H.R.H. the Prince of WALES, in presiding over a meeting of the General Committee of the International Congress of Hygiene and Demography on Monday, the 16th inst., at 20, Hanover-square, justly remarked that a good start had been made. The meeting was certainly well attended. A very strong organising committee has been constituted, and the committees managing the various sections are now well in harness. They have held numerous meetings, carefully drawn up and printed programmes for debate, and have already accomplished a very considerable amount of work. This labour comprised, among other things, the writing of 480 letters to various town councils and local authorities asking for their support. Replies have already been received announcing the appointment of 168 delegates from these local bodies. Some local authorities have coupled the nomination of delegates with invitations to the Congress to visit anything of sanitary interest in their respective districts. This is an important matter, and should be carefully considered. We must show our numerous foreign guests things that are really remarkable and new in this country. For instance, in the all-important question of drainage, all the newer experiments as well as the old systems should be visited. An invitation to view the sewer farm at Croydon has already been received. There are numerous, extensive, and successful sewer farms on the Continent; but nowhere on the Continent will a town be found draining up a hill instead of down a hill, and this of course not by the force of gravitation but by the strength of pneumatic propulsion. Our continental guests will want to see not that which they already know, but rather those innovations which have not yet become notorious throughout the world.

The Congress has two divisions and ten sections. This subdivision of the work to be done is on the whole wisely contrived, with one exception. We cannot but think that a mistake has been committed in classing together industrial hygiene and demography. This is altogether without precedent. There is no more connexion between statistics and industrial hygiene than there is between statistics and any other form of hygiene. Architects, in building artisans' dwellings, will quote statistics to show that their model dwellings are more healthy than the old rookeries. Why not say, therefore, that architecture is a section of demography? Engineers, who prove that after draining a town the death-rate is reduced, might put in the same claim. At the previous Congresses industrial hygiene has been a section by itself, and we should have thought that in England, the greatest industrial country of the world, this subject, which interests and personally concerns the masses more than any other topic, would have held one of the first places. Now, however, the discussion of problems relating to industrial hygiene is to be handicapped by the necessity of treating them from a statistical point of view. We have five Factory Bills before Parliament at the present moment. Similar projects of law are before the Legislatures of almost every country in the

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world, and yet the discussion of these most urgent and practical questions is to be obscured under the mantle of demography. We hope it is not yet too late to correct this error. Also we would remark, while it is still time to make some modifications, that we fail to discover in the programme any provision for sittings of the Congress as a whole. Sectional sittings are useful for the study of special subjects, but when it is a question of enlightening, influencing, and, in fact, guiding the Legislatures of the civilised world, a discussion, and, above all, a vote of the Congress as a whole, are needed. This is what the previous international congresses of hygiene have given us, and the effect on various Legislatures has been most marked and beneficent. Considering that this Congress, if properly managed, and if it has a due sense of its importance and influence, will undoubtedly bring about in various countries the enactment of laws bearing on sanitation, no trouble or expense should be spared to render it a thorough success. The cost of the Congress is roughly estimated at £6000, and towards the completion of this sum £2500 are still wanting. This, then, is the moment for the friends of hygiene to prove their devotion to the cause by substantial donations.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF PHYSICIANS.

THE office of President of the Royal College of Physicians is an annual one, but the Fellows have long since recognised the importance of retaining for a much longer period the services of the physician whom they once select. The duties of the office are not only important, but are decidedly arduous, and there is general agreement as to the assiduity with which they have been pursued by its present holder. Sir Andrew Clark now completes his third term, and if it be in accordance with his own feelings, he fully merits a continuance of the confidence reposed in him. This, there is no doubt, he will receive next Monday, when we feel sure the vote of the Fellows will be endorsed by the profession at large.

BURIAL OF SO-CALLED STILLBORN CHILDREN.

THE question recently asked by Dr. Cameron in the House of Commons respecting the interment of stillborn children, and the reply of the President of the Local Government Board, calls for more serious attention than it is likely to receive. Dr. R. Rentoul has just issued a pamphlet in support of his active opposition to the Midwives' Registration Bill, in which he states that he has ascertained by personal inquiry that during the year 1889 there were interred in seventy-one burial board cemeteries, as stillborn, the bodies of 6321 infants; and that there are no fewer than 1100 such board cemeteries in England, in addition to the parish churchyards, in which the proportional number of this class of burials is supposed to be larger than in cemeteries under the control of burial boards. Dr. Cameron, knowing the very loose and unsatisfactory system under which stillbirths are certified for burial purposes under the Births and Deaths Registration Act, 1874, asked the President of the Local Government Board for a return of the total number of infants interred as stillborn during 1890 in England and Wales. The answer to this question obviously suggested by the facts of the case was that, as there is no system of registration of stillbirths in England and Wales, it would be impossible to furnish the return asked for. It is seriously to be regretted, however, that the importance of this subject, from many points of view of deep public interest, did not suggest the possibility of providing some remedy for an evil which amounts to a grave public scandal, rather than suggest the assertion of a simple *non possumus*, a position too readily assumed by Government departments as a foil to suggested reforms. It is needless now to enumerate the many evils that arise from the present loose ystem of certification of stillbirth; but we may point to one which is but too likely to be overlooked—its effect upon vital statistics, which constitute one of the most powerful and stimulating factors of health progress. Vital statisticians have in recent years been startled by the constantly rapid decline of birth-rates and of death-rates. It is obvious that so-called stillborn children are not recorded in the birth or death registers, and in the interests of trustworthy statistics, it is therefore of real importance to know what truth there is in the assertion of the amount of interment of so-called stillborn infants that is going on around us, practically unknown and unchecked. The results of Dr. Rentoul's private inquiries are striking enough to call for Government inquiry; and there seems to be only one real difficulty in the way of such an inquiry. This difficulty is the apathy of the Government in the matter. All burial grounds and all burial authorities are, it is supposed, under some kind of control exercised by the Home Office. Why then should not the inquiry, so urgently needed and called for, be undertaken by the Home Office? and why should not all burial authorities be required to furnish annual, or more frequent, returns, showing the number of burials of so-called stillborn infants, accompanied by the actual certificates which the Births and Deaths Registration Act, 1874, requires, as authority for the burial of any child as stillborn? Such a course would supply the means for a kind of registration of stillbirths, and would also prove a real check upon the gross abuses of the present system, which are very generally known to exist.

PETITIONS AGAINST THE MIDWIVES' BILL.

IT is difficult to judge accurately of the amount of feeling for and against such a measure as the Midwives' Bill. The number of petitions or of meetings does not show much unless we know the number who signed the petitions, or the number who attended the meetings, and the kind of representation made to them of the probable or possible effects of the Bill. In the last list of petitions against the Bill published by the House of Commons is one from medical practitioners in and about South London, signed by 111; also one petition from members of the Women's Franchise League of Great Britain "in public meeting assembled." We are not told the size of the public meeting, but the number of signatures is two. The number of medical practitioners in Portsmouth is over 100, but the petition from them is signed by 14. Up to the 9th inst. the total number of petitions was thirty-eight, and the total number of signatures 773. The Medical Register for 1891 contains 29,163 names. When we remember the prodigious efforts that have been made to urge these petitions, and that many of the petitioners, and probably most of them, only petition against the present Bill, it would not seem that there is any serious opinion in the great bulk of the profession adverse to a reasonable measure for abating the scandal of untrained midwives. It would not be right to assume that the 28,390 members of the profession over and above these 773 accept the present Bill; but we shall not be far wrong in assuming that they realise the responsibility of not

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attempting to grapple with the question. This will have to be done, and credit will be due to those who can devise a Bill that shall save women from the risks of the most ignorant midwives, and yet draw wide the line between midwives and medical practitioners. Here is a call for a medical statesman. Where shall he be found?

HOSPITAL SATURDAY FUND.

WE heartily congratulate the working men of London on their annual meeting and on the greatly improved account they were able to give of their stewardship. The increase in the workshop collection of £7000 — from £8001 in 1889 to £15,000 in 1890—is a veritable credit to the executive. It is still far below what it might be, and what it should be; but a few leaps and bounds like those of last year will bring it up to a worthy figure. We are glad also that a satisfactory arrangement has been reached by which the Morley House Convalescent Home will be more intimately associated with the Hospital Saturday Fund, and the accommodation for working men increased. Another good piece of work announced at the meeting was an arrangement with the Invalid Transport Corps of the St. John Ambulance Association for the removal of invalids to hospital, by application of collectors of the fund at its offices. Sir John Colomb and the Bishop of London both spoke with natural satisfaction at the growth of every indication of independence in the working classes. We share the feeling, but we must remember that these contributions to hospitals are in no proper sense provisions for the attendance on the working classes in ordinary sickness, but charitable contributions on their part to institutions which exist for the treatment of grave cases of accident or sickness.

THE BLOOD IN PNEUMONIA.

DR. KIKODZE has published in the *Bolnichnaya Gazeta* of Dr. Botkin some interesting observations on the blood during pneumonia. He found that during the course of this disease the white corpuscles increase in number to as much as double, or even treble, what they are in healthy persons. The increase is observed in the fully mature and over-mature corpuscles rather than in the young ones. It is worthy of note that in fatal and very severe cases no increase in the white corpuscles is found. As a rule, however, the increase begins even before the physical signs of pneumonia are detected. It persists from that time onward without any great variations to the crisis, immediately after which it suddenly falls. It appears to be due to the re-entry into the circulation of the corpuscles which have passed out into the alveolar spaces; hence probably the preponderance of over-mature corpuscles. After the crisis this preponderance ceases.

CHOLERA NOSTRAS.

IN a paper read before the Société Médicale des Hôpitaux on Feb. 6th, Drs. Gilbert and Girode describe the researches they have made in regard to some cases of cholera nostras. The chief interest lies in the bacteriological work. The stools in some of the cases yielded almost pure cultivations of Escherich's bacillus. Cultivations were also made from the fæces on different media, and numerous colonies were also obtained from the cerebro-spinal fluid, but not so many were yielded by the blood of the liver and spleen. The fluid squeezed from the lungs produced, in addition to the pathogenic bacteria, organisms morphologically similar to the pneumococcus. Although certain organic disturbances, such as high temperature, favoured the development of the bacillus, as shown by the fact that when such occurred pure cultivations could be easily obtained from the stools, the authors would not imply the reverse order of things—that the high temperature &c. was caused by rapid multiplication of the organism; they considered that cholera nostras is not always a symptom of a local lesion of the intestine, and that the germs were able to pass through the walls of the intestine, invading the body, and so bringing about a new morbid type—the infectious form of the disease. They were also of opinion that the bacillus of Escherich was not the only choleraic microbe in this climate. Finkler and Prior have also found a bacillus in the alvine evacuations of patients suffering from cholera nostras, very similar to the cholera bacillus of Koch. There are two suppositions which may be considered as regards the connexion of Escherich's bacillus with cholera nostras. In one the microbe may be concluded to be harmless before it enters the body, and may there develop its special pathogenic properties. The second idea supposes that the germs are widely distributed, and acquire their poisonous properties before entering the body, most probably doing so by means of drinking water. In the guinea-pig, if a pure culture of this bacillus be injected, it is followed by all the symptoms of a typical attack of cholera nostras.

MEDICAL CHARGES.

ON Friday, the 13th inst., according to the *Times* report, Judge Stonor, at the Marylebone County Court, tried a case in which a medical man claimed a sum of about £45 from a gentleman residing in Bayswater. The jury returned a verdict for £41 19*s.* 3*d.* The lady, described as delicate and nervous, was not the regular patient of the medical man, whose name is not given. She was led to consult him from fear concerning a draught given her by a chemist, tasted but not taken, which was said to contain aconite by mistake. The regular medical adviser called on the plaintiff, and offered him what appeared the usual fees for his services, but he declined. Thereafter the patient and her husband sought the plaintiff's advice, chiefly, it is said, influenced by the promise of a complete cure. On various days she went to the plaintiff's house and remained a considerable time, being submitted to examinations and treatment and provided with medicines and tins of Brand's essence of beef, milk, and eggs. The charges for these were higher than usual, but he said he did not generally supply them. The chief questions were as to the character of the consultations, and whether the plaintiff gave personal supervision during the whole of the time, which he averaged at three or four hours daily, and for which he charged three guineas a day. The jury seem to have been satisfied on this point, and, though a jury of medical men might have something more to say on the case, we are not disposed to quarrel with an ordinary jury for supporting higher fees than medical men generally charge.

A NEW METHOD OF INDUCING PREMATURE LABOUR.

DR. SCHRADER of Hamburg publishes in the *Centralblatt für Gynäcologie* a method of inducing premature labour based on his observation that cold is a greater excitant of the nervous, and consequently also of the muscular, system than warmth. Continuous irrigation at the temperature of 45° F. is impracticable on account of the pain it causes, but a cold douche alternating with a warm one can be borne. Dr. Schrader connects a vaginal glass tube by means of a T-shaped piece and the necessary india-rubber tubes to two irrigators, one of which contains the cold and the other the warm water. By allowing now one instrument and now the other to work, cold or warm water may be sent through the vaginal tube into the vagina. Two people are required—the one to fill the irrigators, the other to work the douche. For each sitting about twenty-

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four litres of cold and half the quantity of warm water at 112° are required, and the douche has a fall of about one metre and a half. The irrigation begins with the warm current, and before the cold water is turned on pressure is made on the perineum with the vaginal tube, so as to allow all the warm water to run away from the vagina. The same plan is observed before the change from cold to warm, by which means the alteration in the temperature as felt by the patient is always sudden. Each time about two litres of cold and half the quantity of warm water are used. The douche is generally repeated about every hour and a half until labour is active enough to make its continuance probable. Of eighteen women treated by this method exclusively, and four others who were partly so treated, one died of eclampsia twelve hours after delivery, but all the others made a good recovery. The eighteen women who were treated by the douche exclusively had twenty children, of whom fifteen, that is 75 per cent., were alive. These cases required on the average ten douches and a half; in half the number three douches and a half were sufficient.

CERTIFYING FACTORY SURGEONS.

THE Royal College of Physicians of Ireland have petitioned Parliament on the subject of the Bills relating to Factories and Workshops at present before Parliament, pointing out objections to the clause providing for the abolition of certificates of fitness for the employment of children and young persons in factories. The petitioners think that public health will be seriously menaced by removal of the safeguard of medical examination of those persons seeking employment in factories and workshops. The National Society for the Prevention of Cruelty to Children have also petitioned the House of Commons against the proposal now before it to abolish the requirement of certificates of bodily fitness for employment of children and young persons in factories and workshops. There seem some signs that the Government perceive the force of the wide opposition to the 19th Clause of this Bill.

ST. BOTOLPH'S CHURCH, ALDGATE.

AN application was made on the 2nd inst. before Dr. Tristram, Q.C., Chancellor of the Diocese of London, for an order varying the terms of a faculty granted by the Consistory Court of London authorising certain alterations in St. Botolph's Churchyard, Aldgate. A decision to enlarge an adjoining street by acquiring a portion of the churchyard necessitated the removal of the remains interred therein, and the Court, by the faculty granted, had ordered that any remains which it should be found necessary to remove should be placed in a vault to be erected in the churchyard at the cost of the Commissioners of Sewers. Since the faculty was granted it had been found that a vault sufficiently large could not be erected without endangering the foundations of the church, and application was now made to authorise the remains being placed in the crypt. In granting the order the Chancellor remarked that in preparing for the enlargement of the street it was found that there was a very large number of remains in the ground that was to be appropriated for the street, filling sixty or seventy boxes and forty-two coffins. The space left would not be large enough to enable a vault sufficiently large to be erected. Since the matter had been before him he had inspected the church, churchyard, and crypt. He now varied the faculty so as to order that the remains be placed in two parts of the crypt underneath the church, that they should be walled off from other portions of the crypt, and so cemented as to prevent any effluvia whatever from coming into the church. That (he observed) could be done without any difficulty. Further, he ordered that the flooring of the crypt should be also covered with concrete by the Commissioners of Sewers. After what has so recently occurred in St. Mary's Woolnoth and in another City church we must confess our surprise that Dr. Tristram should have made such an order. It would have been unwise fifty years ago; in these days of burial reform and cremation it is without defence. Many, if not all, of the forty-two coffins are probably leaden ones, the removal of which will give rise to noxious emanations, and Dr. Tristram is mistaken in assuming that any cementing, however good, will prevent any effluvia from entering the church. Had he made an order at first that the remains must be removed to some suburban cemetery and re-interred there, he would have shown himself in touch with the times, and in harmony with modern sanitary views as to the proper disposal of the dead. Whether the congregation of St. Botolph will continue to worship in the church after the completion of the two proposed charnel-houses beneath is a question which, we trust, will be anticipated by the intervention of the Home Secretary. The removal of human remains from a city churchyard to the crypts under the church is a retrograde movement, which will not admit of any arguments in its defence.

THE PREPARATION OF CANTHARIDINATES.

PROFESSOR OSCAR LIEBREICH gives the following directions for the preparation of cantharidinate of potash or soda. The cantharidinate of soda as well as the other salts of cantharidinic acid described by Dragendorff and Masing are not purely chemical bodies, owing probably to the variable quantity of cantharidin mingled with them, so that they have not hitherto been capable of being used for exact dosage. To obtain a constant solution weighed quantities of cantharidin were dissolved by prolonged heating with alkali, and then carefully diluted to the required degree of concentration. It results from this that the quantity of alkali theoretically needed for the conversion into cantharidinate was not exceeded, so as to keep the cantharidinate in solution. A large number of experiments showed that to obtain a solution which would remain clear on dilution and cooling, it was necessary to use twice as much potassic hydrate and half as much again of sodic hydrate as of the amount of cantharidin employed. The alkali must be pure, dry, and free from carbonic acid. Solutions were therefore prepared as follows:—Cantharidin, 0·2 grm.; potassic hydrate, 0·4 grm. most carefully weighed, and heated over a water bath in a 1000 ccm. flask, with about 20 ccm. of water, until a clear solution resulted; then water was very gradually added, whilst still heating, to about the full quantity, which was quite completed after cooling. Or: Cantharidin, 0·2 grm.; sodic hydrate, 0·3 grm., were dissolved in the same way up to a litre.[1]

THE WORK OF THE DALRYMPLE HOME.

BY the kindness of Dr. Norman Kerr we have been favoured with an advance proof of the annual report of the work of the Dalrymple Home for Inebriates. The admissions during the year were: Under the Inebriates Act, 18; as private patients, 23; with 18 under treatment on Jan. 31st, 1890, the cases for the year were 59, of which 1 was discharged by order of a magistrate, 40 by the efflux of time, and 18 remained under treatment on Jan. 31st, 1891. The number of cases discharged since the opening is 224, and some of the particulars are interesting. More (124) have entered as private than as under the Act. The average length of period of treatment of all patients discharged is about six months and a half. Whisky was the inebriant used in 84 cases. The prevailing temperament was nervous. The

[1] Therapeutische Monatshefte, March, 1891.

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drinking habit in 148 was regular, in 76 cases periodical. As to after history, 94 are reported as doing well, 10 as improved, 74 as not improved, 10 as insane, 1 as dead, and 35 as not heard from.

THE LATE SURGEON-GENERAL BALFOUR.

WE understand that it is proposed to erect a memorial brass to the late Surgeon-General Balfour, F.R.S., in the chapel of the Royal Victoria Hospital, Netley. It is considered that a donation of half-a-guinea from twenty or thirty subscribers will suffice for the purpose, and we have no doubt that Sir Thomas Longmore, who has kindly interested himself in the matter, would gladly receive subscriptions. Dr. Balfour's real memorial is the admirable statistical work he performed; but it may not be so generally known that the late Surgeon-General was one of the ablest and most popular principal medical officers that ever presided at Netley, and it is fitting, therefore, that the memorial of him should find a place there.

THE UVEAL GLAND.

AN important addition to our knowledge of the structure of the ciliary region of the eye has lately been made by Dr. W. Nicati of Marseilles, whose researches demonstrate the existence of a glandular apparatus by which the aqueous humour is secreted. Dr. Nicati names it the "uveal gland," or gland of the ciliary processes, which sufficiently indicates its position. The escape of the aqueous humour was formerly considered to entail the loss of the eye, and, indeed, when it escapes as the result of serious wounds loss of the eye is not of infrequent occurrence; but in later times it was perceived that escape of the aqueous was not in itself serious, and that the fluid was soon reproduced, the eye recovering its normal fulness and aspect. Chirac, a distinguished French physician, at the close of the seventeenth century attributed the secretion of the aqueous to glands which he described as situated at the margin of the iris. Nuck wrote a special treatise on the subject in 1685, in which, whilst denying the existence of the glands, he gave a detailed account of the ducts which Chrovet subsequently found to be filled with blood, and which Haller demonstrated to be the ciliary arteries and their branches. In still more recent times the aqueous humour has been regarded as an exudation from the vessels of the iris and the walls of the anterior chamber, and in the present day is held, as by Leber, to proceed from the posterior surface of the iris and from the ciliary processes. The parts specially described by Nicati as closely associated with or forming part of his uveal gland are, first, an epithelium, continuous at the ora serrata with the retina, and prolonged over the whole surface of the ciliary processes to the attachment of the iris. This represents the gland, and he estimates its surface to amount to at least 6 centimetres square. The cells constitute a single layer, with large oval or spheroidal nuclei, and rest on a layer of pigment cells continuous with that external to the rods and cones of the retina. Internal to the epithelium is the suspensory ligament, a special structure which extends from the tips of the ciliary processes to the lens, and is composed of delicate connective tissue, and of the rigid friable fibres of Henle, amongst which some free blood-corpuscles are found. These he believes to be the remains of the vascular organ which occupied this position before birth, the tunica vasculosa lentis, of which the pupillary membrane of the fœtus is a part, receiving its vascular supply from the hyaloid artery. External to the secreting epithelium is a close network of capillaries, which is a continuation of the chorio-capillaris and ministers to the nutrition of the gland. The larger arteries supplying the plexus are the short ciliaries, and the veins returning the blood are the venæ vorticosæ. The nerves proceed from the plexus formed by the ciliary nerves given off by the nasal nerve and by the lacrymal ganglion. The ducts of the gland are represented by the canal of Petit, the circular marginal slit of the posterior chamber which separates the iris in front from the crystalline lens and the ciliary processes behind, and the slits connecting these spaces with each other; whilst the channels by which the aqueous humour is absorbed and carried away are lacunæ in the epithelial layer covering the crypts on the anterior surface of the iris, sometimes named the lymphatic lacunæ of Fuchs or the stomata of Nuck and Cornil, which open into a system of lymphatic channels that are again continuous with the lymphatic sheaths of the anterior and posterior ciliary veins and of the venæ vorticosæ.

THE FRENCH SURGICAL CONGRESS.

THE fifth session of this congress will hold meetings from March 30th to April 4th in Paris, in the great amphitheatre of the Medical Faculty, under the presidency of Professor Guyon. The inaugural meeting will take place on Monday, March 30th, at two o'clock. Communications will be read on the question of "surgical intervention" in affections of nerve centres, trepanning of the skull excepted. Drs. Reclus, Bazy, Doyen of Rheims, Vaslin, Jeanlen, Professor Ollier, Dr. Picqué, Professor Victor Horsley of London, and others. The subject of the results of removal of the uterine appendages in affections which are not neoplastic in their nature will be discussed by several gynæcologists of eminence. The discussion will be opened by Mr. Lawson Tait on April 2nd, and Sir Spencer Wells will take part in the proceedings. The question of the different kinds of suppuration examined from a clinical and bacteriological point of view will form a subject of discussion.

LEGAL CRUELTY.

THE abduction of Mrs. Jackson, which has been the talk of Lancashire for some days past, has given occasion for one of those exhibitions of the tenacity with which legal doctrines survive their date which fairly take away the breath of a layman. On Monday last an application was made by Mr. E. Forbes Lankester to the Divisional Court of Queen's Bench for a writ of *habeas corpus*, directing her husband, who was at that time holding her a close prisoner, to bring her into Court and assign the cause of her detention. The main facts of the case have become well known through the daily press. Mr. and Mrs. Jackson were married in 1887, but on the day of the marriage the husband brought the wife back to the house in which she had been previously living, and himself departed in the evening, and shortly after left the country for New Zealand. The parties corresponded and quarrelled by letter, and upon the husband's return to England his wife declined to live with him, and refused to obey an order for restitution of conjugal rights which the husband obtained from the High Court of Justice. The husband in these circumstances found an opportunity of forcibly seizing his wife on Sunday, the 8th inst., as she was leaving church, and carrying her off to Blackburn, where he kept her in close confinement. The evidence by which the application was supported showed that the lady was effectively prevented from communicating with her friends, and unable, therefore, to bring her own case before the Court, and it comprised an affidavit by Mr. Musson, her medical attendant, who deposed that he had attended her for thirty years, that she had suffered on three occasions from rheumatic fever, which on the first occasion was complicated with severe inflammation of the heart; and that, although there has since then been no objective evidence of heart disease, it is highly probable that

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there exists a delicacy which in unfavourable circumstances might produce serious results. He further stated that he considered a large amount of out-door exercise of essential importance to her health, and that, in his opinion, continued confinement to the house, and particularly when accompanied by mental disturbance, would be very detrimental. Upon these materials the Divisional Court came to the conclusion that no case for inquiry had been made out. Mr. Justice Cave justified the husband's proceedings upon the ground that he had been led to adopt them, first, by his wife's obduracy in refusing to live with him; and, after the abduction, by the conduct of her relatives, who, as he expressed it, had "picketed" the house. He considered the facts to determine whether in carrying out his blameless purpose the husband had used any unnecessary violence or cruelty, and came to the conclusion that the evidence did not go to this. It is some satisfaction to reflect that the Lord Chancellor and the Court of Appeal did not sanction the very antique doctrine which found favour with the Judges of the Queen's Bench Division, but it is at least startling to learn that at the present time any tribunal can be found which will entertain a doubt as to whether a husband is entitled to drag a delicate woman, if she be his wife, by main force to his house, and to detain her there a close prisoner under unremitting surveillance.

THE HOUSE OF LORDS AND THE MEDICAL PROFESSION.

COLONEL FITZGERALD in the *Morning Post* comments on the conspicuous absence from the Upper House of representatives of the medical profession. The defect is an absurd one, and the Minister who has the courage to remove it will deserve well of the public, and of the House of Lords.

BIOLOGICAL ACTION OF IRON AND MANGANESE.

DR. FAUSTO FAGGIOLI has published in a recent issue of *La Riforma Medica* some notes of a research upon the physiological behaviour of iron which he has carried out, with Professor Pellacani's assistance, in the Bologna laboratory of Forensic Medicine. From these it would appear that iron enjoys the property of setting up mitosis or nuclear change and cellular increase, especially in cultures of unicellular organisms such as protococci. Under some circumstances manganese will act in the same way, but Dr. Faggioli was unable to find that any other metal could do so.

PATHOLOGY OF GRIEF.

THAT severe mental distress or fright sometimes produces physical disease, and occasionally even death, is an admitted fact, although the way in which it acts has hitherto been but little studied. In order in some measure to supply the deficiency in our knowledge regarding this matter, Dr. G. Bassi has recently made a number of observations on animals which apparently died in consequence of capture. Birds, moles, and a dog which had succumbed to conditions believed by Dr. Bassi to resemble those known amongst human beings as acute nostalgia and "a broken heart" were examined post mortem. Generally there was hyperæmia, sometimes associated with capillary hæmorrhages of the abdominal organs, more especially of the liver, also fatty and granular degeneration of their elements, and sometimes bile was found in the stomach with or without a catarrhal condition. The clinical symptoms were at first those of excitement, especially in the birds, these being followed by depression and persistent anorexia. The theory suggested by Dr. Bassi is that the nervous disturbance interferes with the due nutrition of the tissues in such a way as to give rise to the formation of toxic substances—probably ptomaines,—which then set up acute degeneration of the parenchymatous elements similar to that which occurs in consequence of the action of certain poisonous substances such as phosphorus, or to that met with in some infectious diseases. In support of this view, he points out that Schule has found parenchymatous degeneration in persons dead from acute delirium, and that Zenker found hæmorrhages in the pancreas in persons who had died suddenly; he refers also to some well-known facts concerning negroes in a state of slavery and to the occasional occurrence of jaundice after fright. He hopes that these hints may induce medical officers of prisons and others to study both clinically and anatomically this by no means uninteresting or unimportant subject.

THE POLLUTION OF THE AIRE.

DIFFICULTY is already raised as to the formation of a Conservancy Board for the river Aire, and at a public meeting inaugurated by the Keighley Corporation opinions were expressed that the two boroughs of Leeds and Bradford, which were moving in the matter, were the worst offenders; entire disapproval was also expressed at the action taken. But it seems more than likely that the real grievance lies in the question of representation, and that a number of urban and other areas in the West Riding find that their influence will be overridden by an overwhelming majority. A request is to be made to the President of the Local Government Board to receive a deputation on the subject, and if this is assented to, the matter will probably be soon settled one way or the other. Anyhow, we hope that the pollution of the Aire, and of the Calder also, will before long be a thing of the past, for the present state of affairs is a disgrace to the localities through which the rivers flow.

GLANDERS IN HAVANA.

GLANDERS is unfortunately of frequent occurrence in Cuba, more especially in Havana. The reason of this is said by Dr. Davalos, in a paper read before the Cuban Medical Congress, to be that the bacillus mallei in cultures of nutrient material increases in virulency in the ordinary spring temperature—that is to say, at 28° to 30° C., contrary to what occurs in the case of cultures of bacillus anthracis, and, indeed, of most other microbes. When, therefore, clothes and other things have become contaminated from contact with a patient suffering from glanders, whether human or equine, the liability of the disease to spread under the conditions which exist in Havana—a thickly populated and not over-clean town—is very great; indeed, Dr. Davalos ventures an opinion that, with the amount of infection already existing in Havana stables, it would take twenty years of scrupulous antisepsis to destroy it.

DEATH UNDER CHLOROFORM AT KING'S COLLEGE HOSPITAL.

WE have been favoured by Mr. A. Whitfield, L.R.C.P., M.R.C.S., with the following particulars:—D. W., aged twenty-eight, admitted Dec. 14th, 1890, with Pott's fracture of right fibula, was put up in plaster-of-Paris bandages, and sent out some days later. He was afterwards treated as an out-patient at King's College Hospital. The patient came on Friday, March 13th, 1891, when the plaster splint had been removed some time, complaining of stiff ankle, painful on walking, and was told to come the following morning, having had no previous meal, in order that his ankle might be forcibly moved under an anæsthetic. He came to the hospital as directed. He seemed in good health and the circulatory organs gave no sign of

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disease. Chloroform was used as the anæsthetic, and was given from a drop bottle on a folded towel. The patient took the anæsthetic well, and struggled little during the production of anæsthesia. When sufficiently under, the ankle was forcibly moved, and the adhesions broken down, by Mr. Hewlett, house surgeon. The patient was then in a state of fairly complete anæsthesia, his pupils were moderately contracted, and there was still slight corneal reflex; breathing normal and quiet, pulse fairly quick; no muscular resistance was felt in breaking down adhesions. After the operation no more chloroform was given, and the patient seemed quite well for about three minutes. He then stopped breathing suddenly. Artificial respiration was commenced and he started breathing again, which he continued for about ten good breaths; he then stopped again. The pulse was then very quick and small. Artificial respiration was kept up, and fifteen minims of ether injected subcutaneously. The patient was inverted and galvanism and flicking the chest with wet towels were tried. Nothing, however, was of any avail, and after about three-quarters of an hour, during which time artificial respiration was continuously applied, the circulation also failed. Not more than three drachms of chloroform were administered, and the patient was not under its influence more than a minute. There was no cyanosis or other alarming symptoms till the cessation of breathing occurred. At the necropsy all the organs were found healthy. The heart was empty, with no sign of organic disease or fatty degeneration.

DIPHTHERIA AT ESHER.

THE neighbourhood of Esher has from time to time been troubled with diphtheria. Some have thought that the modern system of drainage should have put an end to that disease; others have thought that the connecting of houses with the drains had brought it about. We are told that the last occurrence has taken place where no connexions with the sewers have as yet been made, but where nuisances of an ordinary type and others due to the keeping of fowls and rabbits prevail. The truth is that this endless seeking for some nuisance to explain diphtheria is very misleading. In nine cases out of ten the mischief lies in infection from antecedent cases of a trivial sort which escape detection, and the centre often lies in the school. If, when a case of diphtheria occurs, examination were made of all the throats of children and pupil teachers at school, with a view to the exclusion of any who present symptoms, however slight, of throat disease, much more would be done to stay the sickness than is at present the case. The only advantage of the other course is that remediable evils are dealt with by the sanitary officers, and to that extent preventable disease is diminished. But the hunt for some fault in sanitation and its acceptance as cause, whether it be presence or absence of drainage, privy nuisance, or effluvia from chickens and rabbits, is not altogether scientific.

THE PREVENTION OF BABY-FARMING.

THE recent baby-farming revelations exhibit in ghastly reality the whole ordinary plan and circumstance of this detestable form of crime. Its usual causes, inducements, evasions, methods, and effects have been clearly exposed, and it is hardly needful for us to discuss in full detail the now familiar history. Some study of the method adopted by the would-be farmer will not, however, be without advantage, since it is only by way of prevention that the evil can be cured. On examination the first point that strikes us is that this business rests, like every other, upon a foundation of demand. Legally fatherless, practically motherless, many thousands of children annually born in this country are from birth intended for other than parental keeping. In many cases they are parted with in order that they may be forgotten. The "nurse" understands this, and she will, for a suitable remuneration, supplemented, it may be, by the prospect of a sum payable through an insurance agent, guarantee their disappearance. Advertisement is the medium of communication, and frequent changes of name and residence enable the *quasi*-parent, for a time at least, to baffle suspicion, and thus the inconvenient infant is transferred and absorbed into obscurity. Then follows the well-known process of neglect, starvation, and death. The case of Reeves, which has lately resulted in a verdict of manslaughter, conforms in all essential particulars to the description above given. In the light of such overwhelming proof of wanton mismanagement as was here brought forward, the finding of the jury was a foregone conclusion. Disease had indeed helped forward the slow process of dissolution, but the medical evidence tendered left no doubt as to the fact that starvation and squalor were acting powerfully as preparatory and concurrent causes. Their swift and deadly influence may be judged from the fact announced by the judge in summing up—namely, that in the short space of six months eight children out of twelve in this woman's care had died. We may naturally ask whether nothing can be done to arrest at its beginning this indiscriminate transfer of infants, about which nothing appears to be so certain as its fatal issue. Why not, for example, arrange that every advertisement relating to the custody of nurse children and every case of infant insurance be liable to official registration, this latter to be supported by vigilant after inspection? The work of supervision might be entrusted to the sanitary officials or to persons deputed by them, such, for instance, as the officers of the Cruelty Prevention Society, whose efforts have been deservedly commended.

THE QUESTION OF NOTIFICATION AT BARNSTAPLE.

THE Barnstaple Town Council are somewhat afraid of compulsory notification; indeed some of their number argue that the Act conferring this power is a useless piece of legislation. Since the Councillors resorting to such an argument have never put the Act to the test, their opinion naturally does not go for much; and we may hence pass on to another objection that has been raised—namely, that such a power is useless in the absence of an isolation hospital. To a considerable extent we sympathise with this class of objectors, but if their objection be a genuine one we may console them by informing them that the adoption of the Infectious Diseases (Notification) Act is doing more towards securing the provision of means of isolation than anything else; for when sanitary authorities learn how many are the instances in which they could have stayed the spread of infection had they only had means at hand for the prompt isolation of first attacks of sickness, they feel it their bounden duty towards their constituents to make the needed provision. And pending such provision, a good deal may, according to the experience of other places, be done, for there are a number of instances in which control can be exercised, and this successfully, where hospital isolation is not called for. We refer, for example, to the value of excluding from school all children coming from houses where cases of such diseases as diphtheria, measles, and whooping-cough have existed.

THE CORONER AS INTERPRETER.

WITHOUT prejudice to the capacity for office displayed by lawyers in other spheres of usefulness, we have always maintained that the functions of the coroner can best be exercised by a medical man. The subject matter comes naturally within his proper sphere of thought. Provided,

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in addition, as he must be, with an appropriate knowledge of law, his position is really that of an expert, and his judicial opinion of necessity reliable in a corresponding degree. Moreover, his very familiarity with medical technicalities is in his favour. A somewhat amusing illustration of this latter point occurred a few days ago at an inquest in Chelsea, where the descriptive terms employed by a medical witness were as Greek to a jury of workmen until they were properly translated into good coroner's English. We do not for a moment pretend that it is expedient or necessary for medical men in giving evidence to confine themselves to a technical nomenclature. In this matter, if in anything, simplicity is the essence of good expression. It is obvious, however, that whatever care is taken to observe this desirable clearness of speech, the need of explanation must arise from time to time, and with it the medical coroner's opportunity.

MODE OF ENTRY OF THE TUBERCULAR POISON INTO THE BODY.

A VERY good summary of the various paths of infection adopted by the tubercle bacillus is given by C. Bollinger in the *Münchener Med. Wochenschrift*, 1890, No. 43. He considers that the frequency of infection through the skin has been under-estimated. Several cases have been recorded of direct inoculation by wounds received from broken spittoons &c., by bites, after circumcision, by morphia syringes, and earrings. Eczema and impetigo increase the susceptibility of the skin. No case has as yet been attributed to vaccination, and it would appear that the tubercle bacilli are unable to live in the vaccine lymph. They also appear unable to pierce the pores of the skin as do some of the pyogenic organisms. The susceptibility of the mucous membranes is increased by inflammatory processes, such as otitis, rhinitis, conjunctivitis, pharyngitis, &c.; from thence the poison travels to the submaxillary glands and those of the neck, and generally causes local tuberculosis of the glands. The chief point of infection is of course the lungs. Local predisposition is best exhibited by apices which have been before diseased, but have undergone a healing process. The movement is deficient both in expiration and inspiration, and the liability to reinfection is increased by anæmia, irritants (such as coal and metallic dust), constitutional influences, such as diabetes, disturbances of digestion, and unhealthy surroundings. The poison may pass through the lungs and attack the bronchial glands, under which circumstances the disease may be very insidious. The predisposition of the lungs again exhibits itself in metastasis; not every tubercular disease of these organs is due to inhalation of the bacilli or their spores. As regards primary tuberculosis of the testicles, joints, and bones, Bollinger considers that a latent hæmatogenic infection must be understood, which leaves as little trace of its point of entry as does a primary septic endocarditis or an osteomyelitis. Tubercular disease of the larynx depends upon an autoinfection through the sputum. The rarity of this disease in children is explained by the infrequency of pulmonary cavities in the rapid forms of phthisis. Primary tuberculosis of the intestine generally, combined with an affection of the mesenteric and retroperitoneal glands, is usually occasioned by means of vitiated food and contaminated feeding utensils. Secondary tuberculosis of the intestine depends upon an autoinfection. The tubercular poison passes through to the intestine unaltered by the juices of the stomach and attacks the Peyer's patches and solitary follicles. Tuberculosis of the peritoneum, which is three or four times as common in men as in women, can arise directly from ulcers of the intestine, from tubercular abdominal glands, or, especially in women, from the urogenital tract; further, through contagion from the lungs and pleura, and finally in the course of miliary tuberculosis, or from caseous bronchial glands. Primary tuberculosis of the peritoneum is rare (3 to 4 per cent. of all cases). As regards the infection from milk, this is, in Bollinger's opinion, undoubtedly due to the udder of the cow being affected with the disease. Infection through the milk of tuberculous women has not yet been proved. In tabular form the organs of the body are thus affected, beginning with those most frequently diseased:—(1) lungs, (2) the lymphatic glands, (3) intestine, (4) serous membranes, (5) larynx, (6) spleen, (7) joints, (8) bones, (9) liver, (10) kidneys, (11) the genital tract, (12) the skin, (13) brain and spinal cord, (14) muscles.

UNQUALIFIED ASSISTANTS AND INQUESTS.

THE coroner for West Bromwich, in a case of a child dying twelve hours after birth, where a death certificate was alleged to have been given by the unqualified assistant of a medical man, expressed his surprise that medical men did not generally employ qualified assistants, and announced his intention of holding an inquest on every case where a certificate of death was given by an unqualified assistant.

TROPHIC DISTURBANCES IN HYSTERIA.

UNDER this title a lecture by Pitres appears in the *Progrès Médical*, and the cases dealt with are five in number. The first is that of a young woman who, after a disappointment, suffered from some hysterical manifestations, and when she came under observation was suffering from œdema, confined to the left leg. The swelling was hard and resistant, and did not pit on pressure. There were contraction of the visual fields and hemianæsthesia. The knee-jerk on the affected side was diminished. A cure resulted after magnetisation. The next case referred to is one of paralysis of both legs, with complete flaccidity, which had come on suddenly after a miscarriage. There was anæsthesia of the legs, with loss of sense of position, and sinapisms on being applied provoked neither pain nor redness. There was notable lowering of the temperature of the affected limbs. The visual fields were contracted, and a complete cure was effected by brisk faradisation. The third case is one of wasting of the left hand and arm, which had commenced apparently some months after a wound inflicted in the pectoral region, so long ago as 1882. There was a characteristic *main en griffe*, wasting of thenar and hypothenar eminences, but the electrical reactions are said to have been absolutely normal. There was anæsthesia over the left arm and over parts of both sides of the chest and back. There were also anæsthetic areas on the head, and marked but almost equal contraction of the visual fields. This case was diagnosed as one of hysterical atrophy consequent on traumatism, but the subsequent progress is not reported. The fourth case was one of facial paralysis of the right side with diminished electrical excitability, which recovered completely in a month; while the last one is that of a girl who had several attacks of paralysis, supposed to be hysterical, and who was said to have developed a bedsore in those attacks, and on one occasion to have had suddenly and painlessly several teeth drop out without apparent cause. It is evident that all these cases present anomalies, and to the English mind at least the acceptance of the diagnosis of hysteria in several is difficult. We are prepared to grant that all the patients were what we understand by hysterical, but we are not prepared to say that there was no underlying organic affection. A patient in whom there is œdema of the leg below the knee, with diminished knee-jerk, even if the visual fields are contracted, and there

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is hemianæsthesia, is not necessarily the victim of hysteria alone. We should say that the probabilities were all the other way. Nor can we at all understand why facial paralysis with diminished electrical irritability of the muscles, and with all the classical appearances, should be called hysterical. The only apparent reason is that it occurred in a girl. The last case of all is related as one of trophic disturbance occurring in hysteria; but as the patient was not seen when she was paralysed, and as moreover the existence of the bedsore—the trophic disturbance referred to—was taken entirely on hearsay and had left no cicatrix, we cannot see any sufficient reason for including it in the group of hysteria, far less for citing it as an example of trophic disturbance in that affection.

SIR HENRY THOMPSON.

WE are enabled to qualify a statement which has appeared in the newspapers with respect to the health of Sir Henry Thompson. Sir Henry has not visited Monte Carlo, and has no intention of going there. On Sunday last he was the subject of a slight surgical operation, from which he is, we are glad to say, fast recovering, and which will probably keep him in bed not more than ten days.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Professor Klug of Clausenburg has been selected as successor to the late Dr. Jendrassik in the chair of Physiology.

Freiburg.—Dr. Katelden has been promoted to the rank of Extraordinary Professor.

Giessen.—Professor Stöhr of Zurich has declined an invitation to this University.

Moscow.—Dr. Filatoff has been appointed Professor of Children's Diseases.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Eugen Jendrassik, Professor of Physiology in the University of Buda-Pesth, after a short illness (erysipelas), in his sixty-eighth year.—Dr. Hermann Kugler, of Stettin.—Dr. Blodig, formerly Professor of Ophthalmology in the University of Gratz.—Professor Regeczy-Nagy, of Buda-Pesth.

THE Irish Medical Schools' and Graduates' Association celebrated St. Patrick's Day with due honours. The Association numbers about 700 members. The dinner, presided over by Dr. Gilbart Smith, was numerously attended and much enjoyed.

SURGEON T. H. PARKE, of the Army Medical Staff, has, we learn, been appointed a Vice-Consul in the Oil Rivers Protectorate. Surgeon Parke has lately been doing duty with the 2nd Life Guards in London.

THE University of Aberdeen has paid Dr. Bruce the compliment of conferring on him the degree of LL.D. in consideration of his being the Direct Representative for Scotland in the General Medical Council.

THE corporation of South Shields have adopted the Notification Act, but only by a majority of one. The adoption of the Act was moved by a member of the medical profession, Mr. T. M. Young, M.R.C.S., L.S.A.

INTELLIGENCE has been received of a death in consequence of the injection of cantharidin in the Moabit Hospital in Berlin. The fatal result is said to have been caused by the action of the drug on the kidneys.

THE LANCET Analytical Sanitary Commission.

REPORT ON PERFECT COMBUSTION AND SMOKE PREVENTION.

THE increasing prevalence of fogs, the unlimited growth of this immense metropolis, the rise in the price of coals, and the exceptional severity of the winter have naturally revived the old and vexed problem of smoke abatement. It is very widely felt that there must be a limit to the reckless waste of fuel, with its consequent poisoning of the atmosphere by smoke &c. With the prevalence of fogs the death-rate rises, and of course those who are suffering from diseases of the respiratory organs find their complaints greatly, sometimes fatally, aggravated when they have to breathe the soot and the sulphurous gases which, when mixed with aqueous vapour, constitute the special characteristics of a London fog. This is, of course, entirely due to the hundreds of thousands of chimneys that daily throw off black smoke, and the number of these chimneys is increasing to an appalling extent. Now, what is generally termed smoke—that is to say, dark visible smoke—is simply unconsumed or wasted coal. The coal has been partly decomposed by the heat of the fire, but under the influence of the cold air it condenses anew and re-forms itself into carbon in the shape of soot. To prevent black smoke we must, therefore, thoroughly burn or consume the fuel used. We should then secure the double advantage of obviating smoke and of preventing a great and disastrous waste of fuel. For years, however, we have sought in vain such a consummation. Improvements—many improvements—on the ordinary fire-grate have been suggested. Some had considerable merit, and did contribute to abate the nuisance from which we all suffer, but none offered a complete and practical solution of the entire problem. A Russian civil engineer, M. O. de Clausen, recently exhibited in Paris a stove illustrating the theories he has advanced with regard to the laws of combustion. His invention had passed comparatively unperceived in the French capital. Technical juries awarded him gold medals, but the public at large and even the world of science cared little and knew less about his innovations. Yet coming beneath our notice they seemed to us likely to render such great service not only in the world of industry and manufacture, but, above all, to the cause of public health and social economy, that we invited M. de Clausen to submit his theories to the severest tests we could devise, so as to check his assertions and claims.

The formation of soot and of the highly injurious and poisonous carbon monoxide gas have always been attributed to the insufficiency of the supply of oxygen reaching the fire. But though combustion in an ordinary fire is incomplete, and therefore produces soot and carbon monoxide (CO), M. de Clausen found by analysing the smoke that it also contained a large proportion of free oxygen. How, then, could it be said that the supply of oxygen was insufficient when such oxygen as did exist was not all consumed? M. de Clausen concluded that imperfect combustion must be due to another cause, and not to the want of a stronger draught or of more air. The reason of failure is due, he declares, not to the want of air, but to the absence of a sufficiently elevated temperature to ensure perfect combustion. The combination of the right quantity of oxygen with carbon in a sufficiently elevated temperature can only produce carbonic acid (CO_2). In an ordinary fire CO_2 is formed in the lower layer of fuel resting on the grate. This gas, M. de Clausen explains, travels upwards through the

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superior layers of incandescent coal which take from it one atom of oxygen, thus bringing into existence the carbon monoxide CO, and continues combustion by means of this atom of freed oxygen, and not by means of the large quantity of free oxygen contained in the air of the draught passing through the stove. The oxygen of the incoming air does not possess a sufficiently high temperature, and therefore presents far less affinity for the chemical combination than the heated oxygen derived from the decomposition of CO_2. This explains why the chemical analysis of the products of combustion in ordinary fires or stoves shows us simultaneously CO_2, CO, and O. But if the carbon monoxide produced by the decomposition of CO_2 could meet at the place where it is formed a new current of air of a temperature sufficiently elevated, it would burn and combine once more with an atom of oxygen and reconstitute carbonic acid CO_2. M. de Clausen therefore concludes that it is not the want of oxygen which determines the production of CO, but the unsuitable distribution and temperature of the free oxygen of the air amid the layers of burning fuel.

This is the first or theoretical side of M. de Clausen's discovery; it now became necessary to find its practical application. Basing his researches on Paclé and Dulong's theories—that a spherical surface takes up and surrenders a larger quantity of heat than a flat surface of the same size, and that the coefficient of the transmission of heat for spherical surfaces augments in the ratio of their curve,—M. de Clausen sought to produce a fire clay of extremely porous character, and composed of innumerable spherical particles infinitely small in diameter. For this purpose he mixed powdered magnesia with the clay, and M. de Clausen's invention rests in the special mechanical process by which he is able to mix a large proportion of magnesia with the clay without deteriorating the quality of the brick made.

By referring to the accompanying illustrations, it will be more easily understood how these theories are realised. The first gives the external appearance of the portable stove, which of course can be modified to suit the artistic fancies of the public. The second drawing represents the side section. The fuel, it will be seen, is introduced at the top by the aperture H, an operation which need be performed but once in twelve hours. M M are the iron bars of the grate where the coal rests, and J is the regulator by which air is admitted through the very small openings, about the size of an ordinary pencil, and discharged just where the fuel is in an incandescent state. The amount of air admitted by these minute openings is so small that it cannot lower the temperature of the burning coal to the extent of destroying the chemical affinity of the oxygen to the carbon. K is the ash tray. This can be drawn out so as to throw away the ash, which falls through the iron bars. The dotted lines represent a flue, by which fresh air from the outside of the dwelling can be introduced, and warmed by passing up the back of the stove, along the passage, P, and discharged at the top over the pans, F. These may be charged with plain, scented or medicated water. The third figure will give us a still clearer understanding of the system. O is the interior space charged with fuel. P represents the incandescent or burning part of the stove. There is a very slight downward current of air, so that any smoke or inflammable gases produced by the distillation of the black coal in the upper part of the stove passes downwards into the incandescent part of the fire, and is here consumed. The central walls, as shown by the shading of the drawing, dip into the incandescent part of the fire, just as the dip of a drain trap plunges into water. Thus, on the same principle as the hydraulic syphon drain trap, M. de Clausen has constructed a smoke trap. The smoke from the black coal that has not yet been ignited is consumed by passing through the smoke trap in the incandescent part of the fire. The products of combustion travel from the smoke trap up the passage *a*. Here, on both sides, they are surrounded by walls made of the porous magnesian fireclay. These walls, by reason of their special absorbing character, take up nearly all the heat contained in the gases that are the product of the combustion. This utilisation of heat is facilitated by the fact that the gases have to ascend to the top of the stove, and then descend to the bottom, before they can escape into the chimney by the flue placed on a level with the ash tray, K.

In order to determine how completely and economically combustion is effected in this stove, a large number of experiments were carried out. It is well, in deciding questions of this kind, to consider, first, what ought to be the products of the complete combustion of coal in air; and secondly, what should be the percentage amount of these products in the effluent gases. The first question can only be answered when the composition of the coal employed is known. In the experiments about to be described three varieties of coal

FIG. 1.

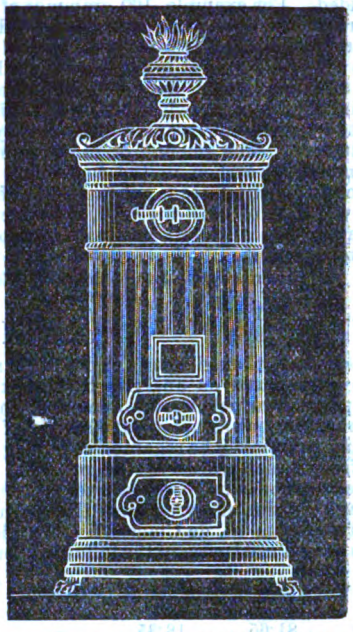
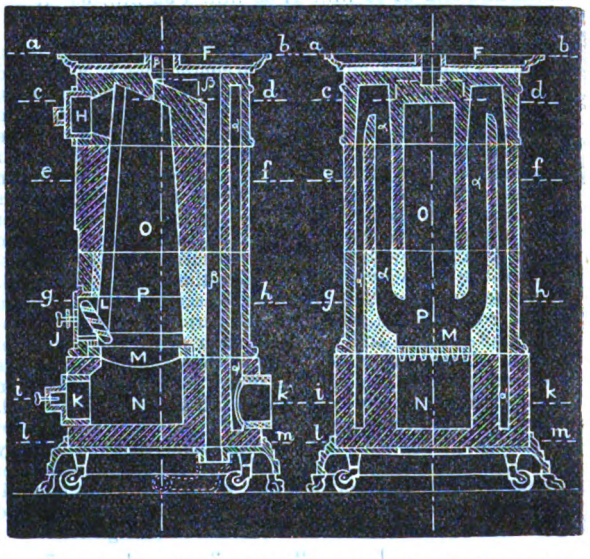


FIG. 2. FIG. 3.



were used—namely, (1) Welsh anthracite, (2) Lancashire coal (ordinary house coal), and (3) Welsh steam coal (a very hard coal). The chief variations in their composition are seen in the following analyses:—

	Anthracite. Per cent.	Lancashire coal. Per cent.	Hard steam coal Per cent.
Carbon ...	91·00	79·95	81·00
Hydrogen ...	3·30	5·45	4·75
Oxygen ...	2·50	7 73	4·78
Sulphur ...	1·00	2·00	1·50
Nitrogen ...	0 80	1·80	1·40
Ash ...	1·40	3·07	6·57

Carbon is of course the chief combustible constituent, but along with it are hydrogen to the extent of from 3 to 6 per cent., and sulphur from 1 to 2 per cent. The perfect combustion of coal in air should give nothing but the oxides of

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carbon, hydrogen, and sulphur—namely, carbonic acid, water, and probably sulphuric acid, and accompanying these are the unchanged nitrogen of the air and the small quantity of nitrogen which occurs in the coal. Since the composition of the coal is known, and therefore the amount of oxygen necessary for its complete combustion, the second question as to what should be the composition of the gaseous products (assuming complete combustion to have taken place) can be decided. For example, 100 grammes of the anthracite coal such as the specimen analysed would require 920 litres of air (in addition to the oxygen the coal contains) in order to be completely burnt into carbonic acid, water, sulphurous or sulphuric acids, and regarding that the steam condenses into water along with the sulphur acids, the gases passing out of the chimney would consist merely of carbonic acid and nitrogen. The amount of nitrogen in the air and also the amount of carbon in the coal being known, the composition of the exit gases is only a matter of calculation. The three varieties of coal analysed, if perfectly oxidised, would give theoretically exit gases of the following percentage composition:

	Anthracite. Per cent.	Lancashire coal. Per cent.	Hard steam coal. Per cent.
N...	81·41	82·50	82·20
CO_2	18·59	17·50	17·80

It follows that if the exit gases or invisible smoke given off by a stove are found on analysis to approximate to the above composition which theory demands, then not only perfect combustion but complete utilisation of the oxygen of the air may practically be regarded as having taken place.

Passing from these theories to the practical experiments made in our laboratory, we ascertained, by means of numerous and careful analyses, that the products of combustion derived from M. de Clausen's stove yielded for the three kinds of coal used gases of the following composition:—

Coal consumed.	Nitrogen.	Carbonic acid.	Oxygen.	Amount of coal consumed in 24 hours.
Anthracite ...	81·65	18·35	—	4 kilos.
,,	82·29	15·21	2·50	3 ,,
Lancashire coal	81·08	17·00	1·92	3½ ,,
Hard steam coal	81·45	18·55	—	4 ,,

Unused oxygen to the slight extent of about 2 per cent. appears in the gases only when the combustion is permitted to proceed with comparative slowness. In the above results, for instance, it will be seen that in the case of anthracite in the second experiment the coal consumed amounted to three kilogrammes per twenty-four hours, while in the first, four kilogrammes were consumed in the same time. Again, in the case of the Lancashire coal, where three kilogrammes and a half were consumed in twenty-four hours, 1·92 per cent. of oxygen was obtained. The rate of consumption can be regulated with remarkable exactness by the adjustment of the air valves with which the stove is provided. Nevertheless, it was felt desirable to ascertain the minimum rate of consumption which would permit the perfect combustion of the coal and the utilisation of all the oxygen of the air. These experiments show that the minimum rate of consumption in this stove is four kilogrammes of coal in twenty-four hours; the oxygen of the air is then entirely used.

The following results are amongst upwards of a thousand experiments made with the Orzat gas analysis apparatus by M. de Clausen himself. The analyses were conducted under our supervision, and their accuracy was confirmed by a duplicate analysis, for which we employed the most delicate and approved apparatus used in this kind of investigation:—

	1.	2.	3	4.	5.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
CO_2.....	13 ...	17 ...	17 ...	18 ...	20
O.....	5 ...	2 ...	2 ...	0 ...	0
CO	— ...	— ...	— ...	— ...	—
N.....	82 ...	81 ...	81 ...	82 ...	80
SO_2.....	— ...	— ...	— ...	— ...	—

The gases (1) containing 5 per cent. oxygen were taken soon after lighting, and the others were collected at intervals of from thirty to forty minutes. The results of No. 4 (three or four hours after lighting) show the stove to be in full working order as regards combustion of fuel and utilisation of air; while the high amount of carbonic acid in No. 5 is probably due to a higher proportion of carbon in the particular parcel of anthracite coal used on that occasion. From the public health point of view, it is essential to observe that when the stove was not thoroughly ignited, but was burning at a low heat, and the experiments demonstrated that the highest ascertained percentage of unutilised oxygen was making its escape, still even at this, the most unfavourable moment, no products of incomplete combustion, such as carbon monoxide, acetylene or opaque smoke, were present. Thus it was shown, visually as well as by analysis, that the whole of the carbon being converted into carbonic acid gas, there was no possibility of its escaping in any other and injurious form.

It is worthy of mention, however, that in one experiment sulphuretted hydrogen and smoke were produced; but, singularly enough, this served as an excellent illustration of the theory held by M. de Clausen that air must not be forced rapidly through the burning coal if perfect combustion is desired. The presence of sulphuretted hydrogen &c. was due to the method by which the gases were collected. A large bottle of water provided with a tap was connected by means of rubber tubing with the flue of the stove. About half-way up the rubber pipe a test tube fitted like a wash bottle was interconnected. On allowing the water to run out of the bottle the gases from the stove were drawn through. After a time the sample tube was disconnected, and placed over mercury. When the water was allowed to flow out of the bottle rapidly smoke was seen to fill the tube, and lead paper showed the presence of sulphuretted hydrogen. M. de Clausen soon suggested the cause of this unfavourable result. In subsequent experiments the gases were drawn over slowly. The entire absence of sulphuretted hydrogen was then manifested. No better evidence can surely be given in favour of the hypothesis that only air in suitable quantity must approach the burning fuel. If the air is too quickly or too abundantly drawn through the fire imperfect products of combustion that are prejudicial to health, like sulphuretted hydrogen, carbon monoxide, and smoke, will be produced. No smoke could be perceived issuing from the chimney during the course of this investigation, and it may be added that the glass wool used in the Orzat apparatus to filter the gases remained perfectly white, even although upwards of 1000 samples of gases had been drawn through it. The sulphur does not, according to our tests, appear in the gases as dioxide (SO_2); but it is probably oxidised completely to sulphuric acid, for in the water used in the Orzat apparatus this acid, in notable quantity, was found. It is well known that the sulphur in coal gas burns completely into sulphuric acid. Our experiments demonstrate further that the stove is competent to deal with all kinds of coal, whether they contain a high or low proportion of sulphur or ash, or differ in physical properties, such as brittleness and hardness. The ashes produced from the burning of the three kinds of coal were perfectly white.

The current views which are very generally held on the subject of the supply of air to fires and furnaces may be opportunely and briefly mentioned here. As a practical rule 12 lb. of air per pound of coal are generally considered to be sufficiently approximate. An additional supply of air is required for dilution, but the smaller the pieces of fuel the less air is needed for this purpose. Insufficient air causes smoke or the production of carbon monoxide according to the nature of the fuel, and too much air represents loss through the excess weight of air raised in temperature.

An eminent authority on this subject argues that if the oxygen of the air is in contact with every particle of fuel during ignition in a furnace it is evident that the desideratum required in combustion would be attained; no escape of combustible gas would then ensue, nor of the carbonaceous particles which give to the gases passing up the chimney the character of smoke, and the greatest possible heat arising from the burning of the substance in air would be developed. Indeed, nothing would be wanting to extract from the fuel the benefit of its total theoretical heating power but such an arrangement of the furnace as would perfectly utilise the heat so produced. "No one, however, who has any experience as to the manner in which the fire is managed in ordinary kinds of furnaces will hesitate to assert that the above conditions are never supplied." And, again, "several modifications of furnaces have been patented of late years for the prevention of smoke, while it is alleged at the same time that the heat of the fire is increased; but it is to be feared that many of these arrangements, while ostensibly obviating one evil, produce others quite as injurious. This arises, for the most

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part, from the injudicious introduction of cold air at a part where the temperature is too low to cause combustion of the inflammable vapours and portions of carbon." On the other hand, the fact that in M. de Clausen's stove perfect combustion is accomplished seems to be established by actual experiment.

The next point of importance to consider is the quantity of heat produced and the extent to which it is utilised or made available for any given purpose. M. de Clausen states that a temperature of 2700° C. may be obtained in this stove, and has been actually shown to exist just in that thin plane of heat where the combustion is most active—that is, where the glowing fuel is in direct contact with the air. Here it may be pointed out that any disturbing influence—like an excess of air, containing as it does a large proportion of inert nitrogen—would tend to lower the temperature. We had no means of ascertaining whether this high temperature was attained or not until it occurred to us that thin platinum wire, which melts at 2600° C., might possibly show it. Accordingly, about a foot of thin wire was pushed up into the stove and left there for a time. The gases in the chimney then showed 18·5 per cent. CO_2 and 81·5 per cent. N. On withdrawing the wire it was found that about three inches from the top end it had been severed by melting. The melted part of the wire no doubt coincided with the thin plane, at which place the most intense heat existed. In ordinary furnaces or fires, supposing that no more air than is absolutely necessary passes through, it will be easily understood that a great amount of heat is rendered useless by the draught in the chimney. But if, as is the general rule, the supply of air is greater than the amount assigned by theory as sufficient, an enormous quantity of heat is lost. The temperature of the exit gases in the flue of M. de Clausen's stove averaged during twelve hours 54° C. At this time the analyses showed the maximum amount of CO_2. The temperature of the room was 20° C.; the loss of heat through the chimney amounted to 34° C. Assuming the stove to be working under the best possible conditions, this means a loss of 1·3 per cent. of the total heat. But even regarding the temperature of the fire to be as low as 1000° C., then the loss by way of the chimney does not exceed 3·4 per cent. Thus at least, and probably more than 97 per cent. of the total quantity of heat, is steadily radiated into the surrounding atmosphere. This extraordinary result depends upon the very remarkable property which the magnesian brick has of absorbing heat. The porous brick appears to act, in fact, as a kind of calorific accumulator, so that when the temperature reaches a certain point radiation proceeds with a beautiful regularity; it acts as would a mass of metal which is kept permanently incandescent by some hidden source of energy.

The magnesian brick stands in a surprising manner the heat of the oxyhydrogen blowpipe, and like the lime cylinder used for the limelight it seems to yield but obstinately to the influence of so high a temperature. It is reasonable to expect that in the highest temperature which is ever attained in the combustion of coal in air this porosity, upon which so much appears to depend, would not be likely to undergo destruction. The inventor states that the part which the porous brick plays in the utilisation of heat and in the perfect combustion of coal resembles that of spongy platinum in bringing together into intimate contact the distillation products of coal with the oxygen of the air.

M. de Clausen maintains that all these principles can be applied to furnaces for factory engines, locomotives, steamships, and even to blast furnaces. How largely factories are responsible for defiling the atmosphere anyone can judge for himself who travels in, for instance, Lancashire; and, to take but one detail, how much more pleasant life in London would become if the underground railway could be run without producing any smoke. In Russia there is a small factory where M. de Clausen's stoves are made. Here a powerful furnace is necessary for the manufacture of the fireclay. Though we have only seen M. de Clausen's system applied to portable domestic stoves, he informs us that in his own factory the principle works well when applied to a large furnace. We know that a kilogramme of coal, if the combustion is complete and it is converted into CO_2, produces heat estimated at 8080 calorics; but if, as is almost invariably the case in ordinary fires and furnaces, the combustion is incomplete and the coal gives off carbon monoxide, then the heat produced is regarded as only 2470 calorics. For a commercial and manufacturing country like England, the immense economy in fuel represented by the difference between the figures 8080 and 2470 is of great importance; while, the absence of carbon monoxide will be of great benefit in the preservation of health. Considering that the maintenance of an equable temperature, both day and night, is essential for the proper treatment of many diseases, this stove may render great service. The poor often cannot afford to keep up a sufficient fire in the sick room; and the rich often fail to maintain a regular temperature because they cannot control the heat given off by an ordinary fire-grate. By using M. de Clausen's stove it would seem that the temperature can be regulated with great precision. With such facts before us we have thought it right to give prominence to this discovery, since from the results of our investigations we consider it is calculated to confer great benefits on the community at large.

THE PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

THE following letter to Members of Convocation on the proposed Reconstitution of the University of London has been forwarded to us for publication:—

The Senate of the University of London, after numerous revisions and variations, has at length produced a scheme for the reconstitution of the University which it has considered sufficiently complete to submit to the governing bodies of University and King's Colleges and the Royal Colleges of Physicians and Surgeons, and to other external institutions.

Before any application is made to the Crown for the grant of a new charter, embodying the proposals contained in the Senate's last scheme, it will be necessary for Convocation to express its approval thereof.

In anticipation of the immediate distribution of the scheme to members of Convocation in accordance with the request by that house to the Senate, we invite your attention to the considerations set forth below. We may state that the full text of the scheme appeared in THE LANCET of Feb. 14th, the *British Medical Journal* of Feb. 21st, and was fully commented upon in *The Times* of Feb. 17th.

1. The scheme in question differs very materially alike from that suggested by the Royal Commission, and from the one to which Convocation gave its sanction in the year 1886.

2. The new Senate is to consist of the unwieldy number of fifty-two Fellows, of whom ten only will be elected by Convocation, thus reducing the representation of Convocation from one in four (as is now the case, and as the Commissioners advised) to less than one in five.

3. Sixteen Members of the Senate will directly represent various collegiate and corporate bodies hitherto not represented on the Senate, and sixteen more will be elected by Metropolitan and Provincial teaching bodies. It is understood that the proportionate representation of University and King's Colleges on the one hand, and of the Provincial Colleges on the other, is regarded as equally unsatisfactory by those bodies.

4. Five separate standing committees of the Senate are provided for—viz., one for the London Colleges in Arts and Science, one for the Provincial Colleges in Arts and Science, one for Arts and Science Examinations of candidates not from constituent colleges, one for medicine, and one for law. These standing committees, although nominally under the control of the Senate, will evidently be influential in effecting such arrangements for examination in the matters with which they are conversant as will open the way for considerable variations in standards of graduation.

5. Convocation has not in this, as it had under former schemes, any share in the selection or revision of constituent colleges; the first list contains schools of very different efficiency, some of which have unsuccessfully claimed admission as constituent colleges in more than one faculty, while others exhibit little justification for admission in any.

6. The representation of Convocation on the Boards of Studies in each faculty is to be two members out of a possible total of twenty-four or more, instead of one-fourth of the combined Boards of Studies (Council of Education), as recommended by its special committee and carried by Convocation.

7. Power is given to the Senate to enter into arrangements with each constituent college in arts and science separately for conducting examinations for the Matriculation and Pass B.A. and B.Sc., by a College professor and a university examiner conjointly, and consequently opportunity is given for as many varieties of standard in such examinations as there shall be constituent colleges.

8. The Pass M.B. Examinations are to be conducted by examiners appointed by the Royal Medical Colleges conjointly with University examiners, under a committee elected in equal numbers by the Colleges and the Standing Medical Committee of the Senate. As this latter cannot fail to consist largely, and must consist in part, of nominees and Fellows of the two Royal Colleges, the University thus practically abandons the control of its Pass M.B. to the corporations, in direct opposition to the recommendation of the Royal Commission.

9. The Preliminary Scientific Examination, which has hitherto offered the most serious check to medical candidates, and the M.D. Examination, which confers the coveted title of "Doctor," are still to be conducted by the University. If they continue as they are, the so-called medical grievance will remain unredressed; there is, however, reason to believe that they will be modified or lowered in standard under pressure from the Corporations until the M.D. Lond. is the equivalent of the M.R.C.S. and L.R.C.P. How powerful such pressure may become is indicated by the enormous departure from the decision of the Royal Commission which the two Colleges have already succeeded in effecting.

10. Hitherto the examinations in all faculties, save the medical, have been equally accessible to, and of the same severity for, private

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and collegiate students. Our examinations have won the confidence of the private student and their public repute on account of their impartial, because impersonal, character. The facilities afforded to collegiate students, under the scheme, cannot fail to place private students at a relative disadvantage.

11. Lastly, the power of conferring honorary degrees, which Convocation has uniformly opposed, is again introduced.

SALE OF PROFESSOR KOCH'S LYMPH.

THE following official rescript appeared in the German Medical Gazette of March 13th, and a translation has been transmitted to us for publication from the Foreign Office.

Professor Dr. Koch has published in the German Medical Gazette of Jan. 15th last a description of the manner in which the lymph, discovered by him for the cure of tuberculosis, is prepared, and according to this description it appears that this remedy comes within the provisions of Section 1 of the Imperial Ordinance of Jan. 27th of last year, and can therefore, with the exception of wholesale trade, only be sold by licensed chemists (apothecaries).

Chemists can at present obtain the lymph, prepared under the personal supervision of the inventor, only through his authorised representative, Dr. Libbertz, 28, Lüneburgerstrasse, Berlin, N.W. It is supplied to them in special bottles of a capacity of 1 or 5 cubic centim. These bottles have glass stoppers covered with bladder and secured by a leaden seal, bearing the letter "L." On one side they bear the name "Tuberculinum Kochii" in white letters on a black ground, on the other side a white label with the signature of Dr. Libbertz, and a note giving the date on which the lymph was prepared. Each bottle is accompanied by a printed paper containing instructions for its use.

With regard to the preservation and sale of the remedy in chemists' shops, the following regulations must be observed:—

1. The "Tuberculinum Kochii" must be kept in the poison cupboard, and in the division reserved for alkaloids.

2. It can only be sold in the original bottles, and only upon the written order of an approved physician, and delivered to such physician himself or to a person authorised by him.

3. A record of the purchase and sale of the remedy must be kept in a special book, in which each bottle must be entered. The contents of the bottle, the date of preparation, of purchase and of sale, the name of the physician to whom it has been sold, or eventually the removal of the unsold bottle from the shop, must all be noted.

4. If a bottle has not been sold within six months of the date of preparation marked upon it, it can no longer be sold or otherwise disposed of, but must be removed from the shop. Such bottles will be exchanged by Dr. Libbertz for others containing freshly prepared lymph free of charge.

5. The price of the "Tuberculinum Kochii" is hereby fixed (exclusive of the cost of packing) at 6 marks for a bottle containing 1 cubic centim., and at 25 marks for one containing 5 cubic centim.

I have the honour to request you to cause the above Regulations to be communicated to the chemists in your district for their guidance, and also to take steps to insure their due observance.

(Signed) Dr. VON GOSSLER.

Berlin, March 1, 1891.

To the Governors of Provinces and the President of Police in Berlin.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5818 births and 4238 deaths were registered during the week ending March 14th. The annual rate of mortality in these towns, which had been 24·1 and 23·7 per 1000 in the preceding two weeks, further declined to 22·1 last week. The rate was 20·7 in London and 23·2 in the twenty-seven provincial towns. During the past ten weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·4 per 1000, and exceeded by 0·3 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 15·7 in Norwich, 17·7 in Derby, 19·2 in Wolverhampton, and 19·3 in Bradford; the highest were 27·6 in Oldham, 28·1 in Manchester, 29·9 in Huddersfield, and 31·1 in Blackburn. The deaths referred to the principal zymotic diseases, which had increased in the preceding five weeks from 332 to 470, declined last week to 413; they included 137 from measles, 136 from whooping-cough, 42 from scarlet fever, 42 from diarrhœa, 32 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. These diseases caused the lowest death-rates in Wolverhampton, Derby, Hull, and Brighton, and the highest rates in Bristol, Halifax, Huddersfield, and Blackburn. The greatest mortality from measles occurred in Leeds, Portsmouth, Bristol, Huddersfield and Blackburn; from scarlet fever in Sunderland, Bolton, and Halifax; and from whooping-cough in Salford, Huddersfield, and Halifax. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 32 deaths from diphtheria included 18 in London, and 2 each in Norwich, Manchester, Salford, and Newcastle-upon-Tyne. No death from small-pox was registered in any of the twenty-eight towns; one small-pox patient was under treatment in the Highgate Small-pox Hospital, and not one in the Metropolitan Asylum Hospitals, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1143, and showed a further decline from recent weekly numbers; the patients admitted during the week were 64, against 80 and 87 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 685 and 677 in the preceding two weeks, further declined last week to 581, but exceeded the corrected average by 58. The causes of 88, or 2·1 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Nottingham, and Birkenhead; the largest proportions of uncertified deaths were recorded in Brighton, Bristol, Huddersfield, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding four weeks from 21·4 to 24·1 per 1000, further rose to 26·2 during the week ending March 14th, and exceeded by 4·1 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 15·4 in Perth and 17·4 in Aberdeen to 31·4 in Glasgow and 47·7 in Paisley. The 684 deaths in these eight towns showed an increase of 56 upon the number in the preceding week, and included 31 which were referred to whooping-cough, 23 to measles, 10 to diarrhœa, 6 to diphtheria, 5 to scarlet fever, 4 to "fever," and not one to small-pox. In all, 79 deaths resulted from these principal zymotic diseases, against 80 and 79 in the preceding two weeks. These 79 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had increased in the preceding three weeks from 13 to 34, were 31 last week, of which 20 occurred in Glasgow, 4 in Edinburgh, and 3 in Dundee. The deaths from measles, which had been 18 and 16 in the previous two weeks, rose again last week to 23, and included 13 in Paisley and 8 in Glasgow. The 6 fatal cases of diphtheria exceeded by 1 the number recorded in the preceding week, and included 4 in Glasgow. The deaths from scarlet fever, which had been 7 and 10 in the previous two weeks, declined to 5 last week, of which 3 occurred in Glasgow. The 4 fatal cases of "fever" showed a further decline from recent weekly numbers, and included 3 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 146 in each of the preceding two weeks, rose last week to 201, and exceeded by 47 the number in the corresponding week of last year. The causes of 72, or more than 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·4 and 28·2 per 1000 in the preceding two weeks, further declined to 28·1 during the week ending March 14th. During the first ten weeks of the current quarter the death-rate in the city averaged 31·1 per 1000, the rate for the same period being 23·3 in London and 21·1 in Edinburgh. The 190 deaths in Dublin were within one of the number in the preceding week, and included 4 which resulted from "fever," 3 from whooping-cough, 1 from diphtheria, and not one either from small-pox, measles, scarlet fever, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 9 and 4 in the preceding two weeks, rose again last week to 8; they were equal to an annual rate of 1·2 per 1000, the rate from the same diseases being 1·6 in London and 1·7 in Edinburgh. The deaths referred to "fever," which had been 3 and 0 in the previous two weeks, were 4 last week. The 3 fatal cases of whooping-cough exceeded the number recorded in any week since January last. The 190 deaths in Dublin last week included 30 of infants under one year of age and 56 of persons aged upwards of sixty years; the deaths of infants showed a further decline from recent weekly numbers, while those of elderly persons showed an increase. Four inquest cases and 2 deaths from

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violence were registered; and 53, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major (ranking as Lieutenant-Colonel) Thos. O'Farrell, M.D., to be Brigade Surgeon, vice J. Wilson, M.B., F.F.P.S. Glasgow, retired (dated Feb. 14th, 1891); Surgeon John Lees Hall is placed on temporary half pay on account of ill-health (dated March 3rd, 1891).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Walter Duret Aubin, M.B., 1st or West Regiment Royal Jersey Militia, to be Surgeon-Major, ranking as Major (dated March 18th, 1891); Acting Surgeon Thos. Lyndon, M.D., 4th Volunteer Battalion, the Queen's (Royal West Surrey Regiment), to be Surgeon, ranking as Captain (dated March 18th, 1891).

BOMBAY MEDICAL ESTABLISHMENT.—The Queen has approved of the retirement from the Service of the undermentioned Officers: Surgeon-Major Bernard Callan Keelan (dated March 15th, 1891), and Surgeon-Major Septimus Jesse Goldsmith (dated March 4th, 1891).

NAVAL MEDICAL SERVICE.—Staff Surgeon James Long Sweetnam, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Feb. 27th, 1891).

VOLUNTEER CORPS.—*Rifle:* 2nd Volunteer Battalion, the Suffolk Regiment: The undermentioned Acting Surgeons resign their appointments:—H. P. Leech and A. W. Aldrich (both dated March 14th, 1891).—5th Volunteer Battalion, the Cheshire Regiment: Surgeon P. M. Davidson is granted the rank of Surgeon-Major, ranking as Major (dated March 14th, 1891).—1st (Inverness-shire Highland) Volunteer Battalion, the Queen's Own Cameron Highlanders: John Dewar, M.B., to be Acting Surgeon (dated March 14th, 1891).

Correspondence.

"Audi alteram partem."

TRICHLORACETIC ACID AS A TEST FOR ALBUMEN IN THE URINE.

To the Editors of THE LANCET.

SIRS,—The practical value of trichloracetic acid as a test for albumen in the urine is so great that any sources of error in its employment should be carefully noted. In a letter from Dr. C. F. Heywood of New York, which appears in the February number of *Merck's Bulletin*, the writer, after speaking in very laudatory terms of the value of the test, says: "I have yet to find that it declares any *other elements* of suspected urine than albumen," and he recommends that a saturated solution should be carried about in the pocket. I have long been employing this test, both in private and in insurance examinations, and can speak very highly of its results. I have been in the habit of comparing its reactions with those given by nitric acid and picric acid, and while I have never found it fail to react in specimens in which albumen has been discovered by other tests, it has given a line of opacity in numerous samples which have been unaffected by nitric acid or picric acid. In some of these the trichloracetic acid appeared to be a more delicate test, since in cases with a history of an acute attack of nephritis the urine has often given a line of opacity after it might have been declared free from albumen when the customary tests were employed. On the other hand, the need of the warning originally given by Boymond (*Repert. de Pharm.*) has been very strongly impressed upon me by several cases—viz., that when the urine is rich in urates the reaction may appear without any albumen being present, and this possible source of error can only be avoided by free dilution of the urine before making the test.

With regard to the desirability of carrying this reagent in the pocket the effects of a crystal on a piece of blue paper or on the blade of a knife have been sufficient to deter me from making the experiment. Although trichloracetic acid may be used either in a solid or liquid form, it gives the most striking results when a good-sized crystal is dropped into the test tube containing the urine. The crystal speedily liquefies, and, if albumen is present, produces a zone of turbidity in the urine just above it, otherwise a sharply defined line marks the junction of the white acid with the yellow urine. The zone of turbidity appears immediately when due to albumen, but when due to urates it forms more slowly, and is not so wide.

I am, Sirs, yours truly,

NESTOR TIRARD, M.D. Lond., F.R.C.P.,
Senior Assist. Physician, King's Coll. Hosp.

Weymouth-street, W., March 17th, 1891.

RECONSTITUTION OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—It is very important that the latest revised scheme of the Senate in reference to the reconstitution of the University of London should be well considered in all its bearings, and not only in those connected with the Faculty of Medicine, especially as many of the medical graduates possess degrees other than those of medicine. For this purpose I beg to offer these few remarks in supplement to those furnished lately by Dr. Collins. By the present scheme, which will be presented to Convocation for acceptance, there will be at least three different standards of arts and science degrees according to the "arrangements" made with the various colleges in London and the provinces; and in accordance with the powers reserved by the Senate, these schemes for these degrees may be, if required, multiplied to any extent to meet the demands of the colleges individually. If such be the case, how can we hope for any uniformity of standard, the syllabus of each college or of each combination of colleges necessarily varying and being of unequal value? Let such arrangements be carried out as desired by the London and provincial colleges, and the University also carry on as of old its own examinations in Arts and Science on its present lines, in all common reason the question may be asked, Of what value can such varying degrees be deemed, or how can they be designated for the comprehension of the world at large, and what probability will there be of their ever remaining at any proposed standard? Since such multifarious degrees cannot be accepted as equivalent to each other, some fanciful distinction must be made, and, taking the University examination, as *the degree par excellence*, we can suppose that some fractional designation must be devised, such as $\frac{\text{B.A.}}{\text{(King's)}}$, or B.A., with some London or provincial College as the denominator, before the public can value their relative merits. The same observations equally apply to the Matriculation and that for the Preliminary Scientific Examinations. Hence it behoves Convocation to realise the probable future of the University which submits to such arrangements as ultimately must destroy itself as a degree-giving centre. With respect to the medical aspect of the scheme, the Senate has gone further out of its way than in the matters of Arts and Science, and actually proposes to give to the two Royal Colleges great, if not absolute, control over the M.B. Examination. This seems inconsistent on the part of the Senate which now seeks to form a Teaching University, for neither of these two Colleges has any pretensions whatever to being considered as teaching bodies except so far as their few endowments for special lectures can be considered as partaking of a teaching quality. To these bodies it really will delegate its powers, subject to "arrangements" which, knowing the desire of those two Colleges, must ultimately by pressure of time and influence not only entirely control the Pass M.B., but will considerably modify the Honours Examination for the same degree, and in the end absorb the M.D. degree also. Indeed, it is reported that the teachers at one of the proposed Constituent Colleges in Medicine have already expressed a demand for such privileges. Another point in connexion with these degrees is the price at which they are to be obtained. As matters are, it is impossible to believe that they will be granted for the moderate fees which the University now receives. Any one knowing the fees exacted for passing the Conjoint Examination will readily doubt if the present scale will be adopted, especially if they are to be shared between the corporations and the University. These doubts are equally

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applicable to the Arts and Science side of the question at issue.

The function of a University is to grant degrees distinct from any qualification given by colleges, and to relegate that power under any circumstances to teaching and non-teaching colleges is an innovation in the cause of education which cannot in the future bear good fruit to the University which so deserts the reason for its existence, and so annihilates itself. Such a course will be detrimental to the cause of that higher education which the University of London first established, and will finally, under the pressure of competing colleges, encourage a depreciation of the value of our degrees, which, though not backed as in the older Universities by the social standing of residence, have their mark in the world at large and command respect as an evidence of that higher education, which, under threatened arrangements (a most elastic word), will bid fair to be a phantom in the future history of our University.

I am, Sirs, yours faithfully,

Junior Athenæum Club, March 18th, 1891. M. BAINES, M.D.

THE TREATMENT OF CHRONIC INFLAMMATION OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—Let me say that your leading article of this date will be the initiation of a calmer form of discussion of this question, and of a happier time for those like myself who have held to their opinions on this question through much misrepresentation and no little persecution.

I trust my friend Dr. Herman will forgive me saying that his letter is logically a *petitio principii*. "By inflammation of the uterine appendages I mean what I think most medical men understand by it" is no answer to my suggestion that the two schools of thought on this subject cannot by any possibility be speaking of the same thing. He quotes my own description of the diseases I have diagnosed and verified by production of the specimens, and then says that the great majority of them, if sufficient time and rest be given, end in diminution in size, or even practical disappearance of the lumps and cessation of symptoms. But this is precisely the opposite of my experience, and the literature of the subject abounds with cases which I have published in detail where the "time and rest," together with other appropriate treatment, has been given at the hands of competent practitioners, and no such happy ending has been arrived at. Dr. Herman does not doubt that there are some cases which can only be cured by operation—an admission I am glad to get from such an authority,—but there remains the very grave question as to which teaching is the correct one, that the majority of the cases get well without surgical treatment, or that very few get well without it.

I must urge on Dr. Herman that this comes now to be the pressing question for settlement, alike for the practice of medicine, the interest of the patients, and the credit of all classes of practitioners. My constant experience is that it is in the delayed cases that the danger and the discredit alike lie. Dr. Herman may say that as an operating surgeon my interests lie in operations. But to this I may just as well answer that to the non-operating (or rarely operating) physician undue delays have equally strong, perhaps even stronger, inducements. It must be clear, therefore, to every judicial mind that it is to the interests of all concerned that the question should be settled by logical research, and that the question should not be begged. The first step towards settlement, therefore, is to decide this question—Are Dr. Herman and I, as representatives of the different schools, really speaking of the same pathological conditions? I do not for a moment believe that we are. Why should not, therefore, Dr. Herman accept my challenge proposal? I am quite prepared to take on myself the bulk of the trouble, for there are very few weeks in which I do not spend a day in London, and the tax of passing an hour occasionally at the London Hospital would be, I am sure, amply repaid by the results of the experiment. Either Dr. Herman must accept this challenge or he must desist in future from stating that the "great majority" of these cases get well, seeing that, in his own words, "it is impossible, from the nature of the case, for one who thinks that a disease has been present and ended in recovery, to bring evidence of the fact convincing to the incredulous." If he accepts neither of these alternatives, he must not be surprised if we continue to express our incredulity forcibly.—I am, Sirs, yours faithfully,

LAWSON TAIT.

ON THE EFFECT OF THE DIVISION OF CERTAIN CONSTITUENTS OF THE SPERMATIC CORD IN THE RADICAL CURE OF VARICOCELE.

To the Editors of THE LANCET.

SIRS,—I have read Mr. Bennett's paper on the above subject in the issue of THE LANCET for March 7th with considerable interest, and can fully bear out what he states with regard to the effect on the testicle of the division of the spermatic artery and veins. In 1886 I published a series of ten cases of varicocele treated by excision,[1] the operation differing very slightly from that recommended by Mr. Bennett in his paper published in THE LANCET of Feb. 9th, 1889. I have had the opportunity of seeing many of these cases since, and find that there has been absolutely no atrophic change or other apparent alteration in the testicle, and yet in all of them not only was the bundle of veins but a portion of the spermatic artery removed, for it is quite easy, as Mr. Bennett says, to see the open mouth of the artery in the mass of tissue removed, leaving no doubt about its division. In all my cases an aseptic course was pursued, and in none was there any trouble from orchitis.

With regard to the third conclusion on the division of the vas deferens I have had no experience, but it is very interesting to know that the division of the duct should also not be followed by atrophy of the organ.

I am, Sirs, yours faithfully,

Leeds, March 12th, 1891. A. W. MAYO ROBSON.

To the Editors of THE LANCET.

SIRS,—After reading in THE LANCET of March 7th Mr. William Bennett's remarks upon his treatment of varicocele, I think it well to draw attention to the tenth volume of the Medical Society's Proceedings (1886), in which the operation I then advised for the radical cure of varicocele will be found with the discussion which took place upon it. Mr. Bennett will there see the remarks of Mr. Hutchinson, jun., upon the course of the spermatic artery as deduced from thirty dissections; and he will notice my remarks upon a method of operating which does not subject the spermatic artery or other important structures of the cord to the risk of being injured or included in the ligature. Since making this communication to the Medical Society in 1886 I have simplified the operation slightly, by making the incision over the external abdominal ring only, and not extending it into the scrotal tissues at all, as I found that it was quite easy to pull up the veins into this limited opening and ligature them; and in this situation there is no liability to injure the vas deferens, so I have discontinued the use of the pins I then recommended. But I attach the same importance to that point in which I advocated the clearing and ligaturing the veins first at the external abdominal ring, where it is easily done; and, having cut them through, to pick up the distal ends of the veins, and lifting them up to strip off the surrounding tissues of the cord as low as the upper part of the testicle; then apply the lower ligature, cut the veins through again, and allow the testicle, which has been drawn up to the wound, to slip back into the scrotum. In this way I have operated upon a large number of cases, in a few instances removing the veins of both sides at the same operation, and often doing the operation in association with the radical cure of hernia, and I have had unvarying success both as regards the rapidity of healing of the wound, the cure of the affection, and the satisfactory condition of the testicle. Several cases have been afterwards admitted into the services.

I have not found the testicle diminish in size in any case, but, on the contrary, it usually increases. In some cases I have observed that there is a tendency for the tunica vaginalis to become slightly distended with fluid when the

[1] Brit. Med. Jour., Feb. 27th, 1886.

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patient first begins to walk about, but this condition disappears during the night when the patient is lying down.

I am, Sirs, yours truly,

A. BOYCE BARROW,
Senior Surgeon, Royal Free Hospital, Assistant Surgeon, King's College Hospital.

Welbeck-street, W., March 18th, 1891.

THE NATURE OF ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—With reference to the recent discussion on angina pectoris and the interesting leading article in the last number of THE LANCET (March 14th) may I suggest that sufficient stress is not laid on the statement that during an attack of angina the pulse *may* be unaltered in character? This statement seems to be definitively accepted, and I need only mention as guarantors thereof the names of Walshe, Balfour, Broadbent, and Gairdner. But if we accept this statement, how can we escape the conclusion that angina pectoris *may* be independent of heart failure? If the heart's action is embarrassed, if there is lack of ventricular power or excess of peripheral resistance, or, in fact, *mechanical* failure of any kind, and however brought about, how can the pulse remain unaffected? The pulse gauges the efficiency of the heart better than any thoracic examination, and if the pulse do not fail the heart does not fail. I cannot hope to add to the cogency of Professor Grainger Stewart's words in the recent discussion, for so long as the above statement remains undisputed they possess the cogency of logical necessity.

I am, Sirs, yours faithfully,

Welbeck-st., March 17th, 1891. HARRINGTON SAINSBURY.

FACTORY SURGEONS.

To the Editors of THE LANCET.

SIRS,—There are many factory surgeons who have given up a portion of their practice in order to perform a public duty, and these Mr. Matthews would cast adrift although there was nothing in the appointment that their services would be dispensed with in a summary manner without compensation. Health officers who have given up their practices and taken up public health appointments are liable to the same treatment, but still they are only appointed for a period. They are as sure of a permanency as we were, but their life is as uncertain, and may be cast off as "unnecessary and costly," quite as untrue as in our case, who have rejected scores of boys and young people on account of age and incapacity. The Government has been asked to release "Barabbas" to the mob, and they in their turn must release him or fear themselves that they will be dismissed as "unnecessary and costly." When zymotic diseases decrease, will the Government discharge medical officers of health and public vaccinators as "unnecessary and costly," and call in the services of a private practitioner, or keep them to preserve the present condition? Cheap labour can always be obtained from crippled and scrofulous children, and would be plentifully supplied by drunken parents, and they could work for months together without fear of an inspector's arrival, for at the present time the demand on his time is far greater than the supply. Instead of dismissing men who have done good service and are willing to be more useful, they should be made answerable for all sanitary work in factories and should pay periodical visits to see that the health of the employed is in no way damaged by their occupation. The factory surgeons are considered to be "unnecessary and costly" in the eyes of Mr. Matthews; would he explain that costliness? Does it consist in receiving six warm coppers fished up out of the trousers pocket of a factory lad, or the payment of a fee of 4*s.* for a two-mile journey and report on an accident and seeing that machinery is properly guarded. This is the only fee which comes out of the Treasury. Costly indeed as regards leather—but these small fees are acceptable to men who have relied on them for years, and framed their practice in order to do their public duty to unprotected children. Far better to attend to the health of the rising generation than to spend money on books for them when their weakly frames are too attenuated to study in reading-rooms. The matter should be plainly put before the public, and let them have a voice in it.

I am, Sirs, your obedient servant,

March 13th, 1891. UBIQUE.

RESPONSIBILITY IN ANÆSTHETISING.

To the Editors of THE LANCET.

SIRS,—I have read your remarks on the above subject and the moral you draw—"Let no one undertake the responsibility of giving chloroform unless in the presence of another medical man"—with much interest, and I wonder what advice you will give to the many isolated medical men in the country districts of this colony, who are often compelled to undertake the double rôle of anæsthetist and operators. Like many of our profession at the Cape, I am living about fifty miles distant from any other medical man, and many of my patients cannot afford the fee charged by a second doctor, who must travel most of the way in a Cape cart; hence I am obliged in nine out of ten cases to give chloroform and operate alone. During eight years I have performed nearly one hundred and forty operations necessitating chloroform, and, although alone, have not had one fatal case, and only once alarming symptoms, amongst patients whose ages have varied from a few months to seventy-two years. The mortality from anæsthetics during operations is, as far as I can learn, in this colony extremely low, due, no doubt, in a large measure to great care in administration, and also to our glorious climate. Sole responsibility in operative practice carries with it increased anxiety for the doctor, and who of us does not feel it?

I am, Sirs, yours faithfully,

J. HERBERT MEARNS, M.D.

Prince Albert, Cape of Good Hope, Feb. 23rd, 1891.

THE PHONOGRAPH IN MEDICINE.

To the Editors of THE LANCET.

SIRS,—In your annotation on this subject in your last issue you express a hope that the phonograph will prove of use in medicine. I agree with you it will be useful in recording defects of speech; but it may save the time of some of your readers to know that at present it is useless for recording cardiac or pulmonary sounds, for if the vibrating membrane (usually glass) is sufficiently delicate to take up these sounds, it also records all faint extraneous sounds, such, for example, as those very slight ones produced by the machine; hence all that the phonogram emits is a confused noise, in which the cardiac or pulmonary sounds are quite indistinguishable.

I am, Sirs, yours faithfully,

Harley-street, March 14th, 1891. W. HALE WHITE.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE annual meeting of the governors of this hospital was held on the 18th inst., under the presidency of the Hon. A. C. G. Calthorpe. The report noted that there was a decrease in the cost of maintenance from £2 17*s.* 6*d.* in the previous year to £2 10*s.* 6*d.* in the year just ended; the other details also were satisfactory. With regard to the subscription list for the new hospital, it was stated that over £84,000 was the present amount. As affecting the professional staff, two important alterations in the laws were made at this meeting—viz, that no medical officer should retain office after he is sixty-five years of age, and that no surgical officer should retain office after he is sixty years of age. The next alteration was that these officers should be appointed in the first instance for fifteen years, and that a general meeting should have the opportunity of further appointing them for a period not exceeding ten years, subject to reference to a subcommittee. It is believed that these amended laws will have a good effect in the interests of the hospital and of the profession.

The Women's Hospital.

The annual meeting of this hospital was held on the 18th inst. The Mayor, Alderman Clayton, presided. The report stated that there had been a decrease in the out-patient numbers of 192, and in the in-patient department a decrease of 57. The total number of patients treated during the year was 15,067. The balance-sheet showed that the total expenditure for the year was £1869 6*s.* 5*d.*, which was £14 9*s.* 2*d.* in excess of the income. It was resolved to pull

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down a present ward and build a new one in its place at an expense of £1500.

Queen's and Mason Colleges.

The proposed scheme to transfer the medical department of Queen's to Mason College is progressing satisfactorily. The outcome of the meeting held on the 19th inst. will have a material influence in settling the matter if the sanction of the Court of Chancery can be obtained. The Government grant now obtained by Mason College is £1400, and this would be much increased by the amalgamation. The Mason College funds would be considerably augmented for teaching purposes, and a substantial benefit accrue to the medical school.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes: Trials for Murder.

A PORTER named Penfold, aged thirty-one, was tried before Mr. Justice Day on the 13th inst. for what was locally termed "The Murder in a Cab." The deceased was a young woman of the unfortunate class, and both she and the prisoner had been drinking heavily for some days before December 17th last, the date of the fatal event. The two were seen to enter a cab, and when it stopped at the desired destination the prisoner informed the cabman that he had stabbed the girl because she asked him to do it. The prisoner made no attempt to escape, and was at once taken into custody. The deceased was taken to the Royal Infirmary, and attended to by the house surgeon, but she died in twenty minutes after her arrival there. On post-mortem examination six punctured wounds on the left side of the chest were found. One penetrated the heart and another went through the heart to the liver. The absence of any motive suggested a doubt as to the prisoner's sanity, and evidence was given that his mother and other members of the family suffered from nervous diseases. But there was no evidence to show that the prisoner was insane when he committed the act, that he was insane now, or that he ever had been so, and the jury, without leaving the box, returned a verdict of "Guilty."—On the same day a married woman aged twenty-nine was indicted for the wilful murder of her infant child. On being called upon to plead she burst into a hysterical fit of crying. It was proved by the evidence of Dr. Joseph Wiglesworth, medical superintendent of Rainhill County Asylum, and of Mr. George Beamish, medical officer of Her Majesty's Prison, Walton, that she was suffering from melancholia and delusion. She was therefore acquitted, and ordered to be detained during Her Majesty's pleasure. She cut the child's throat, and then gave herself up to the police.—A third trial for murder took place on the 16th inst. The crime having been committed on board the British ship *Buckingham* while she was on the high seas on Oct. 11th last, the prisoner being the cook of the vessel, a Hindoo named Jassiwarra, and the deceased, Peter Lyall, the captain. Though contrary to his nationality, the prisoner appears to have volunteered to act as cook; he latterly took a dislike to the work, and neglected his duty. This led to words from the captain, who, according to the prisoner's statement, struck him twice, but this was not seen by any of the crew. The captain was found dead soon afterwards, with two wounds, one over the right eye and another over the left temple. A knife was found, on which Dr. Barron observed blood; he was of opinion that the wounds were the cause of death. The prisoner was seen to be sharpening the knife previously to committing the murder, and he had also been heard to threaten the captain if the latter struck him. He was found guilty, with a strong recommendation to mercy on the grounds of the provocation he had received.

Liverpool, March 17th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The late Weather in the North.

IT is computed that 300,000 tons of snow fell in the city of Newcastle on the night of March 7th and the morning of the 8th. This is exclusive of parks, cemeteries, and large open spaces. Nearly one-third of this fell on streets, and, together with the snow falling from and cast from the roofs of houses, will give a total quantity of at least 120,000 tons to be dealt with. Much of this had to be twice removed—first, to the sides of the streets, and, secondly, carted away—so that it may be estimated that altogether 200,000 tons have been dealt with, the Corporation employing for the purpose 700 men.

White-lead Poisoning in Newcastle.

Another of those poisoning cases so common in Newcastle among female workers in white-lead factories occurred last week. It was shown that the girl, aged eighteen, had been in good health when she went to the factory nine months ago, but since then she had suffered from pains in the head and stomach and vomiting of green matter. At last she was brought home in a convulsive attack, from which she never rallied. The jury found that the deceased died from the effects of lead poisoning. These verdicts are returned with sad regularity, but it is really strange that this work is allowed to go on.

Conversazione in Newcastle.

One of the most successful gatherings of the season was held last Friday, in the museum of the Natural History Society, under the auspices of the associated artistic, literary, and scientific clubs and societies of the city. The proceedings were opened by the mayor, and there was a very large audience. Microscopical research was well represented, and the company ranged freely through the corridors and galleries of the very fine building, viewing such objects as Bewick's original drawings, Hancock's drawings and Collection of British Birds, and the Athey Collection of Fossil Fish, &c.

Cumberland.

A motion of some consequence to the general practitioner, unless he prefers to submit to a process of extinction without demur, was carried in the Carlisle School Board last week. It is to the effect that the certificates of health required by pupil teachers and monitors be given by the medical officer of health. It was in vain that a member (Canon Waterton) showed and argued that the family medical man, who was likely to have a far more competent knowledge of the constitution &c. of the candidate, should be paid by the Board, and employed to certify; and he moved an amendment, which was lost, to that effect. There has been an outbreak of scarlet fever at Isel, in the Cockermouth Union, and the medical officer has obtained authority to close the school at once.

Phthisis in High Altitudes in England.

The medical officer of health for Alston, noted as the highest market town in England, reports a death-rate of 13·9 per 1000 for the past year on the current census, but he believes that the new census will show a decrease in the population, which would of course show a corresponding increase in the death-rate. Influenza had caused two deaths, and he believes it had sown the seeds of consumption in many cases. The medical officer for Nenthead, in the same district, says that phthisis was far more prevalent than might have been expected, considering the high situation and the pure rarefied air. Something of this he also believed was due to consanguineous marriages. I may remark in reference to this that the large number of patients (comparatively for a sparsely populated district like that of Alston) presenting themselves at the institutions of Newcastle with defects and diseases of sight and hearing has often been noted.

Newcastle-upon-Tyne, March 18th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Physicians, Edinburgh.

IN terms of the bequest made to this College by the late Dr. John Parkin, a Fellow of the College, a prize is offered for the best essay on the "Curative Effects of Carbonic Acid Gas or other forms of Carbon in Cholera, the different forms of Fever, and other Diseases." The prize is £100, and is open to competitors of all nations. Essays must be received by the secretary not later than Dec. 31st, 1892.

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Edinburgh Maternity Hospital.

The annual meeting of this hospital was held at the end of last week, Professor Grainger Stewart presiding. In the report it was stated that 293 patients had been treated, as compared with 266 in the previous year; and the out-door patients numbered respectively 661 and 707. Three of the patients died, but these suffered from a complication of troubles when admitted. Forty-eight nurses passed through the hospital curriculum. The financial position showed a balance to the credit of the institution.

Odonto-Chirurgical Society.

At the annual meeting of this Society, held last week, after the business report was submitted, Dr. Clouston read a paper on the Hard Palate in its relation to Brain Development, in which he went over ground dealt with in the Morison lectures. His reason for the communication was to stimulate investigation and collect additional facts.

Medical Appointments.

The directors of the Sick Children's Hospital have appointed Mr. R. D. Rudolf, M.B., C.M., and Mr. Henry Greville Huie, M.B., C.M., to be resident physicians in the hospital for six months from May 1st. Dr. Alexander Black has been appointed a surgeon to the Ear and Throat Dispensary, in place of Dr. Maxwell Ross, who has been appointed medical officer of health for the county of Dumfries.

Close of the Winter Session.

The winter session of the medical classes in the University, and the School of Medicine, Edinburgh, terminates on Friday. The first professional examinations begin next week, and the second professional the week after.

Health of Edinburgh.

The mortality last week was 114, and the death rate 22 per 1000. Diseases of the chest caused 50 deaths, and zymotic diseases 8, of which 4 were from whooping-cough. The intimations for the week were typhoid fever, 16; diphtheria, 3; scarlatina, 22; and measles, 53.

The Victoria Dispensary for Consumption.

A meeting in connexion with this institution was held on Monday. Professor Grainger Stewart, in speaking about the work done by the dispensary, said with regard to the future treatment of disease in Edinburgh it would be necessary to double the size of the Royal Infirmary and build a new wing to the Maternity. He said it was deplorable that their young students should have to pay £5000 a year to the infirmary and get nothing like what they ought to get in the way of clinical experience in return. In addition he moved that every effort be made to extend the usefulness of the Victoria Dispensary and to provide hospital accommodation, where suitable cases recommended from the dispensary might be treated in-doors. A committee was appointed to carry out the objects of the resolution.

March 17th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Stewart Institution for Imbecile Children.

THIS institution, the only one of the kind in this country, has accommodation for eighty beds—a very small number when contrasted with the fact that the last census showed that there were between 7000 and 8000 imbecile children in Ireland. The accommodation being inadequate for the applications for admittance, the committee have determined to enlarge the present building. Dr. Kidd, who has taken a very active part in the institution since its formation, recently pointed out that the outlook for support is encouraging, and subscriptions have not fallen off. There is a sum of about £3000 available for the required purpose.

Dublin Sanitary Association.

The committee in their annual report regret that the Act for the Notification of Infectious Diseases has been adopted in only one out of seven townships adjoining Dublin. The Act has been made operative by almost every sanitary authority in England, and ought to be adopted by all Irish authorities; for if outbreaks of infectious disease are to be successfully coped with, provisions such as those contained in the Act must be complied with universally. The Infectious Disease (Prevention) Act was passed last year, but is an Act which requires adoption by the local authority in order to make it operative in any particular district, and as a result of this, it has not been adopted by any authority in Ireland. As is well known, the sanitary arrangements of a large number of houses in the city and suburbs are still in an unsatisfactory state, and the unenviable notoriety which Dublin has acquired on account of its high death-rate will not disappear until the defective system of drainage which so largely exists is rectified. Mr. Pim, the President, in an excellent address, in which he referred to the sanitary work accomplished in Dublin of late years, alluded, among other topics, to the condition of the tenement houses, which he regarded as one of the greatest sources of the high death-rate. The Corporation have erected blocks of buildings for workpeople, but so foul was the Augean stable which had to be cleansed, so enormous is the mass which still remains to be moved, that all that has been done seems as yet but a drop in the bucket. Yet it has already appreciably affected the general death-rate, and as the working classes are better housed and more attention is paid to domestic drainage year by year, the good results must sooner or later appear in the improvement, gradual though it may be, of the health of the citizens of Dublin.

Memorial Tablet to George Tate, M.D., Surgeon A.M.D.

A tablet in memory of the late Surgeon Tate has recently been placed in Downpatrick Church. The deceased, when only twenty-six years of age, died at Kasauli, India, in July, 1889, and the tablet has been erected by his brother officers who mourn his untimely death.

At a meeting of the Macroom (co. Cork) Dispensary Committee last week, Mr. O'Donoghue was elected medical officer in the room of Mr. White, resigned.

A fancy ball in aid of the Dublin Orthopædic Hospital will be held on April 8th.

Dublin, March 17th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

French Pharmacy and its Future.

MOST of your readers are doubtless aware that as there are in France two grades of medical practitioners—viz., doctors of medicine and *officiers de santé*—so there exist two orders of chemists, *pharmaciens de première* and *pharmaciens de seconde classe*. A movement has been initiated of late years tending towards the suppression of the inferior grade in both branches of the healing art. A Bill regulating the practice of pharmacy, and drawn up by the ex-Minister, M. Lockroy, has been reported on by a parliamentary committee, which approves of the reforms indicated above, and in addition pronounces against the plan of allowing hospital and infirmary dispensers to deposit at dispensaries and relieving offices medicaments specially prepared by them for distribution to the sick poor by persons designated by the said dispensers. The conclusions of the committee have been adversely criticised by the Comité Consultatif d'Hygiène Publique, who allege as reasons for the rejection of these two provisions the fact that the second grade pharmacists constitute two-thirds of the 7100 chemists who ply their calling in France, and, further, that one-fourth of the cantons have no resident chemist at all. The Comité d'Hygiène recommend the abolition of the trade of herbalist on the ground of that hybrid relic of a darker epoch being *de trop*, and also because of the considerable amount of illegal advice given at these botanic depôts. While on the subject of pharmacy I may mention that the *Progrès Médical* has for some years advocated the taking up of this branch of industry by women. I myself have often speculated on the reasons which induce women, who so loudly complain of the limited scope allowed them in the choice of a career, to prefer the more anxious and arduous, if more dignified, functions of a medical practitioner to the obviously more appropriate calling of a chemist. At the dispensing counter the special genius of women for detail and delicate manipulation would find a fitting field

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without exercising an undue strain on their physical powers, and undermining their health by the anxieties inseparable from the carrying on of a medical practice. The true reason is, probably, that the one calling ranks as a trade, while the other—the favoured one—is a profession. In France there are a few *pharmaciennes*, the best known of them being officially attached to the *lycée* of Toulouse. Should the second-grade chemist, whose existence is menaced by legislation, be allowed to survive, the examination tests required of him should not prove too heavy a tax on the intelligence of the average educated Frenchwoman.

A Novel Mode of contracting Syphilis.

At the last meeting of the Société de Dermatologie et de Syphiligraphie, M. Feulard reported the case of a man who, having been treated at St. Louis Hospital for post-scabious eczema, principally of the arms, sought readmission for syphilitic roseola. Researches made as to the seat of inoculation of the virus revealed an enlargement of the epitrochlear gland, and hard chancres of the posterior surface of the right forearm, of the elbow of the same side, and of the left elbow, the genital organs being free from all sores. It was remarked that the chancres corresponded with the points which would touch a table when the arms being folded, it served as a *point d'appui* for those members. It is consequently surmised that the raw eczematous surfaces on the backs of the arms became inoculated by contact with an infected table in the ward. M. Besnier remarked that instances of the contraction of syphilis in the wards of a hospital were extremely rare, it being probable that the activity of the virus deposited on instruments, furniture, &c., is only of limited duration. The only exception is the frequent transmission of the disease by means of the Eustachian catheter. M. Lailler cited a case where syphilitic infection occurred at a hospital through a vaginal cannula in indiscriminate use for all the patients. M. Verchère had noted a similar case.

Salol as an Antiseptic in Cancer of the Uterus.

Of the symptoms characterising cancer of the uterus in its later stages, more especially when it is complicated by a vesico-vaginal fistula, none is more trying to the poor sufferer than the repulsive odour proceeding from the diseased surface. The palliative means in ordinary use, such as injections of carbolic lotion, sublimate and iodised solutions, vaginal suppositories of iodoform, &c., are only partially successful in mitigating the fetor which renders the last days of the patient a veritable martyrdom to herself and to her *entourage*. In salol administered internally in daily doses of from two to four grammes (increased if need be to six or eight grammes, and continued uninterruptedly for a long time) Dr. Marty of Toulouse claims to have discovered a sovereign remedy for this state of things, provided there be a communication between the vagina and the bladder. The urine, flowing constantly over the diseased tissues and impregnated with the products of the decomposition of the salol—viz., a phenylsulphate and salicylic acid—keeps the parts sweet, and its action adds greatly to the comfort of the patient.

Le Médecin Militaire Malgré Lui.

An incident reported in the *Temps* of the 9th inst. has excited some expostulatory comments in several medical organs. I refer to the refusal of the Minister of War to accept the resignation of his commission by an army surgeon. M. de Freycinet bases his action in this matter on the discretionary powers vested in him by the law of 1834. Referred to the judgment of the Council of State, the controversy has been decided in favour of the Minister of War. It is certainly difficult to discover wherein the unlucky *médecin aide-major* erred in expecting his application to be acceded to, seeing that a provision of a decree promulgated on the 15th of June, 1880, renders obligatory the reimbursement of sums expended by the State for the education and maintenance of those officers who quit voluntarily the Army Medical Service before the expiration of their term of engagement (ten years). This condition the officer in question was, it appears, quite willing to fulfil. The *Bulletin Médical* states that the reason for Ministerial refusal is not far to seek. Government dreads the possibility of resignations becoming contagious in the *corps de santé militaire*.

Paris, March 17th

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Medical Education in the United States.

THE annual report of the Illinois State Board of Health contains the elaborate report of its secretary, Dr. John H. Rauch, on medical education, medical colleges, and the regulation of the practice of medicine in the United States and Canada. The present report is far more complete than any of its predecessors. It is, in fact, an exhaustive review and exhibit of all of the medical teaching and licensing bodies in this country. As this is the tenth annual report it affords a favourable opportunity of showing the progress of medical education during this period. In 1882 there were 135 medical colleges, and in 1891 148. The number of colleges requiring certain educational qualifications for matriculation in 1882 was 45; in 1886, 114; in 1889, 117; in 1890, 124; in 1891, 129. In 1882 the number of colleges that required attendance on three or more courses of lectures before graduation was 22; in 1886, 41; in 1889, 47; in 1890, 64; in 1891, 85. Of the 148 colleges, all have chairs of hygiene but 14. The duration of lecture terms has increased from an average of 23·5 weeks in 1882–83 to 26·3 weeks in 1890–91. The number of colleges having terms of six months or more is now 111, as against 42 in 1882–83. There are now 32 examining and licensing bodies which do not give instruction. There are 34 colleges that now or soon will require four years' study and three courses of lectures; 11 that now or soon will require four years' study; 4 that have or soon will have four courses of lectures. The total number of matriculants in all of the colleges in 1889–90 was 14,884, and the total number of graduates was 4492. We may form some estimate of the present status of homœopathy from the fact that the number of matriculants in its schools was 1128, and that of its graduates 391. It appears that there are 6 medical colleges for women in the United States and 2 in Canada. There are 5 medical colleges for coloured students.

A Medical College for Women.

An effort is being made to establish a Women's Medical College connected with the Johns Hopkins University, Baltimore. Several wealthy ladies have combined to raise the requisite amount of money. This College will be organised on a very broad basis, and the course of instruction will, I hear, be most thorough.

The American Public Health Association.

This body held its annual meeting recently at Charleston, South Carolina. Among the delegates in attendance were two representing the Superior Board of Health of Mexico and several from Canada. A large number of interesting papers were read and discussed. The prophylaxis of tuberculosis excited much interest, and a committee was appointed to formulate practical prophylactic measures against that disease. One of the Mexican delegates read an elaborate paper on the Federal District in the Republic of Mexico as a Suitable Residence for Persons predisposed to Tubercular Affections and for the Relief of Pulmonary Consumption. Another paper on the Prevention of Tuberculosis reviewed a century's supervision in Italy under the influence of the preventive laws of the kingdom of Naples enacted in 1782. The incoming President is Dr. Frederic Montizambert, of Quebec, Canada.

Death by Neuritis after Dissection of a Rabic Subject.

The assistant pathologist at the New York Hospital, Dr. H. W. Stevens, made a necropsy on Jan. 23rd on the body of a man who had died of hydrophobia. He had previously injured his forefinger while dissecting, and the sore was not healed at the time. To guard against danger, he applied to Dr. Paul Gibier, of the Pasteur Institute, and had a series of injections made to protect his system against the possible presence of rabic poison received at the necropsy. These were made from Jan. 26th to Feb. 9th, when he was seized with severe nerve pains and paralysis of the lower limbs. His disease assumed the form of multiple neuritis and rapidly proved fatal. Horsley and Bristowe have described a form of paralytic rabies, but this case is not believed to be due to the injections. There is much speculation as to the exact nature of the exciting cause of the disease. Dr. Stevens was himself much alarmed after the exposure, and apprehended troubles.

New York, March 2nd

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Medical News.

UNIVERSITY OF OXFORD.—The Final Examination for the degree of Bachelor of Medicine will commence on Monday, June 1st, and the examination for the degree of Master in Surgery will take place on Thursday, June 11th. Names, with the statutable certificates and fees, may be sent to the Secretary of the Boards of Faculties at any time before May 30th.

NEW FEVER HOSPITAL AT CLECKHEATON.—On the 14th inst. the memorial stone was formally laid of a new fever hospital for the North Bierley District. The site comprises upwards of four acres, and cost £837. It is central and midway between the Cleckheaton and Low Moor Stations. The buildings will contain an administrative block, a pavilion of two wards and twelve beds, an isolation block, with four wards and ten beds, and necessary offices.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, MANCHESTER.—The sixteenth annual report states that during the year 1890 the number of out-patients attending had been 5880, and the total attendance was 31,140. At the hospital at Bowden 231 in-patients were treated. The enlargement of the in- and out-patient departments at Bowden was in progress, which would provide the extra accommodation required. The financial statement shows a deficit of over £300.

LOUGHBOROUGH HOSPITAL AND DISPENSARY.—The work of this institution during the past year maintains its claims for a continuance of the liberal support hitherto accorded to it. There has been an increase in the numbers both of out- and in-patients, the excess in the latter department being twenty-three more than the previous year. The expenditure for the year had exceeded the income by upwards of £60. It has been decided that the title of the hospital shall be altered to "The Loughborough District Hospital and Dispensary."

EAST LONDON NURSING SOCIETY.—The Princess Christian, the president, was present at the annual meeting held on the 12th inst. at Lowther Lodge, Kensington Gore. Viscount Cranbrook, who presided, gave an interesting account of the work and objects of the Society. It aimed at getting nursing possession of the whole east end of London, consisting of 100 parishes. It had twenty-seven on its hands, and its work was conducted on strictly non-sectarian principles. The Society had existed for twenty-one years, and, according to Sir Henry Acland, required £6000 a year.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Dean Plumptre bequeathed £2000 to the Wells Cottage Hospital.—The Leathersellers' Livery Company has granted donations for the present year to the metropolitan hospitals and charitable associations amounting to £1653 15s.—The Queen has made a further donation of twenty guineas to the East London Hospital for Children, Shadwell.—The late Miss Mary Baird, of Camelon, left £1000 to the Edinburgh Royal Infirmary; her sister Mrs. Eliza Beatson, also of Camelon, also left the Royal Infirmary £1000.—By the will of the late Mr. Nathaniel Clayton of Lincoln £1000 has been left to the Lincoln County Hospital and £500 to the Lincoln Dispensary.—Mr. Samuel Burdge, late of Bristol, bequeathed £300 to the General Hospital, Bristol.—A legacy of £600, bequeathed by the late Mr. Donald Cooper (Dundee) to the Dundee Royal Infirmary, has become payable to that institution by the death of his sister.—The Grocers' Livery Company has made a grant of £50 to the Great Northern Central Hospital.—The late Mr. Andrew Pickard, of Ossett, bequeathed £1000 to the Dewsbury and District General Infirmary.—Mr. Charles W. Lea, of Parkfield Hallow, Worcester, has forwarded a donation of £1000 to the Worcester Infirmary.—By the will of Mr. George Thomas Bennett, of Kilburn, £100 each is bequeathed to the Middlesex Hospital, University College Hospital, and the Seamen's Hospital, Greenwich.—The Hon. Algernon Tollemache, of Montrose House, Petersham, Surrey, has sent a donation of £100 to the Royal Hospital for Diseases of the Chest, City-road.

FOOTBALL CASUALTY.—On the 5th inst., a youth, whilst playing at football at Clevedon, fractured his arm, which was also dislocated at the elbow.

PRESENTATION.—At the close of the first aid course of lectures (St. John Ambulance Association) given at Ballymena, co. Antrim, a presentation was made to Dr. Alexander D'Evelyn by the members of the ladies' class, as a testimony that they appreciated his kindness and patience as their lecturer.

DEATH THROUGH TIGHT LACING.—On Saturday an inquest was held at Kingston on Ellen Mary Lewis, aged twenty-two, a single woman, residing at 8, Down Hall Villas, Lower Ham, Kingston, who died suddenly at the Steam Laundry, Oil Mill-lane, Kingston. Dr. Reginald Bayley, of London-road, Kingston, said he found traces of pneumonia, but in his opinion the immediate cause of death was sudden failure of the heart's action, brought about by tight lacing. A verdict in accordance with the medical testimony was returned.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL. The annual report states that 300 patients were admitted during the past year, an excess of 55 on the previous twelve months, and the number treated was 63 more, being the highest on record. The total number of out-patients was 1643. There was an increase of £167 in the expenditure, for necessary miscellaneous requirements, and the income amounted to £2071 11s. 3d., the highest yet recorded. Plans for additions to the hospital had been prepared, and the outlay will exceed £5000, which it is proposed to defray out of invested funds, together with subscriptions given specially for that object.

HULL ROYAL INFIRMARY.—The annual meeting of the governors was held at the hospital on the 12th inst. Mr. W. R. King, J.P., chairman of the board, presided. In moving the adoption of the accounts, which was unanimously carried, the chairman congratulated the governors on the satisfactory state of the balance sheet. The annual report showed that during the year 1890 11,588 patients received the benefits of the institution. By the liberality of special donors during 1889–90 the charity had been entirely relieved of the embarrassment which had existed during the last two years, and the accounts of the twelvemonth under review closed with a balance at the bankers. The ordinary receipts amounted to £7994.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The annual meeting of the governors was held at the hospital on March 10th. Lieut.-Col. Thorneycroft presided. The chairman opened the proceedings by moving the adoption of the report, which had already been circulated. He referred to arrangements which had been made for the treatment of women subject to diseases peculiar to their sex. There was a separate building set apart for them. The report was adopted. A letter was read from Miss Lonsdale, matron of the Sister Dora Convalescent Home, Milford, near Stafford, offering a free cot in that institution for children of both sexes. There would be no expense to the hospital in connexion with it. It was remarked that Miss Lonsdale's offer was practically a free gift to the hospital.

ROYAL STATISTICAL SOCIETY.—Dr. Mouat read a paper before this Society on March 17th on Prison Ethics and Prison Labour, in which questions relating to the regulation of gaol industry, its bearing on free labour, and the encouragements which may be allowed to a convict in the disposal of the portion of his earnings sanctioned, without prejudice to good discipline, were categorically answered by the lecturer. He concurred in Howard's principle of treating prisoners—"Make them diligent and they will be honest,"—and quoted an inscription in the room of the prison of San Michel in Rome: "It is of little advantage to restrain the bad by punishment, unless you render them good by discipline." Principles such as these Howard considered to be "an expression of the grand purpose of all civil policy in relation to criminals." Prison labour, as the best of all instruments for the punishment of crime, was then considered in its disciplinary aspect, in the action of courts of justice, and of the laws in relation to labour sentences, and in the economic objections to prison work, one branch of which was the subject of a recent representation to the Home Secretary.

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UNIVERSITY OF CAMBRIDGE.—At a meeting of the Master and Fellows of Jesus College, held on the 12th inst., Mr. John George Adami, M.A., M.B, formerly scholar of Christ's College, was elected to a fellowship. Mr. Adami is University Demonstrator of Pathology and John Lucas Walker student of pathology.

KENT COUNTY OPHTHALMIC HOSPITAL. — The annual report just issued is a satisfactory record of the work done during the past year. 332 in-patients had been treated, which was the largest number in any year since 1869, the average for the last twenty-one years being 268. The balance sheet showed that the sum of £362 6*s.* 3*d.* was in hand. It is proposed to erect a commodious room to be set apart for a chapel, a want which has been long felt.

INSANITARY CASUAL WARDS.—At the meeting of the Lambeth board of guardians on Wednesday, Mr. John Smith presiding, the Rev. C. E. Brooke, reporting upon his visit to the casual wards, said their sanitary condition was simply disgraceful. There was an open drain, from which there came a most filthy stench, and which should not be allowed to remain open. Mr. Stockbridge explained that the drain had been opened for the purpose of carrying out a scheme for perfecting the drainage.

YORK COUNTY HOSPITAL.—The report for 1890 (the 150th) shows that the financial position was highly satisfactory. Although £2792 10*s.* had been invested during the year there was still on Dec. 31st a balance in hand of £80 14*s.* 10*d.* The expenditure was well within the income, a result partly attributable to the smaller number of patients. During the year 1074 in-patients were treated and 8198 out-patients. A house-to-house collection produced £371 3*s.* 2*d.* Several improvements and alterations are contemplated in order to render the institution more efficient.

OLDHAM INFIRMARY.—The medical statistics of this institution for the past year record that 640 in-patients and 3904 out-patients had been treated during the year. Of the former 130 were medical, and 512 surgical cases. Of the latter, 276 were accidents, 364 patients had been discharged cured, 160 relieved, 33 left at their own request, and only 13 were incurable. The Convalescent Hospitals have been utilised for promoting the recovery of 33 patients, in each case with evident advantage. The balance sheet showed a deficiency of £781 2*s.* 11*d.*, including the deficit of £566 2*s.* 5*d.*, brought forward from the previous year.

THE FACTORIES BILL. — At the sitting of the Standing Committee on Trade, at the House of Commons, on Thursday, to consider the Factory and Workshops Bill, it was decided to include laundries in the provisions of the Act. The clause providing that all factories constructed after Jan. 1st, 1892, shall be provided on every floor with a means of escape in case of fire was met with an amendment by Sir Henry James, providing that spinning mills already existing should be provided with outside means of escape. The Home Secretary maintained that the machinery of the Bill was sufficient, and in the event of a building not having sufficient means of escape the proprietors would be prosecuted before a magistrate.

THE HOSPITAL FOR SICK CHILDREN.—The Duke of Fife, presiding on Wednesday at the dinner of the Hospital for Sick Children, Great Ormond-street, held at the Hôtel Métropole, said that in days gone by, when the sick poor were huddled together in the poor-houses, the position of the sick child was sad indeed. It was only forty years ago that this hospital was established, and to show the way in which it was appreciated he might mention that the average number of patients annually treated within its walls was now about 60,000. Of these, the in-patients numbered about 1060, and the average number of new out-patients was 6371; while the grand total of patients treated during the existence of the hospital was 520,000. He had now to appeal to the public for funds to enable them to complete the new wing, which would enable them to carry on the good work upon a more extended scale. Later in the evening subscriptions amounting to £4360 were announced.

FIRE AT THE NASHVILLE (U.S.A.) LUNATIC ASYLUM. A disastrous fire occurred last week at this Central Lunatic Asylum, and resulted in the death of six inmates; 400 lunatics were in the asylum. Only twenty-eight were confined in the wing where the fire broke out, and twenty-two of these were rescued, the remaining six perished in the flames. The inmates became beyond the control of the guards, and twenty-five escaped, but the most dangerous were in safety in another wing. The firemen succeeded in confining the conflagration to the wing in which the fire broke out.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—The festival dinner of this institution took place last week at the Hôtel Métropole, Mr. G. Newnes, M.P., presiding. The chairman, in proposing "Prosperity to the Institution," referred to the great interest the late Charles Dickens took in the charity, and stated that they were met on the anniversary of the publication of the first daily newspaper in London, which took place on March 11th, 1702. He urged the claims of the institution upon their liberal support. During the evening the secretary announced donations and subscriptions amounting to about £800, which included 100 guineas from the chairman.

THE GORDON HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, LONDON.—During the past year 147 patients were admitted. The out-patients numbered 513, and the attendances were 2642. The committee in their annual report refer to the Committee of the House of Lords on the London Hospitals, and state that the figures given by the Charity Organisation Society were for the year 1887, and do not fairly represent the work of the hospital at the present time. They hope to have an opportunity of explaining this and other matters referred to in the evidence. The report of the medical committee shows satisfactory results of the work done, bearing in mind that nearly all the patients are admitted for operation. Financially a small balance remains in hand.

THE ALEXANDER MEMORIAL PRIZE.—This triennial prize, which is open for competition to executive officers of the Medical Staff, and consists of £50 and a gold medal of the value of £10, has just been awarded for the second time to Surgeon R. H. Firth, Medical Staff. The prize was founded as a memorial of the late Mr. Thomas Alexander, a former Director-General of the Army Medical Department; but, by a clerical error in an advertisement which appeared in our last issue, it was described as the "Alexandra" instead of the "Alexander Memorial." Essays for the next competition must be despatched so as to reach the Director-General on or before Dec. 31st, 1893, and the particulars as to the conditions of the competition will be found in the advertisement referred to. This information is also fully given in the annual "Reports of the Army Medical Department."

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on March 17th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	236	57	..	51	2	346	402
North-Western Hospital	172	45	..	10	5	232	402
Western ,,	143	22	..	13	2	180	234
South-Western ,,	145	27	..	12	..	184	240
South-Eastern ,,	173	14	..	21	2*	210	402
Northern ,,	222	14	..	15	..	251	430
Totals	1091	179	—	122	11	1403	2221

SMALL-POX.—*Atlas* hospital ship, 2.

* Infant and mother.

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MEDICAL NOTES IN PARLIAMENT.

The General Medical Council.

THE accounts for 1890 of the General Medical Council and its branch councils and of the Dental Registration Fund were presented to the House of Commons on Friday, the 13th inst., and were ordered to lie upon the table.

Water-supply from the Thames.

In the House of Commons on Monday, March 16th, Mr. Long directed attention to the condition of the London water supply as represented in Professor Frankland's report, in respect of the organic impurity found in the various samples.—Mr. Ritchie: My attention has been drawn to the report to which the hon. member alludes. With regard to the analysis of the water supplied by the Grand Junction Water Company on Feb. 5th, I recently stated the facts very fully in reply to a question of the hon. member for the Knutsford Division of Cheshire. As to the analysis of the water supplied at a later date in the same month by other metropolitan water companies, I have no doubt that the abnormal amount of vegetable matter, although much less than was the case with the water from the Grand Junction Water Company on Feb. 5th, was occasioned by similar causes. Dr. Frankland informs me that the exceptionally impure condition of the river-derived waters supplied to the metropolis in February has now passed away, and that these waters have apparently returned to a condition approaching the normal at this season. I have communicated with Dr. Frankland with regard to his statements as to the existence of microbes. He states that the number was not large for filtered river water, and that, as no pathogenic organism was observed among the microbes, their presence does not afford any ground for alarm.

The Factories and Workshops Bill.

Many important amendments to the Factories and Workshops Bill have been drafted by members of the House of Commons. Mr. Hoyle has prepared several with reference to the sanitary clauses of the Bill. He has prepared a new clause to the effect that it shall be the duty of every inspector to send to the proprietors of factories and workshops in his district full information as to new methods of ventilating and improving the sanitary condition of factories and workshops which he has met with in his district. Another clause prepared by Mr. Hoyle prescribes that the inspector shall send round reports of all accidents and injuries to life or limb, with details of the machinery and appliances which have caused them. Sir Henry James has drawn up a most formidable list of amendments. A few of them deal with the sanitary clauses; others relate to holidays. A large group have reference to the work of the inspectors. Sir Henry James proposes that, where an inspector is obstructed in the execution of his duties, the person obstructing him shall be liable to a fine not less than one nor exceeding ten pounds sterling. In a new clause he proposes that where it appears to an inspector that dust is generated in any factory and is inhaled by the workers to an injurious extent, and that such inhalation could be prevented by the use of mechanical or other means, he shall serve on the occupier of the factory a requirement that means be provided within a reasonable time. Mr. Sydney Buxton has given notice of an amendment prohibiting the employment of children under twelve years of age. He excepts those children for whom special provision is made under the Prevention of Cruelty to Children Act, 1889. In relation to this Bill we may add that Mr. Matthews has intimated his hope that he may be able to effect some compromise with regard to the abolition of the office of certifying factory surgeons.

THE METROPOLITAN HOSPITALS INQUIRY.

THE Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday. Earl Sandhurst presided.

Greenwich Seamen's Hospital.

Mr. Michelli, secretary of the Greenwich Hospital for four years, said that for the last thirteen years he had been connected with hospitals. This hospital was for seamen, and was managed by the Seamen's Hospital Society. They admitted seamen suffering from all diseases, and, in cases of urgency, other people. Their main hospital was at Greenwich, with 225 beds. There was a branch hospital with fourteen beds, and dispensaries at the London Docks and Gravesend. There was an income of £3600 from land and funded property—£700 of that sum coming from land. His salary was £400 a year, with a house, and he had commissions which averaged between £40 and £50 a year. They were governed by their own Acts of Parliament. He thought their method of checking small expenditure was good, but really the chief responsibility lay with him. The working number of beds was 197, and they admitted all diseases, except small-pox and typhus. Their legacies last year amounted to £7094, which was an exceptionally good year, the average being £1700 for ten years. The total receipts last year were £18,000, and the ordinary expenditure £12,765. They had a professional auditor. There ought to be a uniformity of hospital accounts all over the country. He thought it possible to have a central body to audit all the accounts. The expenditure should be put under heads, so as to find out the cost of foods and drugs. He thought it a pity that small hospitals should be started under the windows of large hospitals, and there should be a licensing body to examine and report as to the necessity for any new hospital. He did not like to see the general hospitals increased in size; he would rather see hospital extension take the form of erection of hospitals outside London. Two-thirds of the patients might with safety be removed to the country, only sufficient patients being kept in London for instruction purposes. The licensing body might be elective and in connexion with the Charity Commissioners. It should audit accounts and inspect the hospitals, but have no control. It might also license the new hospitals.—By Lord Kimberley: Inspection did not necessarily mean control, because the inspecting bodies in the Colonies and in Dublin did not exercise control.—Might not the general body of London hospitals appoint an auditor without bringing in public control? I think there is such a rivalry that it would be difficult.—You propose to invest your funds in the Charity Commissioners. Do you think the public have confidence in the Charity Commissioners? I think they have.—Have you found them an agreeable body to deal with? Yes.—Do you get an answer to your letters in a reasonable time, or have you to wait for six months? In a reasonable time.—By Lord Thring: In regard to this licensing body, why should you prevent any man from doing anything which is not injurious to the State? Well, if there was this licensing body, you might have a hospital at Camberwell instead of a hospital at Paddington, where it was not wanted.—By the Chairman: The patients were admitted by the principal medical officer. The food was supplied by open tender through advertisement. There were not many complaints as to food. When there was any complaint, the food was brought to him, and he along with the medical officer decided whether the complaint was well founded. The steward and matron had a salary of £100 a year each. There was a staff of thirty. Deducting meal hours, a sister or probationer was on duty for ten hours forty minutes. Night nurses were on duty eleven hours fifty-four minutes. The nurses did no menial work, and had a very easy time during the day. They had no students, but the principal medical officer took a certain number of students. There was a Samaritan Fund, out of which they relieved the patients who were incapable of going back to sea. There was a principal medical officer (£350 and a house), a house physician (£70), and a house surgeon (£50). The two latter were nominally appointed for a year, but usually retained office much longer. He was the head of the institution, but he had no power to suspend a medical officer for a grave irregularity. In such a case he could call the committee together within twenty-four hours. As a matter of fact, such an emergency had never occurred. During the last year they had had 8552 out-patients.—By the Chairman: It was a pity that at nearly all the London hospitals out-patients were kept standing in the streets, sometimes in the wet, until the doors opened.

The Lock Hospital.

Mr. Shillitoe, surgeon of the Lock Hospital, examined by Lord Cathcart, said he had some statistics as to venereal disease, but they were very misleading. It was not possible to give statistics as to the prevalence of the disease, because when people got the disease surreptitiously they did not like to publish the fact. The hospital accommodation was not nearly sufficient. It was a horrible thing that the women should be allowed to leave hospital uncured. He could not speak in strong enough terms on such a subject. The disease prevailed all over the country to a much larger extent than was supposed. The type of the disease was very much the same as it had been for many years. It was quite as virulent as it used to be. There were accessions in the strength of the disease occasionally, and he noticed that, especially after the Paris Exhibition, that was through importation. The aggravated forms of disease were not so common, but that was through the spread of education. The mercurial treatment was the only one of any avail. The chief objection to the female out-patient system was that they only got partially cured and then continued their evil courses. The same objection applied to female in-patients, who left before they were quite cured.—But public opinion will not let you keep the women in? I hope that public opinion will veer. I hope to see the day when we shall be able to keep the women till cured. I think the present law is a great misfortune to the nation at large.—Were you always in favour of the Contagious Diseases Acts? Yes; and my opinion has become intensified since my connexion with the Lock Hospital.—Do you find that the women leave the hospital uncured before fairs, or, say, the Derby day? Yes, that is the case.—Examination continued: He had known many cases of surgeons and nurses taking the disease. He had known cases where infection was communicated by towels. Even in travelling people might meet the microbes of the disease. The public were not sufficiently alive to the danger they ran from this terrible disease.

Mr. A. C. Coote, secretary of the Lock Hospital, recalled, said that if the present appeal for assistance was not responded to adequately the hospital would have to be shut up, or another appeal issued. They were in debt £3000 to their tradesmen, but, of 731 cases treated in the hospital, they only lost sight of 177 cases. They were able to follow many of the women after leaving the asylum attached to their hospital, and the results were most encouraging. They had 1200 men out-patients and 150 women. They always made inquiry as to the circumstances of patients before giving advice.

Mr. Shillitoe, recalled, examined by Lord Cathcart, said that a great deal of quackery existed in the treatment of this disease. In the beginning of the disease much of the treatment was by chemists.

The committee then adjourned.

Their lordships met again on Thursday.

Brompton Consumption Hospital.

Mrs. Taylor said she was formerly matron of the Brompton Consumption Hospital. The staff consisted of about seventy. They sent out many nurses to private cases. It was not the usual thing to take out nurses from the wards and send them to private cases. Quite half of the private nurses came to them adequately trained, and the nurses they themselves trained had three months in a general hospital. They had voluntary helpers, but no unpaid probationers. In her nine years' experience at Brompton she had never heard a complaint from a nurse as to the food. If there had been any complaint she would have been sure to hear of the matter. The resident medical officer had two courses of lectures in the course of the year. She also held classes, and found it better to keep the classes down to four or six at a time.

King's College Hospital.

Dr. Wace, D.D., chairman of the committee of management of King's College Hospital, said they had practically no endowments. Last year their receipts were £11,288, and their expenditure £17,126. This showed a large deficit. The deficit was met by some legacies and the sale of some stock. This was the largest deficit they had had for many years. They had kept the hospital constantly before the public, and they found that the more they appealed the more money they got. Five years ago they had to close two wards and reduce the number of beds, but since that time they had been able to reopen the wards and fill all the beds. They had 220 beds, and 215 beds were occupied last week. More patients came to the hospital than they could accommodate. Their deficit did not cause them great anxiety, because they could always catch it up. They had a large body of friends who were ready to respond to any special appeal. The number of in-patients admitted during the year was 2331, and this added to the number remaining in the hospital made the total number treated 2518. The out-patients numbered 9650, but there was also a casual department, where 10,337 persons were treated.

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In addition, 607 poor women were treated during confinement. Their nurses had all to attend the services of the Church of England. They admitted all kinds of disease except small-pox, with this reservation: that there should not be more than ten cases of infectious disease at one time.—By Lord Cathcart: Do you think it fair, in a hospital which takes money from all religious denominations, to make a religious test in regard to the nurses? Perfectly fair, if we make the bargain beforehand.—Do you think it judicious? We find it works well, and there has never been any objection made to it.—By Lord Clifford: We thought it better that there should be some hospitals managed on the principle of religious tests for the nurses. They found it advantageous for the general discipline and good working of the whole institution that there should be this test.

Sister Munk, matron of the hospital and lady superintendent of the nursing department of King's College Hospital, said they had nurses for private work, but this did not at all interfere with the regular staff in the wards. Their nurses were probationers for two years, and took their certificates at the end of three years. If the nurses did private work they received a commission on their earnings; the maximum was 15 per cent. The nurses were on the National Pension Fund. No nurse had left the hospital except to fill a better position. She always dined with the nurses, as did also the sisters. She would therefore be able to know if there was any cause of complaint, but she had not known of any complaints as to food. She was opposed to any British nurses' registration society, as every hospital had its own registry of trained nurses.

Dr. Curnow, dean of King's College Medical School, physician to the hospital, and professor of anatomy, said that since 1864 he had been connected with King's College with the exception of one year. He proceeded to give evidence regarding the arrangements in the out-patients' department, dividing the cases for this purpose into casual patients and out-patients proper. It was only very special cases which continued under treatment for over three weeks. The arrangements for the treatment of casual patients were detailed, and the duties of the resident medical officers submitted to their lordships. The visiting staff were compelled to obtain the membership of the Royal College of Physicians or a Fellowship of the Royal College of Surgeons within a year of their appointment to the staff. This was on account of the disciplinary powers exercised by these bodies in regard to questions of etiquette. The examination of the Royal College of Surgeons was acknowledged to be the best surgical examination in the kingdom, with almost no exceptions. He might say that the degree of Master of Surgery of the University of London was quite as high as that of the Royal College of Physicians, the examination being quite different, and separate from that for the M.B. degree, an arrangement which did not hold in the case of other Universities. If the Universities exercised such disciplinary powers over their graduates he saw no reason why a man belonging to those Universities should not become a member of the hospital staff.—By Lord Zouche: They had standing rules in the hospital whereby ten cases of infectious diseases were admitted, so that the students in King's College had a better chance of seeing such diseases than students had in any other hospital in London, King's College Hospital being in quite an exceptional position in regard to these diseases.—By Lord Spencer: These patients were in the same wards as the ordinary patients, unless there was anything special in their case. There were two isolation wards in the hospital. In regard to the utilisation of the Metropolitan Asylum Boards hospitals for teaching purposes, Dr. Curnow said it would be extremely impracticable for a teacher of one of the general hospitals to take a class to an Asylums Board hospital where the management was under a different superintendent, and where the patients were under a different physician, and over which hospital the teacher had no control.—By Lord Monkswell: The question of special hospitals depended upon the class of the hospital. Hospitals like the Brompton Hospital for Consumption were essential because the cases they treated were extremely numerous. Then there were hospitals for incurables and those which, like Moorfields, were founded before ophthalmic departments were common in general hospitals. In general hospitals now they had separate departments for the eye, ear, nose, throat, skin, &c., and he saw no longer any necessity for special hospitals dealing with these special diseases, but they could not do away with an old institution. Most of the recent special hospitals certainly were useless. It was simply parcelling the body out into pieces, and treating the one part as if it had nothing to do with the other. Regarding hospitals for diseases of children, also, it simply amounted to a question as to how the accommodation could best be distributed.—By the Chairman: The medical school was not an independent school. All accounts were paid in to the secretary of King's College. Since 1883, when he was appointed dean, the receipts averaged from £2500 to £3500, the highest total receipts being nearly £3700. That meant an average of thirty or forty students entering for the year. During the last year or two the numbers had been increasing. The medical men had no control over the institution at all. They had a medical committee which recommended to the Council of the College candidates for the appointments.—Lord Spencer: Your school differs from other schools in this, that there is a large element of lay management, whereas in other hospitals it is almost entirely managed by the hospital staff.—The Witness: Ours is the medical department of a college, managed by the council of a college, but other medical schools are simply associations made by hospital surgeons for teaching purposes. I prefer it infinitely to the private system.—Lord Spencer: Would you like to develop this system still further, and have a large board for the management of medical schools in London?—The Witness: I think it would be most disastrous. The chief objection I should have is that all scientific studies are so practical that I could not understand how a teacher could teach practical science to more than 100 students at once. The teaching would be left mainly in the hands of inferiors or assistant demonstrators. It is not so much to the lecture system that objection can be urged as that the practical work would be neglected. I am very strongly of opinion that there is a great waste of teaching power in science subjects in London, which could be improved by combination. In fact, the great advantage of King's College and University College is that pupils can be sent to study, for instance, physical science in one of the finest physical laboratories in the kingdom. It is almost impossible for a medical department to keep up these things unless it is extremely rich.

The Committee then adjourned until after the Easter recess.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALLEN, W. C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Willington Urban Sanitary District.

ARMSTRONG, JAMES, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Workhouse, and District Medical Officer to the Brampton Union, vice Wotherspoon, deceased.

BERRY, EDMUND, L.R.C.P. Irel., L.F.P.S. Glasg., has been reappointed Medical Officer of Health, Leyland.

BERRY, H. P., M.B. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Grantham Urban District.

BLACK, ALEX., M.B., F.R.C.P. Edin., has been appointed Surgeon to the Eye, Ear, and Throat Infirmary, Edinburgh, vice Ross, resigned.

CHAMBERS, E., M.B. Aberd., M.R.C.S., has been appointed District Medical Officer and Public Vaccinator, Holborn Union.

CHEESEWRIGHT, J. F., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Greasborough Urban Sanitary District.

CLARKE, A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Street Urban Sanitary District of the Wells Union.

CLARK, W. F., L.R.C.P., L.R.C.S., has been reappointed Medical Officer of Health for Cheshunt.

CLIBBORN, WM., B.A., M.D. Dub., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Borough of Bridport; also Certifying Surgeon under the Factory Act for Bridport and the surrounding districts.

COLLINS, J. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Roscommon District of the Ballinasloe Union.

CONOLLY, C. H., M.R.C.S., has been reappointed Medical Officer for the Wood Green Urban Sanitary District.

CORNER, HARRY, M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Second Assistant Medical Officer at Bethlem Royal Hospital.

CROSSFIELD, A. K., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Dittisham District of the Totnes Union.

DE LA HUNT, J. J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Galway District of the Ballinasloe Union.

EADY, G. J., M.D. Brussels, M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Kilburn District of the Hampstead Union, vice Hill, resigned.

EMERSON, D. N. B., B.A., M.B., B.Ch., B.A.O. Dub., has been appointed Senior Resident Medical Officer to the Victoria Dock District Dispensary, vice C. H. Burtchaell, M.B., resigned.

EVANS, C. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. John's Hospital for Diseases of the Skin, vice G. W. Damman.

FAICHNIE, FRED., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the St. Marylebone Infirmary, Notting-hill, vice Berneau, resigned.

GARTLEY, T. A., L.D.S.R.C.S. Eng., has been appointed Honorary Dental Surgeon to the French Benevolent Society.

GILBERT, H. P., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Twelfth District of the Wisbech Union.

GRANT, OGILVIE, M.B., D.P.H. R.C.P. Edin., has been appointed County Medical Officer for Inverness-shire.

GRATTE, C. BROOKE, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Inspector of Seamen for the Board of Trade, Newport, Monmouthshire.

HALL, GEORGE, M.D. Edin., has been appointed District Medical Officer and Public Vaccinator for the Witle District of the Hambledon Union.

HAMILTON, A. A., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Crowle, Thorne Union.

HARRIS, J. H., M.R.C.S., has been reappointed Medical Officer for the Ugborough District of the Totnes Union.

HARTFORD, H. W., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Workhouse of the Christchurch Union.

HICHENS, F., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Redruth Union, vice Carlyon, resigned.

HODSON, THOS., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Sixth District of the Chelmsford Union, vice Winstanley, deceased.

HUIE, H. G., M.B., C.M. Edin., has been appointed Resident Physician of the Royal Edinburgh Hospital.

JOHNSON, H. S., L.R.C.P. Irel., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Totnes Rural Sanitary District.

KEMPE, ARTHUR W., M.D. Brux., M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Exeter Port Sanitary Authority.

LEES, E. LEONARD, M.D., C.M., M.R.C.S., has been appointed Medical Registrar to the Bristol Hospital for Sick Children and Women.

LUCAS, HERBERT, M.R.C.S., has been reappointed Medical Officer of Health to the Huntingdon Town Council.

LUND, T., M.B., B.S. Durh., has been appointed Resident Medical Officer and Secretary to the Royal Victoria Hospital, Bournemouth.

MACKAY, P. B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Doncaster Infirmary, vice Robinson, resigned.

MACLEOD, JOHN NORMAN, M.A., M.B., C.M. Glasg., has been appointed House Surgeon to the Royal Infirmary, Dundee.

MCOSCAR, JOHN, M.R.C.S., has been appointed Medical Officer for the Chinnor District of the Wycombe Union.

MALCOLM, W. A., M.B., C.M., has been appointed Casualty Officer, Registrar, and Assistant Anæsthetist to the Great Northern Central Hospital.

NEVIN, ROBERT J., M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the West Auckland District of the Auckland Union; also Surgeon to the West Auckland, Tindale, and St. Helens Collieries.

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POWELL, L. L., L.R.C.P. Edin., M.R.C.S., has been appointed a District Medical Officer for the Melton Mowbray Union.

PURVES, A. S., M.D. Edin., has been appointed Medical Officer for the Lesbury District of the Alnwick Union.

PRESTON, H. T., M.D. Aberd., M.R.C.S., has been reappointed Medical Officer for the Wolverley District of the Kidderminster Union.

RAWLINGS, H. E., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Gower Union, vice Jones.

ROSS, JAS. M., M.B., C.M. Edin., has been appointed County Medical Officer for Dumfriesshire.

RUDOLF, R. D., M.B., C.M. Edin., has been appointed Resident Physician of the Royal Edinburgh Hospital.

SHARMAN, M., M.B. Glasg., M.R.C.S., has been appointed Medical Officer for the Rickmansworth District of the Watford Union.

SHORE, HERBT. G., M.R.C.S., has been appointed Medical Officer for the Cropredy District of the Banbury Union, vice Hodgson, resigned.

SMITH, K. R., M.D. Lond., M.R.C.S., has been reappointed Medical Officer of the Harbtonford and Halwell Districts of the Totnes Union.

STOCKRIDGE, T. G., M.D. McGill, Montreal, M.C.P.S. Ont., M.R.C.S., has been appointed District Medical Officer and Public Vaccinator, Holborn Union.

SYMINGTON, W. D., M.D. Edin., has been appointed Medical Officer of Health for the Brampton Union Rural Sanitary District, vice Wotherspoon, deceased.

TEMPLE, T. C., M.R.C.S., has been appointed Medical Officer for Shillington, Gravenhurst, and Haynes, Ampthill Union.

UBSDELL, H., M.R.C.S., has been reappointed Medical Officer for the Staverton and Rattery District of the Totnes Union.

WHITAKER, G. H., L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Surgeon of Factories and Workshops for the Horwich District, Bolton-le-Moors, vice Emmett.

WILLAN, G. T., M.R.C.S., has been appointed a District Medical Officer of the Melton Mowbray Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary Surgeon. Salary £100 per annum, with board.

BURTON-ON-TRENT FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Junior Medical Officer. (Apply to the Secretary, Shobnall-road, Burton-on-Trent.)

BOROUGH LUNATIC ASYLUM, Portsmouth.—Clinical Assistant for six months. Board, rooms, lodging, washing, and attendance provided.

BRIDGWATER INFIRMARY.—House Surgeon Salary £80 per annum.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

COUNTIES OF MIDLOTHIAN, WEST LOTHIAN, AND PEEBLES, AND DISTRICTS WITHIN THE SAME.—Medical Officer. Salary £600, besides travelling expenses. (Apply to the County Clerk, County Buildings, Edinburgh.)

CHARING-CROSS HOSPITAL. — Surgical Registrar. Salary £40 per annum.

COUNTY ASYLUM, Shrewsbury. — Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Physiology. Honorarium £100 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer for one year. Salary £80 per annum, with board and residence.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officers. Salary commences at £100 a year, with prospect of an increase of £25 at the end of the first year and £25 at the end of the second, with further increase according to promotion, together with furnished apartments, board, washing, and attendance.

DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham.—Resident House Surgeon for one year. Salary £90 per annum, with board and residence.

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £90 per annum, with board and lodging.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Obstetric Physician to Out-patients.

HOSPITAL, King's Lynn.—House Surgeon and Secretary. Salary £80 per annum, rising to £100, with board, lodging, and washing in the Hospital.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing.

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Junior Assistant Medical Officer. Salary £125 per annum, with furnished apartments, board, and attendance. (Apply to Mr. Allen Fielding, Solicitor, Canterbury.)

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance. (Apply to the Secretary, Leith Offices, 24, Moorfields, Liverpool.)

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician for one year. Salary at the rate of £60 per annum for the first six months, and at the rate of £70 per annum for the second six months.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Surgeon for one year. Salary at the rate of £60 per annum for the first six months, and at the rate of £70 per annum for the second six months

METROPOLITAN HOSPITAL, Kingland-road, N.E.—Assistant House Surgeon for six months.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £120 a year.

ROYAL SOUTH LONDON DISPENSARY.—Honorary Surgeon.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Resident Medical Officer. Salary £70 per annum, with board and residence.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Anæsthetist and Registrar for one year, honorarium of 20 guineas being voted at the end of that term.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—Resident Secretary and Dispenser. Salary £80 per annum, with board, lodging, and washing.

ST. MARY'S HOSPITAL, Paddington, W.—Surgeon in charge of Out-patients for five years.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, W.—Resident Medical Officer. Salary £105 per annum, with furnished apartments, attendance, coal, and gas.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

WINDSOR ROYAL INFIRMARY.—House Surgeon. Salary £100, with apartments, but no board.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

AVARNE.—On March 15th, at Crossfield House, Blaenavon, Mon., the wife of Arthur Blair Avarne, M.R.C.S., L.S.A., of a son.

CALDWELL.—On March 14th, at Brixton, the wife of W. T. D. Caldwell, M.D., of a daughter.

CRITCHETT.—On March 16th, at 21, Harley-street, W., the wife of G. Anderson Critchett, of a daughter.

DUKE.—On March 9th, at Locksley, St. Leonards-on-Sea, the wife of Edward Duke, M.R.C.S., of a daughter.

EMMETT.—On March 12th, at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S., L.R.C.P. Lond., of a daughter.

HEARNDEN.—On March 12th, at Rose Cottage, Leatherhead, the wife of Walter C. Hearnden, M.R.C.S., of a son.

JONES.—On March 13th, at Southgate, Eckington, the wife of G. H. West Jones, of a daughter.

SYMPSON.—On March 14th, at 3, James-street, Lincoln, the wife of E. Mansel Sympson, M.A., M.D., B.C. Cantab., M.R.C.S., of a son.

TROUP.—On March 10th, at Pembroke-square, Kensington, the wife of Surgeon-Major R. W. Troup, Army Medical Staff (retired), of a son.

MARRIAGES.

CLARKE—HECTOR.—On March 12th, at St. Peter's, Morley, by the Rev. Vavasour F. Hammond, M.A., Vicar of Drighlington, assisted by the Rev. G. Pedley, Curate of St. Peter's, Morley, Arthur Clarke, B.A., L.R.C.P. Lond., M.R.C.S. Eng., of Street, Somerset, to Georgina, fourth daughter of the late Alexander Hector, of Montrose, Forfarshire, N.B.

HODGKINSON—WHITNALL.—On March 5th, at St. Philip's Church, Alderley Edge, Alexander Hodgkinson, M.B., C.M., B.Sc., of Disley and Manchester, to Eliza Frances Whitnall, of Southport.

MANLEY—DUNDAS.—On March 12th, at St. Simon's, West Kensington Park, Herbert Manley, M.A., M.B. Cantab., only son of John Manley, of West Bromwich, to Alice C. M. Dundas, eldest daughter of the late Robert Thomas Dundas, Commander in the P. and O. Company's service.

MARTIN—CROSS. — On March 12th, at St. Stephen's, Hampstead, Charles James Martin, M.B., B.Sc., to Edith Harriett, second daughter of the late Alfred Cross, of Kilmarth, Hastings.

RODEN—JOPP.—On March 4th, at St. Andrew's Church, Aberdeen, Percy Austin Roden, M.B., second son of S. S. Roden, M.D., Droitwich, Worcestershire, to Minnie Abercrombie, youngest daughter of Keith Jopp, M.D., Aberdeen.

TAYLOR—ABBOTT.—On March 3rd, at St. Paul's, Onslow-square, Henry Herbert Taylor, F.R.C.S., of Brunswick-place, Brighton, to Florence Marie, daughter of the late William Abbott, of Tasmania.

DEATHS.

BULL.—On March 17th, suddenly, William Bull, F.R.C.S., of Shepherd's bush-road, W., aged 41.

CARTER.—On March 14th, Albert Carter, M.D., of Bexhill, Sussex.

GORDON.—On March 13th, at Muir House, Juniper-green, Midlothian, Patrick Gordon, M.D.

SYMES.—On March 7th, at the County Asylum, Rainhill, George Dickinson Symes, Assistant Medical Officer, second son of J. Gustavus Symes, of Southfield, Weymouth, late Medical Superintendent of the Dorset County Asylums, aged 30. Greatly loved; deeply lamented. Australian and Indian papers please copy.

ERRATUM.—We regret that in our obituary column last week a serious error was suffered to pass uncorrected. The paragraph headed "Hawkins" was intended to announce the death of Mr. Frank Sydney Hawkins, not of Mr. Walter R. T. Hawkins, who we are glad to know is still in the possession of his wonted health.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 19th, 1891.

Date.	Barometer reduced to Sea Level and 32 F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 13	29·77	E.	37	35	81	47	31	..	Hazy
,, 14	29·83	N.E.	41	38	61	46	37	·02	Overcast
,, 15	29·72	S.W.	40	37	72	46	35	·02	Cloudy
,, 16	29·37	S.W.	40	38	63	47	38	·21	Overcast
,, 17	29·57	N.E.	43	42	53	48	40	·01	Raining
,, 18	29·80	N.E.	44	43	53	49	42	·12	Overcast
,, 19	29 85	N.E.	41	38	59	46	37	..	Cloudy

Medical Diary for the ensuing Week.

Monday, March 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
SOCIETY OF ARTS.—8 P.M. Prof. R. Meldola: Photographic Chemistry. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. B. Ward Richardson: Peroxide of Hydrogen, and Various Methods for its Administration and Use.—Mr. Alban Doran: Fibro-Sarcoma, or Desmoid Growth of the Abdominal Wall.

Tuesday, March 24.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
SOCIETY OF ARTS.—8 P.M. Mr. Clement Heaton: Uses of Cloisonné for Decoration in Ancient and Modern Times.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Laws and Regulations governing the Metropolis.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. C. B. Lockwood: The Treatment of Strangulated Hernia when the Intestine is Gangrenous or Ulcerated.—Mr. W. Arbuthnot Lane: Chronic Traumatic Arthritis.

Wednesday, March 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. Galabin: Modern Methods of Cæsarean Section.

Thursday, March 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens of Uterine Polypi will be shown by Dr. Edis. Dr. Robt. Bell: The Treatment of Chronic Disease of the Uterine Adnexa.

Friday, March 27.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, March 28.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

DIARRHŒA DUE TO BALANTIDII.

J. S.—THE Balantidium coli is an infusorium which was discovered by Malmsten of Stockholm as long ago as 1856, and has since been studied by Leuckardt and others, being found frequently in the cæcum and colon of the pig, and occasionally in the human colon, in which case it is, sometimes at all events, associated with obstinate diarrhœa and intestinal ulcers. It is probable that it may be conveyed from the pig to the human subject in food. Little is known about the treatment, and no examples of this parasite seem to have been found in the human subject in this country, or in France or Germany. In Sweden and Russia, however, it is probably not a very uncommon cause of diarrhœa. A case is reported by a Russian medical woman in which a female patient of seventy years of age, who suffered from chronic interstitial nephritis, was attacked by profuse diarrhœa, there being as many as twenty stools daily containing balantidii. Enemata of salicylic acid and of naphthalin and also of salol were tried, the last being given in quantities of a quarter of an ounce twice a day; all these, however, without effect. When the salol enema was given three times a day, and increased to a third of an ounce each time, the parasites disappeared. They returned, though in diminished numbers, as soon as the salol enemata were left off.

Inexpertus should refer to Whitaker's Almanack, or other authority on the point.

"RECIPROCITY BETWEEN MEDICAL PRACTITIONERS AND CHEMISTS."

To the Editors of THE LANCET.

SIRS,—I beg to support your correspondent, Mr. G. D. Mackintosh, whose letter on the above subject appeared in your issue of the 7th inst., in his denunciation of dispensing by general practitioners. There can be no doubt that this stupid practice is at the root of the custom of prescribing by chemists; and is not this latter from many points of view an unmitigated evil? And certainly dispensing is degrading to the profession itself, and is, moreover, exceedingly irksome and inconvenient. The dispensing every day at fixed hours comes in the way of the visiting, the midwifery, and even of the desirable and necessary rest. People, who may be very ill, have often to wait for hours before the busy practitioner can be back at his surgery to make up the medicine; and, in order to be at his surgery as soon as possible, he has to hurry over his visits; hence imperfect diagnosis and meagre advice. He has also to subject himself to all the discomforts and risks of violent exertion in hastening about, and of postponed and irregular meals; has to shorten his consultations by doing the manual work of making up a bottle of physic, for which he has time only to slop in hurriedly two or three things, probably not infrequently incompatibles; has to deprive himself of much well-earned leisure, of time for his hobby ("Every sensible man who wishes to preserve his soul and his senses has his hobby"), for general and medical reading, for study of his obscure cases, and for doing more in thought and in deed for some of his patients who may need all the deliberate scientific attention possible. Furthermore, the custom involves the habit of visiting and consulting merely to get to know as quickly as possible for what crudely to prescribe; and hence there is much less true, careful scientific observation and good to humanity than might be. And do not patients now go to a "doctor" to get physic, and expect to get physic which must be in nothing less than a bottle, and as cheap as possible? No advice or attention is recognised minus physic. Hence grows the enormous popular evil of everlasting drugging and physic-taking, as evinced in the vast extent of the patent medicine trade. Your correspondent's

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remark is undeniable—that the present general practitioner is considered by the public little more than a mere tradesman and a shopkeeper; so the cheapest doctor is sought for, and he is the one who does the "roaring business." To eliminate this popular delusion; to raise the tone of a practitioner's status, habits, and vocation; to rid himself of an inconvenient and fatiguing "extra" to his legitimate calling—is surely not a very difficult matter. Give the dispensing over to the chemists, by reciprocal arrangement or otherwise, as seems most convenient. But to give up the present malpractice only needs united action on the part of all truly professional men, and then even general boycotting, if necessary, of all private practitioners who persist in underbidding their brethren by keeping up the shop system at cheap charges. Could not your correspondent or some other supporter read a practical paper on the subject at the next British Medical Association meeting, when the matter could be discussed, proposals made, general universal action taken, and a special committee and subassociation formed, if necessary? For a practitioner to decline to join such an effort, would it not seem suspicious that he intended to keep out so as to trade in drugs and water, and, like the dog in the manger, rob of their legitimate and whole business well-trained, well-educated men, infinitely better able to dispense neatly, properly, safely, and effectively than the best dispensing medical practitioner who ever "fagged" through his dispensing? Or is he afraid of a chemist's criticism of his prescriptions?

I am, Sirs, yours truly,

York, March 10th, 1891. SICK OF DISPENSING.

HERPES ZOSTER.

To the Editors of THE LANCET.

SIRS,—It is an interesting fact that one case of herpes zoster is generally the herald of others, but those attacked need not necessarily live in the same immediate locality, nor yet have been in contact with each other. This tends to prove that the neuritis originates in some common cause, either atmospheric or otherwise. The disease, as far as my experience goes, is not at all infectious, although some cases have been reported in which infection appears to have been at work in their propagation. The following cases which recently occurred in my practice, none of them nearer than a mile of each other, bear out these statements. On Dec. 6th, T. H——, male, aged forty-five, applied at my surgery with a well-marked crop of herpes following the course of an intercostal nerve. On Dec. 16th, R. M——, male, aged sixty, sent for me. He complained of intense pain in his gluteal region and lower part of the abdomen of the left side. On examination I found him suffering from herpes, the vesicles in this case being over the distribution of the gluteal branch of the external musculo-cutaneous and middle musculo-cutaneous nerves. On Jan. 10th, N. C——, female, aged ten, appeared with the herpetic eruption on one side of her face, mapping out the course of the facial nerve. Jan. 14th: W. B——, male, aged forty-seven. Herpes over the course of an intercostal nerve.

All these cases did well under the treatment except the second, in which the neuralgia has not yet disappeared, and at one time was so severe as to make his friends apprehensive of his sanity.

I remain, Sirs, your obedient servant,

GEO. TANDY WILKINSON, L.R.C.S.I., &c.

Cloughton, Scarboro', March 16th, 1891.

"A NEW METHOD OF NASAL IRRIGATION."

To the Editors of THE LANCET.

SIRS,—Without doubt the profession is indebted to Dr. Ball for ringing under notice the simple and ingenious method of nasal irrigation devised by Dr. Pins of Vienna. To obtain its maximum of usefulness there are three points in which the instrument and its mode of use are capable of improvement:—1. The nozzle should be oval, so as to fit the nostril without undue distension. 2. It should be made of hard rubber and perforated in five or six places, as is the case with the nasal syringe which goes by my name; for by this means a combination of a coarse spray and of a full stream is obtained; and in this connexion it has to be noted that whatever method of irrigation is employed the fluid is bound to return by the opposite nostril, provided the nostril of entrance is thoroughly blocked by the nozzle of the irrigator. 3. The nozzle should not be inserted *up* the nostril, as in the engraved figure, but *along the floor;* for while a stream in the former direction is not necessary for efficient nasal irrigation, it is very liable to produce headache and other symptoms of discomfort.

I am, Sirs, yours faithfully,

Weymouth-street, W., March 16th, 1891. LENNOX BROWNE.

THE SURGICAL TREATMENT OF PHTHISICAL CAVITIES.

To the Editors of THE LANCET.

SIRS,—When the Koch treatment was first introduced, I remarked to my partner that it put me in mind of the surgical treatment of phthisical cavities, which was mooted and written about, and, if I mistake not, put into practice so long ago as the end of 1851. This identical method of treatment is reported in THE LANCET of March 7th this year, and cases given from the practice of Drs. Sonnenberg and Leser. The date is fixed in my mind, as I remember reading the accounts on my first voyage to the Australian gold fields. If reference were made to THE LANCETS at the end of that year accounts of this treatment would be found.

I am, Sirs, yours obediently,

Brierley-hill, March 16th, 1891. SAINTHILL PEARSE.

A FOREIGN BODY LODGED FOR EIGHT MONTHS IN THE BRONCHUS.

To the Editors of THE LANCET.

SIRS,—A case was lately reported in one of the French medical journals of a cigarette having remained in one of the bronchial tubes of an individual for seven months. A similar case came under my notice lately, in which a bone was lodged in one of the bronchial tubes for over eight months. The circumstances are these. A lady, while partaking of some soup at lunch, turned quickly to speak to one of her children, when she felt the bone pass into the larynx, which caused a fit of coughing with nausea and vomiting. In the afternoon she went for a drive, having a sensation of "tightness in the chest and wheezing." About midnight or the early hours of the following morning she had another prolonged fit of coughing, followed during the day by feverishness at intervals, a troublesome cough, and all the symptoms of subacute bronchitis. With the aid of sedatives, such as chloric ether, bromide of ammonium, and compound tincture of camphor, the tightness in the chest was alleviated. The cough of the early hours of the morning still continued, but was at length allayed by a mixture containing sulphonal. Although greatly relieved by the medicine, she did not regain her usual health, and was very subject to exacerbations of cough and tightness in the chest on exposure to cold, so that for two months she was confined to her room. The bone was at length ejected in the following manner. The patient had been away on a visit, and on her return, after a journey of two days, she was coughing more than usual and could get no sleep, which she ascribed partly to having caught cold during the journey and partly to having been disturbed by her children, who were suffering from whooping-cough. Twenty-five drops of chlorodyne were accordingly given along with the usual dose of sulphonal mixture, which had the effect of giving her a good night's rest. This was repeated the next night, and on the following morning I was informed that she had rested well till 4 A.M., when a severe fit of coughing came on and lasted for over two hours, during which she several times nearly fainted, and that at length the bone was coughed up. Beyond a few streaks of blood in the sputum, there was nothing to indicate any injury it had caused in its passage out.

I am, Sirs, yours faithfully,

JOHN W. WEIR, M.D.,

March, 1891. District Surgeon, Enjeobo, Transkei.

THE PROFESSIONAL STATUS OF QUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—Will you give me your assistance on the following case in your next issue?

I am qualified assistant to Dr. A., am twenty-seven years of age, was registered in December, 1888, am a member of the local medical chirurgical society, have been with Dr. A. a year and eight months, and hold more the position of a salaried partner than an assistant. Dr. A. is sent for to a case one night. He is ill, and sends me in his place. I treat the patient, and he takes two doses of my medicine, getting some relief. For some reason or other he has no confidence in me, and so, two hours perhaps afterwards, sends for another medical man—Dr. B. In the course of a conversation with my principal afterwards, Dr. B. says that he does not recognise me—ignores me—in the case. Dr. B. knew that I was qualified, and he also knows me personally. 1. Can Dr. B. thus ignore me? 2. Generally speaking, what is the position of a qualified assistant in relation to other qualified men? 3. Ought I to take up the matter, and request an explanation from Dr. B.? I am, Sirs, yours faithfully,

March 16th, 1891. C. A. L.

*** Dr. B. undoubtedly was within his right in ignoring the qualified assistant of a principal ill, but we think he would have acted a higher and more neighbourly part in regarding the illness of the principal as a reason for consulting with the *qualified* assistant or attending the patient till his own adviser was able to resume the care of the case. We assume that the relations of the two principals were of a friendly character, and that the patient would have acquiesced in such an arrangement.—ED. L.

Rapier.—1. We do not see that our correspondent has any remedy for the action of his board of guardians.—2. "Rapier's" friend can certainly claim his fee.

Conservative has forgotten to enclose his card.

THE USE OF THE RECTAL BAG IN LITHOTRITY.

To the Editors of THE LANCET.

SIRS,—With reference to Mr. Reginald Harrison's remarks in your last issue on the use of the rectal bag in certain cases of sounding for stone and of lithotrity, I am quite sure that a paper I read before the Harveian Society of London, and which was afterwards published at length in the *Provincial Medical Journal* of April, 1890, "On some Sources of Error in Sounding for Stone when the Prostate is Enlarged, with a description of a New Form of Sound," has entirely escaped his notice. I there described the use of the rectal bag in a case in which I performed lithotrity, a very deep post-prostatic pouch being present, in order "to prevent, as far as possible, débris from falling into the pocket behind the prostate." I am, Sirs, yours truly,

Wimpole-street, W., March 16th, 1891. G. BUCKSTON BROWNE.

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Francis.—It has been taught by some authorities, especially in France, that there is a period of agenesis in the inter-menstruum; but it is not an established fact. No doubt there is not so great a probability of insemination being fruitful at the time stated by our correspondent. As a matter of experience, conception does take place during any part of the month, but perhaps with greater certainty after or before the menstrual period.

A Country Person.—Our correspondent should communicate with the Medical Defence Union.

Dr. W. N. Thursfield will find the case commented on in our last issue.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

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NEWSPAPERS.—*National Press (Dublin), Edinburgh Evening Dispatch, North British Mail, Islington Gazette, Leeds Mercury, L'Independence (Brussels), Birmingham Post, Scottish Leader, The Newspaper, City Press, Windsor and Eton Gazette, Mining Journal, Liverpool Daily Post, Manchester Guardian, Bristol Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Hertfordshire Mercury, Windsor and Eton Express, Local Government Chronicle, Sunday Times, Broad Arrow, Builder, Metropolitan, West Middlesex Standard, Chemist and Druggist, Spectator, Saturday Review, Law Journal, Pharmaceutical Journal, Architect, Guy's Hospital Gazette, Surrey Advertiser, Labour World, West Middlesex Advertiser, Times of India, Melbourne Argus, Bradford Observer, New York Herald, Hastings News, Eastbourne Gazette, Worcester Chronicle, Luton Times, Staffordshire Chronicle, Southampton Times, Shields Daily Gazette, Norfolk Daily Standard, Sidmouth Observer, Cape Times, Evening Mail (Portsmouth), Chester Courant, Dartmouth Chronicle, Andover Standard, Birmingham Daily Gazette, Corriere D'Italia (Rio de Janeiro), The Schoolmaster*, &c., have been received.

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ABRIDGED REPORT OF

The Lumleian Lectures

ON THE

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

By W. H. BROADBENT, M.D., F.R.C.P. Lond.

LECTURE II.

Dilatation (*Symptoms*).—The symptoms which attend the earlier stages of dilatation are extremely varied and very vague. An imperfect and fluctuating supply of blood to the brain will give rise to impairment of bodily and mental energy and to irresolution and vacillation of purpose; the memory is li able to fail, especially in regard to recent events and the power of sustained attention and consecutive thought is diminished. The frame of mind will often be despondent and the temper may be irritable; there may be attacks of giddiness or faintness; sleep is usually disturbed and sometimes almost absent, and, whether the nights are good or bad, there may be sopor at any period of the day, the patient dropping off to sleep even over his morning news, paper. For the same reason, the irregular and imperfect blood-supply and the back pressure in the veins, digestion and the action of the liver will be deranged. The appetite is usually bad, and food is followed by discomfort and by flatulent distension, which latter, again, reacts on the heart and gives rise to oppression, or palpitation, or irregular action. The bowels are generally torpid. The urine is usually deficient in amount and high coloured, and there is often an habitual deposit of urates. Turbidity of the urine day after day, whatever the food and drink, or weather, or mode of life, should direct attention to the state of the circulation. There is no one, and scarcely any combination, of the symptoms enumerated, however, which may not occur independently of weakness and dilatation of the heart, especially in states of system attended with high tension, and it would be waste of time to attempt to disentangle those directly due to the state of the heart from those which are merely accidentally associated with it.

The special symptom which calls attention to the heart as the probable starting-point of a number of ailments is breathlessness on slight exertion; but even this may be produced by other causes—by anæmia, for example. After middle life pernicious anæmia may often give rise to extreme breathlessness, which may excite a suspicion of heart disease. High arterial tension alone which has not yet given rise to dilatation, simple debility, very sedentary habits, may also cause great shortness of breath. These facts are mentioned in order to warn against a too-ready inference that heart disease exists simply because the breath is short. A sense of breathlessness coming on during repose, and inciting the patient to make frequent deep inspirations, is usually a symptom of nervous depression, and has no necessary relation to heart disease. For the most part, as the disease advances symptoms arise which are indicative of back pressure in the systemic veins—a gradually advancing œdema, and the like. But the problems which come before us in the prognosis of dilatation of the heart will best be elucidated by discussing them as they present themselves at different stages of the disease, and we may first take the fully developed effects. The patient is dropsical, œdema invading the thighs, loins, and abdominal parietes, as well as the legs, and there may be fluid in the abdomen, and perhaps in one or both pleural cavities. The feet and legs will be cold and pale, or purple and livid, especially if hanging down. The hands also will be cold, and are often crimson or purplish, and the nails of a deep or dusky instead of a bright pink. A white patch on the hand produced by pressure is very slowly invaded by returning colour. The urine will be scanty, of a deep colour, and probably high specific gravity. It most commonly throws down a copious deposit of brickdust lithates, and it may contain albumen. The appetite will be very bad, and frequently there are intolerable nausea and disgust for food; the tongue will probably be furred and flabby; the bowels constipated or irregular.

One of the most distressing symptoms is sleeplessness, and when, after hours of weary shifting of position, the sufferer is overcome by fatigue and drops off, he has painful dreams, and wakes suddenly in a fright with a dreadful sense of suffocation for lack of voluntary help to his respiration. The longest and best sleep will be obtained while sitting in a chair, and sometimes by day rather than in the night. The patient is probably unable to lie down in bed, and is propped up by pillows, or he must have his legs down, and therefore spends day and night seated in his chair. Remarkable exceptions, however, are met with in this respect, some sufferers, while extremely ill, being able to lie down without distress. The face is pale, and perhaps puffy, with injected capillaries over the cheeks, and wears an expression of distress, and the eyes are watery. The lips are pale or bluish. The breathing is more or less laboured, even in repose, and the sufferer constantly supplements his reflex respiration by voluntary deep breaths. When he speaks it is in fragmentary sentences, and with evident effort and aggravation of the respiratory distress. The least movement brings on shortness of breath, which is often painful even to witness. The pulse is frequent, irregular, and probably greatly deficient in tension, but not always. Pursuing the examination, the jugulars will be found full, but not as a rule greatly distended or pulsating forcibly. The liver will be enlarged, coming down sometimes as low as the umbilicus, and extending across the epigastrium into the left hypochondrium. It will often be jogged by the right ventricle, but does not usually exhibit the true expansile pulsation. There may be fluid in the peritoneal or pleural cavities, more commonly not, and there may be physical signs of œdema and congestion of the lungs, or the percussion note may be good and the entry of air free and unattended with adventitious sounds of any kind to the very base of both lungs. The physical signs of dilatation, as already described, show that this is the condition underlying the symptoms of embarrassment of the circulation. We are called upon to answer the question, Has the patient a chance of recovering from the condition described, or will he die?

The first element in the judgment to be formed will be the urgency of the symptoms, and special importance will attach to two of the series—the nausea and loss of appetite and the sleeplessness—from the effects which they have on the patient's strength. Frequent vomiting of food is of very grave import, not only because the patient does not get the benefit of the nourishment, but because it shows that the stasis in the abdominal circulation has reached a point which interferes seriously with the digestive secretions. Attacks of faintness and extreme exhaustion, or of severe dyspnœa, are also very serious. An observation is here necessary. It is not always when the dropsy is excessive that the patient's condition is worst. From the late appearance or entire absence of dropsy in fatty degeneration of the heart in aortic disease and mitral stenosis it would appear that a certain degree of pressure in the arterial system is required to coöperate with the back pressure in the venous system for the full development of dropsical effusion; and when the œdema remains moderate in amount, while other symptoms, such as breathlessness, faintness, and great muscular weakness, the latter especially, indicate great cardiac inefficiency, it may be because the left ventricle propels the blood with very little force. A frequent, short, and unsustained pulse and heart beat without much œdema may thus indicate a more grave condition than extreme dropsy; long-continued great frequency of the pulse is an unfavourable sign. The urgency of the symptoms being about the same, a greater degree of dilatation, as indicated by a more extended area of dulness, displacement, and especially greater diffuseness and weakness of the apex beat and impulse, and greater shortness of the first and weakness of the second sound, will add gravity to the prognosis, and it will be borne in mind that approximation of the first and second sounds is always a very serious indication. A favourable point in the physical examination will be a good right ventricle impulse, and it has appeared to me that there is a greater margin for treatment when the liver is considerably enlarged.

When the symptoms and physical signs have been well weighed, the first question to be asked in view of prognosis is whether there has been any adequate exciting cause of the symptoms. If there has been recognisable over-

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exertion or excitement or grave anxiety—any mental or bodily strain—or if there has been a chill, giving rise to bronchitis or other affection of the lungs, or deranging seriously the liver and digestive organs, it may be hoped by means of rest and treatment to undo the ill effects and restore the balance. If, on the other hand, the symptoms have crept on gradually without traceable cause of the kind mentioned, and especially when due care has been exercised, and there has been no habitual error in regimen or neglect of bowels, the probabilities are that the symptoms are the outcome of conditions which cannot be reversed, of radical inherent weakness of the heart. The previous mode of life, active or sedentary, careful or imprudent, and especially the patient's habits with regard to alcoholic stimulants, will have a very important bearing on the probable issue of the attack, as will also his general soundness, and the absence or existence of disease of any other important organs, especially the kidneys and liver. The patient's cheerfulness, hopefulness, and courage under his sufferings, or his despondency, will make powerfully for or against him, not only as direct influences, but because the state of mind is often an index of the state of the system.

Another inquiry of great prognostic weight will be as to the patient's family history. It is through this that we obtain an idea of his vital tenacity and of the trustworthiness of his tissues, and sometimes of the special liabilities of his heart. There are few tendencies which run more strongly in families than those which are manifested in the heart and vascular system, whether to high arterial tension with the effects on the vessels and heart which follow from this, or to dilatation and weakness, or to degeneration; and a prognosis, otherwise not unfavourable, might have to be instantly revised on learning that the father and an uncle or two, or a brother, had died at about the patient's age from heart disease. Finally, the response to treatment will speedily afford an indication of the utmost value, and this may be described at once.

Treatment.—We have to deal at the same time with defective propulsive power on the part of the ventricle and damming back of blood in the venous system, and the indications are to relieve the ventricles of work and increase the vigour of their action, and at the same time to deplete the venous engorgement. Now when the heart is weak, as it is here, it is much more important to relieve it of work than to try to lend it vigour. We can do much more in one direction than in the other, and we are more sure of our result. Without first diminishing the resistance in the circulation, to stimulate the heart to more energetic contraction may only cause it to give way and dilate further. This last object must indeed be taken first. We must undo the effects as a means of reaching the cause, a course we are often compelled to take in therapeutics.

Venesection, the most effectual means of relieving the right side of the heart, is very rarely applicable in dilatation. It is conceivable that under some pulmonary complication, resulting from chill, the engorgement of the right auricle and ventricle might be such as to make bloodletting the less of two dangers; but the initial fault being weakness of one or both ventricles, we cannot trust the heart to adjust itself to a rapid change of any kind, and the right ventricle may not be in a condition to take advantage of the relief afforded it. Usually, however, the venous engorgement is developed slowly, and the indications for venesection do not arise. The application of six or eight leeches over the liver is safer, and it will usually effect all that can be done by direct abstraction of blood. The indication for this local bleeding is enlargement of the liver, and when this is considerable it rarely fails to afford striking relief. Very frequently, for example, the patient who has previously been tortured by sleeplessness will sleep at once, and sometimes for a night or two afterwards. The reason for selecting the hepatic region for the application of the leeches is simply that pain and tenderness felt there are relieved; it is not supposed that blood is drawn from the liver, or that the same amount abstracted elsewhere would not be equally efficacious. The leeches will be followed by a hot poultice, which, besides encouraging the bleeding, will bring blood to the surface. When the liver is not enlarged, and especially if the right ventricle sounds and impulse are weak, there is no advantage to be gained by leeching.

Concurrently with the application of leeches a purgative will be given, which will deplete the portal system at the same time with the systemic veins. Afterwards this will be the principal means of keeping down the venous engorgement. In a large majority of cases, indeed, we have to depend entirely upon purgatives for these purposes, as abstraction of blood by any method is inadmissible. It is not a matter of indifference what purgatives are employed. The object of a purgative is not simply to carry off as much fluid as possible, and so drain the tissues. This may be the case, perhaps, in ascites from cirrhosis of the liver, but in heart disease of any kind, and especially in dilatation, much more is to be gained by rectifying the balance of the circulation, when the kidneys will resume their function and remove the excess of liquid. Purgatives, then, may be made to contribute to this; and before considering them further we must refer to the first object of treatment—the relief of the heart from work and the increase of its vigour. Of these, we can be much more sure of the first than of the second; we can more easily and certainly diminish the resistance in the arterioles and capillaries than we can lend strength and efficiency to the action of the heart, and, without removing the obstruction in the peripheral circulation, it might only do harm to incite the heart—weakened as its structures are—to greater effort to overcome it. Now, mercurial purgatives have this effect of diminishing arterio-capillary resistance and of lowering arterial tension, and therefore of relieving the heart. The hypothesis by which, as it seems to me, this observed fact is best explained is that mercury influences the liver chemistry and promotes the elimination of impurities which when retained in the blood give rise to resistance in the capillaries. But, whatever the explanation, the fact that the arterial tension is notably lowered by mercurial aperients is confirmed by daily experience, and it is remarkable how frequently the statement recurs in works on heart disease that other remedies often fail to act until a dose of calomel or other mercurial preparation has been given.

Mercurial purgatives, then, have the double effect of depleting the portal system, which relieves the engorgement of the liver and the distension of the right side of the heart, and of diminishing the resistance in the peripheral circulation, and so relieving the left ventricle of stress. Very commonly the best of testimony as to the beneficial character of the result is given by refreshing sleep. The disadvantage, if such it be, that less fluid is carried off than by hydragogue cathartics is often compensated by an increased flow of urine; and elaterium, gamboge, jalap powder, and the like, when repeated give rise to great exhaustion. Calomel, then, or blue pill, or grey powder should be given in doses of from one to five grains, according to the urgency of the case, with colocynth and hyoscyamus, or rhubarb, followed by some mild saline. After one or more full doses at the outset a moderate dose may be given every second or third night. The acid tartrate of potash will often coöperate beneficially both by its action on the bowels and on the kidneys. The heart being relieved of work, may be urged to more vigorous contraction by digitalis, strophanthus, spartein, squills, caffeine, convallaria, apocynum—the special heart tonics,—with which strychnine may usually be combined with advantage. In a case of extreme suffering digitalis may be given with ammonia, ether, and nux vomica; in the more chronic stages with iron, and perhaps strychnine. Sometimes an effect can be obtained by giving citrate of caffeine in a pill at the same time with digitalis in a mixture when singly neither seems to be efficacious. Squills, again, may be given with digitalis, as in the well-known pill with mercury, or in some liquid combination. Next to digitalis stands strophanthus, which is a most valuable alternative when digitalis seems to produce sickness, as is sometimes the case, or when it fails to exercise a favourable influence on the heart. Sulphate of spartein I have seen to be of great service when digitalis and strophanthus appeared to have exhausted their influence; of convallaria I have little to say. Apocynum has in one or two cases seemed to carry off dropsy in a remarkable way, but one patient died suddenly when apparently just well. It is not necessary to go into greater detail with regard to these remedies. Throughout a case of the kind the medical man has to fight, so to speak, with both hands, and continuous watchfulness will be necessary to meet the vicissitudes which occur, and many changes in method may be required while the same principles are held in view.

The prognosis, as has been said, will be greatly influenced by the response to treatment. This will be energetic, especially in the matter of purgatives, in proportion as the symptoms are urgent, and if no favourable effect is produced the prospect of recovery is very poor.

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Very commonly improvement takes place up to a certain point and then progress seems to stop, to come to an end. This is a trying stage both to the patient and to the medical man. Changes of remedies and new combinations must be tried both in regard of the aperient and of the tonic, not frequently and capriciously, but with careful study of the results and due allowance of time for obtaining them. Sometimes it does good to suspend all medicines for a few days and start afresh. Under these circumstances, again, it may be of the greatest service to drain away the fluid from the legs, even when the extent of the œdema is not such as actually to call for it. The good result of removing an ascitic accumulation, should this be present, may be still more striking. Even a moderate amount of effusion in the pleural cavity, such as we should not think of dealing with under ordinary circumstances, should be aspirated. A straw may turn the balance either way, and a very slight obstacle may prevent the heart from regaining control over the circulation. It is not always desirable to postpone the removal of fluid till the particular conjuncture described arrives; it may be an urgent necessity at a very early period. Usually, however, it is prudent to give remedies a chance before resorting to puncture or paracentesis. As regards the method of drainage to be employed, whether for œdema or ascites, but particularly in case of ascites, Southey's tubes are in my opinion much the best.

The feeding of the patient through the long course of treatment will be a task of extreme difficulty. We have to contend with nausea and distaste for food amounting to disgust; sometimes the sufferer positively cannot swallow anything requiring mastication. The object to be held in view is to keep down the volume of the blood while maintaining its quality. A small amount of solid or semi-solid food should be taken about every three hours. When the patient is not too ill to take his meals at the accustomed time, it is a great encouragement to him to be allowed to do so, and he may then eat what he can of fish, fowl, tender meat, game, milk pudding, &c. When the amount is small, the regular meals may be supplemented by intermediate nourishment, such as beaten-up egg, a little milk, or perhaps a small cup of strong soup or beef-tea, or a little beef or chicken jelly or meat extract. Soups and jellies have the disadvantage of containing little proteid and much liquid, but they are stimulants to the flagging heart. Potted meat sandwiches are a great resource, and the pulp of raw beef-steak can be given in this form, disguised by cooked meat or concentrated gravy. A German physician of my acquaintance tells me that he frequently feeds his patients suffering from cardiac dropsy of the kind under consideration entirely upon raw ham, and has great success. The amount of fluid must be restricted as far as possible, especially that taken with food. Stimulants are usually imperatively necessary, but should be kept within limits known and defined by the medical man. The patient is under a great temptation to resort to them for the relief of faintness, exhaustion, and nausea. Cream of tartar drink may be taken to quench thirst between meals, and in some cases a copious draught of hot water once or twice a day will run through the system rapidly and wash out the tissues without augmenting permanently the volume of blood or adding to the dropsy. When this is tried, it must be ascertained definitely that the amount of urine is correspondingly increased.

A question which arises in almost every severe case is whether the patient must be urged to remain in bed or allowed to get up. Bed is undoubtedly the best place for him at first, during what may be called the crisis of the attack, for many reasons; the rest and warmth protect the heart from the strain of exertion and changes of temperature. On the other hand, the dyspnœa is usually worse in the recumbent position, even with the shoulders raised, and may be intolerable unless the legs are allowed to hang down; not unfrequently it is simply impossible for the patient to remain in bed. A suitable chair, therefore, is always necessary, with support for the elbows, shoulders, and head, which can be taken advantage of in turn in the frequent changes of position to which the patient has recourse to ease his breathing or elude discomfort, and the quickness and ingenuity of the nurse or medical man in devising expedients may greatly alleviate his sufferings. A bed table or other form of support upon which the patient may rest his arms or elbows and head when leaning forward will often be very useful. A patient will frequently sleep better in this position than in any other. Perhaps the most common state of things is that the patient is up during the day, and tries to spend more or less of the night in bed. When he cannot at once bear to go to bed at night he may undress and sit in his chair wrapped in blankets near the bed for a time, when he will often, after a nap or two, be able to lie down and sleep.

We come now to the prognosis and treatment of dilatation of the heart at a period when it has not given rise to the serious consequences just described, and an enormous degree of dilatation may be arrived at before such effects are developed. As regards physical signs, the most important evidence will be, not as to the actual size of the heart, but as to the strength of its walls. A greatly dilated heart which is capable of giving a recognisable apex beat and fair impulse of right or left ventricle is more to be trusted than one which has apparently undergone less change, but the movement of which can scarcely be felt at all. There is always a possibility that degeneration may enter into the causation of the symptoms. It is better, again, that the sounds should be strong than weak, spaced than approximated; and it is important that the second sound of both ventricles should be well marked. Irregularity of action is, according to my experience, of less consequence than frequency, and I have learnt not to attach serious importance to the regular alternation of a strong and weak beat so long as there is no great frequency with it. The pulse is important chiefly as an indication of the vigour with which the blood is propelled into the arterial system. Dilatation of the heart presupposes high arterial tension at the time of its production, and it is a favourable sign that a certain degree of this tension persists. When we find a low tension pulse, unless this is the result of treatment, it means that the heart has not sufficient strength to maintain the pressure in the arteries.

The probability of improvement or of prolonged immunity from ulterior consequences will next depend on the general condition of the patient, on the soundness and nutritional vigour of his tissues and organs, and especially of his blood-vessels; if he is weak and anæmic, on the cause and character of the impairment of health, whether it is inherent or accidental—whether, in effect, it is remediable or not; when the state of the heart and of the general health is attributable to alcoholic or other excesses, including the abuse of tobacco, to habits or mode of life or external conditions adverse to health; whether or not the patient is willing and able to renounce his self-indulgence, and relinquish his vices or alter his ways and surroundings.

When we come to consider the treatment of cardiac dilatation in this stage, the first question to be asked is, what object may we venture to set before ourselves? What assurance can we give our patients? Can we ever reduce existing dilatation? Can we even arrest the tendency to increase and avert or postpone the evil consequences? To no question can we return a more confident answer. Every day we see dilatation reduced in some degree in favourable cases, and at the worst much can be done to prevent the development of its ill effects. It has already been stated that in the acute aggravation of dilatation which gives rise to symptoms the apex and extreme limit of dulness may be seen to return towards the normal position day by day, and the well-named "curable mitral regurgitation" of Dr. George Balfour is only a form of dilatation incident to anæmia. The means to be taken are, in the first place, the removal of any recognised cause in the habits and mode of life and surroundings so far as this is practicable. Next to improve the general health by favourable hygienic influences and by suitable remedies. The amount of exercise to be taken will be a most important question, but no rule can be laid down applicable to all cases. Speaking generally, exercise is good, and whatever amount of walking can be done without breathlessness or exhaustion, and especially with enjoyment, that will be safe and beneficial, and, provided due prudence is exercised, walking uphill need not be forbidden. The exercise, however, should be regular and daily, not spasmodic with intervals of inaction. A walk may be taken day by day with advantage which taken only once a week would be injurious. The exercise, again, should not come immediately after food, and it is better taken early in the day than in the afternoon or evening. A walk into the City, for instance, might do good when a walk back after the day's work would do harm. In some cases the treatment may have to be begun by actual rest in bed for two or three weeks,

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perhaps with massage, and the patient may have to resume exercise with just the same caution as food is resumed after hæmatemesis from gastric ulcer.

The question will now come before us whether we should recommend the graduated walking uphill at considerable elevations, known as the Oertel's treatment, for heart disease. In my judgment the idea is good, inasmuch as many people will submit to carry out strict regulations to which a certain amount of mysterious virtue is attached who will not obey common-sense instructions. I doubt very much whether any good will be done in fatty degeneration of the heart; some cases of early dilatation will be benefited, and an enormous number of imaginary cases of heart disease will be cured; the class of patients who come to us saying that they have heart disease will be attracted by the treatment as carried out; a few patients will be killed. But it is not always possible either to modify the patient's life in such a way as to put an end to the conditions which tend to produce and aggravate dilatation of the heart, or to secure for him all the desirable hygienic influence. It would be useless, for example, to recommend a City clerk to relinquish the sedentary occupation which is his only possible livelihood, and little less vain to order a lady who has never walked in her life to take regular exercise. We can, however, do much to keep down the arterio-capillary resistance or high arterial tension, which plays such a fatal part in the production of dilatation of the heart. We can regulate the diet and warn against habits and occasions which are injurious, and by securing efficient and continuous elimination from the liver and bowels we can often make just that difference which is required for the safety and comfort of the patient. This can usually be effected by an aperient pill containing a small dose of one or other of the appropriate mercurial preparations taken twice a week, and we must not be afraid to order patients whose hearts have given way under protracted tension to go on with such a pill for years. Tonics of various kinds may be given with advantage from time to time with acids or alkalies. It is not often that digitalis or remedies of the same kind will be required continuously, though they may render service occasionally.

Lecture

ON

THE RELATION BETWEEN NOSE AFFECTIONS AND DISEASES OF THE EAR.

Delivered at the Charing-cross Medical School,

BY A. MARMADUKE SHEILD, F.R.C.S. ENG.,

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(Reported from Shorthand Notes.)

GENTLEMEN,—The subject of my lecture to-day is the relation between nose affections and diseases of the ear. I shall discuss the matter as plainly and practically as I can, without entering into the consideration of obscure affections. I hope that what I say may prove useful to you in your future professional life. The connexion between inflammatory affections of the middle ear and like affections of the nose and pharynx was very early recognised by writers on aural surgery; especially was it recognised and dwelt upon about the year 1887. It was in that year that the connexion between obstructive diseases of the nose and diseases of the ear was especially treated of by Meier. He may be looked upon as a pioneer in bringing into professional notice this all-important matter. Since that time it has become more and more recognised, until now it is well known to all those who deal with affections of the nose, throat, or ear. The first point I would strongly draw your attention to is this, that the mucous membrane of the tympanum and the mucous membrane of the naso-pharynx are directly continuous, and therefore it is very obvious that inflammatory affections of the naso-pharynx may spread by direct continuity of tissue into the tympanum. Almost all inflammatory affections of the tympanic cavity have their prototype in the inflammatory affections of the naso-pharynx. Mark, then, that if we have an unhealthy condition of the nose and throat with constant attacks of inflammation, we shall also meet with an unhealthy tympanum with recurrent inflammation, and the type of inflammation of the tympanum will originate or "take its cue" from the inflammation of the naso-pharynx. To illustrate this in as commonplace a way as I can we will consider one or two ordinary types of inflammation of the tympanic cavity, and first consider that well-known "ear trouble" which is called catarrh of the middle ear. The disagreeable symptoms of the attack are very likely familiar to some of you in your own persons. You get an ordinary catarrhal cold, accompanied with dryness of the nose and fever. Soon afterwards profuse discharge from the nose occurs, with perhaps pain shooting up the Eustachian tube. You next find that you are a little deaf, that you have a sense of "stuffiness" and "giddiness" in the head. What has happened is merely that the catarrhal process in the nose and throat has spread up the Eustachian tube, and has caused swelling and hyperæmia of the lining membrane of the tympanum, and has probably also narrowed or occluded the lumen of the tube by catarrhal swelling. The ordinary result of an attack like this is recovery. Patients are commonly content to let the affection take its own course, and the swelling of the mucous lining of the tympanum and tube gradually subsides, and these parts are restored to their normal condition. In many instances, however, a very slight degree of permanent deafness is often left behind, and recurrent attacks of this nature more often lay the foundation for chronic inflammatory changes than is usually believed. Next let us take a typical case of a more severe catarrhal condition of the throat and nose. In such the inflammation of the tympanic cavity may be associated with exudation of mucus, varying in quantity and quality, within the cavity of the tympanum. The resulting deafness and "stuffiness" are marked and serious. Though the patient cannot hear the voice of others, his own voice is distressingly loud, and tinnitus is marked. He is usually also cognisant of "bubbling" or "cracking" sounds. Unless such a case is treated, the sufferer may remain with his hearing seriously impaired. The exudative material poured out into the tympanic cavity will become organised, causing fibroid changes which are often irremediable. A third type, which is so familiar to all practitioners, consists of suppurative affections within the tympanum, complicated with the ulcerated sore-throat of scarlet fever, measles, diphtheria, and the like. In scarlatinal sore-throat the mucous membrane of the naso-pharynx is enormously swollen and hyperæmic, laden with micro-organisms of all kinds, and not uncommonly ulcerated. The type of inflammation is septic and virulent. Like pathological processes are induced within the tympanic cavity, and the unfortunate results which ensue are a matter of daily observation—destruction and discharge of the ossicles, perforation or destruction of the drum, and not infrequently complete loss of hearing. What I have put before you so briefly will, I hope, serve to illustrate the clinical fact first stated, that inflammatory processes in the nose and naso-pharynx are the great originators of inflammations of the tympanic cavity.

The practical lesson that we learn is this—that whenever we are treating any chronic inflammatory affection of the middle ear we must remember that it is our duty to treat morbid conditions of the nose and naso-pharynx also. This general consideration applies to all varieties of middle ear inflammations. A large number of these cases occur in young children, and it is of the greatest importance to remember that suppuration of the middle ear in children can be often entirely prevented, or much lessened in violence, if the naso-pharynx be kept clean and free from accumulated and inspissated discharge. This is a detail of treatment which is too often entirely neglected in cases of sore-throat and colds in the head. The measures by which you will best carry out cleanliness will be by gently syringing through the nares every four hours a very dilute alkaline and antiseptic fluid, pleasantly warm. We may employ a warm and dilute lotion of boracic acid, chlorinated soda, or the like. Such remedies do a great deal to "clear out" the back of the naso-pharynx. In a tolerant child or an adult you should invariably with a soft curved brush remove the inspissated secretion from the back of the nose with antiseptic and astringent applications. These indications in young and fractious children are very diffi-

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cult to carry out, but a great deal may be done with patience and perseverance. You will find that though they will often resist brushing out the throat, they will permit you to clean out the naso-pharynx with a spray containing such drugs as iodine, benzoin, chlorate of potash, chlorine, or other moderately dilute and antiseptic applications. In the ulcerated throat of measles or scarlet fever, the importance of the above measures cannot be exaggerated. What I have already said must have its bearing and application on the great and complicated question of obstructive affections of the nose. For the worst cases of naso-pharyngeal inflammation are found in those patients who suffer beforehand from naso-pharyngeal obstruction. If you take the case of a perfectly healthy child having a perfectly healthy naso-pharynx, with no enlarged tonsils and no adenoid growths obstructing his nose, you will rarely find that such will suffer from destructive suppuration of the middle ear; but, on the other hand, if you have a patient who before the onset of severe inflammation has these complications, you will find that it is in such cases especially that dire results, as far as the ear is concerned, will ensue. The more important varieties of nasal or naso-pharyngeal obstruction to which I would draw your attention to-day are: (1) Adenoid growths and enlarged tonsils—I put these together because they are frequently clinically associated; (2) that so-called hypertrophic condition of the spongy bones of the nose in which these structures are enlarged and covered with swollen, hyperæmic, almost erectile, mucous membrane; (3) polypi of all kinds; (4) deviation of the septum of the nose and bony growths, so-called exostosis; and, finally, cicatricial contraction of the nares from old ulcerations of syphilis, necrosis, or the result of operative procedures. These, you will remember, are only some of the causes of obstruction of the nose and naso-pharynx that you are likely to meet with in practice, but they will suffice for our purpose to-day.

Let us, then, consider why these conditions may cause or complicate deafness. First of all, you will have to consider that in many of these conditions—and I want to be particularly explicit about this—the orifices of the Eustachian tubes are mechanically closed by swelling, adenoid growths, or especially inspissated mucus. This is found to be the case in greatly enlarged tonsils, adenoid growths, and great nasal obstruction. When there is nasal obstruction, it must be obvious that we cannot get proper ventilation of the naso-pharynx. The patient may not be able to "blow his nose" properly, and the result is that inspissated mucus and foul discharges collect in enormous quantities at the back of the naso-pharynx, forming a veritable plug of nasal excrement. We must also consider the possibility of mechanical interference with the normal acts of the opening and closing of the Eustachian tube. It is not at all clear to me how the Eustachian tube opens and shuts, but there are certain muscular fibres inserted into it, and it is supposed by some that the action of these fibres is interfered with by swelling or accumulated secretion, and that consequently the normal patency or closure is interfered with in the acts of deglutition and respiration. In the vast majority of cases of nasal obstruction if inspissated discharge hangs about the back of the naso-pharynx an unhealthy catarrhal condition of the mucous membrane is caused by it. This eventually leads to inflammation of the tympanum.

Having thus briefly considered some of the explanations of the association of obstructive diseases of the nose and deafness, we will next consider what are the leading symptoms of nasal obstruction. They are quite familiar to many of you. The patient is, in the first place, a mouth breather, invariably goes about with his mouth open. This gives rise to a vacuous expression of countenance, which often finds a corresponding condition in the intellectual powers. Such patients usually snore loudly at night, and very often are more or less deaf, the deafness being bilateral and varying in severity. These symptoms are common to many forms of obstruction of the nose, and are especially marked in young individuals who are the subjects of enlarged tonsils and adenoid growths. In the latter class of cases the voice is altered, and the patient pronounces his words badly, especially their terminations, speaking with a peculiar nasal intonation.

To make the diagnosis complete in the examination of a case of supposed nasal obstruction, you would first inspect the anterior nares by well dilating them with one or other of the specula I now show you, a good bright light must be thrown into the nose. You may use the electric light, good daylight, or a strong lamp and reflector. You can then definitely see and touch polypoid growths, great swellings or hypertrophy of the mucous membranes, or deviations of the septum nasi. If you next illuminate the back of the throat you may discover enlarged tonsils or adenoid growths. The latter usually show very characteristic signs of their presence. The tonsils are more or less enlarged, and the soft palate is frequently depressed by the bulk of the growth above. In bad cases portions of the growth may actually be seen. The appearance of the pharynx is more or less granular. If you detect these symptoms in a child or young adult who is a mouth breather, you need not put the patient to the inconvenience of passing your finger behind the soft palate. Such a patient is practically certain to be the subject of adenoid growths. Next comes the question how to best examine the back of the nose. First consider posterior rhinoscopy. This is exceedingly useful in adults, but children and nervous individuals who cannot bear the sight or contact of instruments seldom tolerate it sufficiently for you to profit by its adoption. In order to employ it the soft palate is well cocainised with a 5 per cent. solution of cocaine, and the mirror is then inserted behind the soft palate and turned into whatever position is best for getting a view of the posterior nares. Often it is needful to draw the palate forwards with a small sharp hook. I show you a useful form of this instrument, and also the self-retaining palate hook of Mr. C. Baber. Posterior rhinoscopy requires time, skill, and tolerance, with repeated examinations. Some of you have seen the method I commonly employ in the out-patient room, which has much to recommend it. After cocainisation the index finger, well protected with lint at its root, is rapidly passed behind the soft palate and swept over the posterior nares. This manipulation, well executed, gives much explicit information. By posterior rhinoscopy or manipulation, then, you may obtain a clear idea of the condition of the back of the nose in cases of obstructed breathing. Adenoid growths are perhaps the most important of all causes of nasal obstruction, and the idea is rapidly gaining ground in my own mind that a certain amount of these growths, with swollen mucous membranes and lodgment of secretion, are the great cause of deafness in many cases of apparent anterior nasal obstruction. What I mean is, that in cases of deviating septum and hypertrophy of the spongy bones the condition of the naso-pharynx is often the true cause of the associated deafness. Cases of nasal obstruction, especially adenoid growths, are not only important because they cause and complicate deafness, but from an educational point of view. I do not hesitate to express my belief that many of the failures that occur in the education of boys are due to a certain amount of deafness from these conditions. You all know the stupid boy at school, who generally has his mouth slightly open, who snores in the dormitory at night, who fails to learn his lessons. He is often the "butt" of his comrades, and sometimes has his "ears boxed" by the masters. The unhappy lad probably does not hear properly. His deafness varies according to the state of the weather, or whether he has a "cold in the head." But he may fail in the educational race, and have to end his career in some rural occupation. This is not an exaggerated picture of a considerable number of these cases. Sufferers from adenoid growths are worse in damp and cold localities, and the varying amount of deafness is one of the great characteristics of the affection. When we have the question of the treatment of these adenoid growths under consideration we shall find that of all affections of this kind which complicate and cause deafness the treatment of adenoids is perhaps the most satisfactory, because you may take an individual who is really seriously deaf, and by care and pains bring him to a condition in which he can hear perfectly well. Before operating for adenoid growths, or indeed any form of nasal obstruction, you should be quite clear that the condition of the auditory nerve apparatus is healthy, and that the patient has not had prolonged and chronic inflammation of the middle ear previously. To this I will again refer.

The treatment of adenoid growths, when they really exist, consists in their removal. I think one of the first points to bear in mind in connexion with operations upon them is the comparative risk from anæsthesia. This is

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not as well known as it ought to be. When I tell you that I am cognisant of several fatalities having occurred you will see how urgent this consideration becomes. I always prefer in young adults to remove adenoids by the help of cocaine applied through the nose and to the naso-pharynx. In children and nervous individuals it is necessary, however, to give an anæsthetic. The patient should never be put so deeply under the influence of the anæsthetic as to deaden the insensibility of the larynx. Any material which finds its way into the air passages is then coughed up. When these growths are removed by scraping, cutting, or avulsion, sudden profuse bleeding takes place, the blood mixed with a marvellous quantity of inspissated secretion, and fragments of growth will often half fill a very considerable bowl. If a patient is deeply unconscious and in a bad position, the danger of his choking is sufficiently obvious. The operation usually performed by myself is scraping these growths away with the steel nail, strongly advocated by Sir William Dalby, which I now show you. This most useful instrument must not be used timidly. Your own finger nail is sufficient, if you have a strong one, for the cases of young children. [The lecturer here exhibited and described the principal instruments used in operations connected with the removal of adenoids of the nose, and continued:] You must not imagine that when you have removed the adenoid growths the treatment is at an end. It must be continued for at least three weeks or a month after the operation by swabbing out the naso-pharynx with astringent and antiseptic solutions, by syringing the nose and throat with the same remedies, and especially carrying out Politzer's treatment every day so as to render the Eustachian tube thoroughly permeable. If this be done the results are very gratifying both in improving the hearing and the intelligence of the patient. Professor Guye has written a most interesting paper on the connexion between intellectual torpor and nasal obstruction, pointing out the bad effects of nasal diseases on the cerebral circulation by lymphatic obstruction. My own idea is that the reason why these people are stupid and unintelligent is that they do not hear properly. At all events, on the removal of the obstructions you will generally find the parents telling you that the child has improved in intelligence, has moved up a class at school, and so on. You will next ask me whether there are any other risks in the operation for adenoid growths besides the matter of anæsthesia. There is one point which should be always inquired into before proceeding to remove either tonsils or adenoid growths—viz, whether the patient is the subject of the hæmorrhagic diathesis. Children are sometimes brought to us who are "bleeders," and if you perform operations on the nose or pharynx in these cases, you will place yourself in great difficulties, and may perhaps lose the patient. Another very important matter is, that in a certain proportion of cases of nasal obstruction there may be old-standing perforative otorrhœa, with a foul and septic condition of the tympanum. There is then some risk of an operation setting up brain mischief, or even leading to general sepsis.

Time will only allow me to speak briefly of the so-called hypertrophy of the spongy bones as a cause or complication of deafness. I have stated my belief that it is in the naso-pharynx we should especially seek the conditions which complicate or cause hardness of hearing, and it is my candid opinion that the influence of anterior nasal obstruction has been much exaggerated in this connexion. I am aware that I am speaking in direct opposition to many recognised authorities on this subject, but everyone, however humble, has a right to his own opinion, and I believe that many operations are now done upon the spongy bones and septum of the nose which further time and experience will consign to a well-deserved oblivion. Occasionally the spongy bones, or rather the mucous membrane over them, become so swollen and enlarged as actually to occlude the passage, and then there is a need of treatment. The common procedure consists, first, of cauterising the surface with the galvano-cautery, or by the use of chromic acid, and the resulting cicatrisation will usually sufficiently pucker up the surface of the bones to admit a sufficiently free draught of air to pass through the nose. More rarely it is needful to remove portions of the bone, either in front or posteriorly, with a small wire écraseur. Deviations of the septum nasi are only occasionally associated with deafness. To say that all deviations of the septum cause deafness is not correct. I have notes of cases of marked deviation of the septum where there was no deafness whatsoever, although the patients had been the subjects of this malformation all their lives. If I were to examine a case of unilateral deafness with corresponding extreme deviation of the septum nasi, I should long suspect and examine for some other condition than that of the nose as the cause or complication of the hardness of hearing.

The same remark applies to cicatricial contraction of the nostrils. You have the opportunity of seeing complete occlusion of the nostrils after lupus or syphilitic ulceration, and no deafness coexists. When cicatricial processes go on at the posterior nares, the result is different. Deafness is common in these cases, for the tube may be involved in the morbid processes. The instruments used for deviated septum and removal of the spongy bones are various knives, forceps, and snares, which I now show you. [After mentioning the various forceps and instruments used in these operations the lecturer proceeded:] But whatever operation you perform on the septum of the nose, you must remember that the septum will very readily recur to its former position, and therefore it requires to be kept straight. Ivory plugs form the best things the patient can wear as a septum splint, and these require to be worn by the patient for a certain number of hours every day for a considerable time before the septum can be got to retain its position permanently.

We have now to consider what conditions require to be revolved in our minds before recommending to a patient the performance of any operation on his nose for the relief or cure of deafness. The first thing we must consider is the period of time during which the deafness has lasted; in other words, the degree of chronicity of the deafness. A gentlemen twenty-two years of age was brought to me some months ago who was stone deaf—that is to say, if you bawled into his ear on either side he could not hear. Tuning forks applied to the head could be plainly heard by both ears, indicating that the auditory nerves were quite healthy. His friends informed me that all his life he had been subject to colds in the head and to sore-throat. The deafness was gradual in onset, and was of at least ten years' duration. The examination of his drums showed them to be opaque, shrunken, and lustreless, denoting that chronic inflammation had been going on in them and in the tympanic cavity for a long period of time. He had marked hypertrophy of the spongy bones, and was a mouth breather. My opinion was that in such a case dilatation of the nose and removal of the bones would be quite futile so far as relief of the deafness was concerned, because pathological processes had been going on for so long as to produce irremediable conditions.

Next we must inquire into the condition of the auditory nerve apparatus by careful examination through means of tuning forks. In such conditions as congenital syphilis, the sudden deafness following mumps, the specific fevers, and marriages of consanguinity, evidence may be found of labyrinthine mischief. Time merely allows me to mention these cases, and they are comparatively rare; but if you find nasal obstruction in such you will not markedly benefit them by operating on the nose. Suppose, in the next place, that the patient has had violent and severe suppurative inflammation of the tympanic cavity, and the drums and ossicles are almost entirely destroyed, you would in that case recommend removal of the adenoids or other nasal obstructions merely as an assistance in the treatment of the suppurative affection of the ear, and you would not promise that it would in any way improve the hearing.

Lastly, you must always in these cases, if you are honest as a medical man, be rationally certain that there is a definite disease of the nose to be operated upon, and should have a reasonable idea that the deafness may be dependent upon it. It is so easy to look upon the cavities of the body and see disease which does not really exist; and therefore before you say a patient is the subject of polypi, adenoid growths, hypertrophy of the mucous membrane, or the like, you must be quite sure that they exist to such a marked degree as to justify their removal by operation. Operations undertaken for conditions themselves not fraught with grave suffering or danger to life should be looked upon with a peculiarly jealous eye by judicious surgeons. Disaster in such is very lamentable. I plead for the cavities of the nose the same privileges as are accorded by careful surgery to other parts of the body: accuracy in diagnosis, care in selection, and a distinct rational belief that the patient will receive benefit from the operative procedures adopted.

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ON PEROXIDE OF HYDROGEN, OR OZONE WATER, AS A REMEDY.

CONTINUED FROM A RESEARCH COMMENCED IN THE YEAR 1858.[1]

BY B. W. RICHARDSON, M.D., F.R.S.

INTRODUCTORY AND HISTORICAL.

IN the year 1858 I commenced a study on peroxide of hydrogen with the view of introducing it into medicine as an addition to our treasury of remedies. The history of this singular chemical body, discovered in the year 1818 by the illustrious French chemist Baron Thénard, had in 1858 almost become forgotten, and no one, as far as I could learn, had ever taken it up in respect to medical research; although, as I afterwards ascertained, a seat of learning at Haarlem did for some years offer a prize for a medical research upon it, which prize was withdrawn not very long before my work was entered upon, simply because there had never been a competitor. The peroxide when I commenced my investigations was so rare a chemical curiosity that I could not obtain it in quantity, and was therefore obliged to set up the necessary apparatus for its manufacture in my own laboratory. In the manufacture I followed in every particular the instructions left by Thénard, and continued the manufacture until I could assign good reasons for advancing the fluid into the position of a valuable remedy in the treatment of disease. The great novelty of the peroxide solution—for the substance must be considered a solution, although it can be made to take the gaseous form—rendered the study of its physical properties alone of extreme interest, and, as it still remains a novelty to many, I may with advantage devote a few moments to a description of one or two of the special qualities of the solution; otherwise I might be talking an unknown language to some who are not conversant with certain primary facts, themselves unique in the history of chemical substances. This solution, then, is water containing, according to strength, so many atmospheres of oxygen. It is an oxygen atmosphere in solution. It is not, however, a mere mixture, but a peculiar chemical compound. The oxygen can be made to accumulate, volume by volume, until the volume of water, say as much as would fill a pint measure, can rise to ten, twenty, thirty, and some say even over a hundred volumes of oxygen, before complete saturation is reached and a volatile body is formed. In the specimens on the table before us, prepared by Mr. Robbins, we have solutions of three strengths—viz., of ten, twenty, and thirty volumes. We hold, therefore, in a specimen of the peroxide condensed oxygen chemically combined either with the hydrogen of the water, or with the oxygen of the water, or with the two elements acting as a radical. There is here not much difference at first sight from what is common in combinations where there is accumulation of one element on another; as, for example, in the case of carbon with one equivalent of oxygen as in carbonic oxide, and carbon with two equivalents of oxygen as in carbonic dioxide. But now comes a distinction. The combination of the added oxygen in hydrogen peroxide is stable in the presence of some substances, unstable and easily evolved in the presence of others. Some substances, inorganic or organic, when added to the solution are neutral; other substances, inorganic or organic, evolve the oxygen and are themselves unchanged; a third kind evolve the oxygen, and with that some of their own contained oxygen; a fourth kind absorb the oxygen into themselves.

I will illustrate this by experiment. Here are flasks equally charged with a ten-volume solution of the peroxide. To flask *one* I add a portion of oxide of iron: the action is neutral. To flask *two* I add black oxide of platinum: there is brisk action, so that I can light a taper from the oxygen thrown off. To flask *three* I add solution of permanganate: there is very brisk action, and, with the action, evolution of oxygen from the permanganate as well as from the solution. To flask *four* I add arsenious acid: there is absorption of the oxygen by the arsenious compound. These are inorganic bodies; let me compare them with organic. Into flask *five* I put albumen: the action is neutral. Into flask *six* I put fibrin: there is brisk evolution. Thénard, in a general way, had a wonderful knowledge of these distinctions, but he did not live to follow them out or apply them. They are all important to our medicinal labours, in pointing the way to success by the experimental instead of by the empirical mode of questioning nature.

These observations led me very early in my research to form an original view as to the constitution of the fluid. When I liberated the oxygen from the solution, by one or other of the means described above, I found that the oxygen was neutral—that is to say, it presented neither ozonic nor antozonic qualities, but was like the oxygen of the common atmosphere in its natural state. When, however, it existed in solution in the form of peroxide, it responded to ozone tests, rendering the ozone test-papers of deep, dark colour, as I now demonstrate. These facts led me to conceive that the extra oxygen exists as ozonised oxygen, ozone, in combination with water, so long as it is in solution; but that, as it comes off from the solution, it escapes as atmospheric oxygen. This theory has met with opposition, for which I have much respect, but I still hold by it; and I call special attention to it here because, from a medical point of view, it is of primary importance. As I shall show, we use the oxygen of the solution in two forms: sometimes as a solution, when it is ozonic; and sometimes as a gas liberated from the solution, when it is neutral. The difference is great; it is the difference between ozone and oxygen, and until the profession understands that difference the utmost confusion must prevail in regard to therapeutical action.

It may gratify a new generation of Fellows of the Medical Society of London if I briefly relate what led me to use this solution in the first instance. It was in this way: I was working at ozone, and had been studying, with the late Dr. Moffat of Hawarden, the changes of disease in what he called "atmospheric ozone periods." I made peroxide, and found that the oxygen condensed in it coloured Moffat's ozone test-papers of starch and potassium iodide, a fact which showed that this oxygen was more active than the oxygen of common air. It then occurred to me that the peroxide might be of service as a medicine if its action on the animal body and on the tissues were well investigated and defined. In those days we were inclined to believe that diabetes was due to the deficient oxidation of organic material,—a theory which an original observation of mine, namely, that dogs could be made to eliminate urine containing glucose by subjecting them to an atmosphere of carbonic oxide, seemed to confirm.

As a result of this line of thought I made an original investigation, the results of which I reported at length in a paper read to the Medical Society in the session of 1860, describing the chemical, physiological, and therapeutic action of the peroxide. I also fixed in this paper the best form of the peroxide of hydrogen for medical use, suggesting ten-volume strength as the most certain and convenient for ordinary use. At the meeting of the Society on March 3rd, 1862, under the presidency of the late Mr. William Coulson, I made a second report on the medicinal use of the peroxide. I had by this time used it in 223 cases of disease, including cases of phthisis, diabetes, anæmia, subacute and chronic rheumatism, strumous enlargement of the cervical glands, mesenteric disease, pertussis, chronic bronchitis, chronic laryngitis, mitral disease, and some forms of dyspepsia. On referring back to these two communications to the Society, I find in them a good deal of new physiological inquiry. I find that I had tested all the free tissues of the body to learn which of them did and which of them did not eliminate the oxygen by contact. I found that fibrin of blood and cellular tissue liberated the oxygen, that albumen and gelatine did not liberate it, that blood entirely deprived of fibrin absorbed the oxygen; and that common water deprived of all its gases so efficiently that fish could not live in it could be reoxygenated and revitalised by addition of the peroxide solution, but not to the same perfection as obtains in water that has not been deprived of its natural air. It was also in these researches that I observed for the first time the remarkable influence of temperature on the action of the oxygen on the body; that heat caused oxygen to lose its power of sustaining muscular contractility, and that by it oxygen could be made a relaxant even of tetanic spasmodic rigidity. What, however, will interest most a practical body of men like the members of the Medical Society of London will be the *résumé* of the therapeutical properties of the peroxide from those earliest papers. The *résumé* was as follows:—In the paper of 1860 it was advanced (*a*) that the

[1] Essay read before the Medical Society of London, on Monday, March 23rd, 1891

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peroxide quickens oxidation, increases secretion, arterialises blood, and hastens the decomposition of decomposing animal tissues; (*b*) that in combination with blood it restores the power of muscles just dead to contract, and yet calms muscular irritability; (*c*) that it promises valuable aid in a large number of cases of disease; (*d*) that in instances of poisoning by narcotics and by the alkaloids it might with advantage be introduced into the blood by transfusion or injection; (*e*) that in tetanus it affords a most rational treatment, since tetanic rigidity is relaxed by its presence in muscle; (*f*) that in typhus, in which death occurs from what I designated *asphyxia commencing in the blood*, it might be employed with good effect as an oxygenator; (*g*) that it ought to prove useful both as an internal and external remedy in the treatment of cancer. In epitome of results in 1862 I drew the conclusions: (*a*) That in diabetes the peroxide reduces the specific gravity of the urine, whilst it rather increases quantity; (*b*) that in chronic and subacute rheumatism it affords relief; (*c*) that in valvular disease of the heart with pulmonary congestion it gives relief to the dyspnœa; (*d*) that in mesenteric disease and in jaundice it causes an improvement in the digestion; (*e*) that in pertussis its effect for good is very remarkable, since it cuts short the paroxysms of cough, and seems decidedly to shorten the period of the disease; (*f*) that in chronic bronchitis it lessens the dyspnœa, and renders the expectorated matter less tenacious; (*g*) that in chronic laryngitis it gives pain on being swallowed, and does not appear to be useful; (*h*) that in anæmia it does not of itself render a service, but favours the good effect of iron; (*i*) that in the first stage of phthisis it causes improvement in the digestion, and in the later stages gives unquestionable and even wonderful relief to breathlessness and oppression, acting, in fact, like an opiate without producing narcotism, and assisting oxidation.

But the most important new observation I had to communicate to the Society in 1862 was that in free and frequently repeated doses the peroxide could be made to produce a modified salivation, a fact which led to two suggestions: one, that in the use of the mercurial and iodide preparations it might be the chlorine or iodine in them which caused the ptyalism; secondly, that the peroxide would be a good substitute for mercury and the iodides in the treatment of syphilis. In the discussion which followed upon the reading of this paper I was warmly supported on several points by Drs. Septimus Gibbon, Symes Thompson, and Gibb, all of whom had been prescribing the peroxide on the suggestions made in the previous paper of 1860. Dr. Gibb bore special testimony to its value in affording relief during the last stage of phthisis, for which I had prescribed it in the case of a member of his own family.

Such in the briefest terms is the history of the introduction of the peroxide of hydrogen, as it is commonly called, or ozone water, as I should call it, into medicine. Soon after it was thus introduced it created a great deal of discussion, but owing to difficulties in its manufacture and some instability of the earlier specimens of it, it fell out of favour; except in two unexpected directions. An incidental observation of mine that the solution gave a golden colour to feathers led to the employment of it as a golden hair-dye; while a similar reference to its effective action as a deodorant and disinfectant led, I believe, to its use in that very excellent compound called "sanitas." Occasionally also it was employed in medicine, and now and then I was consulted in regard to its employment. Matters remained in this state until about five years ago, when by some sudden and inexplicable impulse the peroxide began to become popular in medical practice, especially in America, and from that time onwards I have had communication with practitioners, both at home and abroad, who were anxious to be informed on points of a practical kind relating to it. It was this circumstance that led me three years ago to propose to revive the subject in the Medical Society of London, and finally to bring forward the present paper. This was the more necessary because, although practitioners who are now largely prescribing the remedy have often, in the most handsome manner, assigned to me the credit of originating the practice, they do not seem to have seized on the principles which led me to introduce it, nor to see the compound nature of the fluid and the different lines of practice which spring from that recognition. Meantime, in the twenty-nine years that have elapsed I have continued to work at this research; practically in the steadiest manner, theoretically by fits and starts, as the opportunities of my overcrowded life have permitted. Now, as a kind of continued report, I propose to give a further account of my stewardship during the gap of time that has supervened since I last spoke on this topic from this place.

NEW METHODS OF APPLICATION.

In carrying out this idea let me notice in the first place a few new facts bearing on modes of administration which did not in any way belong to the previous communications to the Society. Some time about 1863 I made an observation regarding the behaviour of the peroxide with ether. In agitating a thirty-volume solution of the peroxide with anhydrous ether I found that the ether became ozonised, and that it was in this way possible to make a new and useful medicinal preparation. To the preparation so formed I gave the name of ozonic ether, and from the time when it was first announced to the present it has been utilised. The late Dr. Day of Geelong, in Australia, sent to me early for the mode of preparation, and having learned to use it in his own practice, devoted to it much study up to the end of his valuable life. He warmly supported my application of the fluid in the treatment of whooping-cough and its use as an inunction after scarlet fever. He it was who first employed this compound with guaiacum as a blood test. The admixture of the peroxide with a volatile compound like ether led me to another modification—namely, the administration by inhalation of the oxygen evolved either as oxygen, ethereal oxygen, or ozone, for I soon learned that it could be administered, as I shall show presently, in all these states. This was a distinct advantage, as it enabled me to move from the mode of administration by the mouth to a larger and, in cases of lung disease, a more direct method. Taking further advantage of the ozonic properties of the peroxide in solutions, I introduced it in 1865 at the meeting of the British Medical Association at Chester for the deodorisation and disinfection of rooms in which patients suffering from infectious diseases are under treatment, and also for application as spray to fetid or ulcerated surfaces, as in diphtheria, syphilitic ulceration of the throat, and gangrene. For this purpose it may be used either as ozonic ether or simply as the aqueous solution. In addition to the above new progressions I have made others of a physiological and practical kind, bearing on other possible methods of administration. Some of the facts disclosed in this direction are published in the last *Asclepiad*, and I may therefore be content by stating of them in summary, that it is practical to inject the peroxide solution subcutaneously; also, under some circumstances, into mucous and serous cavities, and even into the pulmonic structures. Lastly, I would report in this place that I have tested the effects of morbid substances like purulent matter on the peroxide, as I had previously tested it on normal structures.

OLD AND NEW EXPERIENCES IN PRACTICE.

Let me now proceed to compare the practical experiences I have gained in the use of the peroxide since 1862. In the previous reports I dealt with many cases of disease in which I had applied this remedy; and in respect to all the forms of diseases specified I may say that in the long experience which has succeeded I have nothing of moment to retract, little to modify, much to emphasise and support.

Diabetes.—I have many times prescribed the peroxide solution in this disease since 1862. In four cases, specially noticeable because occurring in members of our own profession, the patients were all satisfied of benefit from it, one of them taking it during a period of eleven years. The results have always been that it reduced the quantity of sugar, but did not reduce the quantity of water eliminated, unless it were combined with codeine, with the use of which Dr. Pavy has made us so familiar. Codeine *three* grains, alcohol (sp. gr. 0·830) *two* fluid drachms, solution of peroxide of hydrogen (10 volume strength) *two* fluid ounces, distilled water to make *twelve* ounces, makes a mixture of which half a fluid ounce may be taken three times a day in a wineglassful of water, and forms the most useful prescription I have ever used in diabetes.

Phthisis pulmonalis.—In the treatment of phthisis pulmonalis the solution has been constantly in use, and in it I have found the greatest service. In some cases of this disease, in which the solution has been borne in large doses during the early stages, it has led to such remarkable results towards recovery that I might almost have

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been pardoned if in younger and enthusiastic days I had declared in it the discovery of a specific. Happily a natural fear of the *experientia fallax* held me back from such a course; but the fact ought not to prevent me from stating that in the first stages of phthisis it is of all medicinal remedies I know the most valuable, and that in the later stages, when dyspnœa is the distressing symptom, it is, especially in combination with ozonic ether, the remedy that gives most relief. It soothes, and it seems to supply oxygen to the blood, and so act vicariously, to a small extent, for the purpose of respiration.

Pertussis.—I repeat all I previously said about the value of the peroxide in the treatment of whooping-cough. I am sure there is nothing so near to a specific for this affection. The only difference I have instituted in the employment of it in this disease consists in prescribing it in the form of ozonic ether. I prescribe it for children in this form, in doses of from ten to sixty minims, diluted with half a fluid drachm of spiritus tenuoris and four drachms of water, to be taken four times a day, with a little more water if that be preferred. But I also prescribe the ozonic ether in this disease by inhalation from the Siegel spray inhaler. In one instance, where the paroxysms were as severe as I have ever seen them, they were arrested at once by this inhalation, and were held in such control by continued inhalations that what may be called a "cure" was the immediate result. As to the power of the oxygen to control muscular spasm, I repeat with still more insistance its value. In practice I have availed myself of the peroxide with ether, not only in whooping-cough, but also in asthma and in angina pectoris. Here the ethereal solution can be used by inhalation in its simple form, or combined with amyl nitrite, or other body of the antispasmodic class that will admix with ether and diffuse with it. In these affections I administer by inhalation in a manner that will be demonstrated in the last section of this essay.

Local use for ulceration and purulent exudation.—In the paper of 1862 I recommended the use of the peroxide for external application in cases of surface decomposition, ulceration, and purulent exudation. I have to emphasise this use. I will name one case alone in illustration. I was called to see a gentleman advanced in life who was suffering from moist senile gangrene of the foot. The extremity was so offensive and the separation so slow, although there was a fair line of separation, that the management was most distressing. I had the foot wrapped in cotton-wool holding peroxide solution slightly acidulated with dilute hydrochloric acid. The offensive odour was at once removed, and the process of separation went on rapidly; the foot soon fell off, leaving an excellent healing surface. The patient lived many years afterwards in fair health, and died at last of mere old age.

Syphilis.—I restate the value of the peroxide in syphilis, and especially in all the chronic stages and conditions of syphilis in which mercury or potassium iodide would, usually, be resorted to. It seems to me, in these cases, to have an intermediate action between mercury and potassium iodide. It is also useful in indolent syphilitic eruptions, and it has the great advantage over both mercury and the iodide that it leaves no after-effects of an injurious character. Salivation from large and frequently repeated doses is soon recovered from when the fluid is withdrawn, as if the ptyalism had been induced by a volatile substance. It also aids the action of mercury, rendering much smaller doses of that remedy effective. The property exemplified in this action is that of elimination by excitement of glandular function, an excitement probably always sustained by the oxygen of the tissues in normal states of health, and only accelerated by the active oxygen. I have of late years become so confident of the value of the peroxide in the treatment of syphilis under the conditions in which mercury or iodide come ordinarily into use that I have employed it as a matter of course. I use it in the primary as well as the secondary form of the disease, and for those cachectic lesions in the syphilitic constitution to which the term "tertiary" is applied there is, I think, no remedy equal to it. In obstinate cases of ulcer and cutaneous eruption it goes admirably with the mercurial bath, and may be prescribed in doses of from two to four drachms three times a day with full doses of fresh cinchona infusion. The solution also has its local use. It makes an excellent injection into the nasal cavity when there is syphilitic ulceration of the cartilage and spongy bones.

(To be concluded.)

THE ELECTRIC BATH.

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THE electric bath is used in the treatment of morbid affections that influence the whole constitution, especially in some having their origin in the central nervous system. It is an easy way of applying general faradisation, but not so efficacious as when the interrupted current is applied successively to the nervous centres by means of a dry electrode or one moistened with salt-and-water. It is an extravagant and wasteful way of applying the continuous current, except in such conditions as those alluded to, in which the general system suffers, and when there is no local manifestation of the disease on which the effects of the current can be concentrated. Both currents may be combined and used through a bath, and perhaps this combination is more easily accomplished by the use of a bath than in any other way. It has yet to be proved that the combined current possesses any increased therapeutic value; it is certainly not so useful as the continuous current in rheumatoid arthritis, lead poisoning, lateral sclerosis, and gout. The interrupted current may be used singly to the extensor muscles of the wrist in lead palsy after the galvanic bath has been administered.

The bath itself, which holds the water, may be made of metal, porcelain, or wood. When made of metal the bath forms one of the electrodes by having the rheophore from one pole of the battery attached to it. Such baths are usually made of copper, and are kept quite bright. A japanned metal bath is not suitable for any form of electric bath. When the copper bath is used provision has to be made so that the patient may not touch the metal. The bottom of the bath is covered by wooden lattice work on which the patient lies, a rest is also provided for the back, and protecting pieces of wood are placed at the sides, at the position about where the hips would come, so as to prevent the body of the patient touching the sides of the bath. This form of bath cannot be so advantageously used for influencing the general system, as the second electrode has to be used locally on different parts of the body, and the part that it is applied to has, for the time being, to be out of the water. On this account such strong currents cannot be borne as when the whole of the body is immersed; and although most probably the current is widely diffused, and enters the body at many points, it is more or less concentrated at the part to which the second electrode is applied, and as the resistance is greatly reduced by the warm water a strong current cannot be tolerated. With this form of bath, or this mode of administering the bath—that is, with the second electrode applied to a part out of the water,—the conducting power of the water may be increased by the addition of salt, soda, or acid. Any addition of the sort is inapplicable in the usual and more useful modes of administering an electric bath, as will presently be explained. The best bath to employ is one made of a non-conducting material such as porcelain or wood. A porcelain bath is the cleanest and best, but it is also the most expensive and is very heavy. Each porcelain bath is made in a separate mould, and many are rejected when turned out on account of some flaw; this difficulty experienced in their manufacture is compensated for by an increased price being placed upon the perfect ones. A wooden tub is therefore the cheapest. The best wood of which it can be made is oak, similar to that employed for ordinary household tubs. The appearance can be improved by the outside of the bath being polished and the hoops of iron which support it being painted black. The inside of all wooden baths used for electrical purposes should be carefully painted with non-metallic paint. White non-metallic enamel is the best for this purpose. If the inside of the bath is not thus protected the wood becomes waterlogged, and is then a conductor of electricity. The water in the bath should be of the temperature of 100° F., if the patient can bear it, as the conductivity of the water is increased in proportion to its temperature; but it is often advisable to give the first bath of a series at a temperature of 98°. Many patients cannot at any time bear a higher temperature. The bath should be well filled with water, so that when the

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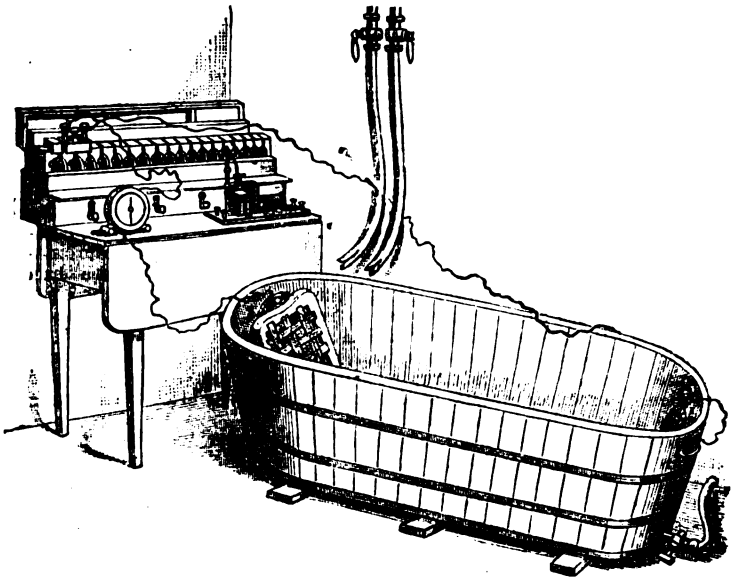
patient lies down his whole body and shoulders may be covered. A bath thermometer should always be used to ascertain and regulate the temperature.

In the ordinary and more efficacious electric bath a metal plate is placed at the head and foot, and always kept bright. These metal plates form the electrodes, and each is provided with a binding screw, to which the rheophores from the

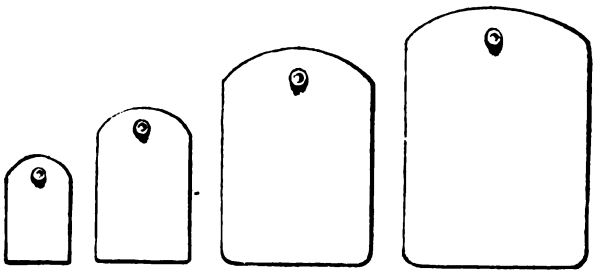
FIG. 1.



Wooden bath and Stöhrer's battery.

battery can be attached. The best metal is copper. It is no use having these metal sheets plated, as is sometimes done for appearance sake, for the plating is always decomposed on the one attached to the positive pole. The electrode placed at the head of the bath is usually the larger, and may measure a foot and a half by a foot, that at the lower end of the bath being eleven inches by nine. Smaller plates are used for the hips and knees when it is wished to localise the current more or less to those parts. The water should always be deep enough in the bath to cover the plates.

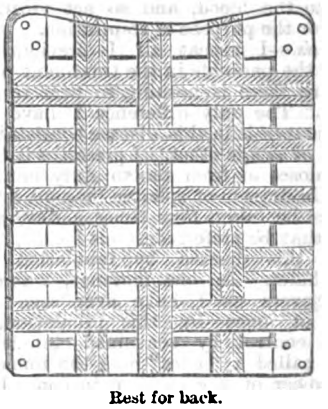
FIG. 2.



Metal plate electrodes.

The shoulders and back of the patient are prevented touching the plate at the head of the bath by a rest made of wood, something like a picture frame across which is stretched pieces of webbing. A depression is made in the upper bar of the frame to support the back of the patient's head. The feet may be allowed to touch the electrode at the opposite end of the bath because the epidermis on the soles is so thick that it is not likely to become blistered. If a patient prefers she need not place her feet against the lower electrode, but may keep them in close proximity. A galvanic current will always prefer to traverse the human body when immersed in ordinary water, as the body is the better conductor; but not so greatly superior as to insure all the current passing through it. The water in the bath offers a broad conducting medium with a large transverse sectional area, several times larger than the patient, and therefore a large portion of the current traverses the water and is altogether lost to the patient. This makes the employment of electricity in the form of a galvanic bath such a wasteful one. It has been calculated that a fifth part only of the current traverses the patient. Thus with a current strength of 200 milliampères passing through the bath the patient gets forty milliampères only. It can easily be shown that part of the current traverses the human body when immersed in

FIG 3.



Rest for back.

a bath even if the feet do not touch the bottom electrode, for if one of the legs is held up out of the water the current strength, as registered by the galvanometer, is immediately reduced. "That the body conducts better than the water is proved by this experiment, which we have often made. Place both hands, at some distance apart, in a bath through which a current of considerable strength is running, and a sensation will be distinctly felt in them. Bring the hands still immersed very close to each other and the sensation will be much diminished. When the hands are far apart a considerable portion of the current passes through the body from one hand to the other. It prefers this much longer and round-about road to the direct path through the water.[1] When a faradaic current is passing the effect is such that the wrists are quite doubled up by the contraction of the muscles when the hands are held far apart. If salt or acid is added to the water, the water becomes a far better conductor than the human body and the whole of the current passes through it. A metal bath is also inappropriate for this form of treatment, when it is wished to influence the general system; for if two electrodes were placed one at the head and the other at the foot of a metal bath, the current would run round the bath and not enter either the water or the patient. This is also almost invariably found to be the case with japanned metal baths. The japanning is seldom so perfect that the current cannot in some way or other find its way to the metal and escape the comparatively badly conducting water and patient. In the treatment of a case the current should be allowed to flow through the patient for from ten to fifteen minutes. It is often not possible to detect much improvement in a patient's condition until after the sixth or eighth bath. The first five or six baths may be given on consecutive days, and then every other day until the end of the course. A course may consist of thirteen or fourteen baths. A patient may have more if he wishes, and if the improvement continues; but often, after a course is concluded, a patient's condition is so improved that the restoration to health will proceed although the baths have been discontinued, and the improvement be maintained until some fresh cause arises to produce a relapse.

The current strength employed in a galvanic bath may be raised so that the galvanometer registers 200 milliampères, but it is best for the first bath or two to pass a current of 60 or 100 milliampères only through the water. A good cell to employ is the large No. 1 Leclanché. A Stöhrer's battery may also be used as represented in Fig. 1. The cells are here added to the circuit by a travelling commutator, two cells being added at a time. There is more

[1] Beard and Rockwell: Medical and Surgical Uses of Electricity, third edition, p. 396.

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risk in the employment of these batteries of giving a patient a shock from some imperfection in the contact-makers under the commutator; but Stöhrer's batteries are the best both for electrolysis and baths, and, in fact, for all purposes where a fairly large external resistance has to be overcome, as the description of cell composing a Stöhrer's battery does not so easily polarise as Leclanché cells do. When Leclanché cells are used, the No. 1 size are preferable for baths on account of their producing a more constant and sustained current than the smaller sizes. Leclanché cells have the advantage of not so frequently requiring attention. The galvanometer that is included in the circuit should be a highly graduated one, such as Gaiffe's, which is used for the electrolysis of fibroid tumours. These galvanometers are graduated up to 250 milliampères. Two hundred milliampères is a sufficient strength to employ in a bath.

The patient, after entering the bath, should be allowed a few minutes to recover from the reaction produced by the warm water before the current is turned on. The current should be increased slowly and the galvanometer watched, and the current strength reduced as slowly at the termination of the bath. A medical man should always be present to regulate, increase, or diminish the strength of the current. The patient can be provided with a bathing-dress, and of course with female patients a nurse would always be in the room. The medical man's attendance is only required while the current is flowing. An arrangement exists on the switch-board or on the battery for completing the circuit, and for gradually increasing the strength of the current without any interruptions taking place, so that all chance of giving a patient a shock is avoided. As the current is slowly augmented the only sensation experienced by the patient is usually a slight pricking at the ankles from their proximity to the negative pole. A galvanic taste is produced in the mouth as the current becomes stronger. Should the patient's head feel full or throbbing during the administration of the bath, a cold wet towel may be placed on the top of the head; and if any faintness is caused the current should be reduced. An electric bath should not be taken too soon after a full meal. During the bath the pulse-rate is said to be diminished, as is also that of the respiration. After the bath the skin of the back which was opposite the upper electrode will be found of a bright-red colour; this will remain for about two hours. After dressing the patient should rest for fifteen or twenty minutes before going out into the open air, and should not immediately engage in exhausting exercise. There appears to be no tendency to catch cold after an electric bath, as is often the case after an ordinary bath. The patient generally feels exhilarated and better. Should the patient feel languid and depressed after each bath the treatment should not be persevered in.

(To be continued.)

ON ADDISON'S DISEASE.

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(Continued from p. 655.)

IN discussing the possible influence of disease of the adrenals as the primary link in the chain of symptoms we call Addison's disease, these bodies may be regarded from two standpoints—(1) as ductless glands, and (2) as nerve structures. As glands, any pathological changes in them could only cause Addison's disease by allowing abnormal pigment, or pigment-forming substance, and some toxic product which it is their function to excrete or to destroy, to be present in the blood, the pigment being responsible for the skin discolouration and the toxine for the more obviously nervous symptoms. Whatever pigment-yielding substances may be present in the blood as a consequence of arrest of function of the adrenals, such substances do not exist in the blood *qua* pigment. No trace has ever been found in the blood in Addison's disease either of free pigment granules or of any pigmented appearance of the white corpuscles. The assumption of a soluble chromogen in the blood, which under normal conditions would be removed by the adrenals, is not so easily negatived by direct evidence. The tendency of the above-mentioned experiments on animals is to prove that in them the adrenals are functionally active in adult life. How far this is the case in the human adult is doubtful. The compensatory hypertrophy which is found to take place in the lower animals is a strong proof that in them the adrenals partake largely of the nature of glands—it is characteristic of glandular structures to hypertrophy when there is an excessive call on the functional activity of the gland. In the early period of development the adrenals in the human subject are relatively large, and they probably exercise important glandular functions. After the commencement of extra-uterine life they are relatively insignificant in volume. If the adrenals in the human adult act solely as glands, one would expect in those cases in which one adrenal only has been destroyed by disease that the other would be found hypertrophied. The post-mortem records of such cases do not bear this out. Allowing, however, that the adrenals do to a certain extent act as blood-depurating glands, there are difficulties in the way of accepting cessation of their function as the cause of Addison's disease. The skin pigmentation in Addison's disease, except in degree, differs in no respect from the normal pigmentation in the white races, found in the scrotum and round the nipples of the two sexes respectively, on the exposed parts of the body after being subjected to powerful sunlight, and in the skin of the negro. The identity refers both to the histological position and, as far as is known, to the chemical composition of the pigment. The inference is that the pigmentation of Addison's disease, like many other pathological conditions, is nothing more than an exaggerated and widely spread form of a physiological process. The common genesis of physiological skin pigmentation and that of Addison's disease has a most important bearing. The question has been exhaustively discussed by Nothnagel,[1] and the conclusion he arrives at is that there is a complete anatomical and histological agreement between the two kinds of pigmentation indicative of their common origin. Further consideration of the subject is reserved until pigmentation of the skin is specially dealt with. Admitting that normal skin pigment and that of Addison's disease are derived from a common source, it follows that if the adrenals excrete effete blood-colouring matter, and if cessation of this function is the cause of skin pigmentation in Addison's disease, one of two conditions must be conceded to account for physiological skin pigmentation: 1. That the adrenals habitually perform their function imperfectly, and leave a percentage of the pigment-forming material in the blood at the disposal of certain of the rete cells, in order to provide for physiological requirements. If this were so effete colouring matter would always be present in the blood, and the question naturally arises, What is to prevent the whole of the lower layer of the rete cells becoming charged with it under normal conditions? 2. If the adrenals remove all effete colouring matter, that there is a perpetual struggle for it between them and the lower layer of the rete Malpighii through the intervention of the carrier cells of the corium. This would be a necessary corollary to the entire removal of the effete colouring matter in order to provide for skin pigmentation known to be independent of disease of the adrenals, as, for example, that which comes on after prolonged exposure to the rays of the sun or other exceptional mode of skin stimulation. Such stimulation might be supposed to act by temporarily giving the carrier cells in the regions subjected to its influence a greater affinity for the effete colouring matter than the adrenals. On this hypothesis the normal pigmentation of the areolæ round the nipples and elsewhere would be provided for by the assumption that the rete cells in these parts are supplied by carrier cells permanently endowed with a greater capacity of abstracting effete pigment from the blood than that of the adrenals. Under these conditions any disturbance of the adjustment between the pigment cells and the adrenals (in favour of the pigment cells) would determine general skin pigmentation. Such disturbance of the adjustment, to the advantage of the pigment cells, would be caused by any destructive lesion of the adrenals, and would be inevitably followed by skin pigmentation. This is contrary to experience. The occurrence of skin pigmentation from disease of the adrenals is almost entirely limited to one form of morbid change in them; they may be completely destroyed by other morbid processes without a vestige of skin pigmentation. The fugitive character of the coloured products obtained from the adrenals, and the utter

[1] Zeitschr. f. Klin. Med., 1885.

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want of resemblance in chemical reactions between such products and the pigment contained in the rete cells, afford further evidence against the view that the skin pigment is derived from effete blood-colouring matter, in the elimination of which the adrenals are concerned. The length of time that elapses between destruction of the adrenals and the appearance of pigmentation looks more like the result of intermediate action than of interference with the excretory functions of a gland. It might be expected, if it were solely a question of non-removal of an abnormal pigment from the blood, that the skin would speedily afford evidence of its unwonted presence. Cases occur, however, in which pigmentation appears only during the last few months of life, and yet the adrenals are found to be the seat of cretaceous degeneration, obviously indicative of prolonged disease, which in its early stage would as completely interfere with the functions of a gland as at the period when the pigmentation took place. Meckel[2] and Klebs[3] state that in negroes the adrenals are very much larger than in the white races. This hardly bears out the view that the adrenals are the excretory glands of effete blood-colouring matter whence the skin pigment is derived. If the skin of the negro were supplied with pigment from this source, it would probably require all the effete hæmoglobin products to maintain its hue. Why, then, should glands which have only to excrete a possible small residuum of effete pigment be developed to twice the size they are in the white races, in whom they have to remove all, or nearly all, of it? Another peculiarity observed in the adrenals of the negro is that the cortical portion is deeply pigmented. This, in conjunction with the fact previously mentioned, that Stilling found excess of pigment in the adrenals of piebald animals, undoubtedly points to some relation between the adrenals and skin pigmentation. Without denying that the adrenals may exercise glandular functions, it is possible that they may act rather as receptacles for pigment than as purely excretory bodies. The description given by Stilling of the pigment-containing cells in the adrenals as star-like cells laying outside the walls of the capillaries, the pigment being limited to these cells, none being found in the gland cells, fits very closely with the description presently to be given of the pigment-carrying cells of the corium of the skin. The abstraction of pigment by such cells from the bloodvessels is probably distinct from any glandular function of the adrenals, and is more nearly allied to a general excessive activity of the pigment cells throughout the body. The deeply pigmented adrenals of the negro may be thus accounted for. In relation to the question of excretion of effete hæmoglobin products by the adrenals, repeated examinations of the urine were made in both my cases, with the view of ascertaining the presence of MacMunn's urohæmatoporphyrin. The urine was treated with neutral and basic lead acetates, and the precipitate was extracted with alcohol acidulated with sulphuric acid. In no instance were any absorption bands observed in the filtrate. It may therefore be inferred that no exceptional effete product of hæmoglobin is necessarily present in the urine of cases of Addison's disease. The accidental presence of such derivative is valueless as evidence of suppressed adrenal function.

Against the assumed presence in the blood of a toxic proteid (also the result of arrested function of the adrenals regarded solely as glands), which would occasion the asthenia, vomiting, and other symptoms, is the steadily progressive and prolonged character of the disease, lasting in many cases for years. There is no analogous condition of chronic auto-intoxication, the result of suppressed glandular function, which slowly depresses the vital energy and, as is usually the case in Addison's disease, causes death from asthenia. It is further to be remembered that the presence of a toxine or special proteid poison resulting from suppressed adrenal function is purely hypothetical; no satisfactory evidence of its existence has yet been given. The foregoing objections are equally applicable against the glandular theory of the adrenals as the cause of Addison's disease, whether these bodies are regarded solely as glands or as a combination of gland and nerve structure. We therefore pass on to the second standpoint from which, so far as the present discussion is concerned, the adrenals are considered solely as organs richly supplied with nerve structures.

[2] Handbuch der Path. Anatomie. [3] Ibid.

On developmental grounds the adrenals are classed amongst the ductless glands. Their intimate relation with both sympathetic and cerebro-spinal systems of nerves, however, justifies the position from which I am about to regard them. In addition to fibres in direct communication with the abdominal sympathetics and pneumogastrics, the adrenals contain multipolar nerve cells. Although there are ample anatomical grounds for explaining the causation of Addison's disease, on the assumption that certain morbid processes in the adrenals derange the functions of both systems of nerves, there is great difficulty in indicating even in an indefinite manner the *modus operandi*. The nerves with which the adrenals are in immediate relation are composite strands containing fibres from various sources, the functions of which are equally varied. Consequently the effects of irritation, or of paralysis, of these nerves cannot be estimated with the same precision that is possible in the case of the cerebro-spinal nerves. It is well known that the splanchnics command the largest vascular area of any of the vaso-motor nerves. Lewin[4] suggests that these nerves undergo such changes as to impair their function, and that in consequence the visceral bloodvessels would be dilated, and that form of intra-vascular hæmorrhage induced which depletes the rest of the system. The tissues specially affected by this withdrawal of blood are the brain and cord. Permanent depletion of these centres would account for the excessive lowering of energy, and in part for the feeble pulse, both characteristic of the disease. Irritation of the splanchnics, the sensory nerves of the intestines, causes severe local pain, such as frequently occurs in Addison's disease. It is to be observed, however, that in Addison's disease structural change in the splanchnics is by no means the rule; in many cases, including the two recorded by me, no microscopic change was found. Is it possible that persistent irritation of the nerve could induce permanent exhaustion without structural change? The remissions that occur from time to time during the progress of the disease in the pain, vomiting, prostration, and other symptoms—not necessarily simultaneously—probably have some relation to the morbid processes in the adrenals: in other words, are expressions of varying nerve irritation. To such variations may be referred the not unfrequently observed alternations of constipation with diarrhœa. Irritation of the pneumogastrics through their adrenal filaments is a probable cause of the attacks of vomiting. It is to be confessed, however, that much has to be granted in the building up of a hypothesis founded on conditions so little understood. The pigmentation of the skin in relation to abnormal nerve influence will be discussed separately.

The chief obstacles in the way of accepting morbid changes in the adrenals as the primary link in the causation of Addison's disease are that skin pigmentation occurs without disease of the adrenals, and that destructive lesions of the adrenals are not invariably followed by skin pigmentation. It is not to be inferred from this way of stating the question that skin pigmentation is regarded as the most important symptom of Addison's disease, but that the combination of symptoms thus named is not complete without skin pigmentation. As long as morbid changes in the adrenals are regarded only as antecedent factors in the causation of Addison's disease, the real causal agent being held to be structural changes in the semilunar ganglia, a satisfactory explanation is to hand. It is that Addison's disease results if the adrenal mischief sets up secondary changes in the semilunar ganglia, but not if the morbid processes are limited to the adrenals themselves. According to the view advocated in this paper the difficulty is more apparent than real. I hold that Addison's disease is due to abnormal nerve influence, and, in the great majority of cases, that structural changes in the adrenals is the initial cause; such changes may or may not be followed by secondary changes in the semilunar ganglia. The primary lesion, it is true, is a morbid process affecting the adrenals. The after-effects, however, are not due to damage sustained by the adrenals as glands, but to implication of the nerve elements they contain, and consequent alteration of function of certain portions of the nervous system with which they are intimately related. The first of the objections to this hypothesis—skin pigmentation without adrenal disease—is disposed of by allowing that exceptionally the nerve structures concerned may be implicated on the central side of the adrenals in morbid processes which do not affect those

[4] Charité Annalen, 1885.

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bodies. In this way skin pigmentation without disease of the adrenals can be accounted for. Illustrative of this cause of skin pigmentation is Paget's case,[5] in which the adrenals were healthy; but the semilunar ganglia and solar plexus were embedded in a mass of enlarged glands, the skin being characteristically pigmented. It is not to be assumed, however, that pressure on the abdominal sympathetic or its ganglia will, as a matter of course, produce skin pigmentation. Merkel[6] states that he has seen the semilunar ganglia embedded in a slowly growing cancerous mass without a trace of skin pigmentation. Other cases of interference with the abdominal sympathetic by pressure of contiguous growths without skin pigmentation have been recorded. On the other hand, apart from Addison's disease, malignant abdominal disease not unfrequently gives rise to some degree of skin pigmentation. The second of the two objections—adrenal disease without skin pigmentation—is not so easily met. It might be reasonably expected that destructive lesions of the adrenals, of whatever type, would be followed by uniform results. Such is not the case. Sarcoma and cancer of the adrenals frequently occur without producing skin pigmentation. It has been suggested that when cancer attacks the adrenals it is frequently unilateral, hence the absence of pigmentation. Fenwick[7] has tabulated a number of cases of malignant disease of the adrenals without skin pigmentation, and states that one capsule only was attacked in a considerable proportion of them. On referring to Averbeck's[8] tables, however, I find that of nine cases of carcinoma of the adrenals in which the skin was pigmented five were unilateral, and of twenty-five cases in which the skin was not pigmented eighteen were bilateral; in three out of the twenty-five no statement is made as to whether they were double or single. A more satisfactory explanation appears to me that on which Wilks lays stress—chronicity. It is probable that the skin does not become pigmented until the adrenals have been diseased for a considerable time. The changes in the adrenals which are usually associated with skin pigmentation are of a chronic inflammatory type. It is highly probable that the two factors—time and the inflammatory nature of the morbid process—have much to do with the after-effects. When malignant disease attacks the adrenals, in the great majority of cases they are the seat of secondary deposits. It is probable in such cases that the patients are far advanced towards the lethal issue before the adrenals are attacked, and consequently the time factor would be wanting for the after-effects to develop. Of forty-two cases of malignant disease of the adrenals taken from Averbeck's tables, three are not specified as to whether they were primary or secondary, and in two other cases the patients died from intercurrent disease; this leaves thirty-seven cases, in thirty-three of which the disease was secondary. Whilst advancing this explanation, however, it is to be admitted that a few cases are on record which do not coincide with the data on which it is founded. Brinton,[9] Collier,[10] and Cagiati[11] record cases in which the adrenals were the seat of cretaceous degeneration without the skin being pigmented. The inconsistent behaviour of the adrenals when subjected to pathological changes has its parallel in that of another ductless gland. Extirpation of the thyroid gland has often been observed to be followed by myxœdema, so frequently that the name strumipriva has been given to this disease. Yet Billroth (quoted by Mosler[12]) states that of the many cases in which he has removed the thyroid he has seen none in which the operation was followed by myxœdema.

(To be concluded.)

[5] THE LANCET, vol. i. 1879.
[6] Von Ziemssen's Cyclopædia, vol. viii.
[7] Path. Trans., vol. xxxiii.
[8] Die Addison'sche Krankheit, 1869.
[9] Path. Trans., vol. ix.
[10] Ibid., vol. xxxix. [11] Riforma Med., 1890.
[12] Virchow's Arch., Bd. cxiv.

NEW DUFFERIN HOSPITAL, ALLAHABAD. — The Lieutenant-Governor formally opened this hospital on the 16th ult. In the main building the accommodation consists of the necessary administrative offices and wards for twenty-two patients. The subsidiary buildings contain four Zenana wards, suitable provision for female hospital assistant and four better class pupil nurses, and also for six pupils; dais and domestic offices. To guarantee the permanent maintenance of the hospital, additional funds are required.

A CASE OF ULCERATION OF THE TRACHEA PRODUCED BY INTUBATION.

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AT the present time, when intubation is on its trial in this country, it is of importance to note any evil results which it may produce, particularly any which experience may enable us to prevent in the future. From this point of view the following case may be instructive.

Herbert N——, a well-developed child two years and eight months old, was admitted to the Victoria Hospital for Children, Chelsea, on Nov. 22nd, 1890, with a history of illness since Nov. 18th. On admission the temperature was 100·6° F.; there was distinct diphtheritic membrane on the right tonsil, with considerable swelling of glands in the neck; no albumen in the urine. On Nov. 23rd the temperature rose to 102°, but was afterwards normal or subnormal until Dec. 3rd. On Nov. 27th membrane appeared on the left tonsil and on the posterior wall of the pharynx; still no albumen in the urine. On Dec. 2nd laryngeal symptoms (aphonia and stridulous cough and cry) appeared for the first time, and on Dec. 3rd the temperature again began to rise, varying from this time between 101° and 104·2°, which latter was reached shortly before death. On account of increasing dyspnœa, stridor, and recession of chest wall the child was intubated at 4.20 P.M. on Dec. 3rd with a tube for a child of two years, according to O'Dwyer's scale. This gave complete relief. It was coughed up two hours later, and the dyspnœa returning in about twenty minutes a tube for a child of three to four years was inserted with some difficulty, being noticed to fit tightly in the larynx. The dyspnœa was again quite relieved, and the tube was retained till Dec. 7th, when it was coughed out. Whilst it was being washed the child made violent but ineffectual efforts to clear the larynx, and became livid, but was at once relieved when the tube was replaced. It was then kept in until death, on Dec. 9th, six days altogether. The child gradually sank with increasing lung signs and symptoms; food was taken fairly well throughout, but occasionally caused some coughing. During the last few days albumen appeared in the urine, and at last amounted to one-half. At the necropsy extensive broncho-pneumonic changes were found in both lungs. The diphtheritic membrane had disappeared from the throat some days before death, but on the right tonsil was a large adherent slough, and in the left one a central cavity, from which a similar slough had evidently separated. There was no membrane in the larynx or trachea, but the entire mucous membrane presented a dirty greyish-white appearance, and in the larynx could be very readily peeled off from the cartilages. There was slight swelling over the arytenoid cartilages. In the centre and exactly on the top of the left aryteno-epiglottic fold was a narrow ulcer about one-third of an inch long. At the upper end of the trachea, in the middle line in front, was a small circular ulcer, about a quarter of an inch in diameter, exposing the first ring. About half way down the front of the trachea, also in the middle line, was a larger ulcer, fully half an inch long by one-third broad, which had actually ulcerated through three of the cartilaginous rings, the ragged ends of which projected freely on each side into the lumen of the tube. The base of this ulcer was covered with an adherent slough. The other organs were healthy.

The case is of interest in the late commencement of the laryngeal symptoms, probably fourteen days after the onset of the disease. In Fagge's Medicine it is stated that "Jenner, in 1861, had never known the onset of laryngeal diphtheria delayed beyond the end of the first week; but Oertel says it is not infrequent on the eighth or tenth day, and may be as late as the thirteenth." The small ulcer on the left aryteno-epiglottic fold was probably due to the string attached to the intubation tube, which was kept in throughout, and fastened to the left side of the child's head. Ulcers similarly situated, and probably attributable to this cause, were described by Mr. Turney at the discussion on intubation at the Medical Society on Dec. 1st, 1890. Therefore, although the string is often a great convenience in withdrawing the tube, it is probably better not to leave it attached when the tube is worn for more than a day or two.

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although in this case the resulting ulcer was so slight that it would probably have readily healed without causing any trouble. Mr. Pitts and Mr. Brook, in their paper read at the Medical Society,[1] say that "in all cases where the tube was expected to remain in for more than twelve hours the string was removed." The chief interest of the case, however, lies in the tracheal ulceration. The large lower ulcer exactly corresponded in position with the end of the intubation tube when *in situ*, and had evidently been produced by this, although the end was quite smooth and thoroughly well bevelled off. The cause of the small upper ulcer is less obvious, as although there is some lateral bulging of the tube in this situation, its anterior aspect is perfectly straight and smooth. Perhaps it is that the lumen of the trachea is narrowest here, as it is said to gradually increase in calibre from above downwards (Quain's Anatomy), so that a tube might just press against the first ring and escape those below. The ulceration did not cause any symptoms during life, and had probably nothing to do with the fatal issue, which seemed to be owing simply to the extension to the lungs of the inflammation started by the diphtheria in the large tubes; but, had the child escaped this danger, such extensive ulceration of the trachea might have proved a very serious complication later, as in the specimen from St. Thomas's Hospital, shown by Mr. Pitts at the Medical Society, in which a tube worn for four days produced tracheal ulceration, which probably led to gangrene of the lungs and death. The practical points to determine are—assuming that there is no defect in the shape of the tubes at present in use—how far was the ulceration due to the time the tube was retained, and how far to its size?

To take the former point first. Undoubtedly it is desirable to remove the tube as soon as possible, but the range and utility of intubation would be very seriously curtailed if a tube could only be retained with safety for a day or two. In the cases of laryngeal stenosis recorded by Mr. Pitts and Mr. Brook, a large tube was often worn continuously for many days, by one of the children frequently for a fortnight at a time, without any harm resulting; but then, as they point out, not only can a much larger tube be tolerated, and is desirable, than is laid down for the treatment of acute cases, but also in these chronic conditions the larynx and trachea are very tolerant of interference and pressure, which might have most serious results when applied to parts damaged by local acute inflammatory and diphtheritic processes, and with the general vitality greatly impaired by the constitutional disease. Nevertheless, there are now many cases on record of a tube being retained many days in laryngeal diphtheria without injurious results. Thus Dr. Wm. Hailes of Albany, U.S.A., has recorded successful cases in which the tube was worn for seven, ten, and twelve days respectively, and also mentions a case in which it was necessary to keep the tube in the larynx for twenty-three days without any ill effect, the patient recovering.[2] Dr. O'Dwyer mentions two cases in which the tube was in for ten days, and Dr. Waxham one in which it was retained for fourteen days without harm resulting. Moreover, in none of the children at the Victoria Hospital (some twelve in number), on whom a necropsy has been obtained in case of death after intubation has any trace of ulceration of the larynx or trachea been found, though it is true that in none was the tube worn nearly so long as in the case under consideration, though, judging from its size and depth, the ulcer in this case would in all probability have been well marked, even had death occurred some days earlier. In one case in which the tube was retained for five days and a half the necropsy was unfortunately refused. However, in the series of cases from the hospital recorded by Mr. Staveley,[3] there was one of diphtheria (No. 7), ending in recovery, in which the tube was worn for nine days, and the voice completely regained ten days later.

The one feature which, so far as I can ascertain, distinguishes the present case from all the others intubated at the hospital is the fact that for the age of the child a tube relatively too large was used. It has always been the custom to adhere strictly to the scale given by O'Dwyer; in this instance, when the first tube was coughed out, with rapid return of dyspnœa, a larger one was inserted, so as to prevent a repetition of this if possible, and so far with success, as it was only expelled once in the six days, but it was noted at the time of insertion to fit very tightly. It would be interesting to know if, in any other case where ulceration has been found—and I believe that at some hospitals it has been more frequent than at the Victoria,—any tube beyond the regulation size has been used. At any rate, for the present the practical lesson of the case seems to be that whilst it is always well to withdraw an intubation tube as early as possible, it is still more important, even at the risk of its being frequently coughed up, not to use too large a tube, especially if it is likely to be wanted for more than a few hours. Although in hospital practice this expulsion of the tube is of no great moment, in private practice, when the child would have to be left entirely in charge of a nurse, it might possibly be an important point, in considering the expediency of the operation, to remember that a tube so large as to be likely to be retained for a considerable time may very probably cause serious tracheal ulceration, whilst a smaller tube may be frequently expelled, and should this occur within the first few hours, urgent dyspnœa may probably return when there is no one at hand to replace it.

I have to thank my colleague Dr. Ridge Jones for permission to use the notes of the case during life.

[1] THE LANCET, Jan. 10th and 17th, 1891.
[2] Brit. Med. Jour., vol. i. 1890, p. 1186.
[3] THE LANCET, Nov. 9th and 16th 1889.

ON BILATERAL FACIAL PARALYSIS AS A FORM OF POLYNEURITIS.

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BILATERAL FACIAL PARALYSIS is an uncommon affection, of which only few cases are recorded in medical literature; and having recently met with two well-marked instances of it, I am induced to offer some remarks on the pathology and treatment of the disease. I shall not speak here of the surgical form of the malady which is seen after injury to the head, and on which Dr. Bristowe has written an able paper in THE LANCET for Jan. 6th, 1883, but shall confine myself to that form which arises from damage to the nerves by disease. In the two cases which I shall relate the affection was owing to neuritis of the portio dura in the lower portion of the Fallopian canal, and appeared to be part and parcel of a somewhat generalised polyneuritis. In the first case the illness was attributed to the sting of a poisonous insect; while the second case occurred during the influenza epidemic of last winter, and probably arose from infection with that virus.

The subject of the first case was a merchant, aged twenty-six, single, who was sent to me by Professor Strümpell of Erlangen; and the case has been described by that gentleman in the *Neurologische Centralblatt* for Nov. 1st, 1889. On comparing the notes of the history of the case, which I took at my first interview with the patient on May 1st, 1888, with the account given by Professor Strümpell, they are found to differ in a good many particulars, which shows once again that statements of patients cannot be always implicitly relied upon. Thus, the patient informed me that he was, while sitting in a garden, stung by an insect on Aug. 28th, 1887, while the Professor gives the date of this accident as October, 1887. As the first symptoms of paralysis appeared at the end of December of the same year this would give an interval of four months for my version and less than three months for the Professor's. I believe that in this instance the version given to me was the correct one, because more circumstantial; and the same applies probably to the locality of the sting, which, according to the Professor was, in the right hand, and according to my notes in the middle finger of the left hand. The patient also told me that the inflammation which supervened extended not only to the left arm and axilla, but spread to the right axilla, where the lymphatic glands were painful and swollen. Anyhow, it is certain that the patient, who had been in excellent health previously to that occurrence, and having neither syphilitic nor alcoholic antecedents, had a smart attack of lymphangitis, attended with feverish symptoms and loss of appetite. After a few weeks the inflammation subsided, and he felt better;

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yet his health was not as good as it had been before, and glycosuria was found to exist, for which an anti-diabetic regimen was prescribed. On Dec. 29th, 1887, while abroad, the patient was suddenly, and without any apparent cause, taken with pain in both temples, giddiness, oppression on the chest, unsteadiness in walking, and difficulty in speaking. On Jan. 2nd, 1888, the pain had become much worse, had spread to the ears, arms, and legs. The patient could not sleep, and took to his bed on the following day. There was no fever, and the pulse was not accelerated. When Professor Strümpell saw him he noticed the symptoms of double facial paralysis and ataxy of the lower extremities. It appears from my notes that the left side of the face was first affected, and the right side soon afterwards. Although the patient had great difficulty in standing and walking, there was no actual paralysis of the limbs, but diminution of sensibility and ataxy of movements in the legs. The knee-jerk was found to be lost in both sides. The muscles of the legs responded well to electricity, but in the face the electric tests showed the signs of the reaction of degeneration. The patient was treated with mercurial inunction, galvanism, and saline baths. He was three weeks in bed. After a week there was some improvement, and in about six weeks the ataxy of the lower extremities had disappeared. In March the voluntary power began to return in the face, and the knee-jerk came back. I first saw him on May 1st, 1888, and found the signs of double facial paresis, affecting chiefly the eyelids and lips, with greatly diminished faradaic contractility, and increased galvano-muscular excitability (½ milliampère). In addition to this there was loss of taste in both sides of the tongue, but no tinnitus aurium or hyperacusis. The soft palate was not affected. The knee-jerk was normal, the urine contained a small quantity of sugar, and the patient had during his illness lost 35 lb. in weight. I treated him by a carefully regulated diet and systematic applications of the constant current, and in July of the same year he had almost entirely recovered. The urine contained then not a trace of sugar, and the only muscle which had not fully regained its strength was the orbicularis oris. The patient could "laugh and kiss," but could not whistle quite so well as before.

Professor Strümpell has not expressed any opinion as to the precise seat of the paralysing lesion in this case, but it seems to me quite clear that the paralytic symptoms, the electric tests, and the loss of taste on the one hand, and the absence of tinnitus and hyperacusis on the other hand, pointed to the lower portion of the Fallopian canal as the seat of the disease. The chorda tympani was evidently involved, while the stapedian nerve, higher up in the Fallopian canal, which supplies the laxator tympani muscle, had escaped the pathological influence. The question whether the sting of the insect really led to all the troubles which this patient experienced is difficult to answer definitely, but there is no inherent improbability in such a supposition. I have seen a case of epilepsy in a farmer, aged thirty, who had been in perfect health until he was one day stung by bees, which caused inflammation of the hand. He never recovered his health thoroughly after this, and nine months after the occurrence had his first epileptic fit, without any assignable cause. The occurrence of paralysis together with ataxy is not uncommon, and is seen in alcoholic and post-diphtheritic affections. The same cause may affect one set of nerves more than another, and the portio dura in the Fallopian canal may, for anatomical reasons, be more thoroughly compressed and squeezed by the effusion, and therefore suffer more severely in its functions, than the nerves of the lower extremities. That the ataxy was not owing to spinal disease, but to peripheral neuritis, would seem to be proved by the rapid recovery which the patient made both from the ataxy and, although in a less degree, likewise from the paralysis.

The second case was that of a clerk aged forty-five, single, whom I exhibited at the Clinical Society on May 23rd, 1890. He had never had syphilis, always been temperate, and had enjoyed excellent health. About the middle of March last he began to be troubled, without any apparent cause, and without any particular exposure to wet or cold, with severe pain all over the body and limbs, and more particularly in the arms and the lower portion of the back. The pain was constant, and prevented him from sleeping. There was no fever, but a considerable degree of prostration. After this had gone on for about three weeks he noticed one morning that his speech was becoming affected, that he had a difficulty in eating, that his food seemed to have lost all flavour, and that his face felt "fixed." His face had indeed changed to such an extent that his friends hardly recognised him, and told him that he looked as if he had been turned into stone. When I first saw him, on April 18th last, his expression was statuesque: the features were completely immovable, while the eyes and muscles of mastication had retained their power, and there was no anæsthesia in the face. The forehead was as smooth as if it had been ironed out, illustrating Romberg's remark that facial palsy is the best cosmetic, by making all the wrinkles disappear. The eyes were widely open, and he had lost the power to blink, while epiphora was marked, and led to dimness of sight; indeed, the patient complained of being unable to read for any length of time, although the structures of the eye were in their normal condition. Other special functions suffered likewise indirectly through the facial paralysis. Although the olfactory nerve was unaffected, yet the patient had lost the power of smelling through being unable to sniff, and the food had lost all its flavour, which made him say that for the taste of it he might just as well be eating sticks. This also deprived him of the enjoyment of his pipe, for, having been very fond of smoking for many years past, he had lately given it up, partly because he could not smell the smoke and partly because he experienced extreme difficulty in drawing it out of the pipe with his lips. The simple tastes, apart from flavours, were likewise affected. I tested the tongue with glycerine, quassia, table salt, and citric acid, and found that the taste of the acid was entirely lost, while it took him about six seconds before he realised the sweet, bitter, and salt. While the action of the temporal and masseter muscles had remained normal, yet there was such difficulty in eating, from paralysis of the buccinators, that he had to work hard for a quarter of an hour before he could dispose of a small piece of fish or bread-crumb. The morsel kept constantly falling out of his mouth, and the attempts to eat caused such fatigue that the patient eventually took nothing but slops; yet even drinking was difficult, as part of the liquid taken used to run out of the mouth. In consequence of these difficulties he lost greatly in weight, or, as he graphically expressed it, he had "from a waggon-load become a cart-load," and lost four inches round the waist. One of the most striking symptoms of the case, however, was the alteration in the speech. The patient could really not articulate at all, but seemed by great efforts to forcibly expel his words from the throat, and his speech was therefore so indistinct that it was hardly possible to make out what he meant. He had chief difficulty with the vowels a, e, u, and the labials. He could neither blow his nose nor spit; if attempting the latter, a tenacious mucus flowed slowly out of his mouth. He could blow out a lighted candle, but not, as one usually does, by puffing with the lips, but by a forcible expiration. The mouth was generally half open. The soft palate was not affected, and the sense of hearing normal. The electric tests showed complete loss of faradaic excitability of the nerves and muscles, loss of galvanic excitability of the nerves, and greatly increased galvanic excitability of the muscles (0·25 milliampère). There were no other symptoms of importance. The urine was of low density, 1010, the excretion of urea being diminished; it was fairly acid, and showed no trace of albumen or sugar or excess of phosphates. The knee-jerk was normal. I treated the patient first with salicylate of soda, and afterwards with antipyrin, which relieved the pain in the body and the limbs considerably, although it took some weeks before he was entirely free from pain. As his suffering had entailed considerable loss of strength I put him presently on quinine. The paralysis was treated by the constant current, of which more presently. The patient was about three months under my care, when he had so far recovered that the treatment could be discontinued. He called on me on Nov. 27th last, when the condition of the face was perfect and his health excellent.

As in the former case, it is difficult to speak with certainty about the cause of the neuritis in this patient. The severe pain in the body and limbs from which he suffered at the beginning of the illness and for some time afterwards looked at first sight like an attack of subacute rheumatism, and the facial palsy as owing to rheumatic neuritis of the portio dura. Since then, however, I have seen and read of a number of cases of acute nervous affections which had come on after, and

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been clearly owing to, severe attacks of influenza, and it seems to me, therefore, much more likely, considering that the illness commenced during that epidemic, and that no exposure to wet or cold could be made out, that it was owing to infection with that virus. Severe pain in different parts of the body, probably owing to acute neuritis, has been the characteristic feature of many cases of influenza. From this point of view the pain about the body and limbs in the present case would have been owing to polyneuritis, which, although it affected the afferent nerves severely enough, did not lead to any trouble in the motor sphere, except in the case of the portio dura, where, for anatomical reasons, the pressure of the effusion on the nerve was greater than in the other parts which were affected. The localisation of the lesion in the present case appeared to be the same as in the first. It was clearly not central—that is to say, situated at any point between the pons and the cortex, because in central palsy only the muscles about the mouth are much affected. Nor could the disease be seated at the base of the brain, for where this occurs there is also deafness from affection of the portio mollis, but no loss of taste, as in the present case, since the portio dura carries gustatory fibres only during its course in the Fallopian canal. This symptom also showed that the affection was not seated in the external branches of the nerve, after this has emerged from the stylo-mastoid foramen, nor in the nucleus of the nerve in the medulla oblongata. Where this latter portion suffers the paralysis is confined to the lower branches of the nerve, for patients who are on the point of dying from bulbar paralysis can still express their feelings to some degree by movements of the upper portions of the face. As there was no hyperacusis, the stapedian nerve had evidently escaped injury; and the lesion could therefore be traced to the nerve in the lower portion of the Fallopian canal, involving the chorda tympani.

The prognosis is favourable in most forms of neuritis, except where it attacks highly specialised structures, such as the expansions of the optic and auditory nerves, which easily succumb to pressure by the effusion. The recuperative power of the ordinary peripheral nerves is indeed very great, especially when compared with the nerve cells of the grey matter. The natural tendency of the disease is therefore towards recovery, and this may be much aided by treatment. In the treatment of polyneuritis I should not resort to mercurial inunction, which was used in the first case, except if a specific cause could be clearly shown. Iodide of potassium, which is often prescribed, I believe to be quite useless in the treatment of such cases, but salicylate of soda and antipyrin (in ten grain doses) act beneficially in the first stage. After the inflammation has subsided, quinine should be given in hydrobromic acid. The most important part of the treatment of the palsy, however, is the cautious use of the constant galvanic current. It has been often stated that this agent should be reserved for the later stages of the complaint; but my experience is to the effect that it is most useful when resorted to in the beginning. We may then call into play the so-called catalytic effects of the current; and by doing so I have seen habitually a more perfect recovery at the end than where the electricity had only been used some months after the occurrence of the paralysis. The principal thing here is the mode of application, in which it is so easy to go astray. A powerful current is sure to do harm by aggravating the existing inflammation; while an exceedingly gentle force, such as we can measure with the greatest nicety with Edelmann's absolute galvanometer, appears at once to ease the circulations and to reduce the pressure of the effusion. I am in the habit of using about ½ to 1 milliampère with the anode resting on the mastoid process, and the cathode below the stylo-mastoid foramen, so as to embrace the diseased portion of the nerve for five minutes; after which a few cathodal passes, with the same current-strength, are made over the paralysed muscles. There can be no question that this is useful, because the patient at once expresses himself as relieved of the unpleasant feeling of stiffness about the face, and because the muscles that have been acted upon are seen to do their work much better after the application. This latter result is more especially seen in the muscles of the eyelids, where the immediate beneficial effect is often very striking. Perseverance with this treatment for two or three months is, however, generally necessary for securing a permanent result.

PLEURO-PNEUMONIC FEVER AT SCOTTER IN 1890.

THE SUPPOSED METHOD OF EXTENSION OF THE DISEASE TO NEIGHBOURING PLACES.

BY T. B. FRANKLIN EMINSON, M.R.C.S., L.S.A.,
MEDICAL OFFICER OF THE SCOTTER DISTRICT OF THE GAINSBOROUGH UNION.

IT is a fact well known amongst farmers that certain seasons independently of climatic variations are especially prone to the production of mildews, blights, smuts, &c., while other seasons with similar weather are less liable to such pests. The hay harvest of 1889 was unusually fine in this neighbourhood, most of the hay being gathered without any rainfall, and the farmers looked forward to having good sweet fodder for winter use. In December, however, when the stacks were cut, a foot of outside was found full of mould, so that when disturbed the hay gave out clouds of whitish spore dust, enveloping the men so completely that they were sometimes invisible to each other. This mouldy condition extended, as I have said, about a foot into the stack all round—that is, wherever the outside air could readily penetrate, the inside of each stack being perfectly sweet and free from mould. Dampness is a common cause of mouldy hay after a wet hay harvest, but in that case the mould is found interspersed throughout the stack; this, however, was of a different nature, and gave rise to special remark as something out of the ordinary, the mould having attacked each stack after it was built. This was general in the neighbourhood of Scotter, and I tried vainly to meet with sound hay for my running horses, but I cannot say whether the same thing was observed in other districts.

The winter of 1889-90 was particularly open, and was followed by a spring of very unusual dryness, there being ninety-seven consecutive days during which the rainfall was considerably less than half the average amount, and forty-seven days, extending from March 24th to May 9th, during which the rainfall was just about one-fifth the average amount. It was in this latter period that the epidemic of pneumonia began and accomplished most of its task in Scotter. But what connexion is there between the pneumonia and mouldy hay? No direct, yet possibly some indirect, relation. The same seasonal peculiarity which favoured the production of this special mould in the dry, sweet, and well-gathered hay may perhaps have favoured the propagation and activity of the still more lowly life form—the pneumonia bacillus. It was evident that the mould spores were conveyed to the hay by the atmosphere, for the disease attacked only the outside, not the inside, as is usual when dampness is the cause, showing that the parent spores were filtered from the air as it penetrated into the substance of the stack, and then grew. May not this process suggest an explanation of how the pneumonia bacillus travelled from Scotter to Scotton, Messingham, and Laughton? During the forty-seven days of drought just mentioned, the south sewer must have contained much stagnant and semi-solid sewage, with dry islands standing up here and there. Sewer air is known to have been evolved freely, and in its passage over the dried sewage it would carry the specific germ into the outside atmosphere. May it not be possible that germs so given off, perhaps in great abundance, travel short distances through the atmosphere, reaching other scenes of operations, not perhaps in a condition to effect an entrance into the human system, but sufficiently active to escape extinction, provided they meet with suitable surface or sewer filth in which to thrive?

I venture to suggest that in some such way as this the pneumonia may have established itself in the villages immediately surrounding Scotter, and, if this be so, it would indicate some little relationship to that peregrinating disease, influenza—a relationship which the known like characters of the two diseases naturally call to mind.

Scotter, Lincolnshire.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ROYAL FREE HOSPITAL.

JAUNDICE ACCOMPANYING SPECIFIC DISEASE; TYPHOID SYMPTOMS; DEATH; NECROPSY: ACUTE YELLOW ATROPHY OF LIVER.

(Under the care of Dr. SAINSBURY.)

ACUTE yellow atrophy of the liver or malignant jaundice is a disease which is rarely met with in the wards of our London hospitals, from whatever cause arising.[1] Cases seem to be much more common in Cuba and other tropical countries, as well as more frequently idiopathic in nature, than in more northern climates, for while only one case in 27,000 was met with at the London Fever Hospital, fifty-eight have been received in the Civil Hospital of Havana during a period of ten years. Dr. Martinez, from whose dissertation this statement is taken, finds the disease much more common in men, whereas in Europe the reverse appears to be the rule. It is a very interesting point in this case that the disease developed while the patient was undergoing mercurial treatment for the syphilitic state. Dr. Früs[2] has published two cases of very similar character. Jaundice came on three months after infection, and both patients died within a fortnight afterwards. Both patients had undergone mercurial inunction for the syphilis.

Ellen H——, aged thirty-four, widow, charwoman by occupation, was admitted into the Royal Free Hospital on Sept. 10th, 1890. On admission she was jaundiced, and complained of the presence of a rash on the body, of abdominal pain, loss of appetite, and weakness. Born in Devonshire, she came to London fourteen years ago. Nine years ago she went to Canada for a year as lady's maid; since this time she has lived in London. As a child she had measles, scarlet fever, and typhoid fever. At the age of nineteen she was laid up for three months with pain in the head and down the spine, and during a portion of this time there was palpitation of the heart. At twenty-three and again at twenty-four she suffered from bronchitis. In January, 1890, she had influenza, and has not been really well since. She has had three children, all born before full term. Two are delicate, and are said to be consumptive. Her husband died of consumption. The present illness began on July 22nd, with the appearance of a very red rash over the whole body. She accounted for this rash as being caused by drinking cold water when she was hot; this occurred on the day the rash appeared. During the next fourteen days she complained of vertical headache, of loss of appetite, and of being unfit for work; she kept her bed two days. Next (five weeks subsequently) her legs began to swell, and she found standing difficult; the swelling went down on resting. She then took to her bed (four weeks ago) and kept it for ten days. At the end of this time she felt stronger, and resumed her work, at which she continued till five days ago. On Monday, Sept. 1st (eleven days since) she was sick, and had diarrhœa. The vomiting continued till two days before admission, when it seems to have been cured by eating an apple. The vomit resembled whatever she had been eating. The diarrhœa lasted from three to four days; for the last four or five days the motions have been formed, and have resembled white clay. Jaundice set in on Sept. 3rd. On Sept. 8th she began to have pain across the upper part of the abdomen. There has been much thirst since the jaundice appeared. The urine has been much yellower since the jaundice. The "present state" showed a well-marked jaundice of somewhat brownish hue. On the neck and arms there were dark-reddish-brown patches running into one another here and there; the patches were desquamating slightly, they were not raised. On the chest were numerous coppery stains. On the abdomen scattered spots of a similar colour, but of a darker shade. There were anorexia, thirst, and a furred tongue, with unpleasant taste; the stools clay coloured; the abdomen tender all over, but not to any great degree; the liver enlarged, its lower margin reaching two inches below the costal margin (tip of ninth rib cartilage). The spleen could not be felt. Thoracic organs nothing abnormal. Pulse 68; respiration 25; temperature 99°. Urine brownish yellow, sp. gr. 1018, acid, no sugar, no albumen; gives bile reactions. The patient is much thinner now than before the influenza in January. She was put on milk and soda-water, and a bismuth mixture was prescribed. On Sept. 12th one grain of pulv. hydrarg. cum cretâ was ordered thrice daily. During the next few days there was much trouble with the bowels and abdominal pain, but by saline aperients the constipation was overcome and the abdominal pain then became much better. The rash meanwhile had improved. Then for a few days vomiting became troublesome, and nausea was almost constant. On Sept. 26th the vomiting had ceased. Patient now complained of the great irritability of the rash. Then there was a return of the sickness and nausea, with flatulent distension of abdomen; and again the patient complained of abominal pain and of pain in the back; next a remission of these symptoms, and in this way the case proceeded. The abdominal pain was at times very severe, and on more than one occasion required the use of hypodermic injections of morphia and fomentations. On Oct. 3rd she complained of swelling of the hands and feet. This symptom, an actual œdema, lasted a few days, but is not mentioned after the 7th. On the 22nd a dulness in the flanks and hypogastrium, obviously due to fluid in the peritoneal sac, is recorded. This ascites was, however, noticed a few days previously. On the 27th there was much swelling of the left side of the face; it was accompanied by an aching pain. On the 30th the face was still swollen and the ascites had apparently increased. On this day the tongue was brown and dry and this symptom was yet more marked on the 31st. On Nov. 1st there was epistaxis, and this was repeated on the 3rd and 4th. During these days the condition became distinctly typhoid. On the 5th the patient was semi-conscious during the night and part of the morning. Death occurred at 11.30 A.M. The jaundice varied very little throughout the progress of the case; at one time it is noted as being of somewhat lighter colour, at another time as being darker. The stools on Oct. 3rd are said to have contained bile for the first time, and on the 6th to be more deeply tinged, but practically there was but little change in this symptom. The urine on admission contained no albumen, but on Oct. 10th, 14th, and doubtfully on the 17th it contained albumen. Subsequently the albumen again disappeared. Throughout it gave Gmelin's test for bile. In general it was thick. On one occasion a dense greenish sediment was observed; the urine on this occasion was examined for leucin and tyrosin, but with negative results. The reaction was acid throughout. The vomit on Sept. 24th was greenish with a coffee-ground admixture. On Oct. 10th the vomit was colourless.

Necropsy.—The body was emaciated and uniformly stained a dull brownish-yellow. The abdomen was prominent. The peritoneal sac contained a considerable quantity of brownish-yellow serum, and this filled the pelvis and the right hypochondrium. The left hypochondrium was occupied by the distended stomach, and the rest of the abdomen, front and flanks, was occupied by moderately distended intestines. The diaphragm stood high on the right side. The liver was small and lay against the spine; it was separated by a considerable interval from the chest wall. The stomach contained a considerable quantity of fluid, consisting in part of tarry matter. The walls were dotted with black spots (hæmorrhagic). There was no ulceration. In the duodenum was a similar fluid. The intestines (large) contained pale greyish-white fæces. The mucous membrane of the large gut was injected; its walls somewhat thickened. The liver weighed 31 oz.; it presented (by gaslight) a dark-brown mottled appearance, and on section the normal lobulated structure was absent. Seen next day a fresh section through the posterior parts of the right lobe showed a mottled brownish-yellow appearance, whilst anteriorly the right lobe and section through the left lobe showed a reddish colour and a dense but to some extent lobulated structure. The liver substance was very firm. Scrapings

[1] THE LANCET, vol. i. 1889, p. 284. [2] Sajous, vol. i., c. 34, 1890.

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from the surface showed under the microscope much fatty débris, with numerous cells in an advanced stage of fatty degeneration. No crystals were seen. The portal fissure was quite free from mucus. The common bile-duct was quite patent, a director passing easily into the bowel. The pancreas was extremely firm, almost cartilaginous in hardness, but otherwise quite normal in appearance. Kidneys (7 oz. each) and spleen (11 oz.) were very firm. Thorax: There was slight excess of fluid in the pleural sacs, with some collapse of lungs posteriorly. Lungs emphysematous. Heart normal. The microscope showed the almost complete replacement, in portions of the liver, of the normal structure by a close fibrous texture, which suggests a collapsed and thickened meshwork, very rich in small nucleated cells. Here and there in this fibrous texture were foci of round cells more closely congregated. In other portions of the liver the lobules of hepatic cells could still be seen, but the cells showed an advanced fatty degeneration, and the lobules were in many places much encroached upon by a dense round-celled infiltration. The pancreas was fibrous in appearance, but there was no suggestion of new growth. The kidneys showed nothing of note under the microscope.

Remarks by Dr. SAINSBURY.—The points which call for notice in this case are—1. The occurrence of jaundice in the presence of a skin eruption, which in its characters was strongly suggestive of specific disease, though no history of infection was obtained. The relation between syphilis and jaundice is admitted, and "now and then what appears to be at first a slight catarrhal jaundice becomes rapidly developed into the symptoms of acute atrophy" in time.[4] 2. The presence of ascites without the discovery of any pressure on the trunk or main branches of the portal vein. Query, was the acute round-celled infiltration of the liver sufficiently widespread and sufficiently acute to determine this dropsy? Clinically it is of interest to note that the accumulation of fluid in the right hypochondrium noted at the time of the necropsy would and did mark the diminution of the liver. I have not found mention of ascites as a complication of acute yellow atrophy, and desire to lay further stress upon it, because it raised doubts as to the possibility of acute yellow atrophy, which had been considered, and because for this reason the examination of the urine for leucin and tyrosin was not made systematically. 3. The enlargement of the liver on admission. This was undoubted. 4. The absence of bile from the stools, except in one or two instances. 5. The appearance of albumen in the urine during the progress of the case, and then its disappearance. The other features were the usual ones. The hæmorrhagic tendency, however, did not become marked till the last three days. On Sept. 24th, soon after the patient's admission, there was some coffee-ground vomiting. The swelling of the hands and feet and of the face I am unable to account for. That of the hands and feet was not marked, and not permanent. The swelling of the face was painful in the first instance; it subsided subsequently.

GENERAL HOSPITAL, NOTTINGHAM.

A CASE OF CANCER OF THE PYLORUS; GASTRO-ENTEROSTOMY; RECOVERY.

(Under the care of Dr. BROOKHOUSE and Mr. OWEN TAYLOR.)

EVIDENCE as to the amount of benefit to be expected by a patient suffering from cancerous disease of the pylorus who submits to the operation of gastro-enterostomy is accumulating month by month. Although it is probable that all the operations which have been performed have not been brought before the profession, enough has been written to prove the value of gastro-enterostomy in selected cases for the relief of some of the symptoms which cause most distress. Mr. Page,[1] in a paper read before the Medico-Chirurgical Society, gave a series of thirty-six cases of the operation; of these, fifteen were fatal directly or indirectly from the operation; death was usually from collapse. In the first eighteen cases there were ten deaths, and in the second eighteen only five deaths. We have published accounts of six cases since the date of that paper.[2] Of these, two recovered and four died. In the two successful cases Senn's bone plates were used, and the operation thus rendered of as short duration as possible; further, in both feeding by the mouth was commenced at very early date—on the second day. In this patient success was also attained by means of a rapid aseptic operation and early feeding by the mouth, and the importance of these factors in a successful operation must be fully recognised. We need statistics showing the duration of life after the operation. The account of the following case is from notes by Mr. J. P. Gray, resident surgical officer:—

N. G——, aged fifty-six, a miner, was admitted into hospital on Sept. 26th, under Dr. Brookhouse. For six months before admission he had suffered from digestive troubles, pain after food, and occasional vomiting, which gradually got worse. He was losing weight steadily. Nine months before, he had been weighed and scaled 9 st. 10 lb., and six weeks before admission he had only weighed 8 st. 10 lb. On admission he weighed 8 st. 5 lb. He is a small man, of sallow complexion, with a miner's stoop, very thin. He takes food readily and with relish, but has a dull pain all over the abdomen, and vomits about once a day, occasionally missing one day, and sometimes vomiting more than once a day. He generally brings up several pints of frothy fluid, found to contain sarcinæ. On examination of his abdomen, a sausage-shaped tumour, the size of a hen's egg, was found in the right hypochondriac and umbilical regions, movable within small limits. The greater part of the left side of the abdomen was prominent, the bulging reaching as low down as midway between the umbilicus and pubes, and extending across the middle line with a lower curved edge leading up to the above-described tumour. This area on percussion gave a stomach note, and a succussion splash could also be obtained over it. The diagnosis made from these signs was cancer of the pylorus, with a greatly dilated stomach. His stomach was emptied and washed out with warm water once a day, with considerable relief to his uneasiness; but he steadily grew worse in condition, and during one week lost close upon a stone in weight. Accordingly, on Oct. 26th, the operation of gastro-enterostomy with Senn's plates was performed by Mr. Owen Taylor. The patient then weighed only 7 st. 2½ lb. Before the operation his stomach was washed out with warm water, and an enema of 1 oz. of brandy with 3 oz. of water administered. There was nothing particularly worth noting in the operation. The fingers of an assistant were found better than Makin's clamps for holding the emptied gut. Some little difficulty was experienced in tying the two lower lateral sutures. Several Czerny-Lembert sutures were also put in at the end. The patient took the A.C.E. mixture badly, and had several hypodermic injections of brandy during the operation, which lasted thirty-five minutes. He was in a very critical condition after the operation, and during the next day vomited three times, the vomit consisting of dark blood with a strong fæcal odour. For two days he was fed by enemata of pancreatised milk with brandy and egg, with an enema of tepid water every morning. He retained them very well. On the second day he had milk-and-water in teaspoonfuls, the enemata being continued. On the third day Brand's essence was given in small quantities. By the ninth day he took everything by mouth, and the enemata were discontinued. The stitches were taken out on the sixth day, and he made a continuous recovery—interrupted, however, by the abdominal wound giving way and gaping for about two inches, though it had been apparently healed in the sixth day. This, however, gave rise to no serious symptoms. The edges were refreshed and sewn up again. On the thirteenth day he was put on meat and rice pudding. He got up three weeks after the operation, and was found to have gained 5½ lb. in weight. He was very constipated, but his faeces contained bile. The stomach reaches now to the level of the umbilicus. He continued to gain in weight, and was discharged in six weeks' time, taking ordinary diet.

[4] Murchison, second edition, p. 206. See also Fagge (Principl of Medicine) and Hutchinson (Syphilis, p. 145, case of Dr. Wilks)

[1] THE LANCET, vol. ii. 1889, p. 986.

[2] THE LANCET, vol. ii. 1890, Mr. Jessett, p. 68; Mr. Beatson, p. 762; Mr. Clarke, p. 1213; THE LANCET, vol. i. 1891, Mr. Barrow.

GUY'S HOSPITAL.—Mr. Fred. Gowland Hopkins, B.Sc. Lond., has been appointed to the studentship in pathology lately established at Guy's Hospital by Sir Cameron Gull in memory of his distinguished father, the late Sir William Gull.

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Medical Societies.

MEDICAL SOCIETY OF LONDON.

The Administration and Use of Peroxide of Hydrogen.

AN ordinary meeting of this Society was held on March 23rd, Mr. Reginald Harrison, Vice-President, in the chair.

Dr. B. W. RICHARDSON read a paper on Peroxide of Hydrogen and the Various Methods for its Administration and Use, the first portion of which we publish in another part of our present issue.

Mr. REGINALD HARRISON, referring to the composition and use of "sanitas," which contained peroxide of hydrogen in combination with turpentine, said that he had found it of much use as a bladder wash in cases of chronic cystitis, especially after lithotrity and in instances where the walls of the bladder were encrusted with phosphates. He usually prescribed it diluted with from six to twelve times its volume of water.

Mr. BRYANT had had experience of the use of peroxide of hydrogen rather as a local application than as a medicine. He had used it largely in ten-volume solution for the last three years. The first case in which he applied it was one of suppuration about the scrotum in association with tubercular testis. There were a great many sinuses, and the patient was old and refused operation. He repeatedly injected a solution of five-volume strength into the sinuses, and a material came out which was at first like yeast, but was afterwards quite clear. After using it three or four times the sinuses closed and the patient got quite well. The second case in which he tried it was one of suppurating tracts in the gluteal region, following a gluteal abscess, in a middle-aged man who had no rectal, vesical, or bone disease. The sinuses were long, and led into the pelvis; they were treated by the ten-volume solution, and, after about half a dozen syringings, in the course of four weeks the patient was quite well. The third case was one of extensive sinuses running up behind the rectum, and it was doubtful whether they communicated with the gut; this patient also made a good recovery after injection. A fourth case was one of very numerous sinuses about the breast, which, being treated in the same way, led to a similarly favourable result. Six weeks ago he saw a young woman of twenty-four, who, after a chill, complained of pelvic pain, and was very ill with typhoid symptoms for a month. He found a large tumour springing from the pelvis, approaching the umbilicus and causing obstruction of the bowels. Under chloroform he made an opening through the posterior cul-de-sac of the vagina, and evacuated more than a quart of fetid pus. He then thoroughly irrigated the cavity with the peroxide solution, and this was continued regularly for some time afterwards. The temperature at once fell to normal; at the end of a week the drainage-tube was pushed out and she was at the present time quite well. Such a result surpassed his greatest expectations. He had found it also of great use in large spinal abscesses: it reduced the fluid which exuded from these to a condition almost like that of serum—a result which he had not found to be brought about by any other antiseptic. Its especial value would certainly be found in the treatment of suppurating tracts and abscess cavities.

Dr. LITTLE asked if the author believed the remedy acted in angina pectoris by reducing spasm.

Mr. SPENCER WATSON said that it had been used in America for the purpose of diagnosing suppuration within the antrum, a white foam filling the nostrils if pus were present when the peroxide was introduced.

Mr. SHEILD said that he lately used it with the best results in a number of cases of putrid and offensive otorrhœa. In one case of mastoid abscess it controlled the odour and reduced the discharge in a remarkable way.

Dr. ROUTH had employed it in phthisis, in which disease he thought that it was as beneficial as cod-liver oil. He had likewise given it in pneumonia where cyanosis was present, and had found it of much value in cases of exhaustion from chronic discharges or over-work.

Dr. RICHARDSON, in reply, said that he thought Mr. Bryant had alluded to the class of cases in which the peroxide would be found most useful. There could be no harm in extending its application to cases of typhoid fever where there was persistent discharge and much flatulence. It would likewise be safe to inject it into pulmonary cavities. He administered it by inhalation in angina, which he thought was perhaps a neuralgia rather than a spasm. It was interesting to watch under the microscope the way in which the peroxide produced disintegration of pus-corpuscles.

OPHTHALMOLOGICAL SOCIETY.

The Glands of the Ciliary Body in the Human Eye.—Hydrophthalmos.—Hunterian Chancre on the Ocular Conjunctiva.—Operation for Ectropion.

AN ordinary meeting of the above Society was held on March 12th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Mr. TREACHER COLLINS read a paper on the Glands of the Ciliary Body in the Human Eye. He first briefly referred to the experiments of Deutschmann, Schœler, Uhthoff, Leplat, and Nicati, as proving that the aqueous humour and the nutrient fluid of the vitreous were secreted in the ciliary region. He then described a method of bleaching sections of the eye with chlorine. From the examination of sections thus treated, he found that the uveal pigment layer from the root of the iris to the ora serrata was composed of a single row of somewhat flattened cells, projecting from the outer surface of which were numerous processes, each composed of a group of cells. These were largest and most numerous at the junction of the plicated and non-plicated parts of the ciliary body, where they were pear-shaped. Examination of sections of them cut transversely showed them to be tubular, with a small central lumen. These tubular processes, he thought, could be nothing else than secreting glands concerned in the elaboration of the aqueous humour and nutrient fluids of the vitreous. So-called serous iritis he regarded as primarily a catarrhal inflammation of these glands. The whole course of the disease, he thought, pointed in this direction, and the histological appearances of eyes lost from it were quite in keeping with this view—there being some increase in the size of the glands, some irregularity and proliferation of their epithelium, enlargement of the bloodvessels in their vicinity, and a variable amount of round-celled infiltration about them. When inflammation of the ciliary body had been of a more plastic character, there was considerable overgrowth of its uveal pigment layer, in which overgrowth the cells were arranged in the form of cylindrical tubes just like tubular glands. He mentioned a case of tumour of the ciliary body described by Alt, which he regarded as an adenoma, and another growing in the same region which he considered to be a glandular carcinoma. The histological points referred to in his paper were afterwards illustrated by lantern slides made from photographs of microscopical sections.—The PRESIDENT considered Mr. Collins' paper was one of very great interest, and proved that there were still parts of the eye which would repay careful examination; he thought such an investigation as that described might lead to an increase in our knowledge of glaucoma.—Mr. PRIESTLEY SMITH referred to the early descriptions of the ciliary body, and stated that Mackenzie as long ago as 1835 attributed to it the function of secreting fluid into the vitreous and aqueous chambers, which had since been confirmed by experiment. He suggested the advisability of using the term "serous cyclitis" instead of serous iritis, as had been done already in modern German works.—Mr. JESSOP drew attention to the difference in the character of the fluid obtained from the anterior chamber by a first and subsequent tapping, that obtained by the second tapping containing more proteid material.—Mr. COLLINS, in reply, said that he had examined a large number of glaucomatous eyes in reference to ciliary body changes, and had found no obvious alteration in the glands described, except that in cases of long standing they shared in the general atrophy.

Mr. F. R. CROSS (Bristol) read a paper on Hydrophthalmos, in which he first made reference to recorded cases and descriptions by writers of fifty years ago, and commented upon the gradual development of knowledge of the subject. In recent text-books but little space is given to any variety of hydrophthalmos. Some authors deal with the condition as only congenital, others as though its consideration could be adequately completed by treating it under the head of "secondary glaucoma." Excess of intra-

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ocular pressure produces some expansion in any healthy sclerotic coat, but the maximum of expansion is soon reached. During the growth of the eyeball, and to some extent up to early adult life, continuous high intra-ocular pressure is accompanied by distension and thinning of the fibrous coats, with stretching and modification of the uveal tract and retina; while in later years, after senile and retrogressive changes have occurred, the sclera resists a high degree of intraocular pressure for months without progressive distension (P. Smith). Glaucoma before the age of thirty is rare, and before the age of twenty extremely so. A few cases have been published, several in eyes distinctly microphthalmic, and in others the corneal measurement has been found below the normal standard (11 to 12 millimetres, P. Smith). On the other hand, hydrophthalmos almost always commences, whatever be its cause, in childhood. It may begin in early adult life, while the tissues of the eye are still extensile. It never commences in middle life, but when it is protracted to this period the symptoms tend towards the glaucomatous type. Anything which causes excess of blood in the eye, venous or arterial, or imperfect lymphatic outflow, tends to raise the intra-ocular pressure, and such conditions produce in the adult eye glaucoma, in the youthful eye hydrophthalmos. Dufour regards the condition as one of primary glaucoma, and he accounts for the open filtration angle and deep anterior chamber by weakening of the zonule of Zinn, and yielding of the corneo-scleral ring, thus allowing of easy passage of the intra-ocular fluids, and an equal pressure in both aqueous and vitreous chambers. The author considers that the cases apparently congenital in origin may depend upon error in development, or upon intra-uterine inflammation, but thinks that in some the morbid condition really commences after birth, or may be a true primary glaucoma during childhood, and that undoubtedly many which can only be classed as hydrophthalmos are true cases of secondary glaucoma, traumatic or otherwise. Several observers have described the microscopical characters found in buphthalmos, but the pathological changes are probably as much the result of intra-ocular pressure as its cause. The primary seat of inflammation seems to be in the ciliary body, at the base of the iris, with implication of the limbus corneæ and the filtration channels. Weakness of the zonule, distension of the lens capsule, and lenticular trouble might also easily arise, with modification of the intra-ocular fluids, and interference with their proper transudation. Dürer and Schligtendal, in a recent account of the microscopical examination of five eyes affected with congenital (so-called) hydrophthalmos, draw special attention to the condition of the uveal tract. In all these cases both choroid and ciliary bodies were found markedly atrophied; the venæ vorticosæ were extremely narrowed in their passage through the sclerotic, while their tributaries in the supra-choroidea were dilated and varicose. In some of the cases dilatation of the large veins and atrophy of the tissues alone existed, whilst in the others there was distinct evidence of inflammation, especially in the region of the posterior aqueous chamber. Increased vascularity and round-celled infiltration were found in the corneo-scleral margin. Schlemm's canal, Fontana's spaces, and the anterior ciliary veins were usually narrowed or obliterated. The term "buphthalmos" should only be applied to cases in which the prominent cornea is surrounded by a thinned blue-tinged sclera, while the term "megalophthalmos" might be retained for cases in which the hypertrophied staring eye is otherwise normal. The history of the case will determine when it should properly be called congenital. Mr. Cross read histories of two cases of hydrophthalmos, one associated with a high degree of myopia, the other dependent on blockage of the filtration angle by a dislocated lens; and of five cases of buphthalmos (the exaggerated form of hydrophthalmos), one probably congenital, one commencing in early life, and three secondary to *iris bombé*, or perforating wounds of the cornea.—Dr. ARGYLL ROBERTSON remarked that under the heading of "hydrophthalmos," Mr. Cross included cases which differed in some particulars, although they had in common the distension of the anterior parts of the eyeball. He mentioned a family under his care in whom the mother and three children were affected with this disease; in one child the condition was unilateral.

The following living cases were shown:—

Mr. LANG: Hunterian Chancre on Ocular Conjunctiva.

Mr. TWEEDY: Result of Operation for Ectropion of Lower Lid following burn.

At the general meeting held subsequently it was resolved that the date of the Bowman lecture be altered from November to the first Thursday in July, subject to the discretion of the Council. Also that an illuminated address be presented to Professor Helmholtz congratulating him on the attainment of his eightieth birthday, and acknowledging the value of his services to ophthalmic science. Mr. TWEEDY moved a resolution, which was carried, to the effect that, in view of the extension of the curriculum to five years, the subject of ophthalmic surgery should be made compulsory, and a committee was nominated composed of past-presidents of the Society and representatives of the Scotch and Irish Universities to urge the matter on the Medical Council.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Feb. 18th, W. Ross Jordan, M.R.C.S., in the chair.

Aphemia.—Dr. T. STACEY WILSON showed a man aged fifty-one who was suffering from a third attack of Aphemia. The first attack, which occurred in 1885, was accompanied by a slight degree of word blindness, and he remained absolutely dumb for eleven months. He then suddenly and completely recovered his speech, and remained perfectly well till January, 1890, when he again lost his speech. On this occasion there was, just as during the first attack, much headache and some fever. He regained his speech in thirteen weeks, however, thanks to a sudden fright that he had. He lost his speech for the third time last August in just the same way as on previous occasions, and his present condition is one of absolute mutism, although in the possession of all his other faculties. Dr. Stacey Wilson pointed out that the case at the present time might be considered to be practically one of hysterical mutism, and that some sufficiently powerful and correctly directed external stimulus was all that was necessary to put the patient's motor speech centre once more under his control.

Rodent Ulcer of Eyelids.—Mr. WOOD WHITE exhibited a man aged fifty-three who, five years before, had been struck on the upper eyelid by a piece of wood. The wound never healed, but, according to the patient's statement, "seemed to ulcerate and go on wasting." It continued thus for two years before it spread to neighbouring parts. All previous wounds healed readily. Nine months ago the man was first seen by Mr. Wood White. The eyelids were then much thickened and infiltrated, especially near their margins. The palprebal aperture was reduced in size and the eyeball pushed backward, but there was no sign of ulceration. The patient was again seen a week ago, when the appearances were much altered. The infiltration had spread upwards as far as the eyebrow, and downwards for some distance over the cheek. Its margin was well defined, and it left the skin in an atrophied and scarred state, but there was still a remarkable absence of ulceration.

Foreign Body in the Eyeball.—Mr. WOOD WHITE showed a patient who had received a penetrating wound of the eyeball from a piece of bell metal. The vitreous was perfectly clear, and the details of the fundus could be well seen. The foreign body was adherent to the retina on the inner side a short distance behind the ciliary processes, and was projecting into the vitreous; the reflex from it was bright and glistening. It had been in the eye for several days, but there was no sign of redness or inflammation. Bell metal being a composition of iron, brass, and glass, and the piece being firmly fixed in the globe, the electro-magnet had not been used.

Deformity of Pelvis.—Dr. PURSLOW showed a patient with Rickety Deformity of Pelvis, for whom he had performed craniotomy in the out-door maternity of the Queen's Hospital. She had been in labour twenty-four hours. Version had been performed by the obstetric house-surgeon who had been called to the case two hours previously, and when seen by Dr. Purslow the feet of the child were protruding and the cord pulseless, but the head was not engaged in brim; the occiput was lying to the left side. The head was perforated behind the right ear and delivered by the aid of the crochet, though not without difficulty, after evacuating the brain. The patient made a rapid recovery without a single bad symptom. The diagonal conjugate measured by the hand while the patient was under chloroform = 3⅛ in. True conjugate, allowing for shape of pubes, not more than 2½ in.

Paper.—Dr. FOXWELL read a paper on the Heart Murmurs in Anæmia.

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Reviews and Notices of Books.

Hypnotism. By Dr. ALBERT MOLL (Berlin). Contemporary Science Series. London: Walter Scott.

Hypnotism, or Psycho-Therapeutics. By R. W. FELKIN, M.D., F.R.S.E. Edinburgh and London: Young J. Pentland.

Should Hypnotism have a Recognised Place in Ordinary Therapeutics? By NORMAN KERR, M.D., F.L.S. H. K. Lewis.

[FIRST NOTICE.]

THE literature of hypnotism grows apace. We have here three *brochures* upon the subject, and, whatever reserves may remain in our mind, there can be no doubt that their perusal is calculated to elucidate many obscure problems, to enlarge our conceptions of the action of mind upon physical function, and to place forcibly before us the claims which hypnotism is now loudly making for recognition both in the domain of psychology and of therapeutics. The impartial reader will probably rise from their perusal feeling that the time has gone by when the *facts* of hypnotism could be legitimately questioned, and that what now remains is rather the interpretation of those facts and the determination of their due relation to the science of mind and the art of healing.

Dr. Moll's work, which is much the most thorough and elaborate of the three, is the production of a thoroughgoing adherent and enthusiastic exponent of the doctrine and practice. Dr. Felkin's shorter and slighter work is also almost wholly favourable in tone; while Dr. Norman Kerr's pamphlet, which is a reprint of the address delivered by him at the last meeting of the British Medical Association in Birmingham, is an emphatic protest against the admission of hypnotism within the recognised domain of therapeutics. We shall notice the three in turn, and shall aim at presenting a fair *résumé* of the facts and deductions of their authors, rather than at assuming any dogmatic position of our own. While the subject of hypnotism cannot be called new, it nevertheless presents many and peculiar difficulties, and we see nothing to regret in the attitude of reserve which has hitherto been maintained towards it by the medical profession in this country. If we could say what mind is and what body is, and what are their relations the one to the other, then the phenomena of hypnotism might admit of a ready explanation; but these questions are really insoluble in the present state of our knowledge, and the solutions which are offered are verbal only. Hence if hypnotism often baffles us and defies our attempts at a thorough analysis, this is only what, from the nature of the case, might have been fairly expected.

Dr. Moll opens with a historical review of the subject, and points out that while traces of hypnotism can be found among the ancient Egyptians and other Oriental nations, and while it and kindred phenomena were studied by Paracelsus and Van Helmont in the Middle Ages, universal attention was first drawn to the subject by Mesmer (1734—1815). The career of Mesmer is characterised by a curious medley of science and chicane, and into its merits and demerits, successes and failures, we have not space to enter. Mesmer believed in animal magnetism and in metallo-therapeutics. His well-known *baquet* at Paris (a sort of oak chest or tub, with appendages of iron) was supposed to be magnetised by him, and to be able to give forth virtue of itself. Several commissions sat to consider the doctrines of Mesmer, and their reports were in the main hostile, most authorities attributing the alleged phenomena solely to the operation of the imagination. In Germany "animal magnetism" was studied by Lavater, Wienholt, Heineken, Böckmann, Gmelin, and others. Selle of Berlin admitted the genuineness of some of the alleged phenomena, but excluded all that was supernormal (clairvoyance). Two currents of thought on the subject were perceptible, one critical and scientific, the other mystical. Early in the present century the Abbé Faria, in his teaching in Paris, practically anticipated the modern doctrine of hypnotism when he showed that no unknown force was necessary for the production of the phenomena; that the cause of the hypnotic sleep was in the person who was to be sent to sleep; that everything was subjective. In England the chief name is that of Braid of Manchester, who about the year 1841 induced cataleptic conditions by making the patient fix his eyes steadily upon some object, and who first gave to these phenomena the term "hypnotism." Braid was inclined to draw a distinction between hypnotism and mesmerism. A little later Grimes in America expounded similar doctrines, and gave to the states produced the term "electro-biological." Modern hypnotism, with its doctrine of the influence of "suggestion," dates from Liébeault, who became the founder of the Nancy school, and whose work, entitled "Du Sommeil," published in 1866, contains the germs of all recent theories upon the subject. In 1878 Charcot began his public classes, in which he directed attention to the physical states of hystero-epileptics during hypnosis. Since that time Bernheim, Beaunis, and Liégeois in France, Van Reuterghem in Holland, Wetterstrand in Stockholm, Forel in Switzerland, and Heidenhain, Berger, Weinhold, Opitz, and many others in Germany have occupied themselves with the subject. Recent investigations have taken one of two directions—viz, the determination of the place and value of hypnotism in therapeutics, and the utilising of it for the founding of experimental psychology.

The general phenomena of hypnotism and the various methods of inducing the hypnotic sleep are passed in review by Dr. Moll, but are probably sufficiently familiar to our readers. We may draw attention to the fact that the school of Nancy proceed by the method of "suggestion" rather than by the procedure of Mesmer or Braid—i.e., the various hypnotic phenomena are "suggested" to the patient by verbal descriptions, and no attempt is made to fatigue the senses by fixed attention, revolving mirrors, or the like. It is important to distinguish these two methods, which are fundamentally distinct. The former attains its end by physical, the latter by psychical means. The latter, or the method of Liébeault, is said to be free from some of the unpleasant after phenomena which sometimes accompany the method of Braid. When the latter plan is adopted, certain stimuli are applied to the senses of sight, hearing, and touch. Taste and smell have been rarely tried, and have generally given negative results. A revolving mirror, the ticking of a watch, the sudden ray of the Drummond light, the loud noise of a gong, contact with hot plates of metal, are among the means that have been adopted. It is always a question, when these physical agents are employed, whether the effects are due to the agents themselves or to the patient's belief in them. Dr. Moll states that "he knows of no well-authenticated case in which sense stimulation has produced hypnosis by a purely physiological action. Most people upon whom such experiments are made know that an attempt is being made to hypnotise them; they have been already hypnotised, and the stimuli arouse conscious or unconscious mental images of the hypnosis; or they have seen the same experiments with others, or they have heard of them." This remark touches the crucial point of hypnotism, and indicates the adhesion of Dr. Moll to the doctrine of the Nancy school,—

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viz., that "suggestion" is at the bottom of all hypnotic phenomena.

Dr. Moll in his third chapter gives the Symptomatology of Hypnotism with great minuteness, but we cannot follow him into all the interesting physiological and psychological questions which he raises. Among the most striking features of hypnosis are the subjection of the voluntary muscles to external suggestion, the loss of the power of voluntary motion, rigidity of the whole body on the one hand, or on the other that peculiar condition to which the term "flexibilitas cerea" has been applied, various contractures; the phenomena of imitative speech (ecbolatic), the patient repeating what is said to him like a phonograph; sense delusions of various kinds, hypnotics being made to drink ink for wine, to eat onions for pears, to smell ammonia for eau de Cologne, &c. The senses of touch and taste are said to be those most easily influenced. The mucous membranes can be made anæsthetic by suggestion in hypnosis to such an extent that the fumes of ammonia in the nose and tickling of the throat are not felt; even the conjunctiva can be touched without producing the corresponding reflex. The muscular sense can also be inhibited in hypnotism, the patient resembling a sufferer from locomotor ataxia. Complete analgesia is exceedingly rare in hypnotism according to Dr. Moll, although it has often been regarded as common.

The influence of hypnotic suggestion upon the various physiological functions is a very curious subject, and some of the alleged facts are novel and startling. Krafft-Ebing claim to be able to produce any temperature he pleases in his patients by suggestion. Heidenhain and Preyer claim to have succeeded in controlling the secretion of urine. The perspiration and the saliva are also said to be under the influence of suggestion. Local reddening of the skin, slowing of the action of the heart, &c., have been said to be similarly affected. Startling as are such assertions, it can hardly be said that they present any *a priori* impossibility. It is quite impossible to assign any limit to the influence of mind upon body, which is probably much more potent and far-reaching than we are usually prepared to admit. Even more startling statements follow. We are informed that under the influence of hypnotic suggestion blisters can be made to rise upon a patient if he can be made to believe that a blister has been applied to him. Marks like burns are said to have been produced by pressing such objects as a snuff-box or a pair of scissors to the skin, the patient being told that the skin was being burned. Various bleedings are said to be capable of being produced by suggestion. Wheals, redness, and swellings are said to have followed the slightest pricks to the skin when the patient had been led to expect them.

Notes on the Examination of the Sputum, Vomit, Fæces, and Urine. By SIDNEY COUPLAND, M.D., F.R.C.P. London: H. K. Lewis.

IT has been aptly remarked that time is short and practical medicine is long, only a very small portion of the art being acquired even in a lifetime. It is all the more essential therefore that "Notes" purporting to give information on that subject should be at once for the most part comprehensive, concise, accurate, and arranged in such a form as will aid the student to retain them in his memory. These characteristics will be found in the "Notes" contained in the present little volume, for which the author modestly "lays no claim to any originality either in the subject matter or in the form in which it is presented." We think, however, that the work shows great originality, and more particularly in avoiding the practice so usual in students' note-books of condensing the print and not the matter. The work deals with everything connected with the sputum, vomit, fæces, and urine which a student or practitioner ought to know, and will form an excellent book of directions for those who are about to be examined on the subject of practical medicine.

ROYAL COMMISSION ON TUBERCULOSIS.

To the Editors of THE LANCET.

7, Whitehall-place, London, S.W., March 16th, 1891.

SIRS,—Will you be good enough to find a place in your columns for the enclosed copies of letters and question papers which have been forwarded at the request of this Commission by the Local Government Board to the medical officers of health?

I am, Sirs, your obedient servant,
LEOPOLD HUDSON, Secretary.

7, Whitehall-place, London, S.W., February, 1891.

SIR,—I am requested by the Commission to state that they will feel very much indebted if the President of the Local Government Board will cause the enclosed question papers to be forwarded to the medical officers of health of the United Kingdom, together with a note commending them to their consideration.

The Commission was appointed on the 21st July, 1890, "to inquire and report what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man."

The Commission have pursued this investigation up to a certain point and are engaging in certain experiments. They also desire to ascertain by inquiry through the medical officers of health of the United Kingdom whether any experience has been obtained by local medical observers that may throw light on the subject referred to the Commission.

Any experiences of the medical officers will be particularly valued, if they will be good enough to reply to the questions on the enclosed form. The Commission will also be obliged if they will kindly forward a copy of these questions to any practitioner in their neighbourhood who they think may be able to furnish information of the kind needed.

I am, Sir, your obedient servant,
LEOPOLD HUDSON, Secretary.

To the Secretary, the Local Government Board.

Local Government Board, Whitehall, S.W., March 16th, 1891.

SIR,—I am directed by the Local Government Board to forward to you the accompanying copy of a letter from the Royal Commissioners on Tuberculosis, expressing their desire to enlist the coöperation of medical officers of health in collecting information on the particular points specified in the memorandum of which copies are also enclosed; and I am to state that the Board will be obliged by your affording any assistance in your power to the Royal Commissioners in the important inquiry which they have undertaken.

Information on the subject, furnished by yourself or by any medical practitioner in whose hands you may think it useful to place a copy of the memorandum, should be communicated to the Secretary of the Commission, 7, Whitehall-place, London, S.W.

I am, Sir, your obedient servant,
HUGH OWEN, Secretary.

To Medical Officer of Health.

7, Whitehall-place, London, S.W.

Medical practitioners are invited to record for the information of the Commission any observations that they may have made on the apparent communication of tubercle from animal to man or from man to animal.

Information is asked for under the following heads:—

1.—A history, with particulars, of any case of tuberculosis in man which has appeared to the observer to be caused by the use of tuberculous food (meat or milk) or by attendance on tuberculous animals.

2.—A history, with particulars, of any case of tuberculous infection of animals which has appeared to the observer to have been contracted from human subjects suffering from tuberculosis.

3.—A history, with particulars, of habitual use of animal food believed by the observer to be tuberculous in cases where individuals or communities have kept free from tuberculous disease.

Replies to this inquiry will be received by Mr. Leopold Hudson, secretary of the Commission, at the above address.

February, 1891.

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THE LANCET.

LONDON: SATURDAY, MARCH 28, 1891.

THE Registers of the profession have made their appearance a little earlier than usual. Last year they were not issued till April 17th. This year we received them on March 18th. In 1887 they were as late as April 29th. We must be thankful for the improvement in respect of time. But there is room for more. It is probably less the fault of the registrars than of the publishers; but it is clearly somebody's fault that public documents of great importance do not appear till nearly a quarter of the year is over. There are great lessons to the profession to be derived from a study of these Registers, which we may briefly indicate. First, they constitute the great and official roll of the profession. There are other compilations of great interest and with a value of their own, but for official and legal purposes, unless a practitioner finds his name here he is a private and non-medical person. Our first inquiry is as to the numbers of the profession. In the Medical Register itself there is no falling off. Perhaps when we come to the Register of Medical Students we may see indications of a recognition of the fact that the profession is overstocked and that young men are perceiving the fact. But in the Medical Register of the 31st December, 1890, there were no less than 29,163 names. This exceeds the number registered on the same day in the previous year by no less than 815!—a startling addition to an already excessive quantity. When we come to inquire into the details of the explanation it may seem a little less startling. But still the fact remains that 29,163 are on the Register for this year, against 28,348 in the previous year. They are not all pure additions—that is, names added for the first time to the Register. Of such fresh names there is a little falling off in the last year. In the three divisions of the kingdom—England, Scotland, and Ireland,—there were respectively 637, 462, and 167 *added* by registration, or 1266 in all, as against 657, 444, and 204, or a total of 1305 in the previous year—a difference of diminution of thirty-nine new registrations. There is a clause (14) in the Medical Act which empowers the Registrar, after certain fruitless inquiries, to remove names; and in some years hundreds of names are removed, in others hundreds are *restored* under this clause. In 1889 no less than 407 were so removed; last year the number was only 82. Practitioners so removed often apply for restoration, and in last year 105 names were restored, against 82 in the previous year. Clause 14 gives oscillation to the numbers on the Register, which must be considered in estimating the real additions by registration for the first time. We have seen these were less than in the year before by 39, and less than the average of the last five years by 78. So the additions, as compared with the previous year, are not quite so alarming, when they come to be analysed, as at first sight they appear to be. But as a matter of fact, there is a greater number of names on the Register for 1891 than there had been in any previous year, and doubtless represent an excess of the actual wants of the empire.

There are three or four ways by which men disappear from this roll of the profession which demand a few sentences. Happily those erased for evil behaviour only average two a year. Hundreds, as we have said, may be removed by carelessness in intimating changes in address. Some men cease to practise. It will surprise men of more lucrative and leisurely callings to learn that seven practitioners a year on an average so withdraw from the Medical Register. There remain the removals by death. And here we find the Registrar's figures most satisfactory and most unsatisfactory. Satisfactory as showing so healthy a state of the members of the profession; unsatisfactory as showing that the Registrar and Dr. OGLE are at serious variance as to the mortality of medical men. The removals from the Register by death have been only 467, which for the numbers in the previous Register (28,348) give a mortality of something over 15 per 1000. Dr. OGLE, a few years ago, gave the mortality of medical men as 25 in the 1000. We can scarcely doubt that the actual mortality of the profession exceeds 467, in spite of the Registrar's great pains to be accurate; but we are disposed to believe that it is not nearly so high as Dr. OGLE's statistics seemed to prove.

A novelty in the Medical Register is the Colonial Register. But our readers need not be unduly alarmed. It contains only two names—viz., those of two graduates of the University of Melbourne, one resident in Melbourne and one in London. Coming to the Register of Medical Students, it contains much material of interest, but we have only space to notice the supply of medical students, and the principal sources whence it comes. We find a falling off in each division. In England there were 974 registrations, in Scotland 643, in Ireland 229, in all 1846; as against 1039, 702, and 286, in all 2027, in the previous year. The number is less than in any of the previous twelve years, except 1883, when it was 1783. We must not too hastily conclude that the rush into the profession of late years has been really stayed. The commencement of medical study may either be at a medical school, or a hospital or infirmary, or by pupilage with a medical practitioner. It is interesting to note with regard to this latter method that it is followed by 140 of our new students. Cambridge, in England, has the largest number of registered students, 104. Edinburgh, in Scotland, has 244, the largest number of any school. In Ireland the largest number is in Queen's College, Cork.

The Dentists' Register contains 4862 names of dentists who hold diplomas from bodies in the United Kingdom, and fifteen from foreign sources, of which six are from Harvard University and nine from Michigan.

THE next meeting of Convocation, on May 12th—when the Draft Charter, prepared on the basis of the latest revised scheme, will be laid before the members for their acceptance or rejection—will be one of the most important in the history of the University of London. The Draft Charter, as well

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as the scheme, will be circulated amongst them before the meeting, so that every member may become acquainted with the latest proposals. It will simply embody the details of the scheme which we published on Feb. 14th, and on it a vote of yea or nay will be taken. It must be understood that it will be impossible to alter the proposed Charter by rejecting any of its clauses or by the introduction of any others; it must be accepted or rejected *en bloc*. The question, then, which Convocation must decide, in the first instance—for, if accepted, it will still be contested by University and King's Colleges before the Privy Council,—is whether the graduates are willing to completely transform the character of the University in a manner at once at absolute variance with the traditions of the existing University and with the proposals for its reform which were suggested in the report of the Royal Commission. In that report the necessity of a local metropolitan University was specially insisted on, whilst the latest scheme is really an attempt to federate all the University Colleges of arts and science throughout England and Wales under the control of Burlington Gardens. Even in so doing it offers these Colleges a very insufficient representation on the Senate, and an unworkable set of regulations for their faculties and boards of studies. Eight representatives on a Senate of fifty-two meeting in London will be quite unable to give effect to any special action affecting the provincial interests, and, if not sufficient to do this, the representation of provincial Colleges, except through Convocation, is useless, and only seems to give a power which is really not possessed. The proportionate representation of Convocation is greatly reduced in the new scheme. But of much more importance to the medical profession and to our readers are the clauses dealing with future medical degrees in London. For the past seven or eight years we have urged the necessity for the removal of the disadvantages under which the London medical student labours in regard to the obtainment of a medical degree as compared with the opportunities enjoyed by students at other centres of medical education, and we had hoped that the report of the Royal Commissioners, pointing out that the present pass degree of the University of London was really an "honours" degree, would form the basis of some satisfactory plan for his relief. But the present scheme simply lowers the existing standard for the Pass M.B. degree by accepting the professional examinations of the Royal Colleges in lieu of the Intermediate and Pass M.B. Examinations, which are not really the barriers to the degree. It still maintains the Matriculation and Preliminary Scientific M.B. Examinations on the old footing. So far back as 1884 it was pointed out to the Senate of the University that the two preliminary examinations were those which required modification, but since then these have been allowed to become even more difficult, and it is further intimated that this standard will undergo no change. Where, then, is the relief? And if no relief, why should the existing status of the degree be disturbed? The new scheme only divides the responsibility for pass degrees by admitting the Royal Colleges to an equal share, so far as professional subjects are concerned, and quite fails to amend the unfair position in which London medical students are placed. It gives the Royal Colleges a position to which the Royal Commission would not assent, and it practically preserves the present conditions at the expense of the students. It is stated in an explanatory memorandum published by the Senate that the opinion was unanimously expressed by the representatives of the Royal Colleges and of the medical schools, "that nothing should be done which should lower the standard or lessen the value of the medical degrees of the University, or impair their scientific character;" but this scheme lowers the standard of the degrees without increasing the facilities for obtaining them. We also hear that the medical schools, except those of University and King's Colleges, have given in their adhesion to the scheme, although "no alteration is now made in the degree of M.D.," which therefore remains an "honours" degree. We cannot believe that the various committees of the medical schools, of whose members many were especially concerned in the promotion of the movement for obtaining degrees for London medical students on equitable terms, have really passed resolutions in support of such an unreasonable scheme, which, if the application for the Charter be successful, will prolong for another generation the present disparity between the terms on which London and the Scotch and provincial students respectively can obtain degrees. The advantages of studying at the largest clinical schools in the world will not compensate for many of the disadvantages under which the students will labour in after-life; no fair chance of obtaining a degree is afforded to them.

IT will probably take some time to settle in a satisfactory manner the various points of difference enumerated by Sir ANDREW CLARK in his recent letters to the War Minister on the present condition of the Army Medical Staff and the reforms by which it would be benefited. The medical officers are never likely to have their case put forward more fully and forcibly than Sir ANDREW CLARK has done; and we probably cannot do better than point out, as briefly as we can, how the matter stands at present between him and the War Minister.

The grievances of which the medical officers complain, notwithstanding their connexion with questions of social and professional position, are by no means of a purely sentimental character. A principal cause of complaint, the duration of continuous foreign service, is eminently practical in its bearings. It will be remembered that the period of five years was in 1888 extended to six. What is asked for is a return to the five years' system—a reform already advised by Lord CAMPERDOWN'S Committee. The medical officers, says Sir ANDREW CLARK, ask for the shorter term of *continuous* foreign service. Mr. STANHOPE promises he will consider what he can do to meet their wishes in this respect, but is doubtful whether such a concession will be considered a boon, as the shortened periods of foreign service would mean more frequent changes, and, as a consequence, some additional expense to the officers concerned. As regards conditions of sick leave for medical officers, Mr. STANHOPE also makes the necessary concessions. But from this point there is considerable divergence in the views expressed on either side. Take, for instance, the

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question of the allotment of honours. On the one hand, we find H.R.H. the Commander-in-Chief, supported by a group of distinguished officers, declaiming against the excess of honours lavished upon medical men. On the other, we have the official statements in which the rewards reaped by medical officers for service in the field appear but as a fraction of those enjoyed by other members of the same force. Thus in the Egyptian campaign of 1882, while the percentage of decorations to the regimental strength in the Ordnance and Commissariat Departments combined was 84, that in the Medical Staff was 7. In connexion with the Nile Expedition two years later the value of services rendered was acknowledged by promotions in the proportion of 44 in the case of chaplains, 41 in that of pay officers, 30 of Ordnance, and 13·8 of Commissariat officers, while the medical department added but a lean total of 7 9. The higher decorations —namely, those of the Bath, the Star of India, the Order of St. Michael and St. George—have strayed at times to the breast of the military surgeon; but their presence has been of conspicuous rarity. Sir ANDREW CLARK gives an effective table, comparing the honours bestowed upon the Royal Engineers with those conferred upon the Medical Staff. Sir RALPH THOMPSON'S Committee in 1878 noticed the marked inequality between the medical and the combatant officers in this particular, and advised that the former should be treated as virtually combatant. It is needless to add that the recommendation was forgotten. In view of such facts and opinions as these we fail to understand what is meant by the term "excess" as applied to the rewards of the Army Medical Department. Mr. STANHOPE alleges that honours cannot be made a matter of proportion, and urges that the fact of the Engineer honours being "for the moment in excess of those enjoyed by the Medical Staff," in no way lessens the force of his statement; and he adds that if the rewards conferred upon Engineers in civil and colonial employ and in high command be eliminated, the two lists, of Engineers and Medical Staff, are not disproportionate. But, even so, Mr. STANHOPE does not touch upon the other illustrations cited by Sir ANDREW CLARK.

We come now to deal with the question of substantive rank. This subject has been treated with much vigour by Sir ANDREW CLARK, who maintains the position already "supported by the experience of the armies of Italy, Switzerland, Holland, Turkey, the United States, and of several other countries, by the opinion of all the medical corporations of the United Kingdom, by the conclusions of almost all bodies of men who have judicially investigated the question, and even by the approval of a rapidly growing number of combatant officers"—namely, that the army medical officer, having to discharge every military duty except actual fighting, must be confirmed in his position by some fitting rank and title. Mr. STANHOPE, on the other hand, declares that the claims put forward and the parallel instituted between the Corps of Royal Engineers and the Medical Staff are based upon misapprehension; that a Royal Medical Staff Corps with definite rank and title to all its officers, and its organic incorporation into the general army on the lines followed in the case of the Royal Engineers, can only carry one meaning to his mind (that of military command whenever a medical officer happened to be senior in the field); and that medical officers already possess the requisite limited command by virtue of the substantive rank conferred on them by their commissions. If this be so, it is to be regretted that it was not made plain. Instead of the words "with" or "as," the medical officer's position might have been described and defined at the time of relative rank being abolished by the use of the words "with the rank of" so and so—captain, major, colonel, as the case might be.

Officers of the medical branch of the service have indubitably the same claims to consideration as have those of any other branch of Her Majesty's service, and it is an anachronism in the present day, to say the least of it, to make any of those distinctions which Sir ANDREW CLARK emphatically says are made between the treatment accorded to them and other officers. Sir ANDREW CLARK cites in illustration, the cases of Surgeon-General Sir ANTHONY HOME and Surgeon REYNOLDS, both of whom won Victoria Crosses for conspicuous bravery.

We have never had any doubt that the Army Medical Staff could be welded together into a corps, and that, if necessary, its officers could be endowed with army or substantive rank equivalent to and conterminous with their sphere of duties. What we have contended for, however, is that so long as these officers are members of the medical profession and in the pursuit of their calling—and we hope proud of their professional status —they should retain some distinctive title expressive of the profession to which they belong. We would protest against the assumption that the profession of medicine is in need of any reflected dignity. It has every bit as much title to respect as the profession of arms.

WE referred last week to the experiences gained up to the close of last year in the use of KOCH'S tuberculin by the leading physicians of Northern Germany, as embodied in the lately issued official reports. In completing that account of the medical use of the remedy, a brief reference may be made to what is especially said concerning its employment in tuberculosis of the larynx and other internal organs. Respecting laryngeal tubercle, Professor SENATOR reports good results, and notes in one case the marked relief given to painful deglutition during the use of the remedy, but the difficulty returned when, owing to cardiac weakness and extension of lung disease, the injections had to be discontinued. Professor SCHULTZE (Bonn) observed in some cases that the first injections produced a hoarseness of voice not previously noticeable, whilst ulcers became covered with exudation and their bases cleansed. He could report no cure—a statement repeated by many others, as BIERMER (Breslau), MOSLER (Greifswald), WEBER (Halle), and LICHTHEIM (Königsberg). Still most, if not all, admit marked signs of improvement in the character of the ulceration, and Professor FRAENKEL (Berlin) is of opinion that the action of tuberculin on the larynx is more rapid than it is upon the lungs. Dr. P. GUTTMANN, who treated upwards of thirty cases of all kinds, varying "from simple infiltration to extensive ulceration and perichondritis," observed favourable effects in all, especially in the slighter cases. But he noted actual

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cicatrisation of ulcers. It is noteworthy that he expresses an opinion that the fears of exciting a dangerous œdema glottidis by the action of tuberculin are groundless. Professor FRAENKEL thinks the laryngeal ulcers improve more rapidly than they do under local applications; and Professor BARTH (Marburg) observes that pain and cough abate after a few injections. As regards other organs there is little to be said. The remedy has been applied in comparatively few cases, and of the majority of these it is reported that they are still under treatment. Dr. OLSHAUSEN thought the ascitic effusion of abdominal tuberculosis became rapidly absorbed under the remedy. Yet the list of "cures" embraces only one case of pleurisy and one of abdominal tuberculosis. Four cases of renal tuberculosis are all returned as "unimproved."

Passing from the medical to the surgical clinics, it is at once patent that there is not quite so much diversity of opinion respecting the value of the remedy among the latter as in the former. Thus, as to its use as an aid to diagnosis, we find Professor VON BERGMANN considering that it is of much value in discriminating a tuberculous from a syphilitic or cancerous affection; Professor VON BRAMAN (Halle) alleging that it is apparently a certain test of the presence of tubercle; and Professor VON ESMARCH (Kiel) expressing an opinion that it is of great service in the diagnosis of lupus and bone and joint disease—especially because of the fact that cases of early disease react the best. In a similar sense speaks Professor BRAUN (Königsberg), who thinks the remedy has extended the powers of diagnosis, as establishing the tubercular nature of affections not hitherto recognised as such, and as determining whether a tuberculous process is cured or not. Professor KÜSTER (Marburg) holds it to be a marked aid in diagnosis, although he failed to get reaction in certain cases of fistula, and yet observed reaction in a case of lupus erythematodes. Professors R. KÖHLER and WESTPHAL think it surpasses all other measures, and that its specific powers are indubitable. Professor LEWIN (Berlin) and Professor DOUTRELEPONT (Bonn) also express their high appreciation of its value. Exceptions to the production of reaction in undoubted cases of tubercular disease are, however, noted by several—e.g., Professors BARDELEBEN and A. KÖHLER,—who think that such occasional failures may be explained by variations in individual susceptibility or in the preparation of the remedy. Professor TRENDELENBURG (Bonn), whilst admitting its practical value in the detection of tubercular foci, notes that it is especially uncertain in tubercular disease of the testis. Still, he has used it with advantage in the differential diagnosis of vertebral caries and effusion into the knee-joint, as well as in the early detection of renal tubercle. Professor MIKULICZ (Breslau) notes the various degrees of reaction that may be observed, sometimes a general reaction being present without any local effect; in such cases the diagnosis of tubercle rests mainly on the intensity of the febrile reaction. He has no doubt tubercle may be excluded if neither general nor local reaction develops. Professors KÖNIG and HILDEBRAND (Göttingen) consider that, in view of some undoubted cases of tuberculosis not showing any reaction, one ought not to estimate its diagnostic powers too highly. Professor HELFERICH (Greifswald) seems to be in doubt whether it is an absolute test. Professor NEISSER (Breslau), who believes in its diagnostic value—negatively as well as positively—thinks that general reaction without local effect may imply the presence of concealed internal tubercle.

The surgical cases in which tuberculin has been used for its therapeutic effect comprise mainly lupus, bone and joint disease, disease of lymphatic glands, and a few cases of tubercular ulceration of soft parts or of cicatrices. There is practical unanimity regarding the striking effects produced in lupus, more than one observer recording what he considers a complete cure (there are five such out of a total of forty cases discharged from hospitals, but 148 remained under treatment), although, as Professor DOUTRELEPONT remarks, sufficient time has not elapsed to exclude the possibility of a recurrence. Opinion is less unanimous regarding the value of the injections in tuberculous bone and joint disease. Professor v. BERGMANN stands alone, however, in the assertion that they seem to be wholly without effect (*wirkungslos*) in such conditions. Professor TRENDELENBURG found no clear result from the use of the remedy, and noted that cases of suppurating joints were made worse. But both he and most of the other surgeons seem to have had cases of more or less marked improvement, especially when it was employed as an adjuvant to more radical surgical measures. The truth is that comparatively few opportunities seem to have occurred for testing its efficiency in the earliest stages, and just as in phthisis, so in joint and bone affection, the disease was already complicated when it had been subjected to the treatment. Professor v. BRAMAN thinks that the supervention of suppuration is a clear indication for surgical intervention.

The general impression resulting from the perusal of these surgical experiences is that sufficient has been shown to justify the further careful trial of the remedy; but that in justice to its powers the cases should be selected with discrimination. The volume contains also reports from various pathological institutes giving the post-mortem appearances in fatal cases. This aspect of the question has, since these reports were drawn up, been so fully gone into by Professor VIRCHOW that we do not propose to enter upon it now. It will, however, have to be maturely weighed and considered in connexion with the question of the indications and contraindications for the use of so powerful a remedy as tuberculin. These are questions which may well be left over for a space, and the debate which will shortly take place at the German Congress of Internal Medicine will doubtless throw more light upon them than can be gained from the brief experiences recorded in these official reports.

THE following notice has been issued from the Foreign Office:—"With reference to the notice which was communicated by the Foreign Office to the newspapers on Jan. 16th respecting an outbreak of typhoid fever at Florence, Her Majesty's Consul-General in that city reports that the epidemic is now declared to be at an end. A few isolated cases may still occur, but nothing more than is usual in a population of 200,000 inhabitants. The condition of the water-supply is occupying the urgent attention of the local authorities, and there is every reason to believe that a satisfactory solution will shortly be arrived at."

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Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF PHYSICIANS.

THE Extraordinary Comitia held on the 23rd inst., to "elect a President, pursuant to Act of Parliament 23 & 24 Vic., cap. lxvi.," was very well attended. The preparation of a new edition of the By-laws and Regulations of the College was entrusted to a committee consisting of Dr. Church, Sir Dyce Duckworth, Sir H. Pitman, Dr. E. Liveing, Dr. Marsh, and Dr. Allchin. The report of the Committee on the Midwives' Registration Bill was presented, and on the motion of Sir R. Quain, seconded by Dr. Barnes, it was received and entered on the minutes. The report, which was favourable to State registration, suggested that the General Medical Council might be entrusted with the task of framing regulations. On the motion of Dr. Champneys, seconded by Dr. Barnes, it was resolved to have the report printed and circulated among the Fellows, with a view to its further consideration. A communication was read from the Association of Certifying Factory Surgeons, asking the College to take immediate action to prevent the passage of Clause 19 of the Factory Acts Amendment Bill now before Parliament, which clause abolishes the granting of medical certificates for children and young persons engaged in workshops. It was decided to leave the matter in the hands of the President to take such action as he might think fit. On the motion of Sir Joseph Fayrer it was resolved to give a reception to the members of the International Congress of Hygiene, which will meet in London in August next. Sir Andrew Clark then delivered the annual Presidential address. He said that during the past year 11 Fellows and 9 Members had died, and that on January 1st of the current year the College comprised 299 Fellows, 466 Members 8 Licentiates (prior to Dec. 1860), 30 extra-Licentiates, 4832 Licentiates, and 80 Diplomates in Public Health. He referred to the baronetcies conferred on Sir H. Acland and Sir R. Quain, and the Court appointments of Sir A. Garrod and Sir Dyce Duckworth. He stated that the total outlay incurred by the College for the new buildings and laboratories on the Embankment amounted to £31,644, that the laboratories were now fully equipped and in working order, and that it was estimated the annual working expenses of the institute would be about £1000. He paid a warm tribute to the admirable work of Dr. E. Liveing, who "has proved himself a worthy successor of our revered Emeritus Registrar, Sir H. Pitman"; and next proceeded to sketch in felicitous language and with much discrimination and feeling the careers of the following deceased Fellows: Dr. A. Lochee of Canterbury, Dr. A. J. Pollock, Dr. Fincham, Dr. Matthews Duncan, Dr. C. Handfield Jones, Dr. Graham Balfour, Dr. G. Gulliver, and Dr. Markham. A review of the affairs of the College during the past year, including especial reference to the reconstitution of the University of London, concluded an address characterised throughout by much eloquence and clear thinking. It was received with much applause, and the motion of the Senior Censor (Dr. Russell Reynolds), according the thanks of the College to Sir Andrew Clark, coupled with the request that he would allow his address to be printed, was carried by acclamation. The election for President then took place. Sir Andrew Clark received 96 votes out of the 103 Fellows present, the remainder being divided between Sir R. Quain, Dr. Wilks, Dr. Bristowe, Dr. G. Johnson, and Sir A. Garrod.

ACCIDENTS UNDER ANÆSTHETICS.

THERE are various contingencies against which no amount of forethought or care can guard, and perhaps this is more emphatically true of the use of anæsthetics than of almost any other domain of the healing art. Although the most careful thought has been given in the choice of the agent to be used, and all the preparations of the patient and the operating-room have been properly made, yet what, for want of a better name, we call an accident takes place, and all calculations are thrown out. We do not here include accidents which can be referred to any given anæsthetic, since no authoritative decision can be yet quoted as settling the vexed question, Which is the best and safest anæsthetic? Opinions differ, and so each medical man has to decide for himself. But when epileptic seizures, vomiting of hard masses of food, &c., occur, it matters little what agent has been employed—the results are the same. These remarks are illustrated by some cases the reports of which have been recently placed before us. At Chelmsford a blacksmith, who was an epileptic, fell while in a fit, and burnt his arm so severely as to necessitate amputation. Chloroform was administered and the operation commenced, but an epileptic seizure took place and the man died, the "cause of death being epilepsy and syncope." The occurrence of epileptic fits under anæsthetics—nitrous oxide, chloroform, ether—is not uncommon, but as a rule is not followed by a fatal result. The knowledge of the existence of epilepsy in a patient, while it emphasises the necessity for caution, does not contraindicate the employment of an anæsthetic. In the case of the death which occurred at University College Hospital, the patient, a young man, had been seen in the early part of the day and carefully instructed to abstain from food, as he was to present himself for a trifling operation in the evening of the same day. He was asked, before the house physician administered ether, whether he had obeyed his directions and replied in the affirmative. It appears, however, this was not true, as he had just before going to the hospital partaken of a hearty meal. The operation over, vomiting came on, and as the patient became cyanosed the finger was passed to the back of the pharynx and dislodged a mass of meat. The symptoms were not relieved, and suffocation appearing imminent, laryngotomy was performed, but without success. The necropsy showed that another wedge of meat had been drawn into the trachea and become fixed, occluding both bronchi. Here only to the victim could blame be imputed.

A METHOD FOR RETAINING ARTIFICIAL DENTURES.

ONE of the great discomforts of artificial dentures where all the teeth have been lost and much absorption of the gums has taken place is the constant tendency for them to slip forwards. To overcome this difficulty Mr. Wm. Dall of Glasgow has developed a method of fixing dentures by means of two or more gold pins attached to the under-surface, which enter holes either made by drilling the jaw-bone or left after the extraction of a tooth. In the former case the gum is first painted with a 50 per cent. solution of cocaine, and the holes are drilled by means of the dental engine. In the lower jaw any place may be chosen between the symphysis and the mental foramen, and in the upper almost anywhere, care, however, being taken not to pierce the floor of the antrum. Koch's solution is used as an antiseptic at the time of operation, and also prescribed as a mouth-wash during healing. The denture is applied a few days later, and is of course to be regularly removed for the purpose of cleaning. He believes that the bone forming the walls of the socket becomes sclerosed, and that there is little danger of necrosis. Where the holes or sockets result from the extraction of teeth the gold pins have simply to be fixed to the denture, and in all cases it is important that they should be parallel. During the last three years Mr. Dall has drilled ten cases

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in all, seven in the upper and three in the lower jaw, and in only one inflammation followed by suppuration occurred, and this quickly subsided. In fifteen cases dentures were inserted with pins entering the sockets of extracted teeth. Two cases were shown at the Odonto-Chirurgical Society of Scotland exemplifying this method of treatment. This operation can hardly be considered analogous to wiring bones together, as was suggested during the discussion of Mr. Dall's paper, for this is done under antiseptic conditions impossible in the mouth, and, moreover, every effort is made to keep the wound aseptic afterwards, whereas in drilling the sockets are left open. Some objections to the operations are the risk of opening up the antrum or the inferior dental canal, and the difficulty of keeping the sockets clean.

THE SANITARY STATE OF SOUTHEND.

THE Local Board of Health of Southend seem in no hurry to take the steps necessary to the removal of the reproach which now attaches to their town. Since the serious epidemic of enteric fever of last autumn we have had reports from one and another, and also the exhaustive account of the circumstances associated with the fever which Dr. Thresh issued after his special commission to inquire into the causes of the outbreak. Then came the failure to re-elect the past medical officer of health, and now, at the moment of the Easter holidays and within about four months of the next summer season, we find Mr. E. Phillips, the new medical officer of health, making the old suggestion over again—namely, that it is of the greatest importance that the sewage of the lower town should be dealt with. Twice a day the tide enters the sewer, and the resulting reflux of sewage must be prevented if healthiness is to be maintained. The view held by the health officer may be judged of from his evidence in a recent trial which was the outcome of an attack of enteric fever, due to unwholesome conditions in a sublet house, and in which he laid stress on the "especial" need in even distant parts of Southend of preventing the sewer air forced in by the tide from getting into houses. But with all this before the Local Board, the latest recommendation is still the first one that was made—namely, "the sooner a skilled engineer was employed ..... the better it would be for the place."

DIABETIC RETINITIS.

IN the *Deutsche Medicinische Wochenschrift*, Nos. 51 and 52, 1890, Dr. J. Hirschberg publishes the results of his investigations on the affections of the retina which occur in connexion with diabetes mellitus. There are three chief forms: (1) A peculiarly characteristic inflammation attacking the central region of the retina, accompanied by small bright spots, and generally also by minute hæmorrhages; (2) hæmorrhages into the retina, followed by inflammatory and degenerative changes; (3) a rarer form of inflammation with degenerative changes. The connexion of this condition with diabetes has yet further to be investigated. Inflammation of the retina occurs in patients of middle age, or in those more advanced in life who have had sugar in the urine for some considerable period. It generally affects both eyes, and the earliest symptoms are bright specks appearing before the eyes, difficulty in reading, and general indistinctness in viewing small objects. The acuity of vision is therefore diminished, but the field of vision is normal, although dark spots often occur in the centre of it. When the fundus is examined by the ophthalmoscope groups of small white shining spots are seen between the superior and inferior branches of the central artery, and others are seen close to the optic disc, being most numerous on its inner side. These spots gradually grow larger and form narrow streaks or curves, but star-shaped collections are never seen. No pigmentation occurs. Minute hæmorrhagic points and streaks are observed surrounding the bright spots just referred to. The complete escape of the optic disc is remarkable, as is also the absence of any considerable cloudiness of the retina, or any very marked changes in the vessels. In this respect diabetic retinitis differs from the albuminuric form. The former is an exceedingly serious condition, as there is little probability that the disturbances of vision will disappear, and it also denotes that the primary disease (diabetes) is severe and deeply rooted. Spontaneous hæmorrhages in the retina occur, being due to changes in the vessels, as atheroma is a frequent consequence of diabetes. Small round patches of hæmorrhage are then seen, if attaining any size, being accompanied with cloudiness of the vitreous, hæmorrhagic glaucoma, and hæmorrhagic infarcts in the retina. These hæmorrhagic affections of the retina are less characteristic of those occurring exclusively with diabetes as those described above, but the prognosis is even more grave, not only as regards the length for which sight may be prolonged, but also in reference to the time the patient will probably live.

DEATH FROM SWALLOWING CHLOROFORM.

A SAD case is reported from Abingdon. According to a local paper, a youth aged twenty was tempted, while suffering from ill-health and under the dread of a forthcoming examination, to take chloroform, and, it would appear, actually swallowed some three ounces. Although emetics were given and vomiting induced, the unfortunate young man died. The drug seems to have been taken soon after 7 A.M., and death took place at 9.15 A.M., in spite of the assiduous efforts of his medical attendants. The effects of chloroform taken into the stomach are now well known; the symptoms are similar whether the vapour is inhaled or the liquid swallowed, save that in the latter case there is an irritant action superadded to the narcotic and anæsthetic effects occurring in the former.

INTERNATIONAL MEDICAL CONGRESS IN BERLIN.

WE have been asked to announce that it has been found more convenient that copies of the Transactions of the International Medical Congress should be distributed by an English firm instead of being obtained direct from Berlin. Arrangements have been made with Mr. Kolckmann, of 2, Langham-place, for their sale, and for free distribution to members on payment of a nominal sum for carriage. Country members can have them forwarded on application. Non-members can obtain them at the net price at which they are published in Berlin. Volume I. only is at present published; the rest will follow at short intervals.

EPSOM COLLEGE.

AS an indication of the good work being done in Epsom College the following facts may be mentioned. Last year the school passed six boys through the preliminary scientific examination for the degree of M B. of the University of London; sixteen passed through the London matriculation examination, and eight passed last January. In July, 1890, seven boys (all who entered) obtained higher certificates in the examination of the Oxford and Cambridge Board, and since Jan. 1st three open scholarships have been gained, two directly from the school—one at Cambridge of £30 for natural science, and one of £80 at Oxford for classics. It has become necessary for the Council to consider the question of extending the school accommodation. Those interested in this important charity should not forget the proposal made by Dr. Holman, the treasurer, at the last festival to enable the pensioners to have augmented incomes, with residence

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amongst their friends. This should not be lost sight of, and fresh endeavours should be made at this time to meet the appeal of the treasurer to secure fresh donors and fresh subscribers to the institution as a whole, so as to enable the Council to undertake these pressing responsibilities and to extend the advantages offered by the school.

THE FAVERSHAM POISONING CASE.

AFTER a trial which lasted four days, Charles Lyddon, aged twenty-eight, was acquitted on the 21st inst. of the charge of murdering his stepbrother, William Reeks Lyddon. The case had been removed from the Kent Assizes to the Central Criminal Court by writ of *certiorari*. The deceased had practised as a surgeon at Faversham for twelve years. For two years he had been assisted by the accused, who was to receive £50 a year for his services. It appears that the salary was not paid. Partly to cover this debt and partly to secure some creditors of the deceased's estate, a covenant was executed in April, 1889. By this instrument the deceased became indebted to his brother in a sum of £550, secured by the goodwill of the practice and the household furniture, but it did not contain the usual restricting clause preventing the deceased from practising in the vicinity of Faversham. It was contended by the prosecution that the desire to possess himself of the amount guaranteed by the deed was the motive of the accused for taking the life of the deceased. The evidence revealed a most painful history of intemperance, for it established that not only the deceased but his mother and the accused were addicted to drink. The deceased seems to have been a confirmed drunkard, and from the testimony of several witnesses there could be little doubt that he also indulged in narcotics. From June to August, 1889, the deceased was an inmate of St. Thomas's Hospital, where he was treated for fistula. In October, 1890, at the suggestion of Dr. Boswell, he went to the Cottage Hospital at Faversham, where he remained for about three weeks. Subsequently he went to Herne Bay, and from there he returned home on Nov. 24th. The following day he was dead. From the evidence of a boy named Naylor, employed as a page by the Lyddons, it appeared that there were frequent quarrels between the deceased and his brother, when either or both of them were under the influence of liquor, but that at other times they lived on mutually affectionate terms. On the night preceding his death the deceased was made by the accused to sleep in a lumber room, a circumstance which had not previously occurred. In this room he was locked by the accused, who slept with the boy Naylor. At 7.30 the following morning the deceased was found in a state of coma, partly dressed, on the floor of the room. When discovered neither the accused nor his mother appears to have assisted Naylor in removing deceased to Mrs. Lyddon's bedroom, but this may be accounted for by their thinking him helplessly drunk, a condition not by any means unusual. Two local medical men were called in, and from their previous knowledge of the life led by the family, and also from the circumstances surrounding the death of Mr. Lyddon, very properly refused to give a death certificate. The accused sent for the police, and offered them every facility in searching the house. In the room occupied by the deceased overnight a bottle, tightly corked, containing some morphia, was found. From an analysis of the contents of the stomach and the liver, Dr. Stevenson was of opinion that death was due to morphia, and that from seven to eight grains of the drug had been administered. Although on the night previously to his death deceased was very drunk from whisky-drinking, none was detected in the stomach, but there was a quantity of fluid. From the latter fact the prosecution suggested that some liquid had been given to the deceased by another person. It was not proved, however, that he could not have obtained it himself. Moreover, it is by no means certain that during the process of osmosis the spirit may not have entered the circulation, leaving the watery constituent in the stomach; or the latter may possibly have transuded from the gastric vessels into the viscus. At any rate, the physiological problem was too complicated to afford grounds for rendering the guilt of the accused even probable. In due course an inquest was held at which the accused was examined and cross-examined on oath. During the lifetime of the deceased the accused had on various occasions and to different people complained of the former giving way to the abuse of drugs; and Dr. Hill of Colchester and Dr. Boswell of Faversham had both seen deceased in a condition consistent with the theory that he was under the influence of narcotics. Then, too, no attempt at secrecy was made by the accused either on the night before the death or subsequently. His conduct was not that of a person about to perpetrate the crime of administering a fatal dose of morphia to the deceased. The coroner's jury returned a verdict making the brother chargeable with causing the death. Considering that an inquest is a court of first instance equivalent to a grand jury, no fault can be found with the event of the inquiry; but it was manifest to most who studied the evidence that it would fail to bring to the minds of the jury at the Criminal Court the conviction that the accused was guilty "beyond reasonable doubt." To the verdict we unhesitatingly subscribe.

LEPROSY IN NEW SOUTH WALES.

THE Government of New South Wales have placed on the statute book an Act providing for the notification of cases of leprosy, for the detention and isolation of lepers, the appointment of lazarets, &c. The Act (54th Vict. No. 20) requires that the immediate notification of any case of leprosy be made in writing to the proper authorities by the householder and medical practitioner in attendance on the case, under a penalty of not less than £10 or more than £50. Power is given to the governor to direct the formation of a lazaret for the reception and treatment of lepers, to the board of health to investigate reported cases, and to order the removal and detention of the leper. Regulations may be made and issued by the governor, on the recommendation of the board of health, to carry the Act into effect, and penalties are imposed upon any person who wilfully disobeys or obstructs the enforcement of such regulations.

THE RELATION OF BACTERIOLOGY TO NOSE AND THROAT DISEASES.

AT a meeting of the British Laryngological and Rhinological Society held on Friday evening, the 20th inst., Dr. John Macintyre of Glasgow gave an interesting lecture, introductory to the discussion on the relation of bacteriology to the diseases of the throat and nose. In the course of his lecture Dr. Macintyre discussed the general facts concerning bacteriology, such as classification, vital phenomena, &c., and stated the arguments for and against the vitalistic theory of disease. He demonstrated a large number of specimens of well-known forms of micro-organisms under the microscope, as well as numerous micro-photographs on the screen, and made special reference to those of interest in throat and nose work. He showed several found in the mouth and nose of healthy people, which are apparently harmless, and others found in diseases where there is decomposing material such as in ozæna. He referred to the specific forms found in diseases of the lower part of the respiratory tract, as tubercle, lupus, diphtheria, pneumonia, and suppurative diseases. Lastly, he discussed the question how protection was to be got from the diseases associated with micro-organisms, noting the result of inoculation, and criticised the theory of phagocytosis. He explained some

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interesting experiments now being made in Glasgow with reference to the hypodermic injection of chemically pure carbolic acid, which bid fair to demonstrate the possibility of rendering the effects of certain pathogenetic micro-organisms inoperative within the body. In considering the possibility of rendering the tissues unsuitable for the growth of organisms after their entrance into the system, he cautioned his audience not to be carried away too hastily by Koch's or Liebreich's methods of treatment for tuberculosis.

TREATMENT OF DIPHTHERIA.

DR. GUNTZ of Dresden has had great success in the treatment of diphtheria with bichromate of potash in water containing carbonic acid, which he has found by numerous experiments on animals, as well as in the course of extensive clinical observation, to be entirely harmless. For an adult 600 grammes (about a pint) are ordered per diem, in which are dissolved three centigrammes (about half a grain) of potassium bichromate. The whole quantity is directed to be taken in about half a dozen doses, regarding which it is important to observe that they must not be taken on an empty stomach; a little milk or gruel should therefore be swallowed before each dose. Children, of course, take smaller quantities, according to age. They can be given the medicine in a tumbler mixed with some fruit syrup, and they do not generally object to it. At the commencement of the disease Dr. Guntz washes the mouth out with a 1 per cent. solution of permanganate of potash containing 0·1 per cent. of thymol, or with a corrosive sublimate solution of the strength of 1 in 3000, taking care, in the latter case, that none is swallowed, and that the mouth is well rinsed with water afterwards. In the case of young children the pharynx must be brushed out with the solution. Sometimes iodoform is employed, being applied on the tip of the finger to the affected spots. Dr. Guntz specially remarks that potassium bichromate, though harmless in the way described, is by no means so when in pills, powders, or in solution in non-carbonated water.

STRUCK BY LIGHTNING.

A MOST curious and interesting case is recorded in the *Boston Medical and Surgical Journal* by Dr. L. M. Palmer. It is that of a man who, while mowing with a two-horse mowing machine, was apparently struck by lightning, while the off horse of the team he was driving was instantly killed. The men who were working near him said that he did not fall from his seat, but that his head simply tipped backward. When first seen by Dr. Palmer his pulse was 100; respiration 40 per minute and stertorous; the pupils were dilated; eyes fixed and staring; conjunctiva insensible to touch; and there was general muscular rigidity. He was treated by hypodermic injections of brandy and ammonia, and at the same time was briskly rubbed, and his condition soon changed to that of constant restlessness. He had some bromide of potassium, and in an hour and a half was able to be moved in an ambulance waggon. On arriving home he vomited, and during the next few days he had several similar attacks. He passed a restless night, but became quieter in the early morning, when he for the first time recognised his friends and surroundings. On careful examination on the day after the accident there was found a gash in the occipital region an inch and a half long down to the bone; the hair between the cut and the neck had been destroyed, and he had a burn in the left scapular region 7 in. by 9 in. There was a blister along the under part of the right arm and a deep burn below the elbow over the fleshy part of the forearm. No mark could be seen beyond this. The crown of his straw hat was completely destroyed. He made a slow recovery, being troubled with noises in the head, deafness, a feeling of confusion, loss of memory, and general prostration. The right hand and arm were almost powerless, and he suffered from pain in the lumbar region and genitals. In eleven days he was able to sit up; in ten weeks he could once more drive a team, but even so long as fourteen weeks after the accident he was weak, walked as if he had lumbago, his right hand and arm were weak, and he had tenderness over the nerves of the right arm and forearm, and in the lumbar and gluteal regions; he also had great loss of memory. Looking at the serious and unusual nature of the accident, it is not surprising that his recovery has been slow, but as improvement seems still to be taking place, Dr. Palmer hoped that it would be complete.

TRANSITORY BLINDNESS IN WHOOPING-COUGH.

IN the *New York Medical Journal* Dr. Jacoby has recently drawn attention to the occurrence of this condition in two cases which he has observed. In the first case there was inaction of the pupils to light, and they were widely dilated; there was also optic neuritis. In the second case the reaction to light was retained, the media were clear, and the fundi normal. As the blindness was gradually recovered from, a condition of right hemianopsia was present in one case. The author regards the condition as due to œdema of the brain, but it is well to remember that in children this disease is not uncommonly accompanied by convulsion, a condition probably analogous to the sudden temporary loss of consciousness which occurs in the adult, and it may be that all those conditions are associated with some toxic blood state, a result of the morbid process. Both cases recovered.

DEFORMITY OF THE HEAD IN MYOPATHY.

M. MARIE has recently described the case of a child who was suffering from progressive myopathy, and in whom there was considerable head deformity. The antero-posterior diameter was 166 mm., the transverse 168 mm., giving a cephalic index of 101. As the usual cephalic index is about 80, the limit in negroes being 88·5, it will be recognised that the departure from the normal was considerable. Another case was referred to with a cephalic index of 89·7. The explanation offered is that there is some osseous condition associated with the muscular one, and that the position which the patient has to assume accounts for the deformity in the bones.

THE HOUSING OF THE WORKING CLASSES.

THE delegates from some of the London vestries and district boards have held another meeting at the Paddington Vestry Hall, and have adopted a report as to the conditions which render a house so dangerous or injurious to health as to be unfit for human habitation. This report divides houses into two classes—those which can be repaired, and those which are incapable of repair; and, further, it states that the housing of the working class contemplates this distinction. We do not, we must confess, know upon what evidence this last statement rests. Undoubtedly, the Act provides for repair and demolition, but for both the house must be closed. The statement in the report, however, appears to indicate that this is not all. The attempt to specify particular structural defects is a mistake. The Act does not deal with houses technically unfit for habitation, but with houses actually in such a condition as to be dangerous in a degree which renders them unfit for such habitation, a point which can only be decided after the local circumstances of the premises have been taken into account. The only two resolutions of any practical importance which were adopted were one by which it is claimed that where an improvement scheme under Part II. of the Act is carried out, to which both County Council and district authority

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have contributed, the land acquired shall be vested in the district authority; the other that the owner of a house should be informed, at the time of service of the first notice, if it is the opinion of the local authority that the house cannot be made fit for habitation.

THE POPULATION AND BIRTH-RATE OF FRANCE.

THE diminishing birth-rate of France is attracting attention from more points of view than one. In a remarkably interesting paper by Mons. Monod, Director of the Public Health Department in the Ministry of the Interior at Paris, entitled "Les Mesures Sanitaires en Angleterre depuis 1875 et leurs Résultats," the late Lord Beaconsfield is first quoted in a passage where he refers to the decadence of nations in connexion with causes such as the population remaining stationary in point of numbers, and it is then pointed out that if France were saving life to the extent to which England has done since our modern sanitary administration took general effect 130,000 lives would be annually spared to our neighbours. Another document has recently been issued from the same Government Department, and in the opening address by Mons. Brouardel to the Minister of the Interior, France is reminded that whilst the population of neighbouring nations is doubling itself every forty to fifty years, that of France is hardly increasing at all, and that unless the amount of death is diminished the death-rate of the country will in two or three years exceed the birth-rate. Whatever influences may be held to affect the birth-rate, Dr. Brouardel regards them as beyond the scope of the Government, but he urges that an imperative duty is imposed upon the State and on local communities to prevent such children as are born from succumbing to preventable epidemic diseases. The cautions thus issued are weighty ones.

THE TUBERCULOSIS INQUIRY.

As will be seen from some correspondence published in another column, the Royal Commission on Tuberculosis, having completed one stage of their inquiry, and having also initiated an experimental investigation into the communicability of that disease, have now addressed a series of questions on the subject to the medical officers of health and practitioners throughout the country. The object is, in the first place, to obtain some definite information regarding the transmissibility of tubercular disease to man through the consumption of the flesh or milk of tuberculous animals. It is well that such an attempt should be made to put the question to the test of actual experience; for hitherto, it must be freely confessed, the evidence in support of such transmission has been less direct. It has been based upon such inferences as can be derived from the similarity in anatomical lesions between human and bovine tuberculosis, or those furnished by the prevalence of mesenteric tubercular disease amongst the milk-fed portion of the community, and chiefly perhaps upon the fact that the bacillus is common to all forms of tuberculosis, both in the lower animals and in human beings, together with the results of inoculation experiments. That there are great difficulties in the way of proving such direct transmission of tubercle by means of the ingesta must be admitted, not the least being the proof that the food consumed really proceeded from an infected animal. Still, here and there, it would seem, if there be such direct transmissibility, cases must have occurred under circumstances which can hardly admit of any other explanation. If any such are known to any medical practitioner in the United Kingdom, he will confer a great benefit on the community by placing the Commission in possession of the facts. Secondly, information is sought upon the question of the transmission of tubercular disease from man to animals. Here, again, the determination of positive facts must be very difficult, owing to the comparative frequency of the disease both amongst cattle and mankind. It is, however, not unlikely that some examples of local (inoculated) tubercle may be thus shown to occur; and there have, we believe, been recorded instances of tuberculosis in fowls traced to infection of their food by phthisical sputa. The Commission do not propose to limit their inquiry to the positive side of the subject, for they ask, in the third place, to be informed of instances of the habitual use of animal food believed to be tuberculous "in cases where individuals or communities have kept free from tuberculous disease." Such negative evidence would, doubtless, be of value if it could possibly be obtained; but judging from the prevalence of tuberculosis amongst animals used for human consumption and the comparative laxity which, until the last few years, permitted the meat from such sources to go on the market, and the ubiquity of the human disease, the non-tuberculous must be limited to a very small area of the earth's surface. Moreover, the fact that several persons exposed to the same source of infection escaped whilst others contracted the disease might only show that a certain proclivity was needed to ensure direct transmission. The assertion that the Jewish community, when living strictly according to the Mosaic code, are remarkably immune from tuberculosis has been made to meet the converse case—namely, that rigid rules as to dietetics may greatly diminish the liability to infection through diseased flesh. But in this case one must not lose sight of other, and perhaps equally important, sanitary rules which were enforced as part of a religious observance. We congratulate the Royal Commission on its bold attempt to grapple with this important question at close quarters; but we are not very sanguine, from the complex conditions of modern social existence, that they will succeed in procuring such reliable evidence as may determine the question one way or another. We can hardly conceive of a matter more difficult of demonstration, and yet one in which there appears to be such fairly reasonable *primâ facie* ground for acceptance, than is that of the transmissibility of tuberculosis between man and the lower animals.

THE AUSTRALASIAN HEALTH OFFICER.

WE have received for comment an advanced proof of an article in the *Australasian Medical Gazette*, under the above heading, the main burden of the article being a criticism of the action of the quarantining staff and of the health officer for the colony of Victoria. It is always difficult, without knowing what has to be said by both sides, to express a definite opinion as to any line of action taken in regard of infectious disease; but when the circumstances involve the question of judging between a case of chicken-pox or of small-pox modified by previous vaccination, we should justly be deemed hasty if, in the absence of the most detailed facts, we ventured to decide a point which is admitted by experts to be one of the least easily solved in connexion with the infectious fevers. So far as we can gather from the few facts included in the editorial comment, a vessel had arrived at Melbourne having on board a man who, according to the ship's surgeon, had recently had chicken-pox. The Victorian health officer seems to have had doubts as to whether it might not have been small-pox modified by vaccination; indeed, he would appear to have called it "varioloid." Was it right, under these circumstances, that a whole ship—crew, passengers, &c.—should be quarantined or not? The patient had since recovery been about his ordinary duties for twelve days, and no one was ailing. Experience has enabled us to draw

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a line between the risk of infection from small-pox during the acute stage, and in either the scabbing and after-scabbing period; and if during the most dangerous period of the illness, and for even twelve days afterwards, no spread had taken place, a skilled official well informed as to the natural history of small-pox might well take the responsibility of deciding that the period of danger had so far elapsed that it would not be justifiable to carry out wholesale restrictions. This was done, and, apart from certain precautionary measures of revaccination, the vessel and her inmates were left unhindered, and, no harm resulting, she arrived afterwards at Sydney, where the case was regarded as one of chicken-pox. The article in question lays it down that a health officer must decide prudently, quickly, and decisively, and it adds that "if he practise long without error, he may be called blessed." We hope that mere rapidity and that sort of decision which comes of hastiness will never be allowed to outweigh an attitude of prudence which generally comes with sound knowledge of the subject to be dealt with. In this case the end justified the means. But, had it been otherwise, we could hardly have held that the circumstances, so far as we can gather them, would have justified wholesale hindrances and restrictions rather than a determination to take responsibility in acting on the basis of information, to the acquirement of which many years and exceptional attainments had been devoted.

SANITATION AMONG THE EAST-END JEWS.

IT may be remembered that when our first special report on Sweating was published, in May, 1884, the revelations we then made had, among other good effects, considerable influence with the Jewish Board of Guardians. They realised that the Jewish refugees coming from foreign countries, but more especially from Poland and Russia, where no knowledge of sanitation exists, were likely to degrade the houses in which they lived. A sanitary subcommittee was therefore appointed by the Jewish guardians, and they nominated a special inspector, who was to visit the homes of the Jews in the East-end; and, where necessary, this inspector was to call upon the local authorities to take steps for the abatement of nuisances. Unfortunately the local authorities did not manifest any particular desire to support these voluntary efforts organised by the Jewish Board of Guardians. In the seven months from May to December, 1884—we mentioned the fact at the time,—the inspector visited 1747 houses inhabited by Jews, and found that 1621 of these houses were unprovided with any arrangement for flushing the drains. It required some years to make the authorities realise this fact. But, in the course of time, they took action, and between Jan. 1st and July 1st, 1890, the Jewish inspector visited 880 houses, and found only twenty houses where the drains had no flushing apparatus. In 1884 no less than 93 per cent. of the closets were without flush, in 1890 only 2 per cent. were in this insanitary condition. These figures show what can be done by private initiative when perseverance and tact are combined. The Jewish Board of Guardians and their inspector, Mr. Goodwyn, are to be congratulated on having so largely contributed to wipe away the reproach which, not without reason, was addressed to their coreligionists, who from various parts of the Continent flocked to the East-end of London. Though most of the closets of the houses inhabited by Jews are now provided with water with which they can be flushed, there remain many other defects that should be promptly remedied. Mr. David F. Schloss, the hon. sec. of the Sanitary Committee of the Jewish Board of Guardians, states that the proportion of the houses visited by the Jewish inspector in which the character of the defects existing are such as the local authorities admit they have full power to remedy is still very large. Of the few houses situated in the City, and inspected during the course of last year, one-half were up to the sanitary standard established by the local authorities. In Whitechapel the proportion of satisfactory houses was only 32 per cent.; in Bethnal-green, 25 per cent.; in St. George's, 22 per cent.; and in Mile-end only 15 per cent. Therefore the sanitary condition of the districts in which the Jewish poor reside remains, notwithstanding all these efforts, in a very unsatisfactory state. The report of the year's work gives some description of the sort of defects detected. We are told of closets that have had their drains blocked up for weeks, notably in some "model dwellings," where two inhabited cellars are flooded with sewage. There is another place which for several years had earned an unenviable reputation in consequence of its noxious odours. Here the committee succeeded in causing to be removed from a basement room a great accumulation of refuse, which contained among its varied component parts the bodies of five cats, a dog, and a rabbit. In St. George's-in-the-East three boot finishers were found at work in a front basement room, while the adjoining back basement room was flooded with sewage, which forced its way up a gully supposed to be protected by a bell trap. In connexion with the boot trade, the report notes with satisfaction that a strike of four weeks of the operatives resulted in inducing the manufacturers to abolish home work for "lasting" and "finishing," and this phase of bootmaking will now be done in factories and workshops, and not in the miserable, and often unhealthy, houses where the bootmakers live. When such defects are discovered by their inspector the Jewish sanitary committee first seek to persuade the owners of the insanitary property to put matters right. It is only when the owners fail to act that the committee appeals to the local authority, sending such appeal, according to the nature of the case, either to the sanitary inspector, the factory inspector, the street inspector, the vestry surveyor, or to the water company. Thus the Jewish Board of Guardians does voluntarily and at its own expense a large share of useful pioneering work, which should be accomplished by the local authorities. This is certainly most creditable, and shows a very worthy ambition to do away with the evil repute in respect to sanitation of the Jewish refugees. While congratulating heartily the Jewish Board of Guardians on their initiative and their energy, we would suggest that it does not suffice to inspect houses. It is, above all things, necessary to educate their inhabitants, so that they may understand their duty to themselves and to their neighbours in respect of the requirements of modern sanitation. The influence of the rabbis might be useful in spreading such a knowledge of the importance of cleanliness, and leaflets might be distributed by the inspector which would explain the dangers arising from unwholesome surroundings.

REFORM IN CHARITY VOTING.

THE many persons who have at one time or another laboured to secure the admission of candidates to any public charity must know something of the expense, effort, delay, and frequent disappointment which attend this process. They will not, therefore, feel surprise that the murmurs of discontent have at last found voice in a protest. This proceeds from the Charity Voting Reform Association, and aims at nothing less than the ultimate abolition of the present system of election by votes. Though conscious, however, of possessing some hold upon public sympathy, the reformers have not forgotten that many old customs die hard. They have accordingly tabulated a series of suggestions to form an interim plan of procedure for employment in those institutions the governors of which cannot or

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will not as yet forego the use of the present method. By these it is proposed to reduce considerably the number of eligible candidates in any given case, to empower the committees of benevolent associations to select at each election the most deserving applicants, whose names, moreover, should occupy a prominent place in the voting list, and also to enable them to assume and employ the votes of subscribers not themselves desirous of using them. Such modifications would, of course, imply a radical change in existing arrangements. They would, no doubt, greatly facilitate the admission of approved applicants; and if this alone were considered, they could not fail of acceptance. It is very doubtful, however, whether any electorate of subscribers would be willing to surrender the privilege of recommending cases without receiving some guarantee of influence in exchange. Whether any other pledge of such practical utility as the vote can be found the promoters of any philanthropic venture can best determine. In the meantime, it is possible to obtain, without resorting to drastic alterations, some relief of pressure by reducing as proposed the number of allowed candidates, and by granting to committees a controlling voice in the admission of the more obviously necessitous cases.

THE SANITARY STATE OF HASLEMERE.

THE Haslemere Parochial Committee decide to retain impervious cesspools and local wells because of the great expense which, it is alleged, sewerage and water-supply would involve. And the County Council of Surrey have through their Sanitary Committee deferred further action pending the appointment of a county health officer. Dr. Edward Seaton, lecturer on public health to St. Thomas's Hospital, having now been elected to that office, the case of Haslemere will, we assume, soon come forward again.

THE INDIAN MARRIAGE LAW.

MUCH has been said and written respecting the opposition to be encountered by the Age of Consent Bill recently under the consideration of the Indian Government. It has now been successfully shown that this was much overrated. Now there remains only another and a lesser fear, which has probably no very solid foundation—namely, the dread lest the measure, when applied, should lead to police tyranny and to irritating interference with the sensitive tissues of social and religious life. We may rest assured, however, that the Indian Legislature have not so far committed themselves without substantial proof that this reform has wider and stronger sanctions than the mere countenance of a minority schooled in Western ideas. The recent canvass of opinion in the Presidencies brought out the fact that approval of the measure was all but coextensive with the Queen's rule in India. Similar evidence is to be gathered from the pages of a little pamphlet lately published by Babu Baij Nath, B.A., which describes an almost triumphal progress undertaken through the North-West Provinces in 1886 by that well-known advocate of marriage reform, Mr. Behramji Malabari. In a series of gatherings, attended by representative Hindus and convened in some of the most important cities of this wide area, Mr. Malabari was able to prove the existence of a strong popular sentiment in accord with his own views. He also showed that this feeling was in harmony with the doctrines of the primitive religious teachers, and he trained it to recognise the advantage of supporting their authority by modern legislation such as that which has just been carried out. The raising of the age of consent to twelve years of course comes far short of our own ideas of preparedness for undertaking the duties of marriage and motherhood. Still, it is a step in the right direction. As such we welcome it. A later day perhaps will witness yet sounder views respecting the necessity of postponing all concern in these important duties till the term of puberty is well over. This matter, as well as the amendment of existing rules relating to child widowhood, possesses an indisputable claim to early consideration.

THE FACTORY AND WORKSHOP ACTS.

MR. MATTHEWS could not be expected to say much less to the deputation of employers and operatives on the great questions of half-time and factory surgeons than he did. The deputation did their best to show that factory surgeons were an obsolete institution, and that half-time work was beneficial to children as well as to the parents, who in Yorkshire and Lancashire alone received £1,274,000 from such work. Mr. Matthews did not admit his conversion on either of those subjects; but he observed that he felt that the general sense of the House was against him. We are glad he has perceived this undoubted fact. We cannot doubt that the Committee of the House will represent the prevalent feeling on both these points, and we are not without hope that the Home Secretary himself will bow to the general opposition. The party which has the credit of the Factory Acts should not be the party to discharge factory surgeons. The numerous communications which have been published in the medical papers show the high uses of factory surgeons in the matter of child labour.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—Dr. Feuer has been recognised as *privat docent* in Ophthalmology, Dr. Salgó as *privat docent* in Mental Diseases, Dr. Udraniszky as *privat docent* in Chemistry, and Dr. Onodi as *privat docent* in Laryngology. The Physiological Lectures are being delivered by Prof. Paul Plosz in consequence of the death of Prof. Jendrássik.

Giessen.—Prof. Eckhard is about to resign the chair of Anatomy, retaining that of Physiology, which he has hitherto held concurrently. Dr. Honigman, First Clinical Assistant in the Medical Clinic, has qualified as *privat docent.*

Madrid.—Dr. Don Amalio Gimeno, Professor of Hygiene, has been appointed after an open competition to the Chair of Medical Pathology.

Santiago (Spain).—Dr. Don J. Farreras y Framis of Barcelona has been appointed to the Chair of Histology.

Strasburg.—Dr. Sedderhaus has been promoted to the rank of Extraordinary Professor.

Tomsk.—Dr. Fortunatoff of St. Petersburg has been appointed Extraordinary Professor of Pharmacology.

Vienna.—Dr. Herzfeld has been recognised as *privat docent* in Midwifery and Gynæcology. He is assistant to Professor K. Braun.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Señor Andrade of Aleu, formerly Professor in the Medical Faculty of Valladolid.—Dr. Emerich Regéczy Nagy, Professor of Physiology in the Veterinary School of Buda-Pesth.

PYOKTANIN or anilin dye has been employed by Professor Eggeling of Teltower in the foot-and-mouth disease of cattle with, it is said, surprisingly good results, the affected parts being syringed out with a solution of the strength of 1 per cent.

WE regret to learn that the condition of Professor Braun von Fernwald has become much worse, there being extreme weakness of the heart's action.

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AN outbreak of typhoid fever of a very virulent type, which has caused great alarm, is reported to have taken place at Nant-y-Fflint, a country hamlet situate between Flint and Halkyn. The corporation of Flint have taken very stringent measures to isolate the cases and stamp out the epidemic, and they have also engaged trained hospital nurses to attend to the sufferers.

MR. WILLIAM ANDERSON, F.R.C.S., has been elected Professor of Anatomy at the Royal Academy, in succession to the late Professor John Marshall, F.R.S. We congratulate Mr. Anderson on his appointment, which cannot fail to give general satisfaction.

HIS HIGHNESS SYED ALI, G.C.S.I., Sultan of Zanzibar, has been graciously pleased to confer a decoration (medal) of Kakob-al-Dari (Brilliant Star of Zanzibar) upon Dr. P. B. Nariman, physician and surgeon to his Highness, in recognition of his eminent services to the State.

DR. JABLOKOFF has been appointed to the senior physiciancy of the pediatric department in the Moscow Foundling Hospital.

THE recent Congress of Russian medical men decided that the long-talked-of memorial to Professor Pirogoff shall be erected in Moscow.

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

THE report of the medical officer of the Local Government Board for the year 1889 has only just been issued, and a not unimportant portion of the volume is taken up with reports of the medical inspectors on certain occurrences of infectious disease, such as enteric fever, diphtheria, scarlet fever, &c., which we have already noticed at the date of their original issue. They embody certain points typical of the circumstances under which prevalences of the specified diseases occur, and hence there is distinct value in thus placing them on permanent record. Dealing with the question of vaccination, Dr. Buchanan again refers to the misuse of the term "insusceptibility." If certificates as to this were to be regarded as trustworthy, we should have to face the awkward fact that insusceptibility to vaccination is twice as frequent in London as elsewhere in the country, we should require to know why in Fulham one child out of 137 is insusceptible, whilst no insusceptibility at all occurs in Shoreditch, and we should have to explain how it is that when the Local Government Board have inquired into this alleged excess of insusceptibility in certain places, no certificate of the kind was found to have been given by a public vaccinator. The vaccination returns for 1887 are those as to which the last complete account is given, and from these it appears that of children born in England and Wales during that year, 7·1 per cent. still remained unaccounted for on Jan. 1st, 1889, and, whether the metropolis or the rest of England be considered, this indicates a growing increase in the number of such default.

The auxiliary scientific investigations were of exceptional interest during 1889, and this especially in so far as diphtheria is concerned. The volume now under consideration gives the detailed report of the discoveries made by Dr. Klein, and of which the principal outcome was at the time submitted to the Royal Society in a paper on the Etiology of Diphtheria. That two forms of bacilli had been confounded under the term "Klebs-Löffler bacilli" has been made clear, and Dr. Klein has succeeded in showing that whilst the two sets of organisms present hardly any morphological differences, yet that they can be differentiated, and this essentially in their conditions of growth. One form of bacillus appears to be benign; it certainly fails to produce any of the typical symptoms and results which follow on the inoculation of certain animals with diphtheria membrane; whereas the other, which Dr. Klein regards as the true diphtheria bacillus, produces amongst cats, for example, the same conditions as have been ascertained to exist in the case of cats suffering from disease contracted in households where diphtheria has prevailed. One of the most interesting differences between the two forms of bacilli is that whereas the pseudo-bacillus fails to multiply on milk at comparatively low temperatures, the true diphtheria bacillus does so multiply, and in milk at the ordinary temperature of the atmosphere—a point of extreme importance in connexion with those occurrences of diphtheria which have taken place as the result of drinking milk from special dairies, and in which the potency of the disease has appeared to be enhanced as the result of the storage of milk in dwelling-houses and elsewhere.

Recalling his experience as to the inoculation of cats with diphtheria membrane, and the resulting production of the diphtheria bacillus in connexion with a disease communicable by cat to cat within the same cage, experiments were then instituted as to the behaviour of milch cows under similar inoculation, and it was ascertained that following on this process cows were found to be suffering from a disease accompanied by vesicular and allied affections of the udder that at once recalled those symptoms which had on several occasions been found to attach to cows the milk from which had been regarded as causative of diphtheria. And, when the contents of the vesicles in question came to be examined, the bacillus diphtheriæ could be demonstrated unmistakably both in cover-glass specimens and in cultures. The disease induced in cows was a mild one, but it was one which was inoculable into calves, and when milk was taken from a cow suffering from the udder affection referred to, bacterial colonies formed within a few days, and in all such there appeared "unmistakably colonies of the bacillus diphtheriæ." Thus a stage is now reached which renders it imperative that this question of the relation of diseases such as diphtheria in the human subject to disease, whether of an apparently trivial sort or not, in cows should be definitely determined, and it seems a pity that the department of State which deals primarily with the health of man should be working alone in this matter.

The volume also contains a suggestive report by Dr. Klein on concurrent inoculation of different infections in the same animal body; a paper by Dr. V. D. Harris on Bacteria in their observed relation with Digestive Processes; and a preliminary contribution by Dr. Sidney Martin on the Chemical Products of the Life Processes of Bacillus Anthracis.

Incidentally, a point is adverted to in this report which is not raised a day too soon. In referring to the illustrations appended to Dr. Klein's contributions on diphtheria, Dr. Buchanan says: "Many of these drawings and photographs ..... are practically worthless for their purpose. Yet they are second attempts made by the lithographers; and upwards of four months have been spent in the production and reproduction of the professing illustrations to Dr. Klein's essay." And Dr. Klein himself is obliged to brand certain of the individual drawings with such words as, "The representations here made fail in reproducing the points of the original photographs." Here we have some explanation of the great delay in the issue of the report. But more, it has long been obvious that the department of Government responsible for illustrations to these and kindred reports utterly fails in its object. The so-called "illustrations" which have appeared in some recent official volumes, and notably in this one and in one not long issued by the Agricultural Department, are such as this country ought to be ashamed of when they are compared with the drawings issued by private individuals or by foreign Governments. Besides which, when diagrams no longer illustrate the points which they were intended to indicate, the expenditure bestowed on them—small as it obviously must be—is thrown away. We trust that some member of Parliament who is alive to the value of scientific research in the promotion of public health will ascertain in the House of Commons to whom the country is indebted for the present state of affairs in this respect.

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THE ARMY MEDICAL STAFF.

WE have been favoured by Sir Andrew Clark with a copy of the following correspondence between the Secretary of State for War and himself:—

Royal College of Physicians, London,
March 7th, 1891.

DEAR MR. STANHOPE,—

Immediately on receiving the letter which you did me the honour to address to me as leader of the deputation from the medical corporations of the United Kingdom, on behalf of the grievances of the army medical officers, I placed myself in communication with those bodies for the purpose of ascertaining their views of the replies which you had made through me to their representations. Having now received answers from all of them, and their views being in complete accord with my own, I venture again to address you in this letter, with the desire to promote such an issue to these negotiations as will prove at once just and satisfactory to the medical officers of the army, and of real and lasting advantage to the State.

Although I am well assured of your unaffected desire to deal generously with the army medical officers, and to grant to their just grievances every just and practicable remedy, although I fully recognise the difficulties of your position as a Minister of State, standing between the army, the Government, and the House of Commons, and can understand somewhat of the obstacles in the way of reconciling them to such a reform as we seek, I am constrained to acquaint you with the unanimous judgment at which we have arrived—that the concessions made to our representations are, with one exception, unsatisfactory, and that they fall far short, not merely of what is claimed by the medical officers, but also of what has been recommended by Parliamentary and War Office Committees, and of what has been regarded as just by men experienced in public affairs.

For my own part, I regard this unhappy result as due to the strange misapprehensions and the inaccurate statements of those who have supplied you with technical information upon the subject; and I cannot understand how our arguments should have been met by replies which could be immediately refuted by reference to official regulations. This is a grave statement to make, and did I not know that in dealing one by one with the paragraphs of your letter I should be able to make the statement good, it would not assuredly have been made.

Here, in order to illustrate this allegation, and to prove its accuracy, I must anticipate what I shall have to say at the close of this letter.

It is averred that "*to incorporate the medical staff into the general army, and to give its officers substantive rank and military titles ..... would have the effect of placing a medical officer in military command over troops in the field whenever one might happen to be the senior officer present.*" Now this is the supreme objection made to conceding the claims of the medical officers, and, strange to say, it is absolutely without foundation, for in various places in the books of official regulations express provision is made for the granting of rank and title without command in the field, and for the granting of rank and title either with no command at all, or with such a limited command as may be defined on appointment. In the Royal Warrant of 1890, paragraph 69A, we read as follows:—"An officer permanently transferred from the commissariat and transport staff to the supernumerary list of our Army Service Corps shall not hold any military command outside our Army Service Corps, except over such officers and men as may be specially placed under his command." "An officer of our Army Service Corps detailed for barrack duties shall not hold any military command, except over such officers and men as may be specially placed under his command." And again, even more explicitly, we read in paragraph 70 that "an officer of our army employed in any of the cases specified in Article 55 (*h*) or (*i*) shall not be entitled by virtue of his military rank to assume any military command in our regular army, unless called out for military duty by our Secretary of State." Surely neither the claims of reason nor the necessities of experience could require more conclusive proof that the granting of military rank and title does not necessarily imply or involve the granting of military command in the field.

With your permission I will now proceed to deal with those paragraphs of your letter which have a crucial bearing upon the questions under discussion.

Paragraph 10.—You state that the only way of lengthening the home service of medical officers is to increase the numbers employed at home; that this could be done only by employing them upon duties which would occupy but a small portion of their time; that they would thereby lose experience and deteriorate in professional knowledge; that an increase of establishment necessary to lengthen the period of home service would cost £27,000 a year; and that therefore you are unable to grant this request. Now I must be permitted to point out that this subject has not been brought fairly before you, and that this answer is entirely irrelevant to the relief sought for by the army medical officers. They do not ask for a shorter term of foreign service, and they do not ask for a longer term of home service. They only ask for a shorter term of *continuous* foreign service; they ask only to be restored to the rule which was in operation before 1888; they ask only that, unless in cases of State emergency, the term of continuous foreign service should be limited to five years instead of six years; and they allege—justly, I think—that the granting of this relief would not only not lengthen, but distinctly shorten, the duration of continuous service at home. This relief is asked by the army medical officers on grounds not less important to the State than to themselves. It has been found that the additional year of foreign service imposed in 1888 upon the army medical officers, more exposed than any others to the active causes of disease, has notably increased the rates of their sickness and mortality, and has, without compensating advantage to the State, added to its burden a growing list of non-effective medical officers. Furthermore, it was declared by your own committee, the Camperdown Committee, that the grounds upon which this relief was sought were just grounds, and they recommended that the new rule should be abrogated and the old rule restored. Finally, having regard to the conduct of medical affairs before 1888, when the term of continuous foreign service, which acted well, was enlarged from five to six years, to the fact that the number of medical officers is about the same now as it was then, and to the circumstance that facilities for drafting are greater at present than at any former period, and that the services of medical officers may be utilised in the troopships so employed, there does not appear to exist any valid reason why, if this request were granted, the somewhat more frequent transport of medical officers, involved in the grant, should necessitate the introduction of new machinery, the enlargement of some existing establishment, or any material addition to present expenditure.

Paragraph 2.—Your concessions as to the conditions for the granting of sick leave to medical officers have been received with uniform and grateful satisfaction, not only by the Army Medical Staff, but also by the whole body of the medical profession which takes an active interest in the just settlement of the questions considered in this correspondence.

Paragraph 3.—In reply to the complaint that the army medical officers do not receive a fair share of the honours and rewards conferred upon officers generally for exceptional services to the State in warlike and other expeditions, you observe that such rewards can hardly be made a matter of proportion, and that the granting of them must necessarily depend on the opportunities which officers, whether combatant or medical, have of distinguishing themselves. The force of these general remarks need not be denied; but the contention of the army medical officers and the contention and recommendations of Sir Ralph Thompson's Committee do not lie within their limits. The contention of the army medical officers is that, in like circumstances of perils encountered, hardships endured, and services rendered in successful expeditions, they should obtain a fair share of the honours bestowed upon such occasions. The contention of Sir Ralph Thompson's Committee of 1878 is that, judged by the standard about to be mentioned, the medical officers are far below the combatant ranks in their enjoyment of the honours of the Bath, the Star of India, and the Star of St. Michael and St. George; and the committee recommends that in regard to honours, rewards, and good service pensions the medical department should be judged rather by the standard for combatants than by that for non-combatants. I am aware that it is contended by the combatant officers of the army that the medical department receives more than

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its fair share of honours and rewards. His Royal Highness the Commander-in-Chief asserts that the army medical officers "have absolutely got such an excess of honours and rewards at the present time that we cannot give them any now," and he adds that the "honours and rewards are all apportioned most carefully." Sir Archibald Alison, Lord Wolseley, General Harman, and other distinguished combatant officers follow in a similar strain. As a matter of fact, however, these statements are incapable of sustaining any critical examination, and a reference to official returns brings immediately to light the conclusive evidence of their complete inaccuracy.

In illustration of the gravely inaccurate information with which you have been supplied on this subject, let me compare the honours bestowed upon the Engineers with honours bestowed upon the Army Medical Staff.

	Strength of the Royal Engineers. 707	Strength of the Army Medical Staff. 841
G.C.B.	2	0
K.C.B.	5	1
C.B.	7	7
G.C.M.G.	2	0
K.C.M.G.	1	0
C.M.G.	10	1
C.I.E.	2	0
D.S.O.	10	6
	39	15

Percentage of honours to strength, R.E., 5·6 A.M.S., 1·7.

Furthermore, of the Egyptian decorations conferred in 1882 the percentage to strength was:—

For the Ordnance Store Department	57
For the Commissariat Department	27
For the Medical Department	7

Finally, in respect of the Nile Expedition of 1884, the percentage to strength of promotions among departmental officers was as follows:—

Chaplains	44
Pay Department	41
Ordnance	30
Commissariat	13·8
Medical Staff	7·9

Such illustrations could be largely added to; but I have adduced already a number sufficient to show that whilst the contentions of the medical officers of Sir Ralph Thompson's Committee and of Director-General Crawford are grounded on official records and are accurate, the contention of the combatant officers is grounded on merely emotional impressions and is inaccurate.

In view of these facts, and especially in view of this further fact, that more than one War Office Commission has recognised the existence and acknowledged the justice of this ground of complaint, we have received with disappointment your decision on this subject.

The matters alluded to in paragraphs 4, 5, 6, and 7 are not of serious importance to the settlement of the main question at issue, and, having been mentioned more by way of illustration of the chronic attitude of mind preserved by combatant officers and high officials towards the medical officers than for the purpose of making any present claim for their reform, are herewith set aside. Nevertheless such matters have some importance, and men of the world acquainted with military organisation, the drift of social opinion, and the general tendencies of the age will think it neither wise nor safe entirely to ignore them.

Permit me to give two illustrations of the matters referred to in the paragraphs specified. When Surgeon-General Sir Anthony Home received the Victoria Cross for his heroic defence of the wounded in a street at Lucknow, he was the only officer decorated on the occasion who was not afterwards invited to the Palace. He felt the slight so keenly that for years afterwards he refused to wear the decoration which he had so honourably won. Again, and in like manner, when Surgeon Reynolds received the Victoria Cross for his gallant conduct at Rorke's Drift, his companion, an officer of Engineers, was afterwards invited to the Palace, but Surgeon Reynolds was passed over unnoticed. He did not belong, one might infer, to the same caste, and he was therefore unfit to sit with any combatant officer above the salt. To those who do not understand the ways of the world of military life these may seem to be small things unworthy of consideration, but to those who enter into the constitution of military society, and to most persons who understand it aright, they are symbols of things which in the aggregate become serious, inasmuch as they tend to foster discord, disaffection, and distrust, and to man with growingly inferior persons a department upon which the nation depends for the safety of its army in peace and for the conditions essential to its success in war.

Paragraph 8.—In this paragraph you are pleased to concede to the army medical officers the composite titles recommended by the Camperdown Commission, and you "trust that this concession will put an end to the regrettable agitation which has obscured the true bearings of this important matter." Unfortunately, however, this is the concession of title alone and of nothing else. But it is not *title by itself* for which the medical officers contend: it is for some such title as will carry with it the guarantee of substantive rank; since they declare that without such rank they are unable to discharge in the prompt, thorough, and acceptable manner which they desire the military duties and responsibilities now imposed upon them; and they earnestly maintain that title without an accompanying guarantee of substantive military rank is absolutely worthless for the remedy of any grievance of which they have just cause of complaint. This contention of the army medical officers has received a kind and measure of support perhaps never before accorded to any like demand for class reform. It is supported by the experience of the armies of Italy, Switzerland, Holland, Turkey, the United States, and of several other countries; by the opinion of all the medical corporations of the United Kingdom; by the conclusions of almost all bodies of men who have judicially investigated the question; and even by the approval of a rapidly growing number of combatant officers. Furthermore, this plan of incorporating the medical officers into the general army and giving them substantive rank therein has never hitherto failed, where it has been tried, to allay dissatisfaction, to promote unity and efficiency of action, and to secure for the medical service higher men and better work.

But there lies in this question still another fact, which, although it is at the root of the whole discussion and of the first importance in its just settlement, has been either overlooked or ignored by your military advisers. Army medical officers are not merely doctors; they are doctors whom the progress of ideas and the march of modern warfare have made of necessity soldiers also; and the further they advance in the service the more important and the more purely military their duties become. As surgeon, the army medical officer has to discharge all military duties and responsibilities except the one of actual fighting in the field. Chief among them I may mention the command and discipline of the Medical Staff Corps and of all persons either attached to the corps or else on duty in the military hospitals, the instruction of the corps in infantry and stretcher drill, the management of the pay, clothing, and general equipment of the Medical Staff Corps, the accounting of officers for hospital buildings, general supplies, and necessary stores, the study of military law and its administration in minor offences. Furthermore, in charge of a field hospital and responsible for a hundred sick, he has military command of four officers and a hundred and seventy-one non-commissioned officers and men; whilst in charge of a bearer company in action, and possibly under fire, he has military command of three officers and one hundred and one non-commissioned officers and men, and he may himself have to fight in defence of his sick. As a surgeon-general, the army medical officer has the military command of nearly three hundred officers and of fifteen hundred non-commissioned officers and men of the medical staff and the Medical Staff Corps; he has the control of probably two thousand sick, and he has to settle in all its complexity of details the medical organisation which may become necessary for the injuries and diseases of forty thousand men.

It seems to me that to deal with an official having responsibilities of such moment as if he were merely a doctor, as if he were not a real officer, as if he were not entitled to rank as combatants rank, and as if he were not worthy of being incorporated into the general army, is at once a serious anomaly, a tactical mistake, and a grave injustice. For if this surgeon-general were not acquainted with military organisation, if he had not studied the economy of armies, if he did not understand military

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strategy, if he were not capable of making adequate provision for transport and of establishing secure bases for supplies, if he were not experienced in the command of men, and if he were not in heart as true a soldier as any on the field, he would be utterly incapable of making those preparations for action without which, in the present day, it is probable that no great battle could be fought and won.

And now, in the last place, as respects the supreme objection to the granting of substantive military rank to medical officers—the objection that it implies and involves the granting of military command in the field,—I venture to remind you that in the beginning of this letter I have conclusively proved from the Royal Warrant of 1890 that this objection has no valid existence, and that definite provision has been made for the granting of rank and title in special circumstances without command. And I may be permitted further to remind you that at this time there are to be found in the army numerous officers of almost all ranks who have no combatant command. The granting of substantive rank to medical officers, therefore, would and could do no more than confirm them in the command with which they are already invested over the Army Medical Corps, and enable them to discharge their duties unencumbered by the trials and difficulties with which they are now surrounded.

The more widely I have considered this subject of the grievances of the army medical officers, and the more critically I have weighed what has been said on both sides of the discussion, the more deeply have I become convinced that those grievances are just, that they require but one remedy for their cure, that no other but this one remedy will succeed in curing, and that to the adoption of it no sound and substantial objection can be taken and maintained. In the presence of this conviction I pursue no further the exposure of the misapprehension and inaccuracies which have crept into the "combatant" side of the discussion. I set aside as covered and satisfied by the main issue all collateral questions of loss of pay, place on courts-martial, comparison with Engineers, and others referred to in your letter, and I content myself with declaring on the part of the medical corporations of the United Kingdom, whom on this occasion I have the honour to represent, their unanimous judgment that the only remedy for the full and just relief of the grievances of the army medical officers is the conversion of the whole Army Medical Department into a Royal Army Medical Corps, and the granting of substantive military rank and title to all its officers.

We firmly believe that if this conversion were effected agitation and disaffection would cease, frequently recurring discords and difficulties would disappear, unity and concord would be restored, the best order of men would seek the medical service, and the naturally high and generous instincts of the combatant officers would soon reconcile themselves to a change which could not fail to bring about increasing advantages to the soldier and higher service to the State.—I am, dear Mr. Stanhope, yours faithfully,

The Right Hon. Edward Stanhope, M.P., Secretary of State for War. ANDREW CLARK.

War Office, Pall Mall, S.W.
March 17th, 1891.

SIR,—I have the honour to acknowledge your letter of the 7th inst. You refer to the concessions made in my letter of Feb. 2nd as unsatisfactory, and again impute that condition of things to the "strange misapprehension and inaccurate statements" of those who have supplied me with the information which you say can be immediately refuted by reference to official regulations.

In proof of this most serious allegation, you quote paragraph 8 of my letter, and you then show, from military regulations, that military rank does not necessarily carry more than a limited command, and can be, and often is, limited in its scope; and you therefore characterise my objection to incorporate the Medical Staff into the general army as absolutely without foundation. These are strong statements, and they are as wrong as they are strong.

In your letter of Jan. 17th you asked for "the transformation of the whole department into a Royal Army Medical Corps with definite rank and title to all its officers and its *organic incorporation into the general army on the lines followed in the case of the Royal Engineers.*" These words carry but one meaning to my mind, and to that meaning there must be the fatal objection described in my letter, and I can only conceive that you labour under a total misapprehension of the powers of officers of the Royal Engineers.

I am quite aware that the function of command can be limited, and in the same paragraph I pointed out that medical officers actually have this limited command, which they derive from the substantive rank given them by their commissions.

As regards the length of foreign service of medical officers, you say that my answer is "entirely irrelevant to the relief sought for." I should be very sorry if I had consciously or unconsciously misrepresented what these officers wish for, but I would point out to you that your mention of the subject was of the baldest possible description, and from your reference to the Camperdown Committee I was led to suppose that your proposal was identical with the recommendation of that Committee. That recommendation was that continuous service abroad should not exceed five years, and that more home service should be given to army medical officers by employing them in posts now filled by retired medical officers (*vide* paragraph 5 of report).

It was to this that my remark as to the great expense of the change applied. If, however, what is asked for is merely a slight rearrangement of the periods of foreign service not involving longer home service, I will consider what I can do to meet their wishes. I should, however, say that such a concession would be a doubtful boon, and might possibly not be appreciated by many of the officers concerned. Such shortened periods of foreign service would mean more frequent changes, and each change of station means some cost to the officer.

As regards the grant of honours, I can only repeat what seems to me to be a self-evident proposition—viz., that it cannot be made a matter of proportion, but must depend on the opportunities which officers have of distinguishing themselves. The fact that the Engineer honours are for the moment in excess of those enjoyed by the Medical Staff in no way lessens the force of my statement.

The Engineers obtain rewards for services not only in the army but in innumerable civil positions, and they have that very qualification of command which you admit should not be given to officers of the Medical Department. If you will eliminate from the list you give of Engineer rewards those gained in civil and colonial employ and in high command, you will find the two lists are not disproportionate.

On the question of Court privileges, I have already said that I would consult with the proper authorities.

The concluding portion of your letter rejects the concession which I made in accordance with your own suggestion. You say that medical officers "contend for some such title as will carry with it the guarantee of substantive rank to enable them to discharge the military duties and responsibilities now imposed on them." On this point there is evidently some misunderstanding on your part. Substantive rank Army Medical officers already have by virtue of their commissions to the full extent you ask for, and no grant of military titles of any description will change or increase it.

I regret very much to be at variance on this point with the distinguished profession which you so ably represent, but I am satisfied that it is not desirable to give medical officers the power to assume the active command of troops in the field or in quarters, and that were I to allow their formation into the corps you propose, and their "organic incorporation into the general Army on the lines followed in the case of the Royal Engineers," this command could not be denied them. I am not therefore prepared to do more than give the composite titles which, as I have already remarked, was your own proposal, and which was also the recommendation of Lord Camperdown's Committee, of which representatives of the profession nominated by the Royal Colleges of Physicians and Surgeons were members.

Having therefore adopted one of the alternatives which you have yourself put forward, I do not think that any object would be gained by any further correspondence on the subject.

I have the honour to be, Sir, your obedient servant,

EDWARD STANHOPE.

Sir Andrew Clark, Bart, M.D., F.R.S., &c.

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IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE annual general meeting of the Irish Medical Schools' and Graduates' Association took place at 11, Chandos-street, on March 17th (St. Patrick's Day).

In the absence of the retiring President, Dr. Kidd, F.R.S., of Dublin, the chair was taken by Sir Thomas Crawford, K.C.B., who presently vacated it for Dr. Gilbart-Smith, the President for the coming year. A vote of thanks was passed to the retiring president, Dr. Kidd. In the annual report of the Council, which was adopted unanimously, mention was made, amongst other matters, of the action of the Association in respect of the Midwives' Registration Bill, and of the disabilities of Irish diplomates in regard to appointments on the honorary staff of certain hospitals. It was announced that the Association now numbered more than 660 members, most of whom reside in England.

The following officers were elected:—President-elect: Director-General Dick, C.B., R.N. Vice-Presidents: Professor Gerald Yeo and Sir Thomas Crawford, K.C.B. Fifteen gentlemen were also chosen to serve on the Council for the ensuing year.

The annual dinner took place the same evening at the Holborn Restaurant, where Dr. Gilbart-Smith presided over a large and representative company. The guests of the evening were Sir G. Murray Humphry and Canon Teignmouth Shore. A congratulatory message was read from Sir Andrew Clark, expressing also his regret that he was unable to be present. The toasts were "Our Sovereign," "Our Defenders," "Our Guests," and "Ourselves." These were handled in a lively and entertaining manner by the President, Dr. Macnaughton Jones, Director-General Dick, Surgeon Parke, Professor Macalister, Sir George Humphry, Canon Shore, and the President of the Royal College of Surgeons in Ireland. Between the speeches a selection of Irish songs was admirably rendered by Messrs. Groome and Clive. The Association may be congratulated on a very enjoyable and successful entertainment.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wakefield Rural District.—The corrected death-rate for this district during 1890 is given by Mr. John W. Walker as 17·2 per 1000; and in view of the fact that amongst the attacks of infectious diseases notified there were 168 cases of scarlet fever, 34 of typhoid, and 38 of diphtheria—240 in all—Mr. Walker urges that efforts should be made to induce people to use the isolation hospital at Carr Gate more than they do. He finds occasion to point to the advantages of free admission to the hospital; and we may therefore assume that herein lies the difficulty experienced. Why people should pay to go into a hospital erected at the cost of the rates for the purposes of protecting the health of the public must be, to all, an enigma. If it is preferred that cases of infection should be left scattered about, for the sake of a pecuniary trifle, it seems a pity to spend money on hospital construction and maintenance. An interesting portion of the report deals with lead poisoning, and it is stated, on the authority of a chemical expert, that "the Wakefield water after prolonged contact with lead—e.g., twelve hours—should not be used for drinking purposes." But a table appended shows, amongst other things, that whereas water after standing in a lead pipe has 0·6 gr. of lead per gallon, and a lead dissolving power estimated at 14, water merely passed through a lead pipe without standing in it has the same amount of lead in it, and has a lead dissolving power of 17. The one sample is, to say the least, as bad as the other in this respect.

Sandal Magna Urban District.—This district also receives the Wakefield water, and Mr. Walker supplies the same information as to the lead-dissolving character of the water drawn from the pipes after standing and otherwise. The general death-rate was 15·71 for 1890, and the compulsory notification of infectious diseases seems to work satisfactorily. The general current sanitary work was evidently well maintained throughout the year.

Hove Urban District.—Estimating the population at 27,000, Mr. Ernest Medcalf gives the death-rate for Hove as 12·7 per 1000 living during 1890, the zymotic rate being 1·4. The notification of infectious diseases is stated to have been of great utility in securing early isolation, and the number of patients having substantially increased at the isolation hospital, it has been decided to erect another ward pavilion.

Exeter Urban District.—Dr. J. Woodman and his colleagues report, as to the Exeter Sanatorium, that 107 cases were admitted during 1890, 88 of these being scarlatina patients. In all, 673 cases have been isolated since 1882, and in a number of instances disease has been prevented from spreading. The Diseases Notification Act, which has now been in working over a year, has materially aided in the results obtained last year, and has facilitated the isolation of infectious cases which called for removal from their homes at an early date; indeed, in some cases immediately on their becoming known. The patients are referred to as appreciating the care bestowed upon them. The admissions in 1890 exceed those for any previous year, and this goes to confirm the view that the advantages of early isolation are increasingly appreciated.

Melton Mowbray Rural District.—Mr. William Tibbles records a death-rate of 15·3 per 1000 during 1890. This represents an excess on the rate for 1889; the causes of the excess being the severity of the influenza epidemic, and to a lesser degree a prevalence of scarlet fever. But it is also recorded that enteric fever and diphtheria were at their lowest ebb. In a number of villages systematic house-to-house inspection was carried out, and such conditions found as were deemed to call for amendment in the interests of public health were dealt with. Some addition was also made to the system of public drainage.

Wirksworth Urban District.—In this district, with a population considerably under 4000, the death-rate for 1890 was 21·3 per 1000, and even the mean for the past ten years—namely, 18·6—is needlessly high. Mr. A. E. Broster, indeed, calls for a house-to-house inspection, and he indicates certain general causes of excessive mortality, such as sewer emanations, effluvia from foul closets, and insufficient house ventilation. These are typical causes of an increase of sickness and death, and are such as often do mischief without actual death being easily identifiable with them. There appears to be a system of removal of privy contents at fixed charges. Hardly anything conduces more to nuisance; the people generally like, in view of the fixed charge, to have what they call a good-sized privy which does not often need emptying. Hence large accumulations occur, and attempts to reduce the privy pits so as to prevent these accumulations fail. The authority should undertake the work themselves in the proper way. If they do it at all, they have no legal right to charge for it.

Liverpool Port Sanitary District.—During 1890 the number of vessels entering the port of Liverpool was 23,085, and of these 3372 were inspected, with the result that 270 were found defective. According to Dr. Stopford Taylor, the condition of the British vessels is on the whole very satisfactory, and it is quite clear that labours such as are carried out in the port of Liverpool constitute an important agency in bringing about that result. Amongst the cases of sickness met with was one of leprosy, the patient being a Swedish emigrant, who was detained and returned to her own country. Such emigrants as are found to be ill are removed to hospital, and the two infectious hospitals belonging to Liverpool have proved useful in this respect. Disinfection and other precautionary measures are also adopted.

Whitechapel.—Mr. Loane estimates the death-rate for Whitechapel during the past year at 24 per 1000, and he discusses the causes of this mortality in some detail. He also gives separately the deaths from certain specified causes in the model dwellings. In view of the work of improvement as regards dwellings which is going on in Whitechapel, a detailed account is given in the report of the conditions which, according to the general consent of the metropolitan medical officers of health, are to be egarded as constituting a "condition dangerous or injurious

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to health" under the Act of 1890, as to the housing of the working classes. They relate to site, construction, age, and want of repair, and nuisances; and though no general code can serve for application to every individual case, the rules laid down will doubtless be of some service.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6343 births and 4196 deaths were registered during the week ending March 21st. The annual rate of mortality in these towns, which had declined from 24·1 to 22·1 per 1000 in the preceding three weeks, further fell to 21·9 last week. The rate was 20·3 in London and 23·1 in the twenty-seven provincial towns. During the past eleven weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·3 per 1000, and exceeded by 0·4 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 12·6 in Derby, 16·5 in Birkenhead, 17·0 in Brighton, and 17·4 in Nottingham; the highest were 29·2 in Portsmouth, 29·5 in Preston, 33·5 in Huddersfield, and 36·0 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 470 and 413 in the preceding two weeks, rose again last week to 449; they included 181 from measles, 117 from whooping-cough, 52 from diphtheria, 39 from "fever" (principally enteric), 38 from diarrhœa, 22 from scarlet fever, and not one from small-pox. These diseases caused the lowest death-rates in Derby, Hull, and Wolverhampton, and the highest rates in Huddersfield, Salford, Portsmouth, and Blackburn. The greatest mortality from measles occurred in Bristol, Plymouth, Leeds, Huddersfield, Portsmouth, and Blackburn; and from whooping-cough in Huddersfield, Leicester, Liverpool, and Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. The 52 deaths from diphtheria included 33 in London, 5 in Manchester, 3 in Salford, 2 in Liverpool, and 2 in Newcastle-upon-Tyne. No death from small-pox was registered in any of the twenty-eight towns; two small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1126, and showed a further decline from recent weekly numbers; the patients admitted during the week were 91, against 87 and 64 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 685 to 581 in the preceding three weeks, further fell last week to 556, but exceeded the corrected average by 27. The causes of 81, or 1·9 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Norwich, Plymouth, Derby, and Bolton; the largest proportions of uncertified deaths were recorded in Liverpool, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding five weeks from 21·4 to 26·2 per 1000, declined to 25·9 during the week ending March 21st, but exceeded by 4·0 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 15·5 in Leith and 18·6 in Aberdeen to 31·5 in Paisley and 32·2 in Glasgow. The 676 deaths in these eight towns show a slight decline from the number in the preceding week, and included 32 which were referred to whooping-cough, 24 to measles, 5 to scarlet fever, 5 to diarrhœa, 4 to "fever," 3 to diphtheria, and not one to small-pox. In all, 73 deaths resulted from these principal zymotic diseases, against 79 in each of the preceding two weeks. These 73 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 34 and 31 in the previous two weeks, were 32 last week, of which 19 occurred in Glasgow, 5 in Edinburgh, and 4 in Leith. The deaths from measles, which had increased from 18 to 23 in the preceding three weeks, were 24 last week, and included 13 in Paisley and 10 in Glasgow. The 5 fatal cases of scarlet fever corresponded with the number in the previous week, and included 3 in Glasgow. The deaths from diphtheria, which had been 5 and 6 in the preceding two weeks, declined to 3 last week, all of which occurred in Glasgow. The 4 fatal cases of "fever" corresponded with the number in the previous week. The deaths referred to diseases of the respiratory organs in these towns, which had been 146 and 201 in the preceding two weeks, declined last week to 194, but exceeded by 65 the number in the corresponding week of last year. The causes of 61, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined from 29·4 to 28·1 per 1000 in the preceding three weeks, rose again to 28·4 during the week ending March 21st. During the first eleven weeks of the current quarter the death-rate in the city averaged 30·8 per 1000, the rate for the same period being 23·0 in London and 21·3 in Edinburgh. The 192 deaths in Dublin slightly exceeded the number in the preceding week, and included 5 which were referred to whooping-cough, 4 to "fever," 2 to diphtheria, and not one either to small-pox, measles, scarlet fever, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 4 and 8 in the preceding two weeks, further rose last week to 11; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 1·8 in London and 1·3 in Edinburgh. The deaths referred to whooping-cough showed an increase of 2 upon the number in the previous week; while the 4 fatal cases of "fever" corresponded with those recorded in the preceding week. The deaths from diphtheria, which had been 2 and 1 in the previous two weeks, were 2 last week. The 192 deaths in Dublin last week included 31 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons were below those recorded in the previous week. Four inquest cases and 3 deaths from violence were registered; and 63, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon John George Stephen Lewis is placed upon temporary half pay on account of ill-health (dated March 6th, 1891).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Chas. Stewart Young, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers (dated March 25th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeon W. R. White, M.B., to the *Hotspur* (dated April 26th, 1891). Surgeons: Edward H. M'Sherry to the *Duke of Wellington*, additional, temporarily (dated March 20th, 1891); Robert Hill to the *Research* and Thomas Rowland to the *Triton* (both dated April 1st, 1891); Wm. Tait to the *Partridge*, Alexander G. Andrews to Bermuda Hospital, William M. Craig, M.B., to the *Severn*, and Hamilton E. L. Earle to Hongkong Hospital (undated); Joseph H. Whelan to the *Racoon* (dated April 2nd, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Edinburgh (City): Surgeon J. M. Ross, M.B., resigns his commission (dated March 25th, 1891).—2nd East Riding of Yorkshire (Western Division, Royal Artillery): Surgeon W. Barter, M.D., resigns his commission (dated March 21st, 1891).—3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Acting Surgeon W. D. Grieve, M.B., resigns his appointment (dated March 25th, 1891).—3rd Middlesex: Acting Surgeon H. Cooper resigns his appointment (dated March 21st, 1891).—2nd Cadet Battalion, the Queen's (Royal West Surrey Regiment): Charles Swaby-Smith, Gent., to be Acting Surgeon (dated March 21st, 1891).

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Correspondence.

"Audi alteram partem."

THE REVISED SCHEME OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Without going into the many other questions which might well be discussed in connexion with the above scheme, one very obvious objection, it seems to me, exists to it from the point of view of the graduates of the University—viz., *the very inadequate representation of Convocation upon the new Senate*, which the new scheme proposes.

According to the scheme, Convocation is to be allowed to elect only ten (10) Fellows of the University out of fifty-two (52); or less than one-fifth of the total number of Fellows of which the new Senate is to be made up. The medical graduates are to be allowed *only two* (2) representatives (or, alternately with the Faculty of Arts, 3)—in other words, *the medical graduates will have a twenty-sixth to one-seventeenth part of the voting power in the governing body.* It will be generally conceded that one of the chief obstacles which has existed in the past in the way of making graduates of the London University take a due interest in the affairs of what, after all, is *their* university (in spite of the opinion which appears to prevail in some quarters that they should be allowed no voice in its reconstruction) has been the fact that the Senate practically ignores the expressed wishes of Convocation in nearly every case, and that it is quite out of touch with the graduates of the University of which it is the governing body. The constitution of the Senate was, perhaps, necessary when the University was first founded, but now, when there are thousands of graduates from which to select a governing body, to continue even the present arrangement is an anachronism; but the new Senate is to be formed in a way which, from the point of view of the legitimate representation of the graduates, is worse than the original. The graduates will have less voice than ever in the government of the University. It will be said, no doubt, that, although the graduates will have less *direct* representation, they will have more *indirect* representation, since most of the medical graduates, for instance, belong to one or other of the Royal Colleges or to one or other of the medical schools. In reply to this, however, we may venture to ask what guarantee is there that all or any of the representatives elected by these bodies will be graduates of our own university? As a matter of fact, excepting certain members of the Senate, who are, as it were, almost bound officially to support it, the chief part of the advocacy of the scheme has been carried on by gentlemen who are not graduates of the University. These prominent advocates will certainly be as likely, and probably will be more likely, to be sent as representatives of various bodies upon the Senate. They would not be likely, nor would they be expected, to make the interests of the graduates their first consideration. It follows, therefore, that the interests of the graduates, as graduates, will be in the hands of a mere fraction of the Fellows of the Senate. Is not this, Sirs, obviously unfair? It seems to me that Convocation would be unwise to accept so inadequate a representation.

Yours very truly,

Wimpole-street, W., March 20th, 1891. V. D. HARRIS, M.D.

THE PULSE IN ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—A letter by Dr. Sainsbury in your number of to-day represents me as having, along with some others, "definitely accepted" the statement "that during an attack of angina the pulse may be unaltered in character." I could indeed, without much sense of individual responsibility, have accepted (in such good company, too) a tradition that has come down to us apparently from Heberden himself, were it not that in the article published in 1877 by Dr. Reynolds these words occur, p. 540: "But it is *difficult to accept without hesitation* the statement of some authorities that, throughout the attack, the pulse may be entirely undisturbed, either as to its rate of frequency or as to its characters." Dr. Sainsbury will himself see that this position is as nearly as possible the opposite of that which he assigns to me; and I will add that I have not as yet encountered anyone of authority who, *giving accurately the results of personal observation*, or with modern means and appliances, has confirmed the statement in question, supposed to be now "definitely accepted." The question being of some importance in the pathology of angina, I will venture to occupy your space for a few lines more in order to show how, according to the view I hold of it, the traditional statement has arisen. In Heberden's first memoir the statement is in these words: "The pulse is, *at least sometimes*, not disturbed by this pain" (Medical Transactions, 1768). In his Commentaries (1796) the statement is made in less qualified terms, but also in terms that betray more distinctly a theoretical bias, as follows: "Arteriæ eorum, qui in hoc dolore sunt, naturaliter prorsus moventur ..... *in ipsa accepione pulsus non concitatur.*" Now, in quoting these phrases, I pointed out that "several authors have followed Heberden here without observing that his real meaning is not that there is no alteration of the pulse (*in ipsa accepione*), but that there is no excitement of it—i.e., that the pulse is not quickened (*non concitatur*) as in inflammation." The kernel of Heberden's pathology was that angina pectoris is *not* an inflammation, but a spasm, or, as we should now say, a neurosis (*distensio nervorum*); and accordingly the pulse, he virtually affirms, does not obey the rule of alteration observed in inflammations. But it is a long stride from this to the assumption that in a severe, still more in a fatal, paroxysm of angina there *may* be *no* alteration at all, and *no* evidence of heart failure. This conclusion was, in fact, distinctly disputed by Dr. Parry (1799) within a few years of Dr. Heberden's last publication on the subject; and in referring to this in the article in question I add: "Such personal experience as I have on the point leads me to agree with Dr. Parry." But it is not easy, of course, to get evidence that is beyond question on this subject. In many cases of sudden death from angina pectoris there is practically no evidence at all as to the facts immediately preceding the fatal event. In others (as in the famous case of Dr. Arnold, recorded in Dr. Latham's book) the evidence, so far as it goes, is entirely adverse to Heberden's assumption or apparent conclusion. Everyone of course admits that *in the intervals* of the severe paroxysms the pulse *may* be apparently that of health; but if this conclusion is to hold as regards the whole course of the paroxysm, it must be on the strength of observations as yet unknown to me, and which it would be very desirable even now to have set forth in exact language and from personal observation.—I am, Sirs, yours faithfully,

Glasgow University, March 21st, 1891. W. T. GAIRDNER.

THE HYDERABAD COMMISSION AND THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Surgeon-Major Lawrie's personal reference to me calls for a brief reply. My paper was not intended to instruct in the elementary methods of administering chloroform, so I omitted details which I thought were familiar to all who had mastered the subject of chloroform administration, and were not so wedded to one method as to allow themselves to remain ignorant of all others. The open method, or that of Syme and Simpson, is so well and fully set forth in Sir Joseph Lister's article in "Holmes's System of Surgery," written in 1861, that it appeared to me to be superfluous to describe it in the columns of a journal like THE LANCET; but since Surgeon-Major Lawrie has received numerous letters from Europe concerning it, and has gone to the pains of describing it, I suppose I am wrong in supposing that the A B C of the chloroformist's duties are pretty generally understood.

With regard to the second method to which I alluded, that in which Junker's inhaler is employed, I must say that your correspondent is clearly wholly unacquainted with the method, or he would not have permitted himself to indulge in such playful criticism. His humour loses none of its point when read by a person who is familiar with Junker's apparatus. I may just say that, with average intelligence and common-sense, the inhaler can be used without necessitating Surgeon-Major Lawrie's suggestion being carried into effect, and the patient

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compelled "to do it himself." Further, the argument which he adduces — viz., that because I had seen various degrees of heart failure and circulatory trouble, therefore my methods are erroneous—is an instance of what logicians call a *petitio principii*, and proves too much. In the first place, the open method, to which my remarks mainly referred, is precisely the method which the Hyderabad Commission, following Syme, advocates. I, as well as many others in Europe, learnt the method before the session of the Commission. That Surgeon-Major Lawrie has never seen the heart fail and that I have is not surprising, because he has never felt the pulse or examined the action of the heart during chloroformisation, and I have. That Surgeon-Major Lawrie has had many cases I do not for a moment doubt, only he has overlooked them, and as, fortunately, in most cases respiratory rhythm is affected *pari passu* with cardiac enfeeblement, he has seen the danger-signal *quâ* the respiration, and has taken measures accordingly.

I am further stated to give no fixed principle of chloroform administration, and in my paper, to which reference has been made, I admit such is the case, and for the reason above stated, that my object was argumentative rather than didactic. In my lectures and practical demonstrations I believe I am dogmatic enough, but personally I regard dogmatism in discussions upon scientific subjects in a scientific periodical as unseemly and valueless. In conclusion, may I draw attention to a sentence against which I am bound to enter a protest? It runs: "The Hyderabad Commission has proved that there is no such thing as chloroform syncope, and that in death from an overdose of chloroform the respiration always fails before the circulation." I submit the Hyderabad Commission has done nothing of the kind; its conclusions were based upon purely negative evidence, and were not warranted by the facts before the profession, and I am strongly of opinion that any teaching which tells chloroformists to ignore the pulse is fraught with danger. I am greatly obliged to Surgeon-Major Lawrie for his courteous reference to myself, and can assure him that I constantly employ the open method and obey the rules he, following Syme, advocates; but I also watch the pulse.—I am, Sirs, your obedient servant,

DUDLEY W. BUXTON.

Mortimer-street, Cavendish-square, W.

INFLUENZA COMMUNICATED TO CATS AND HUMAN BEINGS BY HORSES.

To the Editors of THE LANCET.

SIRS,—At Cairndow, Loch Fyne, on Dec. 24th, 1889, two yearling colts in Mr. J——'s stables were seized with "strangles," or what was believed to be that disease. On Jan. 2nd, 1890, two horses, aged respectively five and six years, were seized with influenza; the symptoms were as follows: short cough, profuse nasal discharge, nauseous breath, marked stiffness of joints, disinclination for food or drink; no lung complications; duration of illness about three weeks. I had not the opportunity of seeing these horses, but got the above facts from the owner, a gentleman skilled in the treatment of horses. I had, however, the opportunity of seeing and treating a horse infected in Mr. J——'s stables; this horse was in the infected stables for four hours on Jan. 17th, 1890, and was not in any other infected stables or near any other infected animal. The incubation period was six days and the period of illness sixteen days. This horse suffered from the following symptoms while under my treatment: short cough, with nasal discharge, at first watery and latterly thick, with a yellowish tint and offensive smell; no glandular swelling of the throat or jaws; he had a weak appearance, staring dry coat, drooping head, dull, sunken eyes, and suffered from loss of appetite, difficulty in urinating, and constipation. For a few days this horse had not lain down in his stall at night. The stethoscope revealed no lung complications. Temperature per rectum 102°; pulse 60 per minute. Mr. J——, the owner of the horses at Cairndow, had three young cats which frequented a hay loft over the stables where the horses were kept while suffering from influenza. These cats were often seen in the stables or about the stables where the horses fed. They were soon seized with sneezing, cough, discharge from eyes and nose, were disinclined to take solid or liquid nourishment, and suffered from severe purging. One died, the others recovered.

From Jan. 9th, 1890, to Feb. 10th, a dancing class was taught in the hay loft above the stables. This loft was low in the roof, with deficient ventilation, and the infected stables below were in a most insanitary condition. There was direct communication between the mangers out of which the affected horses fed and the hay loft through which a current of air passed into the loft and contaminated the atmosphere. There were forty pupils at this school, mostly the children of shepherds isolated from each other over an area of about four or five miles from the hay loft where this class was held. There are only about a dozen families in the district, and owing to their pursuits in life and primitive habits they have little communication with the outside world. There was no case of influenza in the district or anywhere near it as far as I know before Jan. 1st, 1890. On that date a person, who was in continual contact with the horses, was seized with the disease. On Feb. 2nd his son and a neighbouring lad were attacked with influenza, complicated with pleuro-pneumonia. The son described his symptoms as follows. General malaise for about a week, great depression, sickness and nausea, foul breath, hot and dry skin, alternately with cold sweats, severe pain in loins, frontal headache, deep-seated pain behind the eyeballs, followed by cough and prune-juice expectoration. All these cases were convalescent before I had the opportunity of seeing them, and cannot describe the symptoms more minutely. All the forty pupils in the dancing class suffered from well-marked influenza except seven. Some had the disease in a mild form, others had the gastro-intestinal type of this disease, one had severe otitis, with foul discharge from the ears. An occasional onlooker at the dancing class, a young lad, took ill on Feb. 7th, and his father the following day, both died on the 15th of the same month. They were ailing more or less for a week before being confined to bed. These were the only two fatal cases. At Lochgoilhead, about nine miles from Cairndow, there were five or six mild sporadic cases after the epidemic at Cairndow, but there were no other cases to my knowledge within ten miles of Cairndow. I think it fair to infer that a type of this disease was communicated from the horses to the cats and all the persons who suffered from it.—I am, Sirs, yours truly,

J. H. CAIRD,
Medical Officer of Health.

Lochgoilhead, March 16th, 1891.

ERYSIPELAS AND TOTAL ABSTAINERS.

To the Editors of THE LANCET.

SIRS,—I should be sorry if any of your readers should, by my silence, imagine that I admit the truth of Mr. Whitehead's Parthian shot. I can afford to be amused at his reference to my supposed want of knowledge on the subject of alcohol. Mr. Whitehead is mistaken as to Dr. Parkes' dictum with regard to the quantity of alcohol which an adult man might possibly take. It was the late Dr. Anstie who, at one time, put the limit at two ounces (not "about two ounces," Mr. Whitehead). Dr. Parkes put the limit as between an ounce and an ounce and a half in the twenty-four hours, the maximum amount for a powerful man accustomed to the use of alcohol. And what he said about this was that this amount was not followed by any immediate and obvious deleterious effects. I think it can be shown that Dr. Parkes was mistaken on this point; but even if he were not, it by no means follows that such a dose could be taken day after day, month after month, and year after year with similar freedom from obviously bad consequences. As a matter of fact, the returns of some insurance companies show that in the long run these constantly repeated small doses of alcohol cause earlier average death by five or six years than would otherwise have been the case. But more accurate tests than Dr. Parkes applied have shown that all the senses are rendered less acute than before by moderate doses of alcohol, and that perception, discrimination, and decision are all rendered slower. As Dr. Lauder Brunton has said, it produces progressive paralysis of the judgment, and, I may add, of the will likewise. Mr. Whitehead says he is unaware that alcohol in small doses, well diluted, lowers the temperature in health, and says there is evidence to the contrary. Some observers have noted a very small temporary rise of half a degree or so, followed by a fall; others deny any alteration, especially in those accustomed to it. I have noted in myself, an abstainer, a fall of from half to one degree F. some time after two drachms of alcohol well diluted. It is

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an experiment which anyone can make, taking ordinary care to avoid fallacies. These and many other considerations show that alcohol lowers vital action, though it may apparently stimulate indirectly through relaxation of bloodvessels. We come back to the point that in such a condition the body is less fortified against the attacks of erysipelas or any other disease. The returns of the London Grand Division of the Sons of Temperance for 1890, notwithstanding the influenza epidemic, show an average sickness of seven days per member. The most temperate users of alcohol cannot beat that. I trust that Mr. Whitehead will further investigate the subject, and see what the standard works on alcohol really say.

I am, Sirs, yours truly,

J. J. RIDGE,

Enfield, March 16th, 1891. Hon. Sec., Brit. Med. Temp. Assoc.

*** The correspondence on this subject must now cease.—ED. L.

ARREST IN GENERAL PARALYSIS.

To the Editors of THE LANCET.

SIRS,—Recently there have been under my observation three successive cases of general paralysis, in each of which "arrest" has taken place; all were strong men and in the prime of life. The symptoms were unmistakable; indeed, they were typical of the disease. I need hardly give them in detail, they are well known. The first patient believed himself King of Heaven and Earth, and made princes and dukes of those around him; he made millions of money daily, and invited the Prince of Wales and the Duke of Cambridge to dine with him. The second was violent, fought and resisted at first; he made two hundred thousand pounds a day, and offered to make the fortune of all indiscriminately at once; he squandered his money and wrote cheques recklessly. The third was maniacal; he shouted incessantly and was violent, he had thrown knives about, he was King of the World, he had inherited millions under successive wills, and spent most of his time, from his lofty elevation, in watching and controlling the revolutions of the earth.

In each of these cases there were pin-point, unequal, or irregular pupils, the usual great excitement of the first stage, the filthy habits, the restlessness, the sleeplessness, the loss of flesh, the tremulous movements of lips and tongue, and the defective and drawling articulation. They each went through a longer or shorter first stage, and, finally, each in turn gradually lost the excitement, the exaltation, the delusions, the filthy habits, the restlessness, the sleeplessness, and made flesh. Coherence returned perfectly in the first two cases, the third is gradually regaining it. The mental powers, considering the strain they had gone through, were wonderfully little impaired. Each became able to transact business, to settle, manage, and put in order his own affairs. It is not improbable—indeed, it is likely—that each of these cases will again break down physically, and lose mind, but my object in seeking to draw attention to such cases is to show that it may prove of immense advantage to a patient suddenly struck down with so formidable a disease as general paralysis to practically recover, although the recovery may be only temporary, and thus have time given him to put his house in order. That such remission, arrest, or temporary recovery from the disease as I have here described may be favoured by early treatment and careful conduct of the patient through the first stage my later experience of general paralysis leads me strongly to believe.—I am, Sirs, your obedient servant,

JAMES ADAM, M.D.

West Malling, Kent, March 14th, 1891.

ST. BOTOLPH'S CHURCH, ALDGATE.

To the Editors of THE LANCET.

SIRS,—As upper warden of the church of St. Botolph, Aldgate, I cannot allow to pass without comment the condemnatory remarks you have thought fit to make upon the conduct of those concerned in the removal of the bones in the churchyard surrounding this church. The original order was varied because it was found that, in order to construct a vault as originally ordered to receive the displaced bones, other bones, probably in equal quantity, would have to be displaced. During the erection of a new heating apparatus three months ago numerous vaults containing remains were found in the floor of the crypt, and it was decided that this should be leveled and concreted. Before this could be accomplished the difficulty occurred with regard to the disposal of the bones found in the churchyard. Dr. Tristram came down and carefully inspected the premises, and ordered that the bones should be deposited in the crypt. This order has been reverently and decently carried out. The bones so collected have been sprinkled with lime and put in boxes, and each box has been covered with an inch of vegetable charcoal before being fastened down, and this has been done, not because there has been the least perceptible effluvium, but simply as a matter of precaution. The leaden coffins are placed each in a separate box in the crypt under the tower of the church, and there walled in and cemented. The bones are all dry and clean; there has not been at any time during the progress of the work any odour detected. You probably are not aware that no law exists which would permit the removal of the bones as you suggest. In order to obtain such removal nothing short of a special Act of Parliament would have been required. I think it desirable that before making public comment on such an undertaking you should make yourself personally acquainted with the circumstances. I shall be happy to show you or your representative over the church and crypt at any time by appointment. Meanwhile I shall be glad if you will cause the insertion of this letter in THE LANCET of this week.

I am, Sirs, yours faithfully,

JNO. COTMAN, M.R.C.P. EDIN., &c.

Minories, City, March 23rd, 1891.

A NOZZLE FOR NASAL DOUCHE.

To the Editors of THE LANCET.

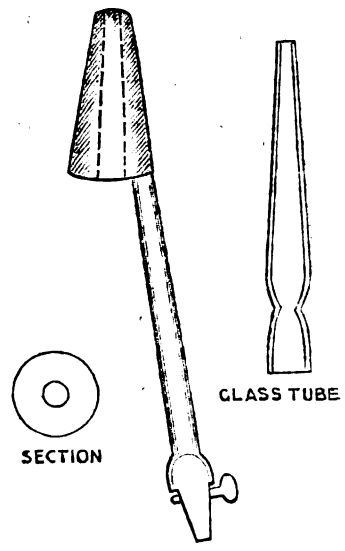
SIRS,—Having had some difficulty in arranging a nasal douche for a lady, I had a nozzle made for me, which I think presents some advantages. It consists of a hollow indiarubber nose piece, which can be blown out just so as to be comfortable to the nostril. It has a central tube, into which a glass tube (connected with a syphon douche) fits. By its softness and its accurate adaptability to the nostril, it prevents escape of any lotion used, and at the same time gives the patient no discomfort.

I am, Sirs, yours obediently,

RUSSELL COOMBE, M.A., F.R.C.S.

West Southernhay, Exeter.

P.S.—It was manufactured by Messrs. C. Wright & Co., of New Bond-street.



THE "REST CURE" IN THE SAHARA.

(FROM A HOLIDAY CORRESPONDENT.)

THIS islet, or rather group of islets, in the great sand sea has all the makings of an admirable health resort, particularly for the sufferer from brain fag or the convalescent from neurasthenia. Its stillness, its estrangement from "the fever and the fret" of the populous European centres, its pure exhilarating atmosphere, its varied

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inducements to open-air life, are all in the invalid's favour, while its natural and historical interest is sufficient to keep the intellect in gentle activity, to say nothing of the moral fascination it owes to the work of Cardinal Lavigerie, that exemplary pioneer in the cause of negro disenthraldom and enlightenment.

For six months of the year the climate of Biskra is all that can be desired. Its salubrity and general attractiveness were familiar to imperial Rome, which made it one of the outposts of the Third Legion, which was quartered in the province. Ad Piscinam was the name it then bore, whence, by phonetic decay, we get "Biskra." Its mean temperature on an average of ten years is 73° F., the maximum during the same period being 124° (in summer) and the minimum 36° (in winter). Rain seldom or never falls, and its only objectionable feature is the occasional prevalence of high winds more or less charged with sand.

Its water-supply from the Oued Biskra ("Oued" corresponding to the "Wady" of Upper Egypt, and meaning river or river valley) is abundant in winter and spring, and never fails except in phenomenally dry summers. Even in such droughts the boring of artesian wells has made the inhabitants independent of the Oued, the enterprise of the French having provided it, as well as the oases in the Sahara, with such means of maintaining water enough for drinking as well as for agricultural requirements. Thanks to this addition to its resources the vegetation of the town and neighbourhood is wonderfully fresh and luxuriant, furnishing not only pleasant shade in the public garden, but affording in the private retreat of M. Landon an assortment of successfully acclimatised trees, tropical and subtropical, which form a source of perennial delight to the public, to whom they are made liberally accessible.

Again, the sulphur baths (with a temperature of about 112° F) are another resource of Biskra not to be overlooked by the visitor. Rising in the Djebel-bon-Ghazal, a low limestone range about six kilometres from the town, they burst forth in great volume to the amount of forty litres a second, and have been greatly utilised by the officers of the French garrison, as they doubtless were by the Romans of the Empire. Unlike their Imperial predecessors, however, the French have done but little to make their virtues enjoyable by the general population. Where Rome, as the remains of ruined structure testify, must have had a thermal establishment on the system, if not to the extent, of those yet visible at Pompeii and other provincial towns, France has only produced an assortment of cabins, but one of which—that reserved for the officers—is fit for decent use. True, there is a talk of extending the accommodation at these baths, and there is even a project of carrying the water by pipes into Biskra itself. But as this latter enterprise is to be associated with the construction of a casino and the establishment of a gambling table on the model of Monte Carlo, its realisation seems fraught with very doubtful advantage to the hitherto tranquil and unspoiled health resort in the Sahara. Whatever "business" of the fashionable kind it would bring to Biskra, it would be fatal to the chief attraction the place now possesses as a seat of the "rest cure."

While the natural recommendations of Biskra are so pronounced, and, in some respects, so unique, there are drawbacks connected with it which have made the former accessible to comparatively few. The Algerian railways are a discredit to French civilisation. Their rate of travel is so slow—top speed barely fifteen miles an hour—that to get from one considerable town in the colony to another the passenger has to start at an hour far too early for all but the robust. The conveniences of the railway service are, moreover, quite inadequate to modern requirements. No means of retirement in the railway carriages such as the traveller on the English or European lines is universally accustomed to; no foot-warmers, even in the dead of winter, except on one or two favoured routes; no intermediate stations where the passenger can, if necessary, spend the night with safety to health or without offence to decency; no buffet or restaurant where food fit to eat may be counted on; and (most objectionable feature of all) no *lieu d'aisance* which the average Briton, *a fortiori* the delicate lady, can enter or even approach. Out of Algiers it is difficult to find a hotel where cleanliness and comfort are provided for on a civilised scale; indeed, but for Swiss enterprise and management, Biskra itself would be quite inferior, in point of hotel accommodation and appointments, to a second-rate Italian town. Improvements in this direction, and not in that of multiplying casinos and gambling-tables, are what is needed for the development of Algeria as a health resort. After sixty years' occupation of the colony—a colony, moreover, little more than a day and night's voyage from her Mediterranean ports—France has done marvellously little for the introduction of civilised institutions. The "rest cure" is an excellent addition to therapeutics, for which Southern Algeria is admirably well adapted. It is a pity that those in high office should have practised it in their own case, and made their posts little better than the dormitories of officialism.

Biskra, March 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Prudhoe Memorial Convalescent Home.

AT the late meeting of the Convalescent Society of Newcastle, held in the library of the Royal Infirmary, Dr. Philipson read the report, which was the thirty-first of the Society's existence; but the Prudhoe Memorial Home at Whitley was only opened in September, 1869, and, as will be shown from the report, has done an immense amount of good work since. The number admitted during the twelve months ending Dec. 31st last has been 1513. This number is thirty-six less than that of 1889, but the year 1889 was exceptional as compared with all preceding ones. The total number of patients received since the institution was opened has been 21,722. Dr. Bramwell read the medical report, which stated of those cases treated during the year 1094 were cured, 378 were greatly benefited, 39 were *in statu quo*, and 2 died.

The Health of Middlesbrough and Stockton.

The medical officer of health for Middlesbrough (Dr. Malcomson) reports that the death-rate had greatly improved, having fallen from 33 in January to 22 in February, which was owing to the favourable weather and the diminution of fatal cases of typhoid fever. At Stockton, too, it appears that typhoid fever is decreasing, but there was still some continuance of scarlet fever.

Ambulance Work in the North.

An examination of members instructed under the rules of the St. John Ambulance Association was held at North Ormesby last week, the men being from the large works in the neighbourhood. Surgeon-Major Hutton was the examiner, and he said the examination reflected great credit on Mr. Smith of North Ormesby, the instructor of the class. Upwards of 5000 persons have passed the Association examinations, which numerically is now the largest district engaged in this work, with the exception of London; at Darlington, too, classes have been examined, and Mr. Jackson has been complimented for their proficiency, likewise Drs. Smeddle and Fielden at Shildon; the last has received a presentation from his class. Dr. Lambie of Lowick has received a presentation of a handsome stationery cabinet, together with a purse of sixty-seven sovereigns, in grateful recognition of his valuable services as medical adviser and the lively interest he has taken during his residence of twenty years in the village in the well-being of the neighbourhood.

Hexham.

Dr. D. Jackson, the medical officer of health for Hexham, in his annual report says that the death-rate, 15·52 per 1000, was the lowest it had ever been his privilege to record. The year's working of the notification of diseases had been satisfactory. He is strongly against having a hospital conjointly with other authorities for infectious diseases, as the chief attraction of Hexham, and a future source of its prosperity, would be its public health, and to concentrate the infectious diseases of a wide area in their midst would, in his judgment, be most detrimental to the best interests of the district.

Recovery of Sulphur from a Waste Product on the Tyne.

The *Newcastle Chronicle*, referring to the opening of works on a large scale some time ago for the manufacture of sulphur by Chance's process, notes that it has been a complete success; that so large a market has been found for the sulphur recovered from the "tank waste" in the alkali manu-

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facture that the article commands a price 50 per cent. above that formerly realised. But there is another advantage in the utilisation of this tank waste—namely, the removal of a nuisance which was at once unsightly and offensive. If the carbon and sulphurous acid which are so freely suspended in our Tyne atmosphere could be recovered in some similar way it would be indeed a blessing. For this, I suppose, we must wait until it can be shown to be a commercial success.

Newcastle-upon-Tyne, March 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Public Health Committee.

AT the meeting of the Public Health Committee last week it was reported that the total number of deaths registered in the city during February was 396, making the death-rate 17·25 per 1000, as compared with 490 in the corresponding month of last year, and 367 in 1889. The rate was below the average of the preceding five years by a fraction of a unit per 1000. As regards age, 29·29 per cent. were under five years, 12·12 per cent. between five and twenty-five years, 29·79 per cent. between twenty-five and sixty years, and 28·78 above sixty years. As regards the causes of death, diseases of the chest accounted for 35·85 per cent., debility and old age for 12·12 per cent., zymotic diseases for 10·10 per cent. During the month 393 cases of infectious disease were intimated, compared with 1037 in the corresponding month of last year, 161 in February, 1889. Of these, 165 were cases of scarlatina, 107 of measles, 94 of typhoid fever, and 27 of diphtheria. Into the City Hospital 139 patients had been admitted, 23 discharged, and 10 died. At the end of the month there remained 262 patients in the hospital, 129 being cases of scarlatina and 82 of typhoid fever. The birth-rate for the city was at the rate of 24·04 per 1000; the males numbered 290 and the females 262. During the month 29,714 lb. of unsound meat were seized or delivered. There were 16 cases of tuberculosis, in 10 of which the animals were destroyed by order of the Board of Agriculture.

Royal Physical Society.

At the meeting of this Society last week Dr. G. Carrington Purvis read a paper on the biological examination of water and milk, with special reference to typhoid fever, and another on the pineal eye of the porbeagle shark.

Health of Edinburgh.

The mortality last week was 114, making the death-rate 22 per 1000. Diseases of the chest caused 60 deaths, and zymotic diseases 7, of which 5 were due to whooping-cough. The intimations for the week were—typhoid fever, 4; diphtheria, 5; scarlatina, 15; measles, 88.

Hospital for Sick Children, Aberdeen.

During the past year 484 patients were treated in the hospital, of whom 387 had been resident in Aberdeen, and 97 came from the country. The expenditure amounted to £1717 8*s.*, while the income, including a balance of £23 4*s.* 4*d.* brought forward from the previous year, amounted to only £1637 0*s.* 5*d.*, showing a deficit of £80 7*s.* 7*d.* During the year £730 17*s.* 9*d.* had been received on capital account, consisting of legacies and special donations, which had been applied towards clearing off the hospital debt, which has now been reduced to £1670 5*s.* 7*d.*

Factories and Workshops Bill.

The Senatus Academicus of the University of Glasgow have forwarded to Mr. James A. Campbell, M.P., for presentation to Parliament, a petition with reference to the above Bill, setting forth that the certificate of fitness for employment of children and young persons in factories and workshops is a valuable safeguard, that the requirement of it is in accordance with other legislative enactments for the protection of the young, and that its abolition (as proposed by the nineteenth clause in the present Bill) would be a retrograde step.

A resolution has also been adopted by the Medical Faculty of Aberdeen University viewing with apprehension the proposal to abolish the certificate at present required of fitness for the employment of children and young persons in factories and workshops.

March 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

The late Mr. R. G. H. Butcher.

THE late Mr. Butcher [a notice of whose life and work appears in another column] was a brother of the late Bishop of Meath, and as a memorial to him and his father, Admiral Butcher, he at his sole cost fitted up a lifeboat station on the west coast of Ireland, at a large expenditure, the boat alone costing £1000. During his last illness he was attended by an old pupil, Mr. W. J. Wheeler.

Health of Dublin during 1890.

In the Dublin registration district the births registered last year numbered 9629, being equal to 27 per 1000, and the deaths 9454, or 26·8 per 1000, or, allowing for the intercalary week, to 26·3, being 0·7 over the rate for 1889. Deaths from zymotic diseases were 1019, or 418 below the average for the previous ten years. Of these, measles caused 106 deaths; scarlatina, 8. There were 25 deaths from typhus, 185 from enteric fever, and 9 from simple continued fever. Whooping-cough caused 187 deaths; diarrhœa and dysentery 184; while influenza, which prevailed in the early part of the year, caused 78 deaths, of which 61 occurred in the first quarter from pulmonary and other complications. The mortality among children was considerably below the average, the death-rate under five years being 69·6 per 1000 of the estimated number of the living at that age, against an average of 88·1 for the previous ten years. The deaths of infants under one year were equal to 163 per 1000 births registered; in 1889 the infant mortality rate was 180.

Monkstown Hospital.

During the past year important and extensive improvements have been made, and at present the institution is in a thoroughly efficient condition. It is satisfactory to learn that the new wing, comprising two wards, a nurses' room, and kitchen, has been furnished and equipped without trenching upon the funds of the hospital. There is, however, a balance due on the building account of about £300, and a debt of about £100 on the ordinary maintenance of the hospital; but as every item which may be regarded as permanent income increased last year, the outlook for the future is encouraging.

Poisoning by Paraldehyde.

In August last a patient in the Cork Workhouse died from an overdose of paraldehyde administered to her by the nurse, Miss Catherine Horgan, particulars of which have already been fully reported in these columns. At the Cork Spring Assizes last week the grand jury found a true bill for manslaughter against Horgan.

A Centenarian.

A lady named Sullivan died in the Kanturk district, co. Cork, last week, aged 109 years. Her sister died about twelve months since, also at a very advanced age—viz., 106.

Queen's College, Cork.

The following lecturers have been appointed by the Council:—Oscar Woods, M.D., L.R.C.S.I., to be lecturer in Psychological Medicine; J. Cotter, M.D., M.Ch., to be lecturer in Pathology; Arthur W. Sandford, M.D., M.Ch., to be lecturer in Ophthalmology and Otology; and Denis D. Donovan, L.R.C.P. and S. Edin., to be lecturer in Hygiene.

A grand ball, under influential patronage, will take place at the Assembly Rooms, Cork, on April 10th, in aid of the Nile-street Hospital.

BELFAST.

Queen's College, Belfast.—The Graduates' Réunion.

One of the most interesting events in the history of Queen's College, Belfast, took place on Thursday evening, March 19th, when the old graduates assembled at a banquet in the Great Hall of the College. There was a very large attendance. The President (Dr. Hamilton) occupied the chair, having on his right Lord Justice Fitzgibbon and on his left Mr. Justice Gibson. The Mayor (Mr. Connor, M.A.), an old Belfast student, Lord Banger, the Moderator of the General Assembly, the President of

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the Harbour Commissioners, the City Recorder, Rev. A. H. Pakenham, the President of the North of Ireland Branch of the British Medical Association (Dr. W. A. Keown), the President of the Ulster Medical Society (Dr. Dempsey), the professors of the College, and a large number of the leading representatives of the clerical, medical, legal, and scholastic professions in the north of Ireland were present. After the usual loyal toasts had been proposed the President gave "The Health of the Judges," which was responded to by Lord Justice Fitzgibbon and Mr. Justice Gibson. The toast of the evening was then proposed by Lord Justice Fitzgibbon—"Floreat Collegium Reginale Belfastiense," to which the President replied, and in a very happy way pointed out the distinguished positions that old graduates of Queen's College, Belfast, now occupied in all parts of the world. He gave the following interesting statistics. The College has now been in operation for four complete decades. In the first of these the average number of students each year was 189; in the second this figure was nearly doubled, rising to 368; in the third it rose to 400; in the fourth, the last which has been completed, it mounted to 473. Professor Redfern, M.D., then proposed the toast, "The Benefactors of the College," to which the Rev. A. H. Pakenham replied. "The City and Trade of Belfast" was given by Mr. Shaw, Q.C., and the Mayor, the President of the Harbour Commissioners, and the President of the Chamber of Commerce replied. The Moderator of the General Assembly (Rev. W. Park, M.A.) proposed in very felicitous and complimentary terms, "The Medical Schools of Ireland," to which Professor Cuming, M.D., responded. Mr. Dodd, Q.C., gave "The Press," to which Mr. Henderson, M.A., and Mr. M'Knight replied. Professor Purser, D.Sc., proposed "Long Life and Happiness to our President and Mrs. Hamilton," which was received with great enthusiasm. The President having replied, the proceedings terminated shortly after midnight. In addition to the band of the Rifle Brigade, the following gentlemen contributed an excellent programme of vocal music, under the direction of Dr. J. A. Lindsay: Dr. MacKenzie, Dr. Leslie, Dr. McCaw, Dr. M'Kissack, and Mr. W. N. Watts, B.L., LL.D. The *réunion* was a very great success, and the proceedings throughout were most interesting and enthusiastic. The President has won golden opinions by the admirable tact, good sense, and sound judgment which he displayed throughout the proceedings of the evening.

March 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The New Law Regulating the Practice of Medicine in France.

THE great event of the week here is the passing by the Chamber of Deputies, on the first reading, of this much-talked-of Bill. Having been declared *d'urgence*, a second reading of the Bill is unnecessary, and it passes at once, after the Easter recess, to the Senate, where it is unlikely that its clauses will undergo material modification. The Bill derives its claims to importance principally from the clauses affecting indigenous and foreign doctors and dentists, and also from the fact that it renders compulsory the notification of certain infectious diseases (the list to be made out by the Minister of the Interior after consultation with the Académie de Médecine and the Comité Consultatif d'Hygiène Publique), and the participation of medical practitioners in medico-legal inquiries, whenever a requisition to that effect is made by the authorities. With regard to the compulsory notification of infectious diseases, it seems to me that its working will be difficult, seeing that the words "*et n'engageant pas le secret professionnel*," qualifying the words *maladies épidémiques*, leave apparently a considerable loophole for its non-observance. The clause providing for the compulsory participation of doctors in medico-legal investigations is doubtless meant as a reply to the strike of the profession, the members of which naturally object to give and prepare evidence in such cases for the miserable pittance now offered to them. The present Bill is designed to revise the *régime* under which, since the year 11 of the first Republic, followers of the healing art have existed. As long ago as 1883, Dr. Chevandier, a medical deputy, laid on the table of the Chamber a similar Bill, but it is curious that the measure just passed by the Lower House should be almost identical with one that was voted by the Chamber of Peers in 1847. The *officier de santé* dates from the year 11 above-mentioned. In no other European State, excepting Portugal, does there exist a similar inferior grade of practitioners. In France, he differs from the M.D. in that (1) he has never passed his *baccalauréate ès* Sciences et ès Lettres (in student slang, *bacho*); (2) he is forbidden to perform major surgical and obstetrical operations; (3) he does not enjoy the prestige of his hierarchical superior, the M.D. The new law provides for the extinction of this second-class practitioner, while reserving to existing *officiers de santé* their right to practise under the same restrictions, and allowing such of them as desire to do so to graduate as M.D., under conditions to be hereafter determined by the Conseil Supérieur de l'Instruction Publique. In future, no one will be allowed to practise medicine on French territory who is unprovided with the diploma of Doctor of Medicine delivered by the French Government. Foreigners desirous of practising in France will have to pass the examinations (and write the thesis) qualifying for the degree at whichever faculty they may choose; but if they can produce the pass certificate of a preliminary examination undergone in their own country, and deemed by the French Minister of Public Instruction of sufficient value as a matriculation test, they will be excused the *baccalauréate*. The Minister shall also have the power to excuse the foreign aspirant not more than three professional examination tests (*trois épreuves*). A novel feature of the Bill is the recognition of the legal status of the dentist. While at present anybody may practise that art, in future no person unprovided with the diploma of M.D. or that of *officier de santé*, or with the licence (*brevet*) of dentist delivered by the French Government, may do so. It was originally proposed to create a diploma in Dentistry, but an amendment was carried declaring a simple licence sufficient. The nature of the examinations qualifying for the *brevet de dentiste* will be hereafter determined by the Conseil Supérieur de l'Instruction Publique. Vested interests are respected as in the case of *officiers de santé*. Any native or foreign dentist who, by the production of his *patente* (nearly all callings pay a *patente* in France), can prove having practised in France for one year previously to the promulgation of the new law will be allowed to ply his art unmolested. But an important distinction is made between him and the licensed dentist of the future, in that the latter alone may, without the collaboration of an M.D., administer anæsthetics, both general and local, the presence of a doctor being compulsory in the case of the unlicensed dental practitioner of the *ancien régime*. Doctors of medicine, *officiers de santé*, dentists, and *sages-femmes* must register their diplomas and *brevets* within one month of their having made a choice of a domicile for business purposes. *Sages-femmes* (midwives) have their actual privileges, including that of vaccinating and revaccinating, confirmed, and will be, as at present, of the first and second class, according to the examinations passed qualifying for the diploma delivered by the French Government, which diploma alone confers the right to practise midwifery (M.D.'s and *officiers de santé* have, of course, that right). *Sages-femmes* are forbidden to employ instruments or to administer drugs, certain rare exceptions being made as regards the latter. No doctor, dentist, or *sage-femme* may act as a pharmacist, even though he or she possesses the latter title. The right of doctors to dispense their own prescriptions in certain districts deprived of a pharmacy has still to be taken into consideration, and the question is deferred until the Pharmacy Act is discussed. A person who employs as a prefix or an affix to his name the title of doctor in medicine without indicating the source of the degree is considered guilty of usurping the title of a French doctor in medicine, unless the said title emanate from the French Government. Various penalties for the illegal practice of medicine, dentistry, and midwifery are specified in the law, and the said penalties are increased if to illicit practice be superadded the offence of usurping titles. Doctors, *officiers de santé*, dentists, or *sages-femmes*, who cover with their names irregular practice by unqualified persons, may be prosecuted themselves for illegal practice. The above clauses comprise all that can interest your readers. The law modifies considerably the position of any of our compatriots who may wish to settle in France with a view of practising. There are, I believe, several English doctors established in France

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who practise in virtue of a special permission, without having qualified even as an *officier de santé*. The Bill is less favourable to them than to dentists already established, and I take it that they will either have to cease practice or graduate at a French Faculty. A deliberate attempt was made by three Boulangist deputies, one of whom was M. Déroulède, to exclude foreigners entirely, and to make French nationality a *sine quâ non* for doctors and dentists. Happily the good sense of the majority soon disposed of this piece of Chauvinism. Throughout the entire discussion Professor Brouardel, Dean of the Paris Faculty, acted in the capacity of Commissary for the Government.

Fluoride of Sodium as a Remedy for Tuberculosis.

Having observed the similarity of the beneficial effects in tuberculosis of dog and goat serum and fluoride of sodium, M. Bourgeois was led to analyse the serum of the blood of these animals, which, as is well known, are refractory to the disease in question. M. Bourgeois has, he informs us (Société de Thérapeutique, March 11th), succeeded in engraving letters on glass by means of the blood of the dog and goat; and he believes that, employed as a therapeutic agent, it is the fluoride of sodium, which he designates the natural preventive of tuberculosis, which endows the vital fluid of these animals with its antibacillary powers. M. Bourgeois was led to give the fluoride a trial in consequence of the happy results obtained by inhalations of hydrofluoric acid. The results were good in the pulmonary, intestinal, and osseous forms of tuberculosis, the patients gaining in weight, and the sweats disappearing.

Paris, March 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Dr. von Gossler.

DR. VON GOSSLER'S resignation of his post as Prussian Minister of Religion, Education, and Medical Affairs affords a fit opportunity for drawing attention to the important services rendered by him to medical science. One of the most memorable of these was his speech on vivisection in 1883. Another was his energetic defence of vaccination against repeated Parliamentary attacks. He was also a most liberal promoter of the new sciences of hygiene and bacteriology, and the enthusiasm with which he welcomed and promoted Koch's last discovery is still in lively remembrance. The success of the Berlin Congress of Naturalists and Physicians in 1886 and of the tenth International Medical Congress last August was largely due to him, and it was in recognition of the latter of these services that the Berlin Medical Society created him "honorary member." He was the founder of the "Klinische Jahrbuch" (Clinical Annual), in which the heads of the university clinics have to render annual account of their stewardship, and to discuss medical questions of general importance.

Professor Koch.

The following telegram was sent from Cairo on the 16th instant: "Professor Dr. Robert Koch, who arrived here yesterday, has expressed his opinion in favour of the erection of a barrack hospital for pulmonary patients in Thebes, as he considers the climate there especially favourable."

The Thirteenth Annual Congress of the Balneological Society.

The proceedings of the thirteenth congress of the Balneological Society began with the inspection of the new Berlin Hospital am Urban in the forenoon of the 6th instant. The first meeting took place in the evening of that day in the lecture-hall of the Pharmacological Institute, and was opened by the president, Professor Liebreich. The next speaker was Dr. Roempler of Goerbersdorf, who spoke on the prophylaxis of consumption. He did not agree with those who thought the destruction of tubercle bacilli the one thing needful in the battle with consumption, because it was, in his opinion, impossible to exterminate the bacilli. Care must rather be taken that they should find no good nutritive medium in the body. The best way was to increase the resisting power of the predisposed organs. Good nutrition, and plenty of fresh air were the main means to this end. Even in the case of intelligent and well-to-do people it was difficult to carry out the precautions for the destruction of the bacilli. If, on the other hand, one considered the extraordinary decrease in the consumption death-rate in English cities in consequence of hygienic institutions on a grand scale, there could be no doubt that hygienic prevention was the only way to obtain really tangible results. Koch himself had said that the inheritance of consumption was due to the inheritance not of the bacilli, but of the predisposition. Dr. Roempler gave instructive statistical proofs of his opinion. As to the promotion of consumption by cold, light had also begun to be thrown on this, as it had been observed that fission fungi increased much more rapidly in the blood of living rabbits in the refrigerator than under ordinary conditions of temperature. Thanks to fresh air and the vigorous circulation caused by their work, rural labourers seldom fell victims to consumption, whereas young gentlemen learning agriculture, whose food and sleep were often scanty, and who had to superintend the work in all weathers without working themselves, very often did. The once prevalent opinion that there was a consumptionless zone, dependent on height above the level of the sea, had long yielded to the truer view that the consumptionless zone began everywhere for everybody with the conditions of life which secured him a sufficient quantity of normal blood and vigorous circulation. Professor Winternitz of Vienna then spoke on the importance of hydro-therapeutics in clinics. He complained of the neglect of hydropathy in hospitals, in consequence of which it had become the chosen domain of quacks, who obtained as many indisputable successes by it as they did harm. He had gained excellent results himself by the hydropathic treatment of neuralgia, rheumatism, and consumption.—Dr. Groedel of Nauheim proposed that the Congress should take steps towards having the centigrade thermometer introduced everywhere in indicating the temperature of baths both in practice and in scientific work. This proposal was accepted.

The Treatment of Tuberculosis by Combined Methods.

A Bulgarian army doctor named Tranjen is making experiments in the Augusta Hospital here, with a view to curing tuberculosis by an original combination of the remedies hitherto known.

School Hygiene.

The School Board of the province of Brandenburg has ordered that the teachers and pupils of the schools under its care shall expectorate in the buildings exclusively into spittoons of proper construction or into bottles constructed on Dettweiler's system; that dust shall be removed from the rooms as completely as possible, but only by wet methods; that the teachers shall especially insist on the observance of the first of these orders by pupils who cough much; and that leave of absence with a view to treatment shall be granted with special readiness to pupils suffering from pulmonary disease. The head masters are to take care that the schools be sufficiently provided with suitable spittoons.

A Medical Exhibition.

There will be an exhibition of medical instruments and preparations in the new Medical Institute in the Johannis Strasse here in the beginning of April. Its purpose is to afford the members of the Surgeons' Congress and the hearers of the holiday courses of lectures for practitioners an opportunity of estimating the progress made here in the manufacture of instruments &c.

Professor Virchow.

A week or two ago Prof. Virchow measured some microcephalous Mexican aborigines on show here. He opposed the theory that such persons are to be regarded as specimens of transitional stages between the ape and man, and maintained that the forms in question are merely morbid, not atavistic.

Professor Rindfleisch.

Professor Edward Rindfleisch of Wurzburg has been elected a member of the Académie de Médecine in Paris. Except the recent bestowal of the Grand Cross of the Legion of Honour on Helmholtz, this is the first distinction of the kind bestowed on a German scientist by the French since 1870. There are only three other German members of the Académie—viz., Virchow, Bunsen, and Helmholtz. Rindfleisch is director of the Pathological Institute of the University of Wurzburg. In his scientific views he differs considerably from his teacher Virchow. His chief works are his Text-book of Pathological Histology and his Elements of Pathology.

Professor Renk, Director of the Hygienic Institute in the University of Halle, has been appointed extraordinary member of the Imperial Office of Health.

Berlin, March 22nd.

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CANADA.

(FROM OUR OWN CORRESPONDENT.)

McGill University.

THIS University has received from Mr. W. C. McDonald, Montreal, a further handsome donation of 40,000 dollars towards endowing a chair in electrical engineering. This gentleman's various gifts to McGill amount to nearly one million dollars.

Board of Health for Ontario.

The quarterly meeting of the Board was held in this city on Feb. 25th and 26th. An interesting discussion took place regarding the placing of actinomycosis among contagious diseases, a case having been reported where diseased animals were slaughtered and offered for sale, convictions having been obtained; but an appeal is pending, the defendant claiming that the meat was not offered for sale. The Board allowed the matter to stand pending the appeal. The important matter of the quality of ice cut by the leading railway companies for summer use for drinking purposes was shown to be one in which local boards had power to adopt such regulations as they deemed best to secure a pure ice. The Committee on Epidemics reported the correspondence between the Grand Trunk Railway with reference to the transportation of dead bodies. The committee had reiterated the views expressed by the Board in May, 1889, in a series of resolutions, the gist of which is that the practice of transporting the bodies of persons dead from dangerous communicable diseases be discontinued, owing to the impossibility of at all times preventing persons who may have received infection from contact with the corpse, or in any other way, from afterwards communicating the infection to others. Dr. P. H. Bryce, secretary to the Board, was appointed delegate to the annual meeting of the American State Medical Health Officers, to be held in Washington this month.

Toronto Medical Society.

At the meeting held on Feb. 19th, being a pathological evening, a number of interesting specimens were exhibited, among which was a Tumour of the Bladder and Uterus, accompanied by Ascites, in a seven months' fœtus, obstructing labour, by Dr. Gordon, and Dermoid Cyst of the Ovary in a child twelve years of age, by Dr. Atherton.

Serious and Fatal Explosions.

During the month two accidents, attended with great loss of life, have occurred. The first accident was the explosion of a boiler whereby twenty-one persons were killed and thirty wounded. According to the finding of the jury it was caused by overpressure of steam due to the stop-valve being closed. The other accident occurred at the Spring Hill Coal Mines, Nova Scotia, an explosion resulting in the loss of 123 lives. The day preceding the accident an inspection of the mine had been made by the deputy inspector, as also by a committee of the miners, and found to be in good condition. Inspector Maddins, testing for fire damp, showed only in one instance the presence of one and two-fifths per cent., while other examinations showed its absence. The committee of miners reported the ventilation as all that could be desired, both in distribution and quantity; they, however, mention the fact of Nos. 6 and 7 balances, where the explosion occurred, as "very dry and dusty, and the air in a condition, from the quantity of dust floating about, to make it a source of danger." They reported this to be almost *nil* by "a system of waterworks with hose attached for sprinkling." The adjournment of the inquest until March 10th prevents the record of the finding of the jury—indeed, as yet no satisfactory reason has been advanced for this the most fatal accident in the history of our mining industry. The sympathy for the bereaved has been widespread, and found expression in contributions from private as well as public purses.

Leprosy in British Columbia.

Word has been received at Ottawa that this disease has been found among the Chinese in that province, and has been communicated to the Indians.

I notice with regret the death, in a western town of the province, of a medical practitioner while using chloroform, which at times he administered to himself. He was found with the chloroformed handkerchief over his face, no doubt having become anæsthetised.

March 12th.

Obituary.

RICHARD G. H. BUTCHER, M.D., F.R.C.S.I.,

OF DUBLIN.

AN able exponent of Irish surgery has passed away, Mr. Butcher, a most distinguished surgeon, having died on Saturday last at his suburban residence, Towerville, Sandymount, aged seventy-two. Owing to failing health he had for some years withdrawn from the practice of his profession, and had led a very retired life. The deceased was born at Killarney in April, 1819, being the third son of the late Admiral Butcher, and was educated at Cork and at the Peter-street School of Medicine, Dublin, and Guy's Hospital. He obtained the membership of the London College of Surgeons in 1838, and the licence of the Irish College three years afterwards, being coöpted a Fellow of the latter institution in 1844. The subject of this notice shortly after being qualified became a demonstrator of, and afterwards a lecturer on, anatomy in Peter-street School, and was elected surgeon to Mercer's Hospital; he was a member of the Council of the Royal College of Surgeons of Ireland, Examiner, and finally, in 1866, he obtained the Presidency. Upon his leaving Mercer's Hospital he joined Sir P. Dun's Hospital as lecturer on operative surgery. His practice was now a very large one, his reputation deservedly great, and honours and distinctions were showered upon him. The University of Dublin conferred the M.D. degree, *honoris causâ*; he was a honorary Fellow of the Philadelphia College of Physicians, and a member of the Royal Irish Academy, while his fame as a brilliant and successful surgeon went far beyond the limits of his own country. He was the inventor of the well-known Butcher's saw, which he first described in 1851, and of a splint for fractures of the femur. Mr. Butcher was a bold and skilful operator, and attracted large crowds to the hospital to which he was attached. In 1885, at the request of Sir Charles Cameron, he presented his valuable museum of surgical specimens to the Royal College of Surgeons of Ireland, a room having been constructed for the purpose by the late Mr. O'Reilly Dease, D.L. He published in 1865, in a large volume of 933 pages, his work on operative and conservative surgery, which was mainly composed of papers published at various periods in the *Dublin Journal of Medical Science*. A man of great muscular strength and striking physique, dark complexion, handsome features, and long curling black hair, he presented quite a foreign appearance, and some years since his face was one of the most familiar in the Irish capital.

Medical News.

UNIVERSITY OF OXFORD.—In a congregation held on the 21st inst. the degree of M.D. was conferred on

Frederick J. Smith, Balliol.

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—The following candidates have satisfied the Examiners in the examinations indicated:—

Second Examination.—First Division: *Hugh Ainsworth, E. L. Compston, R. S. Hardman, Percy McDougall, and *Peter Thompson, Owens College; Douglas Seaton and W. W. Stoney, Yorkshire College.—*Second Division:* Reginald Alcock, H. C. Cadman, D. H. Cheetham, E. A. Goulden, Edmund Harrison, Joseph Jones, Arthur Leigh, and G. M. Y. Whittingham, Owens College; S. H. House, E. S Miller, J. P. Nixon, and R. L. Wood, University College. (* Distinguished in Anatomy.)

Final Examination (Part I.).—G. F. Chadwick, J. G. Clegg, Samuel Crawshaw, A. J. Edwards, R. W. Marsden, Gruner Stowell, J. H. Taylor, J. H. L. Tylecote, W. H. Waddington, and W. B. Warrington, Owens College; Alfred Harris and S. R. Knight, University College.

Final Examination (Part II.).—*First Division:* H. A. Beaver, University College; William Griffith, Owens College.—*Second Division:* J. H. Bailey, W. J. Howarth, C. K. Rawes, and Frank Robinson, Owens College; S. H. Fairrie, University College.

UNIVERSITY OF CAMBRIDGE.—At Gonville and Caius College a Shuttleworth Scholarship open to medical students of the University of not less than eight terms' standing has been awarded to Francis Carr Bottomley, scholar of the college. The value of the scholarship is about £56 per annum, and it is tenable for three years, being given for proficiency in botany and comparative anatomy.

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SUPERANNUATION GRANT. — Mr. Thos. Odell, M.R.C.S., lately medical officer of the second and third districts of the Hertford Union, has been granted a superannuation allowance of £50 per annum.

DONATIONS.—Mr. David Drummond, J.P., has given £200 to the building fund of the Royal Hospital for Incurables. Lord Iveagh has given £100 to the Coombe Lying-in Hospital, Dublin.

LEAMINGTON HOSPITAL EXTENSION.—Under the auspices of the provincial Grand Lodge of Ancient, Free, and Accepted Masons of Warwickshire, Lord Leigh, Lord-Lieutenant of the county, performed the ceremony, on the 18th inst., of laying the foundation stone of a new wing to the Warneford Hospital, Leamington. The estimated cost of this extension is £13,000.

VENTNOR CONSUMPTION HOSPITAL.—The annual meeting of the governors was held on the 21st inst., at 34, Craven-street, Charing-cross. The report presented stated that the whole of the 132 beds were constantly occupied during the past year, and 80 applicants were usually waiting for admission; 763 patients were treated. The income amounted to £10,383, and the expenditure, including £1769 for heating and ventilation works, to £11,344.

BOLTON INFIRMARY AND DISPENSARY.—The working of this institution continues satisfactory. The number of new cases admitted during the past year was 3783. The allotment of beds at convalescent hospitals by the Cotton Districts Convalescent Fund had been taken advantage of for patients requiring change of air, and 114 patients, against 97 last year, had been sent to these institutions. The total receipts amounted to £4514 17*s.* 2*d.*, and the disbursements to £5341 16*s.* 6*d.*, leaving a deficiency, to be taken from the donations, of £826 19*s.* 3*d.* Mr. William Slater, J.P. (Holmes, Dunscar), had presented to the institution a completely equipped horse ambulance.

CHILDREN'S HOSPITAL, BRISTOL.—The annual meeting (the twenty-eighth) was held on the 21st instant. Sir Charles Wathen, the Mayor, presided. The report, which was read, stated that the year commenced with an adverse balance of £445 10*s.* 10*d.*, and the income and expenditure in the year under review closed with a debit balance of £936 11*s.* 3*d.* The committee had sold out a portion of their investments, which realised £657 10*s.* 3*d.*, and had reduced the actual deficit to £279 1*s.* No less than 30,000 patients, or nearly 4000 more than last year, had been treated. Four cots had been added to the list of those which are either supported by annual subscriptions of £25 or by special contributions. The beds had been well occupied throughout the year, and the attendance of out-patients had been large.

THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA. The annual report (the twenty-fourth) is a gratifying record of the good work effected during the past year. The St. Gabriel's Hospital for Infants had been amalgamated with this institution, and twelve cots are specially set apart for infants under two years of age. 978 patients were treated in the course of the year, of whom 734 were discharged either cured or relieved, and the remainder sent out for specific reasons; 15,451 children were treated in the out-patients' department, and 209 cases were sent to the convalescent branch at Margate. The committee hope the new convalescent home at Broadstairs will be ready for occupation in the autumn. There was a balance at the banker's of £123 18*s.* 4*d.* A deficit of £141 15*s.* 3*d.* on the Margate Convalescent Home had been made up from the capital account.

THE NATIONAL ASSOCIATION OF SANITARY INSPECTORS (YORKSHIRE CENTRE). — A general meeting was held at Wakefield on the 21st inst. There was a large and fully representative attendance. Assembling at the Town Hall, the visitors proceeded to the West Riding Asylum, which they inspected, and expressed high satisfaction with all they had seen. On returning to the Town Hall, the chair was taken by Mr. D. Travis, Chief Sanitary Inspector, Halifax. A paper on "Modern Sanitary Legislation" was read by Mr. J. Maguire, Chief Sanitary Inspector, Huddersfield, and an interesting discussion followed; but the paper was considered so exceptionally important that its fuller discussion was reserved for the next quarterly meeting. A paper was afterwards read on the "Duties and Position of an Assistant Sanitary Inspector," and the meeting terminated.

THE Urban Sanitary Authority for Wokingham has decided to adopt the Infectious Diseases (Prevention) Act, 1890, and Part III. of the Public Health Acts (Amendment) Act, 1890. These Acts will come into operation on April 9th.

DISEASED MEAT.—A jobbing butcher, of Ringwood, Hampshire, was last week fined £30 and costs for sending two quarters of diseased beef to the London Central Market, intending it for sale as human food.

THE ANIMALS' INSTITUTE.—The council of this institute have decided to hold during the season a series of exhibitions of appliances used in the working of horses, with the object of lessening suffering amongst animals employed in traffic. Prizes will be given for the best collection of bits and of horse-shoes and other inventions coming under the head of harness. Those collections will be considered the best which are found to be the most humane and practical. The first exhibition will open on April 6th.

FIRE AT A LUNATIC ASYLUM, MONTREAL.—On Saturday a fire was discovered on the first floor of the extensive temporary buildings at Longue Pointe Lunatic Asylum, Montreal, which were erected to replace in some measure the loss of accommodation sustained by the terrible conflagration of a year ago. The flames spread rapidly, and four workmen on the fourth flat made a desperate leap to escape. They were all seriously injured. During the raging of the fire the lunatics in the adjoining buildings made frantic efforts to escape, and with difficulty the keepers kept them under restraint. The damage, which is estimated at 12,000 dols., is covered by insurance.

PRESENTATIONS.—On the 20th inst., at Westminster Medical School, Mr. James Black, lecturer on anatomy, was presented with a handsome marble clock, bearing an exquisitely worked plate, with the following inscription: "Presented to James Black, Esq., B.A., M.B., F.R.C.S., &c., as a token of esteem and gratitude from his anatomy class, Westminster Hospital, 1889–91."—At the close of a St. John Ambulance class at Huntingdon Mr. Oscar Jacobsen, M.R.C.S., L.R.C.P., was presented by the members with a handsome liqueur frame as a token of their appreciation of the trouble he had taken. All the candidates were successful in obtaining certificates.

ST. MARY'S HOSPITAL.—The general efficiency of this institution is maintained. Satisfactory progress has been made for extending the building and giving it a frontage in Praed-street. The work of the past year had been exceptionally heavy, the number of patients being in excess of any previous year. The Board direct special attention to the high encomiums recently passed upon the management by the Select Committee of the House of Lords. The expenditure amounted to £23,608, and but for the receipt of upwards of £8200 in legacies the resources of the charity would have been insufficient to meet the demands upon it. The total income only amounted to £22,344.

NORFOLK AND NORWICH HOSPITAL.—The annual report for the past year just issued shows that the number of in-patients (including those remaining in the hospital Jan. 1st last) was 1323. The number of out-patients (including 288 admitted originally as out-patients) was 4165. The total receipts (exclusive of legacies) was £7570 15*s.*, while the ordinary expenditure (exclusive of special items) was £7652 12*s.* 8*d.* The amount derived from legacies was £1453. The fees received from nurses' services in private nursing was £429 10*s.* 6*d.*, or £105 more than the previous year. An additional ward had been furnished, at an outlay of £177 17*s.* A sum of £500 had been invested in the public funds, and the balance to be carried forward amounted to £248 6*s.* 9*d.*

WORCESTER INFIRMARY.—The annual report for 1890 shows the increased usefulness of the charity. The number of in-patients admitted during the year was the highest recorded. The out-patients treated show a large addition on the previous year. In the course of the twelve months forty-nine patients had been sent to the St. John's Convalescent Home, Malvern, where beds had been provided by Mrs. Perrins. A Hospital Saturday collection had been made for the first time in the city, and £90 19*s.* 1*d.* was allotted to this infirmary. The cash statement shows a deficiency on the income of £865 5*s.* 11*d.* The invested property amounted to £48,583 16*s.* 4*d.* The committee contemplated selling out of the capital £1000 to meet the deficiency, but that was averted by Mr. Wheeley generously giving a cheque for that amount.

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COMMITTAL OF AN ILLEGAL PRACTITIONER AT BIRMINGHAM.—Jesse Key, having failed to pay the penalties inflicted upon him for practising as an apothecary without being registered, was on the 12th inst. committed for forty days each on two summonses. This will doubtless give him time for reflection, and, though stating that his earnings were limited, and that he had a wife and eight children to support, he will probably think over some more profitable method of keeping them on his release from his present incarceration.

LONDON TEMPERANCE HOSPITAL.—The annual report for 1890 (which by altered arrangements only covers a period of nine months) shows that the in-patients were 753 during the year, of whom 390 were cured, 258 relieved, 60 unrelieved, and 45 died. The general statistical summary states that of the in-patients admitted since the opening of the hospital 3628 were abstainers and 3268 non-abstainers. The total expenditure for the nine months was £4415, and it had been necessary to transfer £1300 from the endowment fund, of which a balance still remained in hand of £6540.

MEDICAL NOTES IN PARLIAMENT.

The Consumption of Chlorodyne.

IN the House of Commons on the 21st inst. Mr. S. Smith asked the Secretary of State for the Home Department whether his attention had been drawn to the large consumption of chlorodyne, especially among women, and the grave evils which resulted from the practice; whether the fact of chlorodyne being a patent medicine and protected by a stamp exempted it from the operation of the Sale of Poisons Act; and whether the Government would take into consideration the expediency of classing chlorodyne with other narcotics, and only allow it to be sold under the same restrictions.—Mr. Matthews: I received last year a representation from a coroner's jury that some restriction should be placed on the sale of chlorodyne. I forwarded this representation to the Privy Council Office, which is the department concerned. The answer to the second paragraph depends upon the proper construction of sections 16 and 17 of the Act, to which I beg to refer the hon. member. Section 2 of the Pharmacy Act, 1868, prescribes the manner by which any article may be added to Schedule A of that Act—namely, by a resolution of the Council of the Pharmaceutical Society. The hon. member should address any representation to that Society in the first instance.

Baby Farming.

Mr. Channing asked the Home Secretary whether his attention had been called to the evidence in several recent baby-farming cases in which convictions had been obtained for manslaughter; whether it appeared that the children were largely obtained by means of advertisements in daily and weekly newspapers published in London and the provinces; and whether he would take into consideration the advisability of legislating with a view to control or prevent the insertion of such advertisements.—Mr. Matthews: I observe that the evidence in these cases shows that children are obtained by means of advertisement. I do not see my way to legislative interference with these advertisements, which do not invite to anything necessarily illegal. Neither the Infant Life Act of 1872, nor the amending Bill of last year, which was considered by a Select Committee of this House, proposed to control or prevent the insertion of such advertisements, which are, moreover, found by the police to be a useful clue to the whereabouts of the baby-farming establishments.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAILEY, H. B., M.D. Brux., M.R.C.S., has been reappointed Medical Officer for the Spittlegate District of the Grantham Union.

BARWISE, SYDNEY, M.B. Lond., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the County of Derbyshire.

COLLINGWOOD, J. E., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Burton-Coggles District of the Grantham Union.

COLMAN, WALTER TAWELL, M.R.C.S., L.S.A., has been appointed one of the Surgeons on the Staff of the Sherbourne-road Dispensary, Birmingham, vice F. W. Stokes, resigned.

DANIELL, G. H. S., M.B., B.C. Cantab., has been appointed House Surgeon to Guy's Hospital.

DUNN, R. A., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the North-Eastern Hospital for Children.

FAWCETT, J., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

FENTEM, P. S., M.D. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Baslow Urban District.

FOX, W. PIERCY, L.R.C.P., L.R.C.S., has been appointed Medical Officer to No. 12 District (New District), in addition to No. 6 District, in the Parish of Lambeth.

GORDON, H. LAING, M.B., Mast. Surg. Edin., has been appointed Medical Officer for the No. 6 District of the South Molton Union, Devonshire.

HARPER, C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Bath Rural District.

HART, F. J. LORIMER, M.B., C.M., L.M. Edin., has been appointed Honorary Assistant Medical Officer to the Home and Infirmary for Sick Children and South London Dispensary for Women, Lower Sydenham, S.E., vice R. H. Gwynn, resigned.

HAYDON, W. R., M.D. Glasg., has been reappointed Medical Officer for the Cruwys Morchard District of the Tiverton Union.

HOCKRIDGE, T. GRANVILLE, M.D., M.R.C.S., L.S.A., has been appointed Medical Officer for the No. 6 District of the Holborn Union.

HODGE, W. T., M.R.C.S., has been appointed Medical Officer for the Ellesmere Union.

HOFFMEISTER, W., M.D. Heidelb., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for West Cowes, Isle of Wight Union.

MACDONALD, C. R., M.D. Aberd., D.P.H. Camb., has been appointed Medical Officer of Health for the County of Ayrshire.

MACKINNON, NICOL, M.B. Aberd., has been appointed Medical Officer to the Parochial Board of South Uist, vice Maclachlan, resigned.

MCLAREN, ALICE J., M.B. Lond., has been appointed House Physician to the Leith Hospital.

MURDOCH, ANDREW, M.B., C.M. Glasg., has been reappointed Medical Officer for the Rainford District of the Prescot Union.

NASMYTH, T. G., M.D. Edin., D.Sc., has been appointed Medical Officer of Health for the County of Fife.

PLATT, JOHN EDWARD, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer of the Barnes Convalescent Hospital, Cheadle, vice E. C. Lomas, M.B., resigned.

RICHARDS, J. S., M.B., B.S. Lond., has been appointed Assistant House-Physician to Guy's Hospital.

SCOTT, PATRICK CUMIN, B.A., M.B. Cantab., M.R.C.S., has been appointed Physician to the Miller Hospital.

SHEPHERD, R. F., M.B. Edin., has been appointed Medical Officer and Public Vaccinator for the Hainton District of the Boston Union.

SWAYNE, F. G., M.B., B.C. Cantab., has been appointed House Surgeon to Guy's Hospital.

WEBBER, H. W., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

WELSFORD, A. G., M.B., B.C. Camb., has been appointed Assistant Medical Officer for the Central London Sick Asylum District.

WILSON, HELEN M., M.B. Lond., has been appointed Resident Medical Officer to the Temperance Hospital, Hampstead-road.

WINSHIP, W. A., M.R.C.S., has been appointed Medical Officer for the Wetheral District of the Carlisle Union.

WORBOYS, T. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Dispenser to the Union Infirmary, Leeds, vice Buck.

WORGER, T. H., M.R.C.S., has been reappointed Medical Officer of Health for Radstock.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing will be provided.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BURTON-ON-TRENT FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Junior Medical Officer. (Apply to the Secretary, Shobnall-road, Burton-on-Trent.)

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

COUNTIES OF MIDLOTHIAN, WEST LOTHIAN, AND PEEBLES, AND DISTRICTS WITHIN THE SAME.—Medical Officer. Salary £600, besides travelling expenses. (Apply to the County Clerk, County Buildings, Edinburgh.)

CHARING-CROSS HOSPITAL.—Surgical Registrar. Salary £40 per annum.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Physiology. Honorarium £100 per annum.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.

DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham.—Resident House Surgeon for one year. Salary £80 per annum, with board and residence.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

GUY'S HOSPITAL MEDICAL SCHOOL.—Two additional Anæsthetists for the Dental Department.

GENERAL HOSPITAL, Birmingham.—Honorary Physician.

HOLLOWAY SANATORIUM (HOSPITAL FOR THE INSANE).—Clinical Assistant. Board, lodging, washing, and small honorarium. (Apply to Dr. Rees Philipps, Virginia Water.)

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Junior Assistant Medical Officer. Salary £125 per annum, with furnished apartments, board, and attendance. (Apply to Mr. Allen Fielding, Solicitor, Canterbury.)

LONDON LOCK HOSPITAL, Harrow-road, and 91, Dean-street, W.—Registrar.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician for one year. Salary at the rate of £60 per annum for the first six months, and at the rate of £70 per annum for the second six months.

PADDINGTON INFIRMARY.—Resident Clinical Assistant. Board, residence, and an honorarium of 12 guineas on completion of six months' satisfactory service. (Apply to the Medical Superintendent, 285, Harrow-road, W.)

QUEEN'S COLLEGE, Birmingham.—Co-professor of Medicine.

ROYAL VICTORIA PATRIOTIC ASYLUM FOR GIRLS, Wandsworth-common, S.W.—Medical Officer (non-resident). Salary £100 per annum. (Apply to the Secretary, Royal Commission Patriotic Fund, 59, Charing-cross, S.W.)

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.—Milroy Lecturer.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

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SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BRUNTON.—On March 22nd, at Oatlands Park Hotel, Weybridge, the wife of T. Lauder Brunton, M.D., F.R.S., of 10, Stratford-place., W., of a son.

CUTFIELD.—On March 21st, at Merton House, Ross, Herefordshire, the wife of Arthur Cutfield, B.A., B.Sc., M.R.C.S., of a daughter.

DUKE.—On March 19th, at The Glen, Lewisham, S.E., the wife of John Challen Duke, M.R.C.S., of twin daughters.

FREER.—On March 15th, at Ormeside, Llandudno, the wife of E. Luke Freer, M.R.C.S., of a son.

LAKE.—On March 23rd, at Barnes, S.W., the wife of R. Lake, F.R.C.S., of a daughter.

LEGGATT.—On March 19th, at Elm-avenue, Nottingham, the wife of Gerard S. Leggatt, M.R.C.S., of a son.

ROBERTS.—On March 20th, at 261, Glossop-road, Sheffield, the wife of Sidney Roberts, M.A., M.B., B.C. Cantab., M.R.C.S., of a son.

MARRIAGE.

DUNLOP—DUNCAN.—On March 19th, in St. Giles' Cathedral, Edinburgh, James Craufurd Dunlop, M.B., M.R.C.P.E., to Mary Isabella, elder daughter of J. M. Duncan, Advocate.

DEATHS.

BRUNTON.—On March 24th, at Oatlands Park Hotel, Weybridge, the infant son of T. Lauder Brunton., MD., F.R.S., of 10, Stratford-place, W.

DE LISLE.—On March 20th, at Hélouan, Cairo, Albert De Lisle, M.R.C.S., L.R.C.P., son of the late Albert De Lisle, of Teignmouth, aged 26.

FOWLER.—On March 15th, suddenly, George Fowler, F.R.C.P. Edin., of Clapham-road and Kennington-park-road, in his 57th year.

KERSHAW.—On March 21st, James E. Kershaw, M.A. and M.B. Oxon., Resident Medical Officer at Brompton Hospital for Consumption, only surviving son of the late James Kershaw, Esq., of Bowdon, Cheshire, aged 35.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BLAKISTON, SON, & Co., Philadelphia; and H. K. LEWIS, Gower-street, London.

Text-book of Medical Jurisprudence and Toxicology. By John J. Reese, M.D. Third Edition, revised. 1891. pp. 666.

FANNIN & Co., Dublin; and BAILLIÈRE, TINDALL, & COX, London.

Transactions of the Royal Academy of Medicine in Ireland. Vol. VIII. 1890. pp. 535.

JENKINS, W. R., New York.

The Microbe has his Rights. By G. T. Chapman. 1891. pp. 86.

PENTLAND, YOUNG J., Edinburgh and London.

Botany: A Concise Manual for Students of Medicine and Science. By Alex. Johnstone, F.G.S. Illustrated. 1891. pp. 260.

SWAN SONNENSCHEIN & Co., Paternoster-square, London.

Crime and its Causes. By Wm. Douglas Morrison. 1891. pp 236.

The New York State Reformatory in Elmira. By Alex. Winter, F.S.S. 1891. pp. 172.

An Introduction to the Study of Botany. By Edward Aveling, D.Sc. Lond. With Illustrations. 1891. pp. 363.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY, Hartford.

Transactions of the American Ophthalmological Society. Vol. V. 1888-1890.

The Thermometer in Obstetrics and Gynæcology; by A. D. Leith Napier, M.D., F.R.S. (A. K. Lewis, London, 1890); price 1s. 6d.—Klinische Beiträge zur Kenntniss der Acuten Miliartuberculose und Tuberculosen Meningitis; vorgelest von Dr. H. Reinhold (J. B. Hirschfeld, Leipzig, 1891). — The Strand Magazine, March, 1891; edited by Geo. Newnes (859, Burleigh-street, W.C.). — The Treatment of Chronic Tubercular Consumption; by G. C. Smith, M.D. (Austin, Texas).—New Method for the Analysis of Peptones; by A. Denaeyer (S. Straker and Sons, London, 1891).—La Neurasthénie: Maladie de Beard; par le Dr. Fernand Levillain (A. Maloine, Paris, 1891). — Index Medicus, Authors and Subjects, Vol. XIII., No. 2, February, 1891 (Trübner and Co., and Lewis, London). — Die Tetanie; von Dr. Med. Lothar v. Frankl-Hochwart (August Hirschwald, Berlin, 1891). — Magazines for April: Leisure Hour, Sunday at Home, Good Words, Sunday Magazine, Boys' Own Paper, Girls' Own Paper.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 25th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 19	29·85	N.E.	41	38	59	46	37	..	Cloudy
,, 20	29·80	N.W.	38	36	73	47	35	..	Cloudy
,, 21	29·83	N.E.	38	36	73	44	34	..	Cloudy
,, 22	30·05	N.W.	33	..	71	45	29	·04	Bright
,, 23	30·07	S.W.	35	33	65	44	33	·01	Snowing
,, 24	29·91	S.W.	42	40	83	52	35	..	Cloudy
,, 25	29·72	S.W.	49	47	92	54	41	·01	Cloudy

Medical Diary for the ensuing Week.

Monday, March 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, March 31.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, April 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens by Mr. Targett, Mr. Alban Doran, Dr. W. Duncan, and others. Mr. John W. Taylor: Case of Extra-uterine Pregnancy at full term; removal of child and placenta by abdominal section; recovery.—Dr. W. S. A. Griffith: (1) Case of Obstructed Labour in which a large Fibroma was mistaken for the Head of an Extra-uterine Fœtus; (2) Case of Extra-uterine Gestation, the Sac being situated in the Right Broad Ligament; Pregnancy advanced to the early part of the fourth month.—Mr. Marmaduke Sheild: Case of Extra-uterine Gestation associated with Sloughing of the Abdominal Wall, and attempted Extrusion of a matured and putrid Fœtus near the Umbilicus.

Thursday, April 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Guthrie: A case of Post-hemiplegic Spasm.—Dr. Seymour Taylor: On Bradycardia, the Slow Heart.

Friday, April 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL (Fulham-road, S.W.).—4 P.M. Mr. W. H. Elam: Malignant Disease of Breast.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Mr. Percy Dunn will show some Pathological Specimens. Dr. Alderson: A case of Attempted Suicide by Chloroform.—Mr. S. Edwards: Observations on Lithotrity, with a series of forty cases.

Saturday, April 4.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MR. MANSELL-MOULLIN'S "SURGERY."

WE have received from Messrs. J. & A. Churchill a copy of a fresh list of illustrations to the above work, with the intimation that it is intended to replace the list included in the copy which has been sent out for review. We observe that to each of the borrowed illustrations the name of the author is now attached.

Sabac might apply to the Editor of the *Nursing Record*, published at St. Dunstan's House, Fetter-lane, London, E.C.

Eye Disease.—We have no knowledge of the gentleman mentioned.

CIVIL SERVICE INSURANCE SCHEME.

To the Editors of THE LANCET.

SIRS,—In your issue of the 21st inst. is reported a meeting of the Royal Academy of Medicine in Ireland, at which a paper was read by Dr. MacDowel Cosgrave in reference to the above scheme. The above reported meeting was held on Feb. 13th, 1891. I have before me a prospectus, dated Dec. 13th, 1890, which enacts as follows:—"On and after 1st January, 1891, every proposer for life insurance shall be required to sign the following declaration: 'I, ——, of ——, being desirous to become a member of the Civil Service Insurance Society, do hereby declare that I am at the present time occupied upon my usual official duties, and that I am, to the best of my knowledge and belief, at the present time in a good state of health.' In addition, a certificate appended to the declaration must be signed by two civil servants serving in the same department as the declarant, to the effect that he is at present engaged upon his usual duties, and is believed by them to be in a good state of health." In Dr. Cosgrave's paper, as reported, he states that the insurance is effected "without any declaration of health, and without any reference to friends." Perhaps the above extracts will induce him to correct his statement, and will also tend to modify Mr. Lentaigne's expressed opinion of uneasiness at what seemed to him (with Dr. Cosgrave's spectacles) "a very reckless and dangerous policy."

Perhaps the following facts may also conduce to the formation of a more accurate judgment on the merits of this special case. 1. All civil servants prior to appointment are subjected to a very extended medical examination; and the medical examiner is specially asked to give the benefit of any doubt he may have in regard to fitness for the service not to the individual, but to the State, and as a result only the best men are passed. 2. They enter the service young. 3. Their lives are in the main not devoted to laborious callings, mentally or physically. 4. Only five years must elapse between date of joining the service and date of insurance.

After taking into consideration all the above facts, I think it will be at once acknowledged that the conditions present in the lives of civil servants collectively will distinctly outweigh in their prospects of longevity those present in any first-class insurance office. While strongly defending the Civil Service Insurance Scheme—safeguarded as I believe it to be,—I would equally strongly deprecate what Dr. Cosgrave believes will follow its success—viz., the indiscriminate admission of lives without medical examination.

I am, Sirs, yours faithfully,

March 23rd, 1891. A MEDICAL CIVIL SERVANT.

CLAUSEN'S STOVE.

Mr. Campbell Hyslop and several other correspondents are referred to the inventor, M. de Clausen, 37, Fitzroy-square, W.

Professor Windle (Birmingham).—The matter will be treated fully in our next issue.

THE MEDICAL DEPARTMENT OF THE PERUVIAN ARMY.

THE *Crónica Médica* complains bitterly of the wretched condition of the medical department of the Peruvian army, and considers that much of the suffering endured by the latter during the late war with Chili is to be attributed to the want of proper organisation of the department. One serious defect is that of a medical school where military surgeons may be adequately trained for the important and special work they have to do.

Dr. Jno. Wyllie.—1. No.—2. The older qualification is perhaps the more esteemed, though the possession of a university degree is generally supposed to be accompanied by superior culture.

M.R.C.S.—THE LANCET of Nov. 20th, 1886.

THE GENERAL PRACTITIONERS' UNION.

To the Editors of THE LANCET.

SIRS,—I was very pleased to read in THE LANCET of March 7th that a Society has been formed under the above title for the protection of general practitioners. Now, the great evil that general practitioners have had to suffer from is the fact that they are only represented on the General Medical Council by three members, who, of course, are elected by a majority of medical men as being those most likely to press forward matters in which general practitioners are interested. But I beg to state that even these three gentlemen are not conversant with the trials and troubles of a general practitioner in a country practice in the northern counties.

Scattered thickly over the county of Durham are numerous villages owned by the various colliery proprietors, who each appoint a certain medical man as "colliery doctor" at a certain salary per annum, for which he has to attend all cases of accident which may happen to miners working in their pits. In addition to this, at most collieries the ordinary attendance upon the miners and their families, together with any medicines that may be required, is covered by the large sum of 6*d.* per fortnight for each family, no matter how many "workers" there may be, or how many persons may be ill at the same time, or over how long a period the illness may necessitate attendance and medicine. The only extra is a fee of 10*s.* 6*d.* for confinements, which does not vary whether the case is simple or if forceps or an operation may be needed. This fee includes attendance until the mother is well again, and usually vaccination of the child as well. I might mention here that the average pay of a miner in this county is £3 6*s.* per fortnight of eleven working days of six hours each. He also has house and coals free, and no rates or taxes. In my own case I have about 280 families to attend, which means a population of about 1400. This number at 6*d.* per fortnight for each family should bring in £182 per annum; but from this is deducted 10 per cent. for collector's commission (the custom of the district), which leaves £163 16*s.* net. Then there are about fifty confinements, bringing in £26 5*s.*—a total of £190 1*s.*, to cover an average of twenty-five visits per diem and medicine, which, excluding the confinements, means supplying persons with attendance at a rate of 4¼*d.* per visit, and giving them the medicine gratis. If one speaks of raising the fees, one is met by the reply that Dr. So-and-so will attend for the old fee, and miners are so migratory a population that it matters little to them what doctor attends them so long as he can give the necessary certificate in case of death, and thus save an inquest. They may become pretty well attached to a man if he looks after them well and is possessed of a fair amount of skill; but even should the most popular man raise his fees, they would leave him almost *en masse* for the nearest man who is content with things as they stand.

There is also an element of unqualified practice to contend with. There are two unqualified practitioners in my district; but when I asked my qualified neighbours to unite with me in prosecuting them, I was told as regards one of them: "Let the poor old man go on in peace. He has been in practice here for over thirty years—before any qualified man was in the neighbourhood." I was also told that I should do myself more harm than good by interfering with him, which I really believe. This man puts "M.R.S." after his name, and thus deludes persons into believing he is qualified, and registrars accept his certificates.

The formation of a General Practitioners' Union which would put down unqualified practice, and also help a general practitioner towards raising the low standard of fees quoted above, so that he may have a fair recompense for his work, will be hailed with joy by the great mass of general practitioners, a large number of whom have their lines certainly not cast in pleasant places.

I am, Sirs, yours truly,

March 16th, 1891. GENERAL PRACTITIONER.

MACMUNN'S CASE SHEETS.

ANY plan which facilitates the record of cases seen by the busy practitioner is sure to be appreciated. The "Case Sheets" devised by Dr. MacMunn, and issued by Mr. Silverlock, seem to us to answer well all the requirements for the necessarily condensed form of note-taking that is alone possible under the conditions of private practice. Many will doubtless be glad of so convenient a method of keeping records of their patients.

F.R.C.S.—Our correspondent's letter on the risk of dispensary abuse shall be published next week.

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VERRUGA PERUVIANA.

DR. PAGAZA recently brought before the Lima Medical Society, "Union Fernandina," a case of the peculiar Peruvian wart disease in which gangrene of the right leg occurred, which caused an embolus, resulting fatally.

D. D. D.—Our correspondent does not appear to have tried subnitrate of bismuth (ten-grain doses) every two or three hours. The liquor ferri pernitratis is often of some service.

Mr. J. Lawrence Newton (Sydney).—We regret we cannot answer the question.

CORONERS AND POST-MORTEM INSPECTORS.

To the Editors of THE LANCET.

SIRS,—Certain occurrences happened here a week ago which rendered it necessary that I should question the coroner's selection of a post-mortem inspector. A friendly and courteous correspondence ensued, which much impressed me with the gentlemanly demeanour of the coroner. During that correspondence, however, the coroner emphatically declared that the selection of a post-mortem inspector was, under every and any circumstance, at his unquestionable discretion—that is to say, any medical man in charge of a case eventually ending in a post-mortem examination and inquest may be quite ignored, passed over, slighted, and made give place to the coroner's nominee, the latter having no earthly connexion with the previous history of the case. Further, the coroner, as in the above instance, may be a lawyer, unable to judge of the fitness of his especial nominee for the work in hand. In fact, the said nominee may be practically and truly the inferior of the medical man whose place he takes. If this be law, it is a law constructed by an idiot. The discretion of any coroner in this matter should be open to revision. It is a discretion liable to grave abuse, and fraught with many annoyances to the medical man slighted. It is open to strong censure; for an ignorant public will judge that the doctor who supersedes is more intelligent than the one superseded. Cannot this law—if it be law—be abrogated, annulled, reinstated in the limbo of oblivion which probably holds its constructor?

I place the matter before my professional brethren, and await the enunciation of their opinions.—I am, Sirs, yours faithfully,

Moses Gate, March 23rd, 1891. W. B. BRODIE.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bruce Clarke, London; Dr. Steavenson; Dr. Ed. Seaton; Dr. Theodore Williams, London; Dr. Herman, London; Mr. Kirkham; Mr. Hay Forbes, London; Professor Charteris, Glasgow; Mr. Brodie, Moses Gate; Mr. Lawton, Poole; Dr. W. White, Birmingham; Dr. Mortimer Granville, London; Dr. J. Barr; Mr. Howlett, Hull; Messrs. Keene and Ashwell, London; Dr. Vidal Solares, Barcelona; Messrs. Richardson and Co., Leicester; Prof. Windle, Birmingham; Mr. Hyslop, Church Stretton; Dr. Hekimian; Dr. G. Johnson, London; Messrs. Burgoyne and Co., London; Dr. W. T. Gairdner, Glasgow; Mr. Behnke, Earl's Court; Dr. V. D. Harris, London; Mr. Hawkes; Mr. Mann, Mile End; Mr. Pocock, Bangor; Dr. Kelso, Southsea; Dr. P. C. Larsen-Utke, Copenhagen; Mr. Low, London; Dr. Currie, Madras; Mr. A. Duke, Dublin; Mr. Tweedy, London; Dr. Grove, Wilts; Mr. H. M. Milton, Cairo; Mr. Bagshaw, Salford; Mr. Pearson, Cork; Dr. E. F. Neve, Kashmir; Mr. Mendelsohns, London; Mr. Mitchell, Washington, U.S.A.; Dr. Santini, Rome; Dr. Appiab, Bangalore; Mr. Gurner, Pall Mall; Dr. Wareman, Zanzibar; Messrs. Oppenheimer Bros. and Co., London; Mr. Gibson, Newcastle-on-Tyne; Messrs. Hertz and Collingwood, London; Dr. Moorhead, Notts; Messrs. Orridge and Co., London; Mr. MacDonald, Gosport; Messrs. Wright, Bath, and Co., Birmingham; Messrs. Southall, Birmingham; Mr. Magruder, New Orleans; Mr. Freeman, London; Mr. Donelan; Dr. Phillips, Virginia Water; Mr. Mackenzie, London; Mr. Heaton, London; Messrs. Ross and Co., Belfast; Mrs. Learmonth, Canterbury; Messrs. McMillan and Co., London; Mr. Stranaghan, Pontypridd; Messrs. Mottershead and Co., Manchester; Mr. Hornibrook, London; Dr. Roberts, Sheffield; Mr. Little, London; Mr. Foskett, Dulwich; Dr. Coghill, Birmingham; Dr. Maunsell, Cardiff; Mr. Woodcock, Bradford; Ms. Le Fevre, Bedford; Mr. Vickers, London; Mr. Clifford, London; Mr. W. Rayner, Uxbridge; Dr. Stephenson, Aberdeen; Mr. Mahony, Liverpool; Mr. Eminson, Scotter; Mr. Cotman, London; Mr. Edwards, London; Mr. Maugan, London; Surgery, London; Prescriber; Thor; Sigma; Micros, London; Dispatch, London; Maltine Manufacturing Co., Bloomsbury; J. W. F.; M., London; Pulsometer Engineering Co., London; Medical Superintendent, Harrow-road; Sanitary Wood Wool Co., London; Owner, Lancs; Sabac; A Medical Civil Servant.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Leech, Bristol; Mr. Tully, Hastings; Mr. Moore, London; Messrs. Coxeter and Son, London; Mr. Heywood, Manchester; Mr. Dale, Market Drayton; Dr. Murrell, London; Mr. Ward, London; Messrs. Battle and Co., Paris; Mr. Chapman, Falmouth; Messrs. Brown, Gould, and Co., London; Mr. Tresise, Burton-on-Trent; Messrs. Blondeau et Cie., London; Dr. Diver, University College Hospital; Messrs. Bush and Son, Sheffield; Mr. Lockwood, Huddersfield; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Scriven, Duffield; Messrs. Allen and Wilson, Indianapolis; Mr. Hutchinson, Belfast; Mr. Roberts, Sheffield; Dr. Deane, Ellesmere; Mr. Coombes, Bridgwater; Mr. Bissett, Aberdeen; Dr. Fletcher, Highbury; Dr. Hinde, Banbury; Mr. Tyte, Minchinhampton; Mr. Heywood, Nottingham; Mr. Huish, Lordshipland; Mr. Taylor, Ventnor; Mr. Russell, Liverpool; Mr. Shavaksha Sorabji, Hyderabad; Dr. Cheesewright, Rawmarsh; Messrs. Godfrey and Cooke, London; Mr. Roworth, Grays, Essex; Dr. Adams, West Malling; Mr. Lee, Bath; Mr. Arkle, Teignmouth; Messrs. Cooper and Morris, Ross; Mr. Edwards, Bridgend; Messrs. Ponsford and Co., Taunton; Mr. Mechan, Erith; Mr. Evans, Bradford; Chichester Infirmary; Alphabet; Alpha, Brighton; Phœnix, London; Devon and Exeter Hospital; G. W. C., London; Sussex, London; Portsmouth Lunatic Asylum; Wanderer, London; Churchman, London; County Asylum, Prestwich; P. A., London; Hercules; Secretary, Southern Hospital, Manchester; F. J. D., London; Lupus, London; Cantab, London; Lake, London; Superintendent, Newcastle-on-Tyne; M., Birmingham; Smilax, London; Mercury, London; Medicus, Scarborough; Genuine, London; Student, London; M.D., London; M.A., Croydon; R. M., Sidmouth; Miss X., Manchester; Forceps, Accrington; Dunelm, London; Nurse, Sheffield.

NEWSPAPERS.—*Montreal Star, New York Herald, Long Eaton Advertiser Liverpool Daily Post, Scottish Leader, Builder, Leeds Mercury, Sunday Times, Bristol Mercury, Yorkshire Post, Broad Arrow, West Middlesex Gazette, Chemist and Druggist, Army and Navy Gazette, Metropolitan, Law Journal, Spectator, Pharmaceutical Journal, City Press, Surrey Advertiser, Guy's Hospital Gazette, West Middlesex Advertiser, Saturday Review, Mining Journal, Birmingham Daily Gazette, Insurance Record, Hertfordshire Mercury, Windsor and Eton Express, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, The Newspaper, Electrical Engineer, Englishman (Calcutta), Windsor and Eton Gazette, Cork Constitution, Pioneer (Allahabad), Morning Post, Le Temps (Paris), Scotsman, Banbury Guardian, Manchester Examiner, North British Daily Mail, Sheffield Independent, Western Mail, Manchester City News, Essex County Chronicle. Erith Times, Northampton Mercury, Bath Gazette, Lowestoft Journal, Devizes Gazette, Doncaster Chronicle, Labour World, Kentish Gazette, Confectioners' Union, &c.*, have been received.

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The Lumleian Lectures

ON THE

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

By W. H. BROADBENT, M.D., F.R.C.P. Lond.

LECTURE III.

Fatty degeneration.—No form of heart disease is regarded with so much apprehension as fatty degeneration. More than any other, it carries with it the danger of sudden death and the liability to angina pectoris, and, although happily the disease is not very common, it would be a most important acquisition to be able to make the diagnosis with certainty at an early period. The important point in its causation is that the primary change is atrophy of the muscle substance, the invasion of the fibres by fatty matter being secondary to this and consequent upon it. Disease of the coronary arteries being thus a cause of degeneration of the heart, the existence of conditions which may lead to the implication of the coronary arteries or their orifices in morbid processes will warrant a suspicion that cardiac weakness, which may be recognised, is the result of degeneration. For example, an aortic murmur coming on after middle age may not indicate serious valvular lesion; but, as it is probably the result of atheromatous changes in the valves or arterial walls in close proximity to the orifices of the coronary arteries, there is reason to apprehend that the disease may cause obstruction here or may have extended to the vessels themselves, and progressive weakness of the heart, were this to supervene, would be attributable to degenerative change in its walls. Acute aortitis is recognised mainly by a train of effects on the heart produced in the same way—i.e., by blocking of the mouth of the coronary arteries.

But there may be fatty degeneration of the heart when the coronary arteries are healthy. It is usually present, sometimes in a very advanced degree, in pernicious anæmia, and granular degeneration, which is an acute form of the disease, is a constant effect of severe typhoid fever and of fatal phosphorus poisoning. Cases occur from time to time in which a patient convalescing from typhoid fever dies suddenly on sitting up in bed. Here, again, in fatal anæmia and enteric fever, the process must be the resultant of a balance on the wrong side as between the catabolic and anabolic operations, disintegration and repair; but it is now the quality of the blood which is at fault, not the supply, and in typhoid fever there is also the injurious effect on the nutritional processes of long-continued high temperature. It is not to be wondered at that in pernicious anæmia and fever the heart suffers more than the voluntary muscles, since these are at rest and there is no functional wear and tear, whereas in the heart this is continuous and excessive. From what takes place in typhoid fever, again, it is seen how rapid degeneration may be. Diabetes, alcoholic excess, tippling rather than drunkenness, a sedentary mode of life, may conduce to fatty degeneration of the heart, probably through deterioration of the blood, or it may be secondary to myocarditis. Cases are met with for which no explanation can be found, and we are almost compelled to assume that there may be a defective assimilative action in the muscle cells of the heart, or possibly some unrecognised blood condition.

There is very little that is characteristic in the symptoms. In a large proportion of cases the subject of this affection has had no ailment which has led him to consult a medical man, when he is overtaken by sudden death during exertion or excitement, or the administration of chloroform, or after a full meal. Or the excitement or exertion may be passed through safely and death follow some hours later, next day even. Rupture of the heart is one mode of termination, and this may take place on very slight provocation. Sometimes the patient has been engaged in his usual avocation up to the moment of its occurrence. In one case, which came under my observation, an old gentleman of quiet retired habits, with nothing beyond the weakness incident to age, was heard to knock at the wall against which his bed was placed, and was found dead, the bedclothes scarcely being disturbed. A neat slit was found in the left ventricle near the apex, close to and parallel with the septum.

When the course of the disease has been sufficiently chronic to permit of the recognition of symptoms (which, in my experience, is chiefly when the degeneration is secondary to change in the coronary arteries, or to old-standing hypertrophy, with or without dilatation) they will be such as are produced by a slackening circulation, and they are not so different from those attending dilatation as to permit of any distinction being drawn between the two conditions in an early stage without physical examination. There may perhaps be greater fluctuations in dilatation, though even in degeneration there may be great temporary improvement under care and treatment. In advanced stages characteristic differences make their appearance. The symptoms of advanced dilatation have already been described; those attending degeneration are evidences of heart failure of another kind. A noteworthy point is that well-marked dropsy is rare, and probably never occurs in uncomplicated degeneration. The significance of this is that the special effect of the disease is defective pressure in the venous system, and it is to this are due the syncopal, apoplectic, and epileptiform attacks, which, together with angina pectoris, are the most characteristic later effects of fatty degeneration. The syncopal attacks vary greatly in intensity. So far as they have come under my observation, they have been marked rather by duration than intensity, and have rarely been so complete as to be attended with absence of consciousness; they have usually been accompanied by prolonged coldness of the extremities and of the surface. I have not met with instances of sudden and complete loss of consciousness and immediate recovery as in dilatation. These syncopal attacks are very significant, and are often premonitory of fatal syncope. The apoplectiform seizures are very remarkable, and in the absence of history and without examination they are not distinguishable from the apoplectic condition resulting from cerebral hæmorrhage. The epileptiform attacks are not often violent, but resemble petit mal rather than a typical epileptic fit. While, however, the convulsion may not be severe, there is profound unconsciousness, not like epileptic coma, but of a syncopal character, and the pulse may be extremely infrequent, sometimes less than 20 in the minute. In my judgment the heart failure manifested by the slow pulse and the consequent arrest of the cerebral circulation are the cause of the fits, and it is not the epileptiform attack that affects the action of the heart. By the time any of these forms of attack occur the diagnosis of fatty heart is usually sufficiently clear; but I have had under observation a case of very slow pulse with petit mal, in which the strength and volume of the pulse and the degree of impulse of which the heart was capable precluded the idea of advanced degeneration. Is there anything characteristic in the appearance of a patient suffering from fatty degeneration of the heart? A greasy state of the skin with a sallow pallor of the face has been described, but nothing of the kind is present in a large majority of the cases. Many of the subjects of the disease retain the look of health for a long time, and even up to the moment when the heart ceases to beat.

Pulse and physical signs.—The most constant and significant feature of the pulse is that it is short and unsustained. The size of the artery at the wrist and the condition of its walls may vary greatly. When the arterial coats are healthy they are apt to feel extremely thin. The pulse-rate may be regular and about normal, or extremely irregular both in force and time, and it may be frequent or slow. A very slow pulse with extreme low tension is most characteristic, but then it is the most rare. The physical signs may be described as negative. Unless degeneration has attacked a heart already enlarged the size will be normal. If the fatty change is at all advanced impulse can neither be seen nor felt, or if perceptible it is only as a faint vibration. A heart in this condition is incapable either of giving a distinct push or maintaining continuous pressure in the arteries. The sounds are weak, sometimes so weak as to be almost inaudible, but except that the first is short there is nothing about them; the intervals, again, are usually normal. The very absence of murmur, or of conspicuous modification of the sounds or intervals, and of disturbance of the relation between the two sides of the heart or of increase of dimensions, when symptoms of serious slackening of the circulation are present, and especially

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when there have been anginal, syncopal, or apoplectic attacks, adds gravity to the case. But a weak, short, unsustained pulse is common as a constitutional peculiarity, or may at any period of life be simply a result of general debility, and impulse and apex beat may be entirely absent and the sounds may be short and weak. In young people there is no danger of such weakness being taken as an indication of degeneration of the heart, but it may arouse anxiety after middle age, especially if there is also irregularity. It is important to be able to distinguish between functional weakness of this kind and weakness arising from organic disease. Usually this is accomplished by making the patient walk briskly. A few steps will often be sufficient. If the heart is sound, it rises to the occasion; the pulse beat and sounds are all more distinct and strong and regular, whereas the fatty heart "goes to pieces," and the pulse becomes irregular and shorter than ever, or may even disappear.

Until the disease is far advanced the diagnosis of fatty degeneration of the heart is not easy, and is scarcely to be made without more than one opportunity of examination. When the diagnosis has once been made, the prognosis for the most part can contemplate only one result: a fatal termination is merely a question of time and circumstance. Excluding cases in which death has been sudden without warning, the shortest period in my experience over which characteristic symptoms have extended, together with recognised physical signs, has been about six weeks; several patients have survived the diagnosis two years before justifying it by dying suddenly. But circumstance as well as time enters into the question. A slight effort or a fall, a little hurry or excitement, too hearty a meal, an attack of flatulent indigestion or constipation, a chill, may hurry on the fatal termination; and, on the other hand, judicious care may postpone it till the heart is completely worn out and comes to a standstill.

The question must be asked, Is fatty degeneration of the heart ever cured or arrested? If the granular disintegration which is produced by typhoid fever is to be included under the term, the answer must undoubtedly be, Yes. The heart may ultimately regain structural soundness and functional vigour when during the fever the first sound has been completely lost, and the impulse has been scarcely perceptible; and when degeneration has been the result of other forms of blood poisoning or deterioration, it ought to be possible, and now and then does occur, that recovery of the heart should follow a return to a healthy state of the blood.

More than ten years ago I came to the conclusion that a gentleman still living, aged at that time about fifty-five, was suffering from fatty degeneration of the heart. Spare in habit, strictly moderate in eating and drinking, regular in taking exercise and a great pedestrian, he rapidly lost strength without recognisable cause, became breathless on very slight exertion, so that he could scarcely walk 100 yards without actually stopping, either to get his breath, or on account of anginoid pain. On one occasion at least, while sitting in his chair, he became suddenly pale and unconscious; his head fell on his chest, and the jaw dropped. With this change in his health, the pulse and heart were extremely weak. He never would relinquish exercise, but continued to walk, however slowly, and at whatever cost of pain and distress, every day, exercising great self-command and measuring his strength very exactly. Little by little he gained ground, and he is now in fair health, but capable of very little in the way of work. It should be added that never at any time were his intellectual faculties at all affected. This case may have been an instance of arrest and partial recovery.

There is not much to be said on the subject of treatment. Life should be made as easy as possible for the sufferer. He should have as much sun and fresh air as his strength and the weather will permit, but on no account must he be exposed to severe cold. Such exercise as he is capable of is good for him, but he should never incur angina or extreme breathlessness. His food should be simple and his meals strictly regular, and the bowels should be kept well open. The rectification of functional derangements will be of service, and tonics may do good.

Right ventricle.—Little has been said about the right ventricle in the discussion of the different structural diseases of the heart, for the reason that affections of this ventricle have been reserved for special consideration. It has seemed to me that our ideas of the effects of the disease of the right ventricle have been to much based upon a study of the symptoms which attend affections of this ventricle secondary to disease of the left ventricle or its valves, which therefore are really attributable to the original disease. Undoubtedly the supervention of dilatation of the right ventricle and of reflux through the tricuspid orifice allows back pressure to be brought to bear upon the veins, but this only intensifies pre-existing symptoms and makes no change in their character. We are perhaps justified in assuming that the venous back pressure, to which insufficiency of the tricuspid valve will give rise, will in some degree produce the same results, whatever the state of the left side of the heart, and whether or not the tricuspid regurgitation has been caused by obstruction in the pulmonary circulation, but the conditions are fundamentally different when the tricuspid reflux is primary. It is not impossible, for example, that a sound and strong left ventricle may come to the aid of the right ventricle, just as the right ventricle so constantly comes to the aid of the left, notwithstanding the great length of the systemic as compared with the pulmonic circuit and the weak blood pressure in the systemic veins. The pressure which will cause the blood to spurt for two or three feet in venesection might carry a current through the capillaries of the lungs, aided by the respiratory movement of the valves of pulmonary artery. It has, moreover, seemed to me that weakness of the right ventricle, the left ventricle being in a normal condition, in some cases have given rise to symptoms due rather to inadequate supply of blood to the left side of the heart than to damming back of blood in the veins. I have, for example, met with several instances of primary tricuspid regurgitation, either as a constant condition or coming on under very slight provocation. When any effect of this has been traceable it has not been breathlessness on exertion, but tendency to syncope. Perhaps this is what we ought to expect, since the occurrence of tricuspid regurgitation on the breathlessness of violent exertion has been regarded as a safety-valve action, since, also, shortness of breath results from mitral regurgitation. A difference of symptoms ought to attend mitral and tricuspid insufficiency, one giving rise to turgescence and high pressure in the pulmonary circulation, the other to deficient supply of blood and low pressure. If mitral disease produces pulmonary symptoms tricuspid disease may well produce systemic symptoms. In a few cases which have come under my notice, in which the right ventricle has appeared to be predominantly or almost exclusively affected by asthenia or degeneration, the effects have been similar to those of tricuspid regurgitation.

A patient aged seventy-two, who had never had a day's illness in his life, consulted me in 1879, complaining of failing vigour, giddiness on running to catch a 'bus, and tendency to fall asleep in the day. He was constipated; the pulse was not more than 60, was sometimes tense, sometimes soft. The heart sounds generally were weak, the aortic second accentuated. In April, 1881, symptoms, which had previously been relieved, returned, and it was now found that over all parts of the right ventricle, and even over the pulmonary area, there was absolute silence. No impulse or apex beat could be detected, but at the apex the sounds were normal; the aortic second sound was accentuated. The pulse was 72, a little irregular, but fair in force and length. A month later he was much better. The pulse was 60, fair in strength and length. The left ventricle sounds were good, the right ventricle sounds faintly audible. From this time neither the right ventricle first sound nor the pulmonary second sound was ever at any time audible. The pulse varied considerably both in frequency and in tension, but it was usually well sustained, indicating considerable vigour of the left ventricle, and the left ventricle sounds were good. He had from time to time severe fainting attacks, which sometimes threatened to prove fatal. He was always worse when the bowels were not kept freely open. In June, 1883, the pulse is described as large, full, and tense; the aortic second sound was accentuated at the apex in the right second space; there were no right ventricle sounds. Towards the end of 1884, when not under my care, the bowels were allowed to get confined, and he fell into a condition of stupor, with incontinence of urine and fæces. He recovered from this condition after free aperients, and was again able to go about, though his mental faculties were impaired and he was childish, but in November, 1885, thrombosis of the left middle cerebral artery took place,

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giving rise to hemiplegia and aphasia, of which he died. The entire absence of right ventricle sounds in this case was very remarkable, and I cannot doubt that there was really no action of this ventricle. As it seemed to me impossible that the pulmonary circulation could be maintained without its aid, I formed a very unfavourable prognosis, and when this was belied I watched the case with extreme care—first to make sure that my observation was not at fault, and next in order that I might arrive at some comprehension of the problem presented by the facts. The conclusion appeared to be unavoidable that the left ventricle was carrying on the circulation through the lungs; it was throughout capable of maintaining high tension in the arteries. The amount of blood passing through the pulmonary vessels under these conditions and reaching the left auricle would be easily influenced and would vary greatly, and the fluctuating supply of blood to the left ventricle would account for the varying character of the pulse.

One of the most serious effects of weakness of the right ventricle is met with in disease of the mitral valve. When the mitral valve from thickening and shrinking of the curtains and tendinous cords becomes inefficient, the right ventricle is for a time the rampart by which the reflux of blood is arrested and is a reinforcement to the crippled left ventricle. When we hear a systolic apex murmur telling of mitral regurgitation, the murmur itself gives no trustworthy information as to the amount of blood which is carried back into the auricle. We gather this mainly from the effects upon the right ventricle. The first of these is accentuation of the pulmonary second sound, indicating increased pressure in the pulmonary circulation, and following on this hypertrophy of the right ventricle, by means of which the obstruction to the passage of blood through the lungs is overcome. It is by the augmented strength of the right ventricle that the mitral leakage is neutralised and a working equilibrium established. The greater the regurgitation the greater the amount of hypertrophy required to compensate for it. The change in the right ventricle thus becomes, together with the accompanying dilatation of the left ventricle, a measure of the regurgitation. When, therefore, we detect a mitral systolic murmur, we at once examine the right ventricle in order to gather from its condition information as to the amount of reflux which is not yielded by the murmur itself. This is specially the case when symptoms of failing compensation have set in. But if the right ventricle is in a state of degeneration or great weakness, these indications fail us altogether, while dropsy and other evidence of serious stasis and back pressure in the venous system are rapidly developed for lack of hypertrophy or compensatory effort on the part of the right ventricle. Under these circumstances the prognosis is extremely grave. The right ventricle is unable to come to the aid of the left, the mechanism of compensation makes default, and the back pressure bears at once upon the venous system. The fulcrum for some of our most efficacious therapeutic measures is missing—we dare not open a vein, however great the respiratory embarrassment and cyanosis, the effect of leeching over the liver is less certainly good, and a dose of calomel is not well borne. Recovery is rare, and twice it has happened in my experience that during apparent convalescence, when an unfavourable prognosis seemed to have been belied, the patient has died suddenly when beginning to walk about. Similar conditions result from time to time from adhesion of the pericardium. The right ventricle suffers much more than the left from pericarditis. During the attack the muscular fibres immediately subjacent to the serous membrane, which are paralysed by the inflammation, form an appreciable proportion of the thin wall of this ventricle, which is thus weakening and prone to dilate, whereas, although the superficial layer of the muscular fibres of the left ventricle is similarly paralysed, they constitute a relatively unimportant part of the mass of the ventricular muscle. Again, the right ventricle is much more hampered by adhesion of the pericardium than the left, partly because its superficial area is relatively large, but chiefly because of the thinness of its walls; and when the adhesions are general, and especially if there is also adherence of the pericardium to the chest wall and diaphragm, efficient contraction of this ventricle must be impossible. Cases of this kind, then, are not uncommon. There is valvular disease, mitral or aortic; from the size of the heart, the position and character of the apex beat and impulse the persistence of sounds in spite of the murmurs, there are grounds for concluding that the valvular lesion is not very great, but there is a premature development of symptoms. Under such circumstances we may often confidently infer adhesion of the pericardium when it cannot be demonstrated by physical signs. The right ventricle may be obviously labouring and the pulmonary second sound may be less definite and pronounced, which will tend to corroborate the conclusion arrived at.

The right ventricle is undoubtedly sometimes the cause of sudden death; and when the heart is embarrassed or stopped by pressure upwards of the diaphragm by a distended stomach or colon, it must be on the right ventricle that the pressure takes effect. This part of the heart rests upon the diaphragm, and will be directly compressed when it is pushed up. Probably it is the diastole which is mostly interfered with, and it would seem that the proper expansion and filling of the ventricle must be impossible when the pressure upon it is such that the heart is carried up bodily by the diaphragm, especially when the ventricle is dilated and over-disturbed.

A melancholy instance of this occurred in my experience in the case of an eminent artist. He was suffering from mitral stenosis and regurgitation and had an extreme degree of distension of the right side of the heart with tricuspid regurgitation, and suffered especially from sleeplessness and dyspnœa so that his misery was insupportable and life was despaired of. The application of leeches over the liver, which was enormously swollen, and the administration of calomel at once gave him sleep, and by a repetition of the leeches and regular employment of mercurial aperients, with the usual heart tonics, he so far recovered as to be able to leave his room, and his convalescence seemed to be assured. One morning after a hearty breakfast in bed the nurse was about to wash his face and hands as usual, but he impatiently bade her give him the basin and stand aside. He sat up in bed with the basin between his knees, and when the time came for washing his face bent forwards over it. The pressure upwards of a full stomach caused by this movement brought the weak right ventricle to a standstill, and the patient fell back dead. One cannot help being reminded in relating this incident of the rough-and-ready but effectual way in which a man is brought to who faints after the frightful exertion of a boat race. He is seated on the ground, and his body is bent forcibly forwards so that his head almost comes to the ground between his knees, or if he has fallen forwards over his oar, it is done while he is in the boat. The *modus operandi* of the remedy is pressure on the distended right heart; and when emetics are resorted to in bronchitis which has gone on to the production of cyanosis, the good effect is due not only to the emptying of the bronchial tubes, but to unloading of the right auricle and ventricle by the act of vomiting.

Angina pectoris.—While heart disease generally of whatever kind is remarkable for the almost entire freedom from pain, so that, when patients come complaining of pain in the cardiac region, it is a presumption against the existence of any serious organic affection of the heart rather than an indication of any such change, there is one form of pain in and around the heart, angina pectoris, which is very definite and constant in its significance of disease and of danger. In a characteristic attack of angina there is intense pain in some part of the cardiac region in the left breast, or behind the sternum or across the chest, at its upper part usually, but occasionally lower down, with radiation down the left arm. Accompanying the pain is a sense of utter powerlessness and extreme fear and dread. The patient stands still, not daring to move or breathe, and feels as if he were in the act of dying; he will say afterwards that if the pain had lasted another moment he must have died. In no other condition is the physical agony of dying realised in anything like the same degree. The two elements of pain and sense of dying coexist in a true paroxysm of angina, and are almost equally characteristic. The pain differs in character and situation and in intensity in different cases. Some sufferers will say it is indescribable; nothing in their previous experience suggests even a comparison. Others speak of the pain as severe cramp in the heart, or as if the heart were gripped by an iron claw, while pain of a shooting neuralgic character, sometimes intermittent, sometimes persistent, seems to radiate from the chest to the left shoulder, the inner side of the arm, the forearm, and the ring and little fingers. Occasionally there is a sensation as of the wrist being grasped so tightly as to cause great pain.

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With the pain in the heart there may be pain down both arms or shooting up into the left side of the neck, very rarely in the right arm only. Occasionally the pain may be felt first in the arm and seem to travel up to the chest, or may come in the inner side of the arm as a kind of warning of an attack. Another description of the pain is that it feels as if the sternum were being crushed back to the spine, or, again, as if the whole chest were being held in a vice. In other cases the pain is compared to a bar of iron across the upper part of the chest; in others, again, to a ton weight upon the lower part of the chest. The ramifications of the cardiac plexus and its communications with other nerves make comprehensible the radiation of pain in all the various directions enumerated, and the nerve of Wrisberg has been specially instanced as explaining the pain in the left arm; but no explanation can be given why in one case the pain is felt in one part of the cardiac region, and has some particular character and takes a given direction down one arm or both, or through to the back, while in another case the seat, character, and extension of the pain are quite different. It is not a pressure effect on the plexus outside the heart, neither heart nor aorta being necessarily enlarged, and extreme fusiform dilatation of the arch of the aorta being common without anginoid pain, and there can be no stretching or mechanical irritation of the ramifications beneath the endocardium at all comparable to that which takes place in acute dilatation of the heart. It seems to me probable that the pain is really central and that the radiation of irritation giving rise to its extension takes place in the spinal cord. An interesting point is that at the end of a paroxysm there is usually flatulent eructation from the stomach. The attacks are therefore very commonly attributed to flatulence. Distension of the stomach by food or gases may undoubtedly be, and often actually is, an exciting cause; but more frequently the sensation as of wind on the stomach is only a part of the general commotion, and is due to communicated or sympathetic irritation of the gastric distribution of the vagus, the cardiac branches of which are primarily implicated. The escape of gas from the stomach is often a signal that the paroxysm is over rather than the means of bringing it to an end. Occasionally there is a vehement necessity to pass urine, although the bladder may at the time be empty. The duration of the attacks is very varied. Sometimes it can be reckoned in seconds, most frequently, perhaps, a paroxysm will last a few minutes; but I have known a patient sit in the same position almost through an entire night, not venturing to make the slightest movement, and scarcely seeming to breathe, while the perspiration rolled off his forehead and came through his clothes. According to my experience it is when the attack comes on in the night without provocation by exertion or exposure that it is protracted. When it is started by exertion it generally ceases soon after the exertion is left off. While it would not be justifiable to say that a patient was the subject of angina pectoris unless he had had one or more paroxysms of intense radiating pain, associated with a sense of immediately impending death, it must be admitted that attacks of true angina occur which fall short of the typical development. For example, when a patient has been taught prudence by one or more bad attacks, he may, by standing still on the first warning, or by taking remedies, cut short the paroxysm, which will then have been represented only by the initial pain in the breast or arm without the mortal dread. It is possible, therefore, that before any characteristic attack has occurred, pains of a similar kind and intensity, disregarded by the patient or relieved by rubbing the chest or arm, may have the same significance as a fully developed paroxysm. Again, the patient who has had attacks of true angina may cease to suffer pain, but may have attacks of what he calls faintness, in one of which he ultimately dies. These, which have lost their title to the name angina, have an equally serious significance. The aspect of the patient is one of extreme anxiety or alarm. He is usually pale and often livid round the mouth, but it is said that sometimes the colour does not change. A cold perspiration usually bursts out on the forehead, and may be so copious as to drip off the face. The pulse, in the rare instances in which I have had the opportunity of examining it during a paroxysm, has been irregular, small, and weak. In some cases it has been reported to be very small from contraction or spasm of the arteries. In others, again, it has scarcely been affected at all.

Great importance attaches to the exciting cause of the paroxysms. In the first instance, they are almost always brought on by exertion. The patient while walking perhaps more sharply than usual, or uphill, or against a wind, is more or less suddenly arrested by pain in the chest, with a feeling as if the heart were about to stop and he to fall down dead. On standing still the pain gradually passes off, and he is able to resume his walk, but only feebly and gently. For a while the attacks only occur when provoked by exertion, but more and more easily as time goes on, and they tend to become more severe. They are more readily induced when a walk is taken, or any imprudent exertion, such as stooping, pulling open a drawer, pushing up a window, is made soon after a meal—especially after breakfast. External cold, again, predisposes to an attack; and exercise, which can be taken with impunity in mild weather, brings on a paroxysm if the air is cold and damp. Attacks, again, may be brought on by indigestion or constipation, apparently through reflex disturbance of the heart, or as a result of pressure from the distended stomach or colon carrying the diaphragm upwards and obstructing mechanically the action of the heart and the expansion of the lungs. They are also liable to occur during the night, and may be induced in various ways. The contact of cold sheets may have this effect by causing contraction of the peripheral arterioles, and thus throwing increased work on the heart. Or the upward pressure of the abdominal viscera on assuming the horizontal position may embarrass the heart. Not unfrequently an attack comes on after sleep when the vigour of the circulation has run down. It is clear that the great exciting cause is a demand for increased effort on the part of the heart, to which it is not equal, or, what is equivalent to this, interference with the movements of the heart by a dilated stomach and colon.

The conditions of the heart associated with angina pectoris are varied, but perhaps the most remarkable and significant point in the relations between heart disease and angina is that angina does not attend the chain of events through which stenosis or incompetence of the mitral valve proves fatal, and is not among the symptoms which arise out of the valve lesion and its effects upon the heart. This fact was duly emphasised by Dr. Walshe in his classical work on the heart, and no exception to it has occurred in my experience. I have, indeed, known instances in which, after attacks of angina had occurred at intervals for many months, mitral regurgitation has supervened with dilatation of the left ventricle, and concurrently with the establishment of so-called mitral symptoms—pressure in the pulmonary circulation, dilatation of the right side of the heart, and dropsy—the angina has ceased. In these particular circumstances Dr. George Balfour's view, that the giving way of the mitral valve may be an advantage to the sufferer from aortic disease, is justified. Aortic stenosis may be attended with true angina, as may also, but less frequently, aortic incompetence and a combination of the two conditions of the aortic valve. In association with aortic valvular disease angina may be met with in early adult life, and may continue for many years without proving fatal. The sense of impending death is, however, not fully pronounced in many aortic cases. Adherent pericardium appears in some cases to be a factor in the liability to anginoid attacks when it coexists with aortic valvular disease, but in my experience it has not given rise to angina when no other lesion was present. Injury to the root of the aorta has been known to give rise to angina. In aortitis there is usually angina, the attacks, at first slight, increasing in intensity and duration, and coming on more frequently as the disease advances.

A perfectly characteristic attack of angina has been described to me as having occurred in intermittent fever, and serious weakness of the heart was left behind for some time. Angina, again, has sometimes been an incident of diabetes, possibly from high arterial tension, which is commonly present in this disease late in life. Attacks of pain in the region of the heart of various kinds, some being true angina, are spoken of as gouty, sometimes no doubt in order to disguise the real nature of the paroxysms from a nervous patient, to whom the knowledge might be dangerous or fatal. In a very large proportion of the cases in which angina has proved fatal the heart has been found when examined after death to be in a more a less advanced stage of fatty degeneration. The condition of the heart during the attacks of angina has been generally supposed to be

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one of spasm, but there are great difficulties in accepting this view, and probably ideas as to what is meant by spasm of the heart in the anginal paroxysm by those who have employed the term have been diverse and very often vague. If by spasm of the heart is understood tonic contraction or an unrelaxing systole, this is certainly not the condition present. The heart has never been found in this state after death, and in most cases is absolutely incapable of such contraction from the state of its walls. No pulse would be possible were the heart in a spasm of this kind, and the pulse, though small and often irregular, can usually be felt. It has, indeed, in some cases been apparently unaffected by the paroxysm. But by spasm may be meant an irregular and partial contraction like cramp in voluntary muscles, or a fibrillar contraction such as is sometimes induced by faradaic currents in muscle under experiment. The late Dr. Matthews Duncan, in the last conversation I had the honour to hold with him, suggested that the state of the heart in angina pectoris might be like hour-glass contraction of the uterus; he had probably at that time experienced the pain. Views of this kind cannot be proved to be wrong, but objections might be raised, and for my part I have to admit that I have no clear and definite idea of the state of the heart during the paroxysm. The central fact and essential significance of angina is that stress is put upon the heart, to which for the moment it is unequal. One of the main causes of such stress is persistent resistance in the peripheral circulation—or, in other words, habitual high arterial tension; and we owe to Dr. Lauder Brunton the knowledge that in many attacks of angina there is an aggravation of habitual high tension by a general contraction of the arterioles. But the habitual state of the arterial circulation may possibly be one of relaxed arterioles and capillaries and low tension, so that the heart has no abnormal resistance to overcome. Here sudden general arterial spasm would put the heart to greater stress than if the habitual tension were high, since the contrast between the work demanded would be greater.

When the paroxysms of angina can be distinctly traced to arterio-capillary resistance, or, when in the case of a patient subject to angina the usual condition of the circulation is one of high tension, the term "angina vaso-motoria" may, perhaps, be appropriately employed. It is easy to imagine that stretching of the muscular fibres of the heart in the endeavour to overcome the resistance in the arteries might cause pain. But even when the vaso-motor element is most potent another factor must enter into the causation. Nothing is more common than high arterial tension, and it is met with in an extreme degree and produces fatal results without angina by ruining heart or arteries or both in hundreds of cases for one in which angina is present. Acute dilatation of one or both ventricles, again, in which stretching of the muscular fibres is obvious, frequently occurs without angina. The importance, and even dominance, of this second factor becomes clear when the cases of advanced fatty degeneration are borne in mind, when the fibres must be incapable of producing anything like actual mechanical tension. It has been assumed that the other element is neuralgic, and in a sense this is true, but not in the sense of a predisposing neurotic tendency. It must be remembered that angina is much more common in the male, which is the least neurotic sex. Mechanical stretching and neuralgic predisposition being put out of the question, there remains the fact that the existence of the patient is threatened at the moment of the attack by arrest of the heart's action, and, where it not for the warning given by the pain and for the cessation of exertion enforced by it, the subject of the particular condition of the heart would die. We must, it seems to me, assume that angina is one of the defensive arrangements by which the adjustment of internal reactions to external conditions is secured.

The prognosis of angina is beset with uncertainty. We can never tell when the next attack will come or whether it may not be the last. We are not, however, altogether without guidance, the elements of which will be an estimate of the relative predominance of the two chief factors in the production of the attack—whether inherent weakness of the heart wall or obstruction in the circulation or other cause of embarrassment of the heart's action. While the attacks only come on when provoked by exertion or excitement or by flatulent indigestion (not of course taking the patient's word for the last-named cause), the hope may be entertained that by care in avoiding all known occasions they may be postponed indefinitely. The patient, for example, must not take exercise immediately after food, must never hurry or walk against a wind, and even on level ground must adapt his pace to his condition, and, if compelled to go uphill, must do so very gently and circumspectly. If, further, there is habitual high tension in the pulse, this is at the same time evidence of obstruction in the arterioles and capillaries, which may be capable of mitigation, and of some degree of vigour in the heart. So also will be the accentuation of the aortic second sound, and still more any recognisable impulse or apex beat. Angina, again, in connexion with aortic valvular disease may run a very protracted course. It is when the pulse is soft and the heart is normal in dimensions with imperceptible impulse and weak sounds—when, in fact, the results of careful examination are negative—that the greatest uncertainty and danger exist. The occurrence of unprovoked attacks and of nocturnal angina will emphasise this conclusion.

Treatment.—The hygienic and general treatment for angina is that which has already been described in speaking of dilatation and degeneration—which, indeed, mostly underlie the angina—and the special precautions against the provocation of attacks have been sufficiently indicated. Arsenic has long been held to exercise some influence preventive of the paroxysms, and my experience leads me to agree with this view. Phosphorus, which belongs to the same chemical and therapeutical series as arsenic, has a similar influence, which has in some instances seemed to be superior. The great means of cutting short the attack is that placed in our hands by Dr. Lauder Brunton—nitrite of amyl, or nitro-glycerine,—and a patient subject to angina should never be without one or other of these remedies. They are no doubt greatly abused, and many persons, feeling secure of obtaining relief, neglect the important precautions by which the real disease, of which angina is only a symptom, may be held in check, and so, if they escape suffering, hasten on a fatal termination.

ON THE PHYSIOLOGY OF ASPHYXIA AND ON THE ANÆSTHETIC ACTION OF PURE NITROGEN.

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PROLOGUE.

THE following paper was read (in abstract) and discussed at a meeting of the Royal Society on Feb. 5th, 1891. In now submitting it to the readers of THE LANCET, I have interpolated a few short paragraphs and notes which are distinguished from the rest of the paper by being included within brackets. The subjects here discussed are such as should excite the interest not only of physiologists, but of all who are engaged in the practice of medicine and surgery. It is impossible to correctly interpret the character of the pulse in various morbid conditions without a clear understanding of the influence of the arterioles, both pulmonary and systemic, upon the circulation of the blood. The phenomena of asphyxia from exclusion of atmospheric air, and the results of the inhalation of pure nitrogen and other azotic gases, afford most instructive illustrations of the regulating and controlling influence of the arterioles upon the circulation. These interesting and instructive phenomena it is the main object of this communication to describe and explain, in accordance with the established facts and principles of physiology.

In a recently published Essay on Asphyxia (Apnœa) I have endeavoured to prove that those physiologists who accepted the doctrine of Alison, Reid, and Erichsen—that the immediate cause of death from what is commonly called asphyxia is the arrest of the pulmonary circulation—were right; and that the more modern doctrine, which assumes that the circulation is finally arrested in consequence of the muscular walls of the heart being paralysed by the circulation of unaerated blood through the tissues, is erroneous. Since the publication of the essay in question I have thought it desirable to obtain additional evidence in

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support of the theory which I first published twenty-two years ago—viz., that the arrest of the circulation in the final stage of asphyxia (apnœa) is caused by the contraction of the muscular-walled pulmonary arterioles.[1]

I have to express my obligation to my friend Mr. Charles James Martin, M.B., B.Sc., Demonstrator of Physiology, King's College, London, for the time and labour which he has bestowed upon the skilful performance of numerous and varied experiments, the results of which will, I venture to say, throw much light upon the complex phenomena of asphyxia. It is right to mention that Mr. Martin is not responsible for my interpretation of the results of his experiments.

And here it may be well to state that all these experiments were performed on animals under the influence of anæsthetics—usually morphia, subcutaneously injected, and in some cases with the addition of chloroform—anæsthetics which, while they entirely prevented suffering on the part of the animals, did not interfere with the physiological results of the experiments. Every animal was finally killed by deprivation of air. Animals—rabbits, cats, and in a few cases dogs—were asphyxiated either by ligature of the trachea, by the paralysing influence of curare, or by causing them to inhale a gas containing no free oxygen—viz., nitrous oxide, pure nitrogen, hydrogen, and carbonic acid gas. In all these experiments reinspiration of the gases was avoided by allowing the expired gases to escape through a T-tube fixed in the trachea. During the performance of the experiments in most cases the chest and pericardium of the animals were opened, so that the relative degree of fulness of the heart's cavities might be readily observed. In all these experiments the results as regards the distension of the heart's cavities were essentially the same, no matter whether the air was simply excluded, or whether an azotic gas (i.e., a gas not in itself poisonous, yet unable to support life) was substituted for atmospheric air, the only difference being that in the case of inhalation of an azotic gas the phenomena are more rapid in their occurrence, in consequence of the more speedy displacement of oxygen from the lungs.

The principal changes in the heart's cavities were as follows:—1. Distension of the left cavities of the heart. 2. Enormous distension of the right cavities, with diminished distension of the left; the distension of the right cavities being so great that the enlarged heart actually bulged out between the split sternum of the animal; the lungs at the same time being pale, bloodless, and collapsed to an extreme degree. The circulation was apparently brought to a standstill by the inability of the right cavities to empty themselves in consequence of opposition in front.

That the arrest of the circulation could not be due to paralysis of the heart's walls by the circulation of venous blood through its tissue is, I think, conclusively proved by the following experiment amongst others.

Into the trachea of a small dog, prepared with the chest and pericardium opened, and kept alive by artificial respiration, as above described, a glass T-tube was introduced, through which pure nitrous oxide gas was passed into the lungs, whilst the expired gases escaped into the air. As usual, first the left, then the right cavities became distended, and in one minute the heart's action had nearly ceased, with over-distension of the right side. Then, without loss of time, inhalation of nitrous oxide, *impregnated with the vapour of nitrite of amyl*, was substituted for the pure N_2O, by means of a two-way stopcock, and the result was that almost immediately the distension of the right cavities began to subside, and in two minutes they had nearly regained their normal size.

It was found that after the inhalation of the nitrite of amyl the lungs had assumed a peculiar dirty yellowish tinge, and artificial respiration of air failed to restore life. It is well known that nitrites convert hæmoglobin into methæmoglobin, as a result of which the oxidation of the tissues is hindered. It appears to me that the only possible explanation of these phenomena is that the circulation having been arrested by contraction of the arterioles, was for a time restored by the paralysing influence of the nitrite of amyl upon those vessels, atmospheric air being all the time strictly excluded.[2]

Additional evidence of the influence of the arterioles in arresting the circulation during the progress of asphyxia is derived from the fact that a sufficient dose of such agents as are known to paralyse the arterioles—e.g., curare and atropine—prevents over-distension of the heart's cavities, and considerably prolongs the life of the animal.

The following experiment was performed upon a rabbit previously narcotised by morphia. The chest and pericardium being opened and the animal kept alive by artificial respiration, nitrous oxide was then substituted for air. In half a minute there was distension of the left cavities, followed in one minute by distension of the right. In one minute and a half enormous distension of the right cavities was observed, with convulsions. In two minutes and a half the heart stopped. Artificial respiration with air was now resumed. The heart immediately recommenced to beat, and its distension was removed. The heart's cavities were of the normal size and fulness in seventy seconds after the readmission of air into the lungs. Then a decigramme of curare was slowly introduced into the jugular vein, the introduction occupying five minutes. Three minutes after the completion of the curare injection inhalation of N_2O was resumed and continued. The result was that the heart continued to beat slowly and feebly, that there was no distension of its cavities, that there were occasional slow contractions ten minutes after the commencement of the N_2O inhalation, and even fifteen minutes afterwards the heart was still flickering. In this experiment the dose of curare had been sufficient to paralyse the arterioles.

Into the peritoneal cavity of a cat a decigramme of curare was injected, the animal being kept alive by artificial respiration. When the respiration was suspended, the blood pressure in the carotid immediately began to fall, and artificial respiration had to be resumed to prevent the complete arrest of the circulation by cardiac paralysis. The same phenomena occurred more than once after the respiration had been suspended. At length, after an interval of nearly an hour, suspension of respiration was followed by a rise of blood pressure in the carotid; and the heart having been exposed, there was seen to occur the usual distension, first of the left cavities, then of the right. In this experiment the excessive dose of curare had paralysed the arterioles and weakened the heart. The suspension of respiration still further weakened the heart, and caused an immediate fall of blood pressure. After a time a portion of the curare was eliminated, probably by the kidneys, a considerable amount of urine having been passed upon the operating table, and then the usual results of a moderate dose of curare were observed.

The following experiment was performed upon a cat, previously narcotised by morphia and chloroform. A dose of curare was injected, sufficient to paralyse the voluntary muscles but not the arterioles. A manometer tube, connected with the kymograph, was introduced into one carotid. Suspension of the respiration was followed by the usual rise and subsequent fall of systemic arterial pressure. The circulation having been restored by artificial respiration, sulphate of atropine was injected into the jugular vein; after which the arrest of the breathing produced no rise of pressure in the carotid, and when the sternum was split and the heart exposed, no distension of its cavities was observed.

The three experiments above described suffice to prove that the distension of the heart's cavities and the arrest of the circulation during the progress of asphyxia are the result of arterial contraction, and not of paralysis of the heart's walls by the circulation of venous blood through its tissues.

It has been suggested that the distension first of the left, then of the right side of the heart, is the result solely of *systemic* arterial contraction, the impediment acting backwards from the left side of the heart through the lungs to the right cavities and the systemic veins. One main objection to this theory is the fact, I think generally admitted, that when the chest is opened immediately after death from asphyxia, the lungs are found extremely pale, from anæmia of their minute vessels, and in a corresponding degree collapsed. Surely a backward pressure from the left side of the heart, sufficient to greatly distend the right cavities, must of necessity involve engorgement of the pulmonary capillaries. That there is a certain amount of backward pressure from the primary distension of the left side, extending as far as the *pulmonary veins*, would seem to be proved by observations made by Mr. Martin, to the effect that a manometer in a branch of a pulmonary vein indicates

[1] Med. Chir. Trans., vol. li., 1868, p. 68.

[2] [During the discussion of my paper at the Royal Society an eminent physiologist said, truly enough, that nitrite of amyl relaxes the systemic as well as the pulmonary arterioles; but that the disproportionate distension of the right cavities in this experiment was the result of contraction of the *pulmonary* arterioles can, I think, scarcely be doubted

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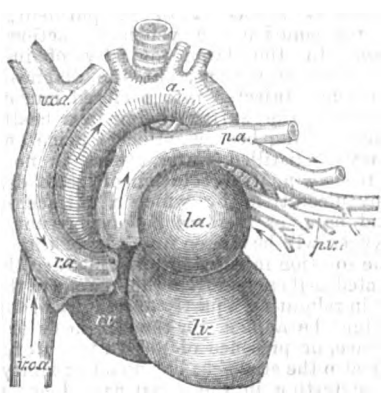
an early and continuous increase of pressure during the progress of asphyxia. But that this backward pressure does not cause the distension of the right side of the heart is shown by the fact that in the last stage of asphyxia, while the right cavities are in a state of extreme distension, the left are, as a rule, flaccid and comparatively empty, the lungs, as before mentioned, being very anæmic and collapsed to an extreme degree.

[Moreover, if the distension of the right cavities of the heart were a result of backward pressure from the left, not only would the pulmonary capillaries be engorged, but the pressure in the pulmonary veins would be greater than that in the pulmonary artery, the fact being that the venous pressure is so much less than the arterial, that it can be measured only by a water manometer.]

A most complete demonstration of the condition of the heart's cavities in the different stages of asphyxia was afforded by some experiments performed by Dr. Rutherford, now Professor of the Institutes of Medicine at the University of Edinburgh, which I had the privilege of witnessing when he was my colleague at King's College in the year 1873. The following is a brief description of Dr. Rutherford's experiments.

Into the trachea of a large dog, previously anæsthetised by chloroform, a tube was tied, and connected with a bellows for the performance of artificial respiration. The voluntary muscles were then paralysed by the injection of a moderate dose of curare, and the animal was kept alive by artificial respiration. The sternum and portions of the ribs were removed, and the pericardium was opened, so as to expose the anterior surface of the heart. One common carotid artery was divided, and a dynamometer tube connected with a mercurial kymograph was introduced into the proximal end. Artificial respiration was now suspended, and immediately the colour of the left auricle changed from crimson to purple, the dark venous blood showing through the thin walls of the auricle, while the kymograph indicated a continuous rise of pressure in the systemic arteries, the variations of arterial pressure being registered by a pen on a revolving cylinder. After the increase of pressure had continued for about a minute the *left* cavities of the heart were much distended, the auricle in particular becoming expanded into a tense globular ball with a smooth surface. (See Fig. 1.) In the next period

FIG. 1.

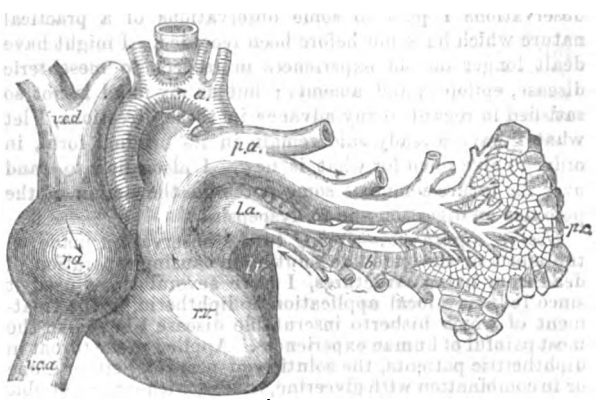


Represents the distension of the left cavities of the heart and aorta in the first stage of apnœa (asphyxia). *l.a.*, Left auricle; *l.v.*, left ventricle. Both greatly distended, the former like a smooth india-rubber ball. *a.*, Aorta distended; *p.a.*, pulmonary artery; *p.v.*, pulmonary vein; *r.a.*, right auricle; *r.v.*, right ventricle; *v.c.d.*, descending vena cava; *v.c.a.*, ascending vena cava. The right cavities of the heart, the pulmonary artery, and the systemic veins are in a state of normal fulness. The right ventricle is partly overlapped by the distended left.

the pressure in the systemic arteries began to fall, and about the same time the right cavities of the heart, which had hitherto remained of the normal size and form, became distended, while the distension of the left rapidly subsided. Meanwhile the right cavities became more and more distended, and now the *right* auricle assumed the appearance of a tense globular ball, while the left auricle had become flaccid and nearly empty. The right ventricle also became so distended that it projected above the level of the left. (See Fig. 2.) This was the condition of the heart's cavities when the animal died by the final arrest of the circulation through the lungs; but more than once, when the circulation was nearly at a standstill, artificial respiration was resumed, and then all the phenomena rapidly changed. The blood, which had accumulated in the pulmonary artery and in the right side of the heart, at once passed freely through the lungs, the distension of the right cavities subsided, and the systemic arterial pressure became first excessive, while the blood was partly venous, and then normal, when the blood became thoroughly oxygenised, and its passage through the terminal systemic arterioles was therefore no longer abnormally resisted.

[The following is the explanation of the facts revealed by Dr. Rutherford's most instructive experiment:—Artificial respiration being suspended, unaerated dark blood at first passed freely to the left side of the heart and to the systemic arteries. Arrived there, either by its direct stimulation of the muscular arterioles, or by a reflex influence through the vaso-motor nerves and centre, the muscular arterioles[3]

FIG. 2.



Represents the distension of the right cavities of the heart, of the pulmonary artery, and the large systemic veins in the final stage of apnœa (asphyxia). The letters have the same significance as in Fig. 1. In addition, *p.c.* indicates the anæmic condition of the pulmonary capillaries; *b.*, left bronchus. The right auricle and ventricle and the pulmonary artery are fully distended, the auricle having the form and smoothness of a distended ball, while the left cavities of the heart and the aorta are collapsed and nearly empty.

are excited to contract, and by this action of the vaso-constrictors the blood pressure in the arterial trunks is increased, while the left cavities of the heart become distended and dilated, as seen in Fig. 1. The circulation through the systemic arterioles is impeded and lessened, but not entirely arrested; some black blood passes through the capillaries, and this venous blood, becoming more and more entirely deoxidised, reaches the right side of the heart, and the pulmonary vessels, and coming in contact with the pulmonary arterioles, it excites in them the same contraction and resistance as had before occurred in the systemic vessels. The resistance offered by the pulmonary vaso-constrictors, while on the one hand it tends to empty the left side of the heart and to lessen the blood pressure in the systemic arteries, on the other it causes that great distension of the right cavities and of the systemic veins which is invariably found when the chest is opened immediately after death from asphyxia, and which in such experiments as Dr. Rutherford's are plainly seen to occur during the lifetime of the animal. (See Fig. 2.)] The relative amount of blood on the two sides of the heart is not an exact measure of the degree of pulmonary obstruction which has existed during the last moments of life, for the reason that the impairment of the contractile power of the left heart by anæmia and venous blood appears to vary in different cases; but I may here mention the results of the simple experiment of ligaturing the trachea of a dog which has been twice performed in my presence; the chest having been opened and the amount of blood in the two sides of the heart measured immediately after the animal had ceased to struggle.

In one dog, weighing 19¼ lb., 2 oz. of blood gushed from the distended right cavities, while 2½ drachms of blood

[3] It has been shown in Ludwig's laboratory that the arteries of an organ which has been withdrawn from all nervous influence contract when blood overloaded with carbonic acid flows through them. See Conheim's Lectures on General Pathology: New Sydenham Society's Transactions, p. 112.

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flowed slowly from the comparatively empty and flaccid left side. In a dog half the size of the above, the experiment having been performed by Mr. Martin, the right auricle was found distended, the left empty; the right side of the heart contained 5½ drachms of blood, the left a quarter of a drachm.[4]

(To be continued.)

ON PEROXIDE OF HYDROGEN, OR OZONE WATER, AS A REMEDY.

CONTINUED FROM A RESEARCH COMMENCED IN THE YEAR 1858.

BY B. W. RICHARDSON, M.D., F.R.S.

(Concluded from page 709.)

FROM these references to practice based on the old observations I pass to some observations of a practical nature which have not before been recorded. I might have dealt longer on old experiences in respect to mesenteric disease, epilepsy, and anæmia; but as my mind is not so satisfied in regard to any advance in these directions, I let what I have already said remain in its original form, in order to give room for what is new. I also allow to stand over for future comment some notes on the action of the peroxide on digestion and in dyspepsia.

Use in diphtheria.—Owing to the observation made on the effect of the peroxide solution in causing separation of dead from living structures, I have several times used it since 1864 as a local application of diphtheria, in the treatment of which hitherto inscrutable disease I have had the most painful of human experiences. Applied to the throat in diphtheritic patients, the solution of peroxide, either alone or in combination with glycerine, causes, without any doubt, a rapid separation of the false membrane, and produces a favourable condition of the local surface. But here, I regret to say, the benefit—and it is a benefit—ends. On the general or constitutional conditions it has not as yet, according to present modes of using it, been efficient. It does not touch the collapse. I name this because I see that some writers, observing the good local effect in cases that have, for some other reason, recovered, have, *post hoc et propter hoc*, proclaimed the peroxide as a specific in diphtheria. It has as yet not won that position. At the same time I invariably prescribe it locally in diphtheria, not only to the throat, but as a wash for the nostrils when there is ichorous and offensive discharge. The twenty-volume solution can be applied freely to the fauces, with borax or with glycerine, and to adults it can be administered in the form of spray.

Use in intestinal cases.—The administration of the peroxide solution as an injection per anum was a line of practice that occurred to me about 1870 in a case of cancer of the rectum, accompanied with a free and very offensive discharge. The action of the solution in destroying the odour, and, combined with tannin, in limiting the discharge, was most useful. Soon after that I was summoned to a patient suffering from what I may designate as strumous caries of the sacrum, with adhesion and ulceration of the lower intestine, and copious escape of pus into the rectum. A more painful case, or one more difficult to manage, I do not remember to have seen. Here I prescribed the ten-volume solution, with tannin and dilute hydrochloric acid, by injection, with the best results. The disease proved fatal, for the whole of the sacrum was involved before the use of the oxygen solution was commenced, and after paralysis of the lower extremities had supervened. But the solution exerted such a controlling influence, and rendered the discharge so healthy, I could but regret that the treatment by it had not been brought into action at an earlier stage.

In a case of what was called chronic dysentery, with frequent motions of a fluid and offensive character, I prescribed the ten-volume solution, with tannin, in ounce doses diluted with a pint of tepid water. The injection was thrown into the bowel once daily through a long O'Beirne tube, and as the oxygen was liberated freely in the intestine soon after the injection was thrown in, the evidence was supplied of the excretion of purulent fluid, or of some excreted matter from blood. The result was very satisfactory, and led to such a rapid and sound recovery that I can recommend the repetition of the practice with the utmost confidence.

Use by inunction.—From a similar line of thought and practice I have for many years used the peroxide as an inunction for the surface of the body of patients affected with cutaneous exfoliation, as in scarlet fever and measles. In these instances the ozonic ether is used instead of the aqueous solution, because of the facility with which it mixes with the oil or lard required to make an ointment. The body is rubbed from head to foot with the ointment, the spaces between the fingers, toes, and flexures of joints being included. The application is very agreeable to the patient, and the effect in removing obnoxious odour is most marked. But the grand advantage lies in the circumstance that the process seems to remove all danger of infection from the convalescent after three or four applications.

Use in eczema.—As a general rule, oily and fatty dressings do not agree well in chronic eczema. But I once gained considerable advantage by treating a chronic eczema, which had previously and for a long time been most intractable, with an ointment of spermaceti saturated with ozonic ether. In other eczematous cases, with exudation of blood, I have employed the aqueous solution with tannin with great advantage. In cases of this nature, where there is great irritation, the solution goes well with an anodyne.

Use in diagnosis.—I have found the peroxide of hydrogen of great service in diagnosis. It diagnoses pus from mucus. In cases where I am in doubt whether matter expectorated by the lung is or is not purulent I perform the following test. I place the expectorated matter in a test-tube containing the solution. If the matter causes no evolution of oxygen, there is no purulent matter present. If the expectoration produces liberation of oxygen, the evidence of pus is strong; and if the same event occurs after all carbonic acid is removed, the presence of either pus or of some plastic element of blood or cellular tissue element may be affirmed of a certainty. In the first test-tube which I now take up there is secretion I do not suspect, and on adding to it some of the twenty-volume solution there is, as you will see, no action whatever. In the second tube there is some doubtful secretion; but again we see there is no action. The third tube holds a few minims of secretion strongly suspected to be purulent, and on addition of the solution the vehement action confirms the suspicion. In the large majority of instances it will be pus that is present, but the diagnosis extends to cellular tissue. Injected into a closed mucous cavity, like the bladder, the surface being in a healthy state, and the viscus having been emptied of urine and washed out with warm distilled water, there is no liberation of oxygen from a neutral solution of peroxide. But if there be any ulceration, by which a surface of cellular tissue is laid bare, or if there be pus present, then the escape of oxygen will be so free from two or three ounces of a ten-volume solution injected into the bladder, that the gas may be detected as it escapes from the free end of the catheter by its effect in relighting a partly extinguished taper. The same test might be applied for the diagnosis of ulcerated mucous surface, or presence of pus in the uterine cavity, and possibly also the stomach, but no opportunity has been offered me of testing in these last-named cases. I may, however, add that no more mischief could follow from the test than would follow from the injection of common water or common atmospheric air, if the solution made be chemically pure; on the contrary, the ozonic quality of the oxygen in the solution would tend to have a good effect. It might be sound practice, indeed, to sustain in some forms of ulceration a gentle continuous current of the fluid through a mucous cavity. In extensive ulceration of the bladder or uterus, accompanied with offensive discharge, this treatment offers promising results.

SUGGESTED NEW PRACTICES FROM PAST EXPERIENCES.

In the course of original research it often happens that a number of side suggestions and thoughts occur to the mind which were not dreamed of when the research commenced. In this way theory is brought out which, being an induction from experiment, may easily become practice, and that, too, of a valuable character. As a rule, it is

[4] The results of these experiments suffice to prove the error of those physiologists who maintain that the comparative emptiness of the left cavities after death from asphyxia is the result of rigor mortis.

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good for the investigator not to advance theory even of this order until he himself has put it to the test. But there are exceptions to every rule, and here seems to me to be one. Some suggestions leading to important lines of practice have forced themselves on my attention, which call for proofs I can hardly hope to make in my own lifetime, but which younger men may have the opportunity of making, and which I, therefore, proceed to state without reserve; and the more readily because really in some instances the way towards practice has been opened for a considerable distance with perfect safety. Let me take as a first illustration of this kind an extension of the practice of injecting the peroxide solution into mucous canals. I have indicated, as a practical fact, that the solution can be injected into the alimentary canal, and that in more than one example it deodorised and neutralised an offensive discharge in a most effective manner.

Typhoid.—I would venture further. I would recommend the practice in the treatment of typhoid fever. In typhoid fever it would be possible to throw into the canal by this means twenty pints of ozonised oxygen per day by using only one pint of the ten-volume solution. The gas when liberated would diffuse through the whole of the canal, and would decompose and oxidise the decomposing exuded products, which by secondary absorption are the cause of the relapsing febrile seizures, with an efficiency possessed by no other remedy. It would be like exposing the decomposing ulcerated surface to ozonised sea air.

Hypodermic and subpulmonary injection.—As in physiological research I found no danger from injecting the neutral solution of the peroxide into the cellular tissue, I would venture the same on the human subject, and I fully expect that the practice will in time be largely adopted. In asphyxia, as after drowning and after suspended animation from chloroform and other narcotics, a hundred pints of oxygen might easily be transfused, hypodermically, by using the thirty-volume solution; and, with the temperature of the solution raised to blood heat, the diffusion of the gas through the cellular tissue would oxidise the blood rapidly, and tend to give a new force to the circulation. I should even go one step further in extremest cases. In sudden collapse from chloroform, if the natural respiration had actually ceased, and death seemed to have occurred, I should, to save time, whilst sustaining artificial respiration, inject the lung cavity directly on both sides of the chest with the solution. The diffusion of the gas through the lung structure would arterialise the blood remaining in the lung, and the mechanical pressure exerted within the pleura against the elastic structure would be a motor to the circulation, compressing the blood towards the left side of the heart, and producing a current of blood from the right side. For these subcutaneous and subpulmonary injections of the peroxide I have invented a new automatic syringe, which can be used without withdrawing the needle, the piston movement being sufficient for filling as well as for emptying the syringe. There would be no danger of injecting four ounces of the thirty-volume solution, rendered neutral and warmed to the normal blood temperature, into each thoracic cavity by needle puncture through an intercostal space high up in the forepart of the thorax. The water might produce a little œdema, but it would soon be picked up, and carried into the circulation by the capillary vessels. Bearing also on this subject of subpulmonary injection there is another use of the solution which has often occurred to my mind, and which would be perfectly legitimate as a practice, when the powerful action of the peroxide in destroying decomposing and purulent matter is taken into account. I suggest that in cases of cavus of the lung in phthisis, where the cavity can be clearly defined, there would be no risk of injecting the cavity, through a fine needle, with the solution, and of oxidising all the fluid that it might contain. Again, in dangerous hæmoptysis it would be most legitimate practice to inject into the pulmonary structure the oxygen solution saturated with tannin. The oxygen could do no harm, and the tannin, which would be quickly transformed into soluble glucose, would merely charge the blood with a useful saccharine food, with the advantage of making the lung, in a small degree, a kind of second stomach. Still more, it is quite worthy of serious consideration whether it would not be good practice to inject the solution in small quantities by the subpulmonary method in the early stages of phthisis. The oxygen would destroy the tuberculous exudation more quickly than any other agent, and I can see no danger of diffusing oxygen through an organ that is made for the sole purpose of receiving and condensing oxygen. The one danger would be hæmorrhage, and that could be met by combining tannin with the solution. I name this new mode of treating the lung substance "the subpulmonary." In a word, my contention is that we may learn to transfuse the peroxide solution without risk and with benefit into the lung, and indeed into any organ of the body, not excluding the brain and nervous centres themselves. The only danger that could follow would arise from delivering into the tissues so much oxygen at once that the blood would not absorb it with sufficient rapidity to allow afterwards a free course through the minute circulation.

I will show you an experiment on this point in order to illustrate what I mean. Here is a two-necked flask charged with six ounces of defibrinated blood from an ox. The blood has been deprived of all free carbonic acid by being washed with oxygen. It is of bright arterial colour, and if a current of air free of carbonic acid be driven through it into lime-water, there is no trace of carbonic acid. But when to this blood I add neutral peroxide solution, there is, even though it is already arterialised to some extent, brisk action. There is more oxidation, there is a slight elevation of temperature, and there is free escape of gaseous matter from the free tube and by the flask through the lime-water. The gaseous matter escaping consists partly of liberated oxygen, but, as shown by the precipitate in the lime-water, there is also carbonic acid; and had the blood been venous the amount of carbonic acid would have been very considerable. Thus it is clear that liberation of carbonic acid in the venous circuit from the use of peroxide may occur; and as there is no escape within the circuit for the gas or gases, there is the same danger as there would be from blowing air into a vein. I observed this fact in an experiment recorded in the last number of the *Asclepiad*, in which I restarted respiration in a lower animal, after death from chloroform, by injecting peroxide solution into the peritoneal cavity. The respiration was so good that life seemed to be returning until the vital functions were arrested from some other cause telling upon the circulation. After death it was found that the right side of the heart and large veins were filled with a bright arterialised blood richly charged with oxygen gas that had been absorbed from the large veins, and with which carbonic acid gas was also admixed. The prevention of this source of danger has to be worked out. It may be done by using a weak peroxide solution, or by using an alkaline solution. Meantime the danger ought to be known and the nature of it understood, since its existence without being understood might interfere materially with the proper application of the peroxide in its most useful and innocent administrations.

Use in tetanus and hydrophobia.—I have spoken of the effect of the peroxide in relaxing muscular contraction, and the facts I have observed in this direction lead me to suggest its use in two particular diseases of the spasmodic type, hitherto so intractable—I mean tetanus and hydrophobia. Anyone who has watched the course of one at least of these diseases (tetanus) will feel that the treatment the most of all hopeful, if it could be realised, is a means for preventing the muscular tetany, for producing free glandular elimination, and free oxidation of the septic blood. In the peroxide solution we have all these requisites, and in the next case of tetanus that comes under my care it is my intention to put the remedy to the completest trial. I shall inject the muscles in groups with the neutral ten-volume solution, heated to blood temperature, adding, if the oxygen be not alone efficient in reducing the tetanus, a weak alcoholic solution of amyl nitrite.

Mechanical use.—One other purpose for the peroxide must be named—a purpose purely mechanical, and yet not to be slighted. In the process of being liberated from its solution the gas exerts an expansion, which in many instances may prove of great service. In this mechanical mode of application it could be used in obstruction of the bowels from intestinal involution. It could be used for causing distension of the bladder when the sound was being employed, and perhaps in stricture for producing dilatation of the passage posteriorly to the stricture. In the same manner it could be brought into play for dilating the uterine cavity; while for bringing on premature labour, in instances of contracted pelvis, the effect of the equal distension by the gas liberated

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from three or four ounces of the ten-volume solution would, I suspect, be as rapid as it would be safe and effective.

NEW PHARMACOLOGICAL RESEARCH.

Let me describe in the last part of this essay some pharmacological outlines. Peroxide of hydrogen is still made, as Thénard first made it, by the action of an aqueous acid solution on peroxide of barium, the number of volumes in each specimen turning on the number of precipitations. I originally proposed a ten-volume solution for medical purposes, and that has been well adhered to; but for special purposes a solution of twenty and even thirty volumes may be employed. In order to keep the oxygen in the solution it is necessary to have it slightly acidified, either by dilute nitric, hydrochloric, or phosphoric acid; and, for my part, I prefer the dilute phosphoric acid. In this form the solution can be administered internally in doses varying from a fluid drachm to a fluid ounce; but two or four drachms, diluted in ten fluid ounces of water, may be considered an average dose. The taste is peculiar, being identical with that of ozone when inhaled by the mouth, and not at all dissimilar to the taste of chlorine in a weak solution. For injection purposes the solution should be rendered neutral by the cautious addition to it of caustic soda or potassa. The soda I think is the best; but it should not be neutralised until the time it is wanted. In ten volumes it may be injected either into the cavities or into the cellular tissue without being further diluted. The solution of the peroxide is incompatible with many substances; but it is compatible with the following: the mineral acids, tannin, alcohol, glycerine, alcoholic solutions of the alkaloids, and alcohol combined either with ether, amyl hydrate, amyl nitrite, or iso-butyl.

ADMINISTRATION BY INHALATION.

The oxygen from the peroxide can also be administered by inhalation by means of a simple apparatus which I have constructed for general use, and in working which I have taken advantage of another oxygenated body that liberates the oxygen and at the same time yields up a portion of its own oxygen. Into a glass vessel having two necks, like the ordinary Wolff's bottle, a few ounces of the peroxide solution are placed. A tube from a funnel, the tube having a stopcock, runs through the stopper of the bottle to the bottom of the contained solution. From the second neck of the bottle there springs another tube for inhalation, at the free end of which is a double-valved mouthpiece, like the oldest and best of the chloroform inhalers. The apparatus is now ready for use. When it is wanted the funnel is charged with a solution of permanganate of potassa in the proportion of ten grains of the permanganate to a fluid ounce of water. The tap is then turned, the permanganate solution flows into the peroxide solution, and, immediately, oxygen derived from both bodies is briskly evolved. This, if necessary, can be caught in a flexible balloon, or bag, from which it can be inhaled in measured doses, but this is not a requisite. Should the practitioner desire to combine the oxygen with ether, or with any other volatile body, soluble in ether but not in water, he can allow the ether, or ethereal solution, to float on the top of the peroxide solution. Then, as the oxygen escapes, the ether, or the ether with its other volatile comrade, passes over in combination with the oxygen. A patient can help himself to a dose at any time, as may be directed, by merely adding a measured quantity of the permanganate solution. Nitrite of amyl can be inhaled in this manner with ether, and, in short, there is here a means of administering most of the active volatile medicaments by inhalation, and in a form most ready for combination with the blood, as it passes in its course over the pulmonic circuit. How easily the apparatus can be brought into use will be seen by the demonstration here made. Under the form of ozonic ether the administration can be carried out either as a medicine to be taken in water, or as spirit solution by the mouth, in doses of half a fluid drachm to two fluid drachms, or as fine spray from the Siegle steam inhaler. For a styptic and deodorant spray for the throat the following form is useful: alcohol, pure (sp. gr. 830), half a fluid ounce; tannin, pure, twenty grains. Dissolve the tannin in the alcohol with an ounce of distilled water, and then add solution of peroxide of hydrogen (ten-volume strength) to six fluid ounces. To make a solution for spray. Of this solution, one or two fluid drachms can be used with Siegle's steam spray inhaler, a mode especially applicable in cases of throat affection. When the peroxide spray is brought into use for the throat, it is good practice, in some instances, to make the spray the means of administration, in small doses, of medicinal agents which may act internally. Quinine may be administered in this manner, and also soluble preparations of opium, and many other substances that are soluble in alcohol, and are, at the same time, compatible with the oxygen solution.

SPRAY FOR THE SICK ROOM.

Reference was made in the first part of this paper to ozonic or sea spray for the sick room—a solution diffused in the air as spray from a spray producer. The solution is composed of the solution of peroxide of hydrogen (ten-volume strength), ten ounces; common salt, two drachms. If a pleasant and pine-tree odour be desired, a few drops of ethereal tincture of Kaurie gum can be added, and the effect can easily be produced. In sick rooms and in the wards of hospitals such sprays could be arranged to work automatically so as to deliver and diffuse the solution at regular intervals. For this purpose Messrs. Krohne and Sesemann have constructed for me an apparatus which will distribute spray for several hours at a time.

OTHER MODES OF APPLICATION.

The peroxide solution can be prescribed as a gargle, antiseptic and astringent. A good form for this purpose is: Tannin, pure, ten grains; glycerine, pure, one ounce; distilled water, four fluid ounces; diluted hydrochloric acid, ten minims; solution of peroxide of hydrogen, sufficient for eight fluid ounces. To make an eight ounce gargle. An evaporating lotion can be made with the peroxide in the following form: Alcohol, pure (sp. gr. 830), two fluid ounces; anhydrous ether, one fluid ounce; distilled water, four fluid ounces; solution of peroxide of hydrogen (of neutral reaction and ten-volume strength), to twelve fluid ounces. To make a twelve fluid ounce lotion.

Another simple yet useful preparation of the peroxide is as the unguent, for inunction over the surface of the skin after scarlet fever, and other affections where there is free shedding of dead cuticle. The unguent is made by rubbing up ozonic ether with spermaceti ointment, so as to form a thin paste, which may, if desired, be rendered thick by the addition of a little more spermaceti, or thin by addition of olive oil.

ADMINISTRATION BY INJECTION: AN AUTOMATIC INJECTION SYRINGE.

In order to inject the peroxide solution into the cavities or beneath the skin, I have invented a syringe which I call the "automatic syringe," and which Messrs. Krohne and Sesemann have very neatly constructed. It is, as will be seen, a small graduated instrument, having a feeding-tube for charging it on one side, and an exit tube for discharging it on the other side. The syringe is automatic in the sense that when both tubes are in place the mere act of working its piston up and down fills it and empties it. The quantities of fluid received and delivered by it vary from ten minims to four fluid drachms, and at the end of the exit tube it can be fitted with injecting needles of different sizes or with a nozzle, according to requirement. With this syringe the peroxide solution can be injected through a needle subcutaneously, as into a carbuncle or into deeper structures. By attaching the delivery end to an enema tube it can be used also for the intestinal injection, and by attaching the same end to a catheter, it can be employed for injecting the bladder. The advantage in every case is that the current can be kept up when once it is started, either for a small or large injection, and that the admission of air is impossible. The syringe might be used without any complication for the transfusion of blood and for aspiration, as well as for transfusion; but it has been specially adapted for the oxygen solution.

CONCLUSION.

In closing these pharmacological notes it is well to recall the important fact that the remedy we have had before us has about it the peculiarity that it is a purely natural remedy, that it is not toxic, and that with the exception of the danger of producing by it gaseous accumulation in the blood, under some circumstances of its use—a danger which admits of being avoided—it is free of all risk. In its remedial application, too, there is no complexity as to its *modus operandi*. In every instance that which it effects is oxidation. For asphyxia it is oxidation; for spasm it is oxidation; for breaking up pus and exudations it is oxidation;

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for destroying infectious and fetid organic secretions, or excretions, it is oxidation; for producing eliminative action it is oxidation.

At the close of the paper on Peroxide of Hydrogen, read before the Medical Society of London in 1860, I said:—"Sir, in placing this memoir on the annals of the Society I guard myself, once and for all, from any exaggerated suggestions as to the value of this new medicinal agent. The subject is so novel, even to me after many months' learning and knowledge of it, I have feared to use a sentence that has not been measured and recast over and over again. I am not offering this medicine as an *elixir vitæ*. I do not pretend to know all its properties. I do not bind myself, irrevocably, to that which, at the present meeting, has been offered; on the contrary, I remain open to all new observation and knowledge for correction and guidance I believe we have here within our grasp a powerful medicine, the full value of which it may take years to develop, and the useful application of which may be developed in directions different from those now advanced. My purpose will be served if I call forth investigation and elicit fact, let the course of the events bend as they may."

A generation has passed since these words, Sir, were spoken, and twenty-nine Presidents have filled the place you occupy to-night. But to you and my fellow-students I re-echo these words; and although I have spoken with more knowledge, experience, and confidence in a remedy which forms the most active and preponderating element of the healthy living body, I wish still to express the same earnest hopes with the same candour and the same respectful confidence in the voice of the future.

OBSERVATIONS ON ADDITIONAL CASES ILLUSTRATING HEPATIC SURGERY.[1]

BY J. KNOWSLEY THORNTON, M.C.,
PRESIDENT OF THE MEDICAL SOCIETY.

IN November, 1887, and again in December, 1888, I had the honour to read before the Medical Society papers containing my experience up to date in hepatic surgery. On March 2nd, 1891, I communicated to the same Society my further experience in this very important branch of abdominal surgery. The work is so comparatively new, and so interesting both to the physician and surgeon, and the individual cases differ so much in detail, that I venture, as in my previous papers, to record them a little more fully than I should do if dealing with some of the commoner operations performed on abdominal organs. I will take, first, nine cases in which I diagnosed gall-stones as the cause of illness, and in seven I found and removed them, with complete cure of the patients. In the eighth case I missed the stone, the patient died, and the stone and much effused bile were found in the peritoneum after death. In the fifth case the obstruction proved to be hydatids, and they were successfully removed. I will, then, refer more briefly to seven other cases, which have a more or less important bearing upon the diagnosis of pathological conditions of the liver.

CASE 1.—A young lady of thirty-two, much crippled with chronic rheumatic arthritis, had lived in early life on marshy land in Roumania. There had been several illnesses, occurring at intervals during several years, which had been diagnosed as due to gall-stones. From the description given by the patient, and from the marked renal and bladder symptoms which accompanied the attacks, I was very doubtful whether they were gall-stone or right renal colics, and when I came to examine the abdomen I was still more inclined to think the illness renal, for there was a rounded tender swelling projecting from under the false ribs on the right side in front, and giving an impulse right back into the loin; and though there was some crepitus over the usual site of the gall-bladder, there was no swelling there and no very marked tenderness. On Feb. 28th, 1889, Mr. Murray gave chloroform, and, assisted by Mr. Malcolm and in the presence of Mr. Heath, I made a small incision over the swelling, but rather to its inner side, in case it should turn out to be the gall-bladder, and found it was that organ completely enclosed in matted omentum and intestines; having aspirated and drawn off a little bile-stained mucus, I packed it carefully round with carbolised sponges, and opened it by a small vertical incision, and extracted two large stones with my sponge forceps and some débris with a lithotomy scoop. The adhesions made the examination of the right kidney very difficult, but it was certainly large and hard, and I greatly feared she might have renal trouble as well. I sutured the edges of the gall-bladder into the abdominal incision in the usual way and drained it, and she made a perfect recovery, all discharge ceasing on the fifteenth day. She has been in much better health in every way since the operation, and the kidney has given no further trouble; so I hope the renal symptoms were due to its adhesion to the inflamed mass formed by gall-bladder, intestines, &c. She has recently had a slight attack of pain, but I think from the description it was merely an ordinary "bilious attack."

CASE 2.—Hospital patient, single, thirty-seven. Operation, March 16th, 1889. Symptoms for a year, two severe attacks of colic. After the second she was seen by Dr. Goodhart, who diagnosed gall-stones. She had never been jaundiced, but the stools had been pale ever since the first attack. Usual incision; healthy gall-bladder, with no adhesions; two good-sized stones in common duct. After aspirating and opening the gall-bladder, I found it impossible to dilate the cystic duct, which had closed behind the stones. I therefore needled them into pieces by passing a fine needle through the wall of the duct, and then further crushed the fragments with a pair of nasal polypus forceps, the blades being protected by red rubber tubing drawn over them. The gall-bladder had been so much injured in the attempts at dilatation that I decided to remove it. The liver was large and congested, and much in the way, and I found the operation much more difficult than in the case described to the Society in my last communication. After the operation she was distinctly jaundiced, and for eight or nine days there was a good deal of bile in the urine, but the first motion passed was brown, and the fragments of stone began to pass on the eleventh day. She made a good recovery, and went home well in a month.

CASE 3.—Single lady aged forty. Attacks of pain and indigestion every three or four months for the last six years. For the last two years pain has been much more severe and prolonged in the region of the gall-bladder, with eructations, sense of constriction round the chest, nausea and vomiting. On March 24th, 1889, very severe attack; jaundice on 29th. April 24th, very severe pain for three days. June 2nd, succession of four attacks of severe pain, jaundice persisting since it first appeared. I saw her in consultation with Mr. Propert, and found her deeply jaundiced; small, quick pulse; temperature over 102°; great pain over the common duct. I diagnosed stone impacted in the common duct, and, looking to her very serious condition, urged immediate operation, and operated the same afternoon, Mr. Murray giving chloroform, Mr. Malcolm assisting, and Mr. Propert being present. I removed a large angular stone from the cystic duct after breaking it up, and found another impacted in the common duct just below the entrance of the cystic duct. Failing either to reach it through the cystic duct or to break it up, as in the last case, I incised the common duct, and needled the stone into fragments, which, however, I was unable to extract through any reasonable opening in the duct wall. I therefore left most of the fragments in the duct, carefully suturing the opening over them. I then sewed the edges of the open gall-bladder into the external wound, and drained it in the usual way, passing a glass tube also into the peritoneal pouch below the liver. The highest temperature after the operation was 100·2°, pulse 72, and after this normal. All discharge ceased on the sixteenth day, and she was up on the nineteenth; all jaundice gone and urine and fæces normal, and she rapidly recovered perfect health.

CASE 4.—Married lady aged thirty-five, mother of five children. Lump just below liver and pain noticed six years ago, just after birth of last child. Several attacks of pain after this; no jaundice. Came to me in July, 1889, during attack; the last previous attack had occurred a year before. I could distinctly feel a number of stones in the gall-bladder, and advised their removal. Operation July 31st, 1889. A simple cholecystotomy, gall-bladder sewn into abdominal incision and drained; bile-stained mucus discharged very freely at first; entirely ceased in a fortnight. Temperature once rose to 101°; was normal on the seventh day. Excellent recovery, and remains well.

CASE 5.—Hospital patient, single woman, aged thirty-two, sent to me by Dr. Jack of Emperor's Gate, was seized with

[1] A paper communicated to the Medical Society, March 2nd, 1891.

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sudden severe pain in the region of the gall-bladder during sleep, in May, 1889. The pain continued all next day, recurring in severe paroxysms; two days later she was jaundiced and the urine was yellow. This attack entirely passed off with a simple purge. On Oct. 11th a similar attack, in which she was attended by Dr. Jack, who found a tumour in the region of the gall-bladder and sent her to me, having first aspirated the tumour and drawn off two pints of bile-stained fluid. The tumour refilled rapidly. On Nov. 11th, 1889, I cut down upon the tumour and having removed two pints and a half of bilious fluid with the aspirator, opened it and removed a quantity of hydatids, and found that it was the gall-bladder. There were many adhesions all round it, and I removed a separate hydatid cyst from the omentum. As there was fluid in the pelvis I made a counter opening over the pubes and drained the peritoneum through it by a glass tube. The gall-bladder was sutured into the abdominal wound and drained. The temperature rose to 102° on the first two evenings, but was normal on the fifth day. The pelvic tube was removed in thirty-six hours. The gall-bladder discharged for twenty-two days. Perfect recovery.

CASE 6.—Married woman, aged forty-three, mother of twelve children, youngest four, was sent to me in same month as above by Dr. Maurice of Marlborough. She was much emaciated and deeply jaundiced, with that peculiar earthy bluish tinge which so often accompanies malignant disease. Indefinite swelling and dulness in region of gall-bladder, but more to left than usual. Liver large and hard, and obvious matting of parts below it; no ascites. First attack nine months before. Severe pain, which continued off and on for two weeks; did not notice her stools or urine. At end of two weeks violent vomiting, complete anorexia, and green jaundice. On admission, colour as above, tongue clean and moist, fair pulse, small hard glands in both groins, pelvic organs normal. I diagnosed impacted gall-stone and advised operation, but could not help being a little anxious, lest it should prove to be associated with malignant disease. I operated on Nov. 28th, 1889, in presence of Dr. Maurice, Sir Spencer Wells, and many other visitors. I found the liver so large that the gall-bladder and ducts were quite covered, much adhesion of omentum and intestines, a large oval stone impacted in common duct, and, failing to define the gall-bladder accurately, and feeling sure that it would be impossible to get at the stone through a contracted cystic duct, I decided to incise the common duct at once and so remove it. I was much hampered by the large liver, and had to work entirely by touch deep in the abdomen, guiding the knife on the left index finger. The first incision was followed by such a rush of dark venous blood that I feared for the vena cava, but, having introduced a small Ferguson's glass speculum, I saw that it proceeded from a vein in the adherent omentum, and this I easily secured. I had great difficulty in loosening the stone, which was firmly adherent to the lining membrane of the duct over a great part of its surface. After removing it I could see the termination of the duct in the duodenum quite distinctly through the speculum. I closed the opening in the duct by six fine interrupted points of silk suture, and a continuous one over all, using the omentum to strengthen the closure as I had done in the previous case of duct incision. I drained the peritoneum by a glass tube. She suffered very seriously from shock, and the first urine was half albumen; there was none before the operation. She quickly rallied, however. The temperature never rose above 100·6°, with a pulse of 100, and both were normal on the fifth day. All drainage was over on the sixth day; there was a natural action of the bowels on the fifth day; the urine began to improve in colour on the third day, but the stools were clay-coloured till the eighth day. The wound was healed in a fortnight, and she left the hospital in three weeks quite well, but still slightly jaundiced. Dr. Williamson of Ludgershall writes that the jaundice lasted about five weeks after her return home, that she has grown stout, and is quite well and able to do all her house work.

CASE 7 was that of a single lady aged thirty-six, whom I saw in consultation with my friend Mr. Hewer at Highbury. The patient had long suffered from inactive liver, with sallow complexion, and attacks of pain in the right hypochondrium, suggesting the presence of gall-stones. For the last six months the attacks had clearly been due to attempted passage of gall-stones; the pain became very violent, and was accompanied by vomiting, jaundice, and rapid emaciation. Sir Andrew Clark, and afterwards Dr. George Harley, saw her, and the latter made a prolonged attempt to massage the stones into the intestine, but without effecting any amelioration of the symptoms. When I saw her with Mr. Hewer she was deeply jaundiced, with raised temperature and quick pulse, and we agreed that if relief was to be given there was no time to lose, and I operated on the next day, May 3rd, 1889. I found two stones impacted one above the other in the common duct. The gall-bladder was so shrunken that it was difficult to recognise it, and I at once decided to open the common duct, remove the stones, and suture the opening. This procedure I carried out with much difficulty, owing to the matting of parts by adhesions; and not being very well satisfied with the security of the suturing of the duct, I passed a rubber tube into the pouch, at the bottom of which it lay, and brought it out through the upper part of the abdominal incision, and I also passed a glass tube into the pouch of Douglas through a counter opening above the pubes. The latter was hardly required, but a very heavy discharge of bile-stained serum flowed from the rubber tube for many days after the operation, showing that my fears as to the security of the duct sutures were well founded. She recovered rapidly, without a single bad symptom, and Mr. Hewer reports on Feb. 13th, 1891: "Perfectly well, good complexion, and takes her food without any inconvenience."

CASE 8 was that of a young married woman aged thirty-four. She had suffered for a long time with attacks of pain round the back and in neighbourhood of liver, which lasted a few days, and then entirely passed off. In January of last year she noticed a lump in the situation of the gall-bladder which varied in size. In February she had a severe attack of pain, with tympanites and severe vomiting. The lump was said at this time to be irregular in outline, and so mobile that it was thought to be in the omentum, and of a malignant nature. This diagnosis was strengthened by gradual emaciation with constant pain, and by her mother having died of internal cancer. When I first saw her I found a smooth oval tumour about as large as a turkey's egg, and with all the characters of a distended gall-bladder. She went away for a time, and when I saw her again I found a much smaller, harder, and more sensitive swelling, and this confirmed my diagnosis; but I feared it might be a case of malignant obstruction rather than stone. I operated on May 20th, 1890, and found a very hard and thickened gall-bladder, and laid it open and hunted carefully, but could find no stone. The adhesions round it were so firm that it was difficult properly to explore the ducts from their peritoneal surface, and the thick wall of the gall-bladder cut so easily with the sutures that I determined not to attempt to fasten it into the incision, but to suture it carefully and drop it in, this, as it proved, most unfortunate decision being aided by the unusually small amount of bile or mucus which escaped from the bladder during the necessary manipulations of the operation. The patient did badly from the first, and died on the third day with septic symptoms. An examination after death showed that a large quantity of bilious fluid had escaped into the peritoneum through the giving way of the sutures in the gall-bladder wall, and close to the opening lay a small gall-stone free in the peritoneal cavity—a remarkably small one to have caused so much trouble and such great thickening of the gall-bladder; but no other disease could be found to account for the mischief.

(To be concluded.)

ON ADDISON'S DISEASE.

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(Concluded from page 713.)

THE discolouration of the skin in Addison's disease has been the subject of much investigation. Various explanations have been offered as to the constitution, source, and mode of deposition of the pigment. The two principal views are: (1) That the pigment is a proteid substance which undergoes colour changes within the rete cells in which it is found; (2) that it is an hæmatogenous product, and is transferred to the cells pre-formed. It will be convenient

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to discuss together the questions relating to the constitution and the source of the pigment. The chemical composition of other pathological pigments has been appealed two with a view of obtaining a clue. A point specially aimed at has been to ascertain whether iron is present or not. If present it affords presumptive proof that the pigment is derived from blood-colouring matter. Berdez and Nencki[1] found that the pigment of a melanotic tumour contained no iron, but a considerable amount of sulphur. An analogous pigment is that of the choroid, which, according to Sieber,[2] contains neither iron nor sulphur. Berdez and Nencki, founding their opinion on the results of their analysis, hold that melanotic pigments are in no way related to the colouring matter of blood. The absence of iron and the presence of sulphur contradict the assumption of any derivation of melanine from hæmatin, which contains iron but not sulphur. Mörner[3] attributes the absence of iron in the results obtained by Berdez and Nencki to the mode of research, as he found that melanotic pigment is nearly half as rich in iron as is hæmoglobin. He regards the pigment as a derivative of hæmoglobin, and declines to accept a decompositon product of hæmoglobin—hæmatin—as representing blood colouring matter. Klebs[4] holds that the presence of sulphur in melanine proves that it is not derived from hæmoglobin but from the decomposition of some sulphur containing albuminoid, remarking that to this class of substances hæmoglobin, being sulphur free, does not belong. This applies to hæmatin but not to hæmoglobin. Hæmoglobin contains sulphur, but hæmatin does not. Schmidt[5] regards pathological pigments which do not contain iron as simply two states of a colouring matter derived from hæmoglobin. In the early stage iron is present, later on it is absent. In some instances portions of the pigment afford evidence of the presence of iron, whilst other portions do not, the difference being due to the relative age of the respective deposits.

With so much diversity of both results and opinions as to the composition of morbid pigments, it may seem useless to try to determine the presence or absence of iron in the pigment of Addison's disease as a means of tracing its derivation. If the result is negative, it is true that no inference can be drawn, as a pigment undoubtedly derived from hæmoglobin may contain no iron. On the other hand, if iron is found, the assumption of the pigment being a product of hæmoglobin receives material corroboration. Perls,[6] Nothnagel, and other observers failed to obtain any reaction with the Prussian-blue test when applied to sections of pigmented skin from Addison's disease. I made a series of experiments in this direction with potassium ferrocyanide, potassium sulphocyanide, ammonium sulphide, and sodium salicylate, the result in all cases being negative. To sections of the skin a few drops of a 3 per cent. solution of potassium ferrocyanide or sulphocyanide were added, and then a drop of hydrochloric acid. With ammonium sulphide the sections were simply covered with a drop or two of the reagent in various dilutions. In some instances a drop of glycerine was added after the reagents, and the section covered with thin glass and allowed to stand for several hours. No colour change in the pigmented cells was produced even after prolonged exposure. As remarked by Nothnagel,[7] these negative results by no means prove the absence of iron, as the metal may be present in some combination which the reagents will not touch. If iron is present in the pigment, it is probably in some form which cannot be unlocked except by destruction of the organic elements of the combination. Incineration would free the iron, but there are practical difficulties in the way of direct demonstration by this process. After trying many methods with sections of the skin to liberate any iron present in the pigment, so as to enable it to yield colour reactions *in situ*, all of which were unsuccessful, I adopted the following procedure. The pigment from a portion of skin from the scrotum (as being most deeply pigmented) was carefully scraped away and transferred to a test tube and well washed with water, and subsequently with alcohol acidulated with hydrochloric acid, in which it was allowed to remain for some hours with frequent agitation. The mass containing the pigment was then dried, weighed, placed on a slip of clean platinum foil, and cautiously incinerated. The residue was treated with two drops of 10 per cent. hydrochloric acid in water, and one drop of a 3 per cent. solution of potassium ferrocyanide. Two short pieces of glass tube were previously prepared by grinding their ends flat, and cementing on to the one of each a circle of thin microscopic cover-glass. The tubes were coated on the outside with lampblack, so that the whole layer of any contained fluid should be traversed by the rays of light directed through them. The tubes were clamped vertically side by side, and a piece of white paper was placed below them at such an angle as to reflect the light through the tubes to the eye. The mixed fluid obtained from the pigmented skin was transferred to one tube, and to the other the fluid obtained from an equal-sized piece of normal (non-pigmented) skin treated in precisely the same way, the washed product when dry corresponding in weight with that yielded by the pigmented skin. In order that the quantities of the reagents should always be equal, the same solutions and the same pipettes respectively were used throughout the experiments. A number of experiments were made in precisely the same way, the result in all cases being the same. There was no perceptible difference in depth of colour between the solutions obtained from the pigmented and from the non-pigmented skin. The colour was always a light blue, and was due to a minute quantity of iron diffused in the cell walls and cement substance that was scraped away. The cells containing pigment were no richer in iron than those which were free from pigment. Some of these experiments were made with potassium sulphocyanide in the place of the ferrocyanide. The result was the same except for the difference in colour of the reaction; the depth of colour was equal in the fluids from pigmented and from non-pigmented skin. Zaleski[8] found minute quantities of iron in various tissues after careful removal of all traces of hæmoglobin. The iron probably exists in more than one combination. As a simple albuminate of the oxide (judging from the behaviour of the artificially prepared albuminate) it would be separated by acidulated alcohol, which is not the case. The result of these experiments tends to support the view that the pigment deposited in the skin of patients suffering from Addison's disease does not contain iron. After what has been already said it is superfluous to observe that it by no means follows that the pigment is not of hæmatogenous origin. Spectrum analysis also yielded negative information. The pigmented layers of several sections of skin were arranged in apposition on a microscope slide, and then examined with the micro-spectroscope. A high-power objective was used, so that all the light received by the spectroscope should pass through the pigmented cells. Not the least trace of an absorption band could be detected. The violet end of the spectrum was damped, without any decided cutting-off. This corresponds with the spectroscopic observations made on solutions of the pigment from melanotic tumours by Berdez and Nencki, and by Mörner.

Chemical evidence as to the source of the pigment being negative, the subject has to be discussed from other standpoints. In favour of the hæmatogenous hypothesis, it is to be observed that there is good reason for believing, broadly speaking, that all pigments, normal and pathological, of the human body are derivatives of hæmoglobin. This statement, however, is by no means universally accepted, and moreover it proves nothing; but convincing evidence to the contrary is required before it can be rejected in any special instance of pigmentation. It is accepted on all sides that the pigment in Addison's disease is deposited in the lowest layers of the rete Malpighii, precisely where normal pigment is found—for example, in the dark-skinned races, and in those parts of the body in whites where pigment abounds, as the areolæ of the nipples in women and the scrotum in men. Further, the deposit of pigment seen in some cases of phthisis, and in puerperal women, occupies the same anatomical site. As Nothnagel puts it: it is impossible to distinguish microscopically between sections of the skin in Addison's disease and those derived from a negro; if there is any difference it is solely in degree. This resemblance applies not only to the site but to the colour and character of the pigment. Recklinghausen[9] lays great stress on the reddish-brown and gold-yellow tint of the pigment granules, as indications of hæmatogenous origin. Further evidence

[1] Archiv für Experiment. Path., Bd. xx.
[2] Ibid. [3] Zeitsch. f. Physiol. Chemie, Bd. ix.
[4] Die Allgemeine Pathologie, 1889.
[5] Virchow's Arch., Bd. cxv. [6] Ibid., Bd. xxxix.
[7] Zeitsch. f. Klin. Med., 1885.
[8] Virchow's Arch., Bd. civ.
[9] Handbuch der Allgemeine Pathol., 1888.

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of hæmatogenous origin is afforded by the observation of Riehl[10] in the transport of pigment from the blood to the hair, by cells which carry the pigment from the bloodvessels through the corium to the hair. Kölliker[11] explains the mode of physiological pigmentation in exactly the same way, and is of opinion that it differs in no respect from pigmentation of pathological causation. It has been urged against the hæmatogenous derivation of the pigment in Addison's disease that the part where the pigment is deposited is removed from the immediate neighbourhood of bloodvessels, and consequently cut off from them as a source of supply. The explanation just given removes this difficulty. Pigment cells have been found attached to the sheath of the bloodvessels in the corium, and others on their way to the epithelial layer surrounding the papillæ. When they reach the lowest cells of the epiderm they yield up to them their pigment. According to Ehrmann,[12] the basal cells of the epiderm send short, thin pigment-carrying processes into the corium, which play an important *rôle* in the transport of the pigment. These finger-like processes act as bridges between the lower cells of the rete Malpighii and the corium, and along them the pigment is propelled as fine granules into the protoplasm of the lower rete cells. Under physiological conditions in the more pigmented parts—as, for example, the skin of the scrotum—the corium is found to contain pigment-carrying cells. By far the greatest amount of pigment exists in the rete cells, because its presence in the corium is only transitory; it is being continuously passed on to the rete cells, where it is stored up. In physiologically deeply pigmented parts the supply is so abundant that a considerable amount is always to be met with in transit. This was beautifully illustrated in a specimen of skin taken from my second case. Some weeks before the patient died a mustard-plaster was applied to the surface of the abdomen. The skin underlying the plaster remained permanently more deeply pigmented than the surrounding skin. At the necropsy a small piece of the skin of the abdomen was removed, so as to include some that showed the pigmentation solely due to the disease and some in which it was intensified by the counter irritant. On microscopic examination it was seen that not only did the lower layer of the rete cells, corresponding to the more deeply pigmented part, contain a larger amount of pigment than those of the neighbouring skin, but that in the underlying corium, below as well as in the papillæ, were a large number of carrier cells charged with pigment. In the corium of the surrounding skin there was a marked difference—the carrier cells were sparsely scattered.

The oft-repeated observation that the pigment in the rete cells is almost entirely limited to the lowest layers, the upper cells of the epiderm being free, suggests the inquiry as to what becomes of it. Ehrmann[13] states that it is rubbed off with the epiderm as it reaches the surface. In the sections of the skin from the cases I examined there was a layer of cells free from pigment, of considerable thickness, above the cells which contained pigment, and consequently the latter could not be rubbed off without causing an abrasion. The squamous cells which are shed in the ordinary course of events contained no pigment. In very deeply pigmented skin the pigmented layer is much thicker, and may extend to the surface, as is the case with negros, in whom the pigment may be parted with, as described by Ehrmann. In the skin from my cases it appeared as though the pigment cells of the rete lost colour as they passed up further from the papillæ. This would indicate fading of the pigment, the hue being maintained in the lowest layer of the rete cells by a continuous supply from the corium. The loss of pigment either by fading or by rubbing off from the surface explains the variations in colour frequently observed in cases of Addison's disease. At times the patient appears darker, at times lighter. If the supply equals the loss the colour remains unchanged—if it is more, the colour is deepened; if less, it is diminished. In the case of the mustard-plaster alluded to, an increased activity was occasioned in the transference of pigment from the bloodvessels to the rete cells, which remained in force long after application of the stimulus. As time went on, however, there were indications of diminution. The more deeply pigmented patch, which at first was very distinct both in hue and outline from the surrounding skin, lost some of its colour, and the margin its sharp contour. There was an evident tendency to return to the general condition.

It is a striking fact that mucous membrane is not pigmented in Addison's disease. With the exceptions about to be mentioned, there is an entire absence of pigmentation of both mucous and serous membranes, as well as of the internal organs throughout the body. The exceptions appear to be limited to those portions of mucous membrane where localised inflammatory processes have taken place, and to those which have been subjected to intermittent pressure, or to friction—chiefly the buccal mucous membrane along the meeting line of the teeth, within the lips, and on the tongue. In several cases small spots of pigmentation have been observed on the peritoneum; my second case presented this peculiarity. In one of the cases recorded by Greenhow, small tubercular granules were scattered over the mesentery and peritoneum, and around each was a deposit of black pigment. In my second case the posterior vaginal wall was pigmented at the upper part, evidently due to pressure produced by an elongated cervix uteri. It appears that the same condition—local hyperæmia—which determines pigmentation in mucous membrane intensifies it in the skin. When mucous membrane is pigmented the discolouration is not so pronounced as it is in the skin. On microscopic examination a notable difference is seen in the position of the pigment; instead of being deposited in the lower layer of the rete cells, it is found in cells within the papillæ of the corium, the cells of the rete being free. This distribution of the pigment in mucous membrane has been noticed by Greenhow,[14] Hadden,[15] Kahlden,[16] and others. The cells in the papillæ have all the appearance of carrier cells. They are irregularly grouped so that some of the papillæ are free from pigment, others contain one or two cells, and others again are filled with them. To this sparing and irregular distribution of the pigment, together with the fact that it is below instead of in the epiderm, the lighter shade of pigmented mucous membrane as compared with the skin is due. In Addison's disease it will be seen that mucous membrane presents three characteristics in reference to pigmentation which distinguish it from skin: it does not undergo general pigmentation; certain local conditions are necessary to develop it; the pigment occupies a different histological site. As regards the second characteristic, it is to be noted that the pigmentation is strictly limited to the areas acted on by the local conditions. In the portions of mucous membrane that are the seat of pigmentation the same process takes place, up to a certain stage, as in the skin. The carrier cells charged with pigment make their way from the vessels through the corium towards the rete. Here the resemblance ceases; for instead of the pigment being transferred to the lower rete cells and stored up in them, it remains in the carrier cells within the papillæ. I noticed that when, exceptionally, any of the pigment did find its way beyond the limit of the corium, it was not deposited within the cells of the rete, as is distinctly the case with the skin, but was diffused in minute granules amongst the rete cells in such a way as to obscure their outline. In the rete of the skin the pigment granules are mostly within the cells, and help to differentiate their contour. Sometimes the pigment granules which penetrate the lower rete layer of mucous membrane run in between the cells, and appear as fine dotted lines. It is evident from all this that the cells of the rete Malphighii of mucous membrane are incapable of receiving the pigment, hence its retention in the carrier cells of the corium. It is probable that the rete cells of mucous membrane are devoid of the finger-like processes described by Ehrmann, which bridge over the space between them and the carrier cells in the corium. This behaviour of mucous membrane towards pigment strengthens the carrier cell hypothesis. By showing the process of pigmentation transport in an incomplete stage, it demonstrates that in pigmented skin the pigment is not formed within the rete cells from colourless albuminoid material or chromogen, but that it is conveyed to them preformed. The argument is corroborated by the analogy which exists between the pigmentation of mucous membrane and two pathological conditions affecting the skin. In leucoderma and in the tufts of white hair prematurely formed in some individuals the papillæ of the underlying corium are as abundantly supplied with pigment carrier cells as is the rest of the skin, but in consequence of the absence of means of com-

[10] Vierteljahrschr. f. Dermatologie, 1884.
[11] Zeitschr. f. Wissensch. Zoologie, 1887.
[12] Vierteljahrsschr. f. Dermatologie, 1885-6. [13] Loc. cit.
[14] Loc. cit. [15] Path. Trans., vol. xxxvi. [16] Loc. cit.

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munication between the rete cells and the pigment cells—the finger-like processes of the former—no pigment is transferred. This absence of receiving filaments is the pathological condition which constitutes the cause of the abnormality in pigmentation in the cases cited; in mucous membrane it is probably a normal histological condition. From the observations I have made in the pigmented mucous membrane of Addison's disease, it appears that exceptionally some of the pigment granules find their way from the carrier cells of the corium into the rete, not, however, into the cells, but between them. The pigment cells of the corium are not capable of retaining their pigment for an indefinite time—they are vehicles, not stores,—and it is probable, when the pigment is not removed from them in the usual way, that the granules after a time escape from the cells and are carried with the lymph into the rete, where they are distributed around the cells.

It has been assumed that light is the agent by which the depth in tint of skin pigmentation is increased. The fact that the exposed parts of the body—the face, neck, and hands—are usually of a deeper hue than the parts which are covered by the clothing is regarded as proof of this statement. I am disposed to think that light does not increase the pigmentation by virtue of its actinic powers, but that in conjunction with the air, and with heat—from the sun and from artificial sources—it increases the amount of blood in the parts acted on, and in this way develops greater pigmentation. My reasons for thinking so are that portions of skin which are subjected to friction—the shoulders of men from the rubbing and pressure of the braces, and the waist in women from the pressure and friction of the bands of their underclothing—have often been found in cases of Addison's disease to be more deeply pigmented than the neighbouring skin. The deeper hue of the skin produced by a mustard plaster, and the deposit of pigment in mucous membrane being limited to those places where either mechanical or pathological irritation has been set up all point to local hyperæmia as the cause of increased pigmentation.

As to the condition in which the colouring matter exists when received from the bloodvessels by the carrier cells there is room for doubt. Whether the blood discs pass through the walls of the vessels and are directly received by the carrier cells clinging to them, or only the hæmoglobin transudes, is not known. In either case it is remarkable how soon the hæmoglobin loses its iron. The activity of cells in splitting up proximate constituents may possibly account for it. Nothnagel[17] strongly insists that the pigmentation in Addison's disease is entirely due to nerve influence affecting not so much the receiving cells of the corium as the bloodvessels of the skin. He denies that the pigmentation is due to any primary alteration in the blood itself. The hypothesis of nerve influence being the cause of skin pigmentation accounts more rationally for its occurrence under various conditions, physiological and pathological, than does the presence of effete or abnormal colouring matter in the blood. It is conceivable that the necessary nerve influence may be occasioned in a variety of ways from central and from peripheral causes. Addison's disease and some other systemic diseases—phthisis and malignant disease, for example—are so many conditions which may cause permanent skin-pigmentation by acting on some segment of the central nervous system. The word "central" is here used in a relative sense, as apposed to peripheral. Temporary pigmentation from central causation is illustrated by that which frequently accompanies pregnancy. Peripheral stimulation causes pigmentation of the skin when the surface is exposed for some time the action of powerful sunlight, especially if accompanied by the presence of saline particles in the air as from sea breezes. These conditions have a mode of action in common, and do not require special morbid processes to suit each case. The presence of effete or of abnormal colouring matter in the blood requires a much more complicated hypothesis in order to embrace all forms of skin pigmentation. It is much simpler to suppose that undue stimulation of the skin nerves by the powerful rays of the sun determines a change in the relation between the walls of the bloodvessels of the skin and the adhering pigment cells, which results in excessive abstraction of pigment from normal blood, than that the blood itself is altered to furnish the pigment.

[17] Loc. cit.

Two additional points in my second case merit attention. The external genital organs resembled those of a young child, the uterus was of the infantile type, and the ovaries were very small. Kleinwachter[18] relates the case of a woman twenty-nine years of age, who died from Addison's disease, whose generative organs presented the following appearances. The mons veneris was devoid of fat and hair, the labia were flaccid, and the uterus, ovaries, and mammæ atrophic. The patient had not menstruated for nine months. The effects of deranged nutrition on special organs is well illustrated by these cases; in the one there was retarded, or rather arrested, development, and in the other the atrophic changes resembling those of advanced old age. It is to be remembered that general wasting does not take place to any great extent in uncomplicated Addison's disease, the inference therefore is that the trophic nerves of the organs named are liable to share in the abdominal nerve changes. The uterine vaso-motor nerves are in close relation with the splanchnic, whence the abnormal influence is probably derived. The second point is that the patient's breath for the last two or three days of her life gave off a peculiar odour which has been described as "ethereal." Nothnagel[19] observed a similar odour in one of his cases of Addison's disease in which von Jaksch found marked acetonuria. The temperature in my patient was subnormal previous to the occurrence of the odour, but afterwards the breath and the surface of the body felt exceptionally cold to the hand. The respiration was slow but not of the sighing type observed in diabetic coma; the patient was exhausted to the verge of dissolution but was not comatose. The urine did not contain sugar, nor did it give any reaction with ferric chloride, or with sodium nitro-prusside and ammonia. About 90 cc. of the blood obtained at the necropsy were placed in a flask connected with a condenser leading to a closed receiver surrounded with ice. The flask was placed on a water bath at about 60° C. After a time the receiver was changed, and the temperature was increased to 100° C. In neither case was any product obtained which responded to the tests for acetone, or the substance which gives the so-called acetone reactions. I am disposed to refer the "ethereal" odour in my case to some aromatic product, probably of the phenol group, derived from the splitting up of the proteids of the tissues. It was about the period of the occurrence of this odour, as recorded in the history of the case, that there was for the first time a marked increase in the amount of indican in the urine. Some of the urine at this period was acidulated with sulphuric acid and distilled. The distillate yielded a much more abundant precipitate with bromine water than the distillate from an equal amount of normal urine. The quantity of urine at my disposal was too small to admit of a reliable quantitative estimation of the phenol from the amount of tribromo-phenol formed, and the death of the patient prevented further investigations. It is known that under many pathological conditions aromatic products are found in the urine greatly in excess of the amount met with in the urine of healthy individuals. For the most part they arise from putrefactive changes in the contents of the intestines, and in the course of certain putrefactive diseases. Exceptionally they may be formed from the tissues of the organism itself by abnormal metabolism apparently apart from the influence of micro-organisms. It is not uncommon for aromatic products to replace each other in the urine from time to time in the progress of a disease. Phenol and indoxyl have been observed to alternate, and also to be present in excess at the same time. Indoxyl may be replaced by acetone, or a substance giving the acetone reaction. I should be disposed to regard the products encountered in my case as evidences of auto-intoxication, presumably referable to abnormal tissue change the result of perverted or perhaps of arrested trophic influence. Increase in the amount of indican in the urine of patients suffering from Addison's disease has been observed by Rosenstern[20] to the extent of 64·5 milligrammes of indigo in one case, and 75·3 milligrammes in another (being eleven or twelve times greater than the normal amount), and also by other observers. The increase here spoken of occurred during the progress of the disease; it was not limited, as in my case, to a short period immediately preceding death. As far as the evidence of my two cases goes, the excretion

[18] Deutsche Med. Zeitung, 1889.
[19] Loc. cit. [20] Virchow's Arch., Bd. lvi.

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of excess of indoxyl and of ether-sulphonates has no direct relation to Addison's disease *per se*. The instance in which it occurred can only be regarded as one of far-advanced disordered metabolism, such as may determine the formation of like derivatives towards the end of any disease in which the tissues are profoundly affected.

Manchester.

DR. RUSSELL'S CHARACTERISTIC MICRO-ORGANISM OF CANCER.

BY GEORGE DEAN, A.M., M.B., C.M.

IN an address read before the Pathological Society of London on Dec. 2nd, 1890, and published in the medical journals of Dec. 13th, Dr. William Russell of Edinburgh described what he called a "Characteristic Organism of Cancer." Since that time I have had the opportunity, in the Pathological Institute, Berlin, through the kindness of Professor Virchow and his assistants, of carrying out some control observations on this subject. At the outset a number of cases of cancer were examined by the methods described by Dr. Russell. In these the fuchsin bodies could be found, being in some cases numerous, in others rare. Some of the appearances described by Dr. Russell were not observed—e.g., the appearance of a row of two or three bodies united by rods. It was also found that the most characteristic groups of bodies always occurred in the connective tissue, in capillaries, or in lymph spaces. The difficulty referred to by Dr. Russell was encountered—viz., that in certain cases the nuclei and nucleoli of the cells gave the same colour. Sometimes this was found to be a local change occurring over small areas. This in itself was sufficient to excite suspicion as to the organismal character of the fuchsin bodies, pointing rather to the action of some chemical agent affecting the cells, or to a degeneration due to some change of nutrition. In some instances the bodies were very closely associated with irregularly shaped masses of hyaline-like substance, giving the same colour—red by Dr. Russell's, purple by Gram's—and glossy appearance as the fuchsin bodies. In Fig. 1, from a case of carcinoma of the liver,

FIG. 1.

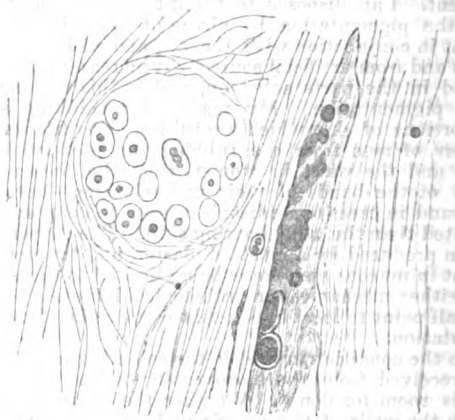
From a case of carcinoma of the liver, secondary to carcinoma of the mamma. (Zeiss, $\frac{1}{12}$, oil immersion, oc. No. 2.)

secondary to carcinoma of the mamma, stained by Gram's method, such an appearance is presented, and the nucleoli in the neighbourhood are also shown to have taken on the colour.

In other cases the bodies were found in intimate relation with hyaline degeneration occurring in and around blood-vessels. In Fig. 2, from a case of ovarian carcinoma, this appearance is seen. Inside the wall of the vessel masses of hyaline substance are to be seen, and among these are one or two bodies very similar in appearance to the fuchsin bodies. In the connective tissue around the vessel some of the bodies are to be seen, and in the alveolus, near the vessel, the altered nuclei of the cells give the red colour and glossy appearance of the bodies, and are practically indistinguishable from them.

These appearances seem to indicate that the bodies are really due to a degeneration, and of the degenerations "hyaline" degeneration is remarkable in giving the same colour with eosin and fuchsin in acid solutions, and in its tendency to form spherical bodies. The term "hyaline" is used in its widest sense, and with the view that the appearance may originate from a number of different sources—e.g., from blood plasma, blood plates, blood corpuscles, epithelium.[1] The position in which the fuchsin bodies occur points in some instances to a post-mortem change taking place in the blood under conditions of which at present we are ignorant. That the bodies are due to the action of reagents I think cannot be entertained; for I believe they can be seen in fresh sections, though here it is much more difficult to be certain one is looking at the same thing. In a fresh section the bodies may be seen lying in characteristic groups, resembling fatty globules, but with the contour not so dark as in the case of fat. A section containing such a group of bodies was treated with acid and afterwards with alcohol and ether, and after this treatment the bodies still retained their characteristics, thus excluding calcareous and fatty deposits. From the same tissue beautiful specimens of the fuchsin bodies were afterwards obtained. The exact nature of these bodies is a question about which it is possible for much discussion

FIG. 2.



Vessel showing hyaline thrombus, with transition to the uchsin bodies. In the neighbouring alveolus the altered nuclei are stained red. (Zeiss, $\frac{1}{12}$, oil immersion, oc. No. 2.)

to arise. A much more important question, however, and fortunately one much easier to decide, is whether these bodies occur in cancer only. For if they are found in other pathological or in normal tissues, with any degree of frequency, it is impossible to hold that they have anything to do with the etiology of cancer. A number of other pathological and also of normal tissues was therefore examined by the same methods. The results certainly do not tend to establish the appearance as one peculiar to cancer. From a comparatively small number of tissues the fuchsin bodies were found in six separate cases. Two were typical cases of uterine myoma without a suspicion of cancer. In a case of syphilis of the lungs the bodies were found in the connective tissue around the bronchial glands. The fourth was a case of phthisis. The other two cases were normal tissues. The one was a case of non-lactating mamma from a woman who had borne children; the other was from a lactating mamma.

The conclusions, therefore, to which this paper leads are: 1. That the bodies are not to be regarded as micro-organisms. 2. Even admitting that they were of vegetable origin, they cannot be regarded as pathogenic—i.e., they cannot be regarded as a "characteristic micro-organism of cancer."

[1] Ziegler's Pathology, vol. i., p. 118.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—The annual report of this charity states that £2000, out of £6000 required, had been collected for the purpose of erecting a central block to the hospital, which will afford room for thirty extra patients. Dr. J. Edward Squire was deputed to go to Berlin to study Professor Koch's system for the treatment of tuberculosis. The result of the inoculation of several patients with the fluid was satisfactory. The in- and out-patients for the year were 396 and 2840 respectively. The cash statement shows a balance in hand of £274.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF A BROKEN CATHETER IN A MALE BLADDER AT SEVENTY YEARS OF AGE, ILLUSTRATING THE VALUE OF INTERNAL URETHROTOMY.

By C. Buckston Browne.

The operation of internal urethrotomy is not yet fully accepted by many surgeons whose opinion is worthy of respect; indeed, it is only two years ago that at one of the most important gatherings of the medical profession a well-known surgeon of many years' experience publicly stated that in the whole course of his experience he had never known a case where this operation was called for. The operation, however, is so useful and important a one, that when very striking illustrations of its advantages occur they should be published, in order that those who have found fault with the procedure may reconsider their decision. It may also be mentioned as an interesting fact that those surgeons most prone to entertain the newest proposals in the way of stricture treatment have been obliged publicly to confess that for all practical purposes internal urethrotomy is the best mode of treating tough undilatable strictures.

The following case illustrates a condition of things in which internal urethrotomy was of the greatest service possible, and where no other means, save an operation of magnitude, could have relieved the patient.

General B——, seventy years of age, had long suffered from urethral stricture. This had induced some vesical debility, and he was in the habit every day of introducing into the bladder a small gum elastic catheter, in order to draw the residual urine, which on the average amounted to three ounces. The stricture was situated three inches from the external meatus, and admitted, but very closely, a No. 4 catheter. One day in August last he introduced the catheter as usual, but on withdrawing it found he had left about an inch of it in the bladder. He was naturally alarmed, and sought advice, but was assured that if he waited the catheter would decay, and come away in pieces naturally. But as time went on the patient became uncomfortable, and he experienced great irritability of the bladder and pain on sitting down. I first saw him on October 30th, when he had all the symptoms of stone in the bladder. I sounded him with a small sound, and felt what was practically a stone in the bladder. A week after he was anæsthetised, and an attempt to dilate the stricture was made, but in vain. Nothing larger than No. 6 would pass. Internal urethrotomy was therefore at once resorted to; the stricture was incised by means of Civiale's urethrotome, and immediately a No. 14 sound (English scale) passed with ease into the bladder. A lithotrite was now introduced, and the offending body seized and lightly crushed; it was seized and released again and again, care being taken every time it was seized to nip it only lightly. By these manœuvres the stony crust was effectually removed from the foreign body, and it was considered ready for evacuation. It was therefore again seized and drawn into the neck of the bladder, where it was felt to meet with a resistance, and was evidently held crossways between the jaws of the lithotrite. The body was therefore seized again, and this time it came through the neck of the bladder, without trouble, between the jaws of the lithotrite. Upon inspection it proved to be more than an inch of a black gum catheter, evidently once entirely coated with calculous matter, but now almost entirely denuded of its phosphatic covering. By means of a lithotrity tube and aspirator all the calculous deposit was evacuated from the bladder. The patient made a good recovery, and now, five months after the operation, his urethra easily admits a No. 14 sound, and it is important to note that the bladder has regained its contractility, and empties itself completely by its own efforts. This case could not be managed by dilatation; the prolonged and trying treatment by electrolysis was entirely out of the question, and either the supra-pubic or a perineal cystotomy would have exposed the life of such a patient to very serious risk. On the other hand, treated by internal urethrotomy, the patient had no pain, lost no blood, and was out of bed and about in ten days.

Wimpole-street, W.

CASE OF CHLORAL POISONING.

By John L. Welch, M.A., M.B., C.M. Edin.,
District Surgeon, Selangor, Straits Settlements.

The following case appears interesting on account of the size of the dose administered, the violence of the symptoms, and the presence at the same time of malarial fever.

On March 17th at 8 A.M., I was called from the pauper hospital to my house, to see the wife of the Chinese cook, who had been taken suddenly ill, and was now "as if dead." During the previous day it appeared the woman had been suffering from an attack of ordinary jungle fever, and had asked my "boy" to get her a dose of salts. Under the impression that it contained salts, he had administered a dose of chloral hydrate from a bottle which he found in my midwifery bag. As nearly as I could judge, 360 grains had been abstracted from the bottle, which before had been nearly full. A few minutes after the drug had been given the patient complained of giddiness. She wandered a little in talk and then fell down insensible. When I first saw her, about twenty minutes after the administration of the drug, the patient was lying deeply comatose, face flushed, conjunctivæ injected, pupils contracted and insensible; respiration about thirty to the minute, quick and shallow, box of larynx moving with every respiration; pulse 152, and very weak; reflex absent from conjunctiva and patellar tendon. I passed an ordinary syphon stomach-tube, and washed out the stomach four times. The fluid at first evacuated was strongly fragrant of the drug. On the fourth washing the odour could not be detected. Before the tube was removed half a glass of pure whisky was thrown into the stomach as a cardiac stimulant pending the arrival of other means of treatment.—8.25: Pulse could hardly be counted. Epiglottis began to fall back on the larynx. This was seized in a pair of forceps and kept forward. A hypodermic injection of five minims of liquor strychniæ was thrown into the biceps, and mustard poultices were applied to the chest and the calves of the legs.—8.45: Pulse could not be counted. Respiration 25, gasping, with occasional pauses. Strong ammonia applied to nostrils without effect.—9: Pulse could not be felt at wrist; breathing shallower; cheeks blown out on expiration. A pint of very strong hot coffee with half an ounce of sal volatile were injected into the rectum, and shampooing commenced over arms and legs.—9.20: Pulse still imperceptible. Respiration stopped twice, but was restored by the application of hot water to the chest. Injected five minims of liquor strychniæ as before, and continued massage to the arms and legs.—10.30: Pulse could be detected at wrist. Shampooing continued. Hot and cold water applied alternately to precordial region.—11: Pulse counted at heart about 160. Temperature taken for the first time 98·8° F. in axilla.—2 P.M.: Pulse 145; much stronger; respiration fairly full, 22 per minute. Face congested; conjunctivæ injected, but sensible to touch; pupils still contracted. Gave a large cupful of strong coffee.—6: Temperature in axilla 100·3°; pulse 98. Patient wandering and delirious.—9: Patient still under the effects of the drug. Pupils contracted; temperature 101°. When disturbed she raves slightly. At 6 A.M. on the following morning the patient was very weak and giddy, sweating profusely, slightly wandering at times; pupils normal. I gave her eight grains of sulphate of quinine and half an ounce of sulphate of magnesia. She fell asleep, and woke in about five hours, refreshed and perfectly sensible. Conjunctivæ still injected. Although every other symptom of chloral poisoning was present in a marked degree, there was never any fall of temperature. This seems to have been due to the occurrence of an attack of intermittent fever, which was itself delayed for about two hours.

Selangor, Straits Settlements.

HYDATID OF UTERUS; LAPAROTOMY RECOVERY.

By A. A. Altormyan, M.D.

A female, aged thirty-five, was married at the age of fifteen. Seven years afterwards she bore a child. Five years ago she married a second time, and soon after noticed a

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swelling in the left iliac region, about the size of a small orange. It grew slowly, but continually, without causing pain or discomfort. Menstruation was regular, both before and after the appearance of the swelling. She was first examined by me in September, 1890, when I found a tumour of round contour, the size of a head, with apparently soft contents; it was pretty freely movable, and perfectly dull on percussion. Digital examination per rectum and vagina revealed nothing abnormal. Bimanual examination did not show any intimate connexion with the uterus. I diagnosed ovarian tumour, and advised operation. The patient did not return till Jan. 10th, when I found the tumour twice as large as in September; it was painful, had lost mobility, and taken a more central position. The patient had lost strength, and had developed the "facies ovarian." She consented to operation, and laparotomy was performed. On incision, peritoneal adhesions of the tumour to the parietal wall were found, which were easily separated. The trocar was introduced, and a light straw-coloured fluid ran out. The pedicle was found to originate in the substance of the uterus; it was treated extra-peritoneally, after passing an elastic ligature round it. On examining the tumour it was found that the thick investing capsule was driven out of the fundus of the uterus, just above the attachment of the left Fallopian tube. Within this uterine capsule was found a thick, laminated, homogeneous elastic membrane, the "ectocyst" displaying a peculiar tremulous motion; within this was a thinner delicate membrane, the "endocyst," within which were found about a dozen walnut- and filbert-sized cysts, with a few granular particles. Under the microscope pieces of the cysts showed the characteristic laminated homogeneous strata: free hooks and new buds from the germinal membrane. There was no fever, and the patient made a rapid recovery.

Aleppo, North Syria.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

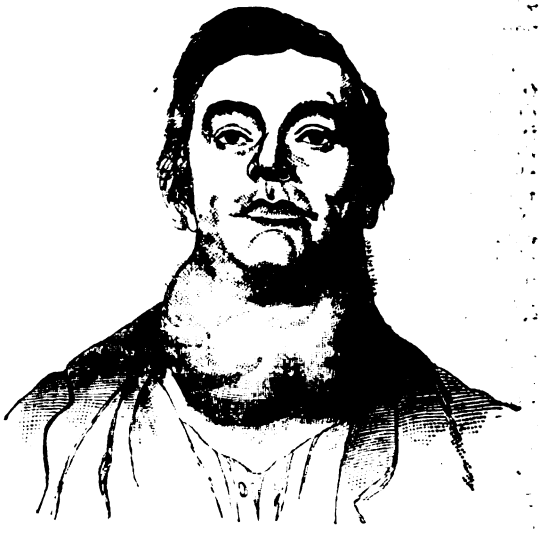
EXCISION OF THE THYROID FOR MALIGNANT DISEASE; RECOVERY; REMARKS.

(Under the care of Mr. PEPPER.)

THIS case presents several features which render it of unusual importance and interest. It is not often that malignant disease of the thyroid is submitted to surgical treatment in the early stage before local signs of malignancy are such as to render complete removal very uncertain. There were difficulty in swallowing and recent enlargement in size, but no marked fixity or irregularity of outline, no enlargement of the lymphatic glands, or evidence of secondary growth. The proof of the malignancy was afforded by the microscopical examination. Removal of the whole of the thyroid gland is an operation of considerable magnitude, and has hitherto been attended by considerable mortality in this country, the amount of which cannot be ascertained. The performance of the operation in two stages in this case undoubtedly diminished the risk of a fatal result by lessening the shock and hæmorrhage. Mr. Butlin[1] gives it as his opinion that "at present the number of instances in which a cure of the disease (malignant of the thyroid) can be claimed is so small that the operation is scarcely justified." Dr. Rotter[2] gives an account of fifty cases of operation for cancer of the thyroid. Eight of these died within twenty-four hours of the operation, five at the end of the first week, and eight at the end of the second week. Only four remained free from recurrence at the end of six months, but one of them continued well for at least four years after the operation. The operation in this patient comes more under the heading of that for removal of hypertrophied thyroids; for although malignant disease was present, the removal of the two parts of the gland presented few of the difficulties usually met with in the excision of malignant growths of this part. The operator is justified in anticipating a cure of the disease. It will be noted that in this, as in most recorded cases of cancer of the thyroid, the patient was the subject of long-standing enlargement of the gland.

G. E——, a married man, aged fifty, by occupation a blacksmith, was admitted on March 26th, 1890, with an enlarged thyroid. He is a native of Buckinghamshire, where he has lived all his life, and he has always been strong and well. One of his daughters died at the age of sixteen from cystic bronchocele, which had been treated by injection. His tumour was first noticed about ten years ago. He was then told that it was enlarged glands, and it was painted with iodine. It, however, slowly continued to increase in size, causing little discomfort. About three months previous to admission he had an attack of influenza, and since then the tumour has grown much more rapidly. For a similar period he has been unable to swallow solid food.

Condition on admission.—The man is strong and well nourished. His intellect is not impaired, and there is no myxœdema. There is a huge lobulated tumour in the front of the neck. It is larger on the right than the left side, and extends upwards behind the angle of the jaw on either side, downwards as low as the sternum and clavicles, and backwards to the level of the ears. The tumour moves with the trachea on swallowing, and the lobes on either side of the



neck are connected by a central enlargement passing over the front of the windpipe. All the lobes are lobulated, simulating enlarged lymphatic glands, and somewhat elastic; the right is rather tender. The neck measures 20¾ in. round the most prominent portion of the tumour, and the right lobe is 9 in. broad and 7 in. long. The voice is impaired, and there is difficulty in swallowing anything except liquids. When he lies on his left side there is stertorous breathing, owing to pressure of the growth on the trachea. He complains of radiating pains in the neck, giving rise to headache. Urine: sp. gr. 1022, faintly acid, no albumen. As the symptoms were not urgent he was given arsenic. Three weeks later the tumour was apparently increasing in size, so it was decided to remove it, the right lobe first.

On April 18th, the neck having been shaved and rendered aseptic, the man was anæsthetised (chloroform) and a longitudinal incision, about five inches in length, made in the middle line of the neck. The tissues were divided until the gland was reached, and, as it was thought impossible to remove the right lobe through the existing wound, a further incision was made about three inches in length, starting from the upper extremity of the first incision and in a direction parallel to the ramus of the jaw on the right side. This flap of skin, with platysma, fascia, &c., was dissected from the gland, and turned out-

[1] Operative Treatment of Malignant Disease, p. 204.
[2] Arch. für Clin. Chir., Bd. xxxi., 1885.

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wards. The sterno-hyoid muscle was pulled over to the left, but the sterno-thyroid and omohyoid, which were thinned out over the tumour, were divided, and the right lobe fully exposed. It was then slowly dissected out in its capsule, bleeding vessels being ligatured as they were divided. The chief difficulty in the removal of the tumour lay in the number and immense size of the bloodvessels supplying the gland. Of these the superior thyroid artery and vein—the latter being quite the size of the finger, and the former proportionately large—the middle thyroid vein, and the inferior thyroid vessels were the largest, and were all ligatured in two places, and divided between the ligatures. After they had been divided, and the gland freed of all its connexions except the enlarged isthmus, this structure was also ligatured and divided, and the right lobe then removed. A huge cavity remained, bounded posteriorly by the carotid sheath throughout its whole length, while below the pleura could be seen rising with each inspiration. The larynx and trachea were flattened out and twisted over to the right side. The wound was washed out with boracic acid lotion and its edges brought into accurate apposition by sutures of silkworm gut, a drainage-tube inserted, and a dressing of iodoform gauze and absorbent wool applied. The operation lasted nearly three hours. There was very little hæmorrhage considering the magnitude of the operation, and the amount of shock was small.

On April 19th the temperature was 100° F., and on the 20th 101°, but it was never above normal afterwards. The wound healed by first intention, and the cavity had entirely closed on the seventh day after the operation, when he was allowed to get up for the first time. He went home a week later, with instructions to return in three weeks' time, it having been thought, from the microscopy of the portion removed, that there was evidence of malignancy.

He returned again on May 27th. He had been in capital health since the previous operation, and had had little if any difficulty in swallowing, even solid food, or of breathing. On May 31st the left half was removed in precisely the same manner as the right half had already been dealt with. On this side, however, the superior thyroid vessels were much smaller and the inferior larger. The recurrent laryngeal nerve was seen underneath the tumour and avoided. The wound was treated in the same way as before. On June 6th all the sutures were removed, and on the 7th the drainage-tube, which had been shortened half an inch daily. The man went home on June 14th quite recovered, the circumference of the neck being then fourteen inches and a half.

Pathology.—Section of the right lobe showed it to be an ordinary bronchocele, with colloid degeneration; there were, however, two masses, each the size of a walnut, which showed a different structure. They were rounded, distinctly marked off from the neighbouring tissue, soft, and more highly vascular. In one a small cyst was found. Microscopically, they showed an alveolar stricture, the fibrous tissue bounding the spaces being small in amount, with numerous bloodvessels. The smaller alveoli were filled with small cubical cells, whilst the larger showed colloid degeneration in the centre, with similar cells around. These masses were evidently of a carcinomatous nature. The left lobe was similar to the right in structure, but showed no evidence of malignant change.

Remarks by Mr. PEPPER.—This is an interesting example of a tumour remaining stationary or only increasing slowly in size for many years, and then suddenly taking on a more active growth, as the result of its undergoing malignant change, which is the more likely if the patient has reached adult life. The rapid increase in size and the pressure effects rendered operative interference necessary. The larger lobe of the tumour was first removed in the hope that the symptoms would disappear, and that the enlargement would prove to be due to simple hypertrophy; but microscopical examination showing its malignant nature, it was resolved to complete the extirpation. Although total excision of the thyroid for simple hypertrophy may not be defensible (save for relief from pressure) on account of the possible development of myxœdema, there can be no doubt that in cases of malignant disease the more immediate danger from the nature of the growth renders the operation advisable. At the present time the patient is in excellent health, and no signs of myxœdema have appeared. As the areas of malignant growth were circumscribed, and the lymphatic glands free from infection, there are grounds for hope of immunity from recurrence. For the clinical notes of the case I am indebted to Mr. KNOX, house-surgeon, and for the pathological report and photograph from which the drawing was made to Mr. Crowle, surgical registrar to the hospital.

LONGFORD INFIRMARY.

THREE CASES OF ABDOMINAL SECTION; RECOVERY.

(Under the care of Dr. MAYNE.)

WE publish below the notes of three cases of successful operation on the abdomen for conditions of varying character: in one the patient suffered from tubercular peritonitis; in another the peritonitis was secondary to an ovarian tumour; and in a third there were many and firm adhesions remaining from a peritonitis, the result of tapping a cyst some time before. Of these, the effect of the operation in the case of the patient suffering from tubercle of the peritoneum is the most interesting. We have already drawn attention to the fact that this condition has often simulated ovarian tumour, and many operations have been undertaken for the relief of patients supposed to have been suffering from the latter when the symptoms were caused by tubercle. The evidence as to the value of operative treatment in tubercle of the peritoneum is so very conclusive of improvement (if not of cure) in the majority of patients submitted to it, that it is not possible to agree with the unfavourable opinion of Spaeth.[1] König gave at the recent congress at Berlin a series of 131 cases in which operation had been done for tubercular peritonitis; of these, no less than 107 were left in a satisfactory condition when they were last reported, 84 were said to be quite cured, and 30 were well two years after the operation. We would refer our readers to our remarks on cases of this nature, and their treatment, as exemplified by patients under the care of Mr. Keetley.[2]

CASE 1. — E. H——, aged twenty, was admitted on March 3rd, 1889, suffering from an attack of tubercular peritonitis, which commenced several weeks before. The abdomen was greatly enlarged and distended with fluid, very painful, and on the left side between the ribs and the crest of the ilium, and about five inches in breadth, there was dulness, which might have been mistaken for a tumour; but careful examination left no doubt of its being caused by disease of the peritoneum. Her features were pinched, and there was a well-marked hectic flush. Severe diarrhœa and night sweats were very troublesome and distressing to her. Temperature 103·2°; pulse 140, very weak. She was ordered daily eight ounces of port wine, egg-flip, beef-tea, jelly, milk and lime-water; for medicine she had quinine, pepsine, and bismuth, and when necessary hypodermic injections of atropine and morphine in combination; applied over the abdomen cod-liver oil and belladonna. This treatment was continued for some days, but without any satisfactory result, the temperature varying from 103° to 104·2° during the time. The patient having been told that an operation would afford her the only chance of recovery, she replied, "I came to hospital believing I must die and place myself entirely in your hands." On the 13th, having been put under the influence of chloroform, an incision about five inches long in the usual site was made. The abdomen having been opened, a large quantity of fluid escaped. The intestines were bound down to the posterior wall of the abdominal cavity, and they occupied a very small space, several bands of lymph appearing to tie them down; these were carefully broken. The dull space referred to was next carefully examined, the peritoneum found greatly thickened and studded with tubercles, several patches having commenced to suppurate. While Dr. Mayne's hand was in the abdominal cavity, about six gallons of water, which had been boiled and allowed to cool to a temperature of 105° F., were poured into it, and during the process some more of the adhesions carefully broken down. The hand was then removed and all the water that would was allowed to flow away, but no attempt was made to empty the cavity. The wound was now closed and the patient put to bed and given a hypodermic injection of ether; as she seemed very weak, some brandy was also given. About two hours afterwards vomiting occurred, and continued during the night. At ten o'clock the temperature was 104·2°; pulse 140, weak and compressible.

[1] Deutsche Med. Woch., No. 20, 1890.
[2] THE LANCET, vol. ii. 1890, p. 1028.

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She was given morphine and atropine hypodermically, and each alternate hour two tablespoonfuls of beef-tea with two teaspoonfuls of brandy, and a sherry glassful of champagne. The following morning she expressed herself as better, but extremely weak and sore where the wound was; temperature 103°. She steadily improved, the temperature on the morning of the 22nd being only 99°. She left the hospital on April 2nd, and has since been for several months at service as house and parlour-maid, and is now a strong healthy-looking girl.

CASE 2.—K. W——, aged fifty, was admitted into hospital on July 6th, 1889, suffering from an attack of peritonitis. On examination an ovarian tumour, which occupied the right side, was found. Having been kept quiet and under the influence of opium she speedily recovered from the symptoms of peritonitis. On the 14th, chloroform having been administered, Dr. Mayne operated, and removed a large polycystic tumour of the right ovary, which was very adherent to the peritoneum (left ovary healthy). Having washed the cavity of the abdomen out with water, which had been boiled and allowed to cool to a temperature of 105° F., the wound was closed and dressed, and the patient placed in bed. Temperature 99°. Hypodermic injection of morphia and atropine was given. Next morning the temperature was normal, and never rose. The only complaint she had was that the surgeon would not open the dressing and look at the wound, which was done on the 21st, when it was found perfectly healed and the stitches removed. She left the hospital on Aug. 2nd, nineteen days after the operation, and has since been in good health.

CASE 3.—M. C——, aged eighteen, of strumous appearance, was admitted on July 11th, 1889. On the 14th, chloroform having been administered, a tumour (which was monocystic, and sprang from the left ovary, had a short pedicle, and was very adherent) having been removed, and the abdomen washed out with water, as in the previous case, the wound was closed and dressed, and the patient put to bed. The pulse being weak, she was given some brandy and a hypodermic injection of morphine and atropine. Temperature 99·3°. There was slight vomiting during the evening. She was given another hypodermic injection of morphine and atropine. At ten o'clock next morning the temperature was 99°, and continued at this until she went home on Aug. 3rd. This patient had been tapped before coming to hospital. With the exception of having had a slight cold she has been in good health since the operation.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Treatment of Strangulated Hernia when the Intestine is Gangrenous or Ulcerated.

AN ordinary meeting of this Society was held on March 24th, the President, Mr. Timothy Holmes, in the chair.

Mr. C. B. LOCKWOOD read a paper on the Treatment of Strangulated Hernia when the Intestine is Gangrenous or Ulcerated, of which the following is an abstract. The communication was based on the analysis of cases of hernia in which the intestine was gangrenous or ulcerated, collected from the records of St. Bartholomew's Hospital, and upon the details of two others in the author's own practice. The St. Bartholomew's Hospital cases were treated in the manner laid down by Sir William Lawrence—namely, "by a free incision of the mortified part, in order to unload the distended intestinal canal, or, if the gut should have already given way, to divide freely the integument and sac, and to leave the subsequent process of cure entirely to nature," the stricture being also divided, if necessary, for the proper flow of fæces. Four of the thirty-five St. Bartholomew's Hospital cases recovered, three of them completely; one had a fistula eight months after the operation. These patients only recovered after repeated operations, and the details of their cases were given. Thirty-one (88·57 per cent.) of the St. Bartholomew's Hospital cases died and both of the author's cases. One of the latter had no proper relief from the opened bowel, although there was a free passage, and the other fatal cases showed that this was not at all unusual. The causation of the absence of relief was discussed and illustrated with cases, and the conclusion was arrived at that the usual operation could not be depended upon to give relief. Next the other causes of death were examined into, and it was shown that intra-peritoneal or subperitoneal fæcal extravasation might occur, or that the gangrene or ulceration might continue to spread to the bowel within the abdomen, or septic peritonitis might spread from the sac to the rest of the peritoneum. Should these dangers be escaped, the patient incurred the risk of dying of inanition. All of these accidents were illustrated from the list of fatal cases. The alternatives to performing the usual operations were next given, and the statistics of treatment by clamp, secondary suture, and of primary resection and suture were mentioned. The conclusion was in favour of primary resection and suture, and the *rationale* of the procedure was briefly described.

Mr. MAYO ROBSON sent a communication from Leeds bearing on the subject of the paper. He agreed that primary resection was the best treatment to pursue in these cases, and he had twice carried out this method successfully within the last two years. The first case was that of a middle-aged woman, who had a small hernia which had been strangulated for eleven days. The gut became gangrenous, and he resected the dead portion and brought the intestine together with Lembert's suture. The second case, in a woman aged sixty, was one of strangulated femoral hernia. A large portion of gangrenous omentum was removed, and the necrotic bowel was resected as in the other case. The bowels were open on the third day, and there was no abdominal trouble. He held that this treatment was far more satisfactory than the old method, and the conditions were different from those existing in cases of resection after fistula, for there was no difficulty in getting the two tubes of gut to fit.

Mr. BRYANT was surprised to find that the mortality of this affection was so terrible; he certainly thought that there was a larger percentage of recoveries; at least he could recall a good many cases which got well. In considering the question of resection it should be remembered that the bulk of the cases of gangrene occurred in femoral rather than inguinal hernia. He had looked up thirty-one cases from the records of Guy's Hospital, and twenty-six were femoral, four were inguinal, and one umbilical. It followed that the operation would have to be done on small herniæ with narrow necks, and it would be difficult to enlarge the incision freely. The majority of cases which presented themselves were almost moribund before they were operated on, and the surgeon as a rule felt himself justified in doing only that which would preserve life, and was not able to resort to a grave operation. It might perhaps be done where there seemed to be a reasonable chance of recovery, in those instances where the bowel was almost but not quite gangrenous. He held that in these cases the gangrene did not extend upwards, but was a gangrene *per se* following on the long blood stasis. In the cases he had collected there was not one instance of fæcal extravasation, and in only one was there peritonitis other than local. All the patients died collapsed from want of power. It should be remembered that there was often firm union between the neck of the sac and the injured intestine, and hence, if an attempt were made to draw down the gut, the result might be only to tear away the gangrenous portion. In order to draw down the intestine it would be necessary to incise very freely the neck of the sac, and this would be difficult in femoral hernia. The incision in some cases would have to be so free that the result would be literally to perform a laparotomy. In young patients with a hernia in the inguinal region of congenital character and with acute gangrene, the plan suggested by the author would be the best course to pursue. In conclusion, he held that the treatment could only be applied to a very small number of cases, and for the majority the old form of treatment would be adhered to. Sir William Lawrence had recommended that as much as possible of the gut should be returned towards the neck of the sac, so as to leave as small a spur as possible after the gut had sloughed away. He could recall two of Mr. Cock's cases which were treated in this way, and which got well. That these patients did not die from obstruction was evident from the fact that in ordinary cases of strangulated hernia seven, fourteen, or twenty-one days might elapse before the bowels were open, and yet no symptoms of obstruction ensue.

Mr. BENNETT said that the treatment described was no doubt the ideal one, but it was not always easy to adapt an

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ideal treatment to ordinary practice. In many patients the condition was such that the question of resection could not be considered. In many cases when the bowel was laid open no relief to the obstruction ensued, no passage of fæces took place, owing to the paralysis of the gut; but if under these circumstances resection were done the patient would be no better off. In those cases where opening of the gut was not followed by evacuation relief could be easily obtained by introducing a tube, and drawing off the contents of the bowels. He had done this twice successfully, and thus the opening in the abdominal wall might be the means of saving the patient's life. The method he had advocated of returning the gut within the neck of the sac gave the patient a chance, and no more could be said of the plan recommended by the author. In one of his cases the bowel had given way after being so returned, but the drainage-tube inserted at the time carried off the fæces. Even if there were an aperture in the bowel he would tie it up, and return the gut towards the abdomen, providing a drain, and this resembled the method of Mr. Cock. In young people in good condition the operation might perhaps be performed, but at the best its application was limited, and he held that it was to be especially avoided in cases of paralysis of the gut.

Mr. HULKE felt able to endorse most of Mr. Bryant's remarks, but where resection was not contemplated he would reject alike both drawing down or thrusting up the gut. He was surprised at the heavy mortality of these cases. He advocated clipping away the gangrenous intestine and soaking thoroughly what remained with zinc chloride solution. He thought the combination of resection with radical cure was dangerous, for if union did not take place there would be a mechanical bar to the outflow of fæces, and thus a purulent peritonitis might result.

Mr. TREVES said that when this subject was brought before the Medical Society of London in 1885 by Mr. Banks it was surprising what great differences of opinion existed with regard to treatment. These cases were rare in the individual experience of any surgeon. He pointed out that the author was dealing with a fallacy when comparing the statistics of the old method as illustrated by the history of St. Bartholomew's Hospital cases with the cases of primary resection tabulated by McCosh, for the cases in the latter table were all selected. The author had likewise failed to draw attention to the mortality after the operation for ordinary strangulated hernia. Taking all cases at the London Hospital as they came, he found that the mortality was nearly 50 per cent. It was curious that surgical instinct had almost always been opposed to resection of the bowel, notwithstanding that the first two cases recorded by Ramdorh in 1727 and by Arnaud in 1732 were successful. When he was the surgeon on duty for the emergency cases at the London Hospital he found that he had operated on seventy-three cases of strangulated hernia, in six of which there was gangrene of the gut; the latter all died. In two of these he left the bowel as it was, in one he cut it open and stitched it to the parietes, and in three he resected the gangrenous portion and united the cut ends. The patients were most of them desperately ill, and were not suitable subjects for an elaborate plastic operation, which might take three or four hours to perform, and the average from McCosh's table was one and half to two hours. The operation was usually done in an atmosphere of putrid pus. As in acute intestinal obstruction the less that was done the better, and as the patients died of the obstruction and not the gangrene, the removal of the gangrenous portion was not essential. If the bowel were cut into and nothing escaped from it, it might be relieved by a tube, or better by an aperient; but if the gut were resected and united, the patient would not be one whit the better as far as this was concerned. No one could speak with precision upon this matter; but it seemed to be the simplest method to open the sac and relieve the obstruction of the bowel, associating this with division of the stricture. The gut might either be opened or left to open of itself, but no attempt should be made to pull it down without first nicking the neck of the sac. The gangrene was not a spreading gangrene, for it only extended in the proximal portion of the gut where it ensued from the excessive distension.

Mr. LANE was inclined to differ entirely from previous speakers. The operation of resection could be done easily and rapidly by Senn's method. He himself had operated on two cases in this way; one got well, and the other, which was almost moribund at the time of operation, went on well for five days, when the proximal bowl became gangrenous; this might have been prevented if he had excised more gut at the time of operation.

Mr. LOCKWOOD, in reply, said that the difficulty of resection was not what it used to be, and the newer methods promised a better result. His paper was only intended to make out a case for a trial of resection on patients who had a reasonable prospect of recovery. He agreed that it would be wiser to put a drainage-tube in, though he could conceive that the tube might in some cases do harm. In performing the operation of resection the proximal portion of gut should always be emptied before proceeding to suture.

EPIDEMIOLOGICAL SOCIETY.

The relations of Saprophytic to Parasitic Micro-organisms.

A MEETING of this Society was held on Feb. 18th, Joseph Ewart, M.D., President, in the chair.

Dr. LOUIS PARKES, in his paper on this subject, said: These micro-organisms, microbes, or bacteria were low forms of life, consisting of protoplasm enclosed in a membrane of cellulose, without chlorophyll, and multiplying by fission, whence they were also termed schizomycetes. The saprophytes were those bacilli, micrococci, &c., which, subsisting on dead matter only, swarmed in the air, earth, and water, and to which, in conjunction with yeasts and moulds, all fermentative and putrefactive processes in organic matter were due. The parasitic micro-organisms, on the other hand, preyed on living matter alone, or equally with dead, splitting up the albumens into other organic bodies or bases. This power of attacking non-living matter, evidence of a certain degree of saprophytism, enabled us to cultivate many pathogenic organisms in artificial media, as peptone gelatine, milk, broth, serum, and agar-agar, and by inoculating animals with the pure cultures to study their action on the living body. These, which included the microbes of tubercle, diphtheria, anthrax, erysipelas, tetanus, and many others, were called "facultative" parasites, while those which were not hitherto known to develop out of the living body were termed "obligate" parasites. To this class belonged the micro-organisms of small-pox, vaccinia, measles, whooping-cough, &c., and of them we necessarily knew but little. The division, moreover, was only provisional, since improved methods of culture might enable us to transfer some or even all of them to the facultative class. Another subdivision of the parasites had been proposed—viz., that into (1) toxic and (2) infective micro-organisms. The latter, including those of the exanthematous fevers, were found to pervade the blood and every organ of the body; the former, of which those of tetanus and diphtheria were typical examples, acted on the organism through the toxines or ptomaines which they produced. These chemical substances could be isolated, and in a state of chemical purity, inoculated into an animal, gave rise in the absence of the bacilli themselves to all the phenomena of the disease. In the case of man the bacillus of diphtheria was confined to the throat or seat of inoculation, though the phenomena of the disease, owing to the diffusion of the poison, were general. Closely corresponding with the division of parasitic micro-organisms into obligate and facultative was that of the respective diseases into epidemic and endemic on etiological considerations. By the former was to be understood those which, as small-pox, scarlatina, and measles, were propagated by personal intercourse only, the periods intervening between the so-called epidemics being determined by the time required for the accumulation of a new and susceptible population. By endemic diseases was meant those in which personal infection played either no part or a secondary one only, the principal factors being local and climatic—in other words, conditions connected with the presence and propagation of the micro-organisms in the outside world, with the degree of susceptibility of the individual to invasion by them. Such, in the strictest sense, were malaria and tetanus, tubercle for the most part, and in a wider sense cholera, enteric fever, diphtheria, and all other diseases, which, though propagated more or less by human intercourse, were amenable to sanitary improvement. Their recurrence as so-called epidemics depended on the existence of conditions favouring the development of the microbes in a locality, and it was highly probable that their entrance into the

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body was a mere accident and but a small point in their life history. Whatever the explanation of immunity conferred by one attack against subsequent infection, it was peculiar to the epidemic class, the endemic diseases, as a rule, conferring little or no such protection, though it would seem that some degree of insusceptibility was acquired by long residence in infected localities, and that persons recently arrived were most liable to infection. It was an interesting question whether such pathogenic organisms might not be developed by a long process of evolution from indifferent saprophytes, and that the comparative insusceptibility of the native populations might not be attributable to the previous influence of transitional and less virulent microbes, incapable of giving rise to the disease, but giving an immunity like that following inoculations with attenuated cultures. Such was the opinion of Professor Hueppe and Dr. Cartwright Wood, who found in earth and water a bacillus morphologically indistinguishable from that of anthrax, but without any pathogenic action. White mice, however, when inoculated with it, were in most cases rendered absolutely refractory to subsequent inoculations with the B. anthracis, though control animals, as usual, invariably succumbed. In the few that did take the disease it ran a chronic course, as seen after inoculations with the attenuated virus. These researches seemed to show that some saprophytes possessed the power of splitting up living albumens, as otherwise they could not have any such action on the living organism, and to offer a scientific explanation of the genesis of pathogenic micro-organisms. The relation between septic diseases and the products of putrefaction was a very close one. The febrile disturbance and metastatic abscesses following the inoculation of torulæ and aspergilli were interesting in this connexion. On the other hand, the attenuation of pathogenic micro-organisms by cultivation under unfavourable conditions, and the fact that these degenerated microbes grew more luxuriantly in artificial—i.e., in non-living—media than their original forms, seemed to point to a reversion to the saprophytic character. If such evolution were still going on, we could well understand the striking contrast between the uniformity of the phenomena of diseases depending on obligate parasites, and the anomalous cases and variety of symptoms exhibited by those caused by the facultative, as enteric fever and diphtheria; and we might yet expect new forms of disease to appear in the world as the result not of a *de novo* origination, but of a long previous evolution. Such a theory was in harmony with the now almost universally accepted ideas of the origin of species associated with the name of Darwin.

Dr. WILLOUGHBY said that he had listened with the deepest interest to Dr. Parkes' paper, having been himself the first to put forward a rational classification of specific diseases in which he had used the terms intra- and extra-corporeal contagia in almost the same sense as the obligate and facultative parasites of Dr. Parkes, and had also, in a paper read before this Society, and afterwards in his work on the "Natural History of Specific Diseases," advanced identical theories of evolution and degeneration, and the same explanation of immunity, as well as of the greater variety of symptoms and absence of subsequent immunity in diseases of his extra-corporeal class of contagia, which he held to be less differentiated or specialised than the intra-corporeal or obligate parasites. The staphylococcus pyogenes aureus was certainly a parasitic saprophyte unable to attack healthy living tissues, but he was inclined to consider the results of inoculations with the aspergillus and torula as rather akin to actinomycosis, or perhaps simply as the effects of embolism. With regard to the toxic or infective character of diphtheria, he would observe that Dr. Klein had found the bacilli not only as Dr. Parkes stated, in the organs of the cow after death, but in the milk, even before the appearance of the eruption, as well as in the contents of the vesicles afterwards. Dr. Parkes had spoken of influenza as an epidemic *sui generis*, not apparently propagated by human intercourse. He was, on the contrary, convinced that the progress of the late epidemic left no doubt as to its being spread by that means alone, its course having been independent of, or opposed to, the prevailing winds, slow in Siberia and Russia, but rapid so soon as it reached the network of railways in Central and Western Europe, diverted by the mountain ranges of Scandinavia, invading Norway, not from Sweden, but later from Holland and England, and deflected in like manner by the Carpathians, reversing its course down the valley of the Danube, and following in direction and time the ocean routes to America, Africa, India, and Australia; and in India showing the same relation to railways and other facilities for travel that it had in Europe. He referred to Dr. Salmon's experiments on the absolute immunity to swine plague imparted to pigeons by inoculations with the products of the culture of the bacilli, contrasting with these those of Roux and Yersin on diphtheria, in which the products set up all the phenomena of the disease, apparently precluding all hope of the prophylactic inoculations against this disease so often promised by the school of Pasteur. Dr. Willoughby was inclined to give the fullest adhesion to Metschnikoff's doctrine of phagocytosis, but was very incredulous as to Hueppe's and Cartwright Wood's alleged discoveries. Buchner long ago believed that he had effected the transformations of the hay and anthrax bacilli into one another, but had since fully recanted.

Dr. COPEMAN, as a working bacteriologist, was equally sceptical on this point, and said that Dr. Klein too had now admitted that his assumed evolution of the B. anthracis was an error of observation, the air of the laboratory having been charged with anthrax spores. He did not doubt the evolution of pathogenic from saprophytic micro-organisms, but was convinced that the process had been a work of centuries, or longer, and was not to be achieved in the laboratory. The nature of the albumoses, ptomaines, toxines, &c., called for minuter examination, since they seemed to include bodies of the most diverse and even antagonistic properties. He referred to the extremely poisonous character of some of the transitional products of the digestion of albumen as bearing on these problems.

Sir JOSEPH FAYRER, though asserting his disbelief in the communicability of cholera by human agency or material means, urged bacteriologists to pursue their investigations in the calm, temperate, and judicial spirit shown by the lecturer. He differed from many of their conclusions, although unacquainted with their methods, but, provided they did not ignore other causes of disease, their labours could not fail to lead us nearer to the truth.

MANCHESTER PATHOLOGICAL SOCIETY.

A MEETING of this Society was held on March 11th, Mr. G. A. Wright, President, in the chair.

Spontaneous Combustion.—Dr. E. S. REYNOLDS read a paper on so-called spontaneous combustion, with details of a recent case. All the reported cases of so-called spontaneous combustion might be divided into five classes: (*a*) Hysterical, (*b*) spurious, (*c*) true spontaneous combustion, (*d*) increased combustibility, (*e*) homicidal. Probably no such thing as true spontaneous combustion has ever occurred, and almost every case is merely one of increased combustibility, the body being first set on fire and then going on burning independently like a candle. The presence of fat in the body is a great aid, although some cases have been thin. Alcohol seems to play a more important part, but how it acts is unknown. In a recent case the woman, aged forty, was thin, an old alcoholic, had while drunk fallen near a hearth, where she was found next morning with the flesh still burning. The femora were carbonised, the knee-joints open, but the stockings entire, the abdominal wall burnt away, and the intestines and stomach protruding, the latter being burnt through. The hands, head, and hair had escaped. The surrounding furniture was merely scorched.

Papilloma of Kidney.—Mr. T. JONES showed sections of a papilloma removed from the pelvis of the kidney. The patient, aged fifty-five, had suffered for eighteen months from almost constant hæmaturia without any pain. He, however, complained of a throbbing sensation confined to the region of the right kidney. This led to exploration of this organ and the removal of the growth. Three days later the hæmaturia completely ceased, and the man made a good recovery.

Cerebral Hæmorrhage and Arterial Degeneration in Early Life.—Dr. T. HARRIS showed preparations from a case of cerebral hæmorrhage which had occurred in a lady twenty years of age. The hæmorrhage was a profuse meningeal one, which had arisen from the rupture of an aneurysm, the size of a small pea, of the left middle cerebral artery. At exactly the corresponding position of the right middle cerebral artery was another aneurysm, somewhat larger than

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the one on the other side, and which had not ruptured. There was no sign of degeneration in the vessels at the base of the brain evident to the naked eye, but microscopically they were found to present the changes of endarteritis. The kidneys presented very few changes to the naked eye, the most notable one being that on separating the capsules small portions of kidney substance were torn away at various parts, but between these torn-out portions the kidney surface was quite smooth and different to an ordinary granular kidney. Microscopically there was found to be no general interstitial nephritis, but marked changes in connexion with the arteries. The arterioles presented marked perivascular fibrosis and decided hyaline changes in the intima. Some of the glomerular capsules were slightly thickened. The aorta presented small patches of atheroma, and the small vessels in the loose tissue round the aorta showed both periarterial and endarterial changes. The endarteritis in some of these vessels had led to nearly complete obliteration of the lumen. The left ventricle of the heart was much hypertrophied. There was no valvular disease. Other organs healthy. There was no trace of syphilitic history in the family, and the girl had no idea that there was anything seriously the matter with her before the fatal attack came on. For the last few years she had complained of headache, which would last only a few hours, but during the last four months she had not complained at all. During the recent frost she had been taking a great deal of violent exercise, walking and skating. In the evening of the fatal termination she was at a dance, but the attack commenced before any dancing had been indulged in. Dr. Harris regarded the case as probably one which, if life had been prolonged, would have gone on to the development of a cirrhotic kidney, and which probably corresponded clinically to the pre-albuminuric stage of Bright's disease.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE annual meeting was held in Manchester on Jan. 16th, and the office-bearers for the year 1891 were elected. The retiring president, Dr. Wallace (Liverpool), made a few remarks, congratulating the Society on the work of the past year. The President, Dr. Braithwaite (Leeds), then took the chair.

Uterine Cancer.—Dr. KEELING (Sheffield) showed two specimens of Uterine Cancer, removed by vaginal hysterectomy, and read notes of the cases. The first case was one of cancer of the cervix, which occurred in a widow aged forty. The body of the uterus was freely movable and unaffected by the disease. The operation was performed in the usual manner in July, 1890. The patient lost blood by the bladder for forty-eight hours after the operation, but otherwise her convalescence was uninterrupted, and she left the hospital six weeks after operation. Fifteen weeks afterwards she was again examined, and a ring-like swelling was found in the vaginal roof. There was a yellow discharge, but the patient's general condition was very good. A month after this the recurrent growth was very marked. The second case was one of malignant ulceration of the cervix, with enlargement of the body of the uterus. The whole uterus was removed in November, 1890, only three ligatures being used for each broad ligament. There was profuse hæmorrhage during the operation. The case ended fatally some weeks after from congestion of the lungs and meningitis. At the necropsy there was no evidence of cancerous infiltration. In the discussion on these cases Dr. Wallace, Dr. Sinclair, Dr. Donald, Dr. O'Hagan, and Dr. Braithwaite took part.

Ectopic Gestation.—Dr. ROBERTSON (Oldham) read notes of a Case of Ectopic Gestation, and exhibited the specimen. The patient, who had previously borne two children, commenced to have uterine hæmorrhage nine weeks after a menstrual period. Ten days afterwards she commenced to have attacks of pain in the lower part of the abdomen, accompanied by vomiting. She was admitted to the Oldham Infirmary. At that time she was blanched and her abdomen was distended, but no definite tumour could be made out. The case was diagnosed as one of intra-peritoneal bleeding, and as she became more pallid and the abdominal distension increased, it was decided to make an exploratory incision. On opening the peritoneum liquid and coagulated blood escaped freely. On the left side of the pelvis a round tumour was felt, with a mass protruding from it, and on traction being made a small fœtus was brought into view. As bleeding was still going on freely, the pedicle of the tumour, which appeared to be composed of uterine tissue, was transfixed, tied with silk, and divided. The fluid and coagulated blood were then washed out of the abdomen by a stream of hot water, a drainage-tube was inserted, and the wound stitched up. The patient was discharged cured about a month after the operation. Some remarks were made on this case by Dr. Sinclair and Dr. Braithwaite.

Sickness of Pregnancy.—Dr. LAUDER (Manchester) read notes of a case of Incoercible Sickness of Pregnancy resulting from a Hydatidiform Mole. The patient, a multipara, aged twenty-eight, was admitted into the Maternity Hospital on Nov. 4th, 1890. She had missed three menstrual periods, and was suffering from obstinate vomiting. After trying small quantities of milk by the mouth for some days nutritive enemata and suppositories were administered. Some days after this nourishment by the mouth was again tried, a teaspoonful of peptonised milk being given every hour, but the sickness returned in a few days, and rectal alimentation was resumed. On Nov. 10th uterine hæmorrhage occurred, and it was decided to induce abortion. It was found, however, that the uterine cavity was occupied by a hydatidiform mole. On this being scraped out, the patient rapidly improved, and soon after was discharged cured. The case was discussed by Dr. Donald, Dr. Edge, and Dr. Braithwaite.

At a meeting held at Sheffield on Feb. 20th, Dr. James Braithwaite, President, in the chair, specimens were shown by Drs. SINCLAIR and KEELING, and Mr. LAVER (Sheffield).

Pelvic Abscess and Abdominal Section.—Dr. HELLIER (Leeds) read a paper on three cases of Pelvic Abscess, and treated by abdominal section, in the Hospital for Women and Children at Leeds. One case originated in a pyosalpinx, and formed a large abscess on the left side of the uterus, surrounded by matted tissues on all sides, into which the abscess extended. A second case was an abscess of the broad ligament of uncertain origin. The third was apparently a pelvic cellulitis. In each case the condition of the patient made prompt treatment urgent, but the abscess was not pointing in the pelvic or abdominal wall. In each case abdominal section was performed with a small median incision; the exact position of the pus was determined with the aspirator, the abscess was opened and thoroughly drained, and finally the cyst wall was stitched to the edge of the parietal peritoneum. The patients had all done well; the most recent case, which was on the 27th ult. operated on, is still under treatment. Dr. Hellier said that this treatment seemed to be applicable to those cases where suppuration is present in the pelvis, and yet there is no pointing obvious in rectum, vagina, or groin. He did not think that abdominal section would supersede pelvic incision and drainage, but he said that it provided a means of dealing with cases not amenable to treatment from below. In one of the cases cited vaginal incision and drainage had been thoroughly tried, and in spite of this the abscess had not only not healed, but had opened into the bladder, while after the abdominal incision the whole was quickly cured. In such cases it is often impossible to say before operating exactly where the pus is, and he had hesitated before opening the abdomen lest he should not be able to approximate the cyst wall to the edge of the parietal peritoneum. This, indeed, proved a difficult thing to do with an abscess lying deep and having friable walls. He was now inclined to the opinion that often all this is not so vital a point as it seems at first, provided only that good drainage be secured and that the fear of being unable to secure the cyst wall in this way should not deter an operator from opening the abdomen if there were strong reasons for doing so on other grounds. These cases need much care in nursing, and the rule that cases of abdominal section should be kept on very short commons for a day or two after operation must not be enforced in the case of patients worn down by previous hectic fever. In conclusion, Dr. Hellier said that as in general surgery abscesses did not always heal when incised and drained, so probably a residuum of these cases would fail to recover; yet, having had an opportunity of watching such cases treated on the old lines in other hospitals in years gone by, he felt convinced that abdominal section for pelvic abscess is a gain to gynæcological surgery, and that certainly these three lives had been saved by this mode of treatment.

Electrical Treatment of Uterine Tumours.—Dr. BURTON

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(Liverpool) opened a discussion on this subject. He said his experience had not been very large, but such as it was he would lay it before the meeting. He had treated a total of nineteen cases of uterine fibromata by the electrical method introduced by Dr. Apostoli. He was able to divide them into six classes: (1) Where temporary improvement had been effected—two cases; (2) where he believed permanent improvement had resulted—seven cases; (3) where no improvement had been obtained—three cases; (4) where the treatment had not been sufficiently tried—three cases; (5) cases unfit for treatment—two cases; (6) where the result was doubtful—two cases. Details of the cases were then given. In Case 1 in the second group the tumour, which was of moderate size and accompanied by hæmorrhage, was much reduced in size after nine applications. After this the patient became pregnant for the first time in her life, but miscarried about the third month. When last seen, eighteen months after the cessation of treatment, the patient was in good health. In the second case the tumour was so much reduced in size by six applications that the patient's clothes showed that her girth was less by one inch and a half. In July, 1890, eighteen months after treatment, the tumour gave her no trouble. About the diminution in size there could be no doubt. In the third case the tumour was of moderate size, but the chief feature was the hæmorrhage. The patient had eight applications between Feb. 1st and April 30th, 1888; although not by any means well she was very much improved by the treatment. Case 4 was a small myoma in the anterior uterine wall with hæmorrhage. After eight applications the tumour was scarcely perceptible. Two years later there was no return of the symptoms. Case 5 was a tumour reaching to the umbilicus; after twenty-eight applications the tumour was much smaller (by at least one-half), and the patient felt well; eighteen months after the last application she continued so. Case 6 was a small tumour in the anterior wall of the uterus with pains and hæmorrhage. Applications were made at varying intervals for about three months, when treatment was discontinued, as there appeared no further need of it. Case 7 was a large fibro-cystic tumour reaching to the ribs, and was of many years' standing; at the patient's wish applications were made and were given about three times a week for four weeks. Diminution in size was considerable and relief to symptoms marked. She considered herself sufficiently well to do without further treatment, but expressed herself as perfectly satisfied with the progress that had been made. Further details were given, and the speaker then summed up his conclusions as follows: 1. In small fibroids almost entire, if not complete, disappearance of tumour may be effected. 2. In large ones, considerable diminution in size with relief of symptoms may be expected in a fair proportion of cases. 3. When relief has been obtained there may be a return of the symptoms sooner or later, which may again call for treatment. 4. In a proportion of cases (probably from one-third to one-half) little or no effect will be produced without puncture. 5. The speaker knew of no case where the tumour had become larger under treatment than it was before it was commenced; so that he claimed that the growth is at least checked in all cases. 6. In the words of Dr. Bröse of Berlin at the International Congress, "Electricity will not take the place of or exclude myomotomy, but it will save many cases from it." He claimed, therefore, that it ought to have a patient trial in every case, before recourse is had to dangerous methods of treatment. 7. If ten or twelve applications made in the course of three or four weeks do not give any result, nothing need be expected from a continuance of the treatment unless punctures be made.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Pathological Section was held on Feb. 20th.

Specimen of Cystic Kidney.—Mr. KENDAL FRANKS showed a specimen of a large kidney, weighing over two pounds, which was in a condition of advanced cystic degeneration. The kidney was removed by operation on Jan. 13th, through a median abdominal incision, from the left side of a married woman aged twenty-five; and it was specially remarkable in this: that the right kidney, which was examined through the abdominal wound at the time of operation, was apparently healthy. This is a rare condition. The diagnosis of renal tumour was made previous to operation, but its exact nature was not determined. The patient made an uninterrupted recovery. Mr. Franks discussed at some length the differences between isolated, though sometimes multiple, cysts of the kidney and the conglomerate cysts of cystic degeneration.—Dr. M'KEE thought there was no essential difference between what Mr. Franks had called "isolated" cysts of the kidney and the "conglomerate" cysts of the specimen shown that evening. Both were equally congenital, and the latter was formed by the confluence of single cysts. The cysts resulting from chronic nephritis were mostly microscopic in size, and never larger than a pea.—Dr. ALFRED SMITH reminded Mr. Kendal Franks that two cases of cystic degeneration of the kidneys were reported in this section during the past three years as having occurred in the fœtus at the Rotunda Hospital, and were fully reported in the Transactions. One was a large cystic variety due to a congenital stricture of the urethra; the other, shown by Dr. Bagot, was of the fine cystoid variety.—Mr. PATTESON wished to ask Mr. Franks if any microscopical examination had been made of the case before the section. Judging from the microscopical appearances, the tumour clearly belonged to the congenital cystic variety. The condition of the urinary tract was not stated, and those cases which Virchow more especially described were conditions of dilatation of the uriniferous tubules due to congenital absence of the pelvis of the kidney or other analogous causes. The importance of careful microscopical examination was shown by a consideration of the views recently put forward by Mr. Shattock and confirmed by Mr. Bland Sutton.—Mr. KENDAL FRANKS, in reply, said that it was generally admitted that in cases of cystic degeneration of the kidney the urinary passages are patent, and the condition could in no way be attributed to an obstructive cause. Virchow's view was that the condition originated *in utero* as an interstitial nephritis. The first case alluded to by Dr. Smith was evidently not an example of conglomerate cystic disease, but was a hydronephritic kidney, the result of congenital atresia of the urethra. He could not agree with Dr. M'Kee that isolated cystic disease and the conglomerate cysts were not distinct conditions. The isolated cysts were not congenital, but frequently may be traced to an injury, and one kidney is alone affected. Other differences might also be mentioned.

Exhibition of Cerebral Tumour.—Dr. E. H. BENNETT exhibited a cerebral tumour occupying a large part of the motor area of the right cerebral hemisphere, including almost the entire arm centre, which had proved fatal by intracranial pressure, but without at any time paralysis of the left arm. The sections showed the size of the tumour to be about that of half a Tangerine orange, the base of the hemisphere being directed against the dura mater. The tumour lay enveloped in the cortical convoluted surface directly over the fissure of Sylvius. The microscopic examination was reserved until the more important facts relating to the site of the tumour had been demonstrated.—Mr. STORY had examined the eyes of the patient when in hospital and found neither optic neuritis nor hemianopsia. Proptosis (or rather retraction of lids) was present on both sides, winking was infrequent, and the upper lids did not follow the downward movement of the globes. There was partial anæsthesia of corneæ and conjunctivæ, and loss of conjunctival reflex. It was an interesting fact to observe these well-known signs of that remarkable disease, exophthalmic goitre, in an undoubtedly cerebral case, and it strengthened the modern view that this disease is of central origin.—Dr. M'WEENEY gave the result of his experience of cerebral tumours examined post mortem during his tenure of office as pathologist to the Mater Misericordiæ Hospital.—Dr. M. A. BOYD said a case of cerebral tumour under his care was, like the president's case, a remarkable example of a considerable motor area of the brain being involved in a tumour without any motor symptoms whatever being present.—Dr. R. G. PATTESON was not quite certain whether Dr. Bennett had spoken of aphasia in the case he brought forward. Undoubtedly, in certain cases transposition of the speech centre occurred, and in such cases observation had established the presence of an exaggerated development of the more complex muscular movements on the left side. As regards the non-occurrence of motor phenomena in connexion with the presence of a tumour in-

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volving most of the motor area, it was possible to conceive, in the case at least of slowly developing tumours, that a certain amount of accommodation could take place, either through already established or newly formed channels, in the opposite side; and it was not, he thought, an exaggerated view to attribute to centres of the higher level a power of associated action which was daily exemplified in the subsidiary centres of the spinal cord after separation from those of a higher order. In the case of more rapidly developing tumours the explanation was of course more difficult.

Hydatid Cyst of the Pleura.—Dr. DUFFEY made a communication on this subject, and exhibited a large cyst (tænia echinococcus), with numerous daughter cysts, removed from the right pleural cavity of a man aged thirty-one, together with the lungs, portion of the diaphragm, and the cyst wall; as well as numerous microscopic sections made by Dr. W. R. Graves, pathologist to the City of Dublin Hospital. The subject of the case had been a soldier, and had seen five years' service in India. He had been under Dr. Duffey's care for four months in June, 1890, six weeks previous to his last admission, for attacks of hæmoptysis, and was then found to have tubercular deposit in the left apex. His cough persisted after leaving hospital. About Christmas he became much worse, but continued at his work as a wine porter until compelled, by pain in the right side of the chest, violent hard dry cough, dyspnœa, and weakness, to seek admission on Jan. 21st, 1891. On examination he presented all the usual physical signs of a large pleural effusion on the right side. The liver was pushed down and the heart displaced to the left side. There was also clear evidence of the existence of vomica in the left apex and of softening in the right There were great respiratory distress, constant hard dry cough, quick pulse, cyanotic appearance of face, but no fever. Forty-seven ounces of a clear straw-coloured serous fluid were removed by paracentesis. Alarming dyspnœa, and intense cyanosis of head, face, and neck, with burning heat of the hands, set in while the fluid was being removed. He rallied slightly, but subsequently the dyspnœa recurred, the pulse and temperature rose, and he died thirteen hours after the operation. On post-mortem examination it was found there was no pleural effusion. The pleura on the right side was most intimately adherent. In trying to detach it the hand ruptured a large tumour, which forcibly ejected a quantity of clear fluid, immediately followed by the extrusion of a large hydatid mother cyst, with a number of small daughter cysts. This cyst was situate between the diaphragmatic and pulmonary pleura. It lay within a dense fibrous capsule, intimately adherent by its external surface to the lung, pericardium, and diaphragm. The left lung was pushed upwards, forwards, and to the left by the tumour, and its lower and middle lobe greatly compressed. Its upper lobe contained numerous miliary and caseating tubercles, and in the apex one large and three small vomicæ. A similar condition, but more advanced, existed in the upper lobe of the left lung, and its lower lobe was much congested. The cyst was sterile, but the laminar construction of its delicate wall was sufficiently distinctive. Dr. Duffey referred to the remarkably few cases of hydatids that had been reported in Ireland, and to the extreme rarity, in any part of the world, of the primary development of the echinococcus cyst in the pleura. Some of the cases reported as hydatids of the pleura might have had their origin in the lung, or have forced their way into the pleura from the abdomen, especially from the liver. The author of the communication, in an extended search through the literature of the subject, could only find eight cases in which evidence existed of the primitive development of the hydatid in the cavity of the pleura. One of these was given by Davaine, two by Heller, two by Vigla, two by Cobbold, being specimens in the museum of Guy's Hospital, and one in the Army Medical Museum at Netley.

GIFT OF A NEW CONVALESCENT HOME.—On Monday the foundation stone was laid at Perranporth of the Convalescent Home which Mr. Passmore Edwards is presenting to his native county, Cornwall The ceremony was performed, in the presence of a large assembly, by the donor's son, Mr. H. Passmore Edwards. The Home will be a memorial to Mr. Edwards' mother. The estimated cost is between £2000 and £3000, and towards an endowment fund Mr. Edwards has contributed £2000.

Reviews and Notices of Books.

Hypnotism. By Dr. ALBERT MOLL (Berlin). Contemporary Science Series. London: Walter Scott. 1890.

Hypnotism, or Psycho-Therapeutics. By R. W. FELKIN, M.D., F.R.S E. Edinburgh and London: Young J. Pentland. 1890.

Should Hypnotism have a Recognised Place in Ordinary Therapeutics? By NORMAN KERR, M.D., F.L.S. H. K. Lewis. 1890.

[SECOND NOTICE.]

MANY theories have been put forward to explain the phenomena of hypnotism. One of the most influential of these is the doctrine of Heidenhain and Mendel, that the phenomena are due to inhibition of the cerebral cortex. Hughes Bennett supposed that the explanation was to be found in a functional disturbance of the nerve fibres connecting the ganglion cells of the cerebrum; Braid thought that the essential condition was some alteration in the circulation in the brain and spinal cord; Carpenter supposed cerebral anæmia; while Rumpf and Hack Tuke have conjectured a partial spasm of the vessels. An adequate discussion of these and other theories upon the subject would lead us far beyond our present limits, so we must content ourselves with a mere enumeration of the various views. We must pass over many other aspects of hypnotism to consider its bearings upon medical practice and therapeutics. This part of the subject is handled calmly and dispassionately by Dr. Moll, and no attempt is made to paint in roseate colours the advantages likely to accrue to our art from hypnotism. He believes those advantages to be considerable, but he is careful to observe the attitude of a scientific inquirer rather than of a prejudiced partisan. Dr. Moll is convinced that from the therapeutic point of view "suggestion" is the really important factor in hypnotism—i.e., there is generated in the patient's mind a high degree of preparedness or expectancy, the potent influence of psychical upon physical conditions follows, and thus the desired result is often obtained. "The idea of a cure should be instilled into the patient during hypnosis. If it is allowed that the idea of a cure effects a cure in many cases, there can be no doubt that suggestion is an integral part of therapeutics." This remark touches the core of the question. There are some, especially in this country, who will regard such measures as pure charlatanism, while others will retort that if the required benefit to the patient follows it matters not whether we attain that end by the administration of a drug or by "suggestion." As regards the conditions amenable to "suggestion," the following are enumerated: "All kinds of pains which have no anatomical cause (headaches, stomach-aches, ovarian pain, rheumatic and neuralgic pains, &c.)—sleeplessness, hysterical disturbances (particularly paralyses of the extremities and aphonia), disturbances of menstruation, spontaneous somnambulism, uneasy dreams, loss of appetite, alcoholism and morphinism, neurasthenic ailments, stammering, nocturnal incontinence of urine, pruritus, writer's cramp." Dr. Moll demurs to Charcot's view that only hysteria can be treated by hypnosis, and apparently regards pronounced hysteria as comparatively rebellious to suggestion. He quotes with approval Forel's remark that "a sound brain is above all things necessary for hypnosis," and adds that "in hysterical patients the brain is often by no means sound." It is well known that Ziemssen, Mendel, Ewald, and others regard the treatment of hysteria by hypnosis as only likely to result in mischief, and altogether deprecate the practice. Insanity, according to Dr. Moll, is difficult to treat by hypnosis. He affirms that benefit has been obtained in the lighter forms of mental disease (some varieties of melancholia and mania),

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but that "generally the effect is less than in the neuroses," the reason being that insane persons are not good subjects for hypnosis. Improvement is alleged to attend the use of hypnotism even in organic affections, and cases are given by Bernheim, Tuckey, and the writer where benefit has been obtained in tabes dorsalis, hemiplegia, and articular rheumatism. The benefit obtained in cases of hemiplegia is explained by the view that while hypnosis cannot restore the function of the necrosed portion of brain, it does restore the functions of neighbouring parts, which functions are sometimes inhibited by the existing lesion.

Dr. Moll discusses with considerable candour the objections usually urged against hypnotism. He first notices Ewald's protest that "suggestion" is not, properly speaking, medical treatment at all, since it requires for its practice neither medical art nor medical knowledge, but only self-confidence. To this Dr. Moll replies that "medical science and psychological knowledge, the ability to diagnose and practise, are all necessary for using hypnotism." He protests that if hypnotism has been practised by quacks and charlatans there is the more need for it being taken out of their hands and properly regulated by men trained in scientific methods. The second objection to hypnotism is the danger that may attend its practice, and this Dr. Moll recognises as a point of real gravity. He retorts, however, that the recognised dangers of such agents as chloroform, strychnine, and antipyrin are not valid grounds against the cautious and legitimate use of such remedies. In reply to the charge that hypnotism induces nervousness, he says: "I agree that fixed attention too long continued may have unpleasant effects. It may be followed by nervous debility or nervous excitement. But I have never seen anyone become nervous whom I hypnotised verbally, and to whom I made no exciting suggestions." He gives the following rules for obviating any unpleasant after-effects from hypnosis:—1. To avoid continuous stimulation of the senses as much as possible. 2. To avoid all mentally exciting suggestions as much as possible. 3. To do away with the suggestion carefully before the awakening. The real dangers of hypnotism, according to Dr. Moll, are not those usually imagined, but the following—viz., the increased tendency to hypnosis and heightened susceptibility to suggestion in the waking state—i.e., the possibility of a new hypnosis against the subject's will, perhaps without his suspecting it, and the danger of his accepting external suggestions even without hypnosis. We have contented ourselves mainly with an exposition of Dr. Moll's views, as a full discussion of them would lead us beyond our present limits.

Dr. Felkin's short work goes over in briefer compass much the same ground as Dr. Moll's volume, and does not call for detailed notice from us. It is in the main a plea for further inquiry, advanced by one who has given the question considerable attention, and who doubts if the attitude of reserve hitherto maintained towards hypnotism by the profession in this country can be any longer safely or justly preserved.

Dr. Norman Kerr's pamphlet is a thoroughgoing condemnation of hypnotism root and branch. He passes in brief review the objections to hypnotism, and gives his opinion that, "in view of all these possible abuses and dangers, it passes my comprehension how it could ever have been contended that family medical practitioners should practise hypnotism on patients of both sexes and all ages as part of their regular daily work. Surely the perverted actions of hysteric patients and the existing chances of groundless and serious charges to which we are already exposed are more than enough, without the addition of hysteria-cum-hypnosis complications." We are heartily in accord with what follows, when Dr. Kerr says: "I cannot find language strong enough to express my abhorrence of the disgusting and degrading exhibitions to be seen in many public places of amusement, as well as in the select circles of fashion—sometimes for mere amusement, sometimes in philanthropic guise, sometimes for pure gain honestly enough professed—at which men, women, and young people are made to perform ridiculous antics, and to unconsciously play the fool, to the detriment of their mental health and to the depraving of the public taste."

We have also received "Der Hypnotismus," by Dr. Otto Wetterstrand of Stockholm, and a small work on Hypnotism (Renshaw) by Dr. Augustus Nicoll, but our space is exhausted, and we cannot review them at length. Wetterstrand's work is an able and exhaustive treatise on hypnotism from the point of view of a leading authority and ardent supporter of the system. Dr. Nicoll also writes on the same side, and is of opinion that "not only disease, but some of our most crying social evils, may be alleviated by a careful and expert application of hypnotism." He is an adherent of the Nancy school, and believes that sooner or later "benefits will most surely accrue to all humanity from that great boon which is waiting, nay, crying aloud for recognition—modern hypnotism." To this and all similar confident prophecies we must content ourselves for the present with saying, *Qui vivra verra.*

ERRATA.—In the former portion of the above review, published last week, two corrections require to be made. On p. 721, second column, line 28, for "Reuterghem" read *Renterghen;* on the following page, line 12, for "ecbolatic" read *echolalie.*

OUR LIBRARY TABLE.

Œuvres Complètes de J. M. Charcot. Tome IX. Paris: Aux Bureaux du *Progrès Médical.* Lecrosnier et Babé. 1890.—This, the ninth volume of Professor Charcot's writings, which are being so faithfully collected under the careful editorship of his former pupil, M. Bourneville, contains some of his earliest as well as his most recent contributions to neurology. For side by side with the memoir upon cerebral hæmorrhage, written in conjunction with M. Ch. Bouchard, in which the invariable presence and the etiological importance of miliary aneurysm in such cases were first pointed out, we find papers upon hypnotism and hysteria, to which Professor Charcot has devoted so much thought and attention of late years. The volume, too, contains a reproduction of his observations upon metalloscopy and metallotherapy made in 1877. We are not quite so much inclined as is the able editor to regard these curious records as of the first importance, and it is certainly remarkable how transient was the interest—keen enough at the time—taken in the subject. However, as a matter of history, and as exemplifying the manner in which Professor Charcot investigated this by-path of neurology, the republication of these papers is welcome. Hypnotism is treated at considerable length, and we are glad to find in an appendix the excellent paper of Babinski, which sets forth clearly the views of the Paris school on this subject, as opposed to that of Nancy. The reader should peruse M. Babinski's essay first, before committing himself to the study of the experiments detailed in M. Charcot's memoir. The place of static electricity in therapeutics, and its application especially to the treatment of hysteria, form the final part of the volume.

Preventable Deaths in Childhood. By W. WYNN WESTCOTT, M.B., Deputy Coroner for Central Middlesex. The Hansard Publishing Union, Limited, London and Redhill.—From time to time the teachings of caution deduced by coroners and jurymen from the cases which come under their observation find expression in the daily press. We are apt to think that here the matter ends. The verdict has been given, a rider perhaps appended by way of reproof or warning, and the subject will soon be forgotten. Such is

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doubtless the natural tendency in the great majority of inquest cases, and it is to be feared that the official *caveat* so timely issued must often exercise but a passing and very limited influence. We therefore welcome as the herald of better things a little pamphlet just published by Dr. Wynn Westcott, Deputy Coroner for Central Middlesex, which treats, in a brief but effective statement, of the causes of preventable deaths among children, and the responsibility of those entrusted with their care. The circumstances commonly attending accidental deaths from overlaying and from physical injury or poison, the danger of domestic [medical treatment, and the duty of obtaining skilled professional attendance in illness are discussed in considerable detail. A chapter devoted to the subject of death certification, and the conditions under which this primary duty should not be exercised by the practitioner, deserves attentive scrutiny. The paper closes with an instructive examination of the uses and abuses of child life insurance, of the practice of baby farming, and of their connexion with what may appear to be ignorant mismanagement. The paper is not a long one. In its present shape it should admirably serve the purpose for which it has been published—namely, the instruction of parents and others as to the risks of childhood, and the means of their avoidance. If somewhat amplified it would constitute a most useful little handbook for the practical guidance of practitioners.

The Asclepiad. First Quarter, 1891. No. 29, Vol. VIII. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. London: Longmans, Green, & Co.—The opening article in this issue of Dr. Richardson's quarterly deals with the physical properties and physiological application of peroxide of hydrogen in continuation of a "research commenced in the year 1856." The readiness with which oxygen is liberated from this substance suggested many interesting experiments to the author's fertile mind, and one of the most important of his discoveries was that it acted in decomposing pus. This article is followed by one on "Cold and Mortality," a scientific exposition of the effects of lowered temperature upon the vital forces, leading to useful practical conclusions as to the means whereby the influence of cold may be best warded off. Amongst the "Opuscula Practica" are several dealing with the question of hæmorrhage and its arrest. The memoir of the quarter is that of John Hunter, a pleasant sketch of the personality, character, and work of the great anatomist, written with much discrimination and in the felicitous style of narrative which stamps all these memoirs. The autotype of Sir Joshua Reynolds' famous portrait of Hunter does not, however, appear to be quite so successful a reproduction of this work as the engraving which is so familiar to us. Dr. Koch's remedy for tuberculosis is dealt with by Dr. Richardson in a very outspoken manner, and his strictures on the *furore* excited in the medical world by the announcement of this new treatment are not altogether unmerited.

The Doctor's Holiday, or a Mediterranean Trip in Search of Health. Liverpool: Turner and Dunnett.—This is a brief account, in a sort of diary form, of one of those coasting trips in the Mediterranean which have now become so popular. The writer visited Gibraltar, Genoa, Naples, went thence to Rome, then by land to Ancona, where he rejoined his steamer, thence to Venice, Trieste, Bari, Zante, Patras, Valencia, and home. The author, who writes in a somewhat blunt style, and carefully eschews all heroics, evidently enjoyed his trip, but was not overwhelmed with admiration for anything he saw. He found even Rome disappointing. "The Tiber looks like a big gutter, its water being the colour and consistence of pea-soup. The Coliseum is a fraud, the Forum a dilapidation." The cherubs by Michael Angelo in St. Peter's "look like inflated babies." As for the Laocoon and the Apollo Belvedere, "the former is just what one expected to see, and the latter is not imposing." He is roused into a little enthusiasm by Venice, where he found it "quite refreshing that the images conjured up in the past by both poetry and prose still existed, and that everything—cathedral, churches, canals, bridges, prisons, and gondolas—all came up to expectations." He did not warm, however, to the picture galleries, and the neighbourhood of the Bridge of Sighs suggests to him chiefly "what a lot of scoundrels the Doges must have been to consign any fellow-creatures to such dungeons." At Patras he saw "the pure, unadulterated Greeks, and scarcely found them so romantic in appearance as Byronic lays had led one to anticipate." Evidently the writer has not steeped himself very deeply in classical lore, and hence the memories of Italy and Greece appeal only feebly to him. As regards the advantages of the sea voyage, he believes that its peculiarities—viz., perfect rest, pure air, out-door life, and absolute change—are, conjoined, a very potent force, whilst the astringent quality of sea breezes is in addition a strong tonic, the best remedy for some well-defined diseases, and the most agreeable for that deviation from health commonly called "seediness."

The Midwives' Registration Bill, or the Proposed Repeal of the Medical Act. By ROBERT REID RENTOUL, M.D., L.R.C.P., M.R.C.S., Fellow of the Obstetrical Society. Liverpool: F. & E. Gibbons, Ranelagh-street.—Those who wish to have in a compact form all that Dr. Rentoul has to say against the Midwives' Bill now before Parliament, and against those who differ from him, will find it in the above pamphlet. His objections are—(1) that the Bill will repeal the Act of 1886 by registering a class of practitioners not educated either in medicine or surgery; (2) that there are not cases enough by which to train and teach both medical students and pupil midwives; (3) that in certain eventualities, and if the Bill becomes law, medical students will have to study under midwives; (4) that it will lead to a great increase in criminal practices, especially in the way of stillbirth; (5) that the Medical Council will have nothing to do with the administration of such a Bill; and (6) that the poor are already fully provided for. Without sharing Dr. Rentoul's fear of all the dire consequences which he considers involved in this Bill, we should like to see any measure that is to pass so drawn as to obviate all reasonable objections. In an appendix to the pamphlet Dr. Rentoul gives an abstract of the views of various bodies on this question. The abstract shows that there is much variety of opinion. The Nottingham Medico-Chirurgical Society is explicit in saying "that it is not expedient to give any legal recognition to persons practising midwifery unless they are duly qualified practitioners." The Committee of the Birmingham Branch of the British Medical Association, on the other hand, "cordially approves the principle of the Bill—viz., the compulsory registration of midwives after due examination," but suggests various useful amendments. Other branches support the Parliamentary Bills Committee. Dr. Rentoul quotes a resolution of the Medical Council in such a way as to make it appear that this body is opposed to such legislation. This is a mistake. The Council has on all occasions recommended legislation. In the resolution referred to it only expressed its inability to undertake the necessary duties under a Registration of Midwives' Bill. We feel sure that Dr. Rentoul will see that, no doubt unintentionally, he misrepresents the position of the Council in this matter. Judging from another communication he sends us, he seems to think that the present Bill is still not dead. But it is certainly moribund, and he will have plenty of time to devise a better one. Meantime he advises all opponents to continue to petition against it.

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Supplement to the Companion to the Latest Edition of the British Pharmacopœia, including the Additions of 1890. By T. W. SQUIRE, F.L.S., F.C.S, and A. H. SQUIRE. Pp. 23. London: J. & A. Churchill. 1891.—The enterprising authors of the Companion to the British Pharmacopœia are to be congratulated. In issuing this little supplement they can proudly say, "The greater portion of what is now made official by the publication of the Additions to the British Pharmacopœia is described in our current edition as *not* official; it therefore becomes necessary to issue a supplement to the 'Companion,' making this alteration." The Companion clearly got the start of the more youthful "Additions," and the authors have now to show how far their forecast has been justified, and also gently to correct the "Additions" when the latter has left itself open to reproof. The insertion of Fehling's solution instead of Pavy's is regarded as a matter for regret, and the omission of a small quantity of sulphuric acid in the copper solution is also noted. The physical properties of acetanilide, of paraldehyde, of phenacetin, of picrotoxin, of gluside, and of sulphonal are criticised, and in various points corrections are suggested. This very unpretentious little book has evidently been the outcome of much careful work, and its utility in relation to the Additions will be as great as that of the Companion to the British Pharmacopœia.

Ophthalmological Transactions, Vol. X., Session 1889-90. London: J. & A. Churchill.—The last issued volume of Transactions of the Ophthalmological Society of the United Kingdom fully maintains the standard attained by its predecessors. It commences with the presidential address delivered by Dr. Hughlings Jackson, in which he insists upon the necessity for ophthalmic knowledge, and a familiarity with normal conditions and variations, before drawing conclusions from ophthalmic appearances in the diagnosis of morbid conditions; and proceeds to review modern observations in connexion specially with nervous disease. In the Bowman lecture Professor Grut of Copenhagen gives an elaborate analysis of strabismus, in which he maintains the nervous as opposed to the anatomical theory of squint. Mr. Priestley Smith contributes a suggestive paper, based on measurements in 1000 cases, on the relation between glaucoma and smallness of the cornea, which he finds associated with a small globe without corresponding diminution in the size of the lens, so that the latter is large relatively to the eye. A valuable paper on Secondary Glaucoma after Extraction of Cataract is furnished by Mr. E. Treacher Collins, based on careful pathological examination of ten eyes, in all of which there was obliteration of the filtration angle and adhesion of iris or lens capsule to the cicatrix. The paper is illustrated by some beautifully finished reproductions from photographic enlargements of actual sections. Other noteworthy papers are contributed by Professor Snellen of Utrecht, on New Methods for treating Symblepharon, Ptosis, and Episcleritis; by Mr. Simeon Snell, on the Artificial Maturation of Cataract; and by Dr. James Anderson and Mr. Doyne, on Recovery from Hemianopsia with subsequent necropsies. Many remarkable and interesting cases are recorded, such as Pyæmic Panophthalmitis and Spontaneous Purulent Hyalitis, by Drs. Rockliffe and Berry respectively; a case of Embolism of a Branch of the Arteria Centralis Retinæ, by Dr. Lawford; and of Cystic Detachment of the Retina, by Dr. Tatham Thompson, all illustrated by lithographic plates.

The Royal London Ophthalmic Hospital Reports. Vol. XIII., Part 1, December, 1890. Edited by R. MARCUS GUNN, M.A., F.R.C.S. London: J. & A. Churchill.—This part contains a memoir by Dr. George A. Berry, in which he discusses the theories of fundamental colour sensation, and points out the difficulties of their application to cases of colour-blindness. He goes so far as to ask, Is there any good reason for assuming that there are any fundamental colour sensations at all? and thinks the colour sensations run into one another continuously. Practically, he believes the ordinary test for colour-blindness by making the subject match colours is completely satisfactory for the detection of colour-blindness. Dr. Lawford and Mr. Collins publish some notes on Glioma Retinæ, with a report of sixty cases; and Mr. Collins adds two valuable memoirs on the Pathology of Intra-ocular Cysts, illustrated by several woodcuts; and a second on the Development and Abnormalities of the Zone of Zinn. Dr. Tatham Thompson gives a note on Förster's Artificial Ripening of Cataract; and lastly, Mr. Lang advocates the division of anterior synechiæ, which he thinks would prevent the occurrence of many cases of secondary glaucoma.

The March number of the *Veterinarian* contains papers of more than usual interest. They comprise an interesting address by Prof. McCall on "Are Blisters Hurtful or Beneficial in Acute Diseases of the Chest?" which, with the discussion that follows, gives some idea of the stages through which the blister and counter-irritation theory has passed in arriving at its present modified stage; a note on Texas Fever; a paper reprinted from the *Philadelphia Medical News* on the Production of Immunity with the Chemical Substances formed during the Growth of the Bacillus of Hog Cholera, by E. A. v. Schweinitz; and a number of notes on the disease of animals reprinted from other journals. The number also contains reports of the National Veterinary Association, the Royal Agricultural Society of England, and the Lancashire Veterinary Medical Association, at the first of which a paper on Soundness and Unsoundness in Horses was read, which will be of interest to more than members of the veterinary profession, although, as might be expected, veterinary surgeons, even amongst themselves, cannot agree as to the meaning of the term "soundness." Perhaps it should be said rather that there seems to be no concurrence of opinion as to what a sound horse really is, and how far slight malformations or other abnormalities really interfere with the working value of an animal.

Analytical Records.

THE LOCH NESS BLEND WHISKY (EXTRA OLD).

(A. GRITTEN & Co., E.C.)

THIS is a whisky which is soft and mellow to the taste, and evidently a well-matured spirit. Our analysis yielded: absolute alcohol 41·55 per cent. by weight, 49·02 per cent. by volume, equal to proof spirit 85·90 per cent.; extractives 0·25 per cent.; mineral matter 0·09 per cent. The black reaction with perchloride of iron would serve to indicate further the "extra age" of this evidently choice blend.

COCOA EXTRACT.

(ABBOTT & BARRETT, NEPTUNE WORKS, LOWESTOFT, AND 47, MINORIES, E.)

Petroleum ether extracted from this preparation 25 per cent. fat, so that probably more than half of the original fat in the raw product has been carefully removed. This treatment, while it increases the proportion of nourishing as well as the stimulating constituents, theine and theobromine, renders the cocoa more agreeable and more digestible. The flavour of the decoction is excellent. Mineral matter 4·24 per cent.

SAUMUR CHAMPAGNE "BRUT ROYAL" (38*s.* DOZEN).

(ACKERMAN-LAURANCE, 41, CRUTCHED FRIARS, E.C.)

A good, wholesome, and exhilarating wine, with taste somewhat sweet, but equal to many champagnes at twice the cost. Alcohol by weight 10·77 per cent., by volume

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13·34 per cent.; extractives 3·13 per cent.; mineral matter 0·10 per cent. (The mineral matter was tinged a light brown, from the presence of oxide of iron.)

UNG. EMOLLIENS AND UNG. EMOLLIENS ANTISEPTICUM.

(ELTON & CO., 28, ENDSLEIGH-GARDENS, EUSTON-ROAD, N.W.)

We are able to confirm, as far as can be judged from a chemical examination, the statement that ung. emolliens is a neutral, pure, and well-prepared fatty cream, and therefore well adapted as a basis for ointments. Ung. emolliens antisepticum is delicately scented, and contains a well-known antiseptic in conjunction with a preparation of zinc. The many applications to which preparations of this character may be advantageously put will suggest themselves to every practitioner.

PAPAIN PEPTONE.

(B. KÜHN, 36, ST. MARY-AT-HILL, EASTCHEAP.)

This preparation is very interesting from a chemico-physiological point of view. It is the body obtained on peptonising beef albumen with papain, the vegetable pepsin. Papain peptone is a brown spongy mass, soluble in water, the solution possessing a somewhat insipid taste, which, however, is improved considerably by the addition of salt. According to our experiments nitrogen is present to the extent of 14·67 per cent., which, adopting the factor 6·3, represents so high a proportion of albumins as 92·42 per cent., of which, as we have verified by actual tests, the greater proportion are uncoagulable and soluble; that is to say, in the form of peptone and albumose. Glue peptone occurs only to a traceable extent. Papain peptone seems likely to prove a valuable adjuvant to food for the debilitated, and it may obviously be employed to increase the nourishing value of many kinds of ordinary food.

HORLICK'S MALTED MILK: A SUBSTITUTE FOR MOTHER'S MILK.

(THE MALTED MILK CO., RACINE, WIS., U.S.A., AND 39, SNOW-HILL, E.C.)

The action of diastase, whether it be that derived from barley or other cereals, is by no means limited to starch, which under its influence undergoes transformation into dextrin and sugar. It is well known that in trustworthy preparations of cod-liver oil and malt the oil does not exist in the free state, but in the condition at present regarded as an emulsion, and, as is shown by the microscope, immediately on the addition of water oily globules are seen to separate. The precise nature of this action of diastase does not appear to have received much attention. From recent experiments it would also seem that diastase acts in such a manner upon the casein and albumen of milk as to render these bodies uncoagulable by acids. Surely this is a subject which recommends itself to the attention of investigating chemists. Advantage has already been taken of this property of diastase by the Malted Milk Company. They are introducing a preparation of dry malted milk. During the process of manufacture they regard the casein of milk to be so acted upon by the diastase as to become partially predigested, for experiments show that on mixing active malt with milk and maintaining the mixture at blood heat for a few hours the casein is rendered uncoagulable by acids. The company's own account of the composition of the dry powder which they prepare is given in the following table:—

The analysis made in our laboratory substantially confirms this, and it will be seen that chemically the composition of malted milk resembles that of human milk (for which it is offered as a substitute), supposing all but 4 per cent. of water had been removed. Important differences, however, consist in the presence in the prepared milk of a less quantity of fat; while, of course, the dextrin owes its origin entirely to the malt. The flavour of malted milk is excellent, and it will be interesting to watch the results accruing from the practical use of this product, which is likely enough to prove an important contribution to food-supply.

LIQUOR CARNIS.

(THE LIQUOR CARNIS COMPANY, LIMITED, 50, HOLBORN VIADUCT, E.C.

We have already had occasion to examine this excellent preparation. Liquor carnis is now flavoured with a "dash" of celery, which gives it a very pleasant taste. That this in no way interferes with the admirable condition in which the meat juice is preserved in the cold is evident from the fact that the simple experiment of boiling resulted in the coagulation of the fluid.

KOLA WINE AND KOLA BITTERS.

(T. CHRISTY & CO., 25, LIME-STREET, E.C.)

Messrs. Christy, who we think were the first to introduce the kola nut to this country, have recently succeeded in preparing a wine and a "bitters," which contain in a wineglassful the equivalent of thirty grains of kola. The port used in the preparation of the former is, judging from the taste, of no inferior kind; while the "bitters," which does not require to be mixed with anything else, possesses a pleasing flavour, that of orange predominating. The alkaloid caffeine was readily extracted with chloroform. Further analytical results are as follows:—Kola wine: Alcohol, 17·00 per cent. by weight; 20·89 per cent. by volume; extractives, 8·72 per cent.; mineral matter, 0·32 per cent. Kola bitters: Alcohol, 20·58 per cent. by weight; 25·17 per cent. by volume; extractives, 9·90 per cent.; mineral matter, 0·20 per cent.

PEPSALIA.

(G. & G. STERN, 62, GRAY'S-INN-ROAD, W.C.)

This preparation, which has been examined previously, has also undergone improvement in manufacture. It is evident that the colour is a purer white, the salt is more uniformly grained, and the digestive agent more active than before. Glycerine we find readily extracts the digestive agent from the salt, and the extract so obtained quickly transforms hard white of egg into soluble albumins.

NATURAL MINERAL AND AERATED WATERS.

(RICHARD DAVIS, 20, MADDOX-STREET, REGENT-STREET, W.)

All the samples submitted to us indicated careful preparation and the employment of good materials. There was a remarkable absence of organic matter, and no trace of injurious metals, as lead, tin, or copper. Analysis gave the following results:—Soda water, 17½ gr. of the bicarbonate to the pint; lithia water, 9 gr. of the carbonate to the pint. Tarasp water: Total solids, 1165 gr. per gallon; chlorine, 158·6 gr. per gallon; magnesium and sodium present in large proportion, with smaller quantities of calcium, potassium, and lithium, combined with chlorine, bromine, sulphuric, and carbonic acids. Tarasp is pleasant to taste, and it contains its own volume of free carbonic acid gas.

	Water.	Sugar.	Dextrin.	Fat.	Albuminoids.	Ash.
Malted Milk (Company Analysis)	3·27 %	46·68 %	17·16 %	6·78 %	22·26 %	3·90 %
Malted Milk (THE LANCET Analysis)	2·21 %	63·59 % (and dextrin)	——	8·40 %	21·85 %	3·95 %
Human Milk	4·00 %	46·78 %	——	23·39 %	23·39 %	2·44 %

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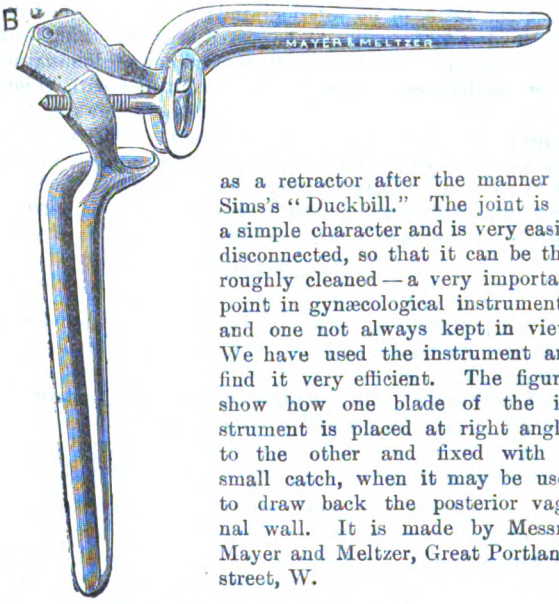
The lithium was readily detected by the spectroscope, but it may possibly be of interest to those who drink lithia water to mention that the presence of the metal is easily made manifest by merely dipping the wire of the bottle into the water and then holding it in the transparent part of a common gas flame. Lithium is indicated by the carmine colour imparted to the flame as the liquid vaporises.

New Invention.

CONVERTIBLE VAGINAL SPECULUM.

THIS speculum is a modification of the bivalve variety, and can be used either as an expanding instrument, or



as a retractor after the manner of Sims's "Duckbill." The joint is of a simple character and is very easily disconnected, so that it can be thoroughly cleaned—a very important point in gynæcological instruments, and one not always kept in view. We have used the instrument and find it very efficient. The figures show how one blade of the instrument is placed at right angles to the other and fixed with a small catch, when it may be used to draw back the posterior vaginal wall. It is made by Messrs. Mayer and Meltzer, Great Portland-street, W.

VIRCHOW TESTIMONIAL FUND.

THE following additional subscriptions have been received:—

	£	s.	d.
P. W. Latham, M.D. ..	2	2	0
George Johnson, M.D. ..	1	1	0
W. L. Reid, M.D.	1	1	0
Charles Workman, M.D...	2	2	0
James Finlayson, M.D. ..	2	2	0
Alex. Robertson, M.D. ..	1	1	0
Joshua Paterson, M.D. ..	2	2	0
J. K. Kelly, M.D.	1	1	0
James Lawrence, M.D. ..	1	1	0
James C. Howden, M.D...	1	1	0
William Frew, M.D.	1	1	0
Sir G. H. B. Macleod, M.D.	2	2	0
George Heron, M.D.	1	1	0
Joseph Coats, M.D.	2	2	0
Johnstone Macfie, M.D. ..	1	1	0
John Lindsay Steven, M.D.	0	15	0
John Cleland, M.D., LL.D., F.R.S.	1	1	0
J. Kingston Fowler, M.D.	1	1	0
J. Langdon Down, M.D.	1	1	0
R. Farquharson, M.D., M.P.	1	1	0
G. H. Savage, M.D.	1	1	0
H. Radcliffe Crocker, M.D.	1	1	0
F. Roberts, M.D.	1	1	0
R. Thorne Thorne, F.R.C.P., F.R.S.	1	1	0
Thomas Reid, M.D.	1	1	0

VACCINATION AND SMALL POX.

To the Editors of THE LANCET.

SIRS,—During a voyage on the South-west Coast of Africa an outbreak of confluent small-pox occurred on board among the black passengers, resulting in some deaths. Owing to native prejudice some difficulty was experienced in persuading them all to undergo vaccination. However, after one death had occurred, the few who had rejected vaccination presented themselves for it. Among these was a well-made muscular negro, a native of Monrovia. He complained of vague pains in the back and limbs, slight headache, and chilliness; his pulse was 100 per minute, and his temperature 100·5°. The bowels were confined; no papules could be felt in the skin. Fearing that he was about to develop an attack of small-pox, he was vaccinated in four places in the upper arm, and given ten grains of calomel, together with a diaphoretic mixture, containing five grains of quinine, which was given every four hours. In addition to this he was isolated. For the two following days he remained in much the same condition, and on the third day the site of vaccination presented three well-defined papules. During the day the patient became much worse; he vomited twice, complained of great frontal headache, and lumbar pain. In spite of the administration of ten grains of calomel the previous evening, the bowels were confined. The temperature was slightly raised (to 101°), and the pulse full and bounding, the tongue being thickly furred. He was given a mixture containing hyoscyamus and bromide of potassium every three hours. The next day the patient was better; the headache had diminished, the pains in the back were less, and the bowels had been moved freely. In the meanwhile the vaccination was steadily advancing, the papules having increased in size, and the upper arm being slightly swollen. The medicine was continued every four hours, and the patient slept most of that day and passed a good night. On the following morning he complained still of some headache and vague pain, but his temperature was normal, the pulse natural, and the patient apparently well. He complained of some pain in the right axilla, which was due to enlarged glands in that situation caused by the vaccination. He was practically well on the day following, complaining of nothing but his arm, which was slightly inflamed, swollen, and painful on movement. In a few days he was allowed to go back to his work; he kept in good health and the arm matured well, vaccination being successful in three out of the four situations operated on.

I have given the above details in order to point out what seems to me the efficacy of vaccination in arresting the development of small-pox. The severe symptoms which appeared on the third day were, to my mind, those of the onset of variola, as they exactly resembled those presented by the cases which developed the disease. I may add that, although we had more than 100 black passengers, the majority of whom had never been previously vaccinated, the disease did not attack any who had undergone the operation. Of course, such cases of small-pox as did arise were rigorously isolated, and due antiseptic precautions were taken. As this, however, was not done until they were taken ill, some risk of infection must have been run by their fellow-passengers; and, as everyone knows who has been in countries inhabited by black races, small-pox is the most terrible scourge that can well be imagined, decimating whole tribes, and sparing neither young nor old. Therefore no immunity on the score of race can be pleaded on behalf of negroes. Owing to the rare occurrence of the disease in a severe form in England, we do not, I think, often realise the fearful ravages which this disease can effect both in loss of life and in the appearance of individuals. On this account we are, perhaps, inclined at times to undervalue the immense importance of vaccination, the benefits derived from which were vividly brought before both myself and my white companions during the voyage I mention.

I remain, Sirs, yours truly,

F. M. MANGAN, M.R.C.S., L.R.C.P.

Fairholme-road, West Kensington, W., March 31st, 1891.

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THE LANCET.

LONDON: SATURDAY, APRIL 4, 1891.

READERS of the reports of the proceedings of the Council of the Royal College of Surgeons of England can rarely find therein any indications of progress in the direction of a reform of the peculiarly close constitution of that important and influential corporation. The rays of light which are occasionally emitted from the Council chamber are often intercepted by an official diaphragm before they can reach the outer world, and Fellows of the College are left to infer that the Council as a whole are a united body unanimously in favour of upholding the best of all possible constitutions at the best of all possible colleges. It is not practicable, however, to shut out every gleam, for the most careful revision of the proceedings of the Council could scarcely be so stretched as to exclude the report of important motions carried by a majority of the Council. Such a motion was that which was made on March 12th by Mr. THOMAS SMITH in pursuance of notice given a month previously, "that the proceedings of the Council in relation to the scheme for the reconstitution of the University of London be placed before a meeting of the Fellows and Members summoned for the purpose, and that the date of the meeting be determined by the President and Vice-Presidents." This motion was seconded by Sir W. S. SAVORY, and carried by a majority of 16 to 5. Considering that the scheme to be submitted for the consideration of the Fellows and Members has already been virtually settled, and is not likely to be materially modified by anything said or done at the general meeting, the adoption of this motion does not appear at first sight to be any considerable step in advance, but that it is of some importance may be inferred from the facts that five members of the Council opposed it, and that the Association of Fellows had urged upon the Council the desirability of calling the Fellows together to consider any scheme of reconstitution of the University before its final ratification. When it was pointed out by the Attorney-General and Mr. PAGET that at the present moment, when an action by the Members of the College is pending, it would be undesirable to call together the Fellows separately, the Committee of the Association passed a resolution in favour of convening a general meeting of Fellows and Members. This step, therefore, is in harmony with the opinions of those who are recognised advocates for a reform of the constitution of the College, and is emphatically a step in the right direction. One of the fundamental articles of the Association was "that it is desirable that no alteration in the constitution or relations of the College shall be effected without the consent of the Fellows and Members convened to discuss such alteration," and this was rejected by the Council of the College in the spring of 1884—a rejection which led to the formation of the Association of Fellows and the Association of Members. Had the resolution been accepted it is extremely doubtful whether either Association would have come into existence, for it was the most important of the four resolutions proposed by Mr. PAUL SWAIN on March 24th, 1884, and adopted at the general meeting then held in the theatre of the College. We are, therefore, inclined to regard the success of Mr. THOMAS SMITH'S motion as indicative of a gradual approach on the part of the Council to an agreement with the very moderate and rational programme which the Association of Fellows is engaged in supporting. It would have been better to have called the meeting sooner, but it is better now than not at all, for the scheme of reconstitution of the University of London has not yet been before Convocation, and when it is discussed by that body it is most likely to be rejected. A further approach to an agreement with the reforming section of the Fellows does not appear upon the face of the official record, for the ray of light was intercepted in its passage. The deputation from the Association of Fellows which waited on a committee of the Council last November pressed for a simplification of the method of voting by voting papers, and their proposals were referred to a special committee of the Council, with the ultimate result that no change was made. An ordinary reader of the published minutes would probably imagine that the Council were unanimously of opinion that the present plan was the best that could be devised, but it is an open secret that the Council were divided in opinion, and that the determination not to comply with the reasonable requests of the deputation from the Association of Fellows was only ratified by the smallest possible majority. Mr. MITCHELL BANKS strongly supported the proposals of the Association of Fellows, and urged the Council to accede to them, thus showing that his adhesion to the programme of the Association as set forth in their recently issued report was substantial and sincere. This is in the highest degree satisfactory, for it shows that his return by a large majority at the head of the poll last year and the failure of the candidates supported by the Association of Fellows did not signify any reactionary movement or any opposition to reform on the part of the constituency, and that this return can be claimed as a victory for the reforming party among the Fellows.

Looking at the political situation as a whole, we are satisfied that it is distinctly favourable to steady constitutional development. By the persistent action of the Association of Fellows, to whose steadfastness in a good cause the Fellows of the College generally are indebted for the progress that has been made, it has been conclusively settled that the Council has the legal power to call separate meetings of Fellows if they are so minded, and we feel sure the change must come shortly. The simplification of the method of voting by voting papers advocated by the Association, and lost by a bare majority, will be carried the next time that it is proposed in the Council. Consultation of the constituency as to changes in the constitution and relations of the College is in the ascendant, and will not be neglected hereafter. The reforming element of the Council is being strengthened, and so soon as it receives the smallest reinforcement the whole fabric of obstruction to moderate

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and necessary measures for investing the Fellows and Members with a larger share in the management of the College will "dissolve, and, like an insubstantial pageant faded, leave not a wreck behind."

THE subject of Provident Dispensaries is coming powerfully to the front in connexion with the acute criticism which is being brought to bear on the out-patient department of hospitals. The result of all investigations of a searching character into the out-patient department is to show that it is greatly abused by persons who are not ill enough or poor enough to need the paraphernalia and the gratuitous aid of a great charity. These persons will have to be excluded if medical charities are to continue to receive the support of the benevolent. And if they are to be excluded means must be provided for their treatment on independent, though at the same time practical, terms elsewhere. This is the problem before the public, and especially before the profession. Those who crowd the out-patient department cannot do without medical aid. It is perhaps natural that they should go to the out-patient department, where they expect to get for nothing the advice of consulting surgeons and physicians. But this is a use of medical charities that was never contemplated, which has become demoralising to the people and highly injurious to the profession. The problem is to devise an alternative that shall preserve the independence of the people and have some regard to the interests of the medical profession. For, after all, it is the private members of the profession in general practice on whom the burden of all onerous sickness of the working classes falls. They have to be on duty night and day, to face infection in the close apartments of the poor, and to be their neighbours and friends in every emergency.

The general remedy suggested for hospital abuse is the Provident Dispensary. Whether in London, Birmingham, Manchester, or elsewhere, these institutions are not only lauded, but they seem to answer—to meet in a certain degree the wants of the case of those who are pronounced by general consent to be unfit for hospital relief. We have before us the annual reports of two or three of these dispensaries, and some of them betray obvious expectations that these institutions are destined to fulfil a great function in connexion with the movement for hospital reform, in the way of affording facilities for the working classes being attended on independent principles. However this may be, some of these institutions seem to thrive well. In Manchester there are nine dispensaries in connexion with the Manchester and Salford Provident Dispensaries Association, with a membership of 24,000. The subscriptions of members amount to £4107, and they pay their medical officers £2372. Only one of the branches is not self-supporting. The rest show a profit of £482. The chairman put forth a very just suggestion that the time was coming—we should say had come—when the medical staff should share more largely in the profit of the dispensary. It is claimed that in Manchester hospital abuse has been almost abolished by a system of investigation and by the provision of these dispensaries. The report of the Northampton Royal Victoria Dispensary is also before us. The members number 20,000, or one-third of the population. The increase in membership in the last year was 981 and that of free payments £315. The total receipts, including a balance in the treasurer's hands at the beginning of the year of £1792, were £5270 12*s.* 9*d.* The amount paid to the medical men for the year 1890 was £2481 16*s.* 4*d.* The largest sum paid to one medical officer was £1048 19*s.* 4*d.* This seems a large sum, but it represents 20,000 visits at the houses of patients, 10,150 interviews with patients at the doctor's house, and 642 at the dispensary—in all, 31,142 attendances! There are five medical officers in all. It is claimed in the report that only eligible persons are admitted and that a large number anxious to join are excluded. Another report before us is that of the Hockley Provident Dispensary. Mr. LAWSON TAIT presided over the annual meeting and expressed his conviction that the only effective method of dealing with the sick poor was by provident dispensaries. The establishment of such institutions was the only practical solution of the difficulty. In the last year 670 new members had been admitted. The total membership was 1800; the income £614 16*s.* 3½*d.*

Such are favourable specimens of the provident dispensaries, and such are the favourable accounts of them by their promoters. We heartily recognise the good they do, and we cannot fail to see that such institutions are looked to for much service in the immediate future. It is well, however, to remember that they have their critics. Their friends will do well to consider the criticism for what it is worth, and to meet obvious objections in a friendly spirit. A letter before us complains that in Northampton tradesmen are admitted, and others in good circumstances. Moreover, that dispensary patients are seen by qualified assistants, and not by the gentleman nominally doing the largest dispensary work, who, by the way, is said also to do the largest private practice in the town. Our correspondent characterises the appointments as a monopoly, enjoyed by "the favoured, subsidised few," and that the enormous amount of work done for a small sum borders closely on "the sweating system." A correspondent at Greenwich complains with much reason of the wholesale distribution of handbills advertising the Greenwich Provident Dispensary and the names of the medical staff. In the Manchester dispensaries we believe there is no wage limit, and, if we mistake not, it was abolished at the instigation of the Manchester Medico-Ethical Society. Surely here we have a proof of the want of some thorough understanding and agreement in the profession at this juncture. The great body of the profession is complaining, and justly, of the competition of the out-patient department. But there is no agreement of opinion to be found as to the substitutes for it, which must be organised and ready. If the Lords' Committee come to conclusions similar to those of the Birmingham Committee, and the profession is unprepared and divided on the question of substitutes, the result will be an indefinite lease to the out-patient department. We think there should be a wage limit and a strict inquiry into the circumstances of patients. Moreover, there should be a determined effort on the part of the promoters of provident dispensaries to make the remunera-

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tion of medical men more proportionate to the nature and amount of their work, and to include in their scheme the largest number of the practitioners of the town. With these precautions—and these are absolutely imperative—the provident system should have the hearty support of all who are battling for the reform of hospital abuses. It is easy to find fault with such a scheme as the Northampton Dispensary. But it is more difficult to imitate it or to excel it. We would ask those who oppose such institutions to consider the miserable substitutes for them in the shape of cheap dispensaries and coöperative medical associations, in which a young and impecunious medical man is induced to undertake a herculean task of work for a pittance that would not pay a respectable mechanic.

WITHIN recent years the bacillus pyocyaneus has attracted considerable attention both in France and in this country; first, because of the beautiful colour to which it gives rise and its characteristic appearance and manner of growth under certain conditions; secondly, because of its action on certain animals; and thirdly, because when either the bacillus (CHARRIN) or merely its products (WOODHEAD and WOOD) are introduced into the body, it seems to interfere in a most remarkable manner with the development of the anthrax bacillus when simultaneously inoculated. M. C. GESSARD[1] has again concentrated our interest on the bacillus itself, and in a series of experiments has been able to show that the surroundings of the micro-organism, or the conditions under which it is developed, may so far modify the manifestations of its activity that it actually seems to become developed into a distinct organism, and that we have in such cases not merely a varietal difference, but even a species or *race* difference. He gives a definition of *race*, based on that given by PASTEUR in his studies on beer, who takes as the basis of his classification not outward form resemblances, which can often obscure marked differences, but the physiological functions, which are far more important in distinguishing the races than are most morphological characters.

M. GESSARD finds that by growing the pyocyaneus bacillus on bouillon he is able to obtain both pyocyanin and green fluorescence; and that if the growth is continued on this nutrient medium, both of these functions may become so strongly developed that, even when removed from the medium, the organism still retains these functions in a most remarkable degree. If, however, it be cultivated for a number of generations on egg albumen, the green fluorescence is lost, and it takes some little time to regain the power of giving rise to this appearance when again grown in broth. On the other hand, gelatinised peptone meat infusions allow of the production of the pyocyanin and not of the fluorescence, although another greenish pigment is always formed. On the addition of glucose to this latter medium even the pyocyanin ceases to be developed, and we have then only the greenish pigment above mentioned. On passing this organism through a rabbit it is found that the pyocyanic function is lost, and even on cultivation in broth outside the body a considerable number of cultures have to be made before it again obtains this power of forming pyocyanin, although the fluorescent function may still remain. The importance of such facts as these is very great, as we have gross optical demonstration of the modifications of the functions of the bacillus due to its cultivation on various media, to the action of heat, and to the passage of the organism through the animal body. There are a number of other organisms which, treated in the same way, become similarly modified. It is always difficult by mere chemical processes to determine how far the products and functions of such organisms have become altered, whilst in the case of passage through animals so many sources of fallacy may creep in that it is extremely difficult to avoid doubt that the results obtained exist in the mind of the experimenter rather than in actual fact. Where, however, the changes can be followed with the eye, and where in consequence a large number of experiments may be carried on and observed in a very short time, we are able to secure much more satisfactory and convincing proof of function modifications; and we feel emboldened to accept more freely the results obtained by the more delicate methods, especially when these can be confirmed by the coarser ones resorted to by M. GESSARD. It is easier to understand how pathogenic organisms—at first comparatively benign—may on passage through several individuals attain a virulence so great that almost every patient attacked by a disease succumbs; whilst in the same way the passage through successive human or animal bodies may so modify the activity of another organism that the attacks of the disease become gradually less and less severe. The passage of anthrax or hydrophobia, for example, through one series of animals gives rise to an attenuation; whilst the passage through another series increases the activity of the virus to such a degree that it almost invariably proves fatal. Similarly, we know that organisms growing on different media give rise to different products; for instance, the bacillus prodigiosus forms a beautiful pigment when growing at certain temperatures on proteid substances, whilst growing on sugar it gives rises to the formation of lactic acid. From this it may be readily understood how other organisms, ordinarily not specially dangerous, when placed in favourable nutrient media outside the body, may develop powers and activities that render them most dangerous to the public health. Further, however, it must be remembered that these organisms act and react one upon another. Of this we have an admirable example in the growth of an innocuous pseudo-diphtheria bacillus within the cavity of the mouth. We find that it may attain certain degrees of virulence, but that the virulence is developed to the highest degree only in those cases where there is present also a micrococcus or streptococcus similar to that of erysipelas, which by its presence appears to prepare the ground, and perhaps even the food, for the development of special toxic substances by the diphtheria bacillus itself. A number of facts bearing on these points will gradually be accumulated, and eventually we may arrive at some general conclusions or obtain some reliable guide as to the means by which these modifications are brought about or determined. For the present we must accept

1. Des Races du Bacille Pyocyanique: Annales de l'Institut Pasteur, tome v., No. 2, 1891.

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M. GESSARD'S most remarkable facts as an indication of the lines along which future work will have to be carried on.

THE most important step in the history of the Birmingham School of Medicine since the conferring on it of the title of Queen's College by Royal Charter in 1845 was taken on the 20th ult., when the amalgamation of Queen's and Mason Colleges was agreed to with only one dissentient—viz., Sir JAMES SAWYER. Mason College has for the past ten years supplied the necessary scientific teaching for the medical students of Birmingham which could not be so efficiently rendered by the older college, and now the disadvantages of a dual control and an attendance on two institutions for a proper curriculum will be removed. There can be no doubt as to the wisdom of this decision, and, with characteristic vigour and determination, the requisite steps for presenting a petition to the Chancery Division praying for the approval of the new scheme have been already taken, whilst the plans for a new building behind Mason College, which is to accommodate the medical students with class-rooms for the medical lectures &c., have also been prepared. The amalgamation will remove from the authorities of Mason College all temptation to become a complete school of medicine in itself, and will secure for the students of Birmingham a security of scientific education which might at any time previously to this union have been taken from them if the professors at Mason College had wished to exclude Queen's College students from their class-rooms. Sir JAMES SAWYER opposes the destruction of an old foundation, but the progress of the scientific element in recent medical education, especially in the curricula of universities, makes it incumbent on all medical schools to form a thoroughly scientific side among their professors, or to enter into an alliance with a college of university standing for the provision of this scientific instruction. The closer the union the better for the student and the teacher. Such an amalgamation, far from being a destruction, is really but a further development, especially if the union is to the advantage of both Colleges. We look upon this fusion as the first great step towards the formation, at no very distant date, of a university in the Midlands, which will emulate in good work the Victoria University, if not some of the older foundations. Local universities are among the most potent forces at work in the elevation of the higher education throughout the country, and we have no doubt that a fully equipped teaching university will soon be desired by the citizens of the Midlands, and be secured for their children. Whether the department of Theology, which will remain to Queen's College after the removal of its Faculty of Medicine, should be continued at Birmingham or removed to Worcester must be decided by the support afforded to it by the Churchmen and inhabitants of Birmingham. This is a local question. The future of the Birmingham Medical School, of the Medical Department of Queen's College, and of Mason College is of importance to everyone throughout the kingdom who is interested in the due development of medical and scientific education, and in the adjustment of their proper relations to each other.

Annotations.

"Ne quid nimis."

HER MAJESTY'S VISIT TO GRASSE.

THE eagerness of competition extends, it would seem, to localities and towns, and a knowledge of this fact will cause some hesitation before accepting absolutely all that has been said about the town of Grasse, which is now being honoured by a visit from the Queen. The question which has been asked, with a purpose as it would seem, "Is Grasse healthy?" admits of a ready answer. The situation of the hotel which the Queen occupies at Grasse is perfect. It is well protected from the north, is 1100ft. above sea level, and has a view of plain and sea and mountain such as can scarcely be excelled in Europe. The air in such a place must be pure, and it goes without saying that Her Majesty's advisers are satisfied as to the purity of the water which the Queen will drink, and the soundness of the sanitation of the house which Her Majesty inhabits. That the old town of Grasse is not calculated to impress the traveller as a place the construction and sanitary arrangements of which are in any degree perfect is of course true; but the Queen will incur as little risk from the old town as Her Majesty does from the slums of Westminster when inhabiting Buckingham Palace. It must be admitted that the old towns along the Riviera are none of them inviting, and must be regarded as a menace to the health of visitors. The old towns of Hyères, Frejus, Cannes, Nice, Eza, Rocca Brunna, San Remo are all pretty much alike—crowded, ill-paved, malodorous; but as the new towns where the visitors congregate are more or less removed from the old ones, those who visit these spots for health or pleasure take no harm. In one respect Grasse is better than its neighbours, inasmuch as the custom has long prevailed there of applying all organic refuse to agricultural purposes, instead of allowing it to foul the foreshore, as is done at all the so-called "health resorts" upon the coast. The argument has been used that inasmuch as Grasse is a place of great antiquity, the soil must have become impure; but such an argument shows a great want of knowledge of elementary biological principles. The ground round Grasse is highly cultivated, so that the impurities of Grasse become in due time violets, roses, jasmine, and orange blossoms; and it is a well-known fact that the more highly land is cultivated the more readily will it eat up, as it were, the impurities which are applied to it. With regard to the earth, the Shakesperian saying, that "appetite doth grow by what it feeds on," is strictly true; and it may be hoped that those who visit Grasse may not be too prejudiced to bring away maybe a useful and thrifty lesson in sanitation from this old city of Provence.

THE MEDICAL MORTALITY RATE.

IN our correspondence column to-day will be found an interesting letter from Dr. Glover Lyon on this subject, in which the attempt is made anew to elucidate the question of mortality in the medical profession. The results so brought out conform much more nearly to what we conceive to be the facts of the case than did Mr. Chatham's figures, which we recently criticised. But Dr. Glover Lyon's method seems to us open to objection, and from two opposite points of view. The method is to take the claim register of an insurance office and search through it until a medical man's claim is found, then to note the age at entry of the life assured, and, as we understand, *to continue* the search until a non-medical claim is discovered arising upon a life

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which was entered in the company's books in the same quinquennium of age and approximately at the same date as the medical case already discovered. The result is that the non-medical policies are found to last slightly longer than the medical ones. Now it is clear that the method of selection precluded the possibility of any great divergence between the two classes of policies because the date of death and date of entry are taken approximately the same, and the ages are taken within the same quinquennial groups. It might happen that these precautions should prevent the true disparity from becoming apparent. But, on the other hand, if, as we understand, the medical case were *first found*, and then a non-medical companion case was looked for *further on in the register*, it would follow that the non-medical cases would have had a process of—perhaps unconscious—selection applied to them the tendency of which would be to give them an *a priori* advantage over the medical cases, since, other things being equal, the later entries must represent policies of longer duration than the earlier. We should be interested to know what would happen to Dr. Glover Lyon's figures if instead of *looking forward* for his non-medical claims he *looked back* for them in his registers, and so gave to the medical policies the advantage which the method as it stands appears to give against them.

PREHISTORIC TREPHINING IN PERU.

THE antiquity of trephining has formed a frequent topic for the medical historian, and many skulls have been produced from caves in France, the Canaries, Algeria, Mexico, and Peru, which bear evidences of having undergone the operation during life. M. Broca has written a good deal on the subject,[1] also Dr. Prunières of Toulouse,[2] who discovered some of the specimens. There does not seem to be any doubt that the European specimens really represent a rude surgical operation, for in many of the cases the edges of the bone are rounded as if the individual had lived for some considerable time after the operation. Less, however, would appear to be known about the Peruvian trephining, as the accounts existing in medical literature are apparently limited to a description of a single specimen by Broca and Nott. A very interesting paper has, however, now been published in *La Crónica Médica* of Peru, by Dr. A. Lorena of Lima, with drawings of four skulls, which, however, are only intended to serve as specimens of several hundred similar ones in the old tombs of Calca and Pomancanchi in Silque. Although Dr. Lorena does not seem to hold any strong views on the origin of the trephine holes, he thinks it very doubtful whether they were made by a surgical operation, though the beveling and notching may have been done by some rude instruments—perhaps with some reference to the fitting of an obturator plate of lead, silver, gourd, or other substance, such as is not uncommon at the present day in some parts of South America. It is suggested that syphilitic disease, which is known to have been very common in the time of the Incas, notwithstanding their severe moral laws, may have caused the perforations, or some of them. It would appear that the venereal origin of some kinds of disease was pretty well known, for a small statue has been preserved representing a man covered with tumours and deformities, the supposed nature of which is sufficiently indicated by the figure of the phallus engraved on the surface. Another explanation possible is that the skulls were injured by weapons. A third may also occur to those who are acquainted with the diabolical cruelty of Indians—viz., that the holes in the skulls may have been chiselled or burnt out as a species of torture. The objections to the theory of surgical trephining is that the Incas seem to have had no knowledge of boring instruments, and that the operation, if such it were, must have been an exceedingly common one judging from the numerous skulls that are found with holes in them. Again, it is known that the Incas were too timid and probably too superstitious to open the abdomen for the purpose of taking the viscera from a dead body for embalming, practising instead the dragging of the intestines &c. through the anus, so that it hardly seems probable that they would have ventured to cut open the skull in the living subject. Of course, amongst these people, as amongst others where it is more certain that holes have really been chipped, scraped, or drilled into the cranium by barbarous surgeons, the idea probably was to provide an outlet for the evil spirits which were supposed to cause headaches or other diseases. In one of the skulls with two apertures there is between these a kind of pit in shape something like the cells of a wasp's nest, which gives one the impression that the operator after making a commencement there thought better of it, and began again at a little distance. Two of the specimens figured present two apertures, and two one only. Five of the holes are approximately circular, and are in the parietal bones; the sixth, which is very irregular, probably from pathological processes, is in the occipital bone. Most of them are beveled at the expense of the outer table, and one is crenate, as if the edge had been filed with a cylindrical file or cut with a boring instrument, there being sixteen arcs in the circumference. It is possible this may have been done after death, with the intention of making an amulet.

[1] See THE LANCET, vol. ii. 1887, p. 213.

[2] See a letter from Mr. Blaker of Burgess-hill, in THE LANCET, vol. ii. 1888, p. 881.

PROPOSED DEMOLITION OF AN INSANITARY AREA AT BRIGHTON.

A PUBLIC inquiry has been held in Brighton with a view to securing a provisional order confirming an improvement scheme which the Town Council propose to carry out under the Housing of the Working Classes Act, 1890. Dr. Newsholme, the medical officer of health, has made two representations to the Town Council with regard to the area in question, and before doing so he fully satisfied himself, from the high rate of mortality prevailing in it as compared with the remainder of the borough, and from the nature of the diseases which occurred there, that it was necessary that the area should be condemned in the interests of public health. The houses, a number of which are built back-to-back, are, as a group, damp, dirty, unprovided with sufficient air-space about them, ill-ventilated, and generally defective from a sanitary point of view. They were also reported to be such that no mere alterations or repairs could make them healthy. In some instances the upper storeys had been converted into registered common lodging-houses, whilst the lower portions were let out as private apartments. The objections to the scheme of the Town Council were hardly such as are likely to be allowed to stand in the way of an improvement, which will be an obvious boon to the town, and also, in so far as health is concerned, to those for whom other dwelling accommodation will be provided than that afforded by this unhealthy area.

DANGERS OF SULPHONAL.

ALTHOUGH sulphonal is probably one of the safest, as it is one of the most efficacious, among the hypnotics recently introduced, the series of cases published by Bresslauer of Vienna show clearly that it has certain dangers. The degree of peril is difficult to estimate, as the patients were lunatics, and were also apparently feeble; but the fact is significant that out of seventy-seven patients who were treated with the drug, no less than seven showed serious symptoms, and in

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five of those there was a fatal termination. It ought to be mentioned that the patients had been taking the drug for a considerable time in good doses, and had borne it well until symptoms of disturbance set in, these being great constipation, dark-brown urine, slow, or in some cases rapid but feeble pulse, discoloured patches resembling purpura on the limbs, and great prostration. In the cases which ended fatally the cause of death was heart failure, with œdema of the lungs.

AN ISOLATION HOSPITAL SCHEME ABANDONED.

WE regret to learn that a scheme under which joint hospital provision was to have been provided for Enfield, Tottenham, Edmonton, Wood Green, and South Hornsey has had to be abandoned. It appears that opposition before Parliament was threatened by the Southgate Local Board, on the borders of whose district the hospital would probably have been erected; and it was felt that, even if success attended the efforts of the combining authorities, the appeal to Parliament would materially increase the cost. The site appears to be close to the Winchmore Hill Infectious Hospital of the Metropolitan Asylums Board; and it is not easy to conceive how a much less objectionable site, from the sentimental point of view, could have been secured. Indeed, Southgate would probably have been wise to have joined in the scheme, which would, at all events, have given them the use of a hospital which was not within their own district. The result of the opposition is the more serious because there are few suburban areas which stand in greater need of means for the prompt isolation of infectious diseases than those which had to do with this scheme. In fact, they run considerable risk if they remain long as they now are in this respect.

PUBLIC HEALTH AND PROFESSIONAL COURTESY.

A CASE of some difficulty is submitted to our judgment, but as the leading facts complained of have been publicly issued in the form of a report appearing in the local press, we feel that the matter may properly be one for comment by us. The only medical practitioner in Brandon, Norfolk, draws our attention to the fact that the medical officer of health for the Thetford rural sanitary district, having to investigate the circumstances of a diphtheria occurrence, has reported that the occurrence had its beginnings in four cases which, he states, were certified by the Brandon practitioner to have died of "influenza and bronchitis"; that he took this step without ever having seen the cases either before or after death; that in the absence, as he admits, "of any other information of a reliable nature" than a mere localisation of the disease and a record of cases and deaths, he has publicly reported that these attacks constituted the "starting-point of the outbreak"; and that the excessive fatality which attended the outbreak "was mainly due to imperfect medical supervision." And the Brandon practitioner proceeds to ask us whether such action is professional, and whether a medical officer of health has any right to examine cases without the permission of the medical attendant. Dealing with the last point first, we would remark that so far as right is concerned no duty of seeing patients is imposed on medical officers of health, that this can only be done with the assent of the sick or of their relatives, and that it must be regarded as a breach of professional courtesy to take any such action without some sort of communication with the medical attendant of the sick. A medical officer of health should not, without grave cause, undertake to go behind the certificate of notification or of death of another practitioner, and he certainly has nothing to do with the results of treatment and medical care. There may be occasions when an imperative duty is cast upon a public officer to take the step of questioning a diagnosis; and it is at such times above all others that extra caution should be taken to comply with the common rules of professional courtesy. This is the first time we have found a public report accusing a fellow medical practitioner of faulty diagnosis, together with a suggestion of faulty medical supervision; and we sincerely hope that there is, in the original report or elsewhere, something which has been omitted from the printed document, which will clear up a difficulty which is obvious in view of such facts as are before us. The duties imposed upon medical officers of health are at times very delicate, and one of the first conditions necessary to their proper fulfilment is the maintenance of an attitude of strict professional courtesy towards all the medical practitioners in the district which is concerned.

HYSTERICAL FACIAL PARALYSIS.

A CASE, said to be of this nature, was recently communicated to the Société Médicale des Hôpitaux by M. Gilbert Ballet for M. Ed. Boinet of Montpellier. The patient was thirty-one years of age, and when she came under observation was suffering from right facial paralysis of cerebral type—i.e., affecting the lower part of the face, associated with anæsthesia, with rhythmical tremor of the right arm. The tremor was recent, having come on after injury, but the condition of the face dated back as far as seven years. The diagnosis of hysteria is made upon several grounds, the strongest of these being the fact that the tremors disappeared in a few days under suggestion, a sufficient proof apparently for French authorities that it was hysterical. But even if we grant that the tremor was a hysterical manifestation, it by no means follows that the facial paralysis is, and however difficult the explanation of the condition may be there seems to be little, if any, justification for the diagnosis of hysteria, a diagnosis as unsatisfactory as it is meaningless.

THE HOUSING OF THE SALFORD POOR.

AN inquiry has been held at Salford into the accuracy of the representations of Mr. Charles Edward Paget as to five unhealthy areas under the Housing of the Working Classes Act. These areas contain respectively 149, 84, 82, 42, and 21 houses, the populations being 615, 240, 110, 90, and 68 persons. The density of population in each respectively is 360, 377, 468, 233, and 319 persons per acre. The average general rates of mortality in the five areas during the five years 1884-88 ranged between 40·8 and 78·2, and during the same period the death-rates from the principal zymotic diseases, including diarrhœa, ranged between 5·8 and 14·5, and from pulmonary diseases, including phthisis, between 14·4 and 25·4. During the years 1889 and 1890 these high death-rates were maintained. Apart, therefore, from defective condition of houses in the areas, there was a strong case against them, but we gather from the report of the evidence given at the inquiry that the houses were of the back-to-back kind, and therefore nothing could be urged on their behalf. As a matter of fact, the schemes were not opposed, and we assume therefore that no obstacle will be put in the way of the Salford Corporation. The schemes proposed only to rehouse 370 of the 1123 persons who would be displaced, and Mr. Samuel Joseph Smith, the inspector of the Local Government Board, who held the inquiry, pointed out that there was no evidence as to how accommodation was to be provided for the remainder. Mr. Paget, however, showed that within a quarter of a mile of these areas there was already vacant accommodation for 625 persons. The inhabitants will therefore not be exposed to any serious inconvenience. Part II. of the Act gives special facilities to local autho-

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rities on this point, and it may be hoped that eventually Part I. will be modified in the same direction. It is not unreasonable to require that the land cleared shall be devoted to houses for the working classes, but it is imprudent in the highest degree to require that an area which has been cleared at great expense shall be again overcrowded with buildings and population. We congratulate the Salford Corporation and their medical officer on the step which has been taken, and trust that nothing will lead them to hesitate to continue to apply the Act until all the unwholesome spots in their borough have been improved.

THE STRUGGLE FOR LIFE AT THE WRECK OF THE "UTOPIA."

IN *The Times* of March 25th there appears from an officer on board the *Anson* a most graphic account of the *Utopia* disaster, evidently written while the terrible scene was fresh in his memory and its horror still vivid before him. While the officers of H.M.S. *Anson* were dressing for dinner the "officers' call" sounded, and all were speedily at their posts. The *Utopia* was sinking fast, and the waves, washing over her, were sweeping away people by dozens into the sea around. Every wave that passed over the ship lessened the numbers struggling for life. There was one man hanging by one leg to some rope aloft quite dead and nearly naked, and around were others clinging and shrieking for help. Another man had lashed himself to the sails for security, and was drowned standing up, while some of those free, and apparently in greater danger, were saved. One poor fellow, when the *Utopia* first sank, got so excited that, crying out "Oh! I can't stand this," he jumped overboard. The cold water brought him to his senses, and he was picked up and saved, but he had no recollection of what he did. Here is an instance of the effect of shock on the senses suddenly depriving the individual of the power of using them even to save his own life. We are apt sometimes to underestimate the effect of shock in accidents less appalling, and it is only by such a circumstance as is here described that we can judge by comparison of those lesser instances of shock to the nervous system which we are so often called on to relieve or to estimate the bearing of with regard to the future life of an individual; especially is this so in railway accidents, in which shock to the nervous system often forms the most serious part of the injury.

ST. BOTOLPH'S CHURCH, ALDGATE.

IN THE LANCET of March 21st we pointed out that the excavations in progress at St. Botolph's Church, Aldgate, for the purpose of widening the public roadway at the junction of Houndsditch with Aldgate High-street, had disclosed a quantity of human remains. It appears that in the course of this work no less than 116 wooden cases, measuring inside 4 ft. by 1½ ft. by 1½ ft., each containing the osseous remains of twelve persons, in addition to forty coffins, each containing one body, or, approximately, in all, the remains of 1432 persons, had been exhumed on Friday, the 20th ult. It is likely that since then more of these boxes and coffins have been discovered. This enormous mass of human corruption, we were informed by a correspondent in last week's issue, has been "reverently and decently" disposed of by placing it in the vaults beneath the church itself, after being smeared with lime and covered an inch thick with vegetable charcoal. A fortnight ago we protested against this as "a retrograde movement not admitting of any arguments in its defence," and suggested the removal of such remains to some suburban cemetery. Dr. Sedgwick Saunders, medical officer of health for the City of London, also feels "that an earnest protest against such a course should be entered in the interest of public health." He writes: "The floor of these vaults consists of fine dry earth, intermixed with human bones in great quantities on and beneath the surface, besides which they contain sunken brick graves, in all probability containing human bodies in every stage of decay." He adds: "We know that no amount of brickwork and cementing can ensure perfect sealing of noxious emanations with any certainty." Further, the heating apparatus of the church will act as an air pump, by which the foul gases will be attracted and conducted into the interior of the church. In addition to this Inspector Hills reports, that "settlements have taken place in the brickwork, occasioning cracks in the arches themselves, which are liable to increase and add to the danger." Dr. Saunders recommends that a representation of these facts be made to the Home Secretary, with a view to amending the order of the Consistory Court, and directing as an alternative the removal of the whole of these human remains to the City of London Cemetery at Ilford, a course, as we pointed out previously, which should have been originally carried out. Dr. Saunders has communicated with the Home Office, and is authorised to state that Dr. Hoffman, Medical Inspector, Burials Act Department, is in accord with these views. It is a question whether the interment of human remains within St. Botolph's Church is not in direct contravention of an order in Council granted in 1853, which prohibited any further burials either in the vaults or churchyard of St. Botolph's Church, Aldgate. But if the question of the legality of the proceeding is doubtful, it is more than fifty years since its impropriety and its unwisdom were settled. In these days of burial reform it is without defence.

DURHAM DEGREES IN HYGIENE.

A SCHEME whereby registered medical practitioners over twenty-two years of age can obtain the degree of Bachelor or Doctor of Hygiene in the University of Durham has been approved by the Senate of that University. The course includes attendance on lectures on public health, attendance on the clinical practice and lectures, instruction in the City Hospital for Infectious Diseases in Newcastle-on-Tyne, and instruction in sanitary medicine and practical hygiene. The examination will be conducted by written papers and practical and *viva-voce* questions, and will be commenced on Sept. 14th, 1891, and again in April, 1892. Particulars of the syllabus for this examination will be given in our Students' Number.

MORVAN'S DISEASE.

THIS condition, first described about eight years ago by the physician whose name it now bears, is one of those apparently spinal diseases associated with changes in sensibility and nutrition manifesting themselves especially in the hands. The three symptoms on which at first a diagnosis was made were pains in the limbs at the commencement of the illness, paresis and analgesia, especially of the hands, and the appearance in one finger after another of whitlows, painless but destructive. Several cases have been described, but the pathology of the disease is still uncertain, some physicians regarding it as merely a form of syringomyelia, while Morvan and his followers, relying upon the somewhat unsatisfactory examination of one specimen, regard it as due primarily to some change in the cord associated with thickened arteries, and secondary changes in the peripheral nerves. In the *Journal of the American Medical Association*, Dr. Church of Chicago gives a clinical account of a case which seems to answer to the description of this disease. The patient is a Swede, aged thirty-five, the commencement of whose symptoms date back to ten years ago, when he had a whitlow on the

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right ring finger, which was painful, and has left the distal phalanx stunted, and nail much altered. About this time, also, his back was noticed to become bent, although previously it had been quite straight. A few years ago, after bathing in a cold lake and driving afterwards some distance, his left wrist, hand, and arm became swollen and painful. The swelling in the wrist has never quite subsided, and the carpus is now to all appearance disorganised but quite painless. Three years ago he had a painless whitlow on the right index finger, in which now the distal phalanx is completely wanting, as well as a part of the middle one. In the same year the middle finger of the right hand suffered a similar mutilation, also from a painless whitlow. He now has these deformities in the fingers and the left wrist, has retention of ordinary tactile sensibility everywhere, but with loss of the power of distinguishing tactile from painful impressions in the hands. Above the hands this disability gradually disappears. There is also present marked lateral curvature of the spine; his gait is shambling, but displays no distinctive peculiarity; his reflexes are normal, and his mind is unaffected. The case is a peculiarly interesting one, especially in reference to differential diagnosis from syringomyelia, but more will have to be known of both conditions before a certain diagnosis is possible.

CHYLURIA IN HUNGARY.

A CASE of chyluria, the first recorded in Hungary, was exhibited by Dr. Angyán before the Buda-Pesth Medical Society at its last sitting. The patient was a man of thirty-four, who had noticed his urine to be turbid for four or five months, this being especially marked in the latter part of the day, that passed in the morning being less affected, and sometimes even quite clear. Occasionally he suffered from pain in the region of the kidneys. The urine was found to pass turbid through a filter, but the addition of ether cleared it. With the microscope, molecular corpuscles were seen, and also red and white blood-cells. The specific gravity varied from 1025 to 1036.

DEATH UNDER CHLOROFORM.

A CASE of death under chloroform is reported by Surgeon-Major Gordon Price, civil surgeon at Burdwan, India, in the current issue of the *Indian Medical Gazette*. The fatality occurred at the Burdwan Dispensary, and the patient, aged thirty, was about to have a plastic operation performed upon her face for the restoration of her nose. Physical examination revealed no evidence of disease beyond a splenic enlargement; the heart and lungs were healthy. Surgeon-Major Price himself administered the chloroform, and used all precautions. Upon the patient becoming unconscious, he requested his assistant, Surgeon Babu Guru Nath Sen, to undertake further chloroformisation while he proceeded with the operation. Assistant Surgeon Sen exclaimed, "Wait, her pulse has stopped." "How can that be?" was the reply; "her respiration is all right," pointing to the patient's abdomen, which was rising and falling regularly. Upon feeling for the radial pulse the statement of the assistant surgeon proved to be correct. "A few seconds afterwards her breathing, which had been perfectly normal, almost ceased." Artificial respiration was sedulously but vainly tried for an hour, and all efforts to stimulate the heart and respiration failed. Surgeon-Major Price concludes: "There was not at any time during the administration of the chloroform the slightest tendency to stertorous breathing, and the woman's chest and abdomen could be seen regularly rising and falling, as in normal respiration, until some seconds after the exclamation of the assistant surgeon. The amount of chloroform used was not measured, but was not excessive. I have always believed, even before the time of the Hyderabad Commission, that in death from chloroform the breathing was primarily affected, and have, in administering the drug, paid continual attention to the patient's respiration, and have impressed this at all times upon my assistants. In the present case there cannot be any doubt that the heart was primarily affected."

FRIEDLÄNDER'S PNEUMOCOCCUS AS A FERMENT.

IT has been known for some time that Friedländer's pneumococcus is capable of inducing fermentative changes in suitable solutions of glycose and cane sugar, this having been first discovered by Brieger. His observations have quite recently been confirmed by Dr. Percy Frankland, Mr. Arthur Stanley, and Mr. William Frew, who have just communicated a paper on the subject to the Chemical Society of London. They further found that the organism ferments maltose, milk sugar, raffinose, dextrin, and mannitol, but that, like the bacillus ethaceticus, it does not attack dulcitol. They made a special study of the fermentations of glucose and mannitol, determining quantitatively the proportions in which the several products are formed. These products are in each case ethyl, alcohol, acetic acid—generally accompanied by a little formic acid and a trace of succinic acid—carbon dioxide, and hydrogen. Both the glucose and mannitol were in all cases only partially fermented, and the decomposition of the glucose was especially incomplete, glucose being apparently less readily attacked by the organism than mannitol and cane sugar. The fermentation was not rendered more complete by furnishing the organism with a more abundant supply of nitrogenous food. The products of the mannitol fermentations were not only qualitatively similar to those obtained in the fermentation of the same substance by the bacillus ethaceticus, but the relative proportions in which they were formed were almost identical, the ratio corresponding closely to the molecular proportions $2\,C_2H_5.OH : CH_3.COOH$.

THE INFLUENZA IN AMERICA.

AN epidemic of this disease is said to be raging with more than ordinary virulence in Pittsburgh and in Alleghany. At Chicago the death-rate has increased to 150 daily. Hospitals which were intended for the reception of accident cases or paying patients only have been thrown open to the sufferers from influenza, and are crowded beyond their resources. From Cleveland, Ohio, 2000 cases are reported, and in New York 160 policemen are on the sick list.

THE SECOND CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THIS Triennial Congress is to meet at Washington, D.C., in September, from Tuesday, Sept. 22nd, to Friday, Sept. 25th, inclusive. Dr. S. Weir Mitchell will preside. Dr. John S. Billings is treasurer, Dr. William Pepper is chairman of the executive committee, and Dr. W. H. Carmalt, Newhaven, Conn., is the secretary. The Congress is a meeting of certain national medical societies, so arranged that, while each society meets separately, there are stated occasions in which the members of all meet and constitute the Congress. According to the preliminary programme the chief subjects of discussion will be: On the Tuesday, Conditions underlying the Infection of Wounds, including a discussion on Disinfection; of the Relation of Bacteria to Suppuration; of the Resistance of Tissues to the Multiplication of Bacteria; and of the Effects of Antiseptic Agents on Wounds, by Dr. Welch of Baltimore, Professor of Pathology in Johns Hopkins University, and Dr. Roswell, Professor of Surgery in the Buffalo Medical College. On the Wednesday: The Late Manifestation of Syphilis, by

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Dr. Phineas S. Conner of Cincinnati, Professor of Surgery in the Medical College, Ohio, and Dr. Abner Post of Boston, Instructor in Venereal Disease and Syphilis in Harvard University. On the Thursday: Fibroid Processes (Chronic Interstitial Inflammation, Scleroses), their Pathology and Etiology, with special reference to the Influence of Diathesis and Heredity, by Dr. Alfred L. Loomis of New York City, Professor of Pathology and Practice of Physic in the University of the City of New York, and Dr. William Osler of Baltimore, Professor of Medicine in Johns Hopkins University. The programme is well conceived. The constitution of the Congress warrants that the subjects will be viewed from many different points, and the executive is a guarantee of the representation of all that is best in American medicine and surgery.

"ASTASIA-ABASIA."

DR. GRAEME M. HAMMOND of New York reports a case of this disorder. The patient was a young woman in whom the symptoms came on after overwork. She had no neurotic history, she had previously shown no sign of hysteria, and she was active and energetic naturally. But at the commencement of her illness she had suffered from aphonia. The condition described as "astasia-abasia" is one of inability to stand or walk, but without paralysis—that is to say, that the patient is able to carry out all movements of the limbs as she lies in bed, but is unable to walk. This patient in attempting to walk advanced the left foot, and then slowly brought the right one up to it, alleging that if she tried to rest her weight on the right leg she would fall. An attempt to do so resulted in her turning round to the right and falling, and the same tendency to turn to the right was evident to anyone supporting her. There was no anæsthesia, colour-blindness, or contraction of the visual fields. The knee-jerks were active, and there was no ankle-clonus. There appeared to be, however, slight loss of muscular sense in the right leg. The previously described cases of this disorder have been similar to Dr. Hammond's, although in many there have been various disturbances of sensibility, consisting in some of anæsthesia, in others of hyperæsthesia. There seems to be little, if anything, to distinguish the case from one of so-called functional paraplegia—a by no means uncommon condition,—and Dr. Hammond himself is of opinion that the condition is a hysterical one.

THE ACTION OF THE VAPOUR OF ETHEREAL OILS ON BACTERIA.

NOTWITHSTANDING the researches of Schultz, Koch, Schill, Fischer, Riedlin, Chamberland, and Braddon, the action of ethereal oils in a state of vapour upon bacteria is by no means well known. As this is a subject which bids fair to have practical interest for the physician as well as for the bacteriologist, a somewhat elaborate research by Dr. Omelchenko, which is published in the *Vrach*, is a welcome addition to our information. Its details must have been very carefully planned and carried out, for it gained the Pirogoff gold medal of the University of Kieff. The observations were made upon cultures of the bacilli of typhoid fever, phthisis, and the Siberian sore (anthrax) by passing over them with the help of an aspirator a slow but continuous stream of air saturated with the vapour of certain ethereal oils, and noting the time which each different vapour required to destroy the bacilli; the quantity of each oil used and the volume of air passed over each tube, as well as the amount of each vapour which the air was capable of holding, were also noted. It was found that if the air was not quite saturated, the effect was very markedly diminished. The bactericidal properties of the different oils were found to be greatest in oil of cinnamon, after which the others may be arranged with reference to their bactericidal power in the following descending order:—Oleum fœniculi, oleum lavendulæ, oleum caryophyllorum, oleum thymi, oleum menthæ piperitæ, oleum anisi, oleum menthæ crispæ, oleum eucalypti globuli, oleum camphoræ japonicæ, oleum valerianæ, eucalyptol, French oil of turpentine. The oils of lemons and of roses had an exceedingly slight action. Bacteria in a dry state were much less easy to destroy than those which were in their natural state; a fresh condition of the sporules of the Siberian sore, however, weakened the destructive effect of the vapour. It was found that the protoplasm of the various bacilli was affected in its chemical constitution in a constant manner for each kind of bacterium, losing its power of taking the stain. This change seemed to affect all parts of the organism equally. The death of the bacteria was shown both by this loss of capacity for taking the stain, and also by the tendency to assume a granular condition. Tables are given of the experiments, from which we see that oleum cinnamomi and oleum valerianæ took the same time to destroy the bacilli of typhoid fever—viz., forty-five hours; but, inasmuch as each litre of air took up only 0·0005 grm. of the former, as against 0·0082 of the latter, the total quantity of cinnamon oil used being 0·0646 grm., while 1·0429 grm. of the oil of valerian was required, it is evident that the former deserves the higher place in the scale of bactericidal substances. Experiments by previous writers made with emulsions of ethereal oils placed in contact with bacterial cultures have not generally shown that these possessed a high bactericidal capacity, and Dr. Omelchenko found that when he passed the air through emulsions instead of through the oils themselves the amount taken up was materially less than in the latter case, and so it would appear that the bactericidal capacity of any one of these substances depends largely upon its volatility.

THE PUBLICITY OF NOTIFICATION RETURNS.

THE London School Board have applied to the Metropolitan Asylums Board to be furnished with information respecting the occurrence of cases of infectious diseases in the metropolis, as shown by the notification returns, and in making this demand they are supported by what passed at a conference of metropolitan medical officers of health in December last. We can quite understand the demand of the London School Board. Nothing is more evident than that diseases such as diphtheria, measles, and scarlet fever owe their spread largely to the aggregation that takes place in elementary schools, and if any information is available, enabling this spread to be prevented or diminished, it seems absurd to withhold it. But it can apparently only be properly utilised if the schoolmasters and schoolmistresses are, in turn, supplied weekly with the notification lists which apply to the localities from which the children attending their schools are derived. And this means an abandonment of that avoidance of publicity which is believed to have governed the drafting of the Infectious Disease (Notification) Act, 1889, and especially of its third section, by which it was enacted that the returns, instead of being sent to the sanitary authority, were to be transmitted to the medical officer of health, who could be trusted to understand the desirability of maintaining, so far as it was possible having regard to the interests of the public, an attitude of professional secrecy.

OCULAR TROUBLES IN TABES DORSALIS.

DR. BERGER, in the *Revue de Médecine*, has drawn attention to this subject. He has observed 109 cases of the disease, and from the results of those observations he draws certain conclusions. He finds that, in cases in which the condition has manifested itself in youth or in old age, serious ocular

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troubles are not met with, and that it is when symptoms of the disease appear between the ages of twenty-five and forty that those complications for the most part occur. In half the cases observed the Argyll-Robertson phenomenon was present. In eleven cases it was accompanied by mydriasis, in fifteen cases the pupils were of the usual size, and in two there was contraction of one with dilatation of the other pupil. He also found in a certain number of cases some irregularity in the shape of the pupil, and he remarks that when myosis is present with the Argyll-Robertson phenomenon the instillation of atropine causes a dilatation of the pupil, which may persist for four or five weeks. Atrophy of the optic nerve was found to be present in 33 per cent. of the cases, and it did not occur simultaneously in the two nerves. The interval between the commencement of atrophy and the establishment of complete blindness was found by this author to vary from two months to seventeen years, and he states that it usually begins in the pre-ataxic stage, and that, this stage once passed, the danger of atrophy setting in is considerably diminished. Paralysis of the external muscles of the eye was observed in 38 per cent. of the cases. It was found to occur usually in the pre-ataxic stage, to be as a rule transitory, and to be more frequent and more lasting in patients with a clearly specific history. In conclusion, the author formulates a theory of the pathology of tabes. In his opinion it originates in some change in a centre in the medulla regulating the vaso-motor condition of the optic nerve and of the spinal cord.

WORKING WOMEN AND FACTORY LEGISLATION.

THE Women's Trade Union League recently held several special meetings to discuss the Factory Bills now before Parliament. The League, from its long and practical experience of the difficulties under which women labour who seek to earn their living, was in a good position to judge the merits of the proposed legislation. This legislation, in the opinion of the League, is evidently incomplete. The discussions are summed up by a series of resolutions which, we are pleased to note, agree with many of the suggestions we made during the course of our inquiries on the sweating system. For instance, the first resolution insists that in factories and workshops each sex should be provided with separate sanitary accommodation. Then the League is so impressed with the necessity of a great increase in the number of factory inspectors that it proposes the creation of sub-inspectorships. These sub-inspectors would, we presume, stand in somewhat similar relationship to the inspectors as sanitary inspectors do to the medical officers of health. With respect more particularly to the sweating system, the League agrees with us that "the worst economic and sanitary evils arise from the impossibility of supervising and controlling home workers"; it therefore urges that "home work should be discouraged by every means available, and that all such places, including even bedrooms, where goods are made up which the public will be invited to purchase should be put under the control of the public, and consequently subjected to the visits of factory and sanitary inspectors." This thoroughly coincides with the principle we have always proclaimed—namely, that the public has the right to protect itself against the danger of infection by controlling the manufacture of the articles it purchases. But in all this there are two difficulties to be overcome—the supineness of local authorities and the resistance of the working classes themselves. The local authorities are, too often, slow to take action. The League therefore urges that some central authority should have the power to stimulate and, if necessary, to force the hand of the local authority. This, we take it, is what is implied by the first clauses of Mr. Matthews' Bill. There will still remain, however, the resistance of the working classes themselves, who dread such sanitary inspection as may lead to interference with their work and consequently reduce their too slender earnings. The Women's Trade Union League, to obviate this obstacle, recommends that power should be given by law to local authorities to make grants from the rates in compensation for loss of work occasioned by the closing of workshops or factories ordered by such local authorities on sanitary grounds. This is an important suggestion. We have often urged that workers, especially home workers, like tailors, laundresses, &c., who usually earn barely enough for subsistence, should, when their work is stopped for sanitary purposes, such as disinfection, be compensated by the authorities. Otherwise the laws of self-preservation and the fear of hunger will tempt workers in this precarious position to conceal the outbreak of any infectious disease. They must be made to feel that it is a public duty to give immediate notice of the presence of infection in their homes or their workshops, and that the neglect of this obvious duty will entail severe punishment, but that its due observance will result in no loss, for due compensation will be forthcoming. Altogether it will be seen that the Women's Trades Union League has, in its study of the necessary remedies to mitigate the evils of the sweating system, come to about the same conclusions as those we were led to adopt after the disclosures made by the special commissioners of THE LANCET, who visited the principal sweating dens of East London and the leading provincial towns.

LARYNGEAL COMPLICATIONS IN TYPHOID FEVER.

IN severe cases of enteric fever various throat complications have been described, but their connexion with the original disease has not been satisfactorily established. In *L'Union Médicale* of March 10th, 1891, Professor Peter describes a case of a man who died of typhoid fever, and in whom the throat complications were well marked. In commenting on the case he remarks that hyperæmia of the larynx is a common symptom of typhoid fever, being most marked on the aryteno-epiglottidean folds. Ulceration following this condition was first noticed by Louis in 1828, who stated that if at a necropsy extensive ulceration of the larynx was found, and if tuberculosis could be excluded, typhoid fever lesions should be sought for. Occasionally, when the laryngitis is intense, Eberth's bacilli are found in the glands around the larynx. An œdematous swelling often appears, and the inflammation may lead to suppuration, extensive ulceration, and even destruction of the cartilages. Laryngitis in connexion with enteric fever assumes two chief forms: the acute and the chronic. The first-mentioned develops from the fifteenth to the twentieth day, at the time when the disease ought to be subsiding. Its onset is marked by local pain, difficulty in swallowing, and dyspnœa chiefly affecting inspiration, expiration being perfectly easy. The difficulty of breathing gradually increases, generally requiring tracheotomy to be performed in order to prevent death by suffocation. Post mortem there is found sero-fibrinous or purulent infiltration with commencing destruction of the epiglottis and the arytenoid and cricoid cartilages. The more chronic form does not commence until convalescence has been well established, at least two months after the termination of the attack, and when the patient is apparently cured. The voice becomes hoarse, there is evident difficulty in speaking, and finally symptoms of œdema of the glottis appear. The prognosis is then very grave; according to Sextier of ten cases which required tracheotomy all proved fatal. Some German statistics show that of nineteen cases which required

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operation seven only recovered. Even if a cure is effected the condition is a very unsatisfactory one, as the cannula has to remain in position for an indefinite period, and the cicatrices which form in the larnyx often producing such constriction as to cause almost total obstruction. In short, in all the parts affected by enteric fever there is a tendency to ulceration, and this is particularly liable to occur in the larynx, and if such happens the submucous tissue becomes infiltrated, and perichondritis follows in its turn. Finally, there is erosion of the cartilage; and, if the patient survives, there are premature ossification of the cartilages and necrosis of the epiglottis and of the arytenoid and cricoid cartilages. Sometimes a small portion of cartilage may be detached—a very dangerous occurrence, as it is very apt to fall into the trachea and cause alarming symptoms, and even death from suffocation. At other times the whole cricoid cartilage may become detached, and be ejected in the form of a sequestrum. The only treatment likely to be effectual is to apply counter-irritants, such as blisters, to the front of the neck.

REGULATION OF STREET MUSIC.

THE nuisance caused by street "musicians" is a very ancient grievance, and it is greatly to be hoped that Mr. Jacoby will be more successful in his proposed measure for its removal than others have been before him. His proposal is that every street "musician" shall, when requested by any householder to cease playing his "instrument," do so, and remove to a distance of not less than a quarter of a mile. There are, we believe, other provisions, but this is the one in which, as caring for the public health and the comfort of members of our profession, we are most interested. A large proportion of the inhabitants of these kingdoms must dwell in large towns or cities, and to all those who do not possess the power of abstraction, the wear and tear of nerves, the worry and trial of temper caused by noises, tell very seriously on the health, and, it may be added, even on the duration of life. Street noises may be divided into those which are inevitable and those which can be prevented. To the former belong those caused by street traffic, to which people get so used that the quiet of the country is often irksome; while modern forms of pavements have in recent years done something to diminish them. The principal noises which can and ought to be prevented are those caused by street cries and street "music." Church bells, too, especially when tolled in the monotonous manner so familiar to all Londoners, cause a noise which is very distressing to many invalids as well as to healthy but nervous people, and which is wholly unnecessary. Whether it would be possible to silence the bells of the established churches by episcopal authority is an open question; but it may be observed that in churches and chapels belonging to other denominations and in the Episcopal churches of Scotland large congregations assemble for worship without any bell summons; and if the bells in all the London churches were silent save at the hours, half hours, and quarters, the congregations would probably be as large, though there might at first be some late arrivals. We have frequently pointed out that the tolling of bells previously to any other service than morning and evening prayers and funerals is not legal, and is certainly without any use. It is unfortunate that the subject of street "music" has never been treated either in or out of the House of Commons with the seriousness which it merits. Those who complain of it are ridiculed, or a plea is urged on behalf of the poor who but for these itinerant "musicians" would never hear that "music" which "hath charms to soothe the savage breast." It may be very safely asserted that the music alluded to by the poet was very different from the discordant sounds which issue from German bands and Italian barrel organs. Moreover, Londoners have this so-called street music inflicted upon them at any hour of the day, however unseasonable, from early morn to dewy eve, and even up to nearly midnight. The late Mr. Babbage, the late John Leech, and others, who have earned fame in literature, had their lives harried, if not shortened, by this pest, and the marvel is that it has been tolerated so long. The Bill proposed by Mr. Jacoby is, as regards this its most important clause, similar to a local Act in force in Liverpool and elsewhere. The streets do not belong to any individual or class, but to all, and nothing can be more reasonable or moderate than that any householder should have power to prevent any street "musician" from playing to his annoyance. Care must be taken to draft the clauses so that there shall be no loopholes left for evasion, and it would be well to have copies of the Act (if passed) translated into German, Italian, and such other languages as may include the nationalities of all street "musicians." In conclusion, it may be observed that street bands and organs have been the cause of many fatal street accidents. For all which reasons we trust that Mr. Jacoby's Bill will pass.

A REMEDY FOR ANTHRAX.

MR. E. H. HANKIN (*Centralbl. f. Bakter.*, vol. ix., Nos. 10, 11) of Cambridge University has succeeded in isolating from the spleen and blood-serum of the rat an albuminoid substance which destroys bacterial life. It is a basic body, differing from any bases hitherto known in being insoluble in alcohol and in water, and in not dialysing. It is a globulin; and to its presence is ascribed the power possessed by the blood serum of the rat of killing anthrax bacilli. Mr. Hankin thinks it probable that the immunity which the rat enjoys to anthrax and diphtheria is, in part at least, to be ascribed to the capability of the rat organism of producing this material. Still further importance is to be assigned to this research from the conclusion that the bactericidal property of this substance can be exerted not only outside, but also within the body of animals susceptible to anthrax. Hence it is possible, he thinks, for the "protective albuminoid body of rats" to be utilised as a remedy for anthrax.

JUVENILE SMOKING.

EXCELLENT common sense on the whole directed the proceedings at a conference recently held in the Town Hall, Manchester, to consider the expediency of arresting the prevalence of juvenile smoking. According to the medical officer of health for the city this habit is practised by 80 per cent. of the Lancashire boys, and his rough calculation may not be very far from an accurate statement of facts. Anyone, or rather everyone, who daily meets with that presumptuous atom of manhood, the boy cigarette-smoker, must have been astonished at the general distribution of the prodigy. Equal, if not greater, is the surprise excited by his diminutive size and exceedingly tender age. Some years ago it was the boy of twelve, fourteen, or sixteen that opened our eyes. Now it is the six or eight years old, the literal infant who prolongs his still recent privilege of suction in a fashion undoubtedly hurtful by perverting at a critical period the sensitive processes of nervous action and nutritive change. The Manchester conference discussed various possible correctives of this mischievous practice. Among these we may mention education of a homilectic character, to be carried out in Board schools. Another and more practical suggestion advised ministers and teachers to set the example of abstinence in their own persons. As a last resource, it was proposed that the aid of the law—restricting, as in Germany, the right to use tobacco to persons over sixteen years of age—should be called in to strengthen

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the gentler measures already referred to. As regards the wisdom of this latter step there would seem to be some question. We are not of those who favour the unnecessary multiplication of petty laws. There is, in cases of the kind in question, no power which in our opinion is either so natural, so safe, or so effectual as that of judicious home training, and we are not hopeless of yet seeing its influence applied far more widely than at present.

THE DEATH OF EARL GRANVILLE.

WE record most regretfully the close of the earthly career of the eminent statesman and politician Lord Granville, at the age of seventy-six years. In his last illness he was attended by Sir Andrew Clark, Sir James Paget, and Mr. Reginald Harrison. Some six weeks ago he caught a chill, from which he never completely rallied. Being of an extremely gouty disposition, his previous attacks of that disease had very much enfeebled his recuperative powers. From time to time he seemed to rally and regain strength; and during the illness he had an attack of parotitis, which resulted in suppuration of the parotid gland and necessitated its being opened. This was the only operation to which he was submitted, and it did not seem to have very much to do with the fatal issue. During the last week of his illness he manifested a great distaste for food, and although all kinds of endeavours were made to administer nourishment they were unsuccessful. He gradually grew weaker, and finally succumbed on the evening of Tuesday, March 30th. While all men owe gratitude to him for the deep interest he took in educational matters, medical men owe more from the peculiar interest he took in that profession. Universities and colleges, hospitals and medical schools, have alike derived inestimable assistance from the deceased nobleman. He occupied the position for the last thirty-five years of Chancellor of the University of London, and was president of the Royal Medical Benevolent College at the time of his death. A late president of the College of Surgeons has spoken of him as "an illustrious statesman, who, as Chancellor of the London University, is foremost in the promotion of general education, and President of the Medical Benevolent College, a president who has taken a very active part in its welfare." But in days long since gone by, between 1837 and 1846, the period *par excellence* of medical reform, when he was a member of the House of Commons, he invariably lent his assistance to the promotion of those reforms, and has frequently expressed his admiration of the founder of THE LANCET, and of the efforts made by the late Mr. Wakley to effect legislation on behalf of the medical profession. Those were the days of the Coroners Bill, the Medical Witnesses Bill, the Factory Bill, the Vaccination Bill, and the Medical Reform Bill. In all these legislative measures, and in many others, the late Earl took an active part, and accorded his influential support to every measure of reform which was to benefit the medical profession generally. And since that period, during the forty years in which he had occupied a seat in the House of Lords, he continued to be an earnest friend and benefactor to our profession.

THE RESPONSIBILITY FOR INFECTION.

IT is nothing new to learn that infection may be transmitted by post, yet we cannot doubt that this fact is often overlooked and sometimes, as in an instance lately reported, by persons whose knowledge of the probable consequences ought to make them more careful. In the case referred to a hospital matron was censured and fined in costs for sending to the neighbouring isolation hospital by parcel post, and without using the needful sanitary precautions, a package of clothes which had been forwarded to her by a nurse for disinfection. One can easily understand the natural dread which prompted this action as the readiest means of removing from the hospital premises material so dangerous to the health of its inmates. The primary fault it must be allowed was not on the side of the matron. The sender of the clothes and the occupants of the house whence they were sent were the original culprits, for, by the terms of the Infectious Diseases Act, disinfection, where not undertaken by the local authorities, must be carried out by the owner or occupier of the infected dwelling. Possibly the clothes in this case were the nurse's own, but if so this makes no real difference. They were for the time being within the infected house, and their purification should have been there provided for. This circumstance does not, of course, excuse the matron, who, having received the parcel, was responsible for its disinfection; but it should serve, as it well may, to render any in her position severely careful that the duties imposed by law in such matters shall be discharged by those who are in the first place accountable for their performance.

THE PIGMENT OF MELANOSIS.

DR. FELIX LAGRANGE, in a paper read before the Société d'Anatomie et de Physiologie de Bordeaux on Dec. 8th of last year, described some investigations he had made as regards the distribution of the pigment in two melanotic tumours. One case was that of a melanotic sarcoma which had been removed from the orbit, and the other was a tumour of the eyelid. Microscopic examination showed the same structure in both cases, but the tumour which had developed in the orbit was more deeply pigmented than the other, though the distribution of the pigment was morphologically the same in each case. Sections of both tumours exhibited fusiform cells and many embryonic elements. A few vessels were seen, but there were no hæmorrhagic foci. The pigment was intra-cellular. In some cells it was completely absent, whilst others were so full as to lose their characteristics, and to appear as black round masses; other cells, again, contained in their protoplasm fine black granules. In order to study the nature of this pigment it was necessary to isolate it from the cellular elements. By treating a section with sulphuric acid, the cellular elements were partially destroyed. Under the influence of this reagent the sarcomatous tissue became shrivelled, remaining as a translucent structureless mass, in the centre of which was the pigment. Nitric acid was next tried; but, although the structure of the tumour was completely destroyed, there still remained a whitish residue in which the pigment remained entangled. In order to obtain a pure preparation of melanine the following process was adopted with success. Having treated a portion of the tumour in which the pigment was abundant with pure sulphuric acid, it was placed, still saturated with the reagent, for twenty-four hours in a moist chamber. In this way the now plastic tissue was partially liquefied, some glycerine was then added, and the containing vessel closed for forty-eight hours. At the end of that period there remained nothing but the pure pigment. It presented three principal forms. 1. Some black masses, evidently formed by the union of a series of granules, separated by unequal intervals, the spaces being filled by a transparent cement which had been unaffected by the acid. These masses were the remains of those cells which had appeared to be entirely filled with the pigment. 2. Fine disseminated granules, which were rounded and very numerous. 3. Small irregularly shaped particles, for the most part angular, but presenting considerable variations in their form and size.

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FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—The medical faculty have drawn up a plan for altering the medical examinations for the degree of M.D. According to the new scheme, which has yet to receive the sanction of the Minister of Education, the present three great *Rigorosen*, or "severe examinations," will be replaced by five, as follows:—1. Physics and Chemistry. 2. Anatomy and Physiology. 3. General Pathology, Pathological Anatomy, and Pharmacology. 4. Clinical Medicine, Surgery, Midwifery, and Ophthalmology, also Operations. 5. Systematic Medicine and Surgery, Medical Jurisprudence, Hygiene, and *vivâ-voce* examination in some special department of Practical Medicine.

Kiel.—Dr. F. Graf von Spee has been promoted to the rank of Extraordinary Professor.

Rostock.—Dr. F. Blochmann of Heidelberg has been appointed to the chair of Zoology, in succession to Professor Braun, who has accepted an invitation to Königsberg.

Toulouse.—This school of medicine has been suppressed by decree, and replaced by a "faculty." The following appointments have been made to professorships:—Anatomy, M. Charpy; Histology, M. Tourneux of Lille; Pathological Anatomy, M. Tapie; Operations, M. Labéda; Forensic Medicine, M. Duponchel; Clinical Medicine, M. Caubet and M. Mossé of Montpelier; Clinical Surgery, M. Chalot of Montpelier and M. Jeannel; Clinical Midwifery, M. Crouzat of Paris; Chemistry and Toxicology, M. Frébault; Pharmacy, M. Dupuy.

Vienna.—Dr. M. Kassowitz has been promoted to be Extraordinary Professor of Children's Diseases.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Maly, Professor of Chemistry in the University of Prague, at the age of fifty-nine.—Dr. Wilhelm Schlesinger, a well-known Vienna medical author, at the age of seventy-nine.—Dr. Karl Beyerlein, one of the most eminent of the Kissingen physicians.—Prof. Karl Braun von Fernwald of Vienna, at the age of sixty-nine.—Dr. N. P. Vasilieff, *privat docent* in the St. Petersburg Medical Academy, and editor of Botkin's *Bolnichnaya Gazeta*, of cardiac disease, at the age of thirty-seven.

THE Council of King's College last week elected Dr. Joseph Priestley, B.A., M.D., D.P.H., as Demonstrator in State Medicine and Public Health at their new laboratories.

WE regret to announce the death, at the age of seventy-nine, on the 28th ult., of Deputy-Inspector-General of Hospitals James Sanderson, F.R.S.Edin., of the Madras Army (retired).

SECONDARY SEXUAL CHARACTERS.

THE study of biology is perhaps one of the most instructive and humanising pursuits in the domain of science, and scientific medical men have by no means had the smallest share in the development both of its botanical and zoological departments. Lectures on the subject are rarely characterised by the two qualities of impressive delivery and artistic illustration. We have listened frequently to lectures on this subject, and in many cases have been fain to admit that, although they were "well drawn," the amount of real instruction which has been received and retained must have been to a large extent the result of the inherent intelligence of the audience. On the other hand, flights of oratory dealing with portions of subjects in the shape of popular lectures have proved through the scantiness of illustration but very insubstantial mental pabulum. The best lectures are those which, like the "object lesson," combine the qualities of aptness and facility of illustration with interesting and impressive statement. A series of six lectures of this kind has just been delivered in the Royal College of Surgeons by Professor Charles Stewart, whose artistic skill and clearness of exposition made the course a most instructive and enjoyable one. He chose for his subject "Secondary Sexual Characters," a term which he defined as compriaing those features by which we are enabled to distinguish the male from the female quite irrespective of the essential organs of reproduction, and which are not concerned either in the nourishment or in the protection of the young. He brought together and exhibited a number of preparations illustrating this subject and forming a series of types taken from the vegetable and animal world. Illustrations were chosen from the algæ and mosses, the liverworts, and the common equisetum. Further illustrations of secondary sexual characters in plants were obtained from the catesetum, the valisneria spiralis, the fig plant, butcher's broom, asparagus, many of the grasses, cannabis indica, and the common hop. In like manner types were chosen from the nematodes, rotiferæ, crustacea, arachnida, insecta, fish, amphibia, reptiles, birds, and mammals, from all of which the lecturer demonstrated that where a difference of size was found to exist between the male and the female it was noticed in all plants, in which there were secondary sexual characters, that the female was the larger of the two. The same difference was found in the nematodes, in the rotifers, and, with few exceptions, in the crustaceans. Among the insecta very much the same thing existed. In the mammals it was found that, without any exception, where a difference exists, the male is the larger. In the reptiles also the male is the larger. In the amphibia, and nearly all fishes, the female is the larger. Where there is a difference of colour, the lecturer showed that in almost every instance, both in plants and animals, the more conspicuous and brilliant colour is presented in the males. In plants the brilliant colours attract the insects, which aid in their fertilisation. Thus, in the case of plants, by attracting the insect which is necessary to convey the pollen to the female, colour operates to some extent in bringing about that which is effected in animals by sexual selection; and it is a fact that in both plants and animals it is the male as a rule which is found to be most conspicuous in colour. As regards the sense organs, it is the male in almost every case that shows excessive development of these. The antennæ of insects, the eyes, the hairs, are almost invariably more developed in the male. As regards glands which give off special odours (as in the case of bats &c.), it is found in almost every instance they are possessed in the fullest extent in the male. This secretion acts very probably as a sexual excitant. It may act like a drug, or it may act, conceivably, by mere association of ideas. In certain fish, and many other vertebrates, a marked difference in size characterises the sexes. The more pronounced and outstanding characters are commonly found to be possessed by the male, so that he is able to defend the female and the young, or to fight with his rivals for her favours. The lecturer then considered the question whether the possession of a certain structure by the male is to be looked upon as having been acquired by him or lost by the female. It has been shown by Poulton that in the case of the antennæ of insects there was evidence that in many instances the female had lost the large size and complex form of that sense organ by a process of degradation, and from having altogether different habits of life from the male. In the case of horns, Austin and others hold that originally both male and female possessed the organs, and that the females have lost them. In the case of the reindeer both sexes have them. For reasons such as this it is held that the female has lost the organs, from trusting to the protection of the male, in whom the horns are more developed. In antelopes the horns of the male are longer, stronger, more ringed, and more ornamental than those of the female, showing a tendency to loss and diminution on her part. As regards the origin of sex, the illustrations went to prove that so far as our observation at the present time goes, most forms in their primitive state were hermaphrodite to start with. A large number of forms can be shown to be so, and all distinguishing characteristics of the two sexes

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are probably the result of the advantage accruing from the "division of labour," the female being modified to bear the bulky ova and the male the less bulky, but equally important, fertilising element. So that there seems to be an advantage in the "division of labour" as regards sex. What, he asked, had brought about and started the division of sex? The lecturer showed that in plants such as the hop, cannabis indica, and sundry other instances, an imperfect nutrition of the plant resulted in the formation of a male plant, whereas a fuller nutrition produced the more luxuriant female. In crustaceans, rotifers, &c., the male is very small and does not live long, whereas the female is larger, more long-lived, and has to carry the eggs for a long time. In cases high up in the mammalia, it has been shown by statistics that when a race or a nation has been in any way depressed below the normal level, by war or by famine, a rise in the percentage of male births at once occurs. That looks as if there were some direct influence upon the individuals determining the sex of their offspring; and there are cases in which the male functions appear when there is less nutritive vigour, and the female when this vigour has attained its maximum in the same animal. The lecturer, in concluding, said that he had thought it well to bring some of these questions under the notice of the Fellows and Members of the College, more especially as it enabled him to bring together certain illustrations of a biological group which he was anxious to see illustrated in the College museum, and that he would be exceedingly indebted to any of the Fellows or Members for any help he might obtain from them, in further illustrating this section of biology.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Barnstaple Rural District.—The death-rate for 1890 was, according to Mr. Joseph Harper, an exceptionally high one, reaching 18·5 per 1000, this result being largely due to fatality from whooping-cough. Great care seems to be exercised in investigating the causes of such diseases as enteric fever, and in amending the conditions with which they are found associated. Much the same applies to the action taken in cases of diphtheria. The adoption of the Notification Act is said to have worked considerable good, but the medical officer of health naturally urges his authority to make that department of their work complete by the provision of a hospital for infectious diseases. However small the provision made at first, it will be found a boon; and if the urban district could be induced to join with the rural area in the matter, not only would the original cost, but the cost of maintenance also, be considerably reduced. If an adequate site be chosen, the question of extending the number of beds could easily be allowed to stand over for a while.

King's Norton Rural District.—This district, with a population of over 28,000, has for some years past had a creditably small death-rate, and Mr. Francis Hollinshead calculates it at 12 per 1000 for 1890, the zymotic rate being also low—namely, 0·7 per 1000. The system of notification revealed 239 cases of scarlet fever, and of these 14 died. The isolation hospital records afford a typical story of the uses to which such a building, which is properly constructed and administered, may be put. Thus no less than 371 cases of scarlet fever were isolated in it last year, 170 of this number coming from the sanitary district itself, and the remainder from two neighbouring urban districts. Indeed, the public demand for efficient means of isolation has rendered necessary the provision of a third ward pavilion. Mr. Hollinshead gives a record of the general sanitary work, from which we gather that his district is, in fact, still troubled with water-supplies which are liable to pollution. They are, however, done away with as soon as they are detected.

Aston Manor Urban District.—Mr. Henry May's annual report deals somewhat exhaustively with the sanitary condition of his district, and, perhaps, more than usually so in order to afford to the County Council of Warwick the information which they may need for their purposes when a summary of the local health reports comes to be compiled. The general death-rate for the year was 17 per 1000. Under the Notification Act of 1889, adopted in July, the number of cases of infectious diseases heard of was 922; no less than 478 of these being cases of scarlet fever. The number of scarlet fever cases removed to hospital was 160, but a payment for admission and other causes seem to hinder this class of work. Measles was also very prevalent, and it led to some discussion as to the utility of school closure under such circumstances, Mr. May holding the opinion that school restrictions were valuable as a means of prevention. A good deal of information is given in the report as to the sanitary circumstances of the district, and amongst other matters it is stated that a destructor has been provided for dealing with the refuse. The population of Aston Manor is increasing steadily, but with this increase there has also been a corresponding condition of progress in matters relating to public health. The average death-rate for the period 1872–81 was 18·4 per 1000, that for the period 1882–90 was 15·7 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5849 births and 4074 deaths were registered during the week ending March 28th. The annual rate of mortality in these towns, which had declined from 24·1 to 21·9 per 1000 in the preceding four weeks, further fell to 21·2 last week. The rate was 19·3 in London and 22·8 in the twenty-seven provincial towns. During the past twelve weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·1 per 1000, and corresponded with the mean rate in the same periods of the ten years 1881–90. The lowest rates in these towns last week were 14·1 in Derby, 16·7 in Nottingham, 17·4 in Bolton, and 17·9 in Birkenhead; the highest rates were 29·0 in Blackburn, 29·5 in Preston, 29·9 in Portsmouth, and 34·6 in Huddersfield. The deaths referred to the principal zymotic diseases, which had been 413 and 449 in the preceding two weeks, declined again last week to 414; they included 150 from measles, 139 from whooping-cough, 39 from diphtheria, 35 from diarrhœa, 30 from "fever" (principally enteric), 20 from scarlet fever, and one from small-pox. These diseases caused the lowest death-rates in Norwich, Derby, Newcastle-upon-Tyne, and Cardiff, and the highest rates in Halifax, Portsmouth, Huddersfield, and Blackburn. The greatest mortality from measles occurred in Bolton, Preston, Bristol, Huddersfield, Portsmouth, and Blackburn; and from whooping-cough in Salford, Manchester, Huddersfield, Leicester, and Halifax. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. The 39 deaths from diphtheria included 26 in London and 4 in Salford. One death from small-pox was registered in Huddersfield, but not one in any other of the twenty-eight towns; three small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and two in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1059, and showed a further decline from recent weekly numbers; the patients admitted during the week were 81, against 64 and 91 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 685 to 556, further fell last week to 466, and were 40 below the corrected average. The causes of 89, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, Sunderland, and in four other smaller towns; the largest proportions of uncertified deaths were recorded in Birmingham, Blackburn, Hull, and Cardiff.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 26·2 and 25·9 per 1000 in the preceding two weeks, rose to 26·7 during the week ending March 28th, and exceeded by 5·6 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·8 in Leith and 15·4 in Perth to 32·8 in Glasgow and 33·1 in Paisley. The 698 deaths in these eight towns showed an increase of 22 upon the number in the preceding

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week, and included 36 which were referred to measles, 34 to whooping-cough, 8 to diarrhœa, 7 to scarlet fever, 5 to diphtheria, 3 to "fever," and not one to small-pox. In all, 93 deaths resulted from these principal zymotic diseases, against 79 and 73 in the preceding two weeks. These 93 deaths were equal to an annual rate of 3·6 per 1000, which exceeded by 1·4 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased from 16 to 24 in the preceding three weeks, further rose last week to 36, of which 21 occurred in Glasgow and 11 in Paisley. The deaths from whooping-cough, which had been 31 and 32 in the preceding two weeks, were 34 last week, and included 19 in Glasgow, 6 in Edinburgh, and 6 in Dundee. The 7 fatal cases of scarlet fever showed a slight increase upon recent weekly numbers; 3 occurred in Glasgow and 3 in Edinburgh. The 5 deaths from diphtheria exceeded by 2 the number in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 201 and 194 in the preceding two weeks, further declined last week to 169, but exceeded by 28 the number in the corresponding week of last year. The causes of 54, or nearly 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·1 and 28·4 per 1000 in the preceding two weeks, further rose to 29·1 during the week ending March 28th. During the first twelve weeks of the current quarter the death-rate in the city averaged 30·7 per 1000, the rate for the same period being 22·7 in London and 21·7 in Edinburgh. The 197 deaths in Dublin showed an increase of 5 upon the number in the preceding week, and included 3 which were referred to whooping-cough, 3 to "fever," 2 to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths referred to the principal zymotic diseases, which had increased in the preceding three weeks from 4 to 11, declined again last week to 8; they were equal to an annual rate of 1·2 per 1000, the rate from the same diseases being 1·6 in London and 3·0 in Edinburgh. The fatal cases of whooping-cough, which had been 3 and 5 in the previous two weeks, declined last week to 3. The deaths referred to different forms of "fever," which had been 4 in each of the preceding two weeks, declined to 3 last week. The 2 fatal cases of diarrhœa exceeded those recorded in any recent week. The 197 deaths in Dublin last week included 29 of infants under one year of age and 58 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons exceeded those recorded in any recent week. Ten inquest cases and 8 deaths from violence were registered; and 52, or more than a fourth, of the deaths occurred in public institutions. The causes of 14, or 7 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

INSURANCE ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—Having for some time past been engaged in collecting figures for making a comparison between the experiences of insurance offices of the lives of medical men and others, I have read with much interest Dr. Muirhead's letter of Feb. 10th. Dr. Muirhead comes to the conclusion that medical lives are as good as those of the population generally. Unfortunately the figures given in his letter, as far as they go, point to a considerable inferiority in the lives of the doctors. He shows that in round numbers the average duration of the two classes are the same—viz., twenty-one years; but it appears that the average age at which the medical men insured was thirty-five, and the non-medical thirty-seven. The medical lives should then have exceeded in duration the non-medical by something between one and two years; thus the medical lives were inferior to the other by something between 5 and 10 per cent. The figures which I lay before you, collected from four offices by the kind indulgence of their managers, pretty well confirm this result. The method adopted by me was as follows:—The registers of policies were searched until a medical policy was found which had resulted in a claim. Then a non-medical claim was taken out as near as possible in point of entry to the medical one, and whose former holder entered in the same quinquennium of age. I thus obtained two claims, the policies of which were taken out by two men identical (apparently) so far as insurance goes, except that one was medical and the other non-medical. The pair entered about the same date, and therefore had the same opportunity of living, and, having the same expectancy, were charged the same rates. Now, if medical lives were as good as non-medical ones, a sufficient number of such pairs being taken, the aggregations of each set should be identical in every respect with one another.

The adjoining tables give a comparison between these two sets of lives. It will be seen that at almost every age the medical lives proved inferior, and on the whole the total years lived by medical men were about 6·4 per cent. less than that lived by non-medical policy holders.

The second (derived) table shows a remarkably even result, and leaves little doubt as to its interpretation.

It may be added that all the cases classed as medical were medical practitioners described as surgeons, physicians, or in the older cases sometimes as apothecaries; no dentists were included. Also, in choosing the cases with

TABLE I. — *Comparison of the Duration of 242 Lives, Medical and Non-medical, entering approximately at the same time and at the same age; the experience extending over more than 80 years.*

	Total number entering between the ages of—							
	20 & 24.	25 & 29.	30 & 34.	35 & 39.	40 & 44.	45 & 49.	50 & 54.	55 & 59.
Number entering	8	48	51	38	29	40	20	8
Total duration (Medical)	163	1023	1103	789	656	673	297	99
Total duration (Non-medical)	172	990	1298	829	686	719	343	93
Average duration to half a year (Medical)	20·5	21·5	22·5	21	22·5	17	15	12·5
Average duration to half a year (Non-medical)	21·5	20·5	25·5	23	23·5	18	17	11·5

Total number of lives of each, 242. Total duration: Medical, 4803; Non-medical, 5130.

TABLE II. — *Derived from* TABLE I., *by taking Means of Ages and Durations.*

	Lives entering at the ages of—						
	25.	30.	35.	40.	45.	50.	55.
Average duration (Medical)	21	22	21·75	21·75	19·75	16	13·75
Average duration (Non-medical)	21	23	23·75	23·25	20·75	17·5	13·75

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which these were paired, care was taken to avoid clerical lives, the latter being regarded as above the average. This result, disappointing as it may be in some respects, after all only emphasises the importance of the subject of insurance of medical men, to the consideration of which you have devoted so much of your valuable space during the last few months.—I am, Sirs, yours obediently,

THOS GLOVER LYON,
Feb. 24th, 1891. Medical Officer to the Mutual Life Office.

"A NEW TREATMENT AND POSSIBLE CURE FOR CANCER."

To the Editors of THE LANCET.

SIRS,—Under this heading I wrote you in June and July, 1889, communicating a method of treating cancer, which I believed to be likely to prove useful. I did not then dare to say more than that "the results obtained so far are encouraging." The time which has elapsed since making this statement has been employed in watching the effects and issues of the treatment, and in investigating the facts in other cases which have fallen under my observation, and been similarly treated. I say *similarly*, because later researches have led to considerable changes in the mode of exhibiting the remedies. In result of my experience to this date I am able to say: (1) that none of the earlier cases have relapsed; (2) that scirrhus tumours of large size and undoubted authenticity have gradually disappeared without any operative interference; (3) that the health of patients has improved under treatment, and the cachexia vanished.

I fully recognise the gravity of these statements, and I feel the responsibility that rests upon me in making them; but in face of the evidence I have obtained I am compelled to say that I tentatively believe cancer to be *curable* by this method, and I have no hesitation in again asking the profession to try it.

The exhibition of the remedies—which *must be used in combination*, for the reasons assigned in my previous letter—requires to be specially adapted to each individual case, as will be obvious to anyone who has given the *modus operandi*, as before explained, a serious thought.

The principal modifications I have made are the following:—Instead of "thallin" I use a periodohydromethyloxychinolin, because that is better borne, and seems to be more effective than the tetrahydroparaquinanisol; and I either inunct, or inject, the tumour with a papain specially prepared, because I have reason to believe that it is not the proteid elements (either the globulin, the α-phyt.-albumose, or β-phyt.-albumose, or these in combination), but the organised ferment of the papaw juice that produces the effects observed.

The scientific explanation of the phenomena (which I am still investigating) would involve too much of the bacteriological phase of the subject to be discussed here; meanwhile I reserve, until another opportunity, the expression of an opinion which I have formed as to the important part played by the papain bacillus, of Rosbach, to whom, as your readers will remember, we are indebted for our acquaintance with the properties of papaw juice by a paper read at the International Congress of 1881. I am aware that some authorities have alleged that the bacillus found in papain is identical with the bacillus subtilis, but I believe that conclusion to be erroneous; and at the proper time and place I shall be prepared to make my assertion good. However that may be, of the therapeutic value of papaw juice, or certain of its elements, as a solvent of the morbifically indurated tissues in cancer, I have no doubt, although, as I said at the outset, it is *perfectly useless* unless administered or applied in combination with an adjunct of the class which I have previously indicated.

I am, Sirs, yours faithfully,

J. MORTIMER GRANVILLE.
Hanover-square, W., March 24th, 1891.

THE EFFECT OF DEEP INSPIRATIONS ON THE HEART.

To the Editors of THE LANCET.

SIRS,—In his second Lumleian lecture Dr. Broadbent remarked: "An interesting fact in connexion with breathlessness due to dilatation of the heart is that it is often relieved by exercise of the voice. I have met with numerous instances in which a clergyman has climbed into the pulpit with the utmost difficulty, and has not only preached a sermon comfortably, but has been all the better for it." The good result, I take it, in these cases is attributable to the deep inspirations necessitated by the loud voice used in preaching; and, without touching upon the so-called suction action of inspiration upon the circulation in general, I would point out that these deep inspirations act beneficially in the following ways: (*a*) First and foremost, they favour the flow of blood *from the right to the left heart;* the right heart being thus relieved, the blood is able to flow more readily into it from the systemic and portal veins; this necessarily facilitates the flow from the systemic arteries, and consequently the left heart has less work to do. Let it further be remembered that the relief brought to a dilated right ventricle by deep inspirations must enable it the better to exercise its suction action on the veins. (*b*) Naturally the respiratory movements favour the flow of lymph by diminishing the venous blood pressure; but in addition to this indirect influence on the lymph flow, inspirations, especially when deep, have a direct influence upon it, for the diaphragm is itself a lymph pump. Now, whatever favours the lymph flow necessarily helps the arterial and venous circulation. (*c*) Lastly, it is possible that the movements of the diaphragm may exert a special influence upon the circulation of the blood through the liver. Not only do inspirations favour the flow of blood through the lungs, but they are absolutely necessary to proper pulmonary circulation, as is readily proved by holding the breath for a moment or two, when the stagnation of the blood in the right heart will provoke epigastric pulsation and cause the veins in the head and neck to swell. It is further proved by the fact that the right heart is found engorged after death from suffocation or drowning, or, indeed, whenever respiration has stopped before the heart has finally ceased to beat. And we have here, I believe, the chief factor in the production of those changes in the right heart which occur secondarily to chronic lung diseases—in all of which the respiratory movements are restricted. That such restriction is competent to produce these cardiac changes is indicated by the right heart suffering in spasmodic asthma unaccompanied by lung mischief. Thus periodic interferences with the respiratory movements are alone clearly capable of affecting the heart. The practical conclusion I desire to emphasise is that we have in the respiratory movements a means of aiding a weak circulation, and especially in those cases where undue work is put upon the right heart.

I am, Sirs, yours faithfully,

HARRY CAMPBELL, M.D.
Guilford-street, W.C., March 31st, 1891.

THE HYDERABAD CHLOROFORM COMMISSION.

To the Editors of THE LANCET.

SIRS,—In his article published in THE LANCET of March 14th, Surgeon-Major E. Lawrie, President of the Hyderabad Commission, emphasises the importance of the respiration, and totally ignores the circulation, as a guide in the administration of chloroform. Undoubtedly the respiration is essentially important, but my view, after ten years' practical experience of anæsthetics, is that the circulation is also sometimes an important guide to the anæsthetist during an operation, and often most valuable. No method of administering chloroform will ensure the uniform behaviour of all patients during the induction of chloroform anæsthesia. The action of chloroform upon a patient is influenced by mental and physical conditions as well as by disease. The effects of the chloroform upon the circulatory, nervous, and respiratory systems, especially when they are diseased, as well as the loss of blood and the duration and nature of an operation (these being the conditions that have to be met by the practical anæsthetist), influence the respiration in such a way in some cases as to make it expedient to obtain all the information that can be gathered of the extent of exhaustion, the probable power of endurance, and the general state of the patient. This knowledge is to be obtained from the respiration, the pulse, the pupil of the eye, the sensibility of the cornea, and the complexion, all of which may be under observation at the same time without discontinuing the chloroform, when it is administered in the manner described by me in a paper read before the West London Medico-Chirurgical

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Society, and which is fully reported in THE LANCET of March 14th. The condition of the muscular system, as to relaxation, is also sometimes useful. An anæsthetist who relies on all these sources for information will sometimes be able to continue an administration of chloroform when, if he relied upon the respiration solely, he would feel bound to discontinue it. I have on several occasions had the greatest difficulty in satisfying myself that respiration was in progress at all, especially in connexion with some operations upon the skull for depressed fracture or other condition in which the functions of the brain were greatly impaired, and have found the pulse most valuable as a guide in such cases, justifying me in supplying sufficient chloroform to prevent reflex movements of the patient occurring. As long as respiration is unimpaired and there is no cyanosis it may not be necessary to go further for information, but early in the progress of administration the breathing may be accompanied by stertorous noises—not true stertor,—the pupils be dilated or the corneal reflex abolished, and yet the anæsthesia may not be sufficient for operation, and in such circumstances the pulse will be found quick perhaps, and not the slow pulse of complete chloroform anæsthesia. When an operation has been some time in progress the respiration may still be good while the patient may have the appearance of extreme exhaustion, and the pulse will then enable the anæsthetist to judge whether it is necessary to hurry or close the operation, or whether stimulants are imperatively called for. Shallow respiration is not uncommon and, when the respiration only is relied upon, dangerously misleading, often when not appreciated giving rise to sudden and alarming symptoms. In practice each of the guides mentioned is of great service, and without them operators would often be disturbed, and sometimes unnecessarily prevented from completing their operations. The following case throws great light upon the effect of chloroform upon the heart and respiration.

In January, 1891, J. B——, aged fifty-one years, came into the theatre for radical cure of hernia, and it was my intention to give him chloroform; but on seeing him, as his appearance presented venous congestion, I gave him ether. After about a quarter of an hour of the operation there was so much saliva and mucus excited by the ether that it was impossible to keep the patient properly under, and I therefore changed to chloroform, which I administered with extra care, for the reason already stated—i.e., in addition to simply satisfying myself that the respiration was good, I proceeded with the sprinkled lint lying on the separated fingers of my right hand in front of the mouth, which enables one to feel the force of expiration; with my left middle finger on the left temporal pulse and my left thumb holding up the left upper lid of the patient, and testing the corneal reflex when necessary, watching the respiratory movements of the abdomen (which was exposed), the complexion of the face, and the pupil of the eye. After about half an hour I suddenly missed the temporal pulse, and found it was also absent from the wrist, notwithstanding that the respiration continued. After a few moments the pulse returned, and the pharyngeal reflex being present I gave two teaspoonfuls of brandy in small quantities, which were swallowed. Then continuing the chloroform, guardedly as before, after twenty minutes the pulse ceased again, and I asked the nurse to give an enema of half an ounce of brandy with water, called the attention of those around to the absence of pulse and the continuance of respiration, which they observed before the respiration ceased, when a little artificial respiration soon so far restored the patient that the operation was continued and completed in another twenty minutes. During this latter time a very little chloroform only was given when the patient had so far recovered as to call out loudly. The patient afterwards told me he felt nothing of the operation. This patient's heart was, so far as could be ascertained, practically sound. Here then was an operation taking place under chloroform, during which the pulse of the patient undoubtedly failed before the respiration on two occasions, the pulse recovering on the first without cessation of respiration, and the respiration failing on the second occasion some seconds after the pulse, and while it was still not to be felt.

I have endeavoured to show in this letter the importance of the pulse as a guide to the anæsthetist, under some circumstances, during chloroform administration; and it is not my intention to express an opinion as to which of the two, the respiration or the circulation, invariably ceases first in death from chloroform, believing, as I do, that it is sometimes one and sometimes the other.

I am, Sirs, yours faithfully,

RICKARD W. LLOYD.

Russell-road, Kensington, W., March 15th, 1891.

THE TREATMENT OF CHRONIC INFLAMMATION OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—The question whether the majority or minority of inflammatory lumps in the pelvis tend to spontaneous cure is one as to which each person who has opportunity must form his own judgment. An investigation in the way proposed by Mr. Tait would not further our knowledge. If, as I expect would happen, there proved to be little difference of opinion, in particular cases, between Mr. Tait and some one of an opposite view as to the general question (I do not know who appointed me the representative of such), it would still be possible for anyone who operated frequently to say that there was some exceptional cause which brought to him a large number of incurable cases; and, as Mr. Tait has clearly foreseen, it would still be open to malevolent critics to say that the surgeon's opinion as to the course without operation would be less favourable in cases in which he would be the operator than in those not under his own care. I need scarcely say that the London Hospital is a public institution, and if Mr. Tait likes to visit it, I shall be very glad to have the benefit of his opinion and advice; but I hardly think that, from his point of view, he will find the advantage commensurate with the trouble. I believe, if he will pardon my saying so, that he would do more to convince the profession if he would add to his great services to medical science by publishing more detailed and exact reports of his own cases. So far as I am concerned, this correspondence is now at an end.

I am, Sirs, yours faithfully,

Harley-street, March 24th, 1891. G. ERNEST HERMAN.

FACTORY SURGEONS.

To the Editors of THE LANCET.

SIRS,—In Clause 19 of his Factory Bill Mr. Matthews proposes to abolish the office of certifying factory surgeon, and if our services are to be retained an immediate and united effort must be made by certifying surgeons everywhere throughout the country An appeal has been made by the Association of Certifying Surgeons, and circulars have been sent to hundreds of certifying surgeons asking them to send to the secretary of the association a list of rejections made by them in their various factories. And with what result? Although there are nearly 1200 certifying surgeons in the country, yet only thirty-seven have taken the trouble to send lists of rejections. This carelessness is disheartening when we consider how our opponents are using every possible means for our extinction. If our office is abolished it will certainly be in a great measure due to the apathy of the mass of certifying surgeons themselves. The Standing Committee who have the Bill in hand do not meet again till April 9th, so there is still time for useful action. I would urge all certifying surgeons to do two things—(1) send at once to the secretary of the Association (Dr. Holmes, Ouselhurst, Radcliffe, near Manchester) a list of cases rejected during the past five years, and (2) to bring all the pressure they can to bear on members of Parliament to oppose Clause 19 of the Factory and Workshops Bill.

I am, Sirs, yours faithfully,

JOHN BARR, M.B.,

Rishton, Blackburn, March 24th, 1891. Certifying Surgeon.

"DIPHTHERIA IN ESHER."

To the Editors of THE LANCET.

SIRS,—It is quite true that this hitherto healthy village has for some months been suffering from diphtheria. I attribute the outbreak entirely to the foul smells emanating from the man-holes and interceptors of the new main drains, which have been insufficiently flushed. This sewer was put into use last summer. Up to that time diphtheria

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was unknown here. We had a great many mild cases last autumn. The first severe cases took place in September in a gentleman's well-ventilated house situated between two man-holes, which gave out abominable odours. The mother, five children, and governess took the disease; one child died. They had no connexion with the village school. Since then the epidemic has been more severe, and I have lost four other children in my practice. These were in families in which some of the children attended the National Schools. I do not think the fault lies in the sanitary state of the schools, but that children having incipient diphtheria communicated it to the other scholars and the mistresses. The school is now shut up, and most of the foul interceptors (so called) closed, so I hope we may see an end of this distressing epidemic. The fault has been in using the sewer before there were sufficient flushing tanks. I am, Sirs, yours faithfully,

Esher, March 30th, 1891. CHARLES W. IZOD.

HOSPITAL REFORM.

To the Editors of THE LANCET.

SIRS,—After the perusal of your leading article of March 7th, in which you support the conclusions of the Birmingham Committee on Hospital Reform, it was a little strange to find reported in the same number Mr. Barker's assertion that "complaints against out-patient departments come from a very undesirable fringe of the profession." I must confess to belonging to this abused fringe, which, though "very undesirable," must be considered ornamental, as it includes THE LANCET and a not inconsiderable portion of the profession. But I venture to think that Conclusions IV. and V. of the committee referred to call for the special attention and criticism of the profession. The necessity for medical reform may be obvious to most of us, but it is as necessary in the dispensary as in the hospital. It will be a grave pity if, in curing hospital abuses, we increase those of the dispensary. It is a fact that many dispensaries make very free use of hospitals without subscribing a halfpenny towards their expenses. I know of one provident dispensary the boasted success of which is fairly attributable to such practices. This institution has over 20,000 members, and its scope is not limited by any wage limit system. It may be reasonable for the dispensary doctor to send his cases of strangulated hernia and other awkward ailments into the hospital. It is certainly convenient. But some acknowledgment should be made for the accommodation afforded. It does not seem fair that the hospital should have to treat gratuitously a number of the most serious dispensary cases, from whom the dispensary has been receiving premiums, for assurance against illness, for a number of years. Of course, if we can secure joint action of hospitals and dispensaries with an agency for investigation into the circumstances of both classes of patients, we may put a check upon abuses; but experience should warn us that dispensary managements are apt to attempt too much. Becoming greedy for a financial success, they commence touting for patients, repudiate the wage limit system, and help to turn the noblest of professions into the most miserable of trades. Under such circumstances the dispensary, as I have tried to show elsewhere, is, even to the public, a curse rather than a blessing. To the self-respecting general practitioner who holds to the old traditions of medical etiquette it is an unscrupulous opponent. Bound by no traditions, with the conscience of a committee, it employs agents, scatters advertisements broadcast, and invites all men to purchase physical salvation for 1*d.* per week. Small wonder if some of the poorer members of our profession follow its example. They have not the ghost of a chance in competitions with such an institution. It behoves us then, before attempting to relieve the congestion of the out-patient department at the hospital by means of a new system of dispensaries, to take security that such a system will be conducted upon equitable principles, and to insist upon the adoption of a reasonable wage limit.

I am, Sirs, your obedient servant,

March 18th, 1891. F.R.C.S.

ARREST OF SYMPTOMS IN GENERAL PARALYSIS.

To the Editors of THE LANCET.

SIRS,—I was much interested in Dr. Adam's letter in THE LANCET of last week on "The Arrest of Symptoms in General Paralysis," as I have recently had two cases under my care which exemplify his remarks. Probably it would be better to use the term "remission" rather than "arrest," as, if the cases are those of general paralysis, the disease is almost certain to reappear.

Dr. Julius Mickle, in his well-known work on this disease, points out that Sauze considers that there are three classes of remissions. The first, in which there is remission of mental and motor symptoms simultaneously; the second, in which the remission pertains to mental symptoms only; and the third, and by far the rarest, in which the motor symptoms subside, with no mental improvement. My first case—which on admission I took to be one of general paralysis, but, after more careful examination of symptoms and history, I marked down as one of those peculiar cases of alcoholic mania resembling in almost all respects general paralysis—got so far well that he was discharged as recovered after a stay of six months. Both mental and motor symptoms had apparently quite subsided. However, my original diagnosis was confirmed, for he came under my care again nine months after his discharge with definite symptoms of general paralysis, and one severe fit of an epileptiform character, and rapidly passing into apoplexy, the disease caused the end of his life four months after his readmission.

In the other case there was a *quasi*-remission of both mental and motor symptoms, and though we knew he still had some grandiose delusions, yet he was able to control them to such an extent that no one talking to him for hours together upon general topics would have found anything wrong with his intellectual powers; and his motor symptoms had much improved. The almost inevitable relapse has taken place, and one single fit has left him paralysed in his lower extremities. Baillarger considers that remissions are more general when the disease commences with an acute maniacal attack, but Dr. Mickle explains this on the hypothesis that the various forms of simple insanity often complicate general paralysis at its onset, of which form mania is the one most likely to terminate in recovery. To my mind, these remissions, unless rightly diagnosed as such, are a grave source of danger to the family of the patient. We discharge such a case, and probably a gradual relapse takes place, and before the relapse is realised, and steps can be taken to place the case under proper control, instead of "putting his house in order," as Dr. Adam implies he may do, he lands his family in hopeless ruin by his extravagance, if even he does not do more, and commit some terrible crime.—I am, Sirs, yours faithfully,

Bath, March 29th, 1891. LIONEL A. WEATHERLY, M.D.

QUARANTINE AT NEW YORK.

To the Editors of THE LANCET.

SIRS,—Several Sicilians, all healthy, and coming from uninfected districts, took ship at Palermo for New York on Jan. 11th. Those who required it underwent vaccination with calf lymph. One man, vaccinated on the 22nd or 23rd, I detected on the 30th with a suspicious vesico-pustular eruption here and there, slightly umbilicated on arms, face, back, and abdomen; none on mucous membrane of mouth, throat, or conjunctivæ. This eruption commenced on the 26th on the arms as vesicles. He had had no vomiting or pain in the back, only a slight headache, and ate well. He had three large unusually well-marked vaccination vesicles on the right arm. Seeing that the incubation period of small-pox had been passed while at sea, that none of the other Sicilians or his immediate steerage neighbours were ill, and well weighing the above facts, I put the case down in my official log as one of vaccinia, together with my reasons. On arrival at New York on Feb. 8th the case was taken ashore, brought back, taken ashore again, experts and inspectors from the city called in, and this dilly-dallying went on for four days. It was decided to be a case of small-pox. Those immigrants vaccinated by me were allowed to land, the rest, all of whom showed scars resulting from a vaccination within eight years, were transferred to Hoffman Island for fourteen days. But by this date (Feb. 11th) seventeen days had elapsed since the man's eruption had appeared (Jan. 26th), and still not a single case of small-pox had occurred, the five men who slept around him being in perfect health. During the inspection I picked out two somewhat similar vaccinated cases, a boy and a woman, that had twice passed unnoticed by the official deputy, who, however, deemed them of sufficient importance to take ashore. The boy's case was stated to be due to vermin, but neither

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acarus scabiei or pediculi corporis were present; and the woman's to her reinoculating herself by scratching all over her body from her vaccinated arm. Now is such a thing probable, nay, possible? I told the official I should like some unbiased opinion. Next morning these two cases were taken ashore early without my knowledge and permitted to land. They went privately, and not in the tug with the others. After this, in my opinion, manufacturing of a case of small-pox, after this decision of the powers that be, how did they act? Verily, like to a wholesale small-pox manufactory. Three saloon passengers with whom I had been in close contact, one of them sharing my cabin, were allowed to land, not a question being asked. The captain, with permission, went to New York in the company's tug, used for passengers by other ships, and constantly plying about harbour. The pilot daily went to and fro between his family and the ship, and, to crown everything, we—i.e., all hands—were free to proceed unquestioned and unexamined—we, including the Italian and Sicilian stewards, who had been in constant hourly communication with the immigrants. Some sulphur was burnt in the steerages, none in the room on deck where men had been placed. A large pile of immigrants' mattresses on deck, not disinfected in any way, were passed into Brooklyn. I claim that if the authorities really thought the case one of small-pox, their proceedings were illogical, inconsistent, and desperately dangerous to public health; whereas, if they thought otherwise, great unnecessary expense was imposed on the Company, and a vast amount of intolerable inconvenience on the immigrants by their detention.

I am, Sirs, yours faithfully,

J. E. S. BARNETT, M.R.C.S., L.R.C.P.,
Surgeon to ss. *Scotia*.

Ditchling-road, Brighton, March, 1891.

MORTALITY OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In the article in THE LANCET of last week on the Medical Registers for 1891 it is stated that "the Registrar and Dr. Ogle are at serious variance as to the mortality of medical men." Permit me to point out that no contradiction exists. The Register includes medical men resident in all parts of the United Kingdom, as well as many abroad, and doubtless some who have died in previous years; while Dr. Ogle's figures are based on the number of medical men enumerated in England and Wales at the census of 1881. Dr. Ogle's death-rates for England and Wales relate to the three years 1880–82; according to the figures in the Medical Register the mean death-rate for those years was 23 per 1000, which, after allowance for imperfect information as to deaths occurring abroad, and for possible differences of mortality in the several divisions of the United Kingdom, does not vary seriously from Dr. Ogle's 25 per 1000. Further, the death-rate as shown by the Medical Register was as high as 28 per 1000 in 1885, while in the fourteen years 1876–89 it averaged rather more than 23 per 1000. The exceptionally low mortality recorded among the medical profession in 1890 is certainly remarkable, both in comparison with previous years and in connexion with the fact that the general death-rate in England and Wales was higher in that year than in either of the years 1887-8-9; but it is remarkable as an exception, and not as being at variance with the mortality at another period of the resident English part of the profession.

I am, Sirs, your obedient servant,

March 31st, 1891. A. C. WATERS.

THE NON-EMPLOYMENT OF MEDICAL MEN BY MEDICAL BODIES.

To the Editors of THE LANCET.

SIRS,—We have repeated and, it must be admitted, justifiable bemoanings from the ranks of the medical profession regarding the illiberal manner in which its services are recognised as regards remuneration &c.; yet I assert without fear of contradiction that there is no other profession that does so little, when it has the chance, for its own *confrères* as the medical profession; and in support of such assertion it is only necessary to point to what daily occurs—as, for instance, whenever a body of medical men form themselves into a society or committee &c., it may be taken as granted that if the office of secretary, registrar, &c., is to carry with it any emolument it is not to a medical man it would be given. There are too many instances of such ungenerous actions of medical men towards each other in such cases. If it is argued that it is a *lapsus mentis*, it forms no excuse, for the same might be said by anyone who fails to befriend another. I do not wish to particularise instances—such would not further in any way the fact which I draw attention to. We have barristers, retired military men, and civilians filling positions as librarians, secretaries, registrars, &c., which posts could and *should*, in such purely medical bodies, be held by medical men. I would like to hear of any military or legal society or institution, devoted purely to the researches or duties of either profession, that gives remuneration in a single instance to any medical man in such capacity as cited above; or, further, that would not sneer contemptuously at even the idea of leaving members of its own profession out for that of another, such as the medical.—I am, Sirs, yours truly,

March 25th, 1891. EBLANA.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary and Owens College.

Non possumus is the final reply of the Infirmary, as represented by its board of management, to the College proposal to erect a new hospital in Victoria-park. The following is the exact terms of this reply: "The board of management do not feel themselves justified either in appealing to the public for money or in appropriating any part of the funds of the Royal Infirmary towards the erection and maintenance of such hospital. The board desire to emphasise the fact that they are already possessed of an ample freehold estate centrally situated on which the Infirmary can be extended, without entailing on themselves extraneous obligations by the establishment of a dual control calculated to interfere with existing executive and administrative arrangements. Moreover, they think it neither wise nor desirable to entertain any scheme which will in their judgment, interfere with the interests of the sick poor, for whose benefit the Infirmary was established." Whether this ultimatum will be endorsed by the public, as represented in the general body of subscribers, remains to be seen. Fifteen or sixteen years ago the then board of management pronounced as decisively for the removal of the whole of the infirmary from its present site into Oxford-road, near the spot now offered for a new building, and this was as decisively vetoed by the subscribers, and a new board put in power. Without doubt public feeling is against any further curtailment of the present small open space around the Infirmary, and there are strong arguments in support of the contention that "the sick poor" would benefit by the establishment of a new building out of the centre of the city in the purer air of the Victoria Park. The advantages to the medical school would be considerable from a new hospital nearer the College, and whose staff would be more closely united with the College than at present is the case. For the present a deadlock exists, the ultimate result of which it is at present difficult to forecast.

Owens College.

At the recent half-yearly meeting of the Court of Governors the rapid and continuous growth of the medical department was prominently noted. The present number of medical students on the books is 348. The arts, science, and law departments show but a slow advance compared with the medical department for the past few years. Some time since it was reported as imperative to take steps to enlarge the accommodation of the medical school, and an appeal is to be made to the public for no less than £50,000 for this object. On the same day, at the above meeting, a marble bust of Dr. Greenwood, lately principal, was publicly presented to the College in the library. It has been subscribed for by the Associates, and is from the chisel of Mr. Onslow Ford, A.R.A. Mr. Broadfield, in making the presentation, alluded in graceful terms to the long life's service of Dr. Greenwood to the College, and especially to the warm feeling of personal friendship and kindly courtesy that always existed between him and the students.

Society of Officers of Health.

At the annual meeting of the North-Western Branch of the Society of Officers of Health, Dr. Thomson of Sheffield

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was appointed president for the ensuing year. A discussion took place upon the proposed Factory and Workshops Act. Mr. Barr of Bury stated that there were in Lancashire alone children and young persons at work in mills to the number of 139,000 "half-timers" and over 300,000 "whole-timers," also that 1319 children per annum had been returned as unfit for work. Upon these and other grounds it was resolved to petition against the abolition of factory surgeons.

Cremation.

The successful establishment of a crematorium in Manchester is now assured, though the whole of the required funds have not yet been quite subscribed. The promoters do their best to bring the subject before the attention of the public, and at a public meeting held recently in Chorlton-cum-Hardy (one of our suburbs) the Rev. R. E. Healy, rector of St. Thomas's, presiding, a resolution was carried recording hearty approval of the system of cremation as a means of disposal of the dead in large communities.

Impure Air.

The committee appointed to make a scientific investigation into the impurities of Manchester air have issued a preliminary report, which, amongst other things, states that with a prevalence of fog the mortality from respiratory diseases at once showed a marked increase. From experiments made during three days of fog it was calculated that in the neighbourhood of the infirmary there was carried down 6 cwt. of sulphuric acid per square mile. No wonder that leaves and trees rapidly die here.

The late Alderman Schofield, J.P.

Amongst those who, in the early days of sanitary reform, did good work for Manchester in remedying sanitary maladministration or neglect, the name of the late Alderman Thomas Schofield stands out prominently. For more than twenty years he was chairman of the Health Committee, and though of late years the methods pursued by it have been the subject of much criticism, everyone gave him credit for acting in a thorough and *bonâ-fide* manner in his efforts to grapple with many of the problems to be dealt with by the sanitary administrators of a large community like this. For many years, also, he took a warm and active interest in the Royal Infirmary and its allied branches, as well as other charitable institutions of the district.

Manchester, April 1st.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Serious Charge against a "Professor."

A MAN named Edward Moross, aged thirty-seven, who has been lecturing in Newcastle for some time in the Central Hall and advertising consultations free, under the style of "Professor Moross, M.E.," was brought up at the Newcastle Police-court on Saturday on warrant, charged with having committed a rape on Isabella Burnley, a domestic servant aged seventeen. The prosecutrix said she arranged with the accused to have six private treatments for deafness for two guineas. She complained to her sister of what happened at the consulting-rooms of the accused. Mr. Baumgartner, the police surgeon, stated that he had examined the prosecutrix, and her condition might be due to natural causes or to what she alleged. Prisoner was further charged with having indecently assaulted Florence Crossley, eighteen years of age, at the same place. She stated that there was an agreement with the prisoner that she was to be treated for neuralgia in the face in the presence of her sister. The fee was to be five guineas. The prisoner, however, asked her to come on the 14th ult. to his consulting-rooms, and said her sister need not attend. He, it was alleged, closed the door of his consulting-room when she went in. There was only a latch on it, but there was a curtain between the door and the interior, and she alleged he indecently assaulted her. The prisoner was remanded, and the magistrates refused to accept bail.

The Barber-Surgeons and Chandlers of Newcastle.

The following "items" are culled from a continuation of the paper read to the Newcastle Society of Antiquaries by Dr. Embleton, and referred to in my former notes: "Itm. for wyne and sugar at our dynners, 16*s.* 6*d.*; item. for beire after dynner, 4*s.*; itm. for tobacco, 1*s.* 6*d.*; itm. for the musick's dynner, 3*s.*; item. geven to the musicks, 5*s.*; itm. for beire the next day at brickfast, 4*s.*; itm. geven to three travelers' cirurgions, 6*s.*; itm. to the mayd, 1*s.*; itm. geven to the pore, 2*s.*; itm. that night in wyne at George Horsler's, 6*s.* 6*d.*; itm. on gallon of brunte claret at George Mallabarre's buriall, 4*s.*"

Newcastle Hospital for Women.

The Newcastle Hospital for Women was founded in 1866, and until recently was carried on in conjunction with the lying-in hospital, but its removal was necessitated by the influx of patients (now about 3000 yearly), and a successful bazaar in its interests was held last week, having been opened by the Mayor.

Cumberland.

The question of appointing a medical officer for the county of Cumberland is said to be under the consideration of a committee of the County Council. The terms of appointment suggested are that the county medical officer should devote his whole time to the service of the county, that he should hold the office at the pleasure of the Council, and that he should not be entitled on retirement to a pension or superannuation allowance. It is to be hoped that the salary (which is not mentioned) may be in proportion to the responsibility of the office and the extent and importance of the county.

The Pork-pie Poisoning Case in Carlisle.

The Medical Report of the Local Government Board includes a paper by Dr. Klein on a case of poisoning at Carlisle, which excited considerable attention about a year ago. Dr. Klein had submitted to him samples of pork and of gravy stock from the same source as the food which was more than suspected of having caused the outbreak of illness. As to the pork, it was known to be from the same animal or animals which was or were believed to have caused the trouble, but of the gravy it could only be said that it came from the same establishment. Mice were fed on the gravy and bread, also on the pork. Bacilli in gelatine cultures were obtained from the bodies of these mice, and used for experiments on other mice. Dr. Klein thus sums up:—"We have here to do with a true infective disease, producible by feeding animals with given samples of gravy stock and pork, and capable of being propagated by a particular microbe in artificial culture from the bodies of rodents fed with samples. The microbe here described is not the same as that described by me ten years ago in connexion with the Welbeck and Nottingham meat poisoning, nor is it identical with either of those to which veal and pork poisoning has been referred by me in recent reports to the medical officer. It is an altogether different species, as will be clear from my account of its morphological and cultural character."

The Silloth Convalescent Institution.

The annual meeting of the Cumberland and Westmorland Convalescent Institution at Silloth was held last week, the Bishop of Carlisle presiding. It was shown by the report that during the year the number of patients admitted was 647, as against 566 in 1889. The report of Dr. Leitch showed that 527 patients gained weight and 66 lost weight, 22 left *in statu quo*, and 32 had left before their time had expired.

Sunderland Eye Infirmary.

At the annual meeting of the Sunderland and North Durham Eye Infirmary 1593 cases, it was stated, had been dealt with during the past year. The new building to be erected in Stockton-road has received support from the working men of Sunderland to the handsome amount of over £800.

Newcastle-upon-Tyne, April 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Sick Children's Hospital.

THE directors have decided to rebuild this hospital on its old site. There were hopes that it might have been acquired for the extension of the Royal Infirmary; but if the decision of the Sick Children's Hospital directors is final,

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these hopes will be disappointed. The site is considered by many as not the best for a children's hospital, the situation of the building at present used for the accommodation of the patients being regarded as much more beneficial to the general health of patients and staff than the old site was.

Health of Edinburgh.

The mortality last week was 122, making the death-rate 23 per 1000. Diseases of the chest accounted for 35 deaths and zymotic causes for 15, of which 3 were due to scarlatina, 4 to measles, and 6 to whooping-cough. The intimations for the week were—typhoid fever, 6; diphtheria, 7; scarlatina, 17; measles, 91.

Honorary Degrees.

The Senatus Academicus of Edinburgh University has offered the degree of LL.D. to the following amongst others: John Beddoe, M.D., and Sir George M. Humphry, M.D.

Anderson's College Medical School.

At a meeting of the governors, held within the office of the secretary, Mr. John Kidston, West Regent-street, on March 25th, T. Kennedy Dalziel, M.B., C.M., F.F.P.S., was appointed to the chair of Medical Jurisprudence, vacant by the resignation of Dr. Eben. Duncan; and D. Campbell Black, M.D., L.R.C.S., F.F.P.S., was appointed to the chair of Physiology, vacant by the resignation of Dr. Christie.

March 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Stevens' Hospital.

MR. WILLIAM COLLES, ex-president of the Royal College of Surgeons, and Surgeon-in-Ordinary to Her Majesty in Ireland, has resigned the senior surgeoncy of this hospital, to which he has been attached since 1834. In that year he was elected house surgeon, and in 1841 visiting surgeon, or a service of upwards of half a century. The Board of Governors have elected Mr. R. L. Swan, F.R.C.S., to the vacancy. Mr. Swan some years since was resident surgeon, and since 1876 has been surgeon to the Orthopædic Hospital, and is one of the examiners in anatomy at the College of Surgeons.

Assault on a Prison Surgeon.

At the Cork Spring Assizes last week, before Lord Chief Justice O'Brien, Ellen Hurley, an inmate of the city female prison, pleaded guilty to an assault on Mr. Thomas Moriarty, medical officer of the prison, by striking him with a bottle under the ear while inspecting the prisoners last month. The wound was a severe one, and had to be stitched. She was sentenced to twelve months' imprisonment with hard labour.

Charge against a Medical Practitioner.

At the Northern Police Court, Dublin, last week, a medical practitioner was prosecuted by the Registrar-General for having signed a certificate of death which contained a false statement. It appeared that the defendant stated that he was registered in Ireland as a medical practitioner, which was not the case, he having been registered after he gave the certificate. There was also an inaccuracy as regarded the duration of the illness of the deceased person. The magistrate held that the offence was proved, and inflicted a fine of £5.

Health of Ireland for December Quarter.

During the December quarter of last year the births registered were equal to an annual birth-rate of 20 per 1000, and the deaths to 16·2 per 1000. The birth-rate was 1·7 under the average for the corresponding quarter of the previous ten years, and the death-rate shows a decrease of 0·4. The public health for the quarter may be regarded as satisfactory. The principal zymotic diseases were under that for any quarter since 1886, and were much below the average for the fourth quarter of the year. Measles caused 33 deaths; scarlatina 91, against an average of 246; typhus fever 100; whooping-cough 232, or 123 below the average; enteric fever 216, or an excess of 12. Compared with those for the corresponding quarter of 1889, the returns of pauperism show a decrease of 1684, or 3·8 per cent., in the average number of workhouse inmates on Saturdays during the quarter, and an increase of 388 in the average number of persons on out-door relief.

Mr. F. W. O'Connor, F.R.C.S., died on March 26th at George-street, Limerick, from an attack of pneumonia, aged forty-nine years.

BELFAST.

The Ulster Medical Society.

At the last meeting of the Ulster Medical Society, Professor Sinclair read a paper on "Intestinal Obstruction," in which he discussed the causes, the diagnosis, and treatment (medical and surgical) of the conditions underlying the symptoms. He showed a young man who had been suffering from obstruction of the bowels, who had been rescued from death by the following operative treatment done by him. After opening the abdomen, Professor Sinclair divided a series of fibrous bands, tying down the bowel; but in order to reduce the ileum (the part constricted) he was obliged to open it and remove a quantity of liquid fæces, after which he stitched up the aperture with Lembert's sutures and closed the abdomen. The patient recovered, and was exhibited to the members of the Society. An interesting discussion followed Dr. Sinclair's paper.

Belfast Ophthalmic Institution.

From the medical report presented by Dr. Walton Browne at the annual meeting of the supporters of this hospital, held on Monday last, I learn that 1662 cases were treated during the year; of these, eighty-four were intern and the remainder out-patient. Eighteen senior medical students are receiving clinical instruction, so that the hospital is performing a double duty: attending to the sufferings of the poor and at the same time acting as a training school for students in the diseases of the eye, ear, and throat. Special reference was made at the meeting to the lamented death of Mr. Samuel Browne, who was connected with the hospital for a period of forty years. A resolution was passed in which the meeting placed on record the loss they had sustained in Dr. Samuel Browne's death.

Hospital for Infectious Diseases.

In one of the local morning papers attention is again drawn in a strong article to the great want in Belfast of a hospital for infectious diseases provided and maintained by the municipal rates. What has been done in this direction in Glasgow and Edinburgh is pointed out, and the necessity for the removal of the Union Fever Hospital from its present site to a more isolated and less crowded district is urged.

April 1st.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Supply of Morphine to Morphinomaniacs.

MORPHINOMANIA being recognised to be on the increase in France, medical men have very generally charged pharmacists with supplying the drug somewhat too liberally to the unfortunate wretches who have become victims to this passion. It is surmised that a prescription is made to serve for years, and it is thought that if the renewing of that document were made compulsory at stated intervals this social evil might be curtailed in its extension. Paris chemists, who as a body are estimable members of society, resent this charge, and the Benefit Society of the First-class Pharmacists of the Department of the Seine appointed a Commission to make inquiries on the subject. The Commission reports that, however true the charge may have been years ago, when morphia commenced to be injected hypodermically, very few pharmacists now contravene the law forbidding such a practice. The Commission, however, formulates the charge against certain wholesale druggists, who, it is alleged, do not hesitate to forward large supplies to non-professional customers. It is also stated that much of the drug comes from beyond the frontier either as contraband, in letters, or even openly by post or rail.

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New Honours for Sir Spencer Wells.

At the last meeting of the Académie de Médecine there were elected two new recruits to the ranks of the foreign associates of this distinguished body—viz., M. Deroubaix of Brussels, and our own eminent compatriot, Sir Spencer Wells. Most of your readers will, with myself, wonder why the latter should, on the first election, have obtained only four votes as against forty-six accorded to his rival. At the election for the second vacant place, Sir Spencer Wells was, however, elected unanimously.

When will the New Medical Law come into Operation?

In my letter last week I communicated to the readers of THE LANCET the gist of the new law on the practice of medicine which had been passed by the Chamber of Deputies. Certain paragraphs in the measure relating to the right of doctors practising in remote districts to dispense medicines were reserved for consideration until the new Pharmacy Act was discussed. The Medical Act having been passed at the first reading, it was hoped that a similar piece of good fortune awaited the Pharmacy Bill. Such a hope was illusory, for the Chamber having refused to vote urgency for the latter measure, a second reading became necessary. It is certain that the Senate will decline to consider the Medical Bill until the Lower House has made up its mind on the paragraphs reserved. Hence a serious delay, and medical reformers are beginning to despair. It appears that red-tapeism is as much a French as an English article! In connexion with the subject, I may mention that the Minister of Public Instruction has just submitted to the consideration of the Superior Council of his department a project calculated to reorganise the purely preparatory studies in the medical curriculum. This scheme provides for the creation of a special degree for medical aspirants, to be styled *Baccalauréat ès Sciences Naturelles.* The preparatory scientific studies, instead of being conducted, as at present, at the Faculty of Medicine, will take place in future at the Faculty of Sciences. This new regulation will allow four entire years to be exclusively devoted to medical studies properly so-called.

A Medical Funeral.

Last week there died, of infectious broncho-pneumonia, one of Professor Brouardel's *internes* at the Charité Hospital, the disease having been contracted in the wards. The defunct, Charles Louis, was an indefatigable worker and a most promising student, and as such, and on account of his pleasing manners, was greatly beloved. The respect in which he was held is proved by the numerous and distinguished company who escorted his remains to the Gare du Nord, *en route* for his native village, Crépy-en-Valois. Amongst the mourners there were noticed Professor Brouardel, Drs. Budin and Horteloup, and numerous hospital physicians and surgeons, Dr. Peyron, Director of the Assistance Publique, and the directors of the Pitié, Bichat, and Charité hospitals, besides a deputation of *internes* and of pupils of the nursing school of the Pitié, who had enjoyed since 1888 the privilege of the teaching of the deceased. At the station touching words of adieu were pronounced by Dr. Peyron, Professor Brouardel, and M. Chipault, the latter being the mouthpiece of the *internes* of the Charité. Amongst the wreaths sent was one from Professor and Madame Brouardel.

The French Surgical Congress.

About three hundred French and foreign surgeons were present at the International Surgical Congress held in Paris last week, among whom were Sir Spencer Wells, Mr. Victor Horsley, Mr. Lawson Tait, Mr. Broadhurst, and Mr. Godwin. The Congress was opened by Dr. Guyon, who read a paper on the Progress of Surgery in Modern Times. Mr. Victor Horsley read a paper on the Operation of Trephining.

Paris, April 1st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Measures against the Spread of Tuberculosis.

A LITTLE tract of fourteen pages, entitled "The Opinion of the Royal Prussian Scientific Department for Medical Affairs regarding Measures against the Spread of Tuberculosis," has been published in obedience to orders by the Berlin police, which at the same time recommends a broad sheet entitled "Measures against the Spread of Consumption" to public notice. The contents of the latter are as follows: "Consumption of the lungs and larynx (tuberculosis) is conveyed to healthy persons by the tubercle bacilli contained in the expectorated sputum of patients; if the sputum dries, it becomes dust, and is thus inhaled. The excreta of such patients are capable of causing mischievous effects in the same manner. By rendering the sputa and excreta harmless the spread of consumption can be prevented. In the dwellings of consumptives and in all houses, on the stair-landings, but especially in buildings and public rooms (hotels, restaurants, places of amusement, assembly rooms of every kind, schools, &c.), spittoons of strong smooth glass, porcelain, earthenware, or enamelled iron, twenty to twenty-five centimetres in diameter, five centimetres high, with smooth edges a little bent round, supplied with water to a depth of from one to two centimetres, with the distinctly legible inscription on the outside, "Spittoon for coughers," should be placed in large numbers. Evaporated water must be replaced; the spittoons are emptied into the closets and cleansed daily with boiling water. The sitting-rooms and bedrooms of consumptive persons must be furnished only with washable curtains, table-covers, and the like; must be without carpets on the floors, without woollen carpets on the stairs leading to them, and must contain as little padded furniture as possible with washable and easily removable covers; elastic iron garden furniture with washable covers or movable cushions is the best substitute for padded furniture, and facilitates the cleaning and disinfecting of the rooms and their contents. Bedside carpets should be of washable jute linen. The whole floor of every such room must be wiped with a damp cloth daily, to remove the dust, and aired for at least an hour in winter as well as in summer; the rooms must be thoroughly cleansed every week, and disinfected every three months according to the regulations for disinfection in epidemics dated Feb. 7th, 1887."

A Portrait of Virchow.

The famous portrait painter Franz Lenbach of Munich is painting a portrait of Virchow for the Berlin Medical Society. It will be unveiled at a festal meeting of the Society, and presented to the Langenbeck House. There it will hang beside a portrait of Langenbeck in the hall destined for the meetings of the medical societies of Berlin, for congress assemblies, festal ceremonies, &c.

German Death-rates in the week ending March 14th.

Aix-la-Chapelle, 25·4; Altona, 32·6; Barmen, 16·3; Berlin, 21; Bremen, 21·5; Breslau, 24·4; Chemnitz, 32·5; Cologne, 23·4; Dantzic, 27; Dresden, 20·1; Dusseldorf, 25·6; Elberfeld, 21·2; Frankfort, 22·8; Hamburg, 23·8; Hanover, 21; Königsberg, 24; Krefeld, 29·6; Leipsic, 20·9; Magdeburg, 24·1; Munich, 30·9; Nuernberg, 28·6; Stettin, 22·4; Strasburg, 23·7; Stuttgart, 24·2.

Berlin, March 30th.

Obituary.

WILBERFORCE ARNOLD, M.R.C.P.I., M.R.C.S., J.P.

WE have to announce with regret the death of Mr. Arnold, which took place suddenly at his residence, Crescent House, Belfast, on Monday night, March 23rd, at the age of fifty-three years. Ever since September last, when he had a slight paralytic stroke, he has been in poor health, a fact noticed by many of his friends. On Monday night, after seeing a patient, he complained of feeling faint, and Dr. Howard Sinclair and Dr. Lindsay saw him soon afterwards, but he was in a semi-conscious condition, and died from cardiac failure. Mr. Arnold was the son of Mr. John Arnold, a man well known in his time in Belfast, and highly respected. Mr. Arnold, who was a member of the Royal College of Surgeons of England, and of the College of Physicians of Ireland, occupied a good social and professional position in Belfast. He was specially distinguished for his religous and philanthropic work, and it was articles from his pen which led to the establishment of the Presbyterian Orphan Society, which has been a great success in Ulster. Mr. Arnold, who was a justice of the peace for the city of Belfast, leaves a widow, three sons, and five daughters.

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Medical News.

EPSOM COLLEGE.—H. Boulton, a pupil at the College, has just gained an open scholarship of £50 for Natural Science at Clare College, Cambridge.

MEDICAL MAGISTRATES, QUEENSLAND.—Mr. M. J. Collins, L.R.C.S. Edin., of Clermont, and Mr. F. H. V. Voss, M.R.C.S., of Rockhampton, have been appointed Justices of the Peace for Queensland.

THE GRESHAM LECTURES.—The subject of Dr. Symes Thompson's lectures, to be delivered on April 7th and three following days, will be "The Prevention of Disease," and will be treated under the headings "The Access of Disease," "Infection and Disinfection," "Diphtheria," and "Contagion."

SOCIETY FOR THE STUDY OF INEBRIETY.—At the annual meeting, to be held on April 7th, in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., the President, Norman Kerr, M.D., F.L.S., will take for the subject of his annual address, "Recent Criminal and Civil Trials, with Inebriate Complications; and the Urgent Need for a Reformed Jurisprudence."

THE HOME FOR LOST DOGS, BATTERSEA.—The thirtieth annual report, just issued, states that, during the year 1890, 21,593 dogs had been received into the Home, showing a decrease of 2530, compared with the returns of the previous year, which were augmented by seizures under the muzzling order. But these figures exceed by 4500 those issued prior to that order. The committee report an almost entire absence of rabies during the past year. Reference is made to the valuable services of Dr. Richardson, who had generously presented to the Home two lethal chambers, in which useless dogs met a painless death.

THE PUBLIC HEALTH MEDICAL SOCIETY.—A meeting of the council of this Society was held on the 24th ult., at its offices, 101, Great Russell-street, Bedford-square, Professor W. R. Smith, M.D., vice-president, in the chair. Among the business transacted was the consideration of various Bills at present before Parliament, and it was unanimously resolved that steps should at once be taken to have an amendment placed on the paper in connexion with the Public Health Law Amendment (London) Bill, with the view of making it compulsory that medical officers of health in the metropolis should not engage in general practice.

QUEEN'S HOSPITAL, BIRMINGHAM.—The report (the fiftieth, and the jubilee year of the institution) is highly satisfactory, both in respect to finance and the large additional good work accomplished during the past year. There was a balance of income over expenditure of £2491 16*s.* 8*d.*, due chiefly to the exceptional amount received in legacies. The in-patients had increased by twelve per day, the total number for the year was 1948, and 27,756 out-patients were tended. From the Hospital Saturday collection £1524 11*s.* 8*d* was allotted to the institution (a very substantial addition on the previous year), and £4435 9*s.* was received from the Hospital Sunday Fund. As soon as the finances of the hospital justify it, the extra space available by the recent enlargement of the wards will be utilised to meet the present inadequate accommodation for out-patients.

SCHOOLS OF SURGERY, ROYAL COLLEGE OF SURGEONS IN IRELAND. — The following is the Anatomical Prize List for the winter session 1890–91:—*Descriptive Anatomy:* Junior—First-class certificates, Messrs. Green (1st Prize and Medal), Meeke (2nd Prize), E. C. Hayes, G. Davidge, J. W. Griffin, C. Black, Keating, Marie Goodwin, Odlum. Senior—Messrs. Sweeny (1st Prize and Medal), O'Donnell (2nd Prize), Taylor, Trewhella, F. Matthews, W. Martin. *Practical Anatomy:* Junior—Messrs. Greene (1st Prize and Medal), Meeke (2nd Prize), E. Hayes, Culligan, L'Estrange, Griffin, Keating, Davidge. Senior—Messrs. Molyneux (1st Prize and Medal), Sweeny (2nd Prize), Behan, E. Tennant, McCann, Grogan, Taylor, Trewhella, Martin, Matthews, Rothwell. Third year—Messrs. Black (1st Prize and Medal), Elsner (2nd Prize), Oliver, Warren, Anderson, J. Griffin, Maughan, Clifford, Good, and W. F. McCann.

THE SANITARY CONDITION OF ST. BARTHOLOMEW'S HOSPITAL.—A petition having been presented to the Commissioners of Sewers complaining of the sanitary condition of this hospital, it has been referred by that body to the Sanitary Committee for further investigation.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—The dinner in aid of the funds of the hospital, at which the Duke of Connaught has consented to preside, will be held in the Royal Venetian Chamber, Holborn Restaurant, on May 15th.

THE NEW INFIRMARY, DERBY.—An official intimation has been received by the Mayor of Derby that Her Majesty the Queen will lay the foundation stone of the new infirmary on the 21st prox. The building is estimated to cost £74,000. The present infirmary, owing to its sanitary defects, has been condemned.

CONGRESS OF HYGIENE.—The Council of the Society of Arts, acting under the provisions of the Benjamin Shaw Trust, have offered two gold medals, or two prizes of £20 each, to the Executive Committee of the Congress of Hygiene and Demography, for any inventions or discoveries of date subsequent to 1885, exhibited at or submitted to the Congress and coming within the terms of the trust. Under the conditions laid down by the donor, these prizes are to be offered for new methods of obviating or diminishing risks incidental to industrial occupations.

NEW INFIRMARY AT WEST DERBY.—The ceremony took place last week of laying the foundation stone of the new infirmary which the West Derby Union Board has decided to erect in the Mill-road. The main building on the north side of Mill-road will comprise the administrative block, in addition to the old lower hospital, which it is proposed to leave standing. The several floors of the blocks will contain a large ward capable of accommodating thirty-six patients, duty room, and day room. The whole scheme will be carried out on the latest approved plans of hospital construction.

UNIVERSITY COLLEGE HOSPITAL.—This institution maintains its efficient administration. The report for 1890 states that the year commenced with debts amounting to £14,147, and, unless the charity received additional support, the committee look forward to grave responsibility. The yearly reliable income was about £6000, while the expenditure approached £20,000. In 1890, 2773 in-patients were admitted. The out-patients numbered 39,478, and the attendances of the latter, including first attendances, 146,062. The hospital rebuilding fund had remained almost stationary. At present £12,000 was in hand, but £30,000 was required.

BRISTOL INFIRMARY. — The 155th annual report shows that the finance of the institution is still unsatisfactory. A heavy debt remains due to the treasurer. As regards the number of in-patients during the past year there was nothing that called for special notice; but there had been a remarkable addition in the total of out-patients, which exceeded the previous year by no less than 4200 (about 16 per cent.), making the total of out-patients attended 30,567. Camden House, which was purchased four years ago, is now in full operation, and affords accommodation for fifty nurses; in connexion with which a Nurses' Institute is being gradually added to from fully qualified nurses who have received their training in the house.

STOCKPORT INFIRMARY.—The annual meeting of the trustees was held last week. The report for the year 1890, which was read, stated that next year would witness the close of a hundred years since the dispensary was inaugurated in a humble cottage by Dr. Briscoll. A Samaritan Fund had been established to aid poor persons by sending them to convalescent hospitals. The late Mr. Allatt Marsland had bequeathed £500, free of legacy duty, to this fund. A framed portrait of Dr. Killer, one of the founders, had been presented to the infirmary. The receipts for the year, exclusive of legacies, had enabled the committee to increase the assets by £3516, these now standing at £41,000. The number of cases treated was 5156, of which 1339 were accidents. There had been 659 in-patients.

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BEQUESTS AND DONATIONS.—Mrs. Anne Browne of Monkstown has left to the Royal Hospital for Incurables £50, Adelaide Hospital £50, Meath Hospital £50, and Cripples' Home, Bray, £50.—Lord Iveagh and Mr. Rathbone have given a donation of £100 each to St. Patrick's Nurses' Home.

YELLOW FEVER ON A BRITISH STEAMER.—An Exchange telegram reports that the Royal Mail steamer *Trent* has been detained in quarantine at Southampton, owing to four fatal cases of yellow fever on the homeward voyage from the River Plate. A tug was to have taken off the mails and specie on Thursday, but the order was countermanded.

FEVER IN BIRKENHEAD.—Another outbreak of fever is reported in Birkenhead, beginning in the Borough Hospital, three of the inmates of which were struck down simultaneously, and the medical staff deemed their removal to the fever hospital to be advisable. The fever has not been officially declared to be typhus, and every precautionary measure is adopted in the hospital.

FOOTBALL CASUALTIES.—In the Alliance match with Bootle on the 23rd ult., at Bootle, three players sustained severe injuries from kicks. Mr. Jabez Ratcliffe, whilst playing football last week, at Hathern, fractured his right hand. On Monday, a youth, belonging to Corbridge, whilst playing a match between the Acomb Archers and the Corbridge Juniors, broke one of his legs below the knee, there being a compound fracture. On Tuesday evening, a youth, aged seventeen, of Black Heath, was admitted into the West Bromwich District Hospital, suffering from a fractured thigh whilst playing football.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The board of management of this hospital announce that the Right Hon. the Earl of Derby, K.G., will preside at the Biennial Festival on Thursday, April 23rd, at the Whitehall Rooms, Hôtel Métropole. The special objects of the festival are: to raise a sum of £2500 to cover deficit on general purposes account and to prevent the closing of wards; to raise a sum of £500 to complete the equipment of the new surgical wing; and to increase the annual subscription list, which, though actually 10 per cent. more, is, proportionately to the expenditure, 40 per cent. less than before the rebuilding.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAYNES, JAMES, has been appointed Analyst for the City and Borough of Peterborough.

BLUCKE, H. F. S., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Teignmouth, Dawlish, and Newton Infirmary, Dispensary, and Convalescent Home.

BROWN, W. H., M.R.C.S., has been appointed Public Vaccinator for Colac, Victoria, Australia.

BROWN, W. S., M.R.C.S., has been appointed Medical Officer to the Paramatta Friendly Societies' Medical Institute, New South Wales.

BRYCE, ALEX., M.B., C.M. Glasg., has been appointed Medical Officer for the Parish of Killin, Perthshire.

CAVERHILL, T. F. S., M.B., F.R.C.P. Edin., has been appointed Medical Officer for the County of Haddingtonshire.

COBB, JOHN FRED., M.R.C.S., has been appointed Public Vaccinator for East Collingwood, Victoria, Australia, vice Macgibbon.

CONNOR, F. G., M.B., C.M. Edin., has been appointed Medical Officer to the Lismore Hospital, Lismore, New South Wales.

DEANE, JOHN E. J., L.R.C.P. Irel., L.F.P.S. Glasg., has been appointed Public Vaccinator for Rutherglen, Victoria, Australia, vice Lang, resigned.

DODSWORTH, F. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Chiswick Urban Sanitary District of the Brentford Union, vice Moore, resigned.

FISHER, JOHN A., L.R.C.P. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Garston, Lancashire.

FISHER, THEODORE, M.D. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Infirmary of the St. Saviour's Union, vice Muspratt, resigned.

FITZGERALD, J., M.B., C.M. Edin., has been appointed Public Vaccinator for the District of Kaitangata, New Zealand.

FORBES, ARMITAGE, L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Government Medical Officer and Vaccinator for the District of Fernmount, New South Wales.

HODGSON, H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Obstetric Surgeon, Guy's Hospital.

HUNTER, ROBT. R., M.B., C.M. Glasg., M.R.C.S., has been appointed Government Medical Officer, Mount Morgan, Queensland.

JOHNSTON, JOHN, M.B., C.M. Glasg., has been appointed Medical Officer for the Town of Williamstown, Victoria, Australia, vice Figg, resigned.

KAY, JAS. M. M., M.B., C.M. Edin., has been appointed Medical Officer to the Workmen of Messrs. Lucas and Aird, Railway Contractors, Crianlarich, Perthshire, vice Hodges, resigned.

LEE, TIMOTHY W., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Wollongong, also Visiting Surgeon to the Wollongong Gaol, New South Wales.

LESLIE, LOUIS G., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Rutherglen Borough, Victoria, South Australia.

LEWIS, PERCY G., M.D., has been appointed Honorary Medical Officer to the Victoria Hospital, Folkestone, and Honorary Assistant Medical Officer to the St. Andrew's Convalescent Hospital, Folkestone.

LEWIS, WM. M., M.D., M.Ch., L.M. R.C.P. Irel., has been appointed Public Vaccinator for Donald, Victoria, Australia, vice Fleming.

MACKINTOSH, A., M.D., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Clay Lane Urban District.

MADIN, WM. T., L.D.S. R.C.S., has been appointed Dental Tutor to Queen's College, Birmingham.

MCGEE, WILLIAM, L.R.C.S., L.K.Q.C.P. Irel., has been appointed Medical Officer for Avonshire, Victoria, South Australia.

MITCHELL, JOHN, M.D., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Barnard Castle Urban and Rural Districts of the Teesdale Union.

MORROW, ROBERT, M.D., B.Ch. Dub., has been appointed Medical Officer for the Shire of Woorayl, Victoria, Australia, vice Montgomery.

MORTON, SELBY M., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Goulburn, also Visiting Surgeon to the Goulburn Gaol, New South Wales.

NASMYTH, T. G., M.D. Edin., D.P.H. Camb., has been appointed Medical Officer for the Cupar District, Fifeshire.

PAUL, G. W. F., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer for Sandgate, Queensland.

PERRY, C. E., M.D. Brux., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Sandgate.

PHILLIPS, E. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Southend Local Board.

POPE, H. SHARLAND, B.A., M.B., B.C. Cantab., has been appointed House Physician to the General Lying-in Hospital, York-road, vice H. B. Osburn, resigned.

ROWLEY, CHAS., M.R.C.S., has been appointed Public Vaccinator for the District of Te Awamutu, Auckland, New Zealand.

SIMS, G. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the West District of the Derby Union.

SMITH, ALFRED F., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Shire of Flinders and Kangereong, Victoria, Australia, vice Theed.

WHITAKER, GEO. HERBERT, M.R.C.S., has been appointed Medical Officer for the Bungay District, Suffolk, vice Johnson, resigned.

WILDING, WALTER F. W., M.R.C.S., L.R.C.P. Lond., and L.M. Coombe, has been appointed Medical Officer of Health to the Hindley Local Board, vice John Aspinall, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing will be provided.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Honorary Pathologist.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant. Board, lodging, washing, and attendance provided.

DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham, N.—House Surgeon. Salary £90 per annum, with board and residence.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House Physiciancy. Board and lodging provided.

GENERAL HOSPITAL, Birmingham.—Honorary Physician.

GRANTHAM FRIENDLY AND TRADE SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary £150 per annum and midwifery fees, with residence, coals, gas, and rates free. (Apply to Mr. F Hullot, Grantham)

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer at Bowdon, Cheshire. Salary £60, with board, apartments, and washing.

MESSRS. J. T. RENNIE, SON, & CO., 4, East India-avenue, E.C.—Surgeon for Steamer for three months' voyage to South Africa and back.

OXFORD EYE HOSPITAL.—House Surgeon. Board, lodging, and honorarium of £50 at expiration of a year.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

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SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon. Salary £120, rising to £140 per annum, at the discretion of the Committee of Management, with residence and board in the Hospital, with his washing.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House Surgeon for six months. Board, lodging, and washing in the Hospital.

WEST RIDING LUNATIC ASYLUM, Wakefield.—Pathologist and Assistant Medical Officer. Salary £100, advancing £10 annually to £150, with board, furnished apartments, &c., and an additional £50 as Pathologist.

Births, Marriages, and Deaths.

BIRTHS.

ALDOUS.—On March 27th, at Charlton House, Plymouth, Devonshire, the wife of George Frederick Aldous, Surgeon, of a daughter.

DAUNT.—On March 24th, at Exmouth-street, W.C., the wife of Francis Eldon Horsford Daunt, L.R.C.P. &c., of a son.

DE MÉRIC.—On March 25th, at Kingswood, Rodwell, Weymouth, the wife of Fleet Surgeon E. V. De Méric, R.N. (retired), of a son.

DOWNMAN.—On March 16th, at Arunhurst, Burnham-on-Crouch, the wife of Charles F. Downman, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

EDWARDS.—On March 30th, at Wimpole-street, Cavendish-square, W., the wife of F. Swinford Edwards, F.R.C.S., of a daughter.

FOLEY.—On March 28th, at Marmora-road, Honour-road, S.E., the wife of C. N. Foley, L.R.C.P. Lond., M.R.C.S., of a son.

MACKENZIE.—On March 18th, at North House, Lockwood, Huddersfield, the wife of F. L. Mackenzie, M.B., of a son.

MATTHEWS.—On March 20th, at St. Owen-street, Hereford, the wife of S. R. Matthews, M.D., of a daughter.

MINNS.—On March 23rd, at 10, Whitehart-street, Thetford, the wife of Allan Minns, L.R.C.P. Lond., of a son.

SEQUEIRA.—On March 20th, at Ingleside, Fairlop-road, Leytonstone, the wife of Henry J. Sequeira, M.R.C.S., L.S.A., of a son.

WOODS.—On March 22nd, at Greenshill, Timsbury, Bath, the wife of Frank Woods, L.R.C.P. Lond., M.R.C.S., of a son.

MARRIAGE.

HUNT—CUTLER.—On March 25th, at St. Luke's, Chelsea, James Sidney Hunt, M.R.C.S., L.R.C.P., of Hughenden, Queensland, to Lilian Mona, fourth daughter of W. H. Cutler, of Marnhull, Dorset, and Duncliffe, Upper Norwood.

DEATHS.

BOLTON.—Suddenly, from convulsions, Flora Beatrice, aged 2½ years. The dearly loved and loving child of Teresina and A. Irwin Bolton, A.B., M.B., T.C.D., L.R.C.S.I. Kustendjie, Roumania.

HALL.—On March 24th, at The Lodge, Avenue, Southampton, William Henry Hall, M.D., aged 72.

LEIGH.—On March 30th, at Leamington, Edwd. P. Leigh, M.R.C.S.

SALTER.—On March 25th, at 18, College-road, Leeds, Francis Joseph Salter (Frank), L.R.C.P. and L.R.C.S., second son of the late Joseph Salter, of Lyddon-terrace—"Until dawn." No cards.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on March 31st, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	222	51	..	46	2	321	442
North-Western Hospital	149	39	..	12	3	203	443
Western ,,	149	19	..	12	1	181	224
South-Western ,,	142	22	..	14	..	178	340
South-Eastern ,,	181	13	..	20	2*	216	462
Northern ,,	177	22	..	8	..	207	480
Totals	1020	166	..	112	8	1306	2891

SMALL-POX.—South-Eastern Hospital, 3; *Atlas* hospital ship, 4. Total, 7.

* Infant and mother.

Medical Diary for the ensuing Week.

Monday, April 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. A. Pearce Gould: Tooth-plate impacted in the Pharynx: Death from Septicæmia. Casual Communications:—Mr. Penfold: Movable Mass of Salivary Calculus tolerated for three years as an Incurable Tumour.—Mr. W. H. Coffin: Jaw and Dentition of the Irish Giant, Cornelius Magrath.—Mr. Stocken: Cases of Absorption of Permanent Teeth.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Alban Doran: Fibro-Sarcoma, or Desmoid Growth of the Abdominal Wall.—Mr. Stephen Paget: Three cases of Strangulated Cæcal Hernia in Infants.—Dr. de Havilland Hall: Chronic Atrophic Rhinitis (Ozæna).

Tuesday, April 7.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. J. Scott Keltie: The Geography of Africa.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Aldren Turner and Dr. Campbell: Heterotopia of Spinal Cord.—Dr. H. Tooth: Heterotopia of Spinal Cord.—Dr. Newton Pitt: Chronic Intestinal Stricture Secondary to Strangulation in a Hernial Sac.—Mr. W. B. Robinson: Columnar-celled Carcinoma of Jaw.—Mr. H. H. Clutton: Osteitis Deformans of Tibia.—Mr. S. G. Shattock: Thickening of Skull in Rickets.—Mr. E. C. Stabb: Tuberculosis of Tendon Sheath.—Dr. A. F. Voelcker: Tuberculosis of Lymphatic Glands invading Lung by Continuity.—Mr. S. Paget: Carcinoma of Scalp. Card Specimens:—Dr. Hale White: Hodgkin's Disease with Waxy Kidney.—Dr. Newton Pitt: Pigmented Colon from a case of Lead Poisoning.

Wednesday, April 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—8 P.M. Dr. F. J. Smith: (1) A case of Fibrous Growths on the Hands; (2) A case of Congenital Heart Disease.—Mr. F. R. Humphreys: Two cases of Pneumonia (migrating), with complications.—Dr. A. T. Davies: (1) A case of Paralysis Agitans; (2) A case of Graves' Disease.

Thursday, April 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Adjourned Discussion on Dr. Bell's paper ("The Treatment of Chronic Disease of the Uterine Adnexa"). Mr. Mayo Robson: Observations on the Menstrual Flow in two cases of Biliary Fistula.

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Friday, April 10.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8 P.M. Mr. A. T. Norton: A case of Popliteal Aneurysm in a youth of seventeen.—Mr. G. R. Turner: A case of Cancellous Suppression of Urine with Double Pyonephrosis; Nephrolithotomy on both sides at one sitting.—Mr. W. H. A. Jacobson: Eight cases of Nephrolithotomy, with their lessons.—Mr. Bilton Pollard: A case of Nephrolithotomy in a boy aged ten years.

ROYAL INSTITUTION.—9 P.M. Sir William Thomson: Electric and Magnetic Screening.

Saturday, April 11.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Silvanus P. Thompson: The Dynamo.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 2nd, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 9.30 A.M.
Mar. 27	29·82	W.	40	36	84	47	35	..	Cloudy
,, 28	29·70	N.	42	39	85	54	36	·04	Cloudy
,, 29	29·71	W.	46	43	89	55	39	..	Cloudy
,, 30	29·79	N.W.	39	33	93	48	33	..	Cloudy
,, 31	30·02	N.W.	39	36	86	48	33	..	Cloudy
Apr. 1	29·95	S.W.	37	34	80	50	34	..	Overcast
,, 2	29·80	S.E.	43	39	66	48	37	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"RUDE" HEALTH.

SPEECH, as the author of the "New Cratylus" demonstrated, has its pathology as well as the human subject, and there is literally no end to the "morbid developments" taken on by words in their passage "per ora virûm." An apt illustration is afforded in the familiar expression "rude" health—an expression which will not stand philological examination for a moment. *Crude* health is what is meant, as can be shown by its use in Latin as late as the middle of the sixteenth century:—

"At me fovebis patriâ indulgentiâ
Crudo vigentem robore."—*Buchanan, Psalm xcii.*

Sigma.—The form or schedule which has to be filled up for the removal of insane persons in Scotland to asylums consists of (1) a petition to the sheriff to grant an order for the reception of the patient, this being usually signed by a relative of the patient; (2) a statement containing particulars as to the name, age, &c., of the patient, this being signed by the person applying to the sheriff; (3) certificates by two medical men; and (4) the order granted by the sheriff for the transmission and reception of the lunatic.

Mr. C. A. Lumley (Birmingham).—The block to accompany the description is being prepared.

Dr. Roberson Day will find the information in our last issue.

Dr. James Armstrong's letter shall appear in our next number.

L.R.C.S.I.—Yes.

PRACTICE IN THE ORANGE FREE STATE.

A. B. W.—We referred our correspondent's query to Dr. Blyth, the representative of the Orange Free State in this country, and have received from him the following reply:—"A medical diploma is required in the Orange Free State, and most of the men practising there are very able Germans. I do not think any British degree would be otherwise than acceptable to the Government. It is distinctly necessary that the gentleman practising should receive the recognition of the State. The general feeling is, however, very conservative towards 'foreigners'; but there is no reason whatever to doubt that if a man went there properly accredited he would receive every attention and consideration at the hands of the Government."

Dr. Ainley.—We know of no recent work specially devoted to climate in relation to the etiology of disease—a subject dealt with by Mr. A. Haviland, in his "Climate, Weather, and Disease," 1855. Much information may be gleaned in Hirsch's "Historical and Geographical Pathology" (New Sydenham Society's Transactions), and in the works on "Les Climats des Montagnes" (3rd ed., 1873) and "Traité de Climatologie Médicale" (1877) by Prof. Lombard.

J. W. F.—1. The first question is answered on p. 686 of our impression of March 21st.—2. This question is also practically answered on p. 677.—3. Crookshank's Manual of Bacteriology might be consulted.

Mr. F. W. Kirkham.—The only remedy of our correspondent's patient is in the county court.

Nolens Volens has not enclosed his card.

DISPENSING BY MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—The subject of dispensing by medical men has occupied the attention of the profession for many years, but the *pros* and *cons* seem so numerous that the matter is likely to remain *in statu quo* for some time. Having had a large general country practice for several years, with a large amount of dispensing, and having now a prescribing practice in a town, I feel that I am in a position to see the various disadvantages of both a dispensing and a prescribing practice. There is no doubt that it would add to the dignity of the profession if dispensing were given up entirely. It would, however, take some time to accomplish, and necessitate a great change in the form of contracts for clubs and unions in country districts. Druggists have told me that they would not dispense for club and parish patients for a less sum than medical men usually get for both medical attendance and medicines combined. The salary of a parish doctor in the country usually pays him at the rate of 1½*d.* for each lot of medicine supplied, and this leaves out of the calculation visits and advice, for which there would be *nil*. I worked this carefully out some years ago, and, curiously enough, another surgeon arrived at the same figure, and quite independently of me. Where there is a large dispensing practice a dispenser ought to be kept; otherwise what your correspondent says is likely to happen—viz., slipshod dispensing and hurrying over cases to get home again to dispense. A patient should never be kept waiting for the medicine if no dispenser is kept, but the prescription forwarded by the patient to the chemist, under cover if preferred, and marked "To my account." The chemist would then retain the prescription. There are several patients who cannot pay a respectable fee to the doctor and then pay the druggist also; and, moreover, prescriptions are dangerous weapons in the hands of the ignorant. I once gave a prescription of small doses of aconite and salicylate of soda, and told the patient to call and see me in three days. It appears, however, he did not want to pay me a second fee, so went on with his aconite mixture for a month! At the expiration of that time I accidentally met him, and he complained of feeling very weak. Again, do patients always get what is prescribed for them? I fancy not. Who is to say when German salicylate is substituted for that which is physiologically pure, or cinchonidine for quinine, without subjecting the mixture to analysis? I do not ask this question without full justification; and although I prescribe only, I am sure my patients would fare better if I dispensed for them as well. The great abuse of sedatives has been almost entirely caused by prescriptions being given to patients and handed about to their friends; and yet sedatives must be prescribed in the form of night mixtures now and again. The abuse of many other drugs occurs in the same way. In a prescribing practice consulting fees at the house have to be higher, because the patients do not come so often. And the same applies to visits at the house, for it is not uncommon for patients, when they get the prescription, to quietly tell you that "they will let you know if they want you to call again." Having got the prescription they think that is all they require until fresh symptoms arise. This, of course, only applies to the small patients, and not the better class. For these reasons dispensing practices are more readily transferable, as the prescriptions are held by the doctor in the same way as documents are held by the lawyer; and the patients are consequently more easily retained by the purchaser of such a practice.

Now, how is the proposed alteration to be brought about? I should think the first step would be for all club and parish doctors to refuse to dispense for such patients, and then gradually for the dispensing for private patients to be also refused.—I am, Sirs, yours truly,

Bristol, April 1st, 1891. PRESCRIBER.

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A NURSE'S CHART.

MESSRS. H. GILBERT AND SONS of St. Andrews-street, Holborn-circus, have published a chart designed by Nurse Marion Pincoffs, drawn up so as to be made available for written directions to the nurse for the proper treatment of any particular patient. Its intention is to ensure accuracy in following medical instructions—a clinical slate ruled in the form of the usual clinical chart, and containing columns for directions for the treatment of the patient, and for recording the observations of the nurse or medical man at any particular time. It cannot fail to be found useful. A continued record from day to day may be made at the end of each day on the back of the slate.

Equity (Brighton).—Our correspondent claims a fee from the London School Board for information as to the health of one of the teachers, granted in answer to a request from the medical officer of the Board. We doubt whether he could enforce such a claim. The information was asked for as a kind of favour by the medical officer of the Board, and presumably in the interest of our correspondent's patient, who might be supposed liable. The point is a doubtful one, and should be cleared up.

Dr. Hime (Bradford).—Very soon.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS' PRIVATE PATIENTS.

To the Editors of THE LANCET.

SIRS,—I have been in communication with the Local Government Board with reference to the duties of medical officers of health, especially as relates to their behaviour toward medical men certifying to them under the Infectious Diseases Notification Act, 1889. In reply I received the following:—

"I am directed by the Local Government Board to advert to your letter of the 7th inst., and to state that Article 18(6) of the Board's order of the 11th of March, 1880, which prescribes the duties of the medical officer of health, is as follows: 'On receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within the district, he shall visit the spot without delay and inquire into the causes and circumstances of such outbreak; and, in case he is not satisfied that all due precautions are being taken, he shall advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and, so far as he may be lawfully authorised, assist in the execution of the same.' As between sanitary officers and medical attendants, the Board leave the interpretation of their regulations to be determined by the circumstances of the particular case, and by the customs that usually govern the relations of medical practitioners to each other."

As the interpretation of these regulations is what I asked for—especially as to whether the medical officer of health was justified in seeing without the permission, or asking it even, of the medical man in attendance,—I pressed for a further and more definite answer; and in reply to my second letter I am informed that the Local Government Board have nothing further to add to their previous letter. Consequently one is forced to the conclusion that they make rules and regulations of which they do not know the interpretation. It is wonderfully clever to ask a riddle and then calmly say, when asked for the answer, "We do not know the answer. You must find that out for yourselves. We only have to ask the riddle; and you—well—you can each of you have your own answer to it."

I, like your correspondent, "N. E. W.," had a case of typhoid fever. The medical officer of health saw it, and reported it to his board as "a questionable case" of typhoid. On another occasion he saw a typhoid patient of mine which he denied being typhoid; but, *mirabile dictu*, some five or six weeks after, another member of the family falling with it, he said it was "caught" from the first case. Well, if medical officers of health are allowed to run riot amongst the patients of other medical men, can you, Sirs, wonder at our protesting against it?

It would be well for some definite and authoritative interpretation of their rules and regulations to be issued by the Local Government Board. Then medical men would understand more clearly than at present their position with respect to medical officers of health.

Personally, no one could be more willing than I to afford every information and opportunity to the medical officer of health; but I do object to having my diagnosis questioned, and this published in every penny weekly paper in the neighbourhood.

I am, Sirs, yours obediently,

March, 1891. DISGUSTED.

HUMAN AND BOVINE SCARLATINA AND DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—There is one point in Dr. Thorne's Milroy lectures which I think specially calls for attention—viz., that there has been a higher death-rate from diphtheria in urban districts during the last, than in the previous ten years—i.e., it has been higher since milk has been mainly obtained from the country, than when the cows were kept stalled in towns, and really, therefore, placed under less favourable sanitary conditions than at the present time. Dr. Klein has tried to prove that scarlatina and diphtheria frequently originate in the cow, and manifest their existence by surface ulcerations of the udder; but it would appear to me there are, at any rate, two links wanting in the proof. 1. The poison from the udder ulceration has never been shown to produce either diphtheria or scarlatina in man by direct inoculation. The milkers, it is said, have had their fingers affected by it, but no serious constitutional illness has resulted therefrom. 2. These diseases can never be shown to have been transmitted from man to animals. But supposing that these ulcerations of the udder are manifestations of the existence of diphtheria and scarlatina in the cow, a question naturally arises, Do these diseases orginate in man and animals, under any circumstances, from a common cause? From the fact that cows were formerly placed under much less favourable sanitary conditions than at the present time, and that there was then a lower death-rate from diphtheria, I should say it appears unlikely.

It would be a great thing if veterinary surgeons were to inform us how many of the diseases which are communicable from animals to human beings manifest their existence by an entirely different set of symptoms.

I am, Sirs, your obedient servant,

Surbiton, March, 1891. F. P. ATKINSON.

OBSTETRIC ENGAGEMENTS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me whether a general practitioner who professes to be in the actual practice of his profession is justified in accepting midwifery engagements, and when the labour happens to take place in the night coolly informing the messenger requesting his attendance "that he does not go out at night," thus inferring that the patient may get on the best way she can unaided? Quite recently I was called to a case under these somewhat peculiar circumstances, and found that delivery had taken place more than an hour previously. The placenta had not come away, and the uterus was slowly filling with blood, the patient evincing all the symptoms of internal hæmorrhage. One hardly likes to contemplate the result in such a case had the poor woman failed to obtain professional aid.

I am, Sirs, your obedient servant,

March, 1891. A GENERAL PRACTITIONER.

*** Our correspondent describes a style of practitioner that has been met with before in history. Such a practitioner undertaking midwifery engagements and then declining them when they occur at night incurs a very grave responsibility. But for our correspondent's kindness in going to this case a very serious censure might have been the lot of the gentleman who accepted the case but did not discharge his part of the contract.—ED. L.

RE-INFECTION IN CHICKEN-POX.

To the Editors of THE LANCET.

SIRS,—In August, 1890, T. W——, aged three years, had varicella. Three days later D. W——, aged four years, developed the same disease. On March 11th, 1891, their nursery governess had varicella; on the 21st D. W—— again sickened, and had distinct varicella next day; and on the 24th T. W—— also had varicella. A peculiar point in the family history of these children is that their maternal grandmother had rather severe modified small-pox about six years after revaccination.

Unfortunately there is a weak spot in the above narrative. The diagnosis of the first attack, in August last, rested chiefly on the opinion of a trained nurse and the patient's friends, but was in part supported by medical observation at the time. I am inclined to regard it as correct. If it is so, then these children, having had chicken-pox last August, are now (eight months later) going through a second attack of the same disease. Can any practitioner give instances of second attacks of chicken-pox?

I am, Sirs, yours faithfully,

London, S.W. ALFRED LEACH, M.B., M.R.C.P.

CHEAP DOCTORING AND ITS REMEDIES.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "General Practitioner," whose letter appeared in your last issue, is pleased to see that a General Practitioners' Union has been formed. I cannot see that such an association can be of any service. We have a lot of ungentlemanly men in the profession who are willing to give their services for the smallest pittance. In this town an F.R.C.S. Eng., a man in very large practice, has contracted with the police to attend the wives and children of inspectors, sergeants, and constables for the magnificent sum of 1½*d.* per week, wife and child; a whole family, no matter how large, for 2½*d.* per week. It was proposed at a Court of Foresters to increase my remuneration from 4*s.* per member to 6*s.* Member after member suggested that they should pay another penny per week, and have their whole family attended on the same terms as the Metropolitan Police.

I am, Sirs, your obedient servant,

March 31st, 1891. M.D.

CLAIMS ON FRIENDLY SOCIETIES.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me if ordinary blindness coming on in a young man, unconnected with any injury or illness, will entitle the patient to take advantage of his club (an ordinary friendly society), and receive weekly payment as a sick member?

I am, Sirs, yours faithfully,

March 26th, 1891. FRIENDLY SOCIETY.

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WORCESTER GENERAL INFIRMARY.

IN our notice last week of the annual report of this charity the name of the donor of the cheque for £1000 was given as Mr. Wheeley. It should have been Mr. Wheeley Lea, of Parkfield, Hallow.

F.R.C.S.E.—We have no doubt the answer must be in the negative.

Thor.—The usual rate is somewhat under two years' purchase.

"TRACHEAL TUGGING."

To the Editors of THE LANCET.

SIRS,—Will you allow me to correct a typographical error in my article on "The Diagnostic Value of the Physical Sign 'Tracheal Tugging' in Thoracic Aneurysm"? At page 536 it is printed "tracheal tugging is never found when the innominate is *above* the seat of aneurysm." This should read, "tracheal tugging is never found when the innominate is *alone* the seat of aneurysm."

I am, Sirs, yours truly,

Montreal, March 6th, 1891. R. L. MACDONNELL.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bezly Thorne, London; Mr. L. Humphry, Cambridge; Messrs. Kemp and Co., Bombay; Dr. Elder, Nottingham; Mr. A. Duke; Dr. Hingston Fox, London; Mr. Boobbyer, Nottingham; Dr. Maynard, Brighton; Dr. Ruffer, London; Dr. Weatherley, Bath; Messrs. Richardson and Co., Liverpool; Dr. Wortabet, Beyrout; Dr. Stroud; Messrs. Thorp and Co., London; Dr. Piggott, Teignmouth; Messrs. Roberts and Allinson, Indianopolis; Dr. Bowker, Buty; Messrs. Burgoyne and Co., London; Dr. H. Campbell, London; Messrs. Tozer, Hewitt, and Co., London; Dr. J. Armstrong, Liverpool; Messrs. Mitchell and Co., London; Mr. Nason, Nuneaton; Mr. Kuhn, London; Dr. Rice Morgan, Llangyfelach; Mr. A. C. Waters, London; Messrs. McNab and Co., Leith; Mr. C. E. Paget, Manchester; Messrs. Southall and Co., Birmingham; Mr. J. E. S. Barnett, Brighton; Messrs. Benger and Co., Manchester; Dr. Izod, Esher; Mr. T. Christy; Mr. Usher Somers, Hadfield; Dr. Stalkartt, Kilburn; Messrs. Rowntree and Co., York; Dr. Coleman, Surbiton; Mr. Eminson, Scotter; Rev. Hart Smith, Epsom; Mrs. E. Bond, Starcross; Mr. Colmer; Messrs. E. and S. Livingstone, Edinburgh; Mr. A. P. Watt, London; Messrs. Castle and Lamb, London; Dr. J. R. Day, Hampstead; Messrs. Oliver and Boyd, Edinburgh; Dr. Potter, London; Messrs. Rock, Hawkins, and Co., Hastings; Mr. Little, London; Mr. Barr, Leeds; Dr. Paris, Sierra Leone; Dr. Mossop, Newhaven; Mr. Blount, London; Messrs. Lazard and Co., Paris; Dr. McLaughlan, Edgbaston; Messrs. Street and Co., London; Dr. T. B. Adam, Foochow; Mr. Pope; Messrs. Keith and Co., Edinburgh; Dr. Chaudhury, Calcutta; Messrs. Perkins and Co., London; Mr. De St. Dalmas, Leicester; Mr. Scott; Mr. W. M. Jones, Wales; M. Ferreira, Correió; Dr. Moorhead; Mr. Laban, West Bromwich; Dr. Scriven, Duffield; Dr. Perkins, Totnes; Messrs. Davies and Co., London; Mr. Dickson, Staffordshire; Messrs. Blondeau et Cie., London; Mr. Saunders, Manchester; Messrs. Richardson and Co., Leicester; Mr. Coombs, Bridgwater; Messrs. Bates, Hendy, and Co., London; Dr. Bottentuit, Paris; Messrs. Longmans, Green, and Co.; Dr. Morrison, Bengal; Mr. Gravatt, London; Messrs. Keene and Ashwell, London; Mr. Macdonnell, Montreal; Dr. Ffrench, Wickham Market; Mr. Rawlings, London; Mr. Eminson, Lincoln; Mr. Rust, Kidderminster; Lieut.-Gen. Bourchier, Brighton; Dr. Hadden, Horncastle; Mr. Birchall, Liverpool; Dr. Griffiths, Clifton; Dr. Atkinson, Surbiton; Mr. Brownlow, Bolton; Dr. Skrimshire, Norfolk; Mr. R. Lloyd, London; Mr. Tomlinson, Malden; Dr. F. George; Mr. H. W. Just, London; Mr. Freer, Llandudno; Mr. Thomas, Liverpool; Yorkshire College, Leeds; Eblana; Equity; L.R.C.S.I.; D. D.; Norfolk and Norwich Hospital; Stocker, London; H. M. S., London; Lady Superintendent, Leicester; Hoyreed, Gibraltar; Secretary, Swansea Hospital; Medicus, Liverpool; Secretary, Great Tower-street Tea Co., London; Deaconesses' Institution, Tottenham; West Riding Asylum, Wakefield; Smilax, London; J. B., London; St. Andrew's Hospital, Northampton; L.R.C.P., London; Maltine Manufacturing Co., London; London, London; Beaureper; A. W. B.; Cheltenham General Hospital.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Gowers, London; Mr. Tully, Hastings; Dr. Ball, London; Messrs. Reynolds and Branson, Leeds; Mr. Graham, Lockerbie; Messrs. Hooper and Co., London; Dr. Downman, Buraham-on-Crouch; Messrs. Rocke and Co., London; Mr. Cochrane, Wigtownshire; Dr. Boutte, Earl's Court; Mr. Minns, Thetford; Mrs. Bull, London; Mr. Tyte, Minchinhampton; Mr. Thin, Edinburgh; Mr. Chubb, Torpoint; Mr. Crow, Canterbury; Mr. Edwards, Birmingham; Mr. Plummer, Newcastle-on-Tyne; Mr. Cornish, Manchester; Dr. Vernon, Yeovil; Mr. Thomas, Hull; Mr. Thomas, Bridgend; Mr. Stenhouse, Glasgow; Dr. Diver, London; Mr. Corbett, Birkenhead; Mr. Hadden, Horncastle; Mr. J. Heywood, Manchester; Mr. Hornibrook, London; Mr. Forjett, Lincolnshire; Mr. Gates, London; Mr. Bowerth, Grays; Mr. O'Meara, Loughboro'; Mr. Graham, Dumfriesshire; Mrs. Moore, Hayward's Heath; Mr. Young, Brighton; Mr. Vine, London; Messrs. Robertson and Scott, Edinburgh; Dr. Bingham, Alfreton; Messrs. C. Green and Co., London; Mr. Arkle; Mr. Deane, Ellesmere; Mr. Owen, North Wales; Mr. Barker, South Hampstead; Mr. Salter, Leeds; Mr. Hick, New Romney; Mr. Ingle, King's Lynn; Dr. Mackenzie, Huddersfield; Oxford Eye Hospital; Medicus, Manchester; Price's Candle Co., London; L.R.C.P., Southgate; Owner, Lancashire; Fleming Memorial Hospital, Newcastle-on-Tyne; Medicus, Manchester; The Coppice, Nottingham; Winchester, London; Pulsometer Engineering Co., London; Hydro, London; Studens, London; Secretary, Rochdale Infirmary; L.R.C.S., London; E. B., London; Lex, London; Union Assurance Co., London; Dexter, London; Genuine, London; Lady Superintendent, Ryde; Goldthread, London; C. J., London; Fidelis, London; Dispatch, London; Beta, London; A. B., London; Sultan, Hampstead; W. S. W., Sheffield; G. X. T., London; Locum, Newport; M.B., Loughborough; Yorkshire, London; Severn; Assistant, London; Cantab., London; A. B. C., Leeds; G. H. G., London; S. J., London; M. A. R., London; W. A. K., Hackney; J. A. B.; X. Y. Z., Wrexham; A. B. C., London; Alpha, Leeds; R. N., London; M., Birmingham; Epsilon, London; M. M., London; Marischal, London; A., Tredegar.

NEWSPAPERS.—*Carlisle Patriot, Newcastle Guardian, Surrey Gazette, Essex Standard, Rugby Advertiser, Stroud News, Poole Herald, United Service Gazette, Hackney Gazette, Cornish Telegraph, Scotsman, Bournemouth Observer, Louth Times, Bolton Weekly Journal, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Western Gazette, Windsor and Eton Express, Malvern News, Stamford Guardian, Preston Herald, Liverpool Daily Post, Mining Journal, Insurance Record, Rochdale Times, Suffolk Chronicle, Leeds Mercury, Sidmouth Observer, Wilts Standard, Reading Mercury, Law Journal, Surrey Advertiser, Essex Times, Dudley Herald, Melbourne Argus, Boston Independent, Yorkshire Post, Bristol Mercury, Scottish Leader, City Press, Chesham Examiner, Labour World, Barrow News, Corriere D'Italia (Rio de Janeiro), Courier de Londres, The Newspaper, Yorkshire Herald, Zoophilist, &c.*, have been received.

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Lecture
ON
THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

Delivered at King's College Hospital,

BY I. BURNEY YEO, M.D., F.R.C.P.,
PROFESSOR OF CLINICAL THERAPEUTICS IN KING'S COLLEGE, AND PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—If in the practice of medicine we should ever be able to establish general laws for the treatment of disease, and introduce scientific accuracy and uniformity into our therapeutic methods, it would certainly be in the treatment of *acute* diseases that we might first hope to attain that desirable end. *Acute* diseases, and especially the infective fevers, present considerable uniformity in the phenomena that accompany and characterise them; they run a tolerably definite course; from their well-defined and nearly constant physical characters their diagnosis is comparatively easy; and, if we are not absolutely certain as to their precise causation, we are far advanced in such knowledge, and we may believe that at no very distant period our knowledge of the etiology of acute diseases will be to a certain extent accurate and complete. It is far otherwise with chronic maladies, the nature of which is often doubtful, their origin and causation obscure, their phenomena extremely variable, and their diagnosis proportionately difficult. We know that in many acute diseases the causative agent is an infective organism, a microbe, introduced into the body from without—a living propagating poison, growing and developing, and multiplying amidst the fluids and tissues of our bodies, and setting up in the process more or less serious disturbances of its functions—disturbances which, in not a few instances, attain such a magnitude as to destroy the life of the individuals attacked. I may remind you that not many years ago the prevailing tendency in the teaching of some physicians of great eminence was that it was useless, or even worse than useless, to attempt to modify the course of these acute diseases by any distinct medical treatment; and their standpoint, although I have always thought it an utterly illogical one, was, tested simply by the appeal to practical results, perfectly defensible. And it had, further, the great recommendation of sweeping away much false theory and bad practice in connexion with the management of acute disease. These physicians bore the same relation to the older schools of medicine that the modern agnostic bears to the theological schools; they practically said, "We do not *know;* we have no *certain* grounds either for belief or action; therefore we neither believe nor act." But this lack of knowledge no longer exists. We know that a great number of acute diseases are caused by the introduction into the body of specific organisms from without, and that the development, activity, and life of these organisms can be modified and influenced by exposure to conditions and agencies over which we have a certain amount of control.

Those, then, who take the same view of acute disease as I do, maintain, as I do, that there are two plain and obligatory indications in the treatment of these affections—one *general* and the other *special*. The *general* indication is to support and strengthen the resisting powers of the organism attacked while it is passing through a more or less grave crisis. The *special* indication is to attempt to diminish the gravity of this crisis by opposing or counteracting the activity of the special morbific microbe with which the organism is infected. To have obtained this latter definite indication for the treatment of infective fevers is already a great advance in therapeutics. We may not yet be in possession of the best means of carrying this indication into effect, but that is only a question of time. The idea of an *antiseptic* treatment of certain forms of disease has been greatly misunderstood or intentionally misrepresented by those who for some inscrutable reason dislike it; and we who have been bold enough to entertain this idea have been credited with the crude intention of attempting to slay these parasitic morbific agents in much the same direct and simple manner as that practised by a certain renowned but still undiscovered operator in the district of Whitechapel! and we have been gravely told that our so-called antiseptic methods are so murderous that our patients and not the microbes fall victims to them.[1]

Now, gentlemen, I have always believed, and I think all biologists are agreed in believing, that the life history and the life activities of every living thing are, to a great extent, determined by its environment, by the physical and other conditions in which it has to live. Almost inappreciable differences (inappreciable to us) in soil or atmospheric conditions will, we know, exert the greatest possible influence over the growth and development of many forms of vegetable life. Every analogy in nature points to the possibility of effectually modifying the life history and activities of all living things by slight modifications of their environment. This, then, is the idea entertained by those who have been searching for methods by which the injurious activities of the living parasitic agents of infective diseases may be modified or counteracted, and we shall continue to search for them, and we shall end in finding them, because, as I have already said, every analogy of nature points in that direction. But there is another mode in which antiseptic agents may avail us. These morbific microbes appear to have the power of determining the formation within the body of certain poisonous animal alkaloids or ptomaines, and antiseptic methods may act either by preventing the formation of these ptomaines or by destroying them when found, or promoting their discharge from the body. The antiseptic idea, then, is a *large*, not a *small*, one, and is by no means to be confounded with mere microbicide; and we may hope it will cease to be represented as such. The idea of an antiseptic treatment of typhoid fever is by no means a new one, so far certainly as intestinal antisepsis is concerned. Sir William Jenner, in his admirable paper on the Treatment of Typhoid Fever, published more than ten years ago,[2] says: "When the stools are very offensive, correctives of fetor should be given. A teaspoonful of charcoal may be given two or three times a day ..... other correctives of fetor or antiseptics will have as good effect, but this has given me such satisfactory results that I have not resorted to other remedies." We now possess intestinal antiseptics which were hardly thought of or known then, less cumbrous and more effective than charcoal. Murchison formulates as the first indication of treatment to "neutralise the poison and improve the state of the blood,"[3] and he says *antiseptic* agents "have this to recommend them, that they might be expected to act directly on the poison in the intestinal canal." Niemeyer, like Murchison, commends the administration of dilute chlorine water in typhoid fever. Sir Thomas Watson, in whose time the remarkable antiseptic power of the salts of mercury was unknown, says, in speaking of the treatment of continued fevers: "In the fevers which I treated, or saw others treat, in London prior to the appearance of the more recent epidemics, mercury in one shape or another was almost constantly prescribed, and a great number of the patients were brought, sooner or later, under the specific operation of that mineral, and in these patients (with one exception only, where the mercury appeared to do neither good nor harm) a decided improvement was almost immediately apparent upon the supervention of soreness of the mouth, and *all such patients ultimately recovered.*" In these cases a rigorous antiseptic treatment had been applied unconsciously and empirically. But one of the most remarkable testimonies on record to the value of antiseptic treatment in typhoid fever is to be found in the admirable paper of Dr. Wilks, of Ashford, published in the *British Medical Journal* so long ago as 1870. Dr. Wilks had encountered in his neighbourhood a widely spread and severe epidemic of typhoid fever. The earliest cases were mild, and did well with merely expectant treatment, but soon they assumed a more severe type, and were difficult to manage. Dr. Wilks had heard of the utility of creasote in such cases, and he therefore tried it, and with good results; but it nauseated some of the patients, and they objected to it. The case of a strong, healthy, active and temperate man, who died within seven days of being first seen, and whose body putrefied so rapidly that it was difficult to come near it within twenty-four hours after death, and almost

[1] "By treating patients in various ways by antiseptic remedies, the result has been that the patient, and not the bacillus, has succumbed." Latham, Harveian Oration, October, 1888.

[2] THE LANCET, Nov. 15th, 1879. [3] Murchison on Fevers.

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impossible to approach the coffin at the funeral sixty hours after, so impressed Dr. Wilks with the activity of the putrefactive agent or agents within the body, that he determined henceforth to introduce some powerful antiseptic substance into the treatment of these cases. He called to mind the value of solutions of chlorine in scarlet fever (he feared the depressing effect of carbolic acid); but he thought that for another species of fever poison another kind of antiseptic might be better, and he thought of sulphurous acid. He tried it in some very severe cases, and the results surprised him. It quickly allayed vomiting and purging, reduced tympanites, supported the pulse, moistened the dry tongue, and relieved thirst. He administered it in 170 cases in fourteen months with signal results. There was only one death, and that a habitual drunkard, who would not take his medicine. The acid was given in doses of from three to twenty minims, according to the age of the patient, every four hours, and continued for a week or ten days, or even more, "until the patient complains of tasting, smelling, and feeling like sulphur or lucifer matches, or, in the case of infants, until they actually emit an odour of the gas from their skin and breath." At this point it was stopped. For adults twenty minims of sulphurous acid mixed with two tablespoonfuls of water and a little syrup of orange-peel every four hours was the usual prescription.

"I will state distinctly," says Dr. Wilks, "what I claim for sulphurous acid in typhoid fever: that it arrests the further development of the fever poison, and, by continuing this arrest long enough, exterminates the fever. Briefly, it is an antidote. ..... In some of my early cases I left off this acid after a few days' use, because the patients seemed better. In almost all such cases they had a relapse, which was again immediately arrested on the resumption of the acid. Very possibly," he concludes, "I have failed to convince you of the advantages of using this drug, but let me again remind you of the plain fact that of 173 cases of this fever occurring in our practice during the past fourteen months, two only died, and those two did not take the acid; for the one it was not prescribed, the other was a drunkard and would take nothing. Of the 171 who took sulphurous acid, not one lost his life, and there were few who were not convalescent within fifteen days of commencing the treatment" Two well-known practitioners in Dr. Wilks' neighbourhood called my attention some years ago to this mode of treatment, and testified to its invariable success in their own practice. I took an early opportunity of testing it, and reported some of the results in the *Practitioner* of June, 1882. It was not so successful in my hands as another method has proved, which I shall presently describe. In one case severe hæmorrhage came on during its administration, which had to be controlled by other means; this case ultimately did well. It was a case in which there had been some difficulty in diagnosing the disease on account of the mildness and indefiniteness of the early symptoms, and so the remedy was not commenced until somewhat late in the course of the fever.

In another case which we had selected as a test for this treatment, on account of its severity, the patient died from perforation on the twenty-ninth day of the fever. He was a nervous man, and was suffering from great nervous depression and sleeplessness before the fever attacked him, because his wife and two children were laid down with typhoid fever. Even in this case the modifying influence of the remedy was very remarkable when first administered. On the fourth day of the fever, when the evening temperature was 104°, he began the sulphurous acid in half-drachm doses every four hours. For the next five days the temperature ranged between 102° and 104°, and on the sixth day of taking the acid there was a notable fall in the temperature curve, and for the next three days it did not rise above 102°; then there was another fall, and for the next six days the temperature reached on one occasion only 101°. The remedy appeared to be modifying in a remarkable manner the course of the fever. There was no diarrhœa, no abdominal tenderness or distension. The general condition was good, except that he was always nervous, depressed, and apprehensive—an evil prognostic On the nineteenth day he began to complain of abdominal pain, the temperature rose again, and reached 104° in the evening, and remained so for the rest of the illness; the abdomen became distended, there was diarrhœa, and on the twenty-fourth day, as the remedy appeared to have no longer any influence over the fever, it was discontinued. He began to have hæmorrhage from the bowels with the diarrhœa on the twenty-sixth day, and on the twenty-ninth day he died somewhat suddenly with symptoms of perforation. On post-mortem examination there were found several large and deep ulcers in the ileum, and four of them had ulcerated completely through the intestine, and there was considerable extravasation of fæces into the peritoneal cavity.

I have dwelt on this case because it showed that, notwithstanding the favourable influence of the antiseptic agent on the early course of the fever, the local lesion went on, apparently uncontrolled, to a fatal termination; and this, under any form of treatment, we must of course be prepared to occasionally encounter. This patient, moreover, was suffering from such marked nervous depression before he was attacked with fever that he was not a hopeful case from the outset. For the first fortnight his bowels were rather disposed to be confined, and it might have given him a better chance if, during the first few days of the fever, his intestinal canal had been swept clean by two or three doses of calomel. I did not pursue the sulphurous acid treatment in any more cases, chiefly because I have adopted another antiseptic agent which I like better, and which I shall presently describe to you. Mr. Kesteven of Brisbane reported in the *Practitioner* of May, 1885, his conviction of the great value of the oil of eucalyptus in the treatment of typhoid fever, and he repeats that conviction in another communication to the same journal in April, 1887. He states that he gave it in 220 cases, many of whom had a "bad start," and that he had only four deaths! His dose was from five to ten minims of the oil, made into an emulsion with mucilage, every four hours; and he combined with it half a drachm of sal volatile, half a drachm of spirits of chloroform, and half a drachm of glycerine. By this means he made it more agreeable to take, and the glycerine covered the rough gum-resinous taste of the eucalyptus oil. He noted as results of this treatment a reduction of the pulse, a remarkable lowering of the temperature, a rapid cleaning and moistening of the tongue; the skin became soft and moist, and the duration of the fever was greatly shortened. An omission of the remedy was attended by a return of the unfavourable symtoms. The alvine evacuations smelt of the oil, so that intestinal antisepsis was no doubt a consequence of its use.

Parallel with these observations of Mr. Kesteven on the value of oil of eucalyptus in typhoid fever, I should like to place Professor H. C. Wood's testimony as to the usefulness of oil of turpentine in the same disease. He says, "Many lives would be saved if the oil of turpentine were more freely used in this disease. ..... The volatile oils are absorbed slowly, and are rapidly vaporised at the temperature of the human abdomen, so that there can be no reasonable doubt that, either in the form of liquid, or more probably in the form of vapour, when given freely by the mouth, they get into contact with the mucous membrane of the upper intestine." He gives it in every case, beginning about the twelfth day of the fever, and the following is the formula he adopts: Oleum caryophylli, gtt. vi.; oleum terebinth., ℥ iss.; glycerini, mucilag. acaciæ, ãā ℥ ss.; syrupi et aquæ ad ℥ iii.; a dessert-spoonful to be given every two hours during the day, the patient being allowed to rest during the night. The use of camphor in typhoid fever, not only as an excellent antiseptic, but also as a cardiac stimulant, has been highly commended by Dr. Janeway of New York; and its very slight solubility in water ought to ensure its local antiseptic action in the small intestine. The administration of creasote both by the mouth and in enemata was warmly advocated by Pécholier of Montpellier, and he maintained that when begun early it diminished the intensity and shortened the duration of the fever. Thymol has been given by Dr. F. Henry with the same object; he gives a grain and a half or two grains made into a pill with soap every six hours. Owing to its insolubility it passes, he says, into the intestines, and there neutralises toxic ptomaines which result from gastro-intestinal catarrh. He has found it lessen diarrhœa and lower temperature. The Italian physician, Testi,[4] has also given thymol in 150 cases of typhoid with good results; he noted a lowering of the temperature, disinfection of the intestinal tract, and a diminution of diarrhœa and tympanites. Likewise a notable diminution in the products of putrefaction developed in the intestine and eliminated by the urine. The importance of attempting

[4] Allg. Wien. Med. Zeitung, No. 9, 1889, p. 90.

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to establish intestinal antisepsis in the treatment of typhoid fever has been especially insisted upon by Professor Bouchard and Professor Grancher, two distinguished professors of the Medical Faculty of Paris, and I will now call your attention to some of their conclusions and to the methods they adopt.

Professor Bouchard[5] encountered much difficulty at first in finding a suitable non-irritating antiseptic agent for this purpose. He tried charcoal as recommended by Sir Wm. Jenner, iodoform, carbolic acid, naphthaline, and other substances, but none of them were quite satisfactory. He now uses and recommends β-naphthol, reduced to a fine powder, and mixed with salicylate of bismuth. One hundred and fifty grains of β-naphthol are mixed with seventy-five grains of salicylate of bismuth, and this is divided into thirty powders. From three to twelve of these are given in the twenty-four hours, enclosed in a wafer, and swallowed with the food. The β-naphthol has the advantage of being very slightly soluble in water, but it is a powerful antiseptic; it therefore reaches the intestine, where it acts as an intestinal antiseptic. Professor Bouchard finds that it certainly deodorises the evacuations. He insists also on the administration of quinine, which he contends (and in this contention I am disposed to agree with him) acts as a *general* antiseptic. Eberth has shown experimentally that quinine is one of the most powerful antiseptics against the typhoid bacillus, and checks its culture. Professor Grancher, Pécholier of Montpellier, and Voit of Berne, have all published excellent clinical results from the administration of quinine in typhoid. Bouchard considers its action in lowering temperature in this fever to be antiseptic rather than antithermic. His method, then, of treating typhoid fever consists in the use of both a local and a general antiseptic. He checks intestinal putrefaction by means of intestinal antisepsis, and he antagonises the infective agent in the blood by means of quinine chiefly. He gives some statistics of the treatment of typhoid cases at the Lariboisière Hospital, with which he is connected. From 1854 to 1885, 12,246 cases were treated, with a death-rate of 21·15 per cent. In the same hospital, in the last four years, he has treated 390 cases and lost 46, a mortality of 11·79 per cent. He states that his mortality only amounts to two-thirds of the whole mortality rate of the other cases of typhoid fever treated in the hospital during the period in which his method has been applied in his service alone. Bouchard gives the quinine in larger doses than have appeared to me to be necessary; for I also am an advocate of the use of quinine in typhoid fever. He gives it after this fashion: during the first fortnight thirty grains are given in the evening, in four equal doses of seven grains and a half each, every half hour, at intervals of three days. Of course, these intervals reduce the total quantity of quinine to the moderate average of ten grains a day. In the third week the thirty grains are reduced to twenty-two grains, and in the fourth week to fifteen grains. Professor Grancher in treating typhoid fever in children gives quinine in the same manner. At five years of age he gives from fifteen grains to twenty-two grains and a half, divided into three doses, every half hour, at about 5 or 6 P.M. He finds that this method has the advantage of procuring the child sleep during the night, and that the child wakes refreshed and cheerful, with a fall of temperature of from 2° to 4° F. He asserts that its effects with children are remarkable, and he believes it to have a specific antiseptic action in typhoid fever. Dr. Clement Cleveland of New York[6] has also recorded his experience with quinine in typhoid fever. He believes it cuts short some cases of the fever, if it is begun early and given in from five to ten grain doses every fifteen minutes for two hours, his idea being the same as Bouchard's—viz, to saturate the system rapidly with quinine, and then leave an interval. He also at other times gives from five to ten grains every two or three hours, and he points out that as quinine is rapidly eliminated it is necessary to keep the system under its influence. Typhoid fever patients with whom it acts well he has observed recover more rapidly, more permanently, and with fewer sequelæ; and he has been impressed with the fact that the death-rate is much lower with the quinine treatment than with the expectant plan.

Let me point out, again, that this is no *new* observation as to the efficacy of quinine in typhoid fever. If we refer to Sir Thomas Watson's Lectures, at page 855, vol. ii., fourth edition, we find him quoting a Dr. Dundas as maintaining that "quinine in large and frequently repeated doses is a specific cure for continued fevers as we see them here," and after referring to the varying reports of its efficacy received from different practitioners, Sir T. Watson concludes, "But of the cases in which this quinine treatment is reported to have effected cures, some are expressly described as instances of maculated typhus, and others as instances of typhoid fever." What I would say with regard to this is, that when you see a remedy returning again and again into favour, and impressing successive generations of physicians, from time to time, with the idea of its value and efficacy, be quite sure there is some truth in their observations; and that what is needed to crystallise, as it were, into an established therapeutic practice these observations is a central idea—unchanging because true—a generalised induction from observation or experiment; and this idea is furnished us now by the knowledge of the retarding influence which quinine, together with other antiseptic agents, exercises in the development of morbific microbes. As the administration of quinine forms an important part in the method of treating cases of typhoid fever that I have long adopted, I will now describe that method. I have found, as Murchison had done many years ago, that of all antiseptic remedies free chlorine is the most useful. "I have repeatedly found it," says Murchison, "to have a beneficial influence upon the abdominal symptoms," and he describes how a solution of the gas may be readily obtained. I follow his plan, but I prefer rather different proportions. Into a twelve ounce bottle put thirty grains of powdered potassic chlorate, and pour on it forty minims of strong hydrochloric acid. Chlorine gas is at once rapidly liberated. Fit a cork into the mouth of the bottle, and keep it closed until it has become filled with the greenish yellow gas. Then pour water into the bottle, little by little, closing the bottle, and well shaking at each addition until the bottle is filled. You will then have a solution of free chlorine, together with some undecomposed chlorate of potash and hydrochloric acid, and probably one or two bye products. I greatly prefer this preparation of chlorine to the liquor chlori of the British Pharmacopœia; it is much pleasanter to take, and I have had much better results with it. To twelve ounces of this solution for an adult I add twenty-four or thirty-six grains of quinine, and an ounce of syrup of orange peel, and I give an ounce every two, three, or four hours, according to the severity of the case—that will be from twelve to thirty-six grains of quinine in the twenty-four hours, according to the case. I have for some years past treated all my typhoid fever cases, except the very mild ones, which have not appeared to me to require any active medical treatment, on this system. They have not been very numerous, but they have been *consecutive* cases, and they have all done well.

In giving this mixture to a typhoid fever patient one of the first results you will notice is a remarkable cleaning of the tongue. You will scarcely ever find a dry, dirty, thickly-coated tongue in a patient who has been early put on this mixture. Another most important change has been noticed again and again, and reported to me by the nursing sisters in our hospital: it is that the fetor of the evacuations, which have often been very offensive, will usually disappear within twenty-four to forty-eight hours of the commencement of this treatment. Now this appears to me to be a very interesting and important point. We should expect that this mixture would be wholly absorbed in the stomach, and that it would not reach the lower part of the small intestine directly. Yet it certainly exerts an antiseptic action on the intestinal contents. May it not be that it exerts its antiseptic influence in the blood and there encounters and neutralises some septic substances generated by the typhoid bacillus so that the excretions into the intestine are modified, and so an antiseptic effect on the intestinal contents is produced? In this way we not only obtain *intestinal* but also a *general* antisepsis. The illustrative cases I am about to submit to you have enabled us to observe the following effects as resulting from this treatment:—1. A modification and sustained depression of the febrile temperature. 2. An abbreviation of the average course of the fever. 3. A remarkable maintenance of the physical strength and intellectual clearness of the patient, so that there has been far less need of stimulants. 4 A greater power of assimilating food. 5. A remarkable cleaning of the tongue. 6. A deodorisation of the evacuations. 7. A more rapid and complete convalescence.

(To be concluded.)

[5] Thérapeutique des Maladies Infectueuse. Paris, 1889.
[6] New York Medical Record, Nov. 20th, 1886.

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ON THE PHYSIOLOGY OF ASPHYXIA AND ON THE ANÆSTHETIC ACTION OF PURE NITROGEN.

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(*Concluded from page 760.*)

THE explanation which I have before given of these facts appears to me to be the true one—viz., that during the later stages of asphyxia, when the blood has become entirely deoxidised, the pulmonary arterioles contract and cause the extreme distension of the right cavities, with anæmia of the pulmonary capillaries and a corresponding defective blood-supply to the left cavities of the heart.

[The extreme distension of the right cavities of the heart while the left are flaccid and comparatively empty, the minute tissue of the lungs being pale and bloodless, clearly indicates an impediment to the flow of blood between the right ventricle and the pulmonary capillaries. Such an impediment is explained by the contraction of the pulmonary arterioles—the vaso-constrictors of the lungs. It appears to me that the phenomena of asphyxia afford a more complete proof of the powerful action of the pulmonary vaso-constrictors than can be derived from any kymographic tracing.]

I venture to suggest the following explanation of the increase of blood pressure in the pulmonary veins, which has been observed by Mr. Martin and other experimenters during the successive stages of asphyxia. In the first stage, when, with high systemic arterial tension, the left cavities of the heart are distended (Fig. 1), there must be a backward pressure in the pulmonary veins, extending, perhaps, as far as the pulmonary arteries.[1] It is probable, however, that a concurring, if not the main, cause of the pulmonary venous pressure which continues and sometimes increases in the second stage of asphyxia, when the systemic arterial tension and the distension of the left cavities have passed away, is the compression of the pulmonary veins by the extreme collapse of the lung which occurs when the chest is opened in order to introduce a manometer into one of the pulmonary vessel trunks.[2] It is an acknowledged fact that the comparatively slight compression of the pulmonary veins which occurs towards the end of an ordinary expiration lessens the flow of blood into the left side of the heart. The degree of impediment to the pulmonary venous current which is thus occasioned must, however, be very much less than that which results from compression of the veins by the elastic force of the collapsed lung when an opening has been made in the wall of the chest.

Lastly, it is probable that yet another hindrance to the onward flow of blood in the pulmonary veins in the second stage of asphyxia is the impairment in the suction power of the left auricle, partly by anæmia of the cardiac tissues consequent on contraction of the arterioles, both pulmonary and systemic, the coronary included,[3] and partly by the fact that the small amount of blood with which the heart is supplied is more or less completely deoxidised.

[The facts and considerations here stated appear to me to explain the circumstance that, whereas the immediate effect of contraction of the systemic arterioles is a fall of pressure in the systemic veins, no such fall of pressure has been observed to occur in the pulmonary veins when the increased blood pressure in the pulmonary artery and anæmia of the capillaries indicate that the vaso-constrictors of the lungs are impeding the onward flow of the blood. As there is a direct relation between the anæmia of the minute vessels of the lungs and the collapse of those organs when the chest is opened, and as the anæmia is the result of contraction of the pulmonary arterioles, it is obvious that the greater the resistance resulting from this arterial contraction the greater will be the pressure to which the pulmonary veins will be subjected by the elastic tissue of the collapsed lungs.]

With reference to the innervation of the pulmonary vessels, Drs. Bradford and Dean have proved not only the existence of pulmonary vaso-motor nerves, but also that they leave the spinal cord higher up than the systemic vaso-motor nerves.[4] True, these authors remark that "it is probable that the pulmonary vaso-motor mechanism is but poorly developed compared with that regulating the systemic arteries." It would, however, be a strange and incredible physiological anomaly if the vessels of an organ through which the entire blood of the body has constantly to pass had not the same regulating and resisting power, compared with the force of the right ventricle, as that possessed by the systemic arterioles.

Mr. Martin has found, by introducing a manometer into a branch of the pulmonary artery of a moderate-sized cat, while the remaining branches are suddenly obliterated, that the blood pressure in the pulmonary artery rose from 17 mm. of mercury to 36 mm. But neither this nor any other experiment which has been hitherto devised can accurately measure the resisting power of the pulmonary arterioles or the actual force of the right ventricle, for the obvious reason that the arrest or great diminution of the pulmonary circulation enfeebles the muscular walls of the heart by cutting off the blood-supply through the coronary arteries.[5] Mr. Martin has also found that during the last stage of asphyxia the pressure in the pulmonary artery is nearly doubled, while that in the carotid is rapidly falling. That the pulmonary arterial pressure is somewhat less in the last stage of asphyxia than when the artery is suddenly and mechanically compressed seems to be explained by the fact that while in the latter case the blood in the coronary vessels is arterial, in the former the muscular walls of the heart have been weakened by the gradually increasing venosity of their diminished blood-supply. Indirect though weighty evidence in support of the theory that the anæmia of the pulmonary capillaries, with distension of the right cavities of the heart, in the last stage of asphyxia is the result of extreme constriction of the pulmonary arterioles is afforded by the well-known fact that immediately after the readmission of air to the lungs there is a great and instantaneous increase of the systemic arterial blood-pressure; the most probable explanation of the phenomena being that the reintroduction of air into the lungs causes, through the vaso-motor nerves and centre, relaxation of the pulmonary arterioles, as a result of which the blood which had accumulated in the trunks of the pulmonary artery and in the right cavities of the heart is forced onwards, at first by the mere elastic resiliency of the distended pulmonary arteries and cardiac walls; while later the vital contractility of the heart is increased, partly by its lessened distension, and partly by an increased supply of oxygenised arterial blood.

[If the arrest of the circulation were the result of paralysis of the heart's walls by the circulation of venous blood, the arrest would be permanent and irremediable, for this theory assumes that, in order to renew the heart's beats, aerated blood must reach the coronary vessels, an event which could not be brought about without the previous restoration of the heart's action.]

I have before stated that the extreme anæmia of the pulmonary capillaries in the last stage of asphyxia and the rapid emptying of the left cavities of the heart, while the right are becoming greatly distended, are facts inconsistent with the theory which assumes that the distension of the right cavities of the heart is a result of backward pressure from the left, consequent on systemic arterial obstruction; and, on the other hand, the *instantaneous* renewal of the circulation by the readmission of air into the lungs is not

[1] This backward pressure will account for the fact mentioned by Drs. Bradford and Dean (Proc. Roy. Soc., vol. xliv., No. 277), that in the early stage of asphyxia there is a synchronous rise of pressure in the systemic and pulmonary arteries. On the other hand, the continued rise of the pulmonary pressure at a later stage, while the systemic pressure is rapidly falling, can be explained only by the action of the pulmonary vaso-constrictors.

[2] See Dr. M. Foster's Physiology, fifth edition, p. 618.

[3] It has been proved by experiment that in the dog speedy arrest of the heart's action is induced by ligature of one of the larger branches of the coronary artery. Lectures on General Pathology, Cohnheim: New Sydenham Society, vol. i., p. 528.

[4] Proc. Roy. Soc., vol. xliv., No. 277.

[5] Dr. M. Foster has done me the favour to direct my attention to a paper by Professor Knoll (Der Blutdruck in der Arteria Pulmonalis bei Kannichen: Sitzungsberichte der Kaiserlichen Akademie in Wien, Band xcvii., Abtheilung 14, S. 207). In this paper Dr. Knoll describes a method of measuring the normal blood pressure in the pulmonary artery of rabbits, which is less fallacious than the processes which have more commonly been adopted. He divides the sternum and introduces a tube into the trunk of the artery without wounding the pleura. By this means the blood pressure is taken, while normal respiration continues. The author admits, however, that the opening of the mediastinum and the consequent exposure of the root of the artery to atmospheric pressure may be a source of error.

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to be explained by the theory of the previous arrest being caused by cardiac paralysis consequent on the circulation of venous blood.

CONCLUSIONS RELATING TO ASPHYXIA.

That the immediate cause of death from asphyxia is the arrest of the pulmonary circulation appears to be proved by the following facts:—1. When the chest of an animal is opened immediately after death caused by ligature on the trachea, the right cavities of the heart are found enormously distended, while the left are comparatively empty. 2. When the heart of an animal is exposed during the progress of asphyxia the right cavities are seen to become distended, while the left cavities, which had been previously gorged, are found to be collapsed and comparatively empty. 3. In the last stage of asphyxia there is a continuous increase of pressure in the pulmonary artery, while the systemic arterial pressure is falling. 4. That the arrest of the circulation through the lungs is due to contraction of the pulmonary arterioles appears to be proved by the influence of agents which are known to paralyse the arterioles—e.g., nitrite of amyl, atropine, and an excessive dose of curare, the effect of which is that deprivation of air is unattended by distension of the right cavities of the heart, and other evidence of obstructed pulmonary circulation, the life of the animal is prolonged for several minutes, and death ultimately results from the toxic action of venous blood upon the cardiac and nervous tissues.

[5. It is an acknowledged fact that these paralysing agents act alike upon the systemic and the pulmonary arterioles, but the successive phenomena of asphyxia are absolutely inconsistent with the idea that the distension of the right side of the heart is a result of systemic arterial obstruction acting backwards through the left cavities of the heart and the lungs.]

THE ANÆSTHETIC ACTION OF NITROGEN ALONE, OR WITH A SMALL PROPORTION OF OXYGEN.

I have elsewhere stated that the phenomena which result from the inhalation of nitrous oxide as an anæsthetic by human beings are strictly analogous with those observed during the early stages of asphyxia.[6] While some writers maintain that the anæsthetic action of nitrous oxide is due to its preventing access of free oxygen to the system, others believe that it has a "specific anæsthetic action." It occurred to me that some light might be thrown upon this subject by the administration of pure nitrogen. Accordingly I obtained from the Scotch and Irish Oxygen Company of Glasgow a cylinder containing 100 cubic feet of compressed nitrogen, in which the proportion of oxygen present was only 0·5 per cent. by volume, with 0·3 per cent. of CO_2. As a preliminary trial, Mr. F. W. Braine was good enough to administer this gas in five instances to members of the staff of King's College, who volunteered to submit to the experiments. The result was in each case the production of complete anæsthesia and of general phenomena precisely similar to those observed from the inhalation of nitrous oxide. Encouraged by these results, Mr. Braine felt justified in administering the gas to patients at the Dental Hospital for anæsthetic purposes. Nine patients took the gas. In every case the result was the production of complete anæsthesia, with general phenomena precisely similar to those observed during nitrous oxide inhalation. The pulse was first full and throbbing, then feeble. In the advanced stage the respiration was deep and rapid, and there was lividity of the surface; the pupils were dilated, and there was more or less jactitation of the limbs. The only difference, in the opinion of some of those present, being that the anæsthesia was less rapidly produced, and somewhat less durable, than that from nitrous oxide, though in each case the tooth was extracted without pain.

On a subsequent occasion the same gas was administered by Dr. Frederic Hewitt at the Dental Hospital. As before, nine patients took the gas. The maximum period required to produce anæsthesia was 70 seconds, the minimum 50 seconds, and the mean time 58·3 seconds. In one case two teeth were extracted without pain. In one case only was pain experienced, and in that case, the tooth having been broken up and not extracted, the patient said she felt a "smashing up." Having on several occasions witnessed the administration by Dr. Hewitt of nitrous oxide mixed with 10 per cent. by volume of oxygen, with the result of producing anæsthesia without lividity or jactitation, I determined to try a mixture of nitrogen with a small proportion of oxygen. I therefore obtained from the company above mentioned a cylinder containing forty cubic feet of nitrogen mixed with 3 per cent. by volume of oxygen, and a second cylinder equally charged with a mixture of nitrogen with 5 per cent. by volume of oxygen. These gases were administered by Dr. Hewitt to patients at the Dental Hospital with the following results:—In the case of the 3 per cent. gas, which was given to five patients, the time required to produce anæsthesia varied from 60 to 75 seconds, the average time being 67·5 seconds. In each case the tooth was extracted without pain, the duration of anæsthesia being somewhat longer than with pure nitrogen. In each case there was lividity, dilatation of pupils, and more or less jactitation. On the same day Dr. Hewitt gave nitrogen with 5 per cent. oxygen to four patients. With this mixture the time required for the production of anæsthesia ranged from 75 to 95 seconds, the average being 87·5 seconds. In each case there was complete anæsthesia, during which one patient had three molars extracted, and although she said she "felt the two last," the sensation appears to have been that of a pull, and not of acute pain. In all of these four cases there was slight lividity before the face-piece was removed, but in only one case was there slight jactitation of the limbs. The other three patients were perfectly quiescent. The experiments here recorded suffice to prove that nitrogen, pure or mixed with a small proportion of oxygen, is as complete and apparently as safe an anæsthetic as nitrous oxide. It is to be hoped that those who are engaged in the administration of anæsthetic gases will investigate this interesting subject further, with a view to ascertain whether atmospheric air, partially deprived of its oxygen, may be advantageously substituted as an anæsthetic for nitrous oxide. For the information of those who may be disposed to enter upon such an investigation, I may state that Brin's Oxygen Company (69, Horseferry-road, Westminster) are prepared to supply nitrogen containing from 4 to 7 per cent. of oxygen at the same rates as they now supply pure oxygen—viz., in quantities of twenty cubic feet or less at 4*d.* per cubic foot, of twenty to sixty cubic feet at 3*d.* per cubic foot, and of over sixty cubic feet at 2½*d.* per cubic foot, in their own cylinders. Below 4 per cent. of oxygen, nitrogen could be supplied only by special arrangement, and probably at increased cost. As before stated, I obtained the gas employed in my experiments from a Glasgow firm, and its cost was therefore increased by the expense of carriage from Scotland.

Savile-row, W.

[6] Essay on Asphyxia, p. 32.

BUBBLE REMEDIES IN AURAL SURGERY.

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IT is probable that all departments of medicine or surgery are more or less liable to the introduction of what may be termed "bubble remedies" (using the word "bubble" in the same sense as it applies to companies), but naturally my cognisance of them is chiefly confined to what I learn from patients with whom I am brought in contact in the practice of my own specialty. If I could repeat a half of their experiences as related to me from time to time during the past few years, the belief in the credulity of mankind would become even greater than it must be even now amongst men who have great knowledge of the world. As might be anticipated from their nature, the life of these bubble remedies is brief, their end is occasionally sudden, and the recollection of them soon fades away; but it is, I am sure, not altogether useless to occasionally subject them to the light. They remain in the air for considerable periods before they attract attention, and then their existence is made known by the voices of those who have invested their hopes in them. In the ordinary course of events the history of any new remedy in medicine or surgery includes a trial at a hospital, a discussion at a society where physicians and surgeons give the advantage of their experience and knowledge to aid the introducer and to criticise his conclusions. A fair trial is given at other hospitals, and it lives or dies according to the measure of its usefulness. It is very different with the bubble remedy. Its origin is at times singularly unobtrusive, and private patients have the inestimable, or questionable, advantage of an early trial. Its constitution is at

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this period of its life too delicate to be submitted to the full blaze of criticism above alluded to. At another time a small pamphlet is greatly circulated, or a few cases (in which it has been tried, rather, it would appear, for the relief of a symptom than a pathological condition) are reported in a medical journal. These are more suitable methods of introducing it to the world. What is better still, is that it should have been at some time previously tried by some well-known man of good reputation and subsequently abandoned. It then has an air of respectability, and so resembles an after-birth of a child who has failed to survive.

I will mention only a few examples. It seems almost incredible, but is no less a fact, that during the past year or so a company was floated in the City of London, with a capital of £100,000, the avowed purpose being to purchase a business which possessed the exclusive right of selling what were termed "artificial ear drums" It is now over fifteen years since the use of Toynbee's artificial membrane (at the time an excellent contrivance in cases of perforation of the tympanic membrane) has been given up by aural surgeons in favour of improved methods. Now practically any form of artificial membrane that is advocated presupposes that all perforations which require protection and pressure can have them usefully applied by one form, the fact being that each perforation requires management to be acquired only by experience, after careful examination, and, when any support of the kind is wanted, it must be regulated by the patient, his sensations being the guide in regard to pressure. Also many perforations are quite intolerant of all forms of artificial covering or pressure. However, in regard to these "artificial drums," at first some time was spent in advertising a simple modification of Toynbee's artificial membrane (which, under another name, was to cure every conceivable sort of ear trouble), by means of a pamphlet full of testimonials, the value of which may be judged by the fact that the inventor quoted a long passage from one of my lectures published in 1873, leaving it to be inferred that it applied to his "ear drum." By and by the bubble was floated. The next episode in its history was an account of a meeting of the company, the vendor occupying the position of chairman. It appeared from the report that the harmony of the proceedings was somewhat marred by the presumption of an inquisitive shareholder; and I have not seen any account of subsequent meetings. That these ear drums had a considerable sale I am sure, since numbers of persons who have consulted me had bought them, I am bound to say generally when they had no perforation at all; for if by chance they had perforations of such a kind as would receive benefit by Toynbee's artificial membrane, their hearing might probably have been helped by the use of this imitation. Now, it was in this fact that the fractional good so necessary for the success of this venture is to be found, for who could doubt that, if some deaf people could be made to hear better, it might be the case with all? So much for the ear drums, and now for electricity.

In July, 1889, when speaking on the subject of tinnitus, I said: "Perhaps because tinnitus due to degeneration and some other causes is of a constant character, the kind of electricity which finds favour amongst its advocates is the constant current; but whether this or the interrupted is employed, it is generally the personally conducted and continuous as long as possible." This is no doubt perfectly true, but I still think that for a long though fitful life amongst all bubble remedies, for the ear at least, electricity will maintain the leading position. I will endeavour to show why this is by an illustration. Before doing so, however, lest there should be any misapprehension as to my meaning, I wish to state most emphatically that my remarks apply absolutely and entirely to the unscientific use of electricity, and it is most necessary to state this, since the scientific use of this force has achieved so much in both surgery and medicine during recent years. When the tympanic cavity becomes the seat of acute inflammation, if the aqueduct of Fallopius is destroyed by caries, the portio dura within it is also destroyed, and facial paralysis is of course in this case permanent. If, however, the inflammatory process is of a more limited character, the facial palsy recovers either completely in a period to be counted by weeks or months, as the inflammatory products around the nerve disappear. Since many of these cases are subjected to electricity, those persons who recover naturally attribute it to the treatment adopted. Perhaps it may be said that this process of reasoning applies so often to many other remedies employed in those forms of disease which have a tendency to recover, that it is unfair to suggest the possibility of the facial palsy getting well in the same time as if there had been no electricity. It is, however, difficult to understand how a current of electricity passed through muscles can expedite the absorption of inflammatory deposit in the aqueduct of Fallopius any more than in hemiplegia it could expedite the changes in a blood-clot in the brain. The same order of events—viz, treatment by electricity, and, if recovery, this attributable to treatment—takes place in so many nervous and inflammatory troubles connected with the ear that it is employed for all sorts of symptoms due to permanent change in tissue down to a general tinnitus, which often comes with atheromatous arteries, the results being the same *minus* the recovery. It is thus that an agent intrinsically of great value in surgery becomes a bubble remedy.

Another reason why electricity as a remedial agent will always be more or less in request may perhaps be found in the fact that the minds of many people are peculiarly liable to its fascinations. The idea is present to them that we live in an age of electricity, and anything short of miracles—in which they also believe up to a point—may be expected from it. The knowledge, too, that undoubtedly the use of the electric current is of very real service in some departments in surgery tends to confirm a possibly waning faith. It can be applied, too, in such ingenious ways to parts of the body out of sight, and this is an attractive idea. Again, if the process is attended with acute pain, the treatment is apt to come to an abrupt conclusion, but as a set off to this what a delightful revelation it is to find that cocaine can be applied to the aperture which is being acted on—the nose, or some other opening—and any objection on the score of pain may be disposed of. To put the matter briefly, is it not within the experience of most practitioners that those who suffer from progressive disease, or unrelieved symptoms, and who naturally fly to something outside the routine of treatment which they have vainly tried, turn their eyes towards electricity as offering a better chance than most of the empty helps held out to them in their dire distress? The same kind of apparent soundness at the base above alluded to—viz., the recovery *under* treatment, and not *due* to treatment—was to be noted in the wholesale injections of deaf people by pilocarpine, which quite recently took place, but the faith in which has been rudely shaken by a paper in THE LANCET of Jan. 3rd from Politzer, who made the original experiments with pilocarpine as far back as 1879, and who, having subsequently given his experience and views on the subject, now finds it necessary to write in such scathing terms on "the abuse" of this treatment. He there speaks of "practitioners who subject their patients to a long and wearisome course of treatment with pilocarpine," and says, "I feel it my duty to say that they are not too conscientious in the discharge of their calling." It is much to be hoped that this protest will be largely and carefully read, for during the spring and summer of 1890 the condition of patients who consulted me after being injected in this way were almost ludicrous as to the variety of the ailments for which it had been employed. For the most part these people belonged to the unsuccessful division, and included old gentlemen who objected strenuously to senile degeneration, the middle-aged and the young whose hearing was defective from the many causes which unhappily admit of no alleviation, but they included none of whom it could be said they had not given it a fair trial. One young man out of many I especially remember, who in consequence of central changes was impervious to sound of every sort, both before and after he had been subjected to eighty injections, and this was after or before (I forget which, but it is unimportant) a long course of electricity. It may not unreasonably be asked why such wholesale injections did not, even before Professor Politzer's protest, elicit an outspoken disapproval of the practice? In the first place, it is a matter of common knowledge that in the secondary stage of syphilis patients often become deaf and completely recover under the ordinary constitutional measures without any especial treatment for the loss of perception to sound, the conducting power remaining good. Those who were injected of course recovered their hearing, and attributed it to the injections In the later stages of constitutional syphilis, or in the inherited variety especially, the course of events is different. In the second place, it must be remembered that the subject of ear affections does not attract the attention of many, and

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so they did not feel competent to express dissent or assent in the matter. In the third place, this is not the only occasion when injections of fluid have been practised with insufficient data, even with the highest objects in view. Indeed, have not recent events shown that there was for a moment a danger lest a wave of enthusiasm should swamp the intelligence of the College of Physicians, and this danger was only averted by the better judgment of a majority and the sagacity of its guiding spirit? This I conceive to be the explanation of the limited vitality of the pilocarpine craze—a vitality which has been further limited by Dr. Politzer, who at least, it must be admitted, may fairly claim to set bounds to the employment of an agent which he was the first to apply to ear disease.

The bubble remedy, chameleon-like in its hues, occasionally assumes the aspect of a surgical procedure. In approaching the subject as delicately as possible, let me say I have sometimes hoped it may be possible that there exists in the human mind a faculty—undeveloped unless called into activity—which permits the possessor of it to persuade himself of the inutility and general harmfulness of some portion of the human body (not in the precise instance of his own body, but in that of others). Unless this delusion is within the range of possibility, how are we to explain the determination with which some practitioners extirpate an apparently unoffending portion of the organism for reasons which appear to be not only quite illogical, but which require the profoundest ingenuity even to enunciate? For example, I have been asked to give an opinion somewhat in this way: "I am suffering from [here follow a variety of symptoms which include deafness and tinnitus, but by no means conclude with these troubles]. Do you think I should be cured by the removal of my [right or left] middle turbinated bone?" This upon examination being found quite healthy, the opinion in the negative is given without much difficulty, without the expenditure of many words or any comments. The same question has, I know, been asked of many others besides myself. As a surgical procedure, this operation is outside the pale of serious discussion, and I mention it only as an example of a bubble remedy that the very mention of it may possibly hasten its inevitable bursting.

If this operation or mutilation (whichever the reader may elect to term it) is devoid of plausibility, it was not so with another, which is now defunct—viz., division of the tensor tympani muscle, but which, at the period of its birth and early in its brief and chequered career, attracted considerable attention. The conception was not wanting in brilliancy if the results of the proceeding included dulness (in hearing), and it was easy and reasonable at first sight to imagine that the division of this muscle would relieve permanent tension, especially if it had undergone permanent contraction. I have even heard it alluded to at one of the medical societies in London as a recognised operation. It may have been recognised, but certainly by those who were familiar with its results (and especially by those upon whom it was performed) it was recognised as a failure so far as any change for the better in hearing was concerned, and a very decided change for the worse in the cases which came before my notice. I have elsewhere described it as including in its history "a flight of the imagination, a brief notoriety, and a burial in oblivion so rapid as falls to the lot of few achievements in surgery," and I see no reason to alter this description in paying a tribute to the dead.

Such are some of the bubble remedies which float over the area of aural surgery, but which "vanish into thin air" as they emerge into the clear light of day.

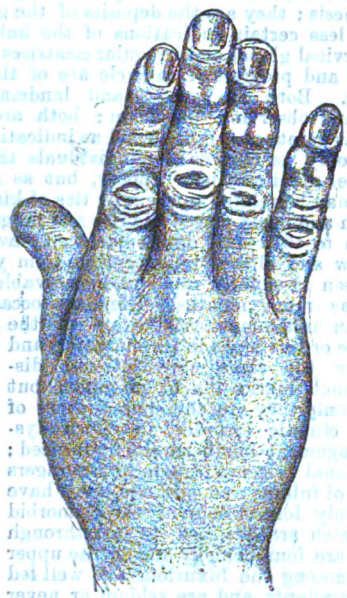
Savile-row, W.

GOUTY FINGERS.

BY EMIL PFEIFFER, M.D., WIESBADEN.

THE celebrated English physician, William Heberden, in his Commentaries, published shortly after his death, about the end of the last century, has a chapter under the heading "De Nodis Digitorum,"[1] the tenour of which runs as follows "Nunquam rite intellexi naturam tumorum, qui interdum nascuntur, ad pisi magnitudinem, prope tertium digitorum articulum. Nihil certe illis commune est cum arthridite; quoniam in multis reperiuntur, quibus morbus ille est incognitus. Per hominis ætatem manent, vacant omni dolore, neque spectant ad ulcerationem. Proinde deformitas major est quam incommodum: quamquam motus digitorum aliquantulum impeditur." From this description these formations have in subsequent publications been named "Heberden's nodes," the name by which they are known at the present day. The accompanying illustration, Fig. 1, taken from a cast in the museum of St. Bartholomew's Hospital, London, and copied from Dr. A. E. Garrod's work,[2] gives a very faithful representation of the affection. Heberden's

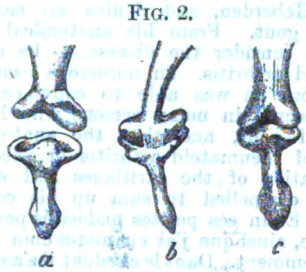
FIG. 1.



doubts regarding the formation of the nodes described by him were twofold. While he was unable to determine the exact nature of the materials of which they were composed, as well as the parts involved, he could not arrive at a decided opinion as to the cause of the affection.

As to the first point, we have been informed by the anatomical investigations of Charcot that the nodes arise from exostoses round the heads of the second and third phalanges. These exostoses are well shown by the drawings which this author has published (Fig. 2).[3] It is evident from these

FIG. 2.



a represents the phalanges from the back, and *b* the side view. For purposes of comparison he gives a delineation of the dorsal surface of a normal phalangeal joint, shown in *c*.

engravings that the nodes are formed by real exostoses and have nothing to do with the tophi of gouty patients.

The second point—the etiology of the disease—has given rise to much greater difference of opinion among writers on this subject. From the little that Heberden wrote we may conclude that he had occupied himself mainly with this question, and that his doubts as to the nature of the nodes were, perhaps, essentially connected with their etiology; but he leaves us in no doubt as to his opinion that they have "no connexion with gout, being found," as he says,

[1] Gulielmi Heberdeni Operæ Medica Commentarii, cap. xxviii., 1802.

[2] A Treatise on Rheumatism and Rheumatoid Arthritis. London: Griffin, 1890. Fig. 15, p. 206.

[3] Œuvres Complètes, tom. vii., planche 1, figs. 4, 5, 6. Paris, 1889

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"in persons who never had it." The most decided opponent to this teaching is Begbie,[4] who, with reference to the above quoted extract from Heberden's work, writes:—

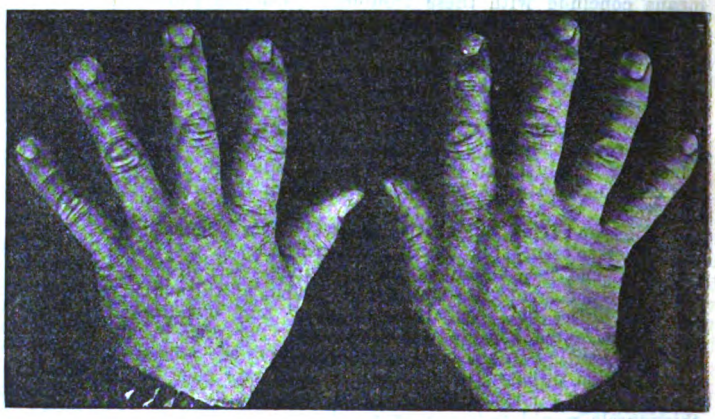
"Many years have passed since Heberden suggested and answered the question thus proposed, and few, I apprehend, of those who have since perused his writings have felt themselves disposed to differ from him in opinion, and give a different answer. Nevertheless, the question, if I mistake not, admits of a distinct reply; and those little knobs, which physicians in all ages must have noticed and considered, are in reality intimately connected with gout, though they are often found in those who have never experienced a fit of the disease. They are the product of the gouty diathesis; they are the deposits of the gouty blood, and are not less certain indications of the habit than the enlarged cervical glands and irregular cicatrices which mark the deposit and progress of tubercle are of the strumous constitution. Both are guides and landmarks to the inquiring and observing physician; both are eminently suggestive as points of diagnosis and as indications of treatment—not only as regards the individuals themselves in whom these manifestations appear, but as respects the many who may be related to them by ties of kindred blood. I have again and again traced the rise and progress of these little knobs to their full development; I have seen that progress slow and almost imperceptible from year to year, and have seen it equally rapid and observable during the course of as many months. They are occasionally the result of an inflammatory affection of the fingers, more or less acute in its character, and attended by the same constitutional disturbance which marks the fit of gout; but more commonly they are the consequences of a slow and chronic disorder, in which dyspeptic derangement has been chiefly noticed; while occasional twitches of pain in the fingers and a sense of fulness and stiffness there have been the only forerunners of those morbid products which are destined to last through life. They are found chiefly among the upper classes, or among the luxurious and well fed of their dependants, and are seldom or never found disfiguring the hands of the industrious labourer or of the hard-working mechanic. I have never seen these knobs but in connexion with gout or the gouty diathesis, and their presence in the fingers of a patient or of a blood relative has often led me to a right diagnosis of some obscure affection, or been the means of throwing light on the nature of some anomalous symptoms which had baffled all attempts to unravel."

Charcot,[5] on the contrary, is of the same opinion as Heberden, and denies all connexion with gout. From his anatomical investigations he is led to consider the disease to be a special form of rheumatoid arthritis. In numerous cases observed at the Salpêtrière he was able to convince himself that the disease occurs in many persons who had never had an attack of gout, and that the anatomical changes were those of rheumatoid arthritis or rheumatic gout—i.e., degeneration of the cartilages and exostoses. He is, however, compelled to sum up his conclusion with the words: "Enfin ces petites nodosités peuvent coincider avec la goutte, ainsi que j'ai eu moi-même l'occasion de le constater récemment. Dans le cas dont il s'agit les nodosités avaient précédé la goutte de plusieurs années."

Recent English authors (Drs. Alfred B. Garrod, Duckworth, and Archibald E. Garrod) are much less confident as to the cause of the nodes. Dr. Alfred B. Garrod[6] believes Heberden's assertion that "they have no necessary connexion with genuine gout to be correct"; and continues, "As far as my own experience goes, I have very seldom seen them in patients who were sufferers from true gout." Dr. Archibald E. Garrod[7] is of the same opinion; only he adds that he has himself seen such nodes in cases in which there were clear histories of gout, but of no other articular affection." Duckworth[8] goes much further than this. He not only contends that in a good many cases the nodes of Heberden are undoubtedly of gouty nature, but even proves by anatomical facts that the changes in the cartilages and the exostoses found by Charcot are very frequently of an undoubtedly gouty nature. The changes in cases of true gout characterised by deposits of urates may go on to complete bony ankylosis—a result which also occasionally takes place in Heberden's nodes. Duckworth quotes a very striking case (of Dr. Gee), in which the third joints of several fingers were stiffened by bony ankylosis, while all the other joints showed exostoses. In this case not only true fits of gout had taken place, but the post-mortem examination revealed "unequivocally gouty changes with small scattered uratic deposits." The case is minutely described and illustrated by drawings. The same point of view is taken by Lecorché,[9] who says: "Nous croyons que, chez les femmes, en particulier, les nodosités d'Heberden peuvent fort bien être l'indice de la diathèse goutteuse, se traduisant d'ailleurs par diverses manifestations viscérales: asthme, dyspepsie, sciatique, etc., et surtout par les modifications caractéristiques de l'urine et du sang." As instances in point, he quotes the cases of two female patients who belonged to gouty families, and in whom, in addition to the presence of the nodes of Heberden, there were many symptoms of anomalous gout.

For some years past I have observed with special interest the nodes of Heberden on the numerous patients suffering from gout or rheumatic gout whom I see here at Wiesbaden.

FIG. 3.—UPPER PART.



Mrs. Doris N—— of Bremerhafen, sixty years of age.

To my mind the nodes of Heberden, as they are represented in Fig. 1, in the form of small tumours of the size of a pea, are only a part of the changes involving the whole joint. When we consider and examine the first stages of the disease, as shown in Fig. 3, we find that the whole region of the third joint is enlarged, not only on the back, but also on the side and towards the volar surface. On the back of the fingers the usual furrows which mark the regions of normal joints when the fingers are stretched have disappeared, or are even supplanted by an elevation, the whole region of the joint forming a kind of bunch or knob. This very singular appearance of the joint becomes still more marked when all the third joints of the hand are similarly disfigured. Even on the volar surface of the fingers the joints can be felt as thickened knobs or pads. In these cases at the commencement the heads of the two phalanges which form the third joint are enlarged on all sides, the nodes of Heberden making their appearance at a much later period of the disease, in the form of large exostoses on the heads of the second phalanges. When we trace the rise and progress of the affection to its full development, we come to the following clinical description: Sometimes peculiar sensations in the fingers precede for a long time the outbreak of the disease. A lady was troubled with a feeling of numbness in the fingers for several years, but no sign of change in the joints could be detected. When I saw her again two years afterwards the numbness still continued, while several of the third joints in both hands

[4] Contributions to Practical Medicine. Edinburgh: Black, 1862, p. 28.
[5] Œuvres Complètes, tom. vii., Paris, 1889, p. 217.
[6] A Treatise on Gout and Rheumatic Gout, third edition. London, 1876, p. 503.
[7] A Treatise on Rheumatism and Rheumatoid Arthritis. London, 1890, p. 266.
[8] A Treatise on Gout. London, 1889, p. 71.
[9] Traité de la Goutte. Paris, 1884, p. 122.

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showed the changes above described. In most cases pain is present in the beginning of the disease. The statement of Heberden—"Vacant omni dolore"—is certainly incorrect for the first stages of the disease, while all authorities are unanimous in saying that most cases present either spontaneous pain or pain when the joints are pressed or moved.

In cases in which the morbid processes are dying or have entirely died out, as not unfrequently happens with people at an advanced age, the swelling of the joints and the nodes of Heberden remain; but pain in the parts, whether spontaneous or on pressure, becomes entirely absent. The pains are, as mentioned above, generally greatest in the beginning of the disease. The patient from whom Fig. 3 is taken suffered from severe pains for several years. A course of baths which she underwent at Eilsen in Germany gave no relief, and it was not until after a series of baths taken at Wiesbaden that all pain disappeared. The patient from whom Fig. 4 is taken has still very much pain on pressure, although the disease is much more advanced. As time goes on the last joints of the fingers usually become more and more thickened, and ultimately the nodes of Heberden make their appearance, accompanied with various symptoms of a vague or anomalous character. In Fig. 4 the affection is shown in a more advanced stage, and in several of the joints, especially in the little finger of one hand, the beginning of the nodes is distinctly observable.

FIG. 4.

Mrs. H——of Hamburg, fifty-five years of age.

As the thickening of the heads of the phalanges continues to increase the movements of the joints become more and more impeded, until in the later stages of the disease complete ankylosis becomes established. In some cases the affection shows itself in one or two fingers only, while in other cases all the third joints become involved, the little finger being not unfrequently the first to be affected. In the very rare cases in which the second joints of the fingers become implicated similar changes are observed in the joint of the thumb. I have met with only one instance of this; Duckworth's case above mentioned being another. In other cases the joint of the thumb remains unaffected. I have never observed this affection in the toes.

The persons most liable to be attacked are elderly people above fifty, but I have seen the disease completely developed in a female patient of forty, in whom it had begun at thirty-six years of age. My opinion is in complete accordance with that expressed by Begbie. I consider the affection to be a symptom of true gout, for I have not only seen the disease in a considerable number of cases which had been preceded by attacks of gout, or in which uratic deposits were actually present, but I maintain, in opposition to the opinion of Garrod and Charcot, that this is frequently the case. On the other hand, I must also admit that the disease is found in many persons who have never been subject to gout. From Heberden's point of view the apparent absence of gout in so many of these cases would be a sufficient argument to preclude entirely the gouty nature of the affection; but at the present day we cannot look upon certain morbid processes as having no connexion with gout on such narrow grounds, as we know that many vague and various affections of a gouty nature not unfrequently occur in persons who have never had an attack of gout. The symptoms of anomalous gout are well known to most physicians, especially in England, and in many cases a diagnosis can be established in the absence of decided outbreaks of the disease or of uratic concretions. An acute attack of gout can only be considered as one of the most frequent symptoms of the gouty condition, and not as its invariable and only certain sign. There is a large number of cases in which the most extensive uratic deposits are developed in the absence of acute symptoms or of preceding outbreaks. In the cases in which nodes are developed without acute symptoms of gout or without uratic deposits, a considerable number are found to belong to families in which the gouty condition is hereditary. Begbie and Lecorché quote such cases, and Duckworth relates the case of a physician in whose family the affection was traceable through three generations. In one branch of the family it was found to be clearly connected with gout. A brother of the patient, in whom the disease had shown itself very distinctly, had an acute attack of gout some time ago. But even the pronounced tendency of the disease to be hereditary is in itself a strong argument in favour of its being a symptom of gout. Rheumatic affections are no doubt also hereditary, but never nearly to the same extent. In the former several successive generations of a family will show precisely the same changes, and only these; while in hereditary rheumatism in the parts attacked a marked difference in this respect is seen to obtain. In one generation the disease attacks the hands, in another the large joints, and so on.

I am inclined myself to consider the above-mentioned changes in the third joints of the fingers to be as typical a symptom of true gout as the appearance of an attack showing itself in the ball of the great toe. The fact of its being mainly a disease of advanced life and of the female sex is quite compatible with its gouty nature, for it is to these chronic forms of gout that females and elderly people are more particularly subject. In the male sex and in those in whom the influence of heredity is very strong, outbreaks of gout usually occur at an earlier period than in those who, living more temperate lives, become subject to the chronic forms of the disease at a later period of life. In this connexion I would mention a case described later on, in which both mother and daughter showed the disease. The changes in the fingers appeared much earlier in the daughter than in the mother, a feature which is quite characteristic of hereditary gout. The most conclusive reason which leads me to consider the disease as being of an entirely gouty nature is furnished by chemical examination of the urine. Indeed, in many of these cases the only symptoms of gout which can be detected are those changes which are seen to take place in the urine, and which, as described by me in THE LANCET of 3rd January last, are pathognomonic of that disease, and alone sufficient to establish its diagnosis. I will relate a few cases in illustration of this; with the exception of the fifth they are those in which no acute attacks or other symptoms of gout had occurred.

Mr. P—— of Athens, sixty-one years old, shows Heberden's nodes in one of the third phalangeal joints. The twenty-four hours' urine collected at the first bath was found to be very acid; it contained 0·5988 gr. of uric acid; 100 ccm. of it, passed through a filter with 0·5 gr. uric acid, yielded, with strong hydrochloric acid, only the sixth part, and passed through a filter with 0·2 gr. uric acid only half of the uric acid originally contained in the urine. After the twentieth bath the quantity of the uric acid in the twenty-four hours' urine was seen to be only 0·3544 gr.

Mrs. N—— of Berlin, fifty-three years old, has the described changes in the third joints of all the fingers, which are painful on pressure. The twenty-four hours' urine collected before the first bath was very acid, containing as much as 0·6515 gr. of uric acid; 100 ccm. of it, after filtration through 0·5 gr. of uric acid, yielded only the fourth part, and after filtration through 0·2 gr. of uric acid only the third part of the uric acid originally contained in the urine. After twenty baths the uric acid secreted in twenty-four hours was only 0·3657 gr.

Mr. B——, seventy years old, shows the described changes of the third joints in several fingers. The urine of twenty-four hours collected at the first bath was very acid, containing 0·4440 gr. of uric acid; 100 ccm. of it, after filtration through 0·2 gr. of uric acid, yielded only half of the original quantity of uric acid with strong hydrochloric acid. After the twentieth bath the quantity of uric acid secreted in twenty-four hours was only 0·0154 gr.

Mrs. de S——, from America, fifty-nine years old, has all

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the third joints of both hands implicated. The disease began at fifty years of age. The quantity of uric acid secreted in twenty-four hours was 0·4045 gr.; 100 ccm. of the urine passed through a filter with 0·2 gr. of uric acid yielded no trace of uric acid with strong hydrochloric acid. After twenty baths the quantity of uric acid secreted in twenty-four hours was only 0·1699 gr.

Mrs. R——, daughter of the above, thirty-nine years old, has the same changes on the fingers of both hands, the affection having begun five or six years ago. Some years after the beginning of the disease she had the first acute attack of gout in the great toe, which has ever since been a regular occurrence every year. The twenty-four hours' urine collected before the first bath gave 0·4305 gr. of uric acid; 100 ccm., after filtration through 0·2 gr. of uric acid, yielded no trace of uric acid with strong hydrochloric acid. After twenty baths the quantity of uric acid secreted in twenty-four hours was only 0·0318 gr.

Mrs. M——, from Aix-la-Chapelle, seventy years old, shows the described changes in the third joints of several fingers of both hands. The twenty-four hours' urine was very acid, containing 0·1646 gr. of uric acid; 100 ccm. of it, after filtration through 0·5 gr. of uric acid, yielded only some crystals of uric acid with strong hydrochloric acid. After a course of twenty baths the quantity of uric acid secreted in twenty-four hours was 0·0772 gr.

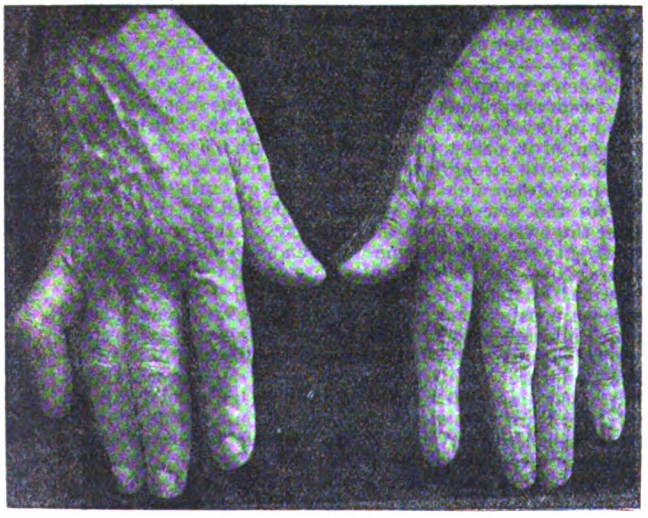
Professor L——, M.D., of Berlin, seventy years old, showed the disease in the third joints of several fingers. The urine of twenty-four hours was very acid, and contained 0·2301 gr. of uric acid; 100 ccm. of it, passed through a filter with 0·2 gr. of uric acid, yielded only 39·3 per cent. of the quantity of uric acid originally present. As the patient came to Wiesbaden only for a short time, the influence of the baths cannot be given.

In these cases it is evident that all of them presented the conditions of urine characteristic of gout, several of them showing, indeed, these urinary changes in a most marked manner; and further, that during a course of baths at Wiesbaden they showed the diminution of the quantity of uric acid secreted in twenty-four hours which I have described in the above-mentioned paper as being one of the most certain tests for latent gout. From all these facts we may conclude that the disease in question *is of true gouty nature and is based only on gout.*

As the nodes of Heberden are only a part of the process, and as the first stages of the disease, which consist in a general enlargement of the heads of the phalanges, are likewise characteristic, the term "gouty fingers" would seem more applicable than "Heberden's nodes," which term should be confined to the nodes at a more fully developed stage of the disease; and a further conclusion may be drawn, that the gouty fingers are of a purely gouty nature, and that in their peculiar clinical appearance, which is in the first stages always connected with changes in, or confined to, the third joints of the fingers, they are as characteristic a symptom of gout as an acute attack in the ball of the great toe.

It is to be noticed that in cases of rheumatoid arthritis in the hands the third joints of the fingers always remain free from changes. But there are cases of gout in which some joints of the hands are involved while the third joints remain free; so, although it can be said that the disease described as "gouty fingers" is a certain proof of gout, we cannot say when there is an absence of morbid changes in the third joints that the gouty condition is not present. Figs. 5 and 6 will serve to illustrate the difference between the cases depicted in Figs. 3 and 4 and those of rheumatoid arthritis. They are taken from two well-marked cases of rheumatoid arthritis. The nature of the disease is not only proved by the clinical examination, but also by the chemical examination of the urine during a course of baths at Wiesbaden.

FIG. 5.—UPPER PART.



Mrs. K——, from Dresden, fifty-four years of age.

FIG. 6.—UPPER PART.

Miss S——, from Wiesbaden, thirty-two years of age.

Mrs. K—— of Dresden, before undergoing a course of baths at Wiesbaden, secreted in the twenty-four hours' urine 0·2805 gr. of uric acid; after twenty baths the quantity of uric acid secreted in twenty-four hours was 0·2754 gr.

Miss S—— of Wiesbaden, previous to a course of baths there in the summer of 1888, secreted 0·1552 gr. of uric acid in twenty-four hours, and 0·2216 gr. after twenty days; and in a second course of baths in the summer of 1890 0·2129 gr. at the first bath, and 0·2152 gr. after twenty days.

In both these cases we see no diminution of the quantity of uric acid produced by a course of baths; while in both the urine contained no "free uric acid" at the beginning of the course of baths, for 100 ccm. of the urine yielded with strong hydrochloric acid just the same quantity of uric acid after filtration through uric acid as without filtration. In these cases we see the joints which are always implicated in "gouty fingers" remain entirely free, while all the other joints of the fingers and of the wrist are involved. The third joints are in the same condition as in healthy persons; they are not enlarged, and remain completely movable, all the other joints of the fingers being either swollen or stiffened. This difference in the hand of rheumatoid arthritis and that of "gouty fingers" is a very striking one.

With respect to the treatment of the disease, I would make the following remarks. In the cases in which there is no pain the only inconvenience suffered is the disfigurement of the hands, especially in the case of ladies; but as most of the subjects of "gouty fingers" are at an advanced age, this disfigurement is not much felt. The treatment in advanced cases is quite hopeless, as the changes in the bones are beyond remedy.

In cases in which the morbid process is only commencing we must interfere on account of the pain, the imminent disfigurement, and hindrance in movement, or complete stiffness. The best remedies in such cases are repeated courses of baths, a strict diet, and the continued use of an alkaline mineral water, especially Fachingen. As I mentioned above, in the case of Fig. 3, a single course of baths at Wiesbaden was the means of freeing the patient from all pain.

The diet is described *in extenso* in the above-quoted treatises on gout, in the work of Ebstein,[10] and in my work,[11] to which a diet table for gouty patients is appended.

[10] Das Regimen bei der Gicht. Wiesbaden: Bergmann, 1885.
[11] Die Gicht und ihre erfolgreiche Behandlung. Wiesbaden: Bergmann, 1891.

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OBSERVATIONS ON ADDITIONAL CASES ILLUSTRATING HEPATIC SURGERY.

BY J. KNOWSLEY THORNTON, M.C.,
PRESIDENT OF THE MEDICAL SOCIETY.

(*Concluded from p. 764.*)

CASE 9.—A single lady, aged thirty-four, whom I saw in consultation with Mr. Edgcombe Venning, to whose kind care of the case after operation I am indebted for being able to add it to the list of successes. I operated on May 21st, the day following the last case. Attacks of pain began in 1875, and were always sudden and spasmodic; sometimes one or two years would pass without an attack. The attack which led to my being called in began in the previous November, the attacks of pain and vomiting continuing at intervals till I saw her. On opening the abdomen I found everything so matted together that I at first mistook the head of the pancreas for a thickened gall-bladder. Finding my mistake, I proceeded to carefully make my way through some fresh adhesions between the stomach, the omentum, and the right lobe of the liver, and at last found the gall-bladder, deeply placed and packed with gall-stones. In searching for it I opened a small abscess under the edge of the liver, and let out about an ounce of thick pus, and cleared away some cheesy material. The clearing out of the stones was long and difficult, and required the aid of various scoops and forceps; when I had finished and washed it out I found that, as in Case 7, it was impossible either to remove it, suture it, or suture it into the abdominal opening, and I therefore merely passed a rubber tube to the bottom of the gall-bladder, and brought it out through the abdominal wound; this of course leaves the opened gall-bladder open to the general peritoneum, and I therefore made a counter opening above the pubes, and drained the pouch of Douglas also with a glass tube. The procedure of leaving the gall-bladder open seems at first sight very dangerous, but these two cases prove that with due care in the arrangement of the tube, and with the auxiliary drainage of the pelvis, it may, when necessary, be safely resorted to. In both cases the wound in the gall-bladder was slow in closing, as one would expect from its being so much wider open than when sutured into the incision; but there was no evidence of any serious leakage from the open gall-bladder into the peritoneum, though the discharge of bile-stained mucus through the rubber tube was very free from the first. I suppose that when the abdominal incision is sutured, and the abdomen well strapped up, the adherent viscera round the gall-bladder or duct, as the case may be, press up to the parietal peritoneum, and the fluid finds it easier to escape through the open tube than to spread into the peritoneum between the surfaces of these structures. Then in a very short time a firm wall all round the tube is formed by the adhesion of neighbouring surfaces. This patient also made an excellent recovery, and on recent inquiry writes that she continues "a walking advertisement" for surgery.

CASE 10.—This case was one of large hydatid cyst of the liver, which I saw in consultation with Dr. Ransford, and which had been thought to be some disease of a more serious kind. I felt perfectly certain of my diagnosis, and verified it by clearing out a large quantity of hydatids and semi-purulent fluid, then washing the sac well out with iodine and water, and draining it with two large rubber tubes. It was long in closing, and after it had closed the patient began to have recurrence of shivering and fever, and at last such distinct enlargement of the right lobe of the liver that I reopened a small spot in the cicatrix, and punctured with a long fine trocar, expecting to find recurrence of suppuration. Nothing but dark blood came, though I punctured deeply in various directions. The result of this phlebotomy was an immediate drop of the temperature; but in a very few days it rose again, and all the old symptoms—chilliness, nausea, anorexia, &c.—returned. After a time, however, the patient gradually improved, and is now, I think, going to get well without further surgery. The cause of the serious recurrence of symptoms remains a mystery, as there has certainly been no escape of pus anywhere. I think it is possible there may have been some deep effusion of serum, which caused the symptoms by setting up tension and obstructing the hepatic circulation, and that this has been gradually reabsorbed.

During the time that has passed while completing the above cases I have also performed five exploratory operations in connexion with disease of the liver—a large proportion of explorations in proportion to the number of completed cases. But this must always be so when one is dealing with a comparatively new departure in surgery, and especially in a field in which positive diagnosis is so difficult as in the one we are considering. Two of the cases turned out to be, as I feared they would, malignant disease. In the first the exact origin of the disease remained obscure after the exploration owing to the matting of parts, and the patient, an elderly gentleman in a very low state at the time, died of complete suppression of urine. I did not myself think this was a gall-stone case, but he had many of the symptoms of impacted gall-stone, including jaundice, and as there was no free fluid in the peritoneum, and no distinct evidence of malignant disease, I thought, with Dr. Broadbent, that it was a proper case for exploration.

The next case was that of a lady, who had been till shortly before I saw her (also with Dr. Broadbent) in the best of health. There was a small, hard, round, mobile body in exactly the situation of the gall-bladder, and here again there was no free fluid, and she herself was very anxious to have the diagnosis made positive by exploratory incision. I found that the hard body named above was a little malignant mass projecting from the right lobe of the liver, with more or less of a pedicle, and that there were other masses embedded in the liver, so I at once closed the incision, and she was happily none the worse for it, and lived for some months.

The next case was that of a young lady whom I saw with Mr. Cripps Lawrence, a case with a long history of pain, and of attacks like gall-stone colic, and I certainly expected to find gall-stones, but there were none, and I could find nothing very definite to account for the pain. I found, however, a small hard body, which appeared to me to be a new growth, but I could not define its exact place of origin, and I closed the incision with some fear that this might eventually turn out to be a case of malignant disease, but the long history before and her health since seem to contra-indicate it. Mr. Lawrence writes on Jan. 29th that the patient gained flesh and strength after the operation, and was free from pain for some time, but had relapses in July and October, the latter being somewhat severe and prolonged. Still she has gained on the whole in general health, and there seems no evidence of any serious organic disease. After my experience with Case 8, an unsuccessful exploration of this kind, with recurrence of symptoms, naturally made me wonder whether I could possibly have missed a small stone.

The fourth exploratory operation was performed upon another case of Mr. Venning's, a young gentleman who had knocked about the world a great deal, and had often been much exposed in travelling, hunting, and shooting expeditions. He had many of the symptoms of gall-stone, and a very distinct hard and tender swelling in the region of the gall-bladder; and after careful consideration, as he was losing health and suffering a good deal of pain and inconvenience, we decided to explore the swelling. It turned out to be a hard, almost calcareous mass, projecting from the right lobe of the liver just over the gall-bladder, and on puncture it was gritty and yielded just a trace of cheesy material on the needle. Below this and on the under surface of the liver were a number of pinkish, somewhat translucent nodules, which certainly looked very like malignant disease. I was a little inclined to regard the calcareous mass as an old hydatid; but on careful consideration of the case in the light thrown on it by the exploration, we were rather in favour of the whole thing being gummatous, and he admitted that he had had syphilis. This view proved to be correct, and he got quite well with large doses of iodide of potassium. In connexion with this case I may mention another (also a young gentlemen) in which I was asked to perform paracentesis abdominis, the idea being that he was suffering from hepatic dropsy resulting from cirrhosis. After the removal of the ascitic fluid I found a greatly enlarged nodular liver—some of the nodules hard, some soft—and I suggested that they might be gummata. The case is not concluded, but he has improved in health under the use of large doses of the iodide, and the liver has

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got markedly smoother and smaller, so that I think we are on the right track.

The fifth case of exploratory incision I saw in consultation with Dr. Ord. The lady (middle aged) was a confirmed invalid and constantly attended by two nurses. She had passed some very large gall-stones, and another was believed to be present in her gall-bladder, causing much pain. I could not convince myself by examination or from the symptoms and history that it was a case of gall-stone colic, but I quite agreed with Dr. Ord that it was a proper case for exploration. I found the gall-bladder and its ducts and surroundings healthy, but some matting of parts from previous inflammation. I simply divided the adhesions and closed the incision, and the patient lost her pain and is now in good health. This case appears to be identical with that of the Irish lady, which I gave in my previous paper; both were exceedingly ill, and both were restored to health by the exploration and separation of some adhesions.

I have recently had another case with Dr. Ord and Mr. Turner, an officer, aged sixty-three, with an enormous hepatic abscess; the surface of the liver was slightly adherent to the parietes, so that I was able to open it without exposing the peritoneal cavity, and, in order to avoid all risk of the liver tearing away as the abscess emptied, I put a fine suture through the upper and lower angles of my abdominal incision, and the corresponding angles of the incision into the liver. The abscess had been explored the day before I saw him with a hypodermic syringe, so I could not be quite certain of asepsis, and therefore thoroughly washed out the cavity with a strong solution of iodine and water. Discharge was very free for the first week, then steadily diminished for the next, and by the end of the fortnight was practically serous, so that the dressings could be left for two or three days undisturbed, and now, at the end of three weeks, the cavity has practically closed, and the patient has gained extraordinarily in the short time in health and strength, a remarkably quick result in a patient of this age, and with an abscess holding several pints of pus.

I have given in more or less detail notes of sixteen cases in which I have operated, let us now consider the lessons which these cases teach. In ten I expected to find gall-stones; I found them in seven. I diagnosed another case correctly, but unfortunately failed to find the gall-stone, though it was there; and in another case the disease was in the gall-bladder and the symptoms were due to obstruction of the ducts, but it was hydatids and not gall-stones; in a tenth case I diagnosed hydatids of the liver, and the operation proved that my diagnosis was correct. In three other cases I explored, not expecting to find gall-stones; in two I found what I expected, malignant disease, but I cannot claim accurate diagnosis because I was in doubt; in the third case I did not think I should find a gall-stone, and I found merely some adhesions, the result of previous trouble during the passage of large gall-stones, but the division of these cured the patient, so that though the diagnosis was not perfect the result was good. Three cases remain. In one the diagnosis of gall-stones was not justified by the exploration, and the patient is little if any better for the operation; in another no gall-stone was found, but the exploration led to a new diagnosis, which was proved by successful medicinal treatment to be the correct one; and in the last case the diagnosis had been made for me by Dr. Ord and Mr. Turner, and verified by puncture before I operated, and the result of operation has been eminently satisfactory. I think, then, on the whole series the results are good, and amply justify the operative procedures. At the same time there is sufficient uncertainty and failure to show that it is to a more perfect diagnosis that our chief attention must be directed. I believe that as experience is gained by more frequent exploration in doubtful cases, we shall advance in certainty of diagnosis; but I think it is too much to hope that we shall ever retain certainty in all cases. With regard to gall-stones, I think the chief points to be noted are the sudden nature of the onset of pain and its equally sudden departure, the way in which it travels round the body and through into the back at the angle of the scapula, and the sense of constriction round the region of the diaphragm. The presence of a mobile pear-shaped tumour in the situation of the gall-bladder, or to one or other side of that situation, which rises and falls with respiration, variations in size and tension of this swelling may make diagnosis pretty certain. The above symptoms, being suddenly complicated by jaundice, especially if a swelling previously present disappears, make it pretty certain that the stone has passed through the cystic duct and become impacted in the common duct.

It is obvious from two of the cases I have given that the absence of ascitic fluid cannot be relied upon as a differential diagnostic sign between malignant disease and stone in either duct, and we must always remember that gall-stone may be present, and actually occasion a cause of symptoms along with malignant disease, also causing obstruction of the ducts, for most interesting notes of such a case I am indebted to my friend Dr. Barlow. My absence from town alone prevented my seeing this case in consultation with Sir Wm. Savory and himself, and I think it is very likely that the symptoms would have led me to urge operation; but the necropsy showed that, though the removal of the stone might have given some relief, the case would still have terminated fatally from malignant disease of the pancreas obstructing the common duct.

The position of the swelling when the cystic duct is obstructed varies so much in different cases that it has but little diagnostic value; and in cases in which there has been much inflammation, matting the parts above the gall-bladder, neighbouring organs, especially the kidney, are so liable to sympathise that the greatest care is necessary not to be led astray into considering the renal symptoms as the essential feature of the case. My first case in the present series illustrates this well; it also shows how a patient suffering from a serious chronic disease like chronic rheumatic arthritis may have all her symptoms relieved and her general health improved by the removal of a serious source of local irritation. Case 2 illustrates the success which may be obtained by merely needling up the stones in the common duct and leaving the fragments to find their own way into the bowel. To obtain success in needling, however, I think it is essential that the stones be not too large, and that they have some mobility in the duct. Had I needled these stones at once the patient would have been saved the serious risk of a difficult cholecystectomy, though now she is well I think she is more likely to keep so without her gall-bladder.

Case 3 also illustrates what may be done with needling even after opening of the duct when we have to deal with a large adherent stone; it also shows, what I believe was unknown before, that it is possible to operate directly upon the common duct and suture it securely even though fragments are left in it. This case and No. 6 (that of Dr. Maurice) also show that prolonged jaundice and a great state of emaciation and weakness are no bar to the most rapid and complete recovery. Prolonged jaundice has been said to interfere with success, but I have never found it make any difference.

Case 5 illustrates the difficulty of differential diagnosis between gall-stones and hydatids when the latter are confined to the gall-bladder.

Cases 6 and 7 show the advisability of at once opening the common duct when large stones are found to be impacted in it; and the intimate adhesion of the stones to the lining membrane of the duct show not only the futility, but extreme danger, of attempting to force them down by external manipulation, as proposed by Dr. Harley, and practised by him in Case 7 with marked increase of all the serious symptoms.

Case 8 shows how dangerous it is to be influenced by previous history or the opinion of others. I made a correct diagnosis, but could not divest my mind of the possibility of malignat disease; the result of this bias was two serious mistakes in my procedure: 1. I did not prolong my search for the stone sufficiently. 2. I feared a malignant fistula if I sewed the gall-bladder into the abdominal incision. Hence my patient lost her life, and I spoilt what would have otherwise been a completely successful record. I have sufficiently commented on the remarkable fact shown in Cases 7 and 9, that the gall-bladder may be left open in the peritoneum or the duct imperfectly closed if efficient drainage is provided, without any serious complication resulting, and without the escape of bile into the general cavity of the peritoneum. The counter opening above the pubes and the glass tube in the pouch of Douglas I commend as a great safeguard in all doubtful cases, and with perfect asepsis I believe that it in no way increases the risk.

The above cases, together with those already laid before

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the Society, complete the record of my experience in hepatic surgery up to the end of January, 1891, and I trust they may be of value to the future of this very interesting branch of abdominal surgery.

CHOLERA AMONG THE ASSAM TEA COOLIES.

BY SURGEON-GENERAL A. C. C. DE RENZY, C.B.

IN the Sanitary Report of the province of Assam for 1878 I brought to notice some remarkable facts about cholera among the coolies who go up the Brahmaputra river by steamer to work on the tea gardens of Assam. For many years these coolies had suffered frightfully on the passage up the river. A voyage unattended with cholera was the exception rather than the rule, and it was a frequent occurrence for from 10 to 20 per cent. of a batch of coolies to die on the short trip of about fifteen days. In the years from 1871 to 1878 the death-rate on the passage calculated as for a year was 47·8 per cent. of average strength. This terrible mortality had continued for so many years, in spite of all the efforts of the Government to prevent it, that it came to be regarded as unavoidable, and to be due to some mysterious influence which was beyond human power to control. The most perfect cleanliness was maintained on board the steamer; the coolies had ample room on decks, covered by an awning, and open on all sides to the fresh air. They were well fed and well provided with clothing. When I came, as part of my official duty, to investigate this case, I was at first greatly puzzled. My previous experience had lain almost wholly in the Punjab—a province whose climate and sanitary conditions differ entirely from those of Assam. The former has one of the driest climates in the world, the latter one of the moistest; and the difference was equally great in other respects. My Punjab experience had led me to the conclusion that cholera is almost always spread through the medium of water; and that in places where the water-supply was secure against the possibility of excremental pollution, there was very little fear of an epidemic of cholera, even though detached cases of the disease might be brought in from time to time; but that no matter how perfect the sanitary arrangements might be in other respects, if the water-supply was exposed to contamination, most serious epidemics were to be apprehended. I was told that this rule would not hold good in the case of the coolie epidemics, that the coolies were supplied with perfectly pure water—the same, in fact, as was used by the European passengers and the native crews of the steamers, both of which classes had, for upwards of twenty years, enjoyed almost complete immunity from cholera. Everyone on board used water drawn from the river. I was shown the large iron tanks into which the water was pumped for the use of the coolies, the suspended matter being precipitated by the use of alum. I could not remain insensible to the force of this evidence. I began to think that, after all, there must be something in the explanation of the epidemic among the coolies, which was universally accepted, or the river. It was well known, it was said, that non-Aryan races were specially prone to suffer from cholera, and the great majority of the coolies were non-Aryans. At the same time I could not but recall the many occasions on which I had seen my own Aryan fellow-countrymen, British soldiers, decimated in a few weeks by cholera in the Punjab, and it seemed strange that on the Brahmaputra, over a period of many years, other countrymen of mine, if it were a mere matter of personal susceptibility, should have shown themselves to be so little liable to suffer from the disease while travelling on the same boats, on the same decks, with the sorely afflicted coolies.

A more rational explanation, and one more in accord with experience in all parts of the world, shortly afterwards appeared. During one of my tours of inspection I happened to be on board a steamer with a batch of coolies, among whom cholera was raging, the crew and my fellow-passengers being as usual quite unaffected, and as I lay awake one night in my berth, thinking what could possibly be the cause of the mysterious limitation of the attacks, I made up my mind to get up at daybreak and to go aft next morning among the coolies, note their ways and doings, in the hope that I might thus obtain some light. I took up my position in the stern of the vessel near where the latrine was placed, and soon afterwards the coolies began to come down from the upper deck where they slept. I observed that there was a general movement towards a tub which was placed alongside the latrine and was intended for water for ablution after defecation. The coolies dipped their drinking vessels into the water which they used to wash their mouths and faces. Presently a woman came with an infant on her hip, washed the child's clothes in the tub, other coolies came, filled their vessels with the water in which the clothes had been washed, gargled their throats and washed their faces with it, and so it went on for hours. It was at once evident that the tub was a ready means for circulating the cholera contagium, and I ascertained that the doings I have described were of daily occurrence on every steamer carrying coolies. It was true that a pure water-supply was provided for their use; but as there was only one tap in the tank which was to supply four or five hundred coolies, a person would often have to wait a considerable time before he could get supplied, and so the poor ignorant people, to avoid the delay, did not hesitate to use the foul water in the tub. Arrangements were at once made to supply abundance of pure water for ablution, as well as for drinking purposes, under conditions which made it impossible for one coolie to use water which had been in contact with another, with the effect that the epidemics which had lasted so many years suddenly ceased. Isolated cases occurred in coolies who formed part of batches which were known to be infected on their arrival at the port of embarkation; but the mortality at once fell to one-third of the previous average, and remained at a very low figure for ten years, notwithstanding that in that interval the districts from which the coolies are recruited, and the province of Bengal generally, had been visited with several severe epidemics.

Unhappily in 1888 and 1889 there was a return of the old state of things, and the mortality was truly lamentable. In 1888 there were 925 deaths among 31,217 coolies, and in 1889 there were 596 deaths among 34,507 coolies. In the two years 252 deaths occurred *en route* to Dhubri, the port of embarkation—and 391 at Dhubri itself; 282 died on board the steamers, and 596 at the depôts up the river, at which the afflicted people were landed from the steamers. Nearly all these deaths were due to cholera. It has been said that the renewal of the epidemics shows that the cessation of them was not due to the change in the system of water-supply above described. I think I can show that there is no ground for this contention. Before I left Assam I warned the Government that in order to keep the epidemics in subjection two things were necessary—(1) to provide good water at the halting places *en route* to Dhubri. So far as the official reports show this has never been done, and on leaving the railway station, forty miles from Dhubri, the coolies have to travel on foot along a road on which the water is no better than ditch water. Under such circumstances it is no wonder that the mortality from cholera *en route* to Dhubri was so great. The second measure I insisted on was that the water-supply at Dhubri itself should be put into a satisfactory state. When I left it was in a very dangerous state. There was a very badly constructed well, the ground round which was thoroughly polluted by the ablutions of the coolies, and though the coolies were forbidden to take water from the stagnant ponds close by, no amount of vigilance could prevent them from doing so. The water-supply, I believe, remains as it was, and I have no doubt it was an important factor in propagating the contagium brought in by the coolies. The coolies on their arrival at Dhubri are inspected by a medical officer, and every endeavour is made to keep back all who show any signs of illness from going on board the steamers; but it is obvious that in the case of cholera it is only when the symptoms have become somewhat pronounced that it can be recognised, and if large batches of coolies go on board in the incubation stage, no matter how perfect the sanitary arrangements may be, the disease will show itself in due time.

Some high Indian authorities believe that these great epidemics on the Brahmaputra are due to some widespread atmospheric influence which hangs over the great river, and they seem to despair of being able to bring them under control. I do not share this desponding belief, and I feel encouraged to take a more cheery view by the results of the emigration from Goalundo, a port lower down the river than Dhubri. The coolies embarking at Goalundo have to pass Dhubri, and if the calamities which befell the Dhubri coolies were due to atmospheric influence, we should expect

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to find the Goalundo coolies suffering likewise. On the contrary, we find that they passed up with comparatively little loss. In 1888 there were 11 deaths, of which 7 were infants, among 2551 coolies, and in 1889 there were 3 deaths among 1763 coolies. The Goalundo and the Dhubri coolies were in all respects similarly circumstanced, except that the former had not been exposed to the unhealthy conditions existing in the camps *en route* to Dhubri and at Dhubri itself.

Assam has unrivalled advantages as a field for the employment of the poverty-stricken population of the congested districts of India. But it is idle to expect that the tide of emigration can set in that direction, so long as people have to run the gauntlet of such epidemics as form the subject of this paper, in order to reach the province. My firm belief is that at a very moderate expense the Government might remove the obstacle, with immense benefit to the people of India.

Dublin.

NOTE ON DISTRESSING AWAKENINGS.

BY A. W. MACFARLANE, M.D., F.R.C.P. ED.

SOME persons do not know what it is to rise from sleep in fresh and buoyant spirits; on the contrary, many awake tired and wearied. A few fare even worse, for they awake in the early morning in great distress, and this feeling is replaced, after a time, by weariness and depression. Between the mental conditions of slight malaise and of morning misery all grades of discomfort may be experienced; just as many shades of mental discomfort are associated with the abnormal states that range from slight degrees of neurasthenia up to the more pronounced conditions of hypochondriasis and insanity. Awaking that is not attended by feelings of invigoration and *bien-être* is abnormal; it betokens some departure from health, or it points to sleeping in unhealthy surroundings. Sleep is a conservative or constructive process. During the activity of daily life the expenditure of nervous energy is rapid, and it preponderates over repair; coincidently, waste products are deposited in the tissues in ratio to the work they effect. The katabolic exceed the anabolic processes, hence the need for sleep. During sleep these conditions are reversed, the expenditure of energy is reduced to a minimum; the waste products are removed from the economy, and, the reparative processes continuing, potential energy is stored up. When depuration and recuperation are complete, awaking ensues, and the textures being reconstituted and well innervated, the sleeper arises full of power and well-being. A vigorous man awakes full of energy, because his textures have accomplished these processes. If, however, such a man curtails his sleep unduly, or if by excessive fatigue he charges his tissues with a larger quantity of waste products than he can excrete in the ordinary hours of sleep, his bodily textures are not adequately renovated, and he awakens languid and tired. The feeble and convalescent accomplish such changes slowly and with difficulty; they are often unable to effect the necessary processes in the hours usually allotted to sleep, so they awake from their night's repose tired and jaded. They consequently feel keenly any curtailment of sleep, as well as any unusual fatigue, and this they perceive most on awaking. The personal equation plays an important part in the recuperation of sleep. Such tired awakenings are readily intelligible.

The patients to whom I wish to refer are a class of habitually bad sleepers, who awake every morning more or less wearied and worn out, but who also from time to time, after an unusually deep sleep, awake in great misery. Collectively, they present very similar symptoms, although these may be modified to some extent by temperament and mental development—in short, by the quality of the man. They awake in the early morning, usually from 4 to 5 o'clock, in much distress, covered with cold perspiration, and they lie tortured by evil forebodings for an indefinite time. The mental distress usually begins before sleep terminates; they are conscious that it awakens them, and occasionally they find themselves groaning. They do not recollect that the sensation had its origin in a terrifying dream, nor do they associate the awakening with dreaming. The acute misery is followed by depression and dread. They attribute the awakenings to sleeping "too deeply," and these bear an intimate relation to morbid sleep. Two patients who are so afflicted state that they occasionally awake not knowing who they are, or where they are, and without knowing that they have slept until they find out how many hours have passed; the mental unrest follows. They all agree that the seizures, if they may be so called, are more prostrating than lying awake all night. Such awakenings do not recur with regularity, although in one instance they did so every seventh or eighth night for a time. The patients who suffer in this way are invariably neurotic and neurasthenic; some are hypochondriacal. They present widely different symptoms during the day, but they all exhibit, in greater or less degree, a lack of mental power and endurance, and they are introspective, self-conscious, and desponding. They dread the unknown; frequently they are restless and yawn and sigh a good deal. They may be divided into two groups. The first are those who have been enervated by excesses, commendable or the reverse; the second by malnutrition, due to an altered blood-supply. One of the chief differences that I have noted between them pertains to their falling asleep. The first group become depressed towards bedtime, and positively dread going to bed. There is nothing of this in the second—indeed, before a "bad" sleep there is often a feeling of exaltation (euphoria). From this they are sometimes able to predict the occurrence of such sleep. One patient, who can do so with some certainty, is occasionally deceived, for, in spite of feeling well, too well, and comfortably sleepy, when he goes to bed he grows restless in the act of falling asleep, and, beginning to turn, sleep deserts him. There is a very intimate connexion between the causes that give rise to broken sleep and those which induce morbid sleep.

The causes of this morbid sleep are, I believe, twofold: the one depending on some peculiar condition of the nervous system, the other on toxic causes. Morbid sleep occurs in connexion with many neurotic diseases. Amongst others may be mentioned hysteria, epilepsy, migraine, and asthma. It has also been noticed in pregnancy and at the menopause. In all these instances it has been observed that such sleep was not followed by any renovation of the bodily powers, consequently it may be concluded that the tissues were unable to effect their depuration or recuperation. In like manner, those who suffer from morning misery, from neurotic causes, awake wretched instead of invigorated, and sometimes they are afflicted with headache and gastric and biliary derangements. In a lady of advanced age, who was for many years under my care, this morbid sleep was followed by an attack of migraine and a wretched awaking alternately.

Morbid sleep occurs in many toxic conditions; it is common when the blood is surcharged with bile, urea, malarial poison, and it has been noticed to precede an attack of acute gout, and to follow poisoning by the products of digestion (ptomaines?). The morning horror of chronic alcoholism and morphinism is widely recognised. In the case of gout such morbid sleep may be preceded by euphoria, just as that symptom occurs in the initial stages of puerperal and other septic fevers, the exaltation being the first symptom of the poisoning. In the second group of cases under discussion euphoria may precede, and misery follow, the morbid sleep.

The causes which combine to make such awakenings miserable are numerous. The nervous tension that exists in a healthy person during diurnal activity is lessened during sleep. In the weakly and neurasthenic the store of nervous energy is small in quantity and easily dissipated during daily duties; at night its recuperation is slow and difficult, so that the nocturnal condition is one of exhaustion. In such a "hopeful" disease as pulmonary consumption sinking and distress in the early morning are often complained of. It is about 4 o'clock that the nervous energy is at its lowest, and death frequently takes place about that hour. This lack of vigour is specially felt after morbid sleep.

There are many grades of normal sleep. During sleep the heart beats more slowly and quietly, the brain becomes comparatively anæmic, and vascular tension is diminished. These changes vary with the depth of sleep. Dr. Graves long ago wrote: "It is between three and five in the morning that the inclination to sleep is strongest; it is about this time that sentinels are most apt to slumber at their posts, and consequently attacks upon camps or cities, made with the intention of effecting a surprise, are usually undertaken about this period of the morning." Quite recently

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Mönninghoff and Piesbergen pointed out that the depth of sleep increased for a second time after four hours and a half, and continued to grow more profound until the end of five or five and a half hours. The brain is at this time comparatively more bloodless. Many kinds of morbid sleep, due to toxic causes, terminate at this hour. It is during this unusually deep sleep that toxic awaking occurs. The man who has drunk or smoked too much is then awakened to repent his folly. The more pronounced anæmia that then occurs appears to cause awaking. An anæmic brain is the source of vacillation and fear. The forebodings that precede an apoplectic attack accrue from this. The neurasthenic state is equally the parent of dread, and, when these conditions are combined, depression and misery are explicable. In enervated states volition is enfeebled, and emotion is correspondingly exaggerated by day; in the early morning, with lessened nervous energy and a diminished cerebral blood-supply, these conditions must be accentuated. For, as Bain writes: "States of pleasure are concomitant with an increase, and states of pain with an abatement, of some or all of the vital energies." It has been truly said that it is in the early morning that the soul holds its inquest in the heart of man. Mosso has pointed out that in the act of awaking the brain undergoes a diminution in volume, and contains less blood than during sleep; this would appear to be coincident with the sudden dilatation of the pupils that then takes place. It is probable that this sudden increase of anæmia may, to some extent, account for the distressing sensations experienced on awaking.

Many neurasthenics grow nervous towards night, and to such an extent that they may be afraid to go to bed after reading or listening to a terrifying tale. The exhaustion inseparable from daily activity diminishes the power of their inhibitory centres. Curtailment of sleep sensibly increases this lack of control, and this is equally noticeable after morbid sleep. Awaking in this condition these centres are unable to resume their functions, and incapacity to think leads to introspection. One patient under observation affirms that occasionally he is able to direct his thoughts out of their ordinary gloomy groove, with the result that depression and dread soon disappear. The absence of sensory stimuli probably increases the distress. The darkness of the night (such awakenings are most complained of in winter) exerts a material influence. It reduces many a neurasthenic to the mental level of a child or a savage. In darkness they are haunted by fears unknown to their daily lives. Travellers in northern climes have insisted upon the depressing effects of the absence of light upon men and the lower animals. My friend Mr. Crockett of Wolverhampton, formerly chief surgeon to the great works at Cyfarthfa, assures me that miners injured in darkness suffer more from shock than those injured in the light. During the light and bustle of the day innumerable impressions are constantly streaming brainwards, and they serve to correct thought. These are almost in abeyance at night. Thought uninhibited from within and uncorrected from without is apt to run riot; moreover, it is liable to run apace, and so to become intensified from the want of distracting agencies around. It has been noted that in the insane thoughts grow far more extravagant in darkness; indeed, a form of nocturnal insanity is well recognised, characterised by restlessness and excitement, and by an extravagant mental state, symptoms which completely disappear during the day. Some of the patients under discussion have curious hallucinations whenever they shut their eyes. One that seems to be disagreeable is a loss of the sense of locality; they think their bed is placed in a different position &c. The poet who has well described most things in Nature has not left these awakenings untouched. The following lines occur in Melpomene:—

"These pannicks whence? And why my bosom torne
With sudden terrors never felt before?
Darkness inwraps me round,
While from the vast profound
Emerging spectres, dreadful shapes assume,
And gleaming on my sight, add horror to the gloom.
* * * * * *
"The fervent prayer was heard: with hideous sound
Her ebon gates of darkness open flew;
A dawning twilight cheers the dread profound,
The train of terror vanishes from view.
More mild enchantments rise;
New scenes salute my eyes."

It only remains to add that men and women suffer from such awakenings in almost equal proportion, and that they occur chiefly in persons over forty years of age. Those of the melancholic temperament—designated by Laycock a degenerate temperament—suffer most acutely. In some instances these patients gravitate from neurasthenia into hypochondriasis, and into insanity, hence the necessity of early recognising the import of the symptom. With proper management such a sequence should be extremely rare.

Treatment.—It is beyond the scope of this brief note to consider the treatment of such cases at length, entailing, as that would do, the hygiene and therapeutics of many diverse conditions. It will suffice to indicate that it must be of a twofold description. First, that directed to the condition of the patient; and, secondly, that adapted to alleviate the morning misery. The former, which is the essential element, involves the consideration of measures calculated to accomplish restoration of nervous energy, and the excretion of waste products, in which diet and regimen exceed medication in value. The latter, being palliative, is of secondary importance. The indication is to flush the brain with blood as speedily and thoroughly as possible. This can be done by two methods: by way of the nervous and of the vascular systems. Mosso demonstrated that a ray of light falling upon the eyelid of a sleeping man caused an increased blood-supply to the brain, by stimulating activity in the nervous centres. This accords with the physiological law which decrees that the blood-supply of an organ is in ratio to its activity, and it explains to a certain extent the invigorating effects of sunshine. A bright light shortens and decreases the acuteness of the attack. Equally, warm and stimulating drinks, by increasing the frequency and force of the heart's action, afford much relief. The addition of a grain or two of caffein, and, in certain carefully selected cases, of a spoonful of brandy, is helpful. In some, full doses of valerian, ammonia, and chloric ether act quickly and well. In all urgent cases, in which the recurrences are frequent and severe, I advise a light to be kept burning all night and an attendant to sleep in the same room.

Manchester-square, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SOUTH-WESTERN FEVER HOSPITAL.

A CASE OF PYÆMIA FOLLOWING SCARLET FEVER; SUPPURATION IN PLEURA AND ELBOW-JOINT; RECOVERY.

(Under the care of Dr. CAIGER.)

THE symptoms presented by the patient whose case is given below, the ulceration of the fauces, offensive nasal discharge, deeply stained rash, and extensive suppuration in the cervical region, show the severity of the attack of scarlet fever, and make it no matter of surprise that pyæmia supervened as a complication of the disease. Pyæmia is rare as a complication of scarlet fever, and when met with it is in this malignant type of the disease. Inflammation of the pleura is prone to become purulent, but the commoner joint complications of scarlet fever do not evince any proof of infective character or tendency to suppurate. Hilton[1] considered a disease of bone or joint remaining after scarlet fever as not uncommon, and wrote, "It will almost always turn out on inquiry that the patient with diseased bones or joints, as a sequel of scarlet fever or measles, had had a blow upon the joint, or had used excessive exercise so as to tire himself and to lower the vital endowments of the bone or articulation by over-fatigue." Recovery from this complication of pyæmia is very unusual, and, should recovery ensue, any joint which may have suppurated is as a rule more or less firmly ankylosed and its usefulness im-

[1] THE LANCET, vol. ii. 1861.

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paired as the result of the destructive changes which have taken place in it. The early recognition of the gravity of the joint complication, and its prompt treatment by some such plan as that adopted by Dr. Caiger in his case, form most important elements in the prevention of disorganisation of the joint and the restoration of its full usefulness. By means of early and sufficient incisions, the use of antiseptics, and rest of the limb, with appropriate general treatment and good nursing, we are able to record successes in the treatment of suppurating joints, even when of this infective nature, which would not have been considered possible a few years ago. Our readers are acquainted with the destructive arthritis which only too frequently supervenes in pyæmia, whether acute or chronic, when the joint has not been incised early, or the treatment for some reason has failed to arrest the local condition. The risk to limb is not only much increased, but from the prolonged suppuration the patient's chances of recovery are greatly diminished. The danger is not from too early incision of a joint, when done with due precaution; it is from leaving it distended with purulent fluid until the inflammation has extended to the ligaments and other structures which enter into its formation.

F. H——, aged eight, was admitted on Dec. 26th, 1890, with severe scarlatina. The temperature instead of falling to the normal at the end of the first week remained on Dec. 31st at 101 8°. The rash was almost hæmorrhagic, the fauces much ulcerated, and there was offensive rhinorrhœa. The glands at the angle of the jaw and under the sterno-mastoid became much swollen, hard, and tender, with extensive infiltration of brawny character in the cellular tissue around. Pulse 144. Patient very restless.

Jan. 4th, 1891.—The swelling was much increased, giving rise to the appearance known as "bull neck," the temperature remaining between 102° and 103°. Chloroform was administered, and free incisions were made into both sides of the neck. The superficial portion of the swelling was hard and glistening on section, and yielded a thin ichorous discharge; pus was found deep down in the neck, and drainage-tubes were inserted.

8th.—The swelling had increased. Temperature 102·2°. Under chloroform more incisions were made on the left side. The rash remained dark and staining.

9th.—Some relief had been obtained. Temperature 100° to 101·4°.

18th.—Has remained much the same since the last note. Temperature varying from 100° to 103·4°. To-day there is more swelling on the left side. Temperature 102°. Under chloroform a fresh collection of pus was found deep down in the left side of the neck; this was opened and a tube inserted. Strength fairly maintained with careful nursing. Taking champagne and essence of beef well.

20th.—Temperature yesterday 101°; to-day 103·2°. Pain and friction heard in the left flank. The urine contains one-tenth albumen.

25th.—Temperature 105°. Vomited. Well-marked pleuro-pneumonia of left lower lobe. Pulse 160; albumen one-sixth. Neck discharging freely; swelling rather less.

31st.—The condition during the last few days has been most critical. Temperature, which has remained between 103° and 104°, fell in the night to 100·4° (sixth day of the pneumonia). Tenderness was complained of in the left elbow yesterday; to-day the joint is hot, tense, tender, and fluctuating. Chloroform administered, and a drainage-tube put through the joint, which, after the pus had been evacuated, was irrigated with 1 in 20 carbolic acid solution for some time. Strips of lint soaked in carbolic lotion were tightly applied round the joint, outside of which were placed several layers of sublimate wool impregnated with iodoform. The whole was enveloped in a firm elastic bandage, which kept up considerable pressure on the joint. The arm was lightly bandaged on to a pasteboard splint, and the dressing changed every four hours.

Feb. 1st.—No pain in the elbow. Only a heavy trace of albumen. Temperature 98·8°.

3rd.—Temperature has risen to 100°. Dulness and loss of vocal fremitus over lower two-thirds of left lung posteriorly. Heart displaced outwards. Respiration over 50. Paracentesis thoracis; three pints of sero-pus removed; relief.

6th.—Tube removed from elbow-joint. The same treatment by elastic pressure, exerted on the joint, enveloped in the antiseptic absorbent dressing, now changed night and morning, as the discharge is but slight.

9th.—Temperature has been variable. Breathing again becoming embarrassed. Right pleura again aspirated. One pint of pus removed. There is now practically no discharge from the elbow-joint, which, except for two small skin wounds, is healed. The same treatment continued.

16th.—Temperature has varied between 98° and 102°. Right pleura again filling. Under chloroform the empyema was opened, an inch and a half of the tenth rib resected, and a double drain inserted. About two pints of pus were evacuated, the cavity afterwards being syringed out with 1 in 60 carbolic acid lotion.

17th.—Has stood the operation well. Temperature 98°. Right elbow now quite sound. Splint discontinued, though elastic pressure maintained.

20th.—The empyema not draining properly. Tubes were temporarily removed, and about a pound of solid coagulated lymph evacuated by coughing. Evening temperature normal.

Since this date recovery has been rapid. The tube was finally removed from the chest wall on March 27th. On the 30th he was allowed to get up. The lung has apparently quite recovered, and the elbow-joint is as sound as its fellow, extension and flexion being in all respects complete. No adhesions seem to have formed within the joint, slight movements being allowed since Feb. 17th, when the splint was left off. This was eighteen days from the time of laying open the joint.

In connexion with this case it is interesting to refer to another, in which, though the child subsequently died, a pyæmic joint was treated by the above method with equal success.

L. D——, aged one and a half, admitted on July 2nd, 1890. Still desquamating after an attack of scarlatina five weeks previously. The right elbow-joint on admission was tense, fluctuating, and acutely tender. The joint was at once opened, the pus evacuated, and the cavity thoroughly irrigated with 1 in 20 carbolic acid, and a drainage-tube laid through the joint. On the following day the temperature was normal. On July 7th the tube was removed and elastic pressure maintained by means of a bandage firmly applied over a strip dressing of carbolic acid surrounded with alembroth wool sprinkled with iodoform. On the 15th, with the exception of two small points in the skin, the wounds were healed. In this child seven other collections of pus, mainly in the intermuscular planes, were treated in the same way by incision, evacuation, antiseptic irrigation, and elastic pressure. In no case did the pus re-collect.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF FÆCAL FISTULA; ABDOMINAL SECTION; OPENING IN BOWEL SUTURED; RECOVERY.

(Under the care of Dr. ARNISON.)

OF the various forms of hernia met with in the groin, that known as "lateral enterocele," "Littré's" or "Richter's hernia" is the most fatal, on account of the frequent absence of symptoms on which reliance is placed in the diagnosis of strangulated intestine. Of the cases, fifty-three in number, collected by Mr. Treves, about one-third presented the symptoms of ordinary strangulated hernia. Three of those remaining had persistent diarrhœa during the progress of the case; in others flatus and fæces were passed for from one to three days after the commencement of the strangulation. The vomiting was generally less frequent and severe than usual, whilst in only six did it become feculent. In very few was there distension of the abdomen, and in several the bowels acted after aperients. The operation of closing the opening in the bowel (usually the ileum in these cases) was less formidable than when undertaken for fæcal fistula, usually resulting from gangrene of strangulated intestine. From the nature of the protrusion it was not necessary to resect the gut before the sutures were inserted; the operation therefore took a shorter time to perform, and the subsequent risk of leakage was much lessened. For the notes of the case we are indebted to Dr. Thomas Beattie, acting house surgeon.

S. B——, female, aged fifty, a charwoman, was admitted into the above institution on Sept. 15th, 1890, complaining of pain in the lower part of her abdomen and also of two discharging sinuses in the right groin. Four years and a half ago, when lifting a heavy weight, the patient was

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seized with pain in the lower part of the right side of the abdomen, and a "lump" the size of a walnut suddenly appeared in her right groin. This swelling remained, becoming larger after doing heavy work, and diminishing in size on resting, but was sometimes very painful. She at this time had no vomiting or constipation, and never wore any truss or other appliance. About three months before admission "inflammation" set in about the swelling, accompanied by great pain and redness. The pain extended across the lower part of the abdomen; her abdomen was swollen. She had complete constipation, but had never any vomiting. It was at this time that she first saw a medical man. Three weeks after the onset of this "inflammation," an abscess pointed over the swelling; the abscess burst, and a large quantity of dark-reddish, ill smelling material was discharged. Her bowels were not moved until about ten days after the abscess burst. Two weeks before admission some dark, pulpy, bruised-plum-like substance came away, since which occurrence the discharge has considerably diminished. When admitted there was a sinus over the right external abdominal ring; and lower down towards the right labium, in the fold of the groin, on the same side, there was another sinus. These were found to communicate with one another, and a probe could be passed through the lower opening, apparently into the abdominal cavity. The tissues between these sinuses were red and indurated, and there was some pain on handling; pain was experienced also on pressure above Poupart's ligament on the right side. There was a small amount of brownish-coloured discharge from the sinuses, but it had no marked fæcal odour; the bowels were regularly moved per anum.

Oct. 6th.—A director was passed from the orifice of one sinus to that of the other, and the intervening tissues slit up. Fæcal matter passed freely from the wound soon after the incision.

Nov. 24th.—The motions as passed through the fistula are thin and by no means formed, they have a very faint fæcal odour, the continuous escape of thin fæces from the sinus has so irritated the surrounding skin that it is severely excoriated and causes considerable pain. From the appearance of the discharge the fistula was believed to communicate with an opening in the small intestine.

Dec. 2nd.—The patient was put under chloroform, and, the parts having been carefully shaved and cleaned, an incision was made through the abdominal walls from a point about 4 in. vertically above the sinus, extending through and laying open the sinus, to which a coil of small intestine, having an opening in it about 1¼ in. in length and ½ in. broad, was found to be adherent. The long diameter of the orifice was in the transverse diameter of the gut. Both the parietal peritoneum and that covering the affected coil of intestine were thickened. The adhesions between the abdominal walls and the intestine were now broken down, and the bowel immediately above the opening was clamped with a thin rubber tube, and the wound in the intestine closed by means of Lembert's sutures, thin silk being used. The bowel was returned into the abdomen, the track of the old sinus carefully scraped out with a sharp spoon, and the peritoneal cavity washed out with perchloride of mercury lotion (1 in 10,000). A Keith's glass drainage-tube was then passed down into Douglas's pouch, and brought out of the upper angle of the wound; the parietal peritoneum was sutured with interrupted catgut sutures; a medium-sized indiarubber drainage-tube was put in, superficial to the peritoneum, and brought out of the lower angle of the wound; the superficial structures were united by interrupted catgut sutures, and the wound dressed antiseptically. The patient was then put to bed, with the right leg raised upon a double inclined plane. The urine was drawn off with a catheter periodically. One grain of opium was administered immediately after the operation, repeated every six hours during the first day, and from that time gradually diminished. The patient was given nothing but ice to suck for the first thirty hours, and after that time a little soda-and-milk and nutrient suppositories; the diet was slowly increased in quantity, beef-tea, fish, tea, and toast being gradually added until ordinary diet was reached. Flatus was passed per anum from the second day; the temperature continued normal, and the patient made an uninterrupted recovery.

5th.—Dressing removed. About one ounce of blood-stained fluid was drawn out of Douglas's pouch through Keith's drainage-tube, and Douglas's pouch was washed out with dilute Condy's fluid until the fluid returned perfectly clear. Both the Keith's tube and the superficial drain were removed and the wound again dressed antiseptically.

11th.—Soap-and-water enema administered, and bowels moved for the first time since operation. On the following day bowels again moved. Enemata were again given on Dec. 17th and 20th, the bowels not having been moved in the intervals between these dates.

25th.—Patient allowed to be up for an hour. Bowels twice moved without enemata. On the following day she was up for six hours, and the bowels were again moved twice. From this date up daily.

Jan. 3rd, 1891.—Patient discharged; wound quite healed; bowels regular.

Remarks.—The above history, together with the condition of the parts revealed by the operation, leaves little doubt that the case was one of Littré's hernia. And we are justified in assuming that the strangulation took place at the time when the patient was attacked with the so-called "inflammation." An unusual circumstance, however, was the absence of vomiting, and this no doubt led the medical man who saw her outside the hospital to look upon the case as one of perityphlitis, and treat it as such. The case evidently progressed naturally towards a spontaneous cure, the portion of strangulated bowel becoming gangrenous, a fæcal abscess, and eventually a fæcal fistula resulting.

TEWKESBURY HOSPITAL.

A CASE OF COMPOUND DEPRESSED FRACTURE OVER THE RIGHT PARIETAL AND FRONTAL BONES; TREPHINING; RECOVERY.

(Under the care of Mr. DEVEREUX.)

WE have not infrequently of late published notes of cases of compound comminuted fractures of the skull in which trephining was performed; and although in the present day the results with the methods of treatment employed are nearly always good, these cases generally present some points of interest. We are also somewhat apt to forget that the percentage of deaths after similar injuries is high if we take the record for a period of, say, twenty years, probably not much less than 35 per cent. in hospital practice. In this patient the period of unconsciousness was unusually prolonged for a case of this description.

William S——, aged fourteen, was admitted to the hospital on the afternoon of Jan. 12th, 1891, with the history of having been kicked on the head by a cart-horse. On admission the patient was in a condition of severe collapse and was quite unconscious. The surface of the body was cold, pulse small and very weak. Movement on both sides of the body was good, but he kept on moving the left arm and leg wildly about, and there was marked twitching on the left side. Grinding of the teeth was very marked. When not disturbed he lay curled up, with the knees and thighs flexed.

On examination a wound was found very much lacerated, and extending for about three inches and a half over the anterior and lateral part of the right parietal bone, and over the superior part of the frontal bone. On digital examination an extensive depressed fracture was felt. He was anæsthetised, and the wound thoroughly irrigated with warm perchloride of mercury lotion. On further examination it was found that the fracture was Y-shaped. Two limbs were situated on the parietal bone, and the portion of bone between them was much depressed. The third limb ran forwards over the frontal bone to within half an inch of the right superior orbital margin. From this limb, near its junction with the other two, there was a fourth fracture running vertically downwards. The outer table of the skull, above the fracture, was slightly comminuted. A large-sized trephine was applied over the meeting point of the fractures and a circle of bone removed. The depressed bone was then elevated and the comminuted portions of the outer table removed. The wound was irrigated and stitched up with silk, a medium-sized drainage-tube being passed from front to back. The wound was then dressed with iodoform, protective, and pink gauze. He had a fairly good night though somewhat restless at times, and occasional twitchings on left side. His temperature was 102·2°.

Jan. 13th.—The next morning he was still unconscious,

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but had no more twitchings. Temperature 99; pulse 90. Tongue clean. Had a good night, the temperature being 99·6°.

14th.—Is partially conscious, complains of his head, and tries to get the bandage off. Pulse quiet; temperature 99·2°. Had a very good night. Temperature 99·6°.

15th.—Quite conscious this morning. The wound was dressed and a smaller drainage-tube inserted. The wound looks very well. The tube and the stitches were removed two days later. His restoration to health was uninterrupted, his temperature never rising above 99°, and the wound being completely healed by Feb. 16th, when he was allowed to get up.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Heterotopia of the Spinal Cord.—Chronic Intestinal Stricture, secondary to Strangulation in a Hernial Sac.—Columnar-celled Carcinoma of Jaw.—Thickening of the Skull in Rickets.—Tuberculosis of Tendon Sheath.—Carcinoma of Scalp.

AN ordinary meeting of this Society was held on April 7th, the President, Dr. Howship Dickinson, in the chair.

Dr. ALDREN TURNER read a paper by Dr. C. M. Campbell and himself on Heterotopia of the Grey Matter of the Spinal Cord, which occurred in a human subject. The patient, who died at the age of twenty-nine, had suffered for many years from a gradually increasing exfoliative dermatitis. Two years before his death there developed severe polyarthritis, which was followed by signs of a transverse myelitis, and the fatal event resulted from exhaustion due to repeated attacks of bronchitis and the formation of a bedsore. The microscopic examination of the spinal cord revealed evidence of a myelitis, which affected principally the segments corresponding to the tenth, eleventh, and twelfth dorsal nerve roots. Here the grey matter presented a peculiar arrangement, consisting mainly in the separation of the horns of grey substance from each other, combined with a considerable amount of atrophy. The atrophy of the left grey crescent was more marked than that of the right. The central canal and posterior median septum were absent, while the anterior median fissure was represented by a small and narrow septum, extending a short distance into the white matter. The condition of the skin presented some points of interest: more or less occlusion of the arteries by great overgrowth of the middle coat, while the prickle cells retained their nuclei to the periphery, undergoing no cornification. No abnormality of the dermal nerves was detected. The author referred to the great rarity of this condition of the spinal cord, which has been called by the Germans "heterotopie." They further point out the liability to myelitis which this faulty structural arrangement manifested.—Dr. HOWARD TOOTH showed microscopical sections with drawings of a spinal cord which had been received from Dr. Woods of the Hoxton House Asylum. It was taken from the body of a man aged twenty-four, the subject of general paralysis. At the post-mortem examination a subdural hæmorrhage from the middle meningeal artery was found. There was excess of fluid both on the surface and in the ventricles of the brain. The convolutions were flattened and the brain was small. There was old fibroid phthisis of the lungs. The cord had been hardened in a 2 per cent. bichromate of potash solution. Sections were carefully stained with picro-carmine and cut in paraffin. The sections showed patches of softening, the neuroglia was increased, and many masses of what were probably micrococci were present. The grey matter showed slight alterations in shape. The ganglion cells everywhere showed great vitality. In those sections in which the inflammatory processes were least extensive, the grey matter was moved from its proper position, displaced either by altered or normal white matter. Below those parts which were most disorganised there had occurred secondary sclerosis. The posterior parts of the cord were the most affected. This was true both of the grey and white matters. The anterior and posterior nerve roots were normal. Two conditions appeared to have been confounded under the term "heterotopia"; a reduplication of parts (*Doppelbildung*), and that, like the present, probably due to extensive inflammation of the grey matter. Many, if not most, of the recorded cases had been obtained from lunatic asylums.—Dr. NEWTON PITT referred to a cord with two central canals obtained from a patient with Friedrich's disease. The cord was very small, with the characteristic sclerotic changes of that disease. There was no acute myelitis.—The PRESIDENT asked Dr. Tooth if there had been any skin affection in his case, and Dr. Tooth answered in the negative.—The specimens were then referred to a special committee.—Dr. TOOTH referred to the large number of what appeared to be micrococci in his specimens.—Dr. TURNER referred to some sections of a spinal cord of a rabbit with two canals, with an accessory anterior horn and with three anterior nerve roots, and in which there was no myelitis.—Dr. NEWTON PITT suggested that there was an interesting abnormality somewhat allied to this, in which there were apparently two central canals. He quoted a case of Friedrich's disease in which, besides atrophy, this condition obtained. He also cited a case of double central canal in a healthy rabbit.—The PRESIDENT considered the subject one which might advantageously be submitted to a special committee, and in this the authors of the paper concurred.—Dr. TOOTH referred to the presence of micrococci in the specimens.

Dr. NEWTON PITT exhibited and described a specimen of Chronic Intestinal Stricture, secondary to Strangulation in a Hernial Sac. Symptoms accrued suddenly on an effort, and pain occurred at intervals, particularly after taking food. The bowels were irregular, and blood was present in the motions. Nutrition was maintained by enemata, and some improvement took place. Later on, operation being refused, the symptoms increased in severity, death ultimately resulting from stercoral ulcer. The necropsy showed a cicatricial contraction at the point of strangulation of a femoral hernia, with hypertrophy and dilatation of the intestine above and the presence of stercoral abscess. Dr. Fagge cites a case of the same sort, and another was published in the Society's Transactions some years ago, but the cases are rare.—The PRESIDENT quoted a case of cicatricial constriction in the small bowel following strangulation.

Mr. ROBINSON described a case of Carcinoma of the Eyelid. He read a report of the Morbid Growths Committee, to the effect that the structure was that of a squamous epithelioma. The growth recurred and was removed; there was no suppuration. The structure in the secondary growth was very different from squamous carcinoma, and rather resembled a sebaceous gland.—Mr. BOWLBY referred to the former report, and thought the account of the later growth quite bore out the opinion formed upon the first one.

Mr. SHATTOCK showed two Skulls from infants, greatly thickened by the formation of very porous new bone on the outer aspect. In one there were signs of syphilis, but no history of that disease in the other. Sections made without decalcification, and stained in carmine, showed complete absence of earthy salts. The appearances were like those of osteo-malacia. The author contended that the thickening of the skull, of flat bones generally, and of the shafts of the long bones are inflammatory, as in osteitis deformans. The rarefaction of the original substance of the bone in rickets would point to the same conclusion. There was nothing in the etiology of rickets that negatived such a view. There were many instances in pathology, apart from microbial origin, in which inflammation was due to morbid alterations of the blood, such as rickets was generally considered to be. The characteristic mark of inflammatory productions in rickets was the want of proper calcification of the new osseous tissue. The second specimen of thickened skull was from an infant with congenital syphilis. That syphilis without rickets might produce widely extended osteo-plastic periostitis had been long known, but the formations, as Parrot had stated, were of normal firmness. The syphilitic disease may to a certain extent determine the seat of the disease, but the rachitic, the imperfect calcification of the new bone, and the combined conditions may be termed "syphilo-rachitis."—Mr. BOWLBY dissented from the idea of rickets being regarded as an inflammatory disease, and considered that the similarity of resulting histological appearances was insufficient to prove their identity. The thickening of the skull cap, as in the cases exhibited, he thought was exceptional. In many cases it might be that the ultimate thickening in long bones was compensatory to their want of rigidity from defective calcification.—Mr.

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SHATTOCK, in reply, said that the term "hypertrophy" was altogether out of place, and the thickening present was structurally quite different from ordinary bone, and was not necessarily associated with fracture or flexure of weak bones.

Mr. E. C. STABB read a paper on Tuberculosis of a Tendon-sheath. The patient was a widow aged sixty-six. Two years ago she ran a fork into the palmar surface of the left middle finger. At its base the fork penetrated deeply, so that when the hand was held up the fork still hung from it, and had to be pulled out. There was no bleeding at the time. The finger was stiff and painful for some days, during which poultices were applied. Two months afterwards she first noticed a small lump at the site of the puncture, followed shortly by others, which coalesced with the first, forming one swelling, gradually increasing in size, and rendering the finger stiff and useless. She was treated as an out-patient for seven months before admission at St. Thomas's Hospital. The diagnosis was compound ganglion, and the swelling was punctured without any result; but after a small incision a number of semi-gelatinous melon-seed bodies were expressed on two occasions. After the second incision the wound filled up with granulation tissue, and the patient was admitted in February, 1891, for amputation, which was performed at the metacarpo-phalangeal joint. On examination of the finger after removal the bones and joints were found to be normal, but all the soft parts were replaced by a gelatinous mass, in which the tendons could not be distinguished. There was one small cavity filled with caseous material. On microscopic examination of the tissue it proved to be tubercular in nature. There was no family history of phthisis. The patient had always been a strong and healthy woman, and there were no signs of disease in her lungs or other organs. No enlarged glands in the axilla. The clear history of a punctured wound, followed by swelling at the seat of puncture, and the absence, so far as could be ascertained, of tubercular disease in any other part of the body, would suggest the case to be one of inoculation.—Mr. ROGER WILLIAMS mentioned a case in an elderly man which had a very similar history. The joint ultimately developed a typical white swelling.—Mr. BARKER said these cases showed, what was already recognised abroad, that diseases of synovial membranes very much resembled those of joints, though the treatment was not always correspondingly careful. He mentioned a case of local tuberculosis of the same kind in which the patient subsequently died of phthisis.—Mr. ROBINSON thought the primary inoculation was the most important feature in the case, as there was nothing to show whence the tubercular virus was derived.—Mr. SHATTOCK referred to cases of local inoculation of tubercle, but thought that in most cases the skin was affected.

Mr. STEPHEN PAGET showed and described a case of Carcinoma of the Scalp, which had existed for four years in an elderly man. The glands were not affected, but in structure and appearance the growth differed in important respects from that of rodent ulcer.—Mr. ROBINSON said the specimen macroscopically resembled the primary tumour he had just described. He considered the further history would determine whether or not the growth was malignant.

The following card specimens were shown:—

Dr. HALE WHITE: Hodgkin's Disease with Waxy Kidney.

Dr. NEWTON PITT: Pigmented Colon from a case of Lead-poisoning.

MEDICAL SOCIETY OF LONDON.

Case of Fibro-sarcoma, or Desmoid Growth of the Abdominal Wall.—Strangulated Hernia in Infants.—Chronic Atrophic Rhinitis.

AN ordinary meeting of this Society was held on April 6th, the President, Dr. Douglas Powell, in the chair.

Mr. ALBAN DORAN exhibited a Tumour of a kind to which Professor Sänger applied the old term "desmoid." He had removed it from a stout woman, aged twenty-one, who had suffered from its growth for two years in the left groin. Posteriorly the growth was incorporated with the internal oblique muscle and the transversalis fascia, the peritoneum being free. Anteriorly it was covered by the aponeurosis of the external oblique. The tumour probably arose from the conjoined tendon. After its removal the wound was closed by deep sutures and drained; it healed rapidly. Six months afterwards the cicatrix was healthy and not stretched, the patient being four months pregnant. The structure of the tumour was in parts indistinguishable from sarcoma, being made up of young, rather loose fibrous tissue, whilst in others it more resembled a dense fibroma. Recorded cases show that "desmoid" tumours of the abdominal wall are clinically innocent, and occur far more frequently in females than in males. There is reason to believe that in several alleged cases in male patients the tumour was not of the class in question, but was true sarcoma. Any of the layers of the abdominal wall, except the peritoneum, might afford origin to a desmoid tumour. Those, however, which had been described as arising in muscular tissue were possibly sarcomata developed in hæmatomata. When the tumour was large and adherent to the peritoneum, the involved portion of serous membrane must be taken away with the growth. The more superficial layers of the abdominal wall formed a good covering to the great aperture made in the course of the operation, and experience showed that the intestines did not adhere to the walls over the area whence the peritoneum had been stripped.—Mr. SUTTON expressed astonishment that such an advanced pathologist as Mr. Doran should use such an antiquated term as "desmoid." In his opinion the tumour in question was probably a fibro-myoma springing from the round ligament. Such growths occurred in the broad ligament, and sometimes sprang from the urachus or ligament of the ovary. When similar tumours were met with in men he thought these were spindle-celled sarcoma.—Sir HUGH BEEVOR asked if Mr. Doran did not think the tumour might be pure fibrous tissue. Under the microscope the appearance was that of a purely cellular structure.—Dr. CULLINGWORTH thought the clinical history was of the utmost importance in establishing diagnosis.—Mr. HASLAM mentioned a case in which a tumour had been removed in a similar situation. There had been no recurrence since, but the case only occurred a few months ago.—Mr. DORAN, in reply, defended the term "desmoid," saying that it was now specifically applied to growths of this kind. The origin of the growth from the transversalis fascia was very distinct, and extended well into the conjoined tendon, and not towards the external ring. The patient was operated on last July.

Mr. STEPHEN PAGET read a paper on three cases of Strangulated Hernia in Infants, which will appear in full in our next issue.—Mr. ALBAN DORAN thought that in interference with the vermiform appendix peritonitis resulted rather from sloughing after damage to the artery than, as was often concluded, from sepsis.—Mr. BALLANCE said it was formerly thought that cæcal hernia had no sac. More recently it had been shown by Mr. Treves that there often was a sac, but instances had occurred in which such a covering was certainly absent. Hernia in children could often be reduced by the aid of a hot bath and inversion of the body with taxis.—In reply, Mr. PAGET said the cases he had reported supported Mr. Treves' view. In two of the cases a hot bath had been given without effect.

Dr. DE HAVILLAND HALL read a paper on Chronic Atrophic Rhinitis. He suggested that the term "ozæna," commonly used as a synonym for this disease, should be discarded. Age and sex are important etiological factors, the majority of cases commencing before the sixteenth year, and females being more frequently attacked than males, in the proportion of seven to two. Dr. Hall was of opinion that the disease is met with more especially in phthisical and anæmic patients. Though there is no distinct anatomical evidence, the majority of observers consider that the disease is preceded by a hypertrophic stage. By some authorities a congenital deficiency in, or an arrest in the development of, the turbinated bones had been regarded as the cause of the disease, the enlarged nasal passages allowing mucus to be retained and to undergo decomposition. As regards the action of micro-organisms there was a great difference of opinion. Loewenburg had discovered a micrococcus in the mucous membrane which he considered to be the cause of the disease. Whether this was the case or not, there was no doubt that bacteria played an important part in the production of the fetid odour. After giving a description of the symptoms and diagnosis of atrophic rhinitis, Dr. Hall stated that though a complete cure was not to be expected, the disease could be deprived of its worst features by carrying out the following treatment. The

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nose was to be thoroughly sprayed out with a warm alkaline solution. (Mackenzie's formula, sodii bicarb., sodii chlor., boracis, of each seven grains, and white sugar fifteen grains, dissolved in two ounces of warm water, was an excellent one.) Any adherent crusts were to be removed by the nasal forceps or by the use of the anterior or posterior nasal syringe with the same solution. The patient was to be instructed to use the spray at least night and morning. If improvement followed, the simple saline spray might be continued. If not, the addition of Listerine to the fluid might be tried, or weak solutions (from two to five grains to the ounce) of alum, sulphate of zinc, nitrate of silver, &c., might be used as a spray after previous cleansing of the passages. Carbolic acid, as in Dobell's solution, would generally remove the smell. Insufflations of iodoform, iodol, boric acid, and aristol were all useful in some cases. Dr. Hall had obtained good results from anointing the interior of the nose with vaseline containing oil of eucalyptus, in the proportion of a drachm to the ounce, or the nostrils could be sprayed out with a liquid paraffin—e.g., paraleine. In intractable cases Gottstein's tampon should be employed.—Mr. SPENCER WATSON agreed in recognising the presence of a hereditary taint, probably tubercular, and thought there was some resemblance between the disease and erythematous lupus. He mentioned a case which had been cured after acute gonorrhœal infection.

OBSTETRICAL SOCIETY OF LONDON.

AN ordinary meeting was held on April 1st, J. Watt Black, M.D., President, in the chair.

Extra-uterine Pregnancy at full term; Removal of Child and Placenta by Abdominal Section; Recovery.—Dr. JOHN W. TAYLOR, Birmingham, introduced this case by reference to somewhat similar records published in the Transactions of the Society, and pointed out the distinctive features which separate the present from previously reported cases. The previous history of the case was detailed, as written by Dr. Lycett of Wolverhampton. An account was given of the operation of abdominal section for removal of the child; of the interval between this and the second operation; of the operation for removal of the placenta on the twelfth day; and of the subsequent history of the case until the recovery and discharge of the patient. The author concluded with a short commentary on the case, to which was added Dr. Lycett's description of the child.

Extra-uterine Gestation, the Sac being situated in the Right Broad Ligament; Pregnancy advanced to the early part of the fourth month.—Dr. WALTER GRIFFITH read a paper on this subject. The patient, who was under the care of Mr. Rout of Hornsey, was aged thirty-two. She had been married eleven years; never pregnant before; previous health good. Severe illness began in the second month, and was followed by severe attacks of abdominal pain and faintness. Dr. Griffith with Mr. Rout made out the diagnosis of extra-uterine gestation in the right broad ligament. The abdomen was opened, and the sac, which had ruptured, was opened and emptied, profuse hæmorrhage taking place immediately from the placental site. The breathing was arrested with difficulty. It was impossible to remove the sac, and after the abdomen had been imperfectly irrigated it was closed, and the sac left plugged. Death occurred an hour after. The specimen removed was described in detail. Reference was made to the anatomy of the placental site, the peculiar position of the right ovary beneath the sac, and to existing disease of the left oviduct; also to analogous cases of ovarian cysts invading the broad ligaments and to the cases of Werth and Hart.

Obstructed Labour, in which a Large Fibroma of the Ovary occupying the Pelvis was mistaken for the Head of an Extra-uterine Fœtus.—Dr. WALTER GRIFFITH also read a paper on this case. The patient was admitted into the Great Northern Hospital in labour, the tumour having been recognised and diagnosed as the head of an extra-uterine fœtus. Three methods of delivery were discussed: (1) Cæsarean section; (2) vaginal section; (3) craniotomy. Craniotomy was finally chosen, as it appeared to involve least risk to the mother. Great difficulty was met with in extracting after craniotomy until version was performed. Septic symptoms gradually supervened, and the patient died on the eighth day. The characters of the uterus and placental site were described, and the author stated his opinion that in all such cases of great obstruction abdominal section provided the safest course of treatment.

Extra-uterine Gestation, associated with Sloughing of the Abdominal Wall, and attempted Extrusion of a Matured and Putrid Fœtus near the Umbilicus.—Mr. MARMADUKE SHEILD read a paper on this subject. The patient was a young married woman, a primipara. For several weeks she had been ill with fever, and for several months had had a large abdominal tumour. The uterus was explored and found to be empty. She was seen by Dr. Martin. There was a considerable circular opening, with sloughy margins, in the situation of the umbilicus. Through this protruded a tumour the size of a turnip. It was black, offensive, and pultaceous. Under chloroform the opening was enlarged downwards and a fœtus extracted, along with foul fluid and gas, followed by bright blood. The placenta was attached deeply behind and above, and the sac appeared to be extra-peritoneal. The bleeding was stopped by hot-water irrigation. The placenta was removed piecemeal, further hæmorrhage being prevented by irrigation, followed by packing with sponges. The author discussed the pathology and anatomy of the case, together with the diagnosis and treatment of ectopic gestation.

Dr. CHAMPNEYS asked Mr. Taylor as to the results of auscultation of the placenta. His own case has been wrongly criticised without proper account being taken of the long interval of practically normal temperature, which entirely negatived the idea of absorption through the wound. The absorption was through the placenta. He thought that the cases of Mr. Taylor and Mr. Jessop and his own case might have been tubal or tubo-ovarian. He also called attention to the great inferiority of these fœtuses, and said the mother's life ought not to be endangered in any way for their sake. — Mr. ALBAN DORAN doubted whether the operation of craniotomy had done much more harm in Dr. Griffith's case. He had seen the case with Dr. Griffith, and had advised him to do a craniotomy. He related a case of extra-uterine gestation mistaken for an ovarian cyst.—Dr. HERMAN thought the cases in which the fœtus lay in the peritoneal cavity were explained by tearing of the amnion from the movements of the child. Probably if the vernix caseoso were examined, bits of amnion would be found in it.—Dr. GRIFFITH, in reply, thought abdominal section preferable to craniotomy in cases like the one narrated.—Dr. JOHN W. TAYLOR also replied.

The following specimens were shown:—

Mr. TARGETT: Section of Vertebræ and Sacrum, from a case of spondylolisthesis.

Mr. ALBAN DORAN: The Uterine Appendages in a case of Double Hæmato-salpinx.

Dr. WHEATON (for Dr. W. DUNCAN): Early Malignant Disease of the Uterus.

CAMBRIDGE MEDICAL SOCIETY.

A MEETING of this Society was held on March 6th, Mr. Hyde Hills, Vice-President, in the chair.

Ophthalmoplegia Externa.—Mr. WHERRY showed a patient, a farmer, aged fifty-two, from Willingham, sent by Dr. Cox on Feb. 27th. He then had diplopia and could not steer himself in walking with the right eye, which he always kept lightly closed. The right eye was nearly stationary in middle position, and there was only very slight movement visible in the ocular muscles, including the superior oblique. There was no ptosis whatever. The movements of the left eye were perfect. In associated movements the right eye seemed rather more free than when acting alone. The pupils were equal, 3 mm., active to light and accommodation. The vision of the right eye was $\frac{2}{3}$, but very slight movement of the head put the board out of view; no improvement with sph. glasses. Vision of left eye was normal. No signs of tabes, no optic neuritis. A week before he had to sit up all night with his cow, and the disorder had come on gradually next day. There had been no illness during twenty years past, until one year ago he had a bad attack of retching, thought to be influenza. He drinks a great deal of beer. There was no history of syphilis; of two children, one aged sixteen in good health, the son, aged twelve years, subject to nocturnal fits, in which he bites his tongue. Iodide of potassium was given. A week later, when examined, the movements, very limited in the right, were more easily

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seen; also the eye, when examined alone, made better movements than when associated with the other eye. Mr. Wherry gave a brief account of the present knowledge of the subject of ophthalmoplegia, which should be distinguished from the unsymmetrical, complete paralysis of an ocular nerve. Since Mr. Hutchinson's paper in 1879 there had been many papers and reports of cases; those especially were mentioned in which post-mortem evidence had been recorded. There was often an association with tabes and optic nerve atrophy. Ophthalmoplegia was due to a variety of causes: degeneration of the nuclei, gummata, tubercle, hæmorrhage, fluid pressure, &c. A most important set of cases, dependent upon thrombosis in the cavernous sinus, could be found in the Ophthalmological Society's Transactions. Mr. Wherry was watching with much interest a symmetrical but not simultaneous ophthalmoplegia in a boy who had uniocular proptosis and intra-cranial bruit after fracture of the base of the skull; the ophthalmoplegia appeared more marked after ligation of the carotid. In Dr. Bristowe's remarkable cases, published in 1885 in *Brain*, the disorder seemed to be functional. The many nuclei of the third nerve were alluded to in explanation of some of the signs. In the case shown the disorder was only in one eye, there was no ptosis, and no paralysis of the sphincter pupillæ, probably none of the ciliary muscle. The lesion was either among the nuclei of origin of the nerve or near the sphenoidal fissure. Mr. Wherry thought the nuclei were invaded rather than fibres of nerve selected so partially. So many cases were of syphilitic origin; these were often symmetrical, partial in immobility with ptosis. Iodide of potassium was best given in large doses. Mr. Hutchinson reports the extraordinary dose of an ounce and a half daily. Mr. Wherry has now a patient taking 120 grains with success. Tubercular cases seem to have been helped by iodide doses and iodoform inunction to the scalp.

Paralysis of Right Sixth and Left Facial Nerves.—Mr. WHERRY also showed a labourer aged forty-five, also from Willingham, seen on February 15th at Addenbrooke's Hospital. He has complete paralysis of the external rectus in the right eye and facial palsy complete, including the orbicularis on the left side, doubtful as to chorda tympani in tongue. There has been considerable hemicrania. The symptoms date back about a fortnight as to the face, but diplopia was noticed several weeks previously. He observed his face go wrong in having to change his pipe to the other side of his mouth. There are no signs of tabes dorsalis, nor optic neuritis, and no other signs of disease or loss of function, except the contraction of the visual fields; colour sense good. He smokes tobacco and drinks a deal of beer. In contrast with the case of ophthalmoplegia, this is a paralysis unsymmetrical and complete. Both the sixth and facial nerves are often affected in so-called rheumatic disorder, and certainly in the face the orbicularis being so much affected suggests Bell's palsy, and that the occurrence of the two together is a coincidence and curiosity. Against this view is the condition of his visual fields, and the fact that the diplopia was noticed so long before the face disorder.

Symmetrical Hyperostosis of Femora (Specimens shown).—Mr. DOUTY showed the femora of a skeleton which were both enormously enlarged in circumference. He found them in a small museum in Scotland, exhibited as "giant's bones." The enlargement was confined to the shaft, and the ends were hardly affected at all. There was no twisting, and the thickening was greatest in the lateral diameter, so that the bones had an appearance of flattening. The bones were heavy and very hard, and the medullary cavity was not encroached upon. There was no history of the bones. The question was whether this sclerosed and hypertrophied condition was to be regarded as the result of a chronic periostitis, perhaps syphilitic, or whether these bones were parts of a skeleton generally affected with osteitis deformans. The absence of the twisting, and the fact that the medullary cavity was not encroached upon, were in favour, Professor Sir G. M. Humphry thought, of the former. The specimens were presented to the Pathological Museum.

Mediastinal Sarcoma in a Child.—Mr. F. W. BURTON contributed a case of mediastinal sarcoma in a child aged five years. He said that, although sarcoma of the abdomen was comparatively common in children, it was very rarely met with in the chests of young people. The child had been ill only about a month with wasting, dyspnœa, and pain in the left side. On admission into Addenbrooke's Hospital, under Dr. MacAlister, it presented all the signs of effusion into the left pleural cavity, but in addition to these it was noted that there were induration and protrusion of the tissues between the left costal cartilages, and that the heart's impulse was impalpable; temperature subnormal. Aspiration in the axilla withdrew twenty-nine ounces of straw-coloured serum. This did not appreciably relieve the dyspnœa, which six days after admission suddenly became urgent and of laryngeal type. Tracheotomy was hurriedly performed, without relief, and the child bled freely from some minute veins; this was the only indication of vascular obstruction, excepting the pleural effusion, though post mortem the whole anterior mediastinum was found occupied by a mass which completely enveloped the pericardium and compressed the aorta and large veins.

Sections of Female Pelvis.—Dr. GRIFFITHS exhibited several specimens of sections of the female pelvis showing the relation of the parts in prolapse of the uterus and other pelvic disorders.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on March 12th, Mr. W. Dale James, M.R.C.S., President, in the chair.

Molluscum Contagiosum.—Mr. SNELL showed a child, aged two years, with well-marked mollusca. Large nodules were situated on the left upper eyelid, and smaller ones on the forehead and cheek. The duration was twelve months.—Mr. Snell also introduced a patient, a youth aged twenty-one, who in October last had been the subject of nystagmus.

Eye Injury from a Revolver Bullet.—Mr. H. T. WIGHTMAN showed, for Mr. G. H. SHAW, an Eye which had been removed in consequence of an injury received from a revolver bullet. The bullet entered under the left malar bone, and was found lying beneath the upper eyelid of the right eye, the left orbit having sustained no damage.

Closure of Cavity after Resection of Ribs.—Mr. R. J. PYE SMITH showed a boy in whom a large cavity, resulting from old-standing empyema, had closed after the resection of portions of the fifth, sixth, and seventh ribs.—Mr. Pye Smith also showed a young man, from whose right frontal sinus he had removed a number of small mucous polypi. Fragments of the polypi removed were shown.

Addison's Keloid.—Dr. BURGESS showed a man aged thirty-five, with a scar-like patch, 3 by 1½ in., of circumscribed "scleroderma" on the back of the neck. When first noticed, sixteen months before, it was a white spot about the size of a sixpence. Itching and burning had been complained of. The induration was then subsiding.

Unilateral Nystagmus.—Dr. BURGESS also showed a case of unilateral nystagmus in a man who had recovered from an anomalous attack of hemiplegia.

Sarcomata.—Dr. GWYNNE showed a girl aged twelve years, from whom he had removed half the lower jaw on the left side for a large sarcomatous growth, which had been noticed six months previously and was growing rapidly. On the fourth day after the operation the stitches were removed and the wound had practically healed. The tumour after removal measured 3½ in. in length and 7 in. in circumference. It had apparently grown from the medullary cavity and pressed out the bone on all sides. The microscope revealed a large number of round cells with some connective tissue, and here and there groups of large giant cells. The tumour was most probably a myeloid sarcoma. Microscopic sections were shown.—Mr. C. ATKIN read short notes of some cases of sarcoma, and pleaded for earlier exploratory incisions in doubtful swellings. Operation, before the state of "fungus hæmatodes" had been arrived at, was strongly advocated, as recurrence was all but certain under such conditions. In one case the growth seemed to spring from the cutaneo-phalangeal ligament of Cleland, which passes from the last phalanx of the finger to the skin. In another case an apparently innocent sebaceous tumour had taken on sarcomatous development. This was removed from the axilla ten months ago, and there had been no recurrence, though the infiltration was of the round-celled character. In a third case a mixed sarcoma had grown from the front of the shin of a young married woman. In all three cases there was a family history of "cancer," but, from all accounts, more of the "epithelioid" type,

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suggesting a connexion, if not an evolution, amongst growths of a malignant nature.

Microscopic sections of the growths were shown.

A meeting of this Society was held on March 26th, Mr. W. Dale James, President, in the chair.

Optic Nerve Atrophy after Injury to the Head and Spine.—Mr. SNELL introduced a young man who, about Christmas, had been pressed down in the shaft of a coal-pit by a descending cage. There were some symptoms pointing to fracture of the skull. Sight was lost immediately. There was now optic nerve atrophy.

Malignant Disease of the Bladder and Kidney.—Mr. W. F. FAVELL showed the bladder, kidneys, and ureters from a man aged thirty-eight, whom he had seen in consultation with Mr. Thorne. The patient had persistent hæmaturia, for which he consulted a specialist, who ordered injections, which were followed by acute cystitis. He suffered acute pain, and catheterisation was necessary on account of the obstruction caused by clots and mucus in the urethra. He died of exhaustion, and post-mortem examination revealed cancerous infiltration of the coats of the bladder, with a growth in the right kidney and dilated ureters and pelves. No calculus was found, and there was no growth elsewhere.—Dr. PORTER showed for Mr. H. Boynton Lee a Horseshoe Kidney, discovered in a subject in the dissecting-room.

Changes in Tubercle Bacilli after Injection with Tuberculin.—Dr. F. J. GREEN exhibited microscopic specimens of sputa containing tubercle bacilli from a patient undergoing the Koch treatment.

Carcinoma Uteri, with Secondary Growth in the Walls of the Heart.—Dr. H. RHODES showed some specimens from a woman aged thirty-four, who had been under Dr. Dyson's care, at the infirmary, for circinoma uteri. She was admitted on Dec. 2nd, 1890, complaining of lumbar pain, menorrhagia of one year's duration, offensive vaginal discharge, difficulty in micturition, and obstinate constipation. On vaginal examination the os was found ulcerated, the vaginal walls indurated and infiltrated. The heart, lungs, and urine were apparently normal. Emaciation was very rapid, and in a few weeks a hard nodule was discovered in the right hypochondrium, which increased in size rapidly. The patient died on March 13th, 1891. At the necropsy the pelvic viscera were found matted together and infiltrated with cancer. The rectum was adherent to the uterus and considerably obstructed. The cervix uteri had entirely disappeared, and the uterine cavity was opened into posteriorly. Both ovaries were greatly enlarged and cancerous. The liver weighed 48 oz. In front of the right lobe was a large spherical nodule nearly three inches in diameter. It was adherent below to the transverse colon. In the posterior part of the right lobe was a much larger nodule, adherent above to the diaphragm. The heart weighed only 4¾ oz. In the anterior wall of the right ventricle was a cancerous nodule about the size of a walnut, and coming to the surface inside the cavity of the ventricle. The valves were normal. The kidneys were small and pale; pelvis much dilated at the expense of the papillary layer, which was atrophied; ureters much dilated and distended with urine. The left suprarenal capsule was enlarged, but not cancerous. Mr. A. Jackson, Dr. Keeling, Dr. Dyson, and Mr. W. F. Favell took part in the discussion.

A few Surgical Experiences and Warnings.—Mr. W. F. FAVELL read a paper on this subject. Mr. James, Dr. Hunt, Dr. Dyson, Mr. C. Atkins, Dr. S. Matthews, Mr. Jackson, and Dr. G. Thomson took part in the discussion.

ULSTER MEDICAL SOCIETY.

A MEETING of the Ulster Medical Society was held on April 3rd, Dr. Dempsey, President, in the chair.

Fracture of the Patella.—Dr. O'NEIL read notes of the methods employed in treatment of eight cases of fracture of the patella, and showed several of the patients.—Specimens: Dr. O'Neill showed a Larynx and Trachea from a patient who suffered for five years from syphilitic ulceration of the larynx and cricoid cartilage in whom tracheotomy had been performed. He also showed the bladder of a patient who suffered from enlargement of the prostate for eight years.

Puerperal Fever.—Dr. BYERS read a paper on puerperal fever, in which, after pointing out the great importance of the subject from its high mortality, the calamity it brought on the public, and the serious loss and annoyance it occasioned the medical attendant, he discussed the question under three heads: 1. Its nature. Evidence was given in support of the view that scarlatina, when conveyed to a lying-in woman, bred true, causing the same disease, and not puerperal fever, the so-called puerperal scarlatina being probably septicæmia with a red rash. It was also considered that the ordinary form of cutaneous erysipelas (a disease analogous to the zymotics) had not any relation to puerperal fever, but it was his belief that the phlegmonous variety, being itself a form of septicæmia, might give rise to the disease. Puerperal fever, he thought, had no analogy with epidemics, and neither soil, season, nor situation had anything to do directly in its causation. Dr. Byers regarded it as a traumatic or wound fever, due to the entrance of micro-organisms from without, and in its manifestations it might take the form of a sapræmia, a septicæmia, or a pyæmia. The nature of the bacteria was discussed, and it was shown that modern research was against the "auto-genetic" or self-infective theory, the poison coming from without. The various circumstances which lead up to our present conception of puerperal fever, and the lessons which the brilliant results obtained by antiseptic precautions in lying-in hospitals taught, were stated. 2. The methods for the prevention of the disease were given, as well as rules for the guidance of the accoucheur and nurse. The routine use of douches was not considered necessary in private practice, except under certain circumstances, which were stated, and the desirability of making few vaginal examinations was emphasised, the importance of abdominal palpation during labour, as rendering vaginal examinations less frequent, being pointed out. Several objections which had been made to the use of antiseptics in private practice were then considered, and it was shown how easily the method might be carried out with very little trouble or expense. 3. Treatment: Local treatment was insisted on as being of the greatest importance, especially when done early. The value of disinfecting the genital tract, the use of iodoform crayons, the practice of curetting, and the question of abdominal section in puerperal peritonitis were discussed. General treatment was considered; and, finally, the question "How soon after exposure to sepsis may the accoucheur safely resume practice?" was raised and considered. Professor Dill having spoken, it was decided to adjourn the discussion of the paper until May.

Reviews and Notices of Books.

The Micro-organisms of the Human Mouth. By WILLOUGHBY D. MILLER, D.D.S., M.D. Philadelphia: The S. S. White Dental Manufacturing Company.

AT first sight it might appear that a work of over 350 pages devoted entirely to the micro-organisms of the human mouth could only find its analogy in the use of a Nasmyth hammer to crack a nut. Anyone, however, who takes up Professor Miller's book and gives it the attention it deserves will soon be convinced that the author has none too soon taken upon himself the task of collecting and systematising not only the observations contained in his own numerous papers, but also the many important observations on the subject that are scattered through a very bulky mass of periodical literature. The work is intended to include not only such matter as will be useful to well-educated practical dental surgeons, but much that must necessarily be of interest to those who have a love of the science of their profession. In so far as it is the product of a man who evidently combines both the practical and scientific qualifications for the holding of the important post of professor of dental surgery in a leading University, the work may be said to fulfil all that the author claims for it.

The dental and oral pathology of to-day, through the intervention of the bacteriologist, is a very different thing

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from what it was twenty years ago, and it is now recognised that the micro-organisms in the mouth are constantly exerting most important actions upon both the local and general health of many patients. It is, therefore, necessary that not only should the dental surgeon understand the conditions and results associated with the bacteria that may find a field for their energies in the mouth, but the practitioner of general medicine should also make himself acquainted with the effects determined by those organisms that may make their way into the mouth from outside when the patient is apparently under comparatively normal conditions. As the author says, "not alone are they [bacteria] responsible for the vast majority of those diseases of the teeth and contiguous parts which the dental surgeon is called upon to treat, but they also give rise to other local and general disorders of the most serious nature. These various disturbances are produced partly by the direct action of micro-organisms and their products upon the teeth and the mucous membrane of the mouth, partly by constant swallowing of large masses of bacteria, partly by carrying them into the lungs (particularly in cases of violent inspiration), and, finally, by their obtaining an entrance into the blood or lymph vessels" in various ways.

It is almost impossible to give an idea of the extent of the ground covered in this work, but we may indicate as briefly as possible the lines on which Professor Miller has worked in the completion of his object. After dealing in the introductory chapter with the morphology of bacteria, the conditions under which they grow or by which they are influenced, and the products to which they give rise, he discusses the nature of the substances contained in the oral cavity that may serve as media for the nutriton of bacteria, describing the saliva and the tissues of the mucous membrane and the teeth, exudations from the gums, and accumulations of particles of food. He then gives the ordinary methods of bacteriological investigation, takes up the bacteria that are specially associated with the mouth and teeth, considers the relation of these to diseased pulps and to the formation of tartar. He shows how some of them set up different forms of fermentation, how they disturb the nutrition, set up inflammation, and how they thus cause caries of the teeth. This subject of caries and dental decay is treated very exhaustively, and the author certainly gives a more connected, complete, and rational account than has as yet been published.

The second part of the book is devoted to a description of the toxic substances that are found in buccal secretions, and the relation of these to pathogenic bacteria of the mouth, a long description of these bacteria being given; and lastly comes a chapter on the Entrance Portals of the Pathogenic Mouth Bacteria. Nothing seems to have escaped the author; the influence of diet on decay of the teeth, the use of antiseptics in the prophylactic treatment of decay, the antiseptic action of filling materials—a subject of very great importance,—are all gone into very thoroughly. As a result of his researches on the antiseptic and other properties of different stopping media, Professor Miller holds very strongly that copper amalgam fillings are very much superior to gold, oxychloride of zinc, or oxyphosphate of zinc. He considers that the film of oxide or sulphide of copper around the filling is absorbed by the surrounding dentine, which is thus protected by the antiseptic action of the copper salt. The process of sterilisation of teeth for the purpose of transplantation and implantation is fully described, and some most important points are insisted upon. We have, however, said enough to show the extent of ground covered by this admirable work of Professor Miller, and we can only strongly recommend a careful study of its contents to those who are engaged in carrying on the work of dental surgery, and to those who wish to obtain an accurate conception of what is known regarding micro-organisms of the human mouth. The book is well printed, and profusely illustrated with woodcuts, a chromo-lithograph, and two micro-photographic plates.

The Students' Atlas of Artistic Anatomy. By CH. ROTH, Professor of Sculpture at the Royal Academy, Munich. Edited, with an Introduction, by C. E. FITZGERALD, M.D., Surgeon Oculist in Ordinary to the Queen in Ireland. With twenty-four plates and ten explanatory figures. London: H. Grevel and Co. 1891.

THERE is an immense satisfaction for the intelligent artist in the full understanding of that which previously he has been unconsciously drawn to imitate. Art depends upon science for the means of studying the internal mechanism of the human body in order rightly to portray the outer form, representing the physical expression of the mind within. The arrangement of limbs, the treatment of surfaces and outlines, belong rather to the rules and technique of art, but a correct knowledge of proportion in the bulk of muscular masses, their limitations and variations with posture, can only be acquired by a comprehensive knowledge of anatomy.

The study of this subject from the cadaver or text-book has ever been the reverse of attractive to artists; and the fact, that both technical works and attenuated subjects are commonly more adapted to convey an intimate knowledge of particular and deep regions, than to give an explanatory and forcible illustration of the appearance of a living man, leaves the field open for some more directly appropriate treatment of artistic anatomy. Professor Roth in the present scheme has done much towards supplying such an educational want.

A living model is posed in imitation of a classic figure, the addition of a considerable weight to one extended arm lending force and reality to the effect. This figure serves as a basis for the anatomical lesson, which includes four separate views each of the nude figure, a careful preparation of the superficial muscles, and the articulated skeleton. In this treatment of the subject the most striking features are the correctness of disposition of the limbs, trunk, and head as regards balance and line of gravity, the proportional distribution of muscular force, and especially the compensating curves of the spine. Parallel sketches, with numbered references to the several parts, facilitate the recognition of anatomical structures, which are delineated with force and accuracy. It is a bold experiment to attempt to combine at once the classical, natural, and anatomical elements in drawing from the nude, but in this the author has succeeded remarkably well. The limitation to a single pose prevents all confusion and very much facilitates anatomical knowledge, whilst the addition of separate sketches at the end of the atlas furnishes opportunity for more detailed study of the limbs and head. The plates are admirably executed, the engraving being smooth and even, and at the same time sufficiently vigorous in the contrast of light and shade. Dr. Fitzgerald's translation of Professor Roth's work is altogether a valuable aid to the study of artistic anatomy, and is itself a work of art.

Theory of Physics: a Rectification of the Theories of Molar Mechanics, Heat, Chemistry, Sound, Light, and Electricity. By CAMILO CALLEJA, M.D. London: Kegan Paul and Co. 1890.

"THE aim of this work is to rectify the theories upheld at the present time in the treatises on physics and chemistry, whose fundamental principles have been by most authors set forth not only without connexion, but in a manner notoriously contradictory." These are the words with which the introduction to Dr. Calleja's little book commences. The learned author having discovered that nearly

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all physical science is wrong, has devoted himself to the task of reconstruction, and has succeeded to his own entire satisfaction. The new discoveries are to be fully described in a great work on "Universal Physiology," of which this appears to be the second instalment. It is explained that the word physiology is here restored to its original application in science, in accordance with its just etymological derivation from the Greek language. We are promised three volumes in this "abridged edition": "One, 'General Physiology; or, Physiological Theory of Cosmos,' comprehending the analysis and synthesis of nature in general; another, 'Abstract Biology,' treating of the Special Synthesis of Living Matter; and another, 'Theory of Physics,' which is circumscribed to the special *analysis of the different kinds of material changes.*" In pursuit of the glorious aim of universal physiology the author has preferred the seductive realm of hypothesis to the laborious path of experiment. He does not seem to have been a profound reader or a practical worker in physical science. In this manner he has avoided bias, and thus doubtless he has quickened his critical insight, for he disposes of great names, theories, and facts with airy omniscience. We find with regret that Dr. Calleja does not think much of Newton's laws of motion, in which, however, he detects some germs of truth. But in regard to the nature of sound he is compelled to adopt a sterner method, by which not only the early master but also some of his successors are detected and exposed. In so grave an idictment we can only do justice to Dr. Calleja in his own words:—"In this work a rigid substitution for old ideas is made, and it has the light of truth to illuminate it. Therefore, though the most distinguished physicists like Newton, Tyndall, Mayer, Helmholz, &c., have admitted and defended the erroneous hypothesis of corpuscular agitation, probably for lack of something better, we must proclaim the theory of progenic oscillation, which is in perfect correlation with the facts and quantivalent of the interchanges between sound and other phenomena" (page 105). Those to whom this kind of scientific writing is attractive will find plenty of it in the "Theory of Physics," and to them we commend it.

OUR LIBRARY TABLE.

Notes on Pathology: General Pathology. By J. RYLAND WHITAKER. Edinburgh: E. and S. Livingstone. 1890.—These "notes," which traverse the whole range of general pathology, have evidently been compiled with great care. Together, they form an outline of the subject of which it will not be difficult for the student to fill in such details as he gathers from his lecturer or his text-book. The author himself recognises this as the main object of his publication, and we may say at once that he has done his work well, and that it should prove of much utility. In these days of "compendia" of knowledge, where the aim often seems to be to condense into as small a space as possible the facts of science, so that the student may be saved the trouble of learning them step by step, it is gratifying to find a writer who takes a higher view of the kind of assistance that the student needs. The information he conveys in his little work is considerable, and also accurate; in parts even—e.g., in the sections dealing with inflammation and the parasites—it is almost, if not quite, as full as is to be found in many a text-book. But it would be difficult for the student to use the work simply for the purpose of "cram." We believe, moreover, that teachers also may be glad of so concise a summary of the subject as Mr. Whitaker has given.

Twelve Lectures on the Structure of the Central Nervous System. By Dr. LUDWIG EDINGER, Frankfort-on-the-Maine. Translated from the Second Edition by WILLIS HALL VITTUM, M.D., and C. EUGENE RIGGS, A.M., M.D. Philadelphia and London: F. A. Davis.—The high reputation which Dr. Edinger's work has attained in the original German is ample justification for its translation into English—we had almost written American, but of the nationality of the translators there is indeed but little trace, except in what may be called the occasional Germanised English or Anglicised German, which is a well-known characteristic of much of the American medical writing of the present day. Of the matter of the work too high an opinion can scarcely be expressed. The author, as one who has observed carefully and laboriously the structures of which he writes, has his own views on several points, but he does not ignore the opinions of others or treat them in anything but a scientific way. His horizon is a wide one; he knows what has been done, and he recognises the limits of our knowledge, and all through the work his intimate acquaintance with all the details of his subject is manifest. The illustrations are excellent and numerous. We are reluctant to find fault with them in any way, but it cannot be denied that to the reader ignorant of German there is a drawback in having the illustrations named in that language, although the translations of epithets furnished reduce the difficulty to the smallest dimensions. The book is a valuable addition to the literature of the nervous system, and will, we doubt not, be widely read both in this country and in America.

Diseases of the Nose and its Accessory Cavities. By W. SPENCER WATSON, F.R.C.S. Second Edition. London: H. K. Lewis. 1890.—The first edition of this well-known work appeared fifteen years ago, and a perusal of the present issue indicates the enormous strides made in the branch of surgery comprised under the title. The new edition consequently contains much additional matter, though its bulk is considerably diminished by the smaller type employed. We find sections added upon skin affections, rhinoplasty, ear affections, &c., by other authors. The section on ear disease is a desirable addition, and is admirably discussed by Mr. Cumberbatch in the small space allotted to him. Turning to those points in which the study of nasal disease has particularly advanced, we are impressed by the elaborate and instructive article on the forms of chronic rhinitis. Yet we think that scant justice has been done to the improvements made in the treatment of hay fever, both in this country and in America. In fact, the only reference to this, the most prevalent of all nose diseases among well-to-do patients, is dismissed in a few words on page 42, nothing being suggested for the amelioration or treatment of the affection. Nor in the section devoted to the reflex neuroses of the nose is any mention made of the subject, although asthma is discussed, and an admirable *résumé* given of the theories maintained by Bosworth of New York. The sections on polypi remain as admirable as in the first edition, and the same may be said of ozæna. The account of post-nasal adenoids is just what is required, and may be strongly recommended. The volume is well illustrated, and the arrangements of the different subjects satisfactory, though we think an appendix of formulæ would be of considerable advantage to the practitioner. But, taking the book as a whole, the faults we find are of small importance; and as a guide to the study of diseases of the nose it cannot be but strongly recommended.

Materia Medica. Part II. Catechism Series. Edinburgh: E. & S. Livingstone. 1891.—This little book is primarily intended to aid the student in preparing for examinations, by "suggesting possible questions that otherwise might have escaped his notice." The writer apparently has but a poor opinion of the powers of "notice" possessed by the average student, so the questions are very numerous, and touch upon most details connected with the articles mentioned. Moreover, the answers to the ques-

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tions are arranged in the type familiar from Brewer's "Guide to Science" or Magnall's "Questions." There is considerable danger to the student's chances of success if he ventures to reproduce these answers before an astute examiner—e.g., the strength of Fowler's solution and liquor arsenici hydrochloricus is given in an offhand way: "Like most of the poisonous liquors, 1 per cent." But no mention is here given of the names or strengths of the implied exceptions. If used only "the night before the examination" this catechism may usefully suggest sundry appreciative gaps; but students would be very ill-advised who relied upon the cramming it affords in place of a text-book.

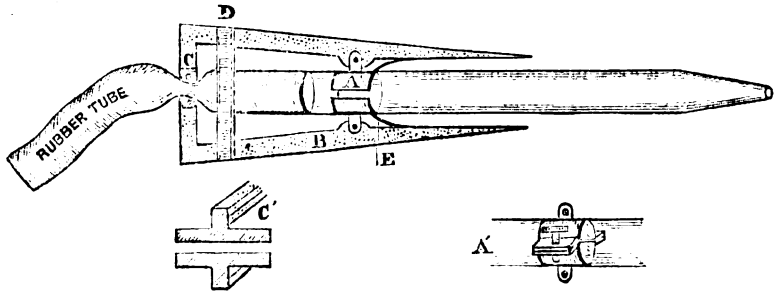
Outlines of Practical Physiology. By WILLIAM STIRLING, M.D., Sc.D. Second Edition, with 234 Illustrations. London: Charles Griffin and Co. 1890.—We have already stated the high opinion we entertain of this useful work. This, the second edition, has been thoroughly worked up to date. A large number of well-executed woodcuts have been added. It may be recommended to the student as one of the best manuals he can possess as a guide and companion in his physiological work, and as one that will usefully supplement the course given by a physiological teacher.

An Elementary Text-book of Physiology. By VINCENT T. MURCHÉ, Head Master of Boundary-lane Board School. London: Blackie & Son. Pp. 202.—This little book will prove useful to those for whom it is intended—namely, the students following the science and art syllabus. It gives a short but accurate description of the skeleton, and notices briefly the muscles, the organs of circulation, digestion, and respiration, the nervous system and senses. The woodcuts as a rule are good, those of the blood-corpuscles (on p. 71) and of the brain (p. 107) being exceptions. A useful feature of the book is the large number of questions which are interpolated between the chapters.

New Inventions.

AN IRRIGATOR REGULATOR.

THE figure shows a clamp for controlling the flow from the ordinary cistern irrigator. On the glass tube, forming the nozzle of the irrigator, is slipped the brass ring A, on which are hinged a pair of brass levers (B), each lever carrying a T-piece (C) at its proximal end. The rubber tube of the irrigator is nipped and closed between the transverse bars of the T-pieces, the necessary pressure being maintained by a rubber band acting at D, or by steel springs at E. The tube is opened to any degree by simply pressing on the distal ends of the levers, and it is automatically closed immediately this pressure is relieved. The advantages of this arrangement over the methods at present in use (clips, cocks, or pinching between the fingers) are that the *one hand* that holds and directs the tube has absolute control over the stream in diminishing or increasing its force, and the clamp automatically stops the flow the instant the tube is laid down or the pressure by the fingers relieved. This instrument is the design of Mr. T. W. Ogilvie, student of medicine, Aberdeen, and may be obtained from the maker, Mr. John Stevenson, School-hill, Aberdeen. The clamp is made with the simple ring A to fit one size of tube, and also with the screw adjustment shown at A' to fit various tubes.



ALEX. OGSTON,
Professor of Surgery, University of Aberdeen.

MESSRS. KROHNE AND SESEMANN'S IMPROVED CHLOROFORM INHALER.

THIS inhaler is based upon Junker's chloroform inhaler, which has been some years before the profession, but is a very great improvement upon the original apparatus. As at present made, it consists of a two-ounce bottle, graduated in drachms, and supplied with an air-tight screw top, perforated by two tubes: one, the afferent, is connected by indiarubber tubing with a hand bellows like that used in Richardson's ether spray atomiser; and the other, the efferent, with the indiarubber tubing connected with the vulcanite face-piece. The afferent tube reaches almost to the bottom of the bottle, the efferent only just to half an inch below the stopper. Four or seven drachms of chloroform are introduced by unscrewing the top. The vulcanite face-piece differs from the original one in having a feather indicator which blows up in expiration and drops in inspiration. This is intended to act as a respiration indicator. The vulcanite face-piece also is replaceable by a Skinner's mask covered with flannel, the covering being removable for washing or replacement by a fresh flannel cap which stretches over the wire frame. An arrangement in the tubes permits of a continuous rather than an intermittent blast of chloroform vapour entering the face-piece; further, by having the central tube in the Skinner's mask perforated with numerous apertures, the blast of chloroform is diffused as an atmosphere rather than pumped as a jet against the face. There is also a graduated stopcock in the course of the afferent tube, the object of which is to regulate the amount of vapour passed out of the chloroform by restricting the supply of air. It is clear, however, that this object cannot so be obtained, as the amount of air passed through will not vary directly as the area of the section of the tube. It is estimated that each time the hand bellows is completely emptied 5·19 cubic inches of air are made to traverse the chloroform, and that one minim of that substance will thereby be volatilised; it is hence claimed that the percentage vapour of chloroform given off is always below that which is considered dangerous. The apparatus as now presented to us is undoubtedly an improvement upon the old inhaler, and affords one of the best methods at present before the profession for giving chloroform. It may be added that for operations in which the face-piece cannot he employed Messrs. Krohne and Sesemann supply a bent pliable metal tube, which can be used for anæsthetising through the nose or mouth. The vulcanite face-piece is supplied with a movable indiarubber band fitted with an air cushion for use when the vulcanite will not readily apply itself to the face.

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THE LANCET.

LONDON: SATURDAY, APRIL 11, 1891.

THE "latest revised" scheme for the reconstitution of the University of London, which has been finally adopted by the Senate as the basis upon which the new Charter will be prepared, has now been sent to every member of Convocation, together with a memorandum explanatory of the scheme, and it is intended to present the draft of the proposed new Charter to Convocation for its consideration at the meeting on May 12th. Convocation will then have to decide on its acceptance or rejection, for it will not be possible to introduce amendments into the draft. Before Convocation says aye or nay, it will be well to see how far the scheme runs on the lines laid down by the Royal Commission, and who will be satisfied with its provisions, should Convocation accede to them, and permit them to be laid before the Lord President of the Privy Council as the basis of the new Charter desired by the University of London for its reconstitution. The Royal Commissioners recommended the formation of a local metropolitan university which, as an indispensable condition, should include the teaching institutions in or near London, stipulating, however, that any other students (including those from the provinces or colonies) should not be debarred from becoming candidates for its degrees; and they specially insisted on the unwisdom of bringing in other teaching institutions having no special connexion with London. "The University, so constituted, would not be what is wanted; it would not be a Teaching University in and for London." They also definitely remarked that "the great majority of London medical students, if they take a degree at all, take it elsewhere than in London, and that is a fact which the highest representatives of the medical profession view with regret. It is injurious, not to the men themselves only, but to the public." In opposition to these opinions, the new scheme of the Senate proposes to assign to the provincial Colleges a position in the University analogous to that given to the London Colleges; in other words, it endeavours to bring under the central control of Burlington Gardens all the University Colleges of Arts and Science in England and Wales, instead of adapting its organisation mainly to the London Colleges and medical schools, as was not only suggested by the Royal Commissioners, but was laid down by them as indispensable. It makes no alteration in the degree of M.D.; it retains the present standard for the Matriculation and Preliminary Scientific M.B. Examinations, although they are distinctly pointed out by the Royal Commissioners as requiring modification (par. 33), and hands over to a joint committee, formed by the Senate and the Royal Colleges, the other examinations for the Pass M.B. degree, although the Commissioners most strongly objected to giving such powers to Colleges which have no academical character. The constitution of the proposed new Senate is also absolutely different from that which was recommended by the Royal Commissioners. We cannot therefore expect that the Royal Commissioners will be satisfied with a scheme which is quite opposed in spirit and in working detail to that which they have advised. If it is not in accordance with the report of the Royal Commission, another question arises, Will it satisfy any of the bodies interested in the question? The voting of the Fellows of the Senate shows that an influential minority is opposed to the new departure, and that this includes many of the oldest Fellows, who are most regular in their attendance for the due despatch of the routine work of the University. A very large section of the members of Convocation will give their votes against the scheme, for, as is plainly and fairly shown in a circular sent to the graduates, the scheme will reduce the representation of Convocation on the Senate, make the degrees of the University of variable value, put the private student on a disadvantageous footing with the Collegiate student, lower the medical degree, and—most important of all from our point of view—not relieve the grievance of the London medical student. The London Teaching Colleges are not satisfied, and they are about to place their objections before the Lord President. It is scarcely to be expected that, since they have been petitioning to be made constituent Colleges of a local Teaching University, they will accept a coördinate position with the provincial Colleges in an imperial University, especially when the Royal Commissioners have declared that they are justified in asking for such a position, and when Colleges of similar standing at Manchester, Liverpool, and Leeds have been allowed to form a University, with marked advantage to general and medical education in that part of England. The provincial Colleges are not satisfied, for if they are to have coequal rights they should have coequal representation with the London Colleges; and from this point of view they have obviously been treated very unfairly by the scheme. The medical representation is worthless; the general representation is inadequate. The attempt to secure the control of these Colleges by the University of London comes rather late in the day. Birmingham and Wales are already moving for local Universities; and a glance at Scotland with its four Universities, and their beneficial action on Scotch education, is sufficient justification for insisting that these local movements shall not be choked by a centralised board in London. The London medical student will not be satisfied, for the present scheme does not remove the grievance under which he suffers. In the first place it will not enable him to call himself "Doctor" unless he take the M.D. degree, the conditions of which he is explicitly told will not be changed; therefore his taking the M.B. Pass degree by passing the Matriculation and Preliminary Scientific M.D. Examinations will only be illusory, for even then he will have no proper right to the title. In the second place, if those preliminary examinations are kept at their present standard, the average medical student will obviously be prevented from obtaining a degree on conditions similar to those on which it is to be obtained at other Universities. The Senate of the University has lowered its standard by its proposals for the Pass M.B. degree, and has not removed the obstacles which are in the way of the average London medical student, and which put him at an

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unfair disadvantage with his fellow students in Scotland and the provinces. The Royal Colleges have accepted the proposed scheme, and as it confers upon them a practical monopoly in the education, examination, and fees of the London Pass medical student, it is not necessary to go further for their reasons in approving the scheme. The Royal Colleges will practically obtain everything which the Royal Commissioners expressly state should not be granted to them, and we cannot understand how the Senate of the University of London could have determined to insert into the scheme provisions which, as every medical man must know, really transfer the examinations of its Pass graduates in medical subjects to the medical corporations. Convocation cannot possibly be expected to sanction such an abnegation of the duty of the University.

IN his Lumleian lectures Dr. BROADBENT has returned to the ever-fresh and interesting topic of heart disease. He directs his attention almost exclusively to structural changes in the muscular walls of the heart, a department of the subject at least equal in importance to that of morbid changes in the valves. The medical student and the young practitioner are very apt to think that the recognition and correct classification of cardiac murmurs are his chief concern, but the wider our experience the more is the conclusion forced upon us that from the patient's point of view—i.e., from the point of view of prognosis and treatment,—the essential point is the integrity or otherwise of the cardiac muscle. Dr. BROADBENT says very truly that cases of structural change in the muscular walls of the heart are "far more numerous at and after middle life than those of valvular disease," and that "the early recognition of such changes is often of greater service to the subject of them than in the case of valvular affections, since it reveals the tendencies which are in operation, and often at a time when they can be successfully combated by treatment." This subject is further of great interest and importance since the cases are not few in which, while no murmur is audible, a careful consideration of all the facts will lead to the recognition of grave cardiac changes. Such cases are probably often overlooked, or, as Dr. BROADBENT says, "the only diagnosis ventured upon is that of 'weak heart,' a vague term which covers the entire ground from temporary functional debility to disease inevitably and imminently fatal." Who has not seen such a diagnosis made time after time, the real explanation of such temporising being the reluctance of the practitioner to admit the existence of organic disease in the absence of any recognisable murmur?

Dr. BROADBENT discusses hypertrophy and dilatation at length, and has much to say that possesses great interest and importance. In addition to the common and well-recognised causes of hypertrophy—viz., disease of the aortic and mitral valves, protracted high arterial tension, emphysema, and bronchitis,—he enumerates adherent pericardium, collapse of a portion of the lungs, contraction of a lung from pleural adhesions, fibroid phthisis, &c. The diagnosis of hypertrophy is comparatively easy. If the hypertrophy affect the left ventricle we shall have high arterial tension, possibly some bulging over the cardiac area, the apex displaced downwards and somewhat outwards, the impulse being "a circumscribed gentle heave," an increase in the area of cardiac dulness, some diminution in the distinctness of the first cardiac sound, and some increase in loudness of the second cardiac sound. With the recognition of hypertrophy there arises at once the question whether it is adequate to the maintenance of the efficiency of the circulation, or whether any signs of failing compensation can be detected. This is a most vital question, worthy of our utmost attention, and some of Dr. BROADBENT'S hints in this connexion are of great value. "The sounds of the heart," he tells us, "usually give notice when it is overtaxed by the resistance to the onward movement of the blood. The interval between the first and second sound may be prolonged, the systole requiring more time than under ordinary circumstances to complete itself. ..... When the systolic pause is lengthened at the expense of the diastolic, so that the sounds are equidistant, the period of repose and reconstitution of the muscular fibres of the ventricle is shortened, and their nutrition must in time suffer." Reduplication of the first sound of the heart is another sign that the organ is becoming unequal to the strain upon it. Dr. BROADBENT does not encourage the idea of the treatment of cardiac hypertrophy as such; but with regard to the treatment of the causes of hypertrophy he remarks that "we shall recognise the necessity of diminishing the volume and improving the quality of the blood by appropriate diet and hygiene, and, if necessary, by tonics. We shall recognise, also, the desirability of diminishing the resistance to the onward movement of the blood in the arterio-capillary network by care in diet, by aperients, and by eliminants of various kinds."

The subject of dilatation is even more interesting and important than that of hypertrophy. Usually both ventricles are involved, but the condition of the left is the more important. The practical effect of dilatation is that the ventricles fail to empty themselves during systole, and there are varying degrees of this failure. In connexion with the etiology of dilatation, it is extremely important to bear in mind that it often arises quite independently of any antecedent valvular defect. Violent effort of any kind, such as mountain-climbing, hunting, boat-racing, or athletics, especially in persons unaccustomed to severe exertion, may produce dilatation of the ventricles, incompetence of the valves as a necessary mechanical result of such dilatation, and possibly the long train of symptoms familiar to us as those of gradual cardiac failure. But such cases often do well under proper treatment, and may even recover completely. Among other causes of dilatation Dr. BROADBENT enumerates the onset of acute diseases, mental anxiety, injudicious hydropathic treatment, the Banting treatment of obesity, and the inhalation of the fumes of Himrod's powder for asthma. The physical signs of dilatation are not difficult of recognition. The pulse is irregular in rhythm and unequal in force of beat; it is also sudden, short, unsustained, and compressible. The artery at the wrist may be large or small, and the beat may be either regular or irregular. The apex may be displaced outwards and downwards; it is often not detectable by the eye, and it may be difficult to localise even by palpation. It lacks the heaving character and the distinct thrust

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so characteristic of hypertrophy. Percussion shows that the area of dulness is enlarged, and more rounded in the apex region than normal. The first sound is short, and usually louder than normal; often there is a systolic apex murmur. The second sound is often weak, especially in the aortic area. An abbreviation of the systolic pause "is a serious indication of failure of the ventricles, and, when carried to an extreme, so that the second sound follows the first immediately, and almost seems to overtake it, is significant of immediate danger." As regards prognosis in dilatation of the heart, among the most grave points are obstinate nausea, loss of appetite, and sleeplessness, long continued and excessive frequency of the pulse, an approximation of the first and second sounds, a history of progressive cardiac failure, and a bad family history.

On the subject of treatment, Dr. BROADBENT treads familiar ground, but his remarks are worthy of the most careful consideration. He thinks the abstraction of blood is serviceable, chiefly where there is marked enlargement of the liver. Purgation, especially by mercurials, he considers as of great value in lowering arterial tension, and remarks how commonly other remedies fail until a mercurial purge has been given. Of the special cardiac remedies he places digitalis, of course, first, and recommends the addition to it of ammonia, ether, strychnine, or iron, according to the circumstances of the individual case. Strophanthus he has found most valuable when digitalis produces much sickness or fails in its effects. Citrate of caffeine, squills, and sulphate of spartein have also proved beneficial in his hands. Of convallaria he cannot say much.

We recommend these very interesting and practically valuable lectures to the best attention of our readers.

IT has often been a matter of speculation as to the ultimate destiny of the relatively large amount of iron which is ordinarily introduced into the human system as a tonic, and the good effects of which seem almost to be proportional to the largeness of the dose. It has several times been made the subject of experimental investigation, as, for example, by HAMBURGER, who regained from the fæces nearly the whole of the amount of iron salts that he had introduced into the stomach of a dog, a very small quantity appearing in the urine. This would appear to show that comparatively little of the metal was really absorbed from the intestine, although it seemed just possible that some of it might have been taken up and again eliminated through the same channel. It appears, however, that we must not regard the excess of iron in the urine as an index of the amount absorbed, since even when iron salts are introduced directly into the blood stream very little is excreted through the kidney. This is clearly shown in a paper by Dr. CARL JACOBI[1] of Strasburg, who had already in 1887 published, in his inaugural thesis, the details of several experiments on the point. A certain quantity of iron salts was injected subcutaneously or into veins, and the urine, as it flowed down the ureters, was received directly into a sulphide of ammonium solution. In that way the time of its first appearance in the urine, after the injection, could be accurately noted, as well as the time at which it ceased to appear; and finally, the total amount of iron thus eliminated could be gauged. The general result of such experiments was to show, after due allowance for normal excretion, that only between 2 and 4·5 per cent. of the quantity of iron introduced into the circulation could be regained from the urine.

The question which Dr. JACOBI now proposed to determine was as to the possibility in HAMBURGER'S experiments of much of the iron being absorbed and again excreted through the intestinal wall. He states that DU CAHN had found manganese introduced into the general circulation to be largely excreted through the intestinal vessels, as much as 14 per cent. passing thus within the first hour of the experiment. Dr. JACOBI'S results do not show that iron is thus eliminated to any large extent, for after its injection into the veins he could regain not more than 1·6 and 2·4 per cent. from the intestinal contents, nor more than 6·35 per cent. and 15·1 per cent. from the intestinal wall (inclusive of that which its tissues normally contain) in the two experiments made for this purpose. It was evident too that the elimination through the intestinal blood-vessels took place very slowly, and he did not get any support for the view that the bile carries off much of the metal. The next step, therefore, was to determine what becomes of all the salt which has been introduced into the blood. Is it retained there, or is it deposited and "fixed" in the tissues? The experiments on the urinary excretion showed that no more iron was eliminated after from two to three hours, a fact which might be explained either on the assumption that the kidney ceased to act as an eliminating organ, or else that the circulating blood had parted with its excess of this constituent. It was easy to show that the latter and not the former explanation was the true one, since a repetition of the injection into the veins caused a reappearance of iron in the urine, its presence therein being again limited to from two to three hours.

The inference that the major quantity of iron taken into the circulation must be deposited in the tissues was clearly proved by an analysis of the liver and spleen, which organs yielded (especially in the case of the liver) a very large proportion of the metal, even when due allowance was made for the blood which was still retained in their vessels. Hence the general conclusion that not more than 10 per cent. of iron salts directly injected into the blood is eliminated by the urine, or the intestinal and biliary secretions; that the main quantity—viz., 50 per cent.—is deposited within the liver, and the rest in the other organs, such as the spleen, kidney, and intestinal wall,—a deposition that must be completed within from two to three hours of the period of the introduction of the iron into the circulation. These observations would, therefore, seem to justify the opinion, long since expressed, that the excess of iron found in the liver in cases of pernicious anæmia is (in part at least) derived from previous ferruginous medication. Of course it does not in any way conflict with the further explanation offered for the presence of such an excess of iron in the liver in this disease—viz., that it is due to blood disintegration. Furthermore, Dr. JACOBI'S experiments serve to confirm the fact that the amount of iron absorbed

[1] Ueber das Schicksal der in das Blut gelangten Eisensalze. Archiv für Exp. Path. u. Pharm., Bd. xxviii., Hft. 3 u. 4.

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from the intestinal membrane is comparatively small, since HAMBURGER'S recovery from the intestinal contents of the large proportion of the amount introduced into the stomach cannot be explained by elimination through the intestinal secretions. Still, it cannot be said that we have as yet any sound explanation of the empirical fact that the tonic or hæmatinic action of the metal is often best exerted when it is administered in quantity far in excess of that which is actually absorbed.

WE find that a correspondence has recently been published in the public press as to three cases of scarlatina which were notified by Mr. J. C. O'HANLON of Tudhoe to the local medical officer of health. The three certificates were returned with the statement that the health officer had found the attacks to be measles, a statement which was, however, not supported by Dr. FREDERICK PAGE of Newcastle. But with the diagnosis we do not concern ourselves so much as with the mischievous practice of going behind medical certificates of notification except in cases of a character so grave as to necessitate such action by a public officer. In this instance the circumstances were submitted to the judgment of the Local Government Board, and they have distinctly stated in answer that "they do not consider that either the Infectious Disease (Notification) Act, 1889, or any Order of the Board imposes on a medical officer of health any obligation to visit each case notified to him under the Act, for the purpose of testing, by personal examination of the patient, the accuracy of the certificate," and they go on to say that it appears to them that "it would usually be inexpedient" that the medical officer of health "should undertake such an examination unless he has reason to believe that the certifying medical practitioner is not acting in good faith."

This letter comes opportunely, and we hope that it may serve to put an end to a practice which is most objectionable, and which tends to bring the public health service into disrepute. We have more than once admitted that there are possible circumstances when such examination of the sick by the medical officer of health may be necessary, but the Local Government Board have materially limited the scope of such action by specifying the main condition which can be held to justify it. And we would gladly have it understood that when a medical officer of health goes behind the back of a fellow medical practitioner, in order to test his diagnosis, he lays himself open to the charge that he is regarding such medical practitioner as not acting in good faith towards the public and the sanitary authority.

But there is another aspect of the question. A number of niggardly sanitary authorities, whose main object seems to be to save the paltry fee by means of which they acquire information that is of great value for public purposes, are only too glad to request the judgment of their medical officers of health on the accuracy of each separate certificate, in the hope that they may differ from it, and they have actually instructed their officers to visit each notified case on their behalf. No such duty of visiting every case of infectious disease that was heard of attached to medical officers of health before the passing of the Notification Act, and the Local Government Board have laid it down on more than one occasion that, whilst that Act gave to sanitary authorities and their officers increased sources of information, it imposed no new duties whatever on medical officers of health. In other words, sanitary authorities have no power to require compliance with such a request; and we hope that, for their own protection as well as in the interests of professional courtesy and of the public health service, medical officers of health will resist this attempt to make them serve as detectives in a system of espionage which is as unwarrantable as it is discreditable to the profession. Should occasion ever arise to advise a sanitary authority to refuse a notification certificate on the ground of the disease being wrongly entered, the medical officers of health who feel compelled to give such counsel should regard the matter in a serious light; they should set forth in writing the reasons which have led them to act thus; and having submitted the case to the sanitary authority they should leave that body to communicate their decision to the medical practitioner concerned. Apart from formal action of this sort no dispute should be allowed to appear between medical colleagues, and medical officers of health should be the first to resent the imposition upon them of any duty tending in such a direction.

THE question of the significance of albuminuria must still be regarded as, to a certain extent, *sub judice*. Professor SENATOR, in the second edition of his work upon albuminuria, has recently reiterated his views that albumen in the urine is, in a certain considerable proportion of cases, physiological in character; while in France the opposite view has been vigorously maintained by Dr. LECORCHÉ and Dr. TELAMON. This is one of the cases in which it is particularly desirable to use terms regarding which there can be no ambiguity. If we speak of albuminuria as "physiological," we should naturally be presumed to mean that the presence of albumen in the urine is a normal occurrence. But we do not apprehend that this is asserted by any competent authority. The most that has been urged on this side of the controversy is that in a considerable proportion of persons, varying from 20 to 25 per 100, apparently in perfect health, albumen may be found in the urine, if sufficiently exact tests be applied. We fail to see how a phenomenon only to be found at the most liberal estimate in one person out of four or five can be correctly designated as "physiological." On the other hand, if we employ the term "functional albuminuria," we merely imply that albumen may be present in the urine without such organic changes in the kidney as can be detected, and this position is now, we conceive, almost universally admitted. The real point at issue—and the controversy, so far from being a verbal one, is really of the most vital pathological interest and importance—is whether the renal epithelium, when structurally sound and functionally efficient, ever allows the transudation of albumen. Two examples will render the real point at issue more readily apprehensible. It is admitted that minute quantities of sugar can be found in the urine without pathological significance. The question is whether "functional" albuminuria is to be placed in the same

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category as this, or whether it is rather analogous to those changes in the gastric secretions which accompany some forms of dyspepsia, but which pass off without structural change in the stomach or obvious impairment of health.

SENATOR believes that the aqueous constituents of the urine are the result of filtration and not of secretion. He attributes to the endothelial cells of the glomeruli a physical rather than a physiological function, and compares their action to that of the endothelium of serous membranes, which, under the influence of the blood pressure, permit the transudation of serum containing a certain proportion of albumen. To this contention LECORCHÉ and TELAMON reply that if the urine is a simple transudation we should expect to find it, like the serous effusions, uniformly and obviously albuminous. They share the view of HEIDENHAIN that the glomerular epithelium exercises a selective action and opposes the transudation of albumen. If this be admitted to be its function, it would obviously follow that albuminuria can never be a normal phenomenon. SENATOR recurs to the analogy of sugar in the urine, and argues that, just as more exact methods of examination have shown the presence of sugar where it was not previously suspected, and in persons in good health, so the same methods show the presence of albumen under similar circumstances; and that, if we regard all albuminuric patients as potential subjects of Bright's disease, so ought we to regard all glycosuric patients as potential diabetics. Argument from analogy is usually hazardous, and rarely convinces an opponent. In order that SENATOR'S position should be maintained it would be necessary to show that the amount of albumen in the urine bears some proportion to the amount of albumen in the blood, just as the amount of sugar in the urine undoubtedly bears some proportion to the amount of sugar in the blood. But this position does not seem to be maintained by anyone, and is, indeed, obviously untenable. It would, further, be necessary to show that it is possible to have abundant albuminuria without structural change in the kidneys, since there is no question that abundant glycosuria may coexist with integrity of those organs; but this is unproved and extremely improbable. On the whole, we are disposed to doubt whether any useful analogies can be drawn between albuminuria and glycosuria. The pathology of the latter affection is extremely obscure, but it is certain that the kidneys are not the organs primarily at fault.

SENATOR attaches great weight to the admitted fact that a considerable proportion of persons have albumen in the urine without any other sign of impaired health. But to infer from this that the albuminuria is "physiological" is to go beyond the facts. The patient may suffer from excessive secretion from the nostrils, or from too free perspirations, or from slight habitual looseness of the bowels, without obvious impairment of health, but we should not, therefore be justified in designating such symptoms as "physiological." We should rather say that there was some departure from health, but too slight to derange the general equipoise of the functions.

It is significant that these cases of transient albuminuria are most frequent in persons who are undergoing some severe and unusual strain, whether mental or physical. They are common among young men preparing for examinations and common among soldiers during the period of military service. The most obvious inference from such considerations would be that the albuminuria is a sign that the system is being overtaxed; that it is, in fact, as Professor GAIRDNER has happily designated it, a "danger signal." Another significant fact is the increasing frequency of albuminuria with advancing years, and with this fact must be correlated the other significant fact that in necropsies upon elderly persons organic changes in the kidneys are the rule rather than the exception.

SENATOR lays down some points which he regards as characteristic of "physiological" albuminuria. 1. The absence of any other morbid sign. 2. The small quantity of the albumen. He fixes 0·4 or 0·5 per 1000 parts as the maximum. 3. The normal composition of the urine regarding its other elements, and especially the absence of casts and formed elements. 4. The short duration and transitory character of the albuminuria. The difficulty is to see how it is possible to affirm that these characteristics might not be found in cases of slight but genuinely pathological albuminuria. The quantity of the albumen is certainly of itself a sign of no value whatever. Nothing is more common than to find the albumen decrease in amount in cases of acute Bright's disease until the merest trace is visible. Nor can casts decide the question for us. We may fail to find them in cases of Bright's disease; while, on the other hand, they are probably sometimes present in otherwise healthy urine.

This whole discussion, however inconclusive for the present, has undoubtedly served a good purpose in emphasising the fact that albuminnria is in certain cases a trivial and transient affection, and that our prognosis must not be too grave until we have had time to take fully the bearings of a case and to form a sound opinion as to its probable course. It would, however, be a much greater and more disastrous error to imagine that albuminuria is ever to be regarded without apprehension, and without a clear realisation of its ultimate dangers.

AMONGST the very many curious and interesting details revealed in the course of the evidence given before Sir LYON PLAYFAIR'S Committee on British and Foreign Spirits, few will cause a more widespread feeling of dismay than those which indicate the extent to which ether is now being employed as an intoxicant in the north of Ireland. For many years ether intoxication has been noted as a vice which was rapidly gaining ground. Nearly fifteen years ago the practice was first referred to in the columns of THE LANCET, and during the interval there have been frequent indications that, in spite of numerous obvious discomforts, the use of ether has been extending in an insidious fashion. The vice, although in isolated instances believed to be rather widely spread, seems to have formed its greatest stronghold in a comparatively small district in the north of Ireland. Rather more than two years ago, at a meeting of the Cookstown Young Men's Christian and Literary Association, the prevalence of ether drinking in the surrounding district led to a resolution, praying that "in any Bill dealing with the liquor question in Ireland a clause may be inserted, placing the houses in which ether

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is sold at present under similar restrictions as licensed spirit dealers' houses, or else restrict the sale of ether to houses licensed at present." That these recommendations would have been insufficient to check the consumption of ether may be inferred both from the evidence given before the committee and from the details in the very striking article on ether-drinking in Ireland which was recently published in *The Times*, since it appears that in country districts supplies of ether are obtained from retail chemists, from publicans and grocers, and from hawkers or dealers; it seems that the largest portion is supplied by the chemists, who of necessity always present the greatest difficulty to all concerned in the regulation of the sale of intoxicants and of poisons. The controversies which have surrounded the sale of the so-called medicated wines have led to the adoption of stringent measures calculated to make the unrestricted sale somewhat difficult. It will be remembered that the Excise authorities considered medicated wines liable to duty, when the dose recommended appeared to render it probable that the wine was employed as a beverage rather than as a drug. The sale of ether is not, however, surrounded by any difficulties; it does not even figure in the schedule of poisons, though the amount of safety ensured by the schedule is relatively small. Provided that the purchaser is known to the seller, and that the former is willing to sign an entry noting the date of sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated to be required, no one need experience trouble in obtaining any quantity of any poison named in the schedule. But for the proper restriction of the sale of medicated wines and of poisons the only real safeguard is an accurate knowledge of the *intent* of the purchaser. With the sale of ether as an intoxicant there can be no doubt of the intent, and it becomes all the more important in the interests of the community to devise measures to arrest its employment.

The chief circumstance which appears to favour the spread of ether drinking is the relatively cheap price of the fluid. It is asserted that "methylated ether," the impure compound employed, is so very cheap that persons may get "gloriously drunk" for fivepence. This form of ether is prepared from methylated spirit which is absolutely exempt from duty. The immediate effects produced seem to follow closely those of ordinary intoxication, but they are more rapid in their onset and in their disappearance. The quarrelsome stage has not been noted, the wave of subdued excitement and unsteadiness of gait being quickly followed by elevated ideas. "The surroundings seem a veritable fairyland, and the victim for the time being is utterly devoid of any care or trouble." Insensibility quickly ensues, but lasts only from half an hour to three-quarters, and then the person awakes dazed, but perfectly sober and depressed. The quantity required to produce these effects varies from one to four drachms. Considering that this amount is taken neat, only being followed by a small quantity of water, it is not surprising to learn that dyspepsia is a frequent after-effect. More serious than this, however, is the undoubted increase in insanity in the districts where the vice is most prevalent. So far as is known at present, ether drinking does not lead to any chronic disease of the liver or kidneys, its elimination during respiration being so very rapid.

The numerical statements made in *The Times* have already been challenged as being exaggerated, but it is to be hoped that this may not hinder the object in view. Every cause which is pursued with crusader-like diligence is apt to suffer from excess of zeal. The national instinct for fair play may unconsciously call into existence the *advocatus diaboli*, who has an easy task in refuting wholesale exaggerations. Reforms of other kinds of intemperance have before now been rendered tedious owing to a few rash statements. With regard to ether, however, as an intoxicant, numerical details are of little moment; the exact proportion of the population indulging in this practice, or even the identification of their social status, may be disregarded in view of the obvious importance of arresting the spread of the vice.

Perhaps one of the most curious contradictions connected with the spread of the mania for ether is that it has followed closely upon energetic efforts for stamping out ordinary alcoholic intemperance.

Annotations.

"Ne quid nimis."

FACTORY SURGEONS AND THE FACTORIES BILL.

The Times of Monday last contained a letter from Mr. Francis H. Walmsley, President of the Association of Certifying Surgeons, on the unfortunate proposal of Mr. Matthews, in the Factories and Workshops Bill, to do away with certifying surgeons. He says it is probable that the average cost of the work of factory surgeons to each employer does not exceed 40*s.* a year. It is to be regretted that Mr. Matthews seems to have listened too exclusively to the representations of the employers in this question. He has spoken throughout as if the duty of the surgeon were limited to merely certifying to the age of the person applying for employment, whereas the surgeon has to certify to having personally examined such person, and ascertained that he is not incapacitated by disease or infirmity. This is a very large duty, and the facts adduced in our columns show that it has been well discharged. Mr. Matthews would do well to take further evidence from the officials of the Certifying Surgeons' Association. The discussions on the proposals to leave out Clause 19 dealing with this subject will probably be carried on at the next sitting of the committee, or at all events on Thursday next, and no time is to be lost in supplying every individual member of it, and members of Parliament generally, with facts illustrating the work that has actually been done by the certifying surgeons. The whole drift of the evidence is to show that, so far from curtailing the work and the authority of the factory surgeon, both should be extended.

A SENSELESS HOAX.

AT Plymouth last week a number of letters, all evidently written by the same person, were posted to the various medical men of the district requesting their attendance at a given address and hour—one o'clock in the day. The whole arrangement was of course a hoax, and the inconvenience and annoyance thus imposed, not only upon the insulted practitioners, but upon the occupants of the house in question, can easily be understood. The trick, however we regard it, has much more disgraced than it can have gratified its originator. If an effort of spite against the householder, it was in this respect, and in its

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total unconcern for the time and occupation of many besides, as miserably petty as it was heartless. If a joke, it was but a poor and a clumsy one, beneath laughter, and but for its practical inconvenience beneath notice. There is nothing clever in such witless imposture, and the kindness of true humour is entirely wanting. We have, instead, only another illustration of the fact that the practical joke is commonly associated with some badness of heart. For the silly perpetrator there is much to be desired, but especially the attainment of moderate wisdom and of ordinary good feeling, for the injured public such tardy satisfaction and hope of security in future as would follow the discovery and exemplary punishment of the culprit. The authorities, we are pleased to learn, are not unmindful of the necessity for such remedial treatment.

THE COLLEGE OF PHYSICIANS AND THE MIDWIVES' BILL.

THE College of Physicians is understood to have reported in favour of legislation on midwives, but to have urged inquiry in the first instance by a select committee. There is a great consensus of opinion now in this direction, which will doubtless be duly considered by the Government, on whom the responsibility now rests. The present Bill is down for second reading on the 14th, but it is blocked by three adverse motions, and there is very little probability of its making further progress.

THE ALKALOID OBTAINED FROM THE TUBERCLE BACILLUS.

GREAT interest is naturally attached to the various experiments which have been made in regard to the pathological chemistry of the tubercle bacillus. Although we are now in possession of a pretty full knowledge of the mode of action of the products of the tubercle bacilli as exhibited by the recent experiments made in all parts of the world with tuberculin, we as yet know comparatively little of the chemistry of this substance. An alkaloid was obtained from the products of the anthrax bacilli by Dr. Sidney Martin, and Professor Zuelzer has succeeded in obtaining a similar body from the bacillus of tuberculosis. A short account of Zuelzer's mode of isolating the alkaloid is given in the *Wiener Medicinische Wochenschrift*, No. 10, 1891. The entire contents of the tubes in which the pure cultures were made were repeatedly treated with hot water acidulated with hydrochloric acid. The solution was filtered, evaporated, and then several times precipitated with platinum chloride; the double salt decomposed by sulphuretted hydrogen, and the liquid again filtered and evaporated to dryness. In this way an almost white crystalline salt was obtained, which was easily soluble in hot water, but with great difficulty in cold. Its solution was light yellow in colour. After keeping for some time the dry salt assumed a light-brown colour. The chloride when injected into rabbits and guinea-pigs exhibited a characteristic toxic action; about one centigramme injected subcutaneously produced after from three to five minutes an increase in the frequency of respiration, the movements reaching 180 per minute. This continued for about a quarter of an hour, when the rate gradually became slower. The temperature rose in two out of the ten observations from normal to 100·2° F. Another constant symptom was well-marked protrusion of the eyes, which also appeared bright and shining, with somewhat dilated pupils. The sclerotic was considerably injected. It was remarkable that the protrusion of the eye was more marked on the side on which the injection had been made than on the other. All these appearances disappeared in from fifteen to twenty minutes. Toxic symptoms only showed themselves in three rabbits, and these had received somewhat larger doses, between two and three centigrammes having been administered. Death usually occurred somewhere between the second and fourth days. At the site of injections there was considerable redness, and small hæmorrhages were found in the muscles immediately beneath. Small effusions of blood were also found in the mucous membrane of the stomach and small intestine. In two cases effusion occurred into the abdominal cavity. The brain was, as a rule, soft and congested. Almost precisely similar results followed the injection of the alkaloid into the conjunctiva.

THE EFFECT OF ASPARAGUS ON THE URINE.

ONE of the curious by-ways seldom explored by science is that which Professor Nencki of Berne has lately investigated (*Archiv f. Exp. Path. u. Pharm.*, Bd. xxviii., Hft. 3 u. 4). It is, namely, the determination of the familiar change in the odour of urine that follows on the eating of asparagus. Hilger attempted to isolate the body causing this odour, by distilling the urine passed after a three days' diet of this vegetable, but he could not arrive at a definite result. Professor Nencki, availing himself of the good offices of four of the workers in his laboratory, who substituted for their midday meal a repast of asparagus, collected the urine passed by them up to 8 P.M. on the same day, acidulated it with oxalic acid, and distilled it over a sand bath. The volatile products were conducted into a solution of cyanide of mercury, causing a precipitate therein; and this, together with a similar deposit obtained by another trial, was collected, washed, and, being treated with a small quantity of a 5 per cent. solution of hydrochloric acid, was again heated—the vapour, which had the characteristic odour of methyl-mercaptan, forming a bright-yellow crystalline deposit in a solution of plumbic acetate. The odoriferous body in the urine is therefore in all probability methyl-mercaptan. Previous experiments by Prof. Nencki and M. Sicker have shown that this substance is one of the products of fermentation of albumen, and also of gelatine, and that it forms one of the constituent gases of the large intestine. Indol and phenol are also derived from the putrefaction of albumen, and it is probable that other sulphur-holding bodies are similarly derived. As to its connexion with asparagus, Professor Nencki quotes an interesting communication from Dr. O. Loew of Munich, to the effect that asparagin contains an organic sulphur compound, and that it is highly probable that methyl-mercaptan is formed in the albuminous disintegration which takes place in the germination of the plant.

ARMY MEDICAL EXAMINATIONS.

ON Saturday the Secretary for War issued an order directing that in future no candidate for admission to the Army Medical Service shall be allowed to compete on more than two occasions. We presume that the intention of this is to prevent a rejected candidate from coming up repeatedly for examination in the hope of being ultimately successful when he has not in the meantime been really working to qualify himself for the appointment.

PRESSURE ON THE OPTIC TRACT.

A CASE of some interest is recorded by Dr. Oliver of Philadelphia in the "Archives of Ophthalmology," vol. xx., No. 1. The patient came under observation in April, 1889, complaining of stiffness and weakness in the right foot. Six months later he had several attacks of spasm of momentary duration, affecting the right hand and arm, associated with extension of the leg on the same side. The right hand and arm were weak, the knee-jerk on this side

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was exaggerated, and ankle clonus was present; vision was reduced, and right homonymous hemianopsia was present, the left fields being also contracted, much more markedly on the left side. The colour fields were also reduced in a similar way, and Wernicke's hemiopic pupillary reaction was very well marked. There was a large hæmorrhage over the lower outer quadrant of the right disc, and the veins were enlarged and tortuous. The diagnosis of a tumour pressing on the left optic tract was made, with probably some irritation of the right tract; and at the necropsy, which took place some weeks later, a glio-sarcoma was found invading the left optic thalamus and corpus striatum, and pressing upon and flattening out the left optic tract.

FIRE INQUESTS.

WE observe that a Bill has been introduced into the House of Commons by Mr. Brookfield, and read a first time, to provide for the holding of inquests into the origin of fires. We shall take an opportunity of expressing our views on the matter when a copy of the Bill comes before us.

THE TREATMENT OF SCLERITIS AND EPISCLERITIS.

DR. NORSA has communicated to the Società Lancisiana of the Roman Hospitals an account of three cases of scleritis and episcleritis which he was able to cure completely in a very short time by means of the medicated galvanic eye-bath, though they had been treated by ordinary internal and external methods for some years without success. His idea is that, whether this affection be of rheumatic, gouty, or syphilitic origin, external remedies applied in the ordinary way act too superficially, and internal ones too slowly, to do much good, and that therefore it is necessary to intensify the local action of whatever remedy is applied locally, which can best be done by means of the galvanic current. The medicament he employed was the salicylate of lithia in a 1 or 2 per cent. solution. This was used tepid. The strength of the galvanic current was from 1 to 3 milliampères.

PATHOLOGY OF MORVAN'S DISEASE.

A CASE recently published seems to place almost beyond further discussion the pathological anatomy of this curious disease. Joffroy showed at a lecture at the Salpêtrière in December last a patient with the trophic changes in the fingers very pronounced. Indeed, several of the phalanges had necrosed, and the opinion was expressed that although the condition was what is known as Morvan's disease, this was in all probability a form of syringomyelia. The patient died a month or two later, and the necropsy revealed the presence of the condition which had been predicted. There was a large cavity in the centre of the cord, the whole of the central region had been destroyed, as well as the right posterior horn, while the left posterior horn and the posterior tracts were also affected. The author, on the strength of this and another case which he has seen, comes to the conclusion that Morvan's disease is only a clinical form of syringomyelia.

THE PULMONARY COMPLICATIONS OF STRANGULATED HERNIA.

FROM an article by Dr. J. Lesshaft, of the Berlin Pathological Institute (Virchow's *Archiv*, 123, iii.), it would appear that the frequency with which pneumonia follows upon the reduction of strangulated hernia—operated on by taxis or by herniotomy—and the relation which such lung trouble bears to the intestinal lesion have both been variously estimated. Dr. Lesshaft is mainly concerned in correcting the impression conveyed by Dr. v. Pietrzikowski, who has recently maintained that pneumonia (as judged by clinical signs) is comparatively frequent in these cases, and who further supports the views held by Gussenbauer as to its causation. These views refer the pulmonary condition to embolism following upon thrombosis in the veins and capillaries of the walls of the strangulated bowel, in those cases at least in which no other explanation—e.g., by direct extension from peritonitis or pyæmia—can be afforded. Dr. Lesshaft, on the contrary, after an analysis of all the fatal cases of hernia examined at the Berlin Pathological Institute during thirty years, thinks the hypothesis of embolism is not justified on pathological grounds. He shows that the circumstances under which pneumonia occurs as a sequel to strangulated hernia, and the character of the pulmonary lesions, are such as may well be explained by the entrance into the air passages of vomited matters. The condition, therefore, is one of *Aspirations-pneumonie*, or *Schluck-pneumonie*; and that it should be more liable to occur in cases of severe strangulation, or those in which gangrene of the gut takes place, is not surprising, since these are just the cases in which vomiting is most likely to be severe. Pietrzikowski has adduced experimental proofs in support of his thesis, which, however, are not substantiated by Dr. Lesshaft, who found that in the rabbit pneumonia never followed artificial strangulation of the intestine; and in the dog it only occurred when it was possible for the aspiration of vomited matter to take place. Indeed, Dr. Lesshaft is convinced that pulmonary infarctions do not occur in connexion with the intestinal changes.

MR. JUSTICE STEPHEN.

THE retirement of Mr. Justice Stephen from the judicial bench, under medical advice, was on Tuesday last made the occasion of an impressive ceremony at the High Court of Justice. In the presence of the judges, and a large assembly of members of the legal profession, the Attorney-General tendered on behalf of the Bar an expression of respect which will be echoed by a larger circle than the speaker assumed to represent. The retiring judge responded in a few well-chosen sentences, and then withdrew from the scene of his public labours into what will, we trust, prove to be an agreeable privacy. Sir James Stephen is, as the Attorney-General said, a man not likely to be long in quest of an avocation, and it may well be hoped that both he and the public, which has learnt to set a high value upon his literary work, will profit by the cultivation of his well-earned repose. The custom which obtains among wearers of the ermine of devoting their entire strength to the duties of their office is one which we should hesitate to blame even in the gentlest terms; it is so closely associated with the virile virtue of single-minded devotion to duty. But there is a pleasing dignity in the act of retirement when a public servant who has fairly earned his discharge anticipates the inevitable hour and betakes himself with unbroken powers to leisure tasks. It was at one time supposed that Sir James Stephen entertained a reluctance to such a course, which, had the fact been so, those would most have regretted who respect him most and most sincerely wish him well. We are glad now to learn that his sentiment is very much the reverse, and that in resolving to retire at once he has been chiefly influenced by the representation that repose will be conducive to his health. We trust that the expectation may prove well founded, and that he will long continue to adorn the society to which from henceforth he will belong in a somewhat new character.

OPTIC NEURITIS OR PAPILLITIS.

ALTHOUGH Dr. Bull, in his recent paper in the *New York Medical Journal*, has nothing new to offer in the way of an explanation of the pathology of optic neuritis, he gives very succinctly a description of the different theories which have

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been advanced to explain the condition, and he emphasises many of the most important and least known facts in connexion with it. He recognises three varieties: (1) Simple hyperæmia or congestion without swelling, a condition of doubtful significance; (2) papillitis or œdema of the disc; (3) a more advanced condition than the last, associated with increased swelling of the disc and the occurrence of hæmorrhages, and signs of strangulation of the papillary vessels. It is evident that the last condition only differs in degree from that immediately preceding it, and it cannot be said that the subdivision helps to elucidate matters. The most rational division seems to be one into papillitis and neuritis if the division can be made. Neuritis in other localities is associated with loss or impairment of function, and there seems no reason why the optic nerve should differ from other nerves. Yet it is well known that many cases are described as optic neuritis in which there is no evidence of impairment of function in the optic nerve, and it is for ophthalmologists to say whether those cases are correctly so described or not. It cannot, however, be too strongly insisted that a condition which, in the great majority of cases, is associated with gross intra-cranial disease is often present for months without obtruding itself by any subjective visual symptoms, and that it only becomes manifest on ophthalmoscopic examination.

CHLORIDE OF ETHYL AS A LOCAL ANÆSTHETIC.

As a substitute for ether spray as a local anæsthetic M. Monnet has introduced a method of freezing by means of chloride of ethyl, which is highly spoken of by Dr. C. Rédard, clinical professor at the Geneva School of Dentistry. Chloride of ethyl is a colourless liquid possessing an ethereal odour, with a boiling point of 50° F. It is hermetically sealed in glass tubes containing ten grammes, one end being drawn out into a fine point. When required for use the point is broken off with a pair of forceps, or by hand, at the narrowest part, which is marked by a file scratch on the glass, and the warmth of the operator's hand is sufficient to cause a very fine jet of the chloride to be projected on the part to be anæsthetised. One great advantage claimed for this method is that no apparatus is required, and its use is advocated in such cases as tooth extraction, neuralgia, &c.

PARISH ASYLUMS FOR THE BLIND AND DEAF-MUTE.

A CHANGE in the internal management of workhouses and parish infirmaries is now in contemplation which, if carried out, should materially aid those affected by it. This will consist in separating from the other inmates all blind and deaf-mute persons, whom it is intended to accommodate in specially appointed institutions. There, by means of association, recreation, and technical training, it may be hoped that the tedious leisure of lives now unduly isolated would be relieved and profitably occupied. The proposed arrangement is open, so far as we can see, to no serious objection which might counteract these advantages. One possible drawback would be the absence of healthy contact with the seeing, hearing, and active outer world. This, however, would be by no means a necessary consequence of the scheme if it were put in practice. The benefits conferred by an institution which would liberate a small afflicted class from the mass of a relatively sound and somewhat unsympathetic majority are compatible with all reasonable freedom of intercourse. These remarks, however, apply chiefly to the case of adults. Institution training has not produced the best results in the case of destitute children. For any such who may be blind or mute the boarding-out system is clearly preferable wherever it can be combined with the special instruction provided in certain Board schools for pupils in their condition. Thus the habits of independence fostered by ordinary home life would flourish without check to the culture of the lacking sense.

CHRONIC RHEUMATISM AND THE NERVOUS SYSTEM.

A NOVEL and suggestive, if somewhat revolutionary, theory in reference to the dependence of chronic rheumatic joint changes on a morbid condition of the central nervous system is advocated in a work by Dr. Wichmann, of which an abstract is furnished in a recent number of the *Centralblatt für Klinische Medicin*. The author began his work six years ago, with the view of explaining the nervous symptoms associated with rheumatic joint affection, and the dependence of those upon a central cause was first suggested by the occurrence of symmetrical phenomena such as patches of erythema, subcutaneous nodules, &c. Charcot has explained the occurrence of contractures in rheumatism by supposing that there is an inflammation of the articular nerves, the influence of which is transmitted to the centres in the cord, there giving rise to irritation of the motor roots; and the fact that the contracture is usually in the flexed position is explained by the greater power of flexors as contrasted with extensors. But it is pointed out that this would not explain the occasional occurrence of extensor contraction, and that, moreover, in other conditions giving rise to joint affection, such contractures do not take place. Further, as supporting the theory of a central lesion for those conditions, attention is directed to the occurrence of arthropathies in tabes and other spinal conditions, and it is contended that a feasible explanation of the vaso-motor and trophic disturbances—such as "glossy skin,"—as well as of the disturbance of sensibility, is offered by such a hypothesis.

THE SALE OF NARCOTIC AND ANODYNE DRUGS.

THE evils which result from over-indulgence in narcotics and anodyne medicines have impressed themselves strongly on the minds and imaginations of the American people, and the opinion seems to be widespread that one of the chief factors in the perpetuation, if not the production, of the vice is the facility with which those drugs can be obtained. At a recent meeting of the American Society for the Cure of Inebriety steps were taken with the view of procuring legislation on the lines of a resolution passed at the meeting. The resolution recommended that no retail chemist should be allowed to dispense morphine, chloral, or cocaine unless they were prescribed by a medical man, and that no prescription should be repeated without a written order. It is to be hoped that the Society will be successful in its efforts to combat a serious and, we fear, a growing evil.

THE EFFECTS OF CERTAIN DRUGS ON THE RENAL CIRCULATION.

DR. ALBANESE has published in an Italian journal some important researches on the effects of caffeine, chloral, and curare on the circulation in the kidney, by which he has been led to the conclusion that the amount of urine secreted is not directly proportional to the quantity of blood passing through the organ. When chloral alone was given there was a very marked increase in the volume of the kidney, though, as is well known, this drug has an exceedingly slight diuretic action; while curare, which has a marked diuretic action, was shown to cause no perceptible increase in the volume. When caffeine was introduced into an animal already under the influence of either chloral or curare, it immediately

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caused a decided increase in the size of the kidney, and at the same time induced marked diuresis. Nevertheless, the increase in size produced under these conditions was not enough to account for the large quantity of urine secreted. Dr. Albanese does not agree with Schroeder that caffeine contracts the renal vessels, but finds that its action is first to increase slightly the volume of the organ and then to cause a slight dilatation of the vessels. As there appears to be no indication that the diuretic action of drugs is due to increase in circulation or in volume, he is inclined to refer it to some change effected in the renal epithelium.

TREPHINING FOR EPILEPSY.

A PAPER by Dr. Yemans in the December number of the *Occidental Medical Times* is referred to in the *Centralbl. für Chir.*, No. 14. The paper gives an account of a case of traumatic epilepsy, the fits being due to an injury to the head caused by a stone, the injury in question having been inflicted two years before the fits developed. Trephining was performed, with the result that at the time the case was reported no return of the fits had taken place. In the same paper reference is made to a case recorded by Wanzer, in which, after the operation, the attacks ceased for a time, but reappeared.

FOREIGN UNIVERSITY INTELLIGENCE.

Innsbruck.—Dr. Gabriel Anton, assistant to Professor Meynert in Vienna, is to have charge of the new clinic for mental diseases.

Königsberg.—Dr. Samter has been recognised as *privat docent* in Surgery.

Prague (Bohemian University).—Dr. Bohnslav Hellich has been recognised as *privat docent* in mental diseases.

Tomsk.—Dr. Gramatikati has been appointed Professor of Midwifery and Dr. Yerofeyeff Professor of Ophthalmology.

Vienna.—Dr. Egon Braun von Fernwald is giving the lectures in Midwifery and Gynæcology, pending the appointment of a successor to Professor Carl Braun von Fernwald, just deceased. Dr. Rosthorn has been recognised as *privat docent* in Midwifery and Gynæcology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Professor August Schenk, director of the Botanic Garden in Leipsic.—Dr. Dmitziyeff, principal medical officer of the Saratoff Hospital.

BRIGADE SURGEON VALESIUS SKIPTON GOULDSBURY, M.D., C.M.G. (formerly Administrator of the Gambia), has been appointed by Her Majesty the Queen to be Administrator of the Island of Saint Lucia and its dependencies; also to administer the Government of the Windward Islands in the event of the absence, &c., of the Governor.

THE death is announced of Sir Francis Murphy, who for fifteen years was Speaker in the Parliament of Victoria. The deceased gentleman studied medicine in Trinity College, Dublin, and became a Member of the Royal College of Surgeons of England in 1832. He received his knighthood in 1860.

THE further correspondence between Sir Andrew Clark, President of the Royal College of Physicians, the British Medical Association, and the War Office, relative to the status of medical officers of the army, has been published and laid before Parliament.

AT the annual meeting of the Birmingham General Hospital, held on March 18th last, the following resolution was moved and carried unanimously: "That in consideration of the eminent services of Sir Walter Foster, he be hereby appointed a Consulting Physician to this hospital."

IT is satisfactory to learn from the India Office that Surgeon Calvert, who accompanied the force of 200 men of the 42nd Regiment and 200 of the 44th Goorkha Light Infantry in the expedition to Manipur, is safe at Lakhipur, near Silchar.

SIR THOMAS CRAWFORD, K.C.B., M.D., late Director-General of the Army Medical Department, has been appointed a member of Lord Wantage's Committee on Recruiting.

HERR MARTENSON, Master in Pharmacy, Pharmacist to the Prince of Oldenburg's hospital, has been elected Director of the St. Petersburg Pharmaceutical Society.

PROFESSOR CORFIELD has been elected an Honorary Member of the Imperial Society of Medicine of Constantinople.

THE FACTORIES AND WORKSHOPS BILL, 1891.

THE Standing Committee on Trade had on Thursday the Factories and Workshops Bill under consideration. Mr. Matthews had charge of the Bill. The amendments to which each clause is subjected are very numerous, and the Bill is likely to undergo a rather exhaustive overhauling before it finds its way again into the House of Commons. The responsibility which the Bill of the Home Secretary attempted to saddle upon the occupier of factories and workshops has been transferred to the owner. Mr. Matthews thought that the Committee in taking this step were making the clause so elaborate as to render it impracticable. A fresh clause has been inserted providing arbitration in cases of dispute between the owner and the sanitary authority. Under the heading of special rules and requirements Mr. Sidney Buxton moved to bring workshops under the action of this Bill, a proposal which the Home Secretary was unwilling to accept. The clause (8), Mr. Matthews said, proposed "a very large experiment, to put all the factory industry of the country under the nursing care of the Secretary of State," and he maintained that if "workshops" were included "the task would be superhuman." He believed it would be mischievous, and mentioned that he would discharge his functions under this particular clause with the greatest possible caution and discrimination, and would only interfere even in the case of factories in very clear cases. Mr. Howell pointed out, however, that precautions against what was "absolutely dangerous or absolutely unhealthy" were required even more in workshops than they were in factories, and urged that every reasonable thing ought to be done to secure that end. He even suggested that so far from exempting "workshops," the Bill might be improved by exempting the factories. In its present state, as Mr. Sidney Buxton pointed out, the Bill leaves out of account all evidence which had been laid before the Sweating Commission. The question was put to a division, and it was agreed by 21 to 20 votes that "workshops" should be included in the Bill. This brings the workshops into direct connexion with the Home Office, as well as with the sanitary authority, and imposes a responsibility on the Home Secretary which he is not very willing to undertake. This clause gave rise to further debate on the proposal of Sir Henry James to provide a supply of fresh air "sufficient for ensuring the good health of the persons employed in the factory," an amendment which was met by the Secretary of State with the answer that good health could not be ensured by Act of Parliament. Mr. Matthews proposed to modify the expression by the words "sufficient to prevent injury

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to the health of those employed in the workshop," which was ultimately adopted, notwithstanding that Sir Henry James characterised the proposal as "insufficient, ungrammatical, and insensible to the object we have in view." On Clause 19, which deals with the certifying factory surgeons, there are ten amendments on the paper, seven of which propose to leave the clause out altogether.

The following memorial to the Standing Committee on Trade has been forwarded by a subcommittee of the Manchester Medico-Ethical Association:—

"GENTLEMEN,—The undersigned, representing the Manchester Medico-Ethical Association, desire to present to your honourable committee a copy of resolutions passed by the Parliamentary subcommittee of that Association on March 17th, 1891, and to ask for their consideration in discussing the clauses referred to in the above Bill. 1. That in Clause 18 of the Government Bill the words, 'without a medical certificate of fitness,' be added after the word 'child.' 2. That strong opposition be offered to the abolition of the office of certifying surgeon as proposed in Clause 19 of the above Bill. 3. That all examinations for certificates of fitness be held at the works, so that the certifying surgeon shall be better able to judge of the probable effect of the work at which the child is to be employed."

The Certifying Surgeons for the Leeds district have expressed the opinion "that the physical welfare of half-time workers does not demand any alteration of existing arrangements in the way of supervision. If this supervision ceases," say they, "crooked limbs, and spinal curvature will be much more in evidence than they are at present."

MEDICAL PRACTICE IN AUSTRALIA.

MR. THOMAS J. HENRY, L.R.C.P. and F.R.C.S. Edin., medical officer, Warialda Hospital, Warialda, N.S.W., has favoured us with the following communication.

In THE LANCET of Jan. 17th, "F. O. S." asks for information regarding openings for practice in the Australian colonies. I trust you will find space for the following, derived from an experience of practice in Australia for four years. I speak more particularly of New South Wales, but my remarks will apply generally to the other colonies. In the first place, I may inform "F. O. S." that practices are bought and sold just as in England, with this difference. In England the patients of a practitioner as a rule transfer their patronage to the in-coming man; but in Australia the tie between physician and patients is very loose, and there is no certainty that patients (unless in unopposed practices, now rare) will accept the new man. In fact, doubtless from the shifting, restless character of colonial life, patients seldom remain long under one doctor, but rush from one to another to an extent unknown in the old country.

The population of New South Wales is under 1,200,000. On the list of registered practitioners in that colony, dated Dec. 31st, 1890, appear about a score less than 1000 names; and every weekly mail steamer brings new men from Great Britain, France, and Germany. It will be admitted that one practitioner to 1200 population is a good average. Moreover, in New South Wales there is no Medical Act. Any person who chooses can assume the title "M.D.," "Dr.," or "F.R.C.S." He can place it on his door-plate, and practise to his heart's content. As a result the colony is overrun with quacks. In Sydney and suburbs alone there are over 100 quacks, and a glance at the advertising pages of the Sydney evening papers shows from two to three columns daily devoted to the flaming advertisements of prosperous quacks. One of these gentry, who, however, holds the "M.D." of "the Edinburgh University of Chicago," obtained without any attendance at lectures or personal examinations, admitted to a recent Royal Commission that he had amassed over £100,000 by his practice. He had had no real medical education whatever. Several medical Bills have been introduced, but have been invariably rejected, and there seems little hope of any passing for years to come.

Both in Melbourne and Sydney are well-equipped medical schools. In both the course is a five years' one after all preliminary subjects are passed. A large number of students graduate each year at these schools. The resident hospital appointments at the Melbourne Hospital are "close" to Melbourne graduates. At the Prince Alfred Hospital, Sydney, the medical superintendent and the four residents are Sydney graduates. At the Sydney Hospital all the residents except the medical superintendent (M.D. Lond.) are Australian graduates; and, though there is no written rule to that effect, it is well known that no graduate from outside Australia has much chance of election. The residents' salaries are: Melbourne and Sydney Prince Alfred Hospital, £50, with board and lodging; Sydney Hospital, £100, with ditto. Even the larger country hospitals are practically "close" to Sydney men; and at Newcastle and Bathurst (the only country hospitals which have resident medical superintendents) Sydney men are installed. The Insane Hospital appointments are also now almost invariably given to Sydney men or to native-born Australians returned from study in Britain.

I quote these instances to show how strong is the tendency to elect Australians. "Australia for the Australians" is the favourite cry. I know of several instances where in ostensibly open competitions Australians who had the Edinburgh or Irish College diplomas defeated Englishmen having M.D. of London and F.R.C.S. England. Clubs also abound. The average city rate is 15*s.* per annum, and the whole family have to be attended. In the larger cities of late the clubs have in many instances amalgamated, and pay a fixed salary to a limited number of men. The Sydney M.U. Oddfellows, numbering several thousand families, pay £250 each to four men, allowing private practice. For these posts competition is keen, and from twenty to thirty men apply for one vacancy. In the outlying districts the hospitals give a salary of £100 to £150 to a practitioner, allowing him private practice. My appointment is £150. For it there were seventeen candidates. I am a native of Australia, and that fact undoubtedly assisted my election. I am eighty miles from a railway station by a bad road, and 130 by a fair road. I often have to ride from forty to sixty miles to a case. The nearest village is thirty miles, and in some directions there are none for sixty miles. The average income of a country practitioner (and no village of over 300 population is without at least one) may be set down as from £500 to £900. A few in the larger towns make £1500, but in the smaller few make over £700, and some as low as £250. The current cost of living is slightly more than in England, whilst rent and furniture are much more expensive. In the country one must keep several horses. I have to keep four in order to have a reserve for emergencies, and I take two on all long journeys—i e, over twenty-five miles one way. A practitioner with capital can of course always buy a practice. The price is about one-half that which would be asked in England. In Sydney and Melbourne provident dispensaries from 2*s.* 6*d.* to 1*s.* abound. There are generally openings for young men to travel with insurance agents, and thus see the country. But in applying for appointments it is not thought to be a recommendation to have been "an insurance doctor," as the lazy itinerant life and living in bush public-houses is not conducive to professional perfection or personal dignity, albeit many able and excellent men have travelled for a few months on their arrival. Victoria or South New South Wales would probably suit a case of winter cough best. The northern colonies are too hot in summer.

THE GENERAL PRACTITIONERS' UNION.

AT a meeting of the Committee on Hospital Management held on Monday evening last it was resolved to send a circular to the general practitioners residing in the metropolitan district, inviting replies to the following questions:—1. Is it within your knowledge that hospitals and public dispensaries are abused? State particulars as to cases. No need to disclose names and addresses of patients. 2. Do you know of any cases where the spread of infectious or contagious diseases can be traced to the out-patient departments of hospitals or public dispensaries? 3. Is it not your opinion that the special departments of the general hospitals should be so extended and supported

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as to render *special* hospitals unnecessary? 4. Do you consider any kind of special hospital desirable? If so, which? 5. Do you approve of the paying or part paying system in the general and special hospitals or public dispensaries? If you do, or if you do not, state your reasons. 6. Do you approve of a central board to supervise the existing charities and the licensing of new ones? 7. Is it not your opinion that public hospitals and dispensaries should have the power to recover all expenses incurred for treatment of patients who have obtained admission to hospitals under false pretences? 8. Do you think that the number of out-patients seen per day should be limited? 9. What further check would you impose upon the admission of out- and casualty patients? 10. Is it your opinion that the larger field which exists in the Poor-law infirmaries and dispensaries for the instruction of medical students should be utilised for their curriculum, more especially during the fifth year of study?

The committee will feel obliged if any medical man in a position to furnish information respecting the above will communicate with the hon. sec., 29, Threadneedle-street, E.C.

COLONIAL MEDICAL APPOINTMENTS.

THOUGH complaints are frequently published in the columns of THE LANCET of the grievances of colonial surgeons, there always seems to be a sufficient supply of candidates for the comparatively small number of such appointments as happen to be vacant. April is the month in which the list of applicants is drawn up for the ensuing twelve months; it will therefore be opportune to reproduce the information on the subject which we have received from the Colonial Office. It varies in some respects from previous circulars of a similar nature.

Medical appointments are from time to time filled up by the Colonial Office in the following colonies:—British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras, Fiji, Sierra Leone, Gambia, Gold Coast, Lagos, Ceylon, Straits Settlements, Hong Kong, Cyprus, Gibraltar, St. Helena, and the Falkland Islands. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates. It is for the West Indies and the West African Colonies that medical officers are chiefly required. The majority of the West Indian appointments involve medical charge of a district, including as a rule the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children.

It should be noted that passage money on first appointment, and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties), are granted to medical officers under the Colonial Regulations; and those serving in West Africa are allowed six months' leave, with full pay and free passages home and out again, after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants; but in cases where private practice is allowed, the rule is that they are not entitled to pension, except in West Africa.

The following is a short account of the appointments in the separate colonies:—

British Guiana.—Candidates must have held for at least six months a resident medical appointment in some public institution. Salary £300 to £900 per annum.

Jamaica.—The appointments, forty-nine in number, are mainly district appointments, with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200.

Trinidad and Tobago.—In Trinidad there are twenty-nine appointments. Officers are appointed in the first instance on two years' probation as supernumeraries. They receive a salary at the rate of £300 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise; these posts carry the right to private practice; after every ten years' service an officer is given an additional personal allowance at the rate of £100 per annum. In the island of Tobago there are three distinct appointments with a salary of £150 per annum attached.

Windward Islands.—The salaries paid by Government vary from £200 to £400.

Leeward Islands (Antigua, St. Christopher and Nevis, Dominica, Montserrat, Virgin Islands).—The twenty-two appointments are of the same nature as in the Windward Islands; the salaries vary from £150 to £400 per annum, but in most cases the pay is £250. As a rule, £30 only is allowed for passage money. The medical officers are allowed private practice.

British Honduras.—There are five medical appointments, in all of which private practice is allowed; the pay is respectively $500, $1000 (three), and $2250.

Fiji.—There are at present eight medical officers, of whom the senior medical officer receives £600 per annum, the others receiving £300 per annum and £50 for house allowance, with private practice.

Sierra Leone.—There are three Government medical officers, who are all allowed to take private practice. The pay of the colonial surgeon is £500 a year. One assistant colonial surgeon receives £300, and the other £250.

Gambia.—There are two medical officers, paid respectively £400 and £300 per annum, and allowed private practice. Quarters are not provided.

Gold Coast.—The pay of the colonial surgeon is £800, rising to £1000 by £50 per annum, with consultation practice only. The assistant colonial surgeons (thirteen in number) are paid at the rate of £350 per annum, rising by triennial increments of £25 to £400. Private practice is allowed, but there is very little to be had, and it cannot be counted upon, as the medical officers are liable to frequent change of station. Free quarters are provided.

Lagos.—The pay of the colonial surgeon is £500 per annum, and he also receives £100 as health officer. The senior assistant colonial surgeon receives the same salary as the assistants at the Gold Coast. There are two other assistant colonial surgeons at £250, rising by triennial increments of £25 to £300 per annum. Private practice is allowed in all cases. Free quarters, or allowances in lieu thereof, are granted to the colonial surgeon and the senior assistant.

N.B.—The special rules as to leave and pension in the case of Government servants on the West Coast of Africa apply also to medical officers.

Ceylon.—Salary from 1500 Rs. to 8000 Rs.

Straits Settlements.—Salary varies from $2400 to $6000 per annum.

Hong Kong.—Salary $1800 to $4800.

Gibraltar.—Salary from about £60 to £1000.

Cyprus.—There is a chief medical officer, paid at the rate of £500 per annum, and two district medical officers, paid at the rate of £250 per annum; all enjoying private practice: these are the only medical appointments in the island which are open to English candidates.

St. Helena.—The colonial surgeon receives £200 per annum, and £30 horse allowance. Private practice is allowed.

Falkland Islands.—There are two appointments, one of which is paid at the rate of £300 per annum, and the other at the rate of £200 per annum. Private practice is allowed in both cases.

In addition to the ordinary medical appointments in these colonies vacancies also occasionally, though very rarely, occur for which specialists are required—as, e.g., to take charge of a lunatic asylum; and the particulars of chief medical officer in some of the larger colonies have not been given, as the headship of the medical department in such colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff, but is often filled up directly from the outside.

All applicants for medical employment in the colonies must be between the ages of twenty-three and thirty, and must be doubly qualified; preference will be given to those who have held hospital appointments as house physicians and house surgeons. Certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office, Dr. Gage Brown, 88, Sloane-street, London, S.W.; Sir D. S. Maclagan, 28, Heriot-row, Edinburgh; and Dr. Hawtrey Benson, 57, Fitzwilliam-square, Dublin.

Applications for medical employment in the tropical colonies from persons in the United Kingdom must be addressed to the Private Secretary, Colonial Office, Downing-street, S.W., during the month of April in each year, and notices to that effect will be posted up early in the year in the leading hospitals and medical schools of Great Britain and Ireland. Out of the total number so applying, a list of candidates will be made who will be eligible to fill any vacancies which may occur during the year, but no promise whatever can be held out that candidates will eventually receive an appointment. It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year.

In the course of the year 1889-1890 there were twelve vacancies, and in the following colonies:—British Guiana, Fiji, Gibraltar, Gold Coast, Hong Kong, Lagos, St. Helena. There were about fifty candidates. In the course of the year 1890-1891 there were seventeen vacancies to which appointments were made from this country. They occurred in the following Colonies:—British Guiana, British Honduras, Gambia, Gold Coast, Leeward Islands, Straits Settlements, Windward Islands. The list of eligible candidates applying in April, 1890, contained between fifty and sixty names.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kettering Rural District.—Mr. J. W. Dryland reports a maintained and severe epidemic of enteric fever at Desborough, which caused seventeen deaths, and materially added to the zymotic death-rate of the district. Five other deaths from the same cause occurred elsewhere in the rural district. As regards Desborough there were 144 attacks, and it seems as if the disease, once imported, had been spread by reason of blocked sewers and faulty drains, these reacting in their turn on certain wells, some of which have been closed. Flushing action was impeded towards the close of the year by reason of the severe frosts, but a loan is now to be secured for amending the sewers. Several other villages were likewise affected, and some of them do not appear for the first time in connexion with occurrences of this disease, the causation of which in this district calls for very exhaustive investigation. Mr. Dryland, acting on his recent experience, takes occasion again to urge very strongly the provision of an isolation hospital.

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Caxton and St. Neots Districts.—Mr. T. Poyntz Wright continues to maintain an active supervision over the sanitary circumstances of the three districts involved in this area, and, as on former occasions, he does not hesitate to point out the conditions that involve risk to public health, although the death-rate in two of the districts, at least, remains extremely low. Dealing with the causation of epidemic diseases, Mr. Wright states that in his district diphtheria has generally followed on a rise in the subsoil water. His reference elsewhere to the defective quality of shallow well water would seem to imply that the soil is polluted, and hence a rise of subsoil water may act by the expulsion of a sewage contaminated air from the soil into the atmosphere above, the changing level of subsoil water thus becoming a factor in the production of diphtheria much in the fashion indicated recently in our abstracts of the Milroy lectures on this subject. The large amount of infectious disease which is brought to light by the Notification Act leads to a renewal of advice as to the provision of means of isolation. Now, more than ever, has it become possible by prompt isolation of first attacks to stay the prevalence of infectious disease, hence the especial value of the advice given in this respect.

Uxbridge Rural District.—Mr. Charles Roberts estimates the death-rate for this district during 1890 as 17·5 per 1000. The diphtheria which was so seriously prevalent gives distinct signs of abatement, the mortality being one-third only of that for last year. But still, 11 deaths from diphtheria, with 6 from membranous croup, together with the amount of non-fatal throat mischief which these 17 deaths denote, should lead to very careful precautions as autumn advances, especially in the exclusion of sore-throat attacks from elementary schools; and no amount of work effected in improving drains, sewers, &c., should be allowed to interfere with such supervision of school attendances. Valuable as it is to deal with bell-traps &c., there is the still graver consideration attaching to aggregation of children at susceptible ages, and the risk of throat infection acquiring, under such circumstances, a virulence that it would be difficult to control.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6231 births and 4304 deaths were registered during the week ending April 4th. The annual rate of mortality in these towns, which had declined from 24·1 to 21·2 per 1000 in the preceding five weeks, rose again to 22·4 last week. The rate was 20·9 in London and 23·7 in the twenty-seven provincial towns. During the thirteen weeks of the quarter ending on the 4th inst. the death-rate in the twenty-eight towns averaged 23·0 per 1000, and slightly exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 14·1 in Derby, 14·5 in Brighton, 17·6 in Nottingham, and 18·1 in Birmingham; the highest rates were 30·2 in Halifax, 30·6 in Portsmouth, 31·6 in Plymouth, and 36·5 in Hull. The deaths referred to the principal zymotic diseases, which had been 449 and 414 in the preceding two weeks, rose again last week to 468; they included 184 from measles, 149 from whooping-cough, 35 from scarlet fever, 34 from diarrhœa, 33 from diphtheria, 30 from "fever" (principally enteric), and 3 from small-pox. These diseases caused the lowest death-rates in Norwich, Brighton, and Oldham, and the highest rates in Huddersfield, Blackburn, and Portsmouth. The greatest mortality from measles occurred in Leeds, Bristol, Huddersfield, Blackburn, and Portsmouth; from scarlet fever in Bradford, Bolton, and Halifax; from whooping-cough in Halifax, Newcastle-upon-Tyne, Plymouth, Salford, and Leicester; and from "fever" in Wolverhampton. The 33 deaths from diphtheria included 24 in London. Two fatal cases of small-pox were recorded last week in London, and 1 in Hull; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 2 in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1026, and showed a further decline from recent weekly numbers; the patients admitted during the week were 98, against 91 and 81 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 685 to 466, rose to 489 last week, and exceeded by 12 the corrected average. The causes of 97, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Plymouth, Wolverhampton, Bolton, Bradford, and Cardiff; the largest proportions of uncertified deaths were recorded in Sheffield, Preston, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·9 and 26·7 per 1000 in the preceding two weeks, declined to 26·2 during the week ending April 4th, but exceeded by 3·8 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·5 in Aberdeen and 16·7 in Leith to 30·1 in Glasgow and 44·4 in Paisley. The 684 deaths in these eight towns showed a decline of 14 from the number in the preceding week, and included 41 which were referred to measles, 28 to whooping-cough, 14 to diarrhœa, 9 to diphtheria, 5 to scarlet fever, 3 to "fever," and not one to small-pox. In all, 100 deaths resulted from these principal zymotic diseases, against 73 and 93 in the preceding two weeks. These 100 deaths were equal to an annual rate of 3·8 per 1000, which exceeded by 1·4 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased in the preceding four weeks from 16 to 36, further rose last week to 41, of which 20 occurred in Paisley and 18 in Glasgow. The deaths referred to whooping-cough, which had risen from 31 to 34 in the previous three weeks, declined to 28 last week, and included 10 in Edinburgh, 8 in Glasgow, and 5 in Dundee. The 9 fatal cases of diphtheria showed a further increase upon recent weekly numbers; 2 occurred in Glasgow, 2 in Dundee, and 2 in Paisley. The 5 deaths from scarlet fever were within 2 of the number in the preceding week, and included 4 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 201 to 169 in the preceding three weeks, were 166 last week, and exceeded by 36 the number in the corresponding week of last year. The causes of 64, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 28·1 to 29·1 per 1000 in the preceding three weeks, declined to 23·9 during the week ending April 4th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 30·2 per 1000, the rate for the same period being 22·6 in London and 21·8 in Edinburgh. The 162 deaths in Dublin showed a decline of 35 from the number in the preceding week, and included 3 which were referred to whooping-cough, 1 to "fever," 1 to diarrhœa, but not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths referred to the principal zymotic diseases, which had been 11 and 8 in the preceding two weeks, further declined last week to 5; they were equal to an annual rate of 0·7 per 1000, the rate from the same diseases being 1·9 in London and 2·8 in Edinburgh. The fatal cases of whooping-cough, which had been 5 and 3 in the preceding two weeks, were again 3 last week. The deaths referred to "fever," which had been 4 and 3 in the previous two weeks, further declined to 1 during the week under notice. The 162 deaths in Dublin included 28 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in recent weeks. Eight inquest cases and 4 deaths from violence were registered; and 57, or more than a third, of the deaths occurred in public institutions. The causes of 18, or more than 11 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon N. Mookerjee, of the 4th Burmah Infantry, will accompany the Manipur Relief Column, which is to start from Tamu.

ARMY MEDICAL STAFF.—The following Surgeons-Major of the Medical Staff who have ranked as Majors will henceforward become entitled to rank as Lieutenant-Colonels:—L. A. Irving, J. A. M'Cracken, M.D., J. M. Beamish, M.D.,

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J. A. Clery, M.B., J. Coats, M.B., J. G. Williamson, W. J. Fawcett, M.B., H. W. Joynt, W. E. Saunders, D. Leckie, M.B., W. J. Charlton, A. H. Anthonisz, M.B., O. F. Molloy, R. Exham, J. M'Namara, M.D., R. Harman, M.B., G. D. N. Leake, J. W. O'M. Martin, M.B., P. R. Gabbett, M. D. O'Connell, M.D., W. Finlay, and E. H. Joynt, M.D. Surgeon J. F. Bateson, M.B., has been selected to be attached to the Coldstream Guards for his tour of home service, vice Surgeon R. H. Cox, who has resigned his commission.

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Inspector-General of Hospitals Edward T. Mortimer to Plymouth Hospital (dated May 7th, 1891; Deputy Inspectors-General Maxwell Rogers, M.D., to Malta Hospital, and Duncan Hilston, M.D., to Haslar Hospital (both dated April 4th, 1891). Surgeons Alexander George Pemberton Gipps, John Hunter, M.B., Robert McIvor, M.D., and Wm. George Jack have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet. Staff Surgeons: Wm. H. Patterson to the *Aurora*, and Alexander G. P. Gipps to the *Boscawen* (both dated April 13th, 1891). Surgeons: George Allen, M.B., to the *Lizard* (dated April 1st, 1891); John E. Webb to Haslar Hospital (dated March 1st, 1891); George L. Baker to the *Racer*, and Edwd. R. D. Fasken to the *Lion* (dated April 21st, 1891); James J. Walsh to Chatham Hospital, and Wm. G. Axford to Bermuda Hospital (dated April 7th, 1891).

VOLUNTEER CORPS.—*Artillery:* 3rd Durham (Western Division, Royal Artillery): Francis Wm. Sinclair, M.B., to be Acting Surgeon (dated April 4th, 1891). — *Rifle:* 3rd (Cambridgeshire) Volunteer Battalion, the Suffolk Regiment: Acting Surgeon F. P. F. Ransom, M.D., to be Surgeon (dated April 4th, 1891).—5th (Deeside Highland) Volunteer Battalion, the Gordon Highlanders: Robert Rannie, M.B., to be Acting Surgeon (dated April 4th, 1891).

Correspondence.

"Audi alteram partem."

THE COMMUNICABILITY OF CHOLERA.

To the Editors of THE LANCET.

SIRS,—In your notice of the proceedings of the Epidemiological Society in THE LANCET of this date it is reported that "though asserting his disbelief in the communicability of cholera by *human agency* or *material* means, Sir Joseph Fayrer urged bacteriologists to pursue their investigations in the calm, temperate, and judicial spirit shown by the lecturer. He differed from many of their conclusions, although unacquainted [it should be *practically* unacquainted] with their methods, but provided they did not ignore other causes of disease their labours could not fail to lead us nearer to the truth." The reporter has, I fear, misunderstood, and therefore unintentionally misrepresented, me. I certainly did say that I have not yet been satisfied that cholera is communicable by direct contagion, by a germ from one individual to the other, but I did not say that it is altogether independent of human agency or material means. Knowing as I well do that local insanitary conditions, impure water, foul air, certain climatic conditions, together with overcrowding human beings, are potent factors in the development of the disease, I yield to no one in my admiration of the work and discoveries of bacteriologists; but I venture to think there is a disposition to too hasty generalisation, and, in the zeal and enthusiasm of scientific investigation, too great a tendency to describe as causes what may be but epiphenomena, too little recognition of the many other possible causes of disease which lie within and around us. I venture, in short, to think that though we are well acquainted with the *nurses*, we as yet do not know the *mother* of cholera. I am, Sirs, yours faithfully,

April 4th, 1891. J. FAYRER.

THE PULSE IN ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—Through mischance I did not see Dr. Gairdner's letter in THE LANCET of March 28th on the subject of the pulse in angina pectoris; may I now be permitted a few words in reply? The quotation which Dr. Gairdner cites must, I confess, be taken as the expression of a doubt that the pulse may be unaltered during an attack of angina, though surely the quotation from Heberden given in the foot-note justifies an interpretation different from that which Dr. Gairdner gives. The ground, however, upon which I stated that Dr. Gairdner *definitely accepted* the statement that the pulse might be unaffected during an attack of angina pectoris is the presence, on p. 541, vol. iv., Reynolds' "System of Medicine," of the following paragraph: "On the other hand, it must be admitted that in a few instances the heart has been heard beating in the very midst of a paroxysm, without appreciable alteration in the character of the sounds and impulse, and the pulse has also been said to be regular, and neither rapid nor weak." This definite statement will perhaps justify my use of Dr. Gairdner's name, though I must confess that had I been fully alive to the doubts expressed elsewhere in the article referred to I should not have quoted Dr. Gairdner in the sense I did.

May I add that the real object of my letter of March 21st was to draw attention to a definite statement, backed by authoritative names, and to point to the conclusion which the acceptance of such statement would compel—viz., that in *some cases at least* the seizure of angina pectoris is independent of any heart failure. Of course, after Dr. Gairdner's letter the above statement no longer has his sanction.

I am, Sirs, yours faithfully,

Welbeck-st., W., April 6th, 1891. HARRINGTON SAINSBURY.

THE TREATMENT OF CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—I think Dr. Herman is mistaken when he says my proposed challenge would not further our knowledge as to whether the majority or minority of inflammatory lumps in the pelvis tend to spontaneous cure or not. But that is not what I proposed to discuss. What I did propose to investigate—and I am positive I could settle it definitely in the way I suggest—is the preliminary question, whether Dr. Herman and his school are speaking of the same thing that I am when the phrase "chronic inflammatory disease of the uterine appendages" is used. It must be evident to all your readers that we are not, and I could prove to Dr. Herman that he includes a great group of cases of mere subinvolution and hyperæmia which we exclude. But he declines to accept my proposal, and so he must remain in the realms of darkness. He is good enough to say I might serve medical science by publishing more detailed and exact reports of my own cases. Dr. Herman's memory in my case must be as strangely defective as it was shown to be in the case of Dr. Braithwaite, or he must confine his reading to the Transactions of the Obstetrical Society, in the ranks of which he is a distinguished leader. But what is the use of our making appearances at the Obstetrical Society? Dr. Braithwaite's paper was refused, and several of mine have been refused. A few nights ago Dr. Grigg attended with the preparations of three cases of recent occurrence, and he gave full details of their clinical histories. I was prepared to substantiate his statements and to elaborate the details of the operations with which he had entrusted me, but there was a "conspiracy of silence," and the very men who are ever ready enough to abuse us and to misrepresent our work when we are not present, were as dumb as mice when we had them face to face.

I am, Sirs, yours truly,

April 6th, 1891. LAWSON TAIT.

*** We cannot devote more space to this controversy.—ED. L.

EMOTIONAL EXPRESSION.

To the Editors of THE LANCET.

SIRS,—In your last issue you deal with emotional expression, and point to the theories advanced by Darwin relating thereto. I certainly agree with you in admitting that to a certain extent many things which up to late years have been allowed to rest as natural, may be and are becoming daily more satisfactorily explained. Now we know that blushing may be caused by division of the cervical sympathetics due to dilatation of the arteries of the head and neck, and consequent increased flow of blood

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to these parts, while the reverse obtains should the upper ends of the divided nerves be stimulated by electricity. Therefore we say that through the cervical sympathetics is exercised an inhibitory action (the centre for which is situated in the medulla) over the arteries of the head and neck, which keeps them in a state of tonic contraction. On the removal of this inhibitory action, or, as Foster has it, "diminution of the normal tonic action of the [medullary] centre," dilatation occurs; while, on the other hand, stimulation of the centre causes "increase of the same normal tonic action of the centre," and pallor without any lessening of the heart's action results. Analogous with the above may be mentioned lacrymation and salivation, the latter due to increased vascularity of the salivary glands—in the case of the submaxillary the stimulus passing down the chorda tympani. Laughter we may take, I think, as an exaggerated form of smiling, *plus* a series of vocal sounds. If we accept the above explanation as regards blushing and crying, may we not also assume that the human face preserves its normal expression owing to certain nerve influences, more or less subservient to the will according as its possessor can command it? Remove this so to speak inhibitory action, and the face loses its natural expression and firmness of outline and comes to wear a peculiar vacant, almost meaningless, look—a smile. This smile or vacant look is that of an idiot, and as such the perpetual wearer of it would I think be classed. This is partly borne out by the knowledge of the fact that the face is a very fair picture of the mind of its owner, and that a man of strong will may restrain from laughter if he chooses, whereas the weaker the will the less able is he to govern his actions. The case of the crying child tightly shutting its eyes, is not this an exaggerated form of the wrinkling?

Regarding the cause: these acts are acknowledged to be governed by centres situated in the medulla, and probably the immediate exciting cause is the disturbance of the equilibrium normally existing there. Such may be caused by various agents apparently—e.g., lacrymation by emotion, or external stimuli, as touching the eyeball, the vapour of onions, &c.; salivation by action of certain drugs, such as calomel, or through the agency of the nervous system, as is produced by the smell or sight of food. Again, we know that all these phenomena are much more prone to occur in persons of feeble intellect, as, for example, the hysterical.

Darwin's theory, to which you lastly draw attention—viz., that "when the sensorium is strongly excited, nerve force is generated in excess, and transmitted in certain definite directions,"—appears to be the soundest explanation as yet volunteered. Doubtless, when this excess of nerve force is generated it must, as you say, "find vent in some outward and physical manifestation," and impulses travel and attack those parts of the human organisation which are in a more or less weaker state than others, and therefore less able to resist. This will perhaps account for the same effect being produced by different emotions, such as crying from either grief or joy. The subject is, indeed, one which opens a vast field of inquiry, and it will be interesting to hear the views of some of your readers better acquainted therewith.

I am, Sirs, yours faithfully,

Southwark, March 17th, 1891. SIDNEY E. ATKINS.

PUBLIC HEALTH (LONDON) LAW AMENDMENT ACT.

To the Editors of THE LANCET.

SIRS,—Permit me to draw your attention to Clause 35 (1) of the above Act, which runs thus: "The power to appoint the medical officer of a union to be a medical officer of health is hereby repealed." On what ground is the district medical officer singled out to be debarred by law from pursuing that branch of his profession for which his public position particularly fits him? It should be remembered that a great proportion of the profession either are, have been, or will be medical officers of a union, and I would venture to submit that such officers may justly ask the entire profession, including the heads of colleges from which they have obtained the legal right to practise all branches of their profession, to assist them in their, I trust united, endeavour to prevent an act of such gross injustice as well as to resent such a gratuitous and unwarrantable insult.

I am, Sirs, yours truly,

April 8th, 1891 FAIRPLAY.

THE TWENTIETH SURGICAL CONGRESS, HELD AT BERLIN.

(FROM OUR OWN CORRESPONDENT.)

AT noon on the 1st inst. Professor Thiersch opened the Surgical Congress in the festal hall of Berlin University. Besides the Berlin surgeons and Professors Koch, Koenig of Göttingen, Esmarch of Kiel, Bruns of Tübingen, Kuester of Marburg, Wagner of Kœnigshuette, Mikulicz of Breslau, Lauenstein of Hamburg, and Roth of Dresden were present, and the attendance was very numerous. The President referred to the members who had died since the last meeting, the most famous of whom were Nassbaum of Munich and Reyher of Dorpat. The committee was re-elected by acclamation, and Prof. Bergmann was elected president, who reported on the Langenbeck House, an institution to be established in memory of the great surgeon whose name it is to bear.

After some preliminary business, the President addressed the assembly on the subject of Koch's method. The gist of his remarks was as follows. Local reaction takes place only in real tuberculosis, whereas general reaction has been observed in other diseases—for instance, actinomycosis and *softened* large sarcomas. In the latter cases, indeed, it is likely that the patients suffer from tubercular affections too, and this question ought to be decided by post-mortem examination. The unfavourable effects of tuberculin must be judged of with great caution. General tuberculosis sometimes sets in after extensive surgical operations in cases of local tuberculosis, and the occurrence of miliary tuberculosis after the application of tuberculin is perhaps to be compared with such cases and explained in the same manner. It is at any rate necessary, before attributing the outbreak of general tuberculosis to the injections, to ascertain that the fever caused by the latter did not decrease till the termination, and that the necropsy proved the existence of a single focus, from which the bacilli spread. One must also prove that the spreading of the bacilli is fresh, which is no easy matter. He had observed that in many cases, after apparent cure, new tubercular ulcers and nodes appear at places where they did not exist before. One may say that latent tubercular nodules had already existed there which now became apparent. But the outbreak sometimes occurs so long after the treatment (from six to ten weeks) that this explanation presents difficulties. It is still more unfortunate that such new nodes and ulcers resist Koch's treatment, whereas it might be thought that they, if any, should yield to it, because tuberculin is said to be more efficacious in the early stages of tuberculosis. These incidents at least prove that Koch's method does not protect against relapses, and this concurrence of fairly regular initial efficacy, with frequent relapse, is one of the most unfavourable features in the matter. Should the question be raised whether we ought to abandon the remedy or alter its application, in order to discover whether the initial successes can be made permanent, it must be said that the former course would be premature; considering the shortness of the time over which our experience extends, the latter course should be adopted. At any rate, science will gain richly by these experiments; just as in the story of the treasure-seekers in the vineyard, the fertility of the vineyard was increased by their efforts to find gold. Dr. Koenig of Göttingen spoke more hopefully. He now injected tuberculin in small doses, beginning with half a milligramme, and had more cases of improvement than before. Some patients ought not to be subjected to the treatment at all, especially those suffering from multiple tubercular disease, and those with undiagnosed large foci in joints. Many other cases showed improvement at first, then became stationary, while in others the effect was excellent. To the latter category belonged, above all, lupus of the oral cavity, in the treatment of which tuberculin had already become indispensable. In agreement with Bergmann, Koenig declared the favourable effect to be a consequence, not of necrosis, but of the flushing of the diseased parts with exuded fluids, the anti-bacterial serum and white blood-corpuscles of which have a therapeutic effect. At any rate, there were no other means by which similar phenomena could be produced, and therefore the experiments should be continued. Thiersch confirmed Koenig's remarks on lupus of the oral cavity. Schede of Hamburg declared tuberculin to be an invaluable weapon against

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tuberculosis. He had not observed bad effects of a serious nature. He believed the variations of effect to be due to differences in the use of the remedy. He had never seen cases of miliary tuberculosis that could be with certainty attributed to the administration of tuberculin. The foci that came to light after the injections were always old; they showed caseous contents, and had therefore existed for a length of time, and only been developed by the treatment. He used very small doses, and sought to measure them so as to avoid fever and to render a rapid increase of the doses possible. He regarded careful tendance, good nourishment, and plenty of fresh air as very important auxiliaries. Lauenstein of Hamburg spoke in similar terms. Eiselsberg of Vienna reported on a case of actinomycotic tumour in Billroth's clinic that had been cured by tuberculin; and Kuester of Marburg on two cases of non-tubercular tumours in which local reaction had taken place. The discussion was then closed.

Senger of Krefeld then spoke on the efficacy of iodoform injections in surgical tuberculosis. He believes that he has discovered the reason why the treatment of articular tuberculosis with iodoform is sometimes successful and sometimes not. It is not the iodoform itself, he thinks, which causes the cure, but the formic acid produced by its oxidation. If oxidation take place iodoform acts, but not otherwise. On the strength of this theory he has injected formate of soda and formic sulphuric ether with good effect. The last speaker was Dr. Rubenstein, who communicated the results obtained by Professor Schueller of Berlin in more than one hundred cases of local tuberculosis of the skin, the glands, the bones, and the joints by a combination of internal treatment with guaiacum, partly with surgical treatment, partly (in tuberculosis of the joints) with injections of iodoform glycerine into the joints and directly into the tubercular soft parts and bones belonging to the joints. Of fifteen cases of articular tuberculosis treated in this manner nine are already permanently cured. As regards the other forms of local tuberculosis Schueller's results are of special importance, because in many cases of cure there has been no relapse, though years have passed since the close of the treatment. Some cases have been observed for more than eight years.

The second sitting began with a discussion between Liebreich and Bergmann. In his speech on Koch's method Bergmann had mentioned Liebreich's cantharidinate of potash, and had stated that in several cases of lupus treated with it in his clinic no result had been obtained. Liebreich now maintained that there was improvement in these and other cases—slow indeed, but distinct. Bergmann declared the supposed improvement to be nothing more than an erroneous interpretation of the continual changes characteristic of all cases of lupus. Liebreich expressed the hope that it would soon be possible to prove the unquestionable improvement more convincingly. Koenig then spoke on the osteo-plastic treatment of congenital dislocation of the hip-joint. He had tried to obtain a permanent cure by splitting off a plate of bone from the pelvis and forming an artificial socket to hold the condyle firmly. He could not report definitely on the result, mainly because two of the children first operated on had died of infectious diseases. Schuchardt of Stettin then reported a case of extirpation of a tubercular kidney, and several cases in which lupus had at first been supposed to be cured and had afterwards reappeared were shown. Urban of Leipsic, on the other hand, showed a case of extensive lupus of the left temple, cheek, and neck, which had been completely cured by extirpation, followed by transplantation of healthy skin. With reference to this case Thiersch remarked that the transplanted layers of skin grow the more easily the thinner they are, but the appearance of the cicatrix is proportionately less good. In young adults, however, engrafted skin shares in their growth and becomes thicker, so that in such cases the use of thin layers is permissible even from the æsthetic point of view. Patients in whom Koch's method had been combined with surgical treatment were then shown. Though it cannot be said that they are completely cured, their general condition is so much improved that a gradual, complete, and permanent cure may be expected. According to Hahn, who had operated on one of these patients, a very careful selection of cases is the first condition of success, and suitable cases are not numerous. Westphal of Berlin then reported three cases of articular tuberculosis, which had been successfully treated by Koch's method. Bruns of Tübingen then spoke on cirsoid neuromas and aneurysms. Army Surgeon Dr. Benda showed a case of traumatic cortex-epilepsy, which had been cured after extensive osteo-plastic trepanning and the removal of a piece of the cerebral cortex.

The third meeting began with a discourse by Herzog of Munich on the involution of the umbilical vessels. He regards the process not as a retraction of the distended tissues, but as a partial decay of them, and believes that thrombosis does not play so definite a part in the final closing of the vessels as has hitherto been ascribed to it, and that, on the contrary, it may, under certain circumstances, delay involution. Professor Gurlt then reported the result of a proposal made last year that the members of the Congress should send in statements of the number of anæsthetisations undertaken by them, and of the untoward accidents observed by them on those occasions. Sixty-six reports, mostly from Germany, and mostly confined to a part of last year, had been received. Unfortunately six German clinics and several great hospitals had not yet reported. The Berlin Charité, on the other hand, had reported on a period of twelve years, and the dentist Ritter of Berlin on 1748 cases. Deducting the Charité cases, the number of which was roughly estimated at 12,000, 24,675 cases of anæsthetisation had been reported, 22,656 with chloroform, 470 with ether, 1055 with ether *plus* chloroform, 470 with ether *plus* chloroform *plus* alcohol, and 27 with bromide of ethyl. Among the chloroform cases 71 cases of threatened asphyxia and 6 deaths occurred; among the ether cases, none even of danger; among the ether-chloroform cases, 5 of danger; among the ether-chloroform-alcohol cases, 4 of danger; among the bromide of ethyl cases, none. The chloroform used was obtained mostly from German and English chloral factories. Of 2732 narcoses, 278 lasted an hour or more. The three longest lasted 150, 155, and 180 minutes. The average consumption of chloroform with the ordinary mask was one gramme per minute; with the Junker-Kappler mask 0·6 of a gramme. One private clinic reckoned the average consumption at twenty-five grammes per case; the maximum consumption was 150 grammes. Some of the reporters increased the narcosis by injecting morphia. The threatening of asphyxia occurred in patients of all ages and degrees of strength. Professor Bruns remarked that the results were not unsatisfactory, but that better ones seemed not impossible. Greater attention, especially, should be paid to ether narcosis. The materials, too, were not copious enough to admit of safe conclusions. A proposal to continue the inquiry was accepted.

Berlin, April 7th.

THE SUN-BATH OF THE SAHARA.

(FROM A HOLIDAY CONTRIBUTOR.)

NEVER within the experience of the oldest hotel-keeper between Tunis and Constantine, or Constantine and Biskra, has there been such an inroad of arrivals as during the winter now closing. The abnormal cold, which, south of the Algerian littoral, drove the Bouira lion from his den and made the panther a too familiar object near Bône, had emptied the winter cities of Spain and the suntraps of Italy, and even thinned the *aprici advenæ* of the French Riviera—sending all flying southward in quest of sun. The favourite terminus of these pilgrims was Biskra, and its hotel accommodation, after being strained to bursting, had to be supplemented by improvised lodgings in the town. Nor was it the hotel service only that proved inadequate to the demand. The railway arrangements, wretched at all times, broke down—at least to this extent, that first-class passengers had to be thrust into second-class and even third-class carriages—an experience which many a traveller on the Tunis-Constantine railway recalls with a shudder. That ill-starred line runs no exclusively passenger trains, but simply a few carriages interspersed here and there in a long series of goods waggons. The distance between the two cities is some five hundred kilométres, which the Flying Scotsman or the Wild Irishman would overtake (stoppages included) in seven hours. Not so, however, the "Flying Berber"! With a top speed of fifteen miles an hour it jogs, I cannot say "runs," from Tunis to Constantine, from five o'clock in the morning till long after midnight. Break the journey at intermediate stations like Souk-el-Arbäa or Souk-Ahras you cannot, the inns at these places being little

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better than that one immortalised in "Anne of Gierstein" as kept by John Mengs. The buffets at these and other stations are provided with food which Signor Succi after his thirtieth day's fast would think twice before tackling, and the beverages would daunt the prowess of the Irishman who, after a glass of Scotch whisky, felt "as if a torchlight procession had gone down his throat." As for such conveniences as even third-class passengers between London and Edinburgh are accustomed to, the Tunis-Constantine railway has none of them, while the *lieux d'aisance* along the line are hardly to be approached, much less entered. Foot-warmers in first-class carriages are provided only when you near Constantine, though, as I can testify, the cold was as keen as any encountered on a winter's journey between Moscow and St. Petersburg. Yet even in such conditions invalid old gentlemen, delicate ladies, and convalescents from every form of lung mischief have, since the middle of January, been pressing southwards to Biskra, and when I left that "islet in the great sand sea" a few days ago the cry was "still they come."

French colonisation is at best but a poor affair, and after sixty years' occupation of Algeria its railway service and hotel accommodation are half a century behind the day. But competition may supply the stimulus to improvement for which native initiative has been wanting, and national jealousy may come in to accelerate both. As year by year a larger influx of pilgrims in search of warmth invades North Africa, and pushes ever southwards in quest of what the Mediterranean seaboard cannot vouchsafe, the resources of the Sahara as the great sun-bath of Europe will more and more assert themselves. If France is so blind to her opportunity as not to utilise her advantages in catering for such a public, other countries will not be slow to step in and oust her. Cardinal Lavigerie, who to the world-sympathy of a great philanthropist unites the sagacity of a statesman, has already given his compatriots the broadest of hints to this effect. "All the nationalities of Europe," he said the other day, "are pressing on and into the Sahara. There are the English *viâ* the Niger, the Italians from Abyssinia, the Belgians from the immediate south of the Equator, and Germany from the southern and eastern sides. We must at every cost safeguard our rights in the Sahara and the Soudan by a complete iron network of communication to connect our Algerian possessions with the Great Lakes." That these words have not fallen on deaf ears may be read in the prolonged debates that have recently engaged the Corps Législatif on France's North African policy, and before the century is out we may have something like the development as to transit and accommodation which should have been started when the century was still young.

As a first step to furthering the resources of South Algeria in health resorts, the access to the numerous hot sulphur baths in which it abounds should be facilitated, and the hotels at these places put on a really civilised footing. Take, as a typical example, Hammam Meskoutine, on the line of railway between Constantine and Bône. That the Romans had already known and utilised that wondrous spring goes without saying—the "Aquæ Tibilitinæ," as they called it, having baths cut by them out of the living rock, and still used by hospital patients. "The temperature of the water," says Sir Lambert Playfair, in his excellent handbook, "is no less than 203°F., which, taking into consideration the height of the source above the sea level, is just about boiling-water heat, and is only surpassed by the Geysers in Iceland and Las Trincheras in South America, the former of which rises at 208° and the latter at 206° temperature." The spectacle that the lime-encrusted rock presents is perhaps unique, only paralleled, it is said, by a simi'ar development in New Zealand, now, alas! spoiled by a convulsion of nature. As the water gushes from the soil it forms streamlets that find their way over a steep rock into the glen below, and are used for cooking and washing by the villagers. But the edge and façade of the rock itself have the appearance of "a torrent frozen in the leap," the waves of carbonate of lime in solution having become stiffened and stagnant just as they descended from above, and hanging down like folds of drapery, snow-white and occasionally cream-coloured, over the brook, in which the yet running streamlets unite. Natural scenery in and around Hammam Meskoutine combines with specific thermal advantages to make it a favoured resort not only of the gouty, rheumatic, and neurasthenic, but of the artist and the sportsman, to say nothing of the archæologist; but even now the railway service to and from it is such as I have described. The hotel accommodation (with all goodwill on the landlord's part possible) is insufficient, and the entertainment it affords too irregular to be satisfactory three days running. What wonder if the clients it attracts, instead of remaining long enough to get the good it is capable of yielding, seldom put up with it more than forty-eight hours? Not that its unique attractions have been appreciated only by Imperial Rome. In a little grotto quite near the bungalow that does duty for a hotel—almost as hidden from the eye as the tomb of Archimedes at Syracuse—I noted the following, and (*sicut meus est mos*) transcribed it as another accession to the gallery of "Medicine's forgotten worthies":—

Docteur Moreau,
1800-1870,
Ancien Médecin des Armées et des Hôpitaux civiles de Bône,
Chevalier de la Légion d'Honneur et de l'Ordre de François 1er. d'Italie,
Fondateur de l'Établissement Thermal d'Hamman Meskoutine.
Benefaciendo vixit.

Evidently the good doctor's initiative has not been followed up in the spirit in which he took it, and Hamman Meskoutine—still without a resident physician!—remains another example out of many of what France has yet to do before she can reap the benefit of Nature's gifts so generously lavished on her African possessions.

The same holds equally—or still more—true of the lovely oases in the desert, sun-baths in the severest winter, when the French and Italian Riviera, and the Mediterranean islands, are but a shade less trying to the victim to weak heart or impaired lung than the sheltered spots on our south and west coast, which far transcend their continental rivals in comfort and civilisation. Biskra, delightful as it is, might have many counterparts within easy hail of it, if only French appreciation and enterprise were equal to the occasion. But, as I have said, the difficulty of getting to and from the neighbourhood is such that few invalids venture on repeating their visit, while the excellent Swiss Hotel and its French rival are quite inadequate to the requirements of even such a recently frequented resort. The overcrowding of which Biskra was the scene from the middle of January to the end of March (and, I may safely add, at the present moment) must ere long incur its Nemesis in blood-poisoning of the too familiar kind. Shortly before I left there were fourteen cases of typhoid fever reported in the town, one case of diphtheria, and, in one of the hotels, a case of quotidian remittent fever, which but for prompt treatment might have drifted into what Italian physicians call "typho-malaria." There is no fall from the soil level, and sanitary engineering has yet to meet this obstacle to the speedy removal of the sewage which drains off from the hotels and pensions. It is disheartening to have to admit it, but nothing short of the pressure of competition will stimulate French energy to the undertakings which appeal from every oasis for prompt and effective realisation. That pressure, however, as Cardinal Lavigerie has already admonished his countrymen, is now within measurable distance, and, in self-defence, if from no other motive, France may yet be brought to put the railway in working order and render the hotels more attractive and to multiply the health-resorts, which invalid Europe has so long been demanding in vain. Even America, represented by numerous patients at Biskra, feels after the late terrible winters the want of the sun-bath of the Sahara, and contributes to swell the cry for extended means of utilising the months of certain warmth, of cloudless skies, of dry, absorbent, exhilarating air, which may be enjoyed at the very door of French Africa. It would, indeed, be hard to exclude from such enjoyment the compatriots of him who conceived and prescribed the "rest-cure," of which the "islets in the great sand-sea" are the appropriate haven.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Death following a Football Accident at Southport.

MR. S. BRIGHOUSE, the county coroner, held an inquest on the 6th inst. upon the body of a painter, twenty-three years of age, who died in the Southport Infirmary on the 4th from the effects of injuries received in a football match on Good Friday. The deceased collided with one of his

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opponents, and fell forward with such force as to cause a compound fracture of his left arm. He was at once taken to the Infirmary, where the arm was set, but it was regarded from the first as a very serious case, and death resulted from tetanus on the eighth day. There appears to have been no blame attaching to anyone, and the jury found a verdict of "Accidental death." The deceased leaves a widow and child.

The Census and Physicians' Lives.

Among other results of the present census may possibly be a satisfactory solution of the question now being debated in THE LANCET as to whether the lives of medical practitioners are or are not equal to those of other professional men. Liverpool has had in past and present times a very fair share of practitioners who, notwithstanding a most laborious life, have lived to a great age. The late James Dawson lived to be upwards of ninety, and to enjoy excellent health in his charming retirement at Wray Castle, Windermere. His colleague, the late Henry Park, who first performed excision of the knee-joint, lived till some years past eighty. Coming to more recent years, there is now amongst us in perfect health a veteran who obtained the licence of the College of Surgeons, Edinburgh, in 1822, and graduated there in 1826. Mr. F. Worthington's death has been but recently chronicled as taking place in his eighty-second year, and there are still several who graduated in the thirties, enjoying excellent health, practising, and in the full possession of their faculties. The number who have passed the threescore and ten is apparently quite equal to that of clergymen and lawyers. When life insurance is more general among medical men than it unfortunately is now, perhaps there will be less difference of opinion among actuaries than there is at present.

The Medical Jurisprudence of Drowning.

As might be expected in such a city as this, many bodies are removed annually from the river Mersey, and a smaller number from the Leeds and Liverpool canal, to the mortuary at the Prince's Dock. The coroner invariably orders an external medical inspection in every case, and, where this appears to be called for, a post-mortem examination. The bodies seen in the mortuary comprise every variety of age, sex, and nationality; the drowning has been suicidal, accidental, or homicidal, and in many instances the body is not identified. What is remarkable is that in a tidal river so many bodies should be found long afterwards in a state of decomposition near the spot where they were last seen, or were seen to fall. In some cases it is evident that they have been kept at or near the bottom of the river by some obstruction. In other cases the body has been found remarkably well preserved in all those parts which have not been exposed to the air, whilst, from their appearance, the exposed parts indicate that death took place some considerable time previously.

The Burial of Stillborn Infants.

Many years ago, in consequence of some grave irregularity being discovered at St. Martin's Cemetery in the case of a newly born infant, the coroner's officer made it a rule daily to call there and make full inquiries into every such case. The value of this arrangement has been frequently demonstrated, and the practice continues now. As it is the parish mortuary where the large proportion of recently born infants, stillborn or deceased, are taken, the arrangement has its advantages, though it becomes a grave question as to what takes place in other cemeteries where a less strict rule prevails. Much trouble is no doubt thrown upon the officials when a medical certificate or coroner's order is not produced and a declaration is required. But the dangers of any laxity in this respect are so obvious that it is greatly to be wished that some uniform system should be adopted at every burial ground where infants are interred.

Liverpool, April 7th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Serious Charge against a "Medical" Electrician.

AT the Newcastle Police-court on Saturday last Edward Moross (whose case I referred to in last week's "Notes") came up before the magistrates on remand. Moross has for some time past been giving public exhibitions in Newcastle and its neighbourhood with demonstrations of patients "cured." Some of these patients, however, it was remarked, bore a very striking resemblance to patients "cured" by former practitioners of hypnotism and rubbing &c. Moross was again charged with having committed a rape on a girl aged seventeen, and further with having committed an indecent assault on another girl aged eighteen. The solicitor for the prosecutrix said that Moross had also inflicted upon the first girl an abominable complaint. The evidence of the police-surgeon went to support this, and also that given by a prison warder. The magistrates, after an attentive hearing of the cases, refused to take bail, but remanded the prisoner, when, they said, he would be fully committed to the Assizes, next Thursday. Demonstrations of approval on this decision being announced were made by some persons in court, and objected to by the prisoner's solicitor; but the Bench, in reply, said "they were men, and perhaps fathers."

Newcastle Royal Infirmary.

An interesting ceremony took place last week in the Royal Infirmary, being the reopening of the Chapel (St. Luke's) after redecoration and refurnishing, but especially in reference to the unveiling of new stained glass windows, the gift of Mr. John Hall, a munificent citizen of Newcastle. Dr. Gibb had defrayed the cost of furnishing and repairs, and Mrs. Wilkinson the cost of painting art decorations, while a beautiful oak pulpit lectern was the gift of Mrs. Armstrong, in memory of her late husband, Dr. Luke Armstrong, who was for eighteen years one of the honorary surgeons of the infirmary.

Middlesborough North Riding Infirmary.

The annual report of the governors of the North Riding Infirmary has been issued, and it states that the general condition of the infirmary is highly satisfactory. The statement of accounts shows an increased income amounting to £269, and an increased expenditure amounting to £293. The revenue account shows that £93 more than the income has been spent, chiefly on account of an increase in the number of patients, which amounted in the year to 802, against 734 for the previous year and 694 for the year before that. The children's ward still continues a source of interest and sympathy. Sir R. Dixon had founded a cot in commemoration of the visit of the Prince and Princess of Wales, to be called the Alexandra cot, by express permission of her Royal Highness. Although the infirmary's financial position may seem worse by £93 than during the previous year, its medical position has materially advanced.

Durham.

A much respected member of our profession, Alderman W. Boyd, J.P., M.R.C.S., received many honours from the hands of his fellow-citizens last week. On Wednesday he was presented with the honorary freedom of the city, which he has so well served for nearly fifty years. His record shows that he has been four times mayor of Durham, a member of this ancient corporation, and a medical officer of a large district for nearly fifty years, and a sanitary reformer when sanitary science was in its infancy. Alderman Boyd had further honours the next day (Thursday), when he was presented with a public testimonial in the form of an address, his portrait, a massive silver salver weighing 50 oz., together with a gold and diamond brooch inlaid with pearls for Mrs. Boyd. The Mayor of Durham has presented to the railway *employés* who have passed the examination of the St. John Ambulance Society the certificates awarded to the successful students. At the close of the proceedings presentations were made to Dr. Jepson, who has taught the class, and also to Mr. Hollins, the secretary.

Another Death from Lead Poisoning in Newcastle.

An inquest has been held on the body of a young woman aged twenty-two, who had been a worker in a white-lead factory. It was shown that she was taken ill on Feb. 20th with pains in the head and vomiting. She went to the workhouse for a fortnight, and afterwards went back to the factory. Three days following she was again taken ill, and on Good Friday went back to the workhouse, where she died on April 1st. It was further shown that she was engaged at the stoves—a department in lead-working which was considered one of the most dangerous. She had only worked sixteen days this year. The stoves affected some girls sooner than others. Girls had been known to work sixteen to eighteen years in the department. Dr. Bowlan, the medical officer of the workhouse, stated that

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the girl when admitted was suffering from lead poisoning, and the verdict was in accordance with this evidence.

Berwick Infirmary.

The annual meeting of the governors of the Berwick Infirmary was held last week, and it was stated that there was a balance of £419, against £317 last year. To the Hospital Sunday Fund sixteen churches contributed, an increase of one over the previous year. More than 1400 prescriptions were dispensed during the year. There were over 300 out-door and forty-six in-door patients, including several cases of typhoid and scarlet fever.

Suicide by Dynamite.

A quarryman, who would appear to have been in a despondent state of mind from drink, committed suicide on Saturday last at Rothbury in the following extraordinary manner. He placed an ordinary dynamite blasting cartridge in the fold of his soft felt hat, set fire to the cartridge, and placed the hat on his head. In a few seconds the explosion took place, taking away the whole of the top and back of his skull, but he was found on the ground with his face uninjured; of course dead.

Bradford Infirmary.

A meeting of the Board of Management of the Bradford Infirmary was held on the 3rd inst. After the usual routine business had been transacted the Board proceeded to make some alterations in and additions to the medical staff of the institution. Dr. J. Lacy Firth, who has been house physician, was appointed house surgeon, in place of Mr. C. F. M. Althorp, M.R.C.S., who has resigned; and Mr. Pettitt, M.R.C.S., dispensary surgeon, was appointed house physician, in place of Dr. Firth. This left the position of dispensary surgeon vacant, and five candidates, three of whom were local, had been selected by the joint committee of the honorary staff committee and the house committee. Ultimately Mr. H. N. D. Milligan, M.B., C.M., was appointed to the post. The meeting then proceeded to the election of an honorary laryngologist, two honorary assistant medical officers, and two honorary assistant surgeons. Dr. Adolf Bronner was elected honorary laryngologist without opposition. Mr. C. F. M. Althorp, M.R.C.S., and Mr. William Horrocks, F.R.C.S., were elected honorary assistant surgeons. There were six candidates for the posts of assistant medical officers, but the list was reduced one-half by the first voting. Dr. H. Bronner and Mr. T. Wilmot, M.R.C.S., were elected.

Newcastle-upon-Tyne, April 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

University of Edinburgh.

THE Chancellor of the University has appointed Mr. Æneas J. G. Mackay, Advocate, to be his Assessor in the University Court, in succession to the late Mr. T. G. Murrey, W.S. The second professional examination commenced last week at the University, and is still going on. The number of failures in both it and the First Professional are reported as very numerous.

Medical Preliminary Examinations.

This examination, which is now conducted by the Educational Institute of Scotland, instead of by the Colleges, was held last week. There were 152 candidates, of whom eleven were women.

Health of the City.

The mortality last week was 119, making the death-rate 22·49 per 1000. Diseases of the chest accounted for 47 deaths, and zymotic diseases for 14, of which 10 were due to whooping-cough. The intimations for the week were: typhoid fever, 5; scarlatina, 11; measles, 120.

The Fever Hospital.

At the invitation of the corporation a large company of ladies and gentlemen assembled on the 3rd inst. at the City Hospital, on the occasion of the opening of a new hall for the nurses. The building, which has hitherto been used for storage purposes, is situated in the grounds, and is admirably adapted for the use to which it has been appropriated—viz., a dining- and sitting-room, an additional accommodation greatly needed by the staff and much appreciated by them. The hospital and the nurses' hall had been decorated by many friends, and handsome presents had been received for that purpose. The buildings required to be brightened as much as possible. The occasion of the present assembly was really that thanks might formally be offered for the assistance and the gifts thus bestowed.

GLASGOW.

St. Mungo's College.

The winter session of the Medical Faculty of St. Mungo's College, Glasgow, was closed on March 27th by a meeting in the Dispensary Hall, Castle-street. Mr. Hugh Brown, who presided, mentioned that it was just 100 years since the Royal Infirmary was founded by Royal charter, when the population of Glasgow was only 66,000. After briefly sketching the history of the College, Mr. Brown said that the numbers this year had been greater than last, and they had every reason to hope that as they grew in age they would grow in importance. Dr. Blackie had succeeded in getting six merchants in Glasgow to offer £1000 each. It was hoped that with these and other sums the College would soon be put on a very firm basis. Zoology classes had this year been added to the curriculum. The prizes and certificates were then presented to the successful students.

Queen Margaret College.

The last meeting of the Winter Medical Session took place on Monday week, when a large number of persons interested in the medical education of women attended. Addresses were given by Dr. R. Perry, Professor Young, and Professor McKendrick. The report, which was adopted, stated that the session had been a most successful one.

ABERDEEN.

Graduation Ceremony.

The ceremony of "capping" the graduates in medicine took place in Marischal College on Friday of last week. An immense gathering of the public filled the hall, and the undergraduates present made it one of the noisiest cappings that has taken place for many years. So boisterous was the fun that the Principal dispensed with the usual address to the graduates, and the proceedings were brought to an abrupt termination. Thirteen gentlemen were promoted to the degree of M.D. The thesis of Dr. G. S. P. Ferdinands was considered worthy of highest honours, and that of Dr. Neil M. MacFarlane worthy of commendation. Twenty-nine gentlemen received the degrees of M.B. and C.M., and two more passed all the examinations, but cannot graduate until they attain the necessary age. Three gentlemen, Mr. William Findlay, Mr. John Marnoch, and Mr. George Tawse, graduated with "highest academical honours," and Mr. Dewar, Mr. MacLennan, and Mr. John Wilson with "honourable distinction." Twenty-four candidates passed the first half of the first professional examination, sixty-two completed the first professional, and forty-four passed the second professional examination. The diploma in Public Health was conferred on Winckworth Tonge-Smith, M.D., Richard A. S. Eden, M.B., C.M., and William B. Simpson, M.B., C.M.

The Lord Rector's Assessor.

On the recommendation of the Students' Representative Council, the Marquis of Huntly nominated Mr. Peter J. Anderson, LL.B., as his Assessor in the University Court in room of the late Mr. Murray Garden. At a meeting of the Court held on Saturday last, Mr. Anderson was duly elected.

Health of the City.

During the past week the following cases of zymotic diseases were notified to the medical officer of health:—erysipelas, 1; measles, 3; scarlet fever, 10; typhoid fever, 5—a decrease of 3 on the whole, as compared with the number for the previous week.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Factories and Workshops Bill.

THE Royal College of Surgeons have petitioned against the proposal in this Bill to abolish medical certificates of fitness for the employment of children. They request that the 19th clause may be eliminated, and that clauses may

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be inserted so as to extend the functions of certifying surgeons by admitting of their giving probationary permission for the employment of operatives as to whose fitness doubts might be entertained, and to allow of their specifying the sort of work to which such persons ought to be limited. Memorials also have been presented against the Bill by the University of Dublin, the Irish Medical Association, and the Irish Mercantile Association, and this evening the Public Health Committee of the Corporation will discuss a communication from Dr. C. F. Moore, Vice-President of the Factory Officers' Association, bearing on the matter at issue.

The Irish Census.

The census papers will shortly be collected, and in a few months we may expect an abstract of the returns. The commissioners appointed are the Registrar-General (Dr. Grimshaw), Mr. Matheson, and Dr. T. Bellingham Brady. His Excellency the Lord Lieutenant paid a visit on Saturday to Charlemount House, Rutland-square, and inspected the arrangements made for carrying out the census of 1891.

Health of Dublin in February.

The death-rate for February was very much under the average for that month, and was the lowest since accurate registration of deaths commenced in Dublin. The mean temperature being 2·1° higher than the mean temperature of February for the past ten years had of course an important bearing on the mortality. The zymotic death-rate was the lowest ever recorded for the month, and was lower in the city than in the suburbs.

Jervis-street Hospital, Dublin.

The vacancy occasioned by the death of Mr. Robert McDonnell has, at last, been filled by the election of Mr. J. Dallas Pratt, M.D., F.R.C.S.I. He was unopposed.

Queen's College, Cork.

In May last the president (Dr. Sullivan) died, and the report for the Session 1889–90 has only now come under my notice. The present president (Mr. Slattery) wrote the report at the end of July, but it was not furnished to His Excellency the Lord Lieutenant until December last, a delay which appears inexplicable. During the Session 1889–90, 238 students were on the college books, of which 167 were entered in the Faculty of Medicine. In referring to his predecessor, Mr. Slattery states that during his seventeen years' tenure of office he devoted his untiring energy and wide experience to the promotion of higher education in the south of Ireland, and especially in the teaching of chemical, physical, and medical science, while he initiated improvements which will be the work of many years to carry to their full development.

Infectious Diseases Prevention Act

The Corporation of Dublin have adopted this Act, which will become operative in a few weeks. Sir Charles Cameron, medical superintendent officer of health, strongly recommended its adoption, and states that perhaps one of the most important provisions in the Act is the clause empowering the detention in hospital of an infected person who is without proper lodging or accommodation, for the section of the Public Health Act dealing with the compulsory removal of patients to hospital is silent with regard to their detention. The Corporation by this Act can provide, free of charge, temporary shelter or house accommodation, with any necessary attendants, for the members of any family who may be compelled to leave their dwellings for the purpose of enabling disinfection to be carried out.

Fever in Clifden.

An epidemic of a severe febrile type is reported to be prevailing in the Renvyle district of the Clifden Union. Mr. Macdonnell, the medical officer of the Renvyle Dispensary District, has unfortunately contracted the infection, and is in danger of succumbing to the attack of what is pronounced to be typhus fever.

The Pembroke Township Commissioners have adopted the Notification of Infectious Diseases Act, and its provisions are now in operation in the township.

Mr. Mills, senior house surgeon to Jervis-street Hospital, has been elected medical officer of Rhode Dispensary, King's county.

Margaret Branney, of Downpatrick, has been returned on the census paper as aged 107 years.

April 7th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The French Surgical Congress.

THE fifth session of this Congress was, as mentioned last week, inaugurated in the large amphitheatre of the Faculty on March 30th, under the presidency of Professor Guyon. The President delivered a stirring oration, the first portion of which was devoted to a eulogy of the late Professor Trélat, a former President, whose disappearance from our midst has created such a void in scientific circles. On the same evening the members of the Congress assembled in the splendid *salons* of Madame Guyon in the Rue Roquepine, where the guests were regaled with excellent music and listened to a comedy of Meilhac, interpreted by Mmes. Réjane and Pierson, of the Odéon and Théâtre Français respectively. Thursday morning was devoted to visits to divers hospitals, and in the afternoon the peregrinations of the visitors extended to the Institut Pasteur, the Morgue, the well-known dermatological museum at St. Louis, and last, but not least, the fine new École Pratique of the Faculty, with its noble dissecting-rooms, laboratories, &c. Thursday evening found the members reassembled at a banquet at the Lion d'Or. Amongst the most important papers read at the Congress were two by our countrymen, Sir Spencer Wells and Mr. Lawson Tait, on the Remote Consequences of Ablation of the Uterine Appendages for Non-neoplastic Affections. Sir Spencer Wells, in a communication, a translation of which was read by M. Pozzi, protested once more against the modern craze for oöphorectomy. He is satisfied that affections of the Fallopian tubes are much less common than is sometimes maintained, and he claims that salpingitis and pyosalpinx are curable without operation. Mr. Lawson Tait pleaded the innocuousness of salpingo-oöphorectomy, his figures yielding a mortality of only 3 per cent. He rejects the idea that castration produces premature old age, and maintains that the effects of the operation on the sexual appetite varies with the age at which it is performed—viz., before or after puberty. Of 271 castrations performed for uterine myoma, success was complete in 257. Performed before the age of forty, the operation determined the complete disappearance of the tumour seventy times out of 100. After forty years the myoma simply diminishes in volume by a sixth or a third. In castration for ovaro-salpinx Mr. Tait recalls the difficulty of the operation, and emphasises the necessity of thoroughness in performing it. A frequent complication following this operation is the occurrence of rupture of vessels in the broad ligaments at what would have been the normal menstrual period. After a period of illness characterised by elevation of temperature and rapidity of pulse, the effusion is generally reabsorbed spontaneously. But occasionally it gives rise to suppuration, and this condition will necessitate laparotomy and drainage. Formerly Mr. Tait entertained great doubts as to the expediency of castration for the cure of neurotic affections. Now, however, he believes the operation justifiable in epilepsy of menstrual origin, and he cited an instructive case of castration for menstrual insanity in the person of the niece of a celebrated physician, in which the patient recovered completely. Professor Le Dentu, who followed, stated that he had not unfrequently traced the persistence of pain after operation to the development of a cyst in the portion of tube left attached to the uterus. These cases, he said, he treated successfully by uterine dilatation, which determines the evacuation of the contents of the cyst per vaginam. He urged the advisability of leaving no portion of the tubes behind.

Inauguration of the Franco-Dutch Hospital.

The opening on Monday last of this new nosocomial venture marks an epoch in the efforts made to administer to the medical wants of the foreign element in the heterogeneous population of this city. The institution, the creation of which is due to the generous initiative of M. Van Lier, Consul-General of the Netherlands, is at present of modest dimensions, containing only twelve beds. It is intended, however, to construct two additional pavilions, and M. Van Lier will shortly call a meeting of the representatives of foreign powers, with a view of giving practical effect to his idea of founding a vast international hospital where sick foreigners would be treated irrespectively of creed. For the present the hospital is, as the name implies,

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reserved for patients of French and Dutch nationality. The Hertford British Hospital, situated outside Paris, at Levallois-Perret, which is entirely supported by funds left by that noble philanthropist the late Sir Richard Wallace, is invaluable as a refuge for the sick poor English. But the accommodation provided by this palatial institution is limited, and in times of great sickness inadequate. Many English people evince an inveterate dislike to entering a French hospital, and the creation of an establishment worked on international lines will prove a great boon to them.

A Moral Seaport!

Toulon is hardly the place one would choose for the education of one's sons and daughters. According to the journal *Le Petit Var* the number of wineshops, *brasseries*, and *bouges* directed by women of "easy" virtue is no less than 670, without counting similar establishments in the east end of the town. It is fairly safe to opine that the *clientèle* of these *lupanars* is pretty conversant with such terms as *accidents primitifs*, *accidents secondaires*, and it would seem that Madame la Maréchale would find in this degenerate town a fitting field for the display of the evangelising energies of the *Armée du Salut*.

The Pasteur Institute.

At a meeting held last week the secretary of the Institute, Professor Grancher, stated that of 1546 patients treated during the year 1890, only 10 died, of whom 6 succumbed within a fortnight of the commencement of the treatment; it being conceded that these 6 should not be counted, there remains a mortality not exceeding 0·26 per cent. It should not be forgotten that the ardent *savants* attached to the Institute are devoting much of their time to micro-biological researches on infectious diseases other than hydrophobia. The number of French and foreign *savants* now pursuing a course of study at the Institute is ninety. Professor Grancher says that the results obtained would be greater were larger funds available.

Paris, April 7th.

Obituary.

DR. JAMES EDWARD KERSHAW.

WE regret to have to record the death of Dr. J. E. Kershaw, M.A., M.B.Oxon., M.R.C.S., L.R.C.P., which took place on Saturday, March 21st, at the Hospital for Diseases of the Chest, Brompton, of which institution he was resident medical officer. His illness commenced in the acute form on the previous Monday, though he had for some time previously suffered from severe headaches and insomnia; but there had been no reason to anticipate any serious organic disease until this date. Dr. Kershaw was educated at Rugby and University College, Oxford. At Oxford he devoted himself to chemistry, and obtained a second class in the final school of natural science; while he rowed in his College torpid in 1875 and 1876. He studied medicine at St. Thomas's Hospital, where he held the post of resident accoucheur, and subsequently he became one of the clinical assistants at the Brompton Hospital. Afterwards he became resident medical officer to the Hospital for Children at Pendlebury, and on leaving that institution he was elected assistant resident medical officer at Brompton, and towards the close of 1890 was appointed resident medical officer, in succession to Mr. H. H. Taylor, who resigned. A good deal of extra work and responsibility was thrown upon him earlier in the present year by the observations which were rendered necessary by the introduction into the hospital of Koch's method of treating tuberculosis; and he was still in the active discharge of his duties when he was seized with the attack which proved fatal. He was rather reserved in manner, and did not easily make friends; but those who knew him well fully appreciated his good nature and his generosity, both of which were exceptional. He was content to carry out his duties with a quiet and unostentatious industry, which, though it did not attract much attention, was very thorough and conscientious. Chemistry was always with him a favourite study; he was an enthusiastic photographer, and also attained very considerable skill in that art. Without brilliant natural ability, he was content to do the daily duty which lay before him, and he had always that delight in life which "work alone can give."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council of the College held on Thursday, the 9th inst., the minutes of the ordinary Council of Feb. 12th were read and confirmed. The President announced the adjudication of the Jacksonian Prize for the year to Mr. William Thorburn, F.R.C.S., of Manchester, for the Dissertation on "Injuries of the Spinal Column and its Contents, &c." The subject for the prize of 1892 is "Diseases of the Ovaries and the Uterine Appendages, their Pathology, Diagnosis, and Surgical Treatment."

The Council agreed to the report of the Committee on the Extension of the College Premises, and adopted their resolutions in regard to alterations in the fittings of the new museums. Amongst other resolutions in the report, the Committee express their regret that, having taken into consideration Mr. Hutchinson's offer to present to the College his collection of Clinical and Pathological Drawings, the arrangement of the Museums approved by the Committee prevent them from recommending compliance with the conditions of Mr. Hutchinson's offer.

The following report of the Committee of Management of the two Colleges was read, approved, and adopted, subject to the approval of the Royal College of Physicians: "That having received from Dr. G. Vivian Poore, Honorary Secretary General on behalf of the Organising Committee of the International Congress of Hygiene and Demography, an application for permission to use the Examination Hall for the purposes of the Congress during the week beginning the 10th of August, they recommend that the Colleges do accede to Dr. Poore's request. The Committee also recommend that the Royal Southern Hospital, Liverpool, which is in sufficiently close proximity to University College, Liverpool, be now recognised as a 'Hospital in connexion with a recognised Medical School,' at which the whole period of attendance on medical and surgical hospital practice and medical and surgical clinical lectures may be completed, the authorities of that hospital having satisfied the Committee that adequate arrangements exist for the instruction of students."

The President reported that, in pursuance of the provisions of the Bradshawe Bequest, he had chosen Mr. J. W. Hulke as the Bradshawe lecturer for the ensuing collegiate year, and that the lecture would be delivered at some convenient date in November or December, of which due notice would be given by circular to members of the Council.

The Council elected Mr. O. Pemberton as the Morton lecturer on Cancer and Cancerous Diseases for the ensuing collegiate year.

It was agreed to give an entertainment by the Council of the College in August to the members of the International Congress of Hygiene and Demography, and it was left to a committee to fix the date and make arrangements for the entertainment.

Monday, May 11th, at 3 P.M., was selected by the Council as the most convenient date for the meeting of Fellows and Members in reference to the scheme for the reconstitution of the University of London.

A letter was read from Mr. H. P. Dunn, reporting the views of the committee of the Association of Fellows on the opinion of the Attorney-General and Mr. Paget, with regard to the powers of the College to call meetings of the Fellows.

A letter of the 14th ultimo from Dr. James Holmes, honorary secretary of the Association of Certifying Surgeons, was read, calling attention to Clause 19 of the Factories and Workshops Act Amendment Bill, and expressing the hope that the College would use its influence to prevent the said clause being passed. The President and Vice-Presidents were requested to take what action they might consider desirable in the matter.

A letter of the 25th ultimo from Mr. C. S. Sherrington, honorary secretary of the Physiological Society, forwarding a copy of the following resolution adopted by that Society, was read and laid before the Council—viz., "That, in the opinion of this Society, it is important, in the interests of the teaching of physiology, that, as recommended by the General Medical Council, a large portion, if not the whole, of the additional year which is to be added to the medical curriculum should be devoted to Elementary Physics, to Chemistry, and especially Biology." A reply was returned to the effect that the subject was already under the consideration of the Council.

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Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Examiners on the 4th inst.:—

Physiology only.—Alfred H. Hardcastle, student of Yorkshire College, Leeds; H. Spencer Hughes, of Queen's College, Birmingham; J. Alphonsus Dawes, of Queen's College, Manchester; Stephen L. Martin, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; H. Myddelton Moore, Horace R. Pring, Henry Knight, Gerald L. Hanwell, Lancelot M. Breton, Malcolm White, and Edgar C. Peru, of St. Thomas's Hospital; Hamilton Hearnden, John J. Culmer, William J. Burroughs, Alfred Alexander, and C. Melville Greenway, of Guy's Hospital; Nowriji M. Tarachand, of Bombay and Middlesex Hospital; A. Eldon Scott, of Middlesex Hospital; Walter Allingham and John F. H. Iles, of St. George's Hospital; Robert D. Cox and S. C. Collingwood Fenwick, of St Mary's Hospital; John Moses, of London Hospital; and Herbert Jenkins, of University College.

Passed on the 6th inst.:—

Anatomy and Physiology.—Reginald G. Hann, student of Yorkshire College, Leeds; Alfred E. Thompson, of Queen's College, Belfast; Charles Porter, of Queen's College, Cork; Frederic W. Willway, C. L'Ostle Miall, A. Bloomfield Densham, and A. E. Raif Rutherford, of Bristol Medical School; Harold Ashton, of Anderson's College, Glasgow; Joseph Cryer, Samuel A. Archer, W. Hindshaw Budd, and David D. Stewart, of University College, Liverpool; J. Hedley Marsh, J. Ramsay Bishop, Ernest Knight, and Arthur Walker, of Owens College, Manchester; Leonard S. Tomkys, of Queen's College, Birmingham; Walter F. Miller and Ernest H. Drake, of Guy's Hospital.

Anatomy only.—Thomas Astbury and Ambrose H. Palmer, of Queen's College, Birmingham; John Tilsley, W. A. P. A. V. Price, and F. D'A. M. Williams, of Bristol Medical School; Arthur E. Syme, of Melbourne University; Flavell Edmunds and Percy Slack, of Sheffield Medical School; Frank W. Stokes, of University College; Winthrop T. Talbot, of Boston University and London Hospital.

Physiology only.—Bruce E. Edge, Richmond Goulden, Philip Wilkinson, and T. Leiming Webster, of Owens College, Manchester; and Jas. E. Gordon, of Glasgow University.

Passed on the 7th inst.:—

Anatomy and Physiology.—George V. A. Robertson, Richard L. B. Smith, David Stephenson, and Frederick Walker, students of the Yorkshire College, Leeds; F. Ward Crossman, Arthur Hudson, Edward H. Marsh, and Frederick L. Titley, of Bristol School of Medicine; Kenway T. Williams, Frederick J. V. Hall, T. S. F. Hudson, W. D'Este Emery, J. Copeland Poole, Edward A. Dando, and Gilbert W. Charsley, of Queen's College, Birmingham; Edwin Quayle, Alan McDougall, Samuel C. Salter, Albert Thorp, William J. Hoyton, and Joseph Law, of Owens College, Manchester; Lionel S. Partridge and H. Russell Welsh, of Oxford University; Clement W. Branson, of Sheffield Medical School; David Morrison, of University College; and Marcus S. Paterson, of St. Mary's Hospital.

Anatomy only.—Charles H. Ackland and Albert T. Morgan, of Bristol Medical School; William H. Cooper, of Bristol Medical School and Mr. Cooke's School of Anatomy and Physiology; H. Meredith Harrison, of St. Thomas's Hospital; and W. Bryce Orme, of University College.

Physiology only.—Arthur D. Griffiths, of Bristol Medical School; Stephen Langton, of St. Mary's Hospital.

Passed on the 8th inst.:—

Anatomy and Physiology.—George E. Barcht, G. Hebb Cowan, and Francis W. Walton, students of London Hospital; Ernest W. Ormerod, William H. Symons, Brice Collyer, and Arthur D. Ducat, of St. Bartholomew's Hospital; D. Egryan Jones, of Trinity College, Toronto, and St. Bartholomew's Hospital; Edward T. Jones and A. Wanstall Clarke, of University College; G. Haylett Lock and Walter H. Hargreaves, of Middlesex Hospital; A. Winsmore Hooper, Arthur E. Thorpe, and J. Wiseman Laver, of St Thomas's Hospital; Reginald A. Cowie, of Cambridge University and St. Thomas's Hospital; Arthur Bousfield, of King's College; A. Cecil Hovenden, G. Stanley Hovenden, and Howard W. Graham, of Guy's Hospital; Arthur G. Bennett, of St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology; Dossabhoy Nowrojee, of Madras Medical College; and Thomas S. Davies, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—Robert Serjeant, of Guy's Hospital; Samuel E. Price, of London Hospital; and Arthur P. Woollright, of St. Bartholomew's Hospital

Physiology only.—Ernest Shepherd, of St. Mary's Hospital; Louis J. A. de Gébert, of Middlesex Hospital; Mark R. Taylor, of St. Bartholomew's Hospital; George W. Gostling, of University College; John Challice, of London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having passed the necessary examinations, and having conformed to the by-laws and regulations, was at the quarterly meeting of the Council on the 9th inst. admitted a Member of the College:

Dumaresq, Mark Bayfield, L.S.A., Streatfield-street, Burdett-road.

The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was at the same meeting admitted a Fellow of the College:

White, Gilbert Benjamin Mower, M.B. Lond., Hazelville-road, N., Diploma of Member, dated Aug. 2nd, 1888.

UNIVERSITY OF ABERDEEN.—The following candidates have received degrees in Medicine and Surgery:—

Degree of M.D.—William Alexander, M.A., M.B., C.M., Tarland; Edward Bovill, M.B., C.M., Bengal; Thomas Joseph Compton, M.B., C.M., Norwich; John Cragie, M.B., C.M., Chard; George S. P. Ferdinands, M.B., C.M., Aberdeen; Neil Morrison MacFarlane, M.B., C.M., Preston; Thomas William Adam Napier, M.B., C.M., Egremont, Cheshire; John Moysey Rattray, M.A., M.B., C.M., Frome; John Scott, M.A., M.B., C.M., Manchester; Charles Carter Shepherd, M.B., C.M., Kidderminster; John Taylor, M.B., C.M., Bootle; Thomas Harvey Thomson, M.B., C.M., Campbeltown; Richard Mahoney Townsend, M.B., C.M., Cape of Good Hope. (The thesis of George S. P. Ferdinands was considered worthy of Highest Honours, and that of Neil Morrison MacFarlane of Commendation.)

Degrees of M.B. and C.M.—Alex. G. Allan, M.A., Portsoy; James Bell, Cults, Aberdeen; Alfred H. Bennett, South Australia; Sidney H. Burnett, Manchester; Wm. H. Clark, Kintore; James D. Crow, M.A., Aberdeen; Patrick W. Diack, M.A., Aberdeen; John P. Farquharson, Aberdeen; *Wm. Findlay, M.A., Aberdeen; James W. de Hoedt, Ceylon; Andrew Hunter, Aberdeen; Samuel C. Ironside, Aberdour; John H. Lumsden, Fortrose; George Lyon, Whitehills, Banff; James M'D. M'Kay, Sutherlandshire; George Mackie, Insch; †Roderick M. MacLennan, M.A., Ross-shire; *John Marnoch, M.A., Aberdeen; Charles Milne, Newhills; Thomas Pimley, Preston; A. Cumming Ross, Craigellachie; David Russell, Banchory; Walter W. Sinclair, Banchory; Charles E. G. Simons, Merthyr Tydfil; George Snell, British Honduras; William H. Stephen, Newhills; *George W. H. Tawse, Aberdeen; Clarence E. Wigan, Somerset; †John T. Wilson, Glasgow. (Robt L. Brander and †William J. Dewar, Arbroath, have passed the examinations for the degrees of M.B. and C.M., but will not graduate until they attain the necessary age.)

* With highest Academical Honours. † Honourable distinction.

The diploma in Public Health has been conferred on—

Richard A. S. Eden, M.B., C.M., Aberdeen; William B. Simpson, M.B., C.M., Bedale; Winckworth Tonge-Smith, M.D.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the Preliminary Examination:

J. Barry, J. Bluett, J. Brogan, M. Caraher, M. Carroll, D. Clarke, H. Conyngham, H. Crumplin, W. Cummins, P. Dempsey, L. Famin, E. Fenton, T. Fisher, P. Fitzsimons, R. Fox, R. Glynn, C. Hodgson, F. Jackson, W. Lawler, J. Leventon, V. Magee, J. Murdoch, J. Murphy, B. McCaul, J. McCarthy, G. McDonnell, D. Spillane, J. Wallace, and A. Goring.

Physics.—J. Benson, M. Carroll, W. Carroll, T. Crean, H. Crumplin, G. Creighton, W. Darby, P. Dempsey, R. Fox, R. Glynn, A. Halligan, B. Hamilton, M. Hurly, H. Kennedy, L. Lett, V. Magee, J. Maughan, W. McCann, B. McCaul, G. McDonnell, J. Neary, J. O'Keeffe, T. Palmer, J. Pigott, S. Scott, G. Simpson, J. Smyth, W. Stratton, J. Thompson, C. R. Tichborne, F. Wise, and A. Young.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed the recent examination in the subjects indicated:—

Arts.—First Class: C. P. Woodstock, E. M. Leney, B. F. Henry.—*Second Class:* G. S. Andrewes, C. J. Armson, C. E. Blackstone, F. B. Cardozo, P. Cator, G. A. Crowe, H. E. Fryer, H. Hilliard, J. Ingram, H. E. Izard, W. R. Kingdon, A. E. Malaher, B. Rowlands, H. J. M. Wyllys. (There were 153 candidates, of whom 3 were placed in the First Class and 14 in the Second Class, having passed in all the subjects required for registration as medical students. 108 passed in one or more of the subjects.)

Surgery.—E. M. Dobinson, Guy's Hospital; W. B. Duck, M.A. Oxon., Oxford University and St. Mary's Hospital; G. V. M. Gideon, St. Mary's Hospital; C. D. Holmes, Liverpool University College; S. R. Lane, Glasgow, Middlesex, and London Hospitals; W. C. Lattey, St. George's Hospital; W. S. McGeagh, L.K.Q.C.P.I., St. Thomas's Hospital; L. E. Parkhurst, B.A. Oxon., Oxford University and St. Mary's Hospital; A. Plumbe, London Hospital; F. Spurr, Sheffield and Middlesex Hospitals.

Medicine, Forensic Medicine, and Midwifery.—E. A. R. Covey, St. Bartholomew's Hospital; H. H. Crickitt, St. George's Hospital; G. V. M. Gideon, St. Mary's Hospital; G. Jones, M.A. Oxon., Oxford University and London Hospital; A. J. Lambert, Leeds Yorkshire College and Westminster Hospital; A. E. Mayner, M.D., C.M., Montreal University; W. F. H. Newbery, M.D., C.M., Trinity Medical College, Toronto; A. S. Phillips, St. Thomas's Hospital; R. D. Waghorn, Westminster Hospital; E. A. Wimberley, Birmingham, Queen's College.

Medicine and Midwifery.—T. C. Hughes, Westminster Hospital; L. Roberts, Cambridge University and St. Mary's Hospital.

Midwifery.—R. W. Brimacombe, Birmingham, Queen's College, and St. Mary's Hospital; J. S. Newington, Edinburgh University.

Messrs. Crickitt, Gideon, Jones, Lambert, Mayner, Newbery, Parkhurst, and Waghorn were granted the Diploma of the Society, qualifying for registration, and entitling them to practise the three branches of the profession—Surgery, Medicine, and Midwifery.

GLANDERS IN HUNGARY.—News from Parndorf, near Pressburg, states that the whole of the horses in two stables there had to be killed in consequence of an outbreak of glanders amongst them. The veterinary surgeon and the two farmers who owned the animals were wounded in destroying the horses, blood poisoning supervening to all three of them, which had been fatal to the veterinary surgeon, and a like result was apprehended to the farmers.

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MEDICAL MAGISTRATE.—Mr. Henry Laver, M.R.C.S. &c., has been placed on the Commission of the Peace for the Borough of Colchester.

THE CENSUS IN INDIA.—The returns of the census in India, just completed, show the population of the Indian Empire to be 285,000,000, being an increase of fully 30,000,000 since the last census, taken in 1881.

OPEN SPACES.—The burial ground of the parish church of St. Giles, situated in the High-street, which has been for many years in disuse and closed to the public, has been taken over by the district board of works, and laid out as a recreation ground.

CAVENDISH COLLEGE, CAMBRIDGE. — An examination will commence on July 7th for one entrance scholarship of £50, one of £40, and at least two of £30, open to candidates who will be under eighteen years of age on Oct. 1st. Candidates may offer one or more of the following subjects: classics, mathematics, natural science, modern languages. For particulars application should be made to the master.

THE INTERNATIONAL CONGRESS OF HYGIENE.—The Government of Denmark has accepted the invitation to be represented at this Congress, to be held in London in August next, and has appointed as its representative Dr. J. Lehmann, dean of the Royal Sanitary Council. The American Government has also notified its intention to appoint representatives at the Congress, and will give general and wide publicity to the Prince of Wales's invitation, with the view that representatives may attend from learned institutions in the United States.

LITERARY INTELLIGENCE.—The first number of the *Nurses' Journal*, the organ of the Royal British Nurses' Association, has appeared. The contents are as varied as the aim of the publication will admit of, and are on the whole interesting.—A new serial, the *Optician*, devoted to the interests of the optical, mathematical, philosophical, electrical, and photographic instrument industries, has been commenced by Messrs. Hyatt-Woolf and Hayman of Fleet-street.—Mr. J. W. Kolckmann of Langham-place announces that Vol. I. of the Transactions of the International Medical Congress held at Berlin last year is now ready.

PRESENTATIONS.—Dr. Younger, on recently resigning his appointment on the medical staff of the London County Asylum, Hanwell, after sixteen years' service, was presented by the inspectors and attendants with a richly chased silver cup, and by the nurses with a handsome and highly ornate salver, each with a suitable inscription, as tokens of the high esteem in which he was held by the subscribers. Also his brother officers gave him individual presents of value as tributes to his worth.—On April 1st, at the Huddersfield Infirmary, Dr. E. F. Scougal, the hon. secretary of the Medical Society, was, on the occasion of his marriage, presented by the members with a handsome walnut cylinder writing-table and a library chair. The table had on it a plate with the inscription, "Presented to Edward Fowles Scougal, M.A., M.D., on the occasion of his marriage, by the members of the Medical Society of Huddersfield."—Mr. P. M. Scatliff, M.R.C.S., L.R.C.P. Lond., has been presented with a handsome pedestal drawing-room lamp by the ladies who have been attending the Lordship-lane branch of the St. John Ambulance Association, as a mark of their appreciation of his services as honorary lecturer to the classes recently concluded.—Dr. Growse, the medical officer of the Marton district of the Rugby Union, has been presented with a gold albert chain, a set of gold studs, and a tankard by the inhabitants of Marton and the surrounding villages, as a recognition of his services as their medical adviser.—At a public meeting held in the Mission Hall, Sharnbrook, near Bedford, Dr. J. Somerville Johnston was presented with a very handsome walking-stick by the members of the Sharnbrook Branch of St. John Ambulance Association, as a token of esteem for valuable services rendered to two very successful classes of the branch. — Mr. E. Wilmer Phillips, L.R.C.P. Lond., M.R.C.S., who has held the office of house surgeon for the last five years in the Windsor Royal Infirmary, having resigned, to undertake private practice at Southsea, was last week, before his departure, presented with a valuable gold watch, subscribed for chiefly by the staff of the institution, with some of the managers and several of the present and past patients.

THE Lord Chancellor has appointed Mr. Francis William Maclean, Q.C., M.P., a Master in Lunacy, in the place of Sir Alexander Miller, resigned.

THE directors of the General Association of Practical Surgical Instrument Makers and Bandagers offer a prize of £10 for the best spontaneous movements of the fingers of an artificial hand in connexion with the elbow-joint. Particulars can be had from Instrumentmacher Wilhelm Tasch, Berlin, Oranienburger-Strasse, 27.

CHILDREN'S HOSPITAL, NOTTINGHAM.—The annual report for 1890 shows an increase in the total receipts for the year and a growing interest in the institution by the general public. The total income was £308 in excess of the previous year. The steady addition in the work of the hospital had necessitated an augmentation of the honorary medical staff, and the necessary appointments were made. Colonel Seely had generously hired a house as a Convalescent Home during the summer at Woodthorpe, and had placed it, free of cost, at the disposal of the committee. Forty-six children were received there, and greatly benefited by the change.

ARROW POISON OF THE PIGMIES.—An interesting account of the various arrow poisons collected by Surgeon Parke in the recent African expedition was given by him to the Pharmaceutical Society on Wednesday night. The poisons were reported by Mr. Holmes, the Curator of the Society's Museum, to be extracted from a well-known bark used as an ordeal poison in several African countries. The plant is known as Erythrophlœum Guineense. Another poison is obtained from the leaf of Palisota Barteri; the stem of unknown species of Combretum; the stem of Strychnos Icaja, a shrub which owes its poisonous properties to strychnine; and the seed of Tephrosia Vogelii, a plant largely used in Central Africa as a fish-poison.

FOOTBALL CASUALTIES.—A player in a match at Royton, on Saturday, between Helmshore and Royton, sustained a fracture of his left leg.—A young man, aged twenty-three, who was playing football for the Churchtown Football Club, on Good Friday, at Southport, against Little Lever, died in the Southport Infirmary on Saturday from lockjaw, supervening on injuries sustained in a charge during the match.—A young man, aged nineteen, while engaged in football in a field in St. Paul's-road, Birmingham, on Saturday, received injuries, and was taken to the Queen's Hospital, where he died on Sunday from a contusion on the right side of the abdomen and rupture of the right kidney.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION. The following Volunteer medical officers, who have been under instruction from Surgeon R. R. Sleman, M.A., 20th Middlesex (Artists) R.V., and the staff of the school, have recently passed the proficiency examination: Surgeon Sir Morell Mackenzie, M.D., Queen's Westminster R.V.; Acting Surgeon D. Key, 1st City of London A.V.; Acting Surgeon D. Grant, F.R.C.S., 24th Middlesex R.V.; Acting Surgeon E. Younger, M.D., 3rd V.B. Royal Fusiliers; Acting Surgeon E. W. Stiven, M.D., 21st Middlesex R.V.; Acting Surgeon J. H. Griffin, London Irish R.V.; Acting Surgeon T. Fennell, 3rd V.B. Cheshire Regiment; Acting Surgeon F. Ransom, M.D., 3rd V.B. Suffolk Regiment. The next class will be held in May.

MEDICAL OFFICERS OF HEALTH SOCIETY.—A meeting of the Birmingham and Midland Branch of this Society was held at the Council House on the 2nd inst. Dr. A. S. Underhill presided. Mr. H. May (Aston) reported the result of the interview of the deputation from the Society with the Sanitary Committee of the Worcestershire County Council, in respect to the appointment or offer of the services of the county medical officer to the district authorities at a reduced salary. It appeared that the action of the County Council was misunderstood. No such offer had been made to the district sanitary authorities. Mr. May read a paper upon Recent Sanitary Legislation. He dwelt especially upon the Housing of the Working Classes Act. A discussion followed, in which Drs. Hill and Manley took part. Mr. May afterwards opened a discussion on the Infectious Diseases Prevention Act. After some observations by several gentlemen, a vote of thanks was passed to Mr. May, and the meeting closed.

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THE BRITISH GYNÆCOLOGICAL SOCIETY will hold a provincial meeting on June 18th and 19th at Newcastle-on-Tyne. Dr. Robert Barnes, hon. president of the Society, will take the chair at the meetings, which will be held in the College of Medicine. Dr. R. C. Benington has been appointed general local secretary, and all communications are to be addressed to him.

MEDICAL NOTES IN PARLIAMENT.

Public Health (London) Law Amendment and Consolidation Bills.

On Tuesday, in the House of Commons, Mr. Ritchie moved the second reading of these Bills, which, he said, dealt with the public health of London, the first being a consolidating Bill and the second an amending Bill. The state of the law in regard to public health in London was very unsatisfactory. Whereas the law as to public health in the provinces had been amended and consolidated by the Act of 1875, the public health law of the metropolis was scattered over a number of Acts, beginning with Michael Angelo Taylor's Act of 1817, and was contained in twenty-nine separate statutes. Under the present law the sanitary authorities might contract with the managers of the Metropolitan Asylums Board for the provision of hospital accommodation. In that case the sanitary authorities were liable for expenses, but in cases in which the sanitary authority thought them able to do so the patients could be made to pay. This Bill proposed to extend that provision to hospitals built by the sanitary authorities themselves. The Bill provided for the immediate abatement of a nuisance, not only where it was actually proved to exist, but also where it was injurious or dangerous to the public health. At present only the persons affected by the nuisance or the local authority could move in the matter, but the present Bill provided that any person might give information of a nuisance with a view to its removal, and under its provisions any person found guilty of allowing a nuisance to exist would be held responsible for doing any work necessary to abate it. The Bill also imposed on the London County Council the duty of making by-laws for the cleansing of streets and the prevention of nuisances. This would throw upon the County Council the duty of making by-laws to put a stop to an intolerable nuisance as to which considerable complaint had justly arisen—namely, the throwing of salt on the streets of the metropolis in snowy and frosty weather. The Bill next dealt with the question of offensive trades, in which several amendments of an unimportant character were introduced. The Bill provided that where a sanitary authority caused a nuisance, or did anything injurious or dangerous to health, it might be prosecuted, and all the provisions as to nuisances should apply. As to the clearance of the footways in times of snow, the law as to footways and watercourses seemed to be that the occupier was liable to clear the snow from before his house, and to keep the footway and watercourse properly swept and cleansed. If the occupier did not perform his duty after a short interval it would be performed for him by the sanitary authority, and the cost put upon him; besides which he would be also liable to a fine for the non-performance of his duty. Nobody could fail to be struck, after a fall of snow, with the numerous cases where a large amount of pavement was left untouched for days and days; and in nine cases out of ten this was in connexion with unoccupied houses, or gardens and squares. Clearly it should be the duty of the sanitary authority to see that this state of things should not exist, and they were now given the power, and the duty was imposed upon them, of ascertaining who was liable, and of making him pay wherever it was possible to do so. With regard to streets, the Bill required the sanitary authority to perform its duty of sweeping and cleansing the streets, and the sanitary authority was made liable to a fine if it did not perform its duty as far as reasonably practicable. The Bill did not set out a period within which the removal must be made; but the sanitary authority would be bound to fix some proper and reasonable period for clearing away dust and house refuse, and they would be liable to a fine if, proper notice being given, they did not at once comply with the request of the owner. The next portion of the Bill dealt with the question of unsound articles of food. They proposed to extend the existing law, which applied only to those who exposed such articles for sale. This Bill applied to every article used for food, and gave power of both search and destruction. The existing law was considerably strengthened. By the law as it stood at present it was only the individual who exposed the article for sale who was punishable by law: they now proposed to make the person from whom the food was bought, as well as the person selling it, punishable for the offence. Then came the question of proper water-supply to houses. In his opinion a house without a water-supply was a nuisance and ought to be abated, and they now declared that being without a proper supply was a nuisance that rendered a house unfit for habitation. They also amended the law with regard to infectious diseases. The provision of the present law with regard to disinfection was entirely permissible. They proposed to make it necessary for the sanitary authority to provide proper premises for disinfecting bedding, clothing, &c., and also vehicles for carrying these articles to and fro. Representations had been made to the Local Government Board, especially from Maidstone, as to persons selling fruit who had been found manifestly suffering from infectious disease. It was eminently desirable to prevent a person suffering from an infectious disease from handling articles of food at all, and therefore the Bill imposed a penalty upon anyone milking, selling fruit, or otherwise engaging in an occupation connected with food who knew himself to be suffering from an infectious disease. They also proposed, with regard to the notification of infectious diseases, that the return required to be sent by the Metropolitan Asylums managers to the County Council should be sent by them to every sanitary authority in London, and to the London School Board, and to the managers of every public elementary school in London. With regard to mortuaries, every sanitary authority must make one. At present the law was only permissive, and considerable scandals had arisen in this respect. Every sanitary authority must also, if required by the County Council, provide a building for post-mortem examinations. One very important matter with which they dealt in this Bill was the question of underground or cellar rooms. By the Public Health Act of 1875 very stringent regulations had been made to secure ventilation &c. In London, however, so far as underground dwellings were concerned, the provisions with regard to the preservation of health were extremely few and weak. By this Bill ample provisions were made with regard to height, drainage, and ventilation. The Government's proposal was to apply to underground rooms the complete Public Health Act of 1875. The proposals in the Bill would apply to all underground rooms, with the reservation that the London County Council might by general regulation, or on application of the owner of particular rooms, dispense with or modify the provisions as far as they involved structural alterations, having due regard to the necessities of the case. One of the proposals of the Bill referred to the inspectors of nuisances and medical officers of health. Means were provided by which an adequate number of proper persons should be appointed as inspectors of nuisances, henceforth to be called sanitary inspectors. Complaint was made that the number of these inspectors in some parts of London was not nearly adequate for the area over which they exercised their jurisdiction, and it was quite impossible for the sanitary authorities to carry out the law unless they had a sufficient staff of inspectors. The Bill provided that the Local Government Board might, if satisfied on representation of the London County Council that a sanitary authority had not appointed a sufficient number of inspectors, order that sanitary authority to appoint as many more as might be deemed necessary. It was also provided, with a view to secure fit and proper persons as inspectors, that their appointment should be subject to regulations of the Local Government Board; and, with regard to the medical officers of health and sanitary inspectors, it was provided that they should be removable by the sanitary authority only with the consent of the Local Government Board. This provision had been urged from many quarters, and there was much force in the argument that, unless these officers were to a certain extent independent of the local authority, they could not perform their duties with absolute freedom. With regard to the non-performance of duty by the sanitary authority at present in London, any person might make complaint against the sanitary authority to the Local Government Board; the Local Government Board might hold a local inquiry into such complaint, and, if satisfied of its justice, they might appoint some person to perform the neglected duty. Under the law as it stood, therefore, the London County Council might be appointed; and the provisions of the Bill really made a modification of the existing law in favour of the vestries. In future it would not be in the power of any individual to put the sanitary authorities to all this trouble, and when complaint was made it would have to be made with the authority of a popularly constituted and responsible body. In many local matters the London County Council rightly had powers of a very extensive character; and it was right and proper in dealing with a great question of public health that the County Council, representing all parts of the metropolis, should be eligible for appointment with regard to the performance of duties which had been neglected by the local sanitary authorities If the House would assent to the Government's proposals, he believed that they would prove to be productive of enormous benefit to the health of London. It was proposed to refer both Bills to one of the standing committees, and he did not doubt that they would come back from that committee even better measures than they were now. He begged to move the second reading.—Mr. Stuart said it was right that powers should be given to the County Council in matters in which it did not supersede the other local authorities, but where it was to frame by-laws which they were to carry out. It was satisfactory to hear that the right hon. gentleman did not share that distrust of the County Council which some Ministerialist members for the metropolis professed to entertain. The work which the Council had done, especially in respect of the housing of the poor, was sufficient to show that it was wholly undeserving of such distrust. An article which appeared in THE LANCET emphasised the fact that the London County Council had not the powers possessed by any suburban or rural anthority with respect to insisting upon the open spaces around houses that were necessary for the health of their occupants, and he trusted that this defect would be supplied by an amendment of the Bill. In order to give efficiency to the sanitary arrangements of London two important reforms were necessary. The first was that there must be placed at the disposal of the local authorities funds other than those obtained by the rating of occupiers. The second was that the local government of London must be completed by the establishment of the district councils which were promised in 1888, and which they had several times heard from the right hon. gentleman were provided for by a Bill he had prepared, and which the House was anxious to see. It might be said that every part of the metropolis was, so to speak, thirsting for this measure, and it was one that could be introduced and carried only by the Government of the day.—Mr. J. R. Kelly said he did not think it was wise, or in the interests of the public, that the antiquated system should be continued of throwing on the occupier of a house the obligation of sweeping the snow from the pavement in front of his door. If the burden were cast on the local authority the result would be that hundreds of men would get an honest day's work, the streets and pavements would be systematically swept, and no one would have reason to complain except the idle loafer who blackmailed the unfortunate householder. He thought that London had very little to gain from the Bill. There were provisions so harassing in their character, the machinery of the common informer was so foreign to the English spirit, there was so little done to relieve the unfortunate metropolitan householders from the foolish burdens cast upon them, that he felt disposed, if any hon. member were to move the rejection of the second reading, to support him.—Mr. Pickersgill submitted, however, that all the subordinate authorities in London ought to be subject to those by-laws. (Mr. Ritchie: They are.) The City of London was exempted from the operation, and it was unfair and impolitic to exempt it. The Bill, as a whole, had many good features, and no doubt it would be improved in its course through committee.—Sir A. Rollit said there could not be any doubt that many of the provisions of those Bills were urgently required, and that they introduced valuable amendments in the law. Provisions relating to the public health were scattered up and down many statutes, and it would be of great advantage to have them consolidated in one measure. One of the defects of the London County Council was that it had been scarcely able to cope with the immense amount of work which had to

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be dealt with. Yet these Bills would impose upon it duties which he thought it would not be able adequately to fulfil. While he welcomed many of the provisions in these Bills, he thought that in committee exception would have to be taken to some of them.—Dr. Farquharson thought the Bill would do a great deal to remove some of the minor miseries of life under which Londoners had been groaning for so many years. Hon. members had not yet had time to go thoroughly into this Bill, and it would, of course, have to be considered by a committee upstairs.—Mr. Isaacs, while thanking the right hon. gentleman for introducing the Bill, was rather disposed to think that the best course would have been to previously introduce a measure for creating district councils.—Mr. Causton, Mr. W. Isaacson, and Mr. Whitmore took part in the debate.—Mr. Ritchie, in reply, said it was not surprising that objection should be taken to certain details, considering that the Bill dealt with so many important and difficult questions. The Bill was not going beyond the existing law. In some respects, indeed, it modified the existing law, because it provided that it should not be in the power of any individual to put that machinery in motion, but the County Council alone; and the County Council even should not be at liberty to interfere until they had obtained the previous assent of the Local Government Board. If in any matter of form or language the Bill was thought to create undue powers of interference, the Government would be glad to consider amendments to remove doubts or difficulties in that connexion. He should be the last person to do anything calculated to prevent good men from coming forward to serve on the local bodies. With regard to medical officers of health and sanitary inspectors, the position was this—that at the end of the term of their present appointment they would become officers under this Bill; until the present appointments ceased they would not.—Mr. Causton stated that many officers were not subject to reappointment.—Mr. Ritchie was not aware of cases in which they were not reappointed; but, in any event, existing appointments might be terminated by mutual consent and a new appointment made. He would only say, in conclusion, that the Government did not regard this Bill as a party one, or in a political sense a contentious one, and they should be glad to listen to any suggestions in committee, and to consider dispassionately, and he hoped favourably, all proposals which they thought would be improvements in the Bill. The Bills were then read a second time, and referred to the Standing Committee on Law.

Certifying Factory Surgeons.

On Thursday, Mr. Jacob Bright asked the Secretary of State for the Home Department, seeing that he had stated that his opinion in regard to the certifying surgeon was based upon the best information, whether he would inform the House if he had consulted the Chief Inspector of Factories upon the subject, and also the Superintending Inspector, and the other inspectors in the districts chiefly interested, as to the advisability of abolishing the certifying surgeon's certificate of fitness; and, if not, why not.—Mr. Matthews replied: I have, in the ordinary course, communicated with the Chief Inspector of Factories on this subject, and I have learned through him the views of his department. It is hardly reasonable to suppose that in dealing with a question of this kind I should not avail myself and take advantage of all the sources of information at my disposal.

Volunteer and Militia Surgeons.

On the same day Dr. Clark asked the Secretary of State for War whether Volunteer surgeons are now promoted to brigade rank, and if so whether it is the intention to promote to a similar rank the senior Militia surgeons, some of whom had been serving before the Volunteer force was instituted.—Mr. Stanhope replied that the reason why the Volunteers have this advantage is that they are organised in brigades, and the rank of brigade surgeon is conferred in recognition of the increased responsibility attached to the principal medical officer of a brigade.

Opium Consumption.

Mr. Samuel Smith asked the Under Secretary of State for India whether he could state what was the total consumption of opium in India in 1880, and also in Burmah in the same year; and what were the figures for the latest year for which statistics had been obtained for India and for Burmah.—Sir Jas. Fergusson, who replied, said the consumption of opium in Madras and Bombay for 1880 could not be given. In 1889-90 it was 1594 chests. Excluding Madras and Bombay, but including Lower Burmah, the total consumption in British India for 1880-81 was 5606 chests, and for 1889-90, 4800 chests. In Lower Burmah the consumption was for 1880-81, 812 chests, and for 1889-90 it was 794 chests. The consumption in Upper Burmah was not known.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on April 7th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	163	47	..	41	3	254	442
North-Western Hospital	139	40	..	12	1	192	443
Western ,,	149	14	..	13	1	177	224
South-Western ,,	150	21	..	14	1	186	340
South-Eastern ,,	174	12	..	19	2	207	462
Northern ,,	218	22	..	10	..	250	480
Totals	993	156	..	109	8	1266	2391

SMALL-POX.—*Atlas* hospital ship, 7.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Sea-sickness. By T. Dutton, M.D. Durh. Second Edition. pp. 79. Price 1s. 6d.

CASSELL & Co., London.
Materia Medica and Therapeutics. By J. Mitchell Bruce, M.D. Lond. 19th Thousand. 1891. pp. 682.

DAVIS, F. A., Philadelphia and London.
Medical Symbolism. By Thos. S. Sozinskey, M.D., Ph.D. Illustrated. 1891. pp. 171. Price 6s.

KEGAN PAUL, TRENCH, & Co., London.
Examination of Water for Sanitary and Technical Purposes. By Henry Leffman, M.D., Ph.D., and William Beam, M.A. Second Edition. Illustrated. 1891. pp. 130.

KEMP & Co., Bombay (London Office, 84, Leadenhall-street).
The Prescriber's Pharmacopœia. By Kemp & Co. Second Edition. 1891. pp. 428.

LEWIS, H. K., Gower-street, London.
Elements of Practical Medicine. By Alfred H. Carter, M.D. Lond. Sixth Edition. 1891. pp. 496.
A Manual of Diseases of the Nose and Throat. By P. S. Hutchinson, M.R.C.S. Illustrated. 1891. pp. 127.
The Comparative Climatology of London and the chief English Health Resorts. By B. Thornton, M.R.C.S., L.R.C.P. Lond. 1891. pp. 15.

PENTLAND, YOUNG J., Edinburgh and London.
Pulmonary Tuberculosis, Etiological and Therapeutic. By R. W. Philip, M.A., M.D., F.R.S.E. pp. 55.

PERCIVAL & Co., King-street, Covent-garden, London.
The Essentials of School Diet. By Clement Dukes, M.D., B.S. Lond. 1891. pp. 187. Price 6s.

SMITH, ELDER, & Co., Waterloo-place, London.
Dictionary of National Biography. Edited by Leslie Stephen and Sidney Lee. Vol. XXVI. Henry II.—Hindley. 1891. pp. 448.

The Visit of the Tenant-Farmer Delegates to Canada in 1890 (published by authority of the Government of Canada, 1891).—The Thermal Springs District of New Zealand, and the Government Sanatorium at Roturua; by A. Ginders, M.D. (G. Didsbury, Government Printer, Wellington, 1890).—Charter, Constitution, By-laws, and List of Fellows of the New York Academy of Medicine (printed for the Academy, New York, 1891).—Report of the British Chamber of Commerce for the year 1890 (C. Skipper & East, Paris, 1891).—A Note for the Successful Treatment of Diphtheria, also of the Coryza and Malignant Sore Throat of Scarlatina; by Henry Thomas, M.D. (Kegan Paul, Trench, & Co., London, 1891); price 1s.—Modern Abdominal Surgery; by Sir T. Spencer Wells, Bart., F.R.C.S. (J. & A. Churchill, London, 1891).—Annales de l'Institut Pasteur; par M. E. Duclaux; Tome V., No. 3 (G. Masson, Paris, 1891)—Archives de Médecine Expérimentale et d'Anatomie Pathologique; par MM. Grancher, Lépine, Straus, et Joffroy (George Masson, Paris, 1891).—Estadistica de las Inoculaciones con Mosquitos contaminados en Enfermos de Fiebre Amarilla; par los Dres. Finlay y Delgado (A. Alvarez y Comp., Habana, 1891).—Behandlung weiblicher Geschlechtskrankheiten; von Thure Brandt (Fischer, Berlin, N.W., 1891).—Report of the State of the Blood and the Bloodvessels in Inflammation; together with a Report on Lymphatic Hearts and on the Propulsion of Lymph from them, through a proper Duct, into their respective Veins; by T. Wharton Jones, F.R.S. (London: Baillière, Tyndall, & Cox).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AULD, A., M.B., C.M. Glasg., has been reappointed Medical Officer for the Heck District of the Pontefract Union.

BLAIKIE, A. B., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 District of the Oswestry Union.

BRONNER, ADOLPH, M.D. Heidelb., M.R.C.S., has been appointed Laryngologist to the Bradford Infirmary.

BRONNER, HERMANN, M.D. Strasburg, has been appointed Honorary Assistant Medical Officer to the Bradford Infirmary.

BURDWOOD, J. W., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Bourne, Lincolnshire.

CARTWRIGHT, J. P., M.R.C.S., has been appointed Medical Officer of Oswestry and the Workhouse.

COLLUM, ARCHIE T., L.R.C.P., M.R.C.S., has been appointed House Physician to Charing-cross Hospital.

COSENS, CHAS. H. C., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Second District of the Wellington Union.

ERSKINE, ROBT., M.D. Q.U. Irel., has been reappointed Medical Officer for the Camborne District of the Redruth Union.

FRASER, HERBERT, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Windsor Royal Infirmary, vice Phillips, resigned.

FRY, W. W. B., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Builth Union.

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GIBBS, CHARLES, L.R.C.P., M.R.C.S., has been appointed House Surgeon to Charing-cross Hospital.
HORROCKS, W. H., Jun., M.B., F.R.C.S., has been appointed Assistant Surgeon to the Bradford Infirmary.
HUGHES, EDGAR, F.R.C.S., has been appointed Surgeon to the St. George's and St. James's Dispensary, and Surgeon to the London Rifle Volunteer Brigade.
JULER, HENRY E, F.R.C.S., has been appointed Consulting Ophthalmic Surgeon to the London Lock Hospital and Asylum, Harrow-road.
MACGREGOR, D. A., M.B., C.M. Edin., has been reappointed Medical Officer for the Denby District of the Penistone Union.
MACVAIL, JOHN C., M.D. St. And., D.P.H. Camb., has been appointed Medical Officer of Health for the Counties of Stirling and Dumbarton.
MCLINTOCK, JAMES, M.D., B.Sc. Edin., has been appointed Medical Officer of Health for the County of Lanark.
REMFRY, LEONARD, M.A., M.D., B.C. Cantab., M.R.C.P., has been appointed Obstetric Physician to Out-patients at the Great Northern Central Hospital.
PARHAM, H. G. H., M.R.C.S., L.R.C.P., has been appointed Surgical Registrar to Charing-cross Hospital, vice F. X. Da Costa, resigned.
RIDDELL, J. S., M.B., C.M. Aberd., has been appointed Medical Officer for the West Division of the Oldmachar Parochial Board.
ROLSTON, T. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Stoke and Tamar District of the Stoke Damerel Union.
SIMPSON, ALEX., M.A., M.B., C.M. Aberd., has been appointed Junior Assistant Medical Officer to the Sussex County Asylum, Hayward's Heath.
STONEY, P. B., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Millom, Cumberland.
SULLY, A. MAX, L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer of the Jaffray Suburban Hospital, Birmingham.
SWALLOW, F. MCDONALD, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Silkstone District of the Penistone Union.
WILLIAMS, WM. HENRY, jun., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Medical Officer of Health for the Rural Sanitary Authority of the Sherborne Union, Dorset.
WILMOT, THOS., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Medical Officer to the Bradford Infirmary.
WILSON, A. C. J., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Penistone Rural Sanitary District.
YOUNGER, EDWARD GEORGE, M.D. Brux., M.R.C.P. Lond., has been appointed an Honorary Physician to the St. Pancras and Northern Dispensary.
YOUNG, JAMES, M.D. Glasg., has been appointed Assistant Surgeon to the South Dispensary, Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ALRESFORD UNION.—Medical Officer for the Second District. Salary £100 per annum, with extra fees and vaccination. (Apply to the Clerk, Alresford, Hants.)
ALRESFORD UNION.—Medical Officer of Health for the District of the whole Union. Salary £40 per annum. (Apply to the Clerk, Alresford, Hants.)
BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing will be provided.
CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.
CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Physiology. Honorarium £100 per annum.
CHELSEA.—Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner. Salary £450 per annum.
DEVONSHIRE HOSPITAL, Buxton.—House Surgeon. Salary £100 per annum, with board, furnished apartments, and washing.
DEVONSHIRE HOSPITAL, Buxton.—Assistant House Surgeon. Salary £50 per annum, with board, furnished apartments, and washing.
GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.
GENERAL INFIRMARY, Leeds.—Resident House Physician for twelve months. Board, lodging, and washing provided.
GENERAL INFIRMARY, Leeds.—Two Resident House Surgeons for twelve months. Board, lodging, and washing provided.
GENERAL INFIRMARY, Leeds.—A Resident Officer at the Ida Hospital for six months, with honorarium of £25.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.
KING'S COLLEGE HOSPITAL, London.—Sambrooke Medical Registrar.
KING'S COLLEGE, London.—Demonstrator of Public Health.
LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Assistant, out-door. Salary £120 per annum. (Apply to the Secretary, 12, North Parade, Lincoln.)
NORTH-WEST LONDON HOSPITAL, Kentish-town-road. — Resident Medical Officer for six months.
NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer for six months.
NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM, Gosport.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.
PARISH OF BIRMINGHAM (WORKHOUSE INFIRMARY).—Medical Clinical Clerk at the Workhouse Infirmary for six months. Honorarium 15 guineas for the six months, also provided with rations (which do not include alcoholic liquors), coal, gas, apartments, washing, and attendance. (Apply to the Clerk to the Guardians, Parish Offices, Edmund-street.)
ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street.—Third Honorary Physician.
WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

AUDLAND.—On April 2nd, at Brooklands, Wellingborough, the wife of W. E. Audland, L.R.C.P. &c., of a daughter.
BRAND.—On April 6th, at Invery, Great Driffield, E. Yorks, the wife of Dr. Brand, of a son.
BREWIS.—On April 1st, at Waratah, Mount Bischoff, Tasmania, the wife of R. Adams Brewis, M.D. Edin., of a daughter (stillborn).
BUCKLEY.—On April 2nd, at The Poplars, Thrapston, the wife of T. W. Buckley, M.R.C.S., of a daughter.
HALL.—On April 5th, at Wimpole-street, W., the wife of F. De Havilland Hall, M.D., F.R.C.P., of a daughter.
LE CRONIER. — On April 1st, at Midvale-road, Jersey, the wife of Hardwick Le Cronier, M.R.C.S., of a daughter.
SIDEBOTHAM.—On April 3rd, at Erlesdene, Bowdon, Cheshire, the wife of E. J. Sidebotham, M.A., M.B. Cantab., of a son.
TIDEY.—On April 3rd, at Villa Magnolias, Montreux, Switzerland, the wife of Stuart Alexander Tidey, M.B., of a daughter.
TURNER.—On April 6th, at Alton, Hants, the wife of T. B. Turner, M.R.C.S., of a daughter.

MARRIAGES.

ADAMS—WHYTE.—On March 12th, at St. Thomas's Cathedral, Bombay, Charles Adams, M.B., LL.B. Dub., F.R.C.S.I., son of the late Andrew Adams, Esq., Terraquin, county Tyrone, to Maude de Wyte, second daughter of the late Major John L. A. Whyte, J.P., county Clare, and Bray, Ireland.
AMSDEN—VEREKER.—On April 4th, at St. Bartholomew's Church, Dublin, George Amsden, M.B., of Essex County Asylum, Brentwood, to Annie Elizabeth, daughter of Amos M. Vereker, Esq., Wellington-place, Dublin.
BEAUCHAMP—SHARP.—On April 4th, at St. Mark's, Milverton, Leamington, Sydney Beauchamp, M.B. Cantab., second son of H. H. Beauchamp, to Edith, third daughter of the late H. Morton Sharp, of Leamington.
HARDYMAN—BEATH.—On April 3rd, at the Parish Church, West Wickham, by the Rev. F. E. Murphy, M.A., Bath, George Hardyman, M.B., C.M., of Bath, eldest son of the late John Hay Hardyman, Esq., of Heatherwick, W.S., late of the 3rd Battalion Royal Scots, to Constance Christian, second daughter of David Beath, Esq., Melbourne, Australia, and of Wood Lodge, West Wickham, Kent.
HICKLY—MAPLESTONE.—On April 1st, at St. Stephen's Church, Shepherd's-bush, Arthur Mackenzie Hickly, L.R.C.P. Lond., M.R.C.S., of Meltham, Yorkshire, to Gertrude Frances, daughter of the late H. Maplestone, R.I., Shepherd's-bush, London.
LOCKETT—SPRENT.—On April 7th, at St. Peter's Church, Southsea, by the Rev. C. R. Tompkins, Vicar, John Arthur Pope Lockett, M.R.C.S., L.R.C.P., of Woolwich, to Isabella Swanson, elder daughter of Major Sprent, late R.A., of Southsea.
MACDONALD—USHER.—On April 2nd, at 18, Lauder-road, Edinburgh, by the Rev. Robert G. Balfour, Thomas Ranken Macdonald, M.B., Surgeon, Bengal Medical Staff, to Amy Balmer, youngest daughter of Mr. Thomas Usher, of Edinburgh.
PAYNE—EDMUNDS.—On March 31st, at St. George's Church, Edgbaston, Birmingham, Willam Arthur Payne, B.A. Pem. Coll. Oxon., M.R.C.S., of Selly Oak, Worcestershire, son of F. A. Pryne, Esq., Pantre Ucha, near Oswestry, to Margaret Banks Edmunds, daughter of the late Henry Edmunds, Esq., of Elmsdale, Edgbaston.
PRAGER—KNOWLES.—On March 26th, at Brighton, Alfred Prager, L.D.S., of Portman-street, W., to Teresa Carlotta Gladys, daughter of the late Captain C. H. Knowles, R.N.
SCOUGAL—GRIST.—On April 2nd, at St. Peter's, Huddersfield, by the Rev. Canon Bardsley, M.A., Vicar, assisted by the Rev. Robert Willan, M.A., Vicar of Golcar, Edward Fowler Scougal, M.A. Aberd., M.D., C.M. Edin., Huddersfield, to Edith, second daughter of John J. Grist, Oakleigh, Edgerton, Huddersfield. No cards.
TRINDER—MOLE.—On April 7th, at Tutbury Parish Church, Staffordshire, Alfred Probus Trinder, M.R.C.S., L.R.C.P., elder son of the late Rev. Daniel Trinder, Vicar of Highgate, to Mary Maude, eldest daughter of R. L. Homer Mole, of Riverdale, Tutbury.

DEATHS.

BABINGTON. — On April 2nd, in London, Surgeon-Major Thomas Babington, Medical Staff, Retired.
DAVIDSON.—At Toowoomba, Queensland, John Maxwell Davidson, M.B., C.M. Glasg.
DAVIS.—On April 7th, at 20, Upper Woburn-place, Dr. H. P. Davis, aged 73. Friends will please accept this, the only intimation.
HOWELL.—On April 8th, at Cleeve House, West Hill, Wandsworth, Bessie, wife of J. Arthur Ives Howell, Esq., and daughter of the late John Tayler, Esq., of Gotherington, Gloucestershire, aged 31 years.
JAMES.—On April 3rd, at Ireton Wood, Derbyshire, Henry James, M.D.
STAMFORD.—On April 3rd, at Heathfield, near Alfreton, Derbyshire, Florence Louisa, wife of W. A. Stamford, M.R.C.S. Eng., and daughter of the late Hugh Eccles Walker, M.D., of Chesterfield, aged 42 years.
TONKS.—On April 2nd, at Willenhall, Staffordshire, Joseph Tonks, M.R.C.S., aged 39.
VACHELL.—On March 29th, at Victoria, Ebbw Vale, Edward Shearman Vachell, M.R.C.S., J.P. for Monmouthshire, second son of the late C. R. Vachell, M.D., F.R.C.S., Cardiff, in his 36th year.
WADE.—On April 1st, at Cross, Compton Bishop, Somerset, Edward Wade, Surgeon, aged 81.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, April 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. G. Buckston Browne: The Importance of the Post-prostatic (or trigonal) Pouch in the Surgery of the Vesical Calculus, illustrated by several cases.

Tuesday, April 14.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. J. Scott Keltie: The Geography of Africa.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. J. H. Hutchinson (for Dr. W. B. Cheadle): Measles as a Cause of Endocarditis, being an account of four cases in which Organic Mitral Murmurs developed during the course of the disease.—Mr. W. Arbuthnot Lane: Chronic Traumatic Arthritis.

Wednesday, April 15.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, April 16.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Edmund Roughton: A case of Hepatic Abscess implicating the Lung, Pleura, Kidney, and Colon.—Dr. Amand Routh: The Treatment of the Vomiting of Pregnancy.

Friday, April 17.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—9 P.M. Prof. A. W. Bücker: Magnetic Rocks.

Saturday, April 18.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Prof. Silvanus P. Thompson: The Dynamo.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 9th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 3	29·61	E.	41	39	66	51	39	..	Overcast
,, 4	29·72	S.E.	45	44	66	54	40	·06	Raining
,, 5	29·60	S.W.	49	47	85	56	43	·45	Cloudy
,, 6	29·69	W.	46	44	93	60	42	·08	Cloudy
,, 7	29·70	N.	44	42	..	45	41	..	Overcast
,, 8	29·93	N.	41	37	89	49	35	..	Bright
,, 9	29·97	N.E.	42	41	50	45	40	·09	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

GENERAL PRACTITIONERS' UNION.

Beaureper, writing on this subject, says: "I can most heartily endorse every word that has been written by your correspondent, 'General Practitioner,' as to the absolute necessity for the above. The two great factors that we have to contend against are overcrowding and underselling, the one being the outcome of the other. In the town in which I reside there are two lamentable instances of the pass to which we have come. One large society, composed principally, but not entirely, of women, pays 3s. per head per annum, which includes attendance in labour. Amongst its members are included tradesmen and their wives, publicans of both sexes, and gentlemen's servants. Another glaring instance. A large cotton spinning mill pays its medical officers, of which it has no less than five, sixpence and eightpence per quarter per head. I have vainly tried to put a stop to this state of things, but am powerless, as there is no unanimity amongst us. In the Poor-law very much the same thing occurs, and guardians have no hesitation in informing the discontented medical officer that if he is not satisfied they can find plenty of men able and willing to do his work for half his pay, and I fear it is but too true. The public vaccinator has also to put up with the same competition, and is frequently told that Mr. X. only puts on two small spots for half-a-crown and calls at the people's house for the purpose, and has been known not to despise the proverbial "bob" when the larger coin has not been forthcoming. The question of collecting clubs also requires ventilation, men being frequently employed as touts to obtain members for the so-called dispensaries."

General Practitioner writes as follows on the same subject: "May I be allowed to support my statement which appeared in your issue of March 20th, that a General Practitioners' Union would be of service to the medical profession. In the legal profession there is the Incorporated Law Society, against which no lawyer dares to fight. We have no such society in the medical profession. Of course, there is the British Medical Association, but its meetings are attended chiefly by consultants and hospital surgeons, the bulk of general practitioners having too much work and too little pay to spare the time for attending. Then, again, its meetings are so much taken up with discussing matters relative to disease itself that there is little time to spare for trying to ameliorate the condition of the mass of those whose work it is to cure disease. I perfectly agree with 'M.D.' that there are 'a lot of ungentlemanly men in the profession who are willing to give their services for the smallest pittance,' but I hope these men are in the minority. It only wants unanimity on the part of the medical profession to

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improve the position of general practitioners, both as regards income and as regards the respect in which they, as a body, are held by members of other professions and society at large. Let us have the Union, I say, and let us stand by one another in not allowing competition (owing to the continual increase of our numbers) to cut down the fees. There is plenty of room for us all, if we can only agree to accept fees according to a certain standard, which can be brought about by forming ourselves into a Union. Then shall we be able to put down the 'hangers-on' round our profession, bonesetters, and unqualified practitioners, and, worst evil of all, qualified men acting as 'covers' to quacks. If we are only united and determined to fight the matter out, there is little doubt of our success."

C.—A practitioner with only a surgical qualification is at a legal disadvantage in enforcing payment for services in a *medical* case. He is competent, if *registered*, to give evidence before a coroner, even in a medical case, the coroner generally contenting himself with inquiring if the witness is a registered practitioner.

Mr. John A. Sleicher (New York).—We have no special information of the waters. Application might be made to the editor of the *Wien. Med. Wochens.*, from which our account was taken.

Mrs. Piper.—A sample should be forwarded, with a statement of its composition.

B. F. P. has not enclosed his card.

HUMAN AND BOVINE SCARLATINA.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Atkinson on the above subject in your current issue, I beg to say it is with great regret that, as a country veterinary practitioner, I cannot enlighten him on those bovine diseases communicable to the higher animal which manifest themselves by "an entirely different set of symptoms," and there are three main reasons for my inability to do so:—1. The medical officer of health too frequently forms a theory that the cow is to blame, and omits to notice important sanitary facts in his zeal to saddle her with the odium of being the origin of an epidemic; or he does not seek the aid of a veterinary surgeon to elucidate the mystery of mammary ulcers, which have probably arisen from the farmer having picked off small papillomata with a very dirty thumbnail, and tried to assist the healing process by using some strong caustic. Or, if accompanied by a veterinary surgeon, he is handicapped in his scientific research by the arguments and theories of a man whose pathology has become very rusty, and who in his ignorance disbelieves in the unity of human and bovine disease. 2. The ignorance of stockowners and their fear of the Contagious Diseases Act. Many a time have I had to turn sadly away from a case which might have helped to throw light on this subject because the owner has been suspicious that my investigations were being carried on at his expense, or were likely to damage his milk trade. 3. An entirely different set of symptoms do not characterise the same disease in man and beast. Like produces like; and though there are minor differences due to difference of surrounding temperature, &c., the symptoms have much in common, and the pathogenic organisms exhibit a strong family likeness—e.g., malignant pustule of man and anthrax of sheep; consumption of man, tuberculosis of cattle.

The cow has much to be answerable for; but I fear that her human neighbours are more frequently to blame, and in their anxiety to screen themselves either wilfully or ignorantly mislead the searcher after truth.

I am, Sirs, yours obediently,

Exmouth, April 6th, 1891. FRAS. EVELYN PLACE, M.R.C.V.S.

SALICYLIC ACID AND SCARLET FEVER.

IT is stated by Dr. de Rosa, in an Italian medical journal, that salicylic acid is a valuable prophylactic in epidemics of scarlet fever. Of sixty-six children who were all exposed to the contagion, but who were given from a grain to five grains a day, sixty-three entirely escaped.

PREHISTORIC TREPHINING.

To the Editors of THE LANCET.

SIRS,—The very interesting subject of prehistoric trephining, detailed in your last issue, is pretty fully discussed in one of the "International Scientific Series"—vol. xliv., I believe, "Man before Metals," by M. Joly—and illustrated by engravings of trephined skulls. The explanation given, if I recollect rightly, is that epileptics were so treated probably to allow the demon possession to escape, and that these skulls after death of the owner were treasured as charms against the disease. As I left that part of my library in New Zealand, I cannot refer to the volume.

I am, Sirs, yours obediently,

April 4th, 1891. JOHN W. KEYWORTH.

LONGEVITY.

IN the country district of Ormskirk one of the medical practitioners discovered that the combined ages of the first five cases seen by him last Good Friday morning amounted to 402 years, the respective ages of the patients being 74, 87, 74, 74, and 93.

L.R.C.P. should refer to THE LANCET of March 21st, p. 686, as to the sale of Koch's fluid; the question of quantity may be decided by reference to the various reports of cases treated by the remedy.

A SCOTCH HOLIDAY SPOILED.

D. E.—One of the supposed charms of a medical holiday in the Western Islands of Scotland is a fancied security from summons to a midwifery case. Our correspondent's interesting letter shows that this security must not be too much relied on. His kindness in the circumstances was great, and his charges were reasonable. An emergency in such solitudes might call for the gratuitous exercise of professional talents; but to be at the mercy of violent calls by rich people, involving attendance on midwifery, crossing moors and mountains, and taking a journey of sixteen miles on a wet night, giving up holidays, sleeping a fortnight in the patient's house, and then guiding and accompanying a tender infant 200 or 300 miles by land and sea, is a risk and a sacrifice that must have their compensations. In the main we agree with our correspondent in his view of his obligation to Dr. K——. Dr. K——, being first sent for, cannot be ignored in regard to the obstetric case. But our correspondent was personally compelled, as it were, to undertake the infant's care, and did it, finding it a most onerous duty.

M.D.—We should say that our correspondent was duly engaged, and is entitled to his fee. He should have very strong evidence that a brother practitioner *knew* that he was engaged to attend the case before concluding that he was guilty of unprofessional conduct in superseding him without notice.

SYMBOLS AND INSIGNIA OF ALCHEMY, CHEMISTRY, AND MEDICINE.

To the Editors of THE LANCET.

SIRS,—A gentleman in the United States is endeavouring to make a complete collection of pictorial illustrations of the various badges and insignia that have been used in times past to characterise or distinguish the professions of pharmacy, chemistry, medicine, surgery, and the allied sciences, including alchemy. Can any of your readers assist in this matter by describing such signs as may be known to them, or referring to publications containing such particulars?

I am, Sirs, yours faithfully,

April 4th, 1891. G. W.

THE FRIENDLY SOCIETIES' MEDICAL ALLIANCE IN CONCLAVE.

THE twelfth annual Conference of the Alliance has been recently held at Wolverhampton. Mr. J. B. Cutler presided, and delegates were present from Burton-on-Trent, Gloucester, Bradford, Kidderminster, Lincoln, Leicester, Wednesbury, Stourport, York, and Wolverhampton. The President remarked with satisfaction on the more friendly spirit with which the medical faculty regarded these associations and their methods. With every wish to reciprocate friendly feeling with the President, and towards schemes for facilitating good medical attendance on working men and their families, we do not know on what facts he bases his satisfaction. The medical profession feels deeply the contemptuous estimate of its services implied in the terms of these friendly associations, which are accepted for the most part by the younger members of the profession. These terms are being commented on by the lay press, and are discreditable alike to those who offer and to those who accept them.

Messrs. Rocke, Tompsitt, & Co.—We regret we are unable to supply the address required.

CIVIL SERVICE INSURANCE SCHEME.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "A Medical Civil Servant," in your issue of the 28th ult., in reference to the Civil Service Insurance Scheme, states that "all civil servants prior to appointment are submitted to a very extended medical examination; and the medical examiner is specially asked to give the benefit of any doubt he may have in regard to fitness for the service not to the individual, but to the State, and as a result only the best men are passed." Will he be so good as to say in which branches of the Civil Service this course is practised?

I am, Sirs, your obedient servant,

April 7th, 1891. INQUIRER.

PRACTITIONERS DISPENSING ABROAD.

COMPLAINTS are made that the medical men practising in sparsely populated rural districts in Alsace-Lorraine, who are allowed to supply medicines to their own patients when there is no pharmacist near, have of late been exceeding the licence they have, and that some of them systematically supply medicine when there is no difficulty in getting prescriptions made up. Some, too, it is said, even sell medicines to persons who are not their patients. The pharmacists naturally complain that their rights are being infringed, and the medical authorities have been charged to see that the law is no longer set at defiance. It is not, however, intended to take away the licence to medical men to supply medicines, as under the circumstances this would be impossible.

Russell.—The death of Napoleon I. was caused by cancer of the stomach.

Mr. W. H. Brown.—Probably next week.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Walter Foster, Edgbaston; Surgeon-General De Renzy, Dublin; Mr. Lawson Tait, Birmingham; Dr. Horrocks; Dr. Sainsbury; Dr. Mortimer Granville, London; Dr. Herman, London; Mr. Hulke; Prof. Ogston, Aberdeen; Mr. W. H. Bennett, London; Messrs. Rowntree and Co., York; Dr. M. S. Wade, Victoria; Messrs. Rock, Hawkins and Co., London; Mr. Weddell, Newcastle-on-Tyne; Messrs. Burgoyne and Co., London; Dr. H. J. J. Lavis, Naples; Dr. Pierce; Dr. Wood White, Birmingham; Mr. Marshall, Huddersfield; Messrs. Legray and Co., Paris; Mr. W. H. Brown, Leeds; Messrs. Lazard Bros. and Co., London; Dr. W. Hill, London; Mr. Duke, Dublin; Mr. Haydon Brown, Edinburgh; Mr. Lawrence-Hamilton, London; Messrs. Hertz and Collingwood, London; Mr. Place, Exmouth; Messrs. Matthew Bros., London; Surgeon Sleman, London; Messrs. C. Hearson and Co., London; Mr. S. Paget, London; Messrs. Herman, Lescher, and Co., London; Dr. Dutton, London; Dr. G. Johnson; Dr. Knox, East Moseley; Mr. Blair, Leeds; Mr. Oxley, Wisbech; Messrs. Carnrick and Co., Bloomsbury; Dr. Kingsbury, Blackpool; Messrs. Baillière et Fils, Paris; Dr. Alexander, Hanwell; Messrs. Roche, Tompsit, and Co., London; Mr. Hordley, Stoke-upon-Trent; Messrs. Wright and Co., Bristol; Mr. Beeves, London; Mr. J. J. Marsh; Mr. Cleary, New York; Dr. Scatliff, Brighton; Mr. Cogan, Nottingham; Messrs. Mann and Sons, London; Dr. Keyworth, Southport; Messrs. Abbott and Barrett; M. Tissier, Paris; Mr. Mercier, London; Messrs. Keene and Ashwell, London; Mr. Sutherland, London; Mr. H. Hick, New Romney; Mr. Cocking, Sheffield; Dr. Ball, London; Senhor Corria Vaz, Oporto; Mr. G. Vickers, London; Miss Thompson, Tunbridge Wells; Dr. Wood, Wilmington, N.C., U.S.A.; Messrs. Potter and Sacker, London; Mr. H. Sell; Mr. Lyle, London; Mr. Sleicher, New York; Mr. Addiscombe, Glasgow; Messrs. Duncan, Flockhart, and Co., Edinburgh; Mr. Edwards, Birmingham; Messrs. Mason and Co., London; Mr. Wheeler, Chicago; Dr. Partington, Tunbridge Wells; Dr. Poore, London; Mr. Densham, London; Messrs. Dulau and Co., London; Mr. Davis, London; Mr. Keary, Preston; Mr. M. Smith, London; Mr. Jones, Towcester; Dr. Cooper, Mortimer; Mr. L. Browne, London; Miss Beadon, Plymouth; Messrs. Macmillan and Co., London; Mr. Brodie, Newcastle-on-Tyne; Messrs. Cochrane and Walker, Liverpool; Mr. Mangan, Kensington; Messrs. Coutela and Co., Paris; Dr. E. Blake, London; Mr. G. N. Pitt; Messrs. Deacon and Co., London; Mr. Dickson, Derbyshire; Messrs. Brown, Gould, and Co., London; Mr. G. Whitcombe, Gloucester; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Ryley, London; Messrs. Savory and Moore, London; Dr. J. L. Steven, Glasgow; Messrs. Blondeau et Cie., London; Mr. T. F. Raven, Broadstairs; Messrs. Frazer and Co., London; Mr. Balding, Royston; Dr. Wigan, Portishead; Mr. Le Fevre, Belfast; Mr. T. Dodd, London; Mr. Kühn, London; Mr. A. Thomson, London; Mr. Saunders, Manchester; Mr. Birchall, Liverpool; Mr. A. Hodson, Brighton; Mr. Lacy, London; Dr. Becker, Milwaukie; Mr. Hamilton, Brighton; Mr. Hodgson, London; Mr. T. B. Browne, London; Mr. G. Brown, London; Mr. J. Poland; Dr. Brown, Clifton; Prof. Watson, Glasgow; Dr. Fullerton, Greenwich; Dr. B. Howard, Yokohama; Mr. S. E. Atkins, London; Dr. Piggott, Teignmouth; Dr. Hambleton, London; Dr. W. Hunter, London; Mr. T. J. Henry, Waraïlda; Mr. Boning, Powick; T., Homerton; M.D., Camberwell; M.R.C.P.; M.; D. E; General Practitioner; One of the Crowd; L.R.C.P.; C.; M.D.; Sussex, London; *Birmingham Daily Post;* W. B. A., London; Alpha, Manchester; M. M., London; An Old Subscriber; Secretary, General Hospital, Cheltenham; Bradford Infirmary; *Dental Record*, London; F.R.C.S.I., London; Devonshire Hospital, Buxton; A. B., London; Fairplay; Geddes Manufacturing Co., London; Alpha, London; Cash, London; Spes, London; Guest Hospital, Dudley; Delta, Manchester; Surgery, London; Spes, Liverpool; Clerk, Wakefield; Inquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Thorne, London; Mr. Lockwood, Eastbourne; Mr. Field; Mr. Hutchinson, Belfast; Dr. Brewis, Edinburgh; Mr. Thin, Edinburgh; Mr. Wilson, Devizes; Mr. Stranaghan, Pontypridd; Mr. Brownlow, Bolton-le-Moors; Dr. Nelson, Wandsworth; Mr. Simmonds, Newry; Mr. Tully, Hastings; Mr. Forjett, Caistor; Dr. Evans, London; Dr. Richards, Ledbury; Mr. Johnston, Beds; Dr. Jones, Towcester; Messrs. Lee and Martin, Birmingham; Mr. Lewis, Swansea; Messrs. Keith and Co., Edinburgh; Dr. Keith, London; Messrs. Richardson Bros. and Co., Liverpool; Mr. Jenkins, Lincoln; Mr. Jones, Morley; Mr. W. Scott, London; Miss Symons, Southport; Mr. Heywood, Manchester; Mr. Tyte, Minchinhampton; Mr. Johnston, Burnley; Mr. Stamford, Alfreton; Dr. Irwan, co. Down; Mr. Brien, co. Dublin; Mr. Hale, Chesterfield; Mr. Richardson, Manchester; Dr. Parkinson, Sheffield; Mr. Blackburn, Barnsley; Dr. Waller, Peterboro'; Mr. A. W. Needes, London; Miss Moorhouse, London; Messrs. Paternoster and Hales, Hitchin; Mr. Charlesworth, Sheffield; Messrs. Heywood and Co., Manchester; Dr. McFarlane, co. Tyrone; Mr. Withers, Shrewsbury; Mr. Greville, Sheffield; Mr. Marshall, London; Mr. Knowles, Leeds; Mr. Waldron, Leicester; Dr. Garman, Kendal; Dr. Granville, London; Mr. Husbands; Mr. Barker, Hampstead; D. Medicinæ, London; Iota, London; R. M., London; Secretary, Medical Aid Association, Loughborough; Students, London; Secretary, Wonford House Hospital, Exeter; K., London; Secretary, Hospital for Sick Children, Bloomsbury; Medicus, Todmorden; Lupus, London; M.B., Loughborough; Assistant, London; C. H., London; Attendant A. G., London; Y. B. J., Maida-vale; Zulu, London; Cantab, London; K., Yorks; P. E. R., London; J. W. C., London; M.B., Newcastle-on-Tyne; P. L. M., London; X. Y., Abergavenny; Mrs. H., Shepherd's-bush; C., Torpoint; Beta, London; Dunelm, London; Medicus, Edinburgh; Lupus, London; Fidelis, London; G. Y., Londan; T. R., London; Surgeon, London; Mason, London; Omega, London; Y. Z., Truro.

NEWSPAPERS.—*Auckland Star (N.Z.), The Newspaper, Liverpool Daily Post, Insurance Record, Reading Mercury, Mining Journal, West Middlesex Advertiser, Leeds Mercury, City Press, Sunday Times, Law Journal, Bristol Mercury, Builder, Broad Arrow, West Middlesex Standard, Hertfordshire Mercury, Guy's Hospital Gazette, Chemist and Druggist, Metropolitan, Spectator, Saturday Review, Surrey Advertiser, Architect, Yorkshire Post, Scottish Leader, Windsor and Eton Gazette, Pharmaceutical Journal, Cape Times, Weekly Free Press and Aberdeen Herald, Lincolnshire Chronicle, Le Temps (Paris), Western Daily Mercury, Spennymoor and Tudhoe Chronicle, Vegetarian, Windsor and Eton Express, Birmingham Daily Post, Morning Post, Maidstone Journal, Midland Evening News, Ipswich Journal, Melbourne Daily Telegraph, Cheltenham Examiner, Observer, Rangoon Gazette, East Anglican Times, Colchester Gazette, Sheffield Independent, Scotsman, Oldham Standard, Durham Chronicle, Chorley Guardian, The Owens Register (Beechworth, Melbourne), Tasmanian Mail, Pioneer Mail (Allahabad), &c.*, have been received.

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Lecture
ON
THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

Delivered at King's College Hospital,

BY I. BURNEY YEO, M.D., F.R.C.P.,
PROFESSOR OF CLINICAL THERAPEUTICS IN KING'S COLLEGE, AND PHYSICIAN TO THE HOSPITAL.

(*Concluded from p. 813.*)

THE following cases do not represent the most remarkable or the very best results I have observed from this treatment, but I present them as *consecutive*, not selected cases.

CASE 1.—L. H——, a young married woman, twenty years of age, was admitted, with well-marked symptoms of typhoid, into King's College Hospital. There were albumen in the urine, some rhonchi over the left lung, and a loud systolic murmur over the base of the heart. Her temperature was 104·2°, and it rose to 105° in the evening of the third day after admission. The day before this she began the chlorine and quinine mixture, taking a dose every four hours. Two days afterwards the temperature did not rise above 102·4°, and the next day 102·8°. It rose again, however, on the fourth day to 104°, fell the next evening to 103·2°, and on the seventh, just a week after commencing the medicine, to 101·2°, and never again rose above 101°, but fell pretty steadily, and was 98° on the evening of the twenty-first day after her admission into the hospital. She was then practically convalescent, and she was able to get up just one month after her admission. Now this case, at the onset, had by no means a favourable aspect. There was a temperature of 105°, much mental oppression and sluggishness, much abdominal distension and tympanites, a tremulous tongue, a loud basic murmur, which disappeared during convalescence, some albumen in the urine, a good deal of splenic enlargement, and some congestive bronchitis of the left lung. I do not think it is possible to look on this chart showing the progress of this case, and not be impressed with the fact that the average course of the disease was greatly modified and favourably influenced by the treatment.

CASE 2.—H. B——, a young man nineteen years of age, was admitted into King's College Hospital on March 11th with the usual symptoms of typhoid fever. His temperature on admission was 103°; on the evenings of the 12th and 13th it reached 104·4°. There was diarrhœa, and his motions were noted as "very offensive." The chlorine and quinine mixture was begun on the 12th; on the 14th the temperature began to fall, and on the 16th the highest temperature recorded was 101°; on the evening of the next day it was 102·2°, but fell again on the following day, and for the next three days did not rise above 101·2°; then, the bowels having become constipated, the temperature rose on the following three days to 102°, 102·6°, and 103·4° respectively. Two or three enemata of olive oil and water were given, and on the 24th, twelve days after the commencement of the treatment, it began to fall steadily, and reached normal on the 28th, from which date the convalescence was rapid and uninterrupted. Here, again, I do not think one can look at this chart without seeing that the course of the disease was greatly and favourably modified by the treatment.

CASE 3.—W. H——, a seaman twenty-three years of age, was admitted into King's College Hospital with typhoid fever on March 20th. It was noted that the motions were very offensive. The temperature on admission was 103·2°. He began the chlorine and quinine mixture on the 21st, and on the 23rd it was reported that the motions had lost their offensive odour. His temperature fell at once and steadily, and was on the evening of the 23rd 101·8°; it oscillated between 101° and 102° till April the 5th, when it fell steadily to normal, and he was convalescent just three weeks after his admission.

CASE 4.—M. W——, a female nineteen years of age, was admitted with typhoid fever on March 22nd. There was diarrhœa, much abdominal tympanites, and the motions were very offensive. The temperature was 103·6°. The chlorine and quinine mixture was begun as the 23rd, and on the 26th the motions had lost their offensive character. On the 25th the temperature began to fall, and fell steadily to 100° on the 29th; it rose again to 101·2° on the 31st, fell to 100·2° for the next two days, rose to 101° on April 3rd, and to 102° on the 6th, and then fell steadily to normal on the 12th, three weeks after admission. She made a rapid and uninterrupted convalescence.

I could bring before you the histories of many other cases, but they all tell the same story—great modification of the temperature curve, deodorisation of the motions, cleaning of the tongue, maintenance of a comparative well-being and much less evidence of a septic state of blood, rapid convalescence, and much less loss of strength than is ordinarily observed after an attack of typhoid fever. I may mention, however, another case where I had departed somewhat from my ordinary prescription, and had ordered liquor chlori with quinine, instead of the mixture I have described. The temperature was reduced, and the case appeared to be doing very well, when unexpectedly the temperature rapidly rose from 101·6°, to which level it had been reduced for three or four days, to 104·4°. This was disappointing, and I asked to see the medicine which had been last supplied, and then I found that in this last supply the dispenser had substituted aquæ chloroformi for liquor chlori. This was an important observation, because it showed that it was not the quinine alone which was effective, but the combination of chlorine with quinine. During this interruption of the chlorine the offensive odour of the stools quickly reappeared, and disappeared as quickly on the resumption of the chlorine mixture. The case eventually did well.

In commending this method of treating typhoid fever to your notice as supporting the idea of the value both of general and local antisepsis in this disease, I am far from wishing you to conclude that this is the very best method to follow in all cases, or that a more perfect antiseptic treatment may not be attainable. It seems probable from recent observations that various antiseptic methods may be adopted with advantage, and that some constitutions may be influenced more readily and favourably by one method than by another. I will endeavour therefore now to complete as well as I am able the history of the application of this idea. The important point is that the *idea* of an antiseptic treatment of typhoid fever should take possession of your minds; the methods of applying the idea will grow more and more perfect as our knowledge of all the conditions of the problem grows more complete.

The use of β-naphthol as adopted by Professor Bouchard to produce intestinal antisepsis has had many supporters. Professor Petresco of Bucharest has borne valuable testimony to the efficacy of this drug. He had experimented with carbolic acid, salicylic acid, turpentine, benzoic acid, kairin, calomel, corrosive sublimate, and boric acid without any very favourable results. He then tried a saturated solution of sulphide of carbon, with which he was much better pleased; and lastly he tried naphthol, fifteen grains three times a day, and he reports that he had results more favourable than with any other remedy, that the rate of mortality was reduced, and the course of the disease favourably modified. Dr. J. Mitchell Clarke[1] of Bristol has also recorded some observations on the use of β-naphthol and also of hydro-naphthol in typhoid fever. Hydro-naphthol is prepared from β-naphthol. It is less soluble, and melts at a lower temperature, and it is said to be absolutely innocuous. Like β-naphthol, it has a faint odour of carbolic acid, and like it, though less so, it leaves a pungent and burning after-taste in the mouth. He gave hydro-naphthol in five cases of typhoid fever, and all did well; two were severe and protracted cases. It soon stopped the diarrhœa, and the stools lost their offensive odour. He gave from three to four grains every two hours until the diarrhœa was checked, and then every three hours so long as there was fever. He thus summarises his results from the use of naphthol in typhoid fever:—1. A reduction in the average duration of the fever. 2. Stools become much less offensive. 3. A diminution of abdominal tenderness and meteorism. 4. Early cleansing of tongue and less dryness of mouth and lips. 5. Absence of albuminuria. 6. Convalescence more rapid and strength less reduced. 7. Less risk of propagating the disease to others. 8. Tendency to secondary complications diminished. In two of Dr. Clarke's cases he thought the naphthol caused a milk dyspepsia, and one of

[1] The Practitioner, December, 1888, and July, 1890.

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these had a relapse, and he made some experiments with the drug which showed that it retarded the digestion of egg albumen by peptic fluids, and very slightly that of milk, but that it had no effect on the pancreatic digestion of milk or of albuminates. He suggests that all risk of its interference with stomach digestion would be avoided by giving it in pills coated with keratin. This would also get rid of the pungent burning after-taste it is apt to leave in the mouth and throat when given mixed with fluids. A French pharmacist has suggested that it should be given in an emulsion. It can be dissolved in ten times its weight of sweet almond oil with the aid of a gentle heat, and then made into an emulsion with mucilage and syrup. Cream rather than milk would be a good vehicle for the administration of such an emulsion, and this would probably carry it through the stomach into the small intestine. It has also been observed to produce a dark-brown colouration of the urine, and to cause some pain in micturition, due no doubt to the absorption of a certain quantity from the intestine and its elimination by the kidneys. M. Maximovitch[2] recommends α-naphthol as preferable to β-naphthol. It is three times less toxic, and as to its antiseptic value, he found 1 part in 10,000 would prevent the development of the typhoid bacillus, as well as that of many other septic microbes, in ordinary cultivation fluids. Dr. Moncorvo of Rio[3] has given β-naphthol to children by the mouth in doses of from fifteen to thirty grains in twenty-four hours, and has found that tolerance was always perfect on the part of children. It promptly removed the fetor of the stools, and diminished or removed the tympanites. He states he has obtained remarkably good results from intestinal antisepsis so produced. Dr. Teissier of Lyons also prefers α-naphthol for producing intestinal antisepsis in typhoid fever. He read a paper recently before the Congress at Limoges, in which he spoke very highly of the results he had obtained by this method of treatment. He gives it in six-grain doses, combined with salicylate of bismuth, and he at the same time promotes free diuresis by cold water enemata. He also gives enemata of quinine and cinchona as an "anti-thermic tonic." He observed that as soon as intestinal antisepsis was established the urine became green, the temperature fell, the albuminuria disappeared, the spleen diminished in size, and the tongue became remarkably moist. Convalescence was very rapid. He considers the naphthol acts by sterilising the bacterial products in the intestine. Dr. Schwartz[4] has demonstrated that naphthaline administered internally diminishes the number of bacilli in fæcal matter in the proportion of one-third to one-fourth. When its administration is discontinued, this proportion increases again. He states also that he finds calomel increases the efficacy of naphthaline, and he advises a combination of calomel and naphthaline in the treatment of typhoid fever. He also confirms the observations of Bouchard and Legroux. But naphthaline is not so safe or suitable an intestinal antiseptic as β-naphthol or α-naphthol, and in August last a *pharmacien* at Grenoble was fined 500 francs for substituting naphthaline for β-naphthol in making up a prescription for a case of typhoid fever. The advantage of attempting to establish intestinal antisepsis in the treatment of typhoid fever was dwelt upon at a discussion in the New York Academy of Medicine in January of last year. Dr. W. H. Thomson, of the Roosevelt Hospital, where he had had large opportunities of treating cases of typhoid fever, advocated it strongly, but his method differs somewhat from those we have been considering. In the first place, he looks carefully to the food administered, and that is an important point, to which I shall presently return. He never gives milk undiluted, but always mixed with an equal quantity of lime water, which he believes to be "no mean antiseptic." He objects to beef-tea as setting up gastro-intestinal fermentation. He gives also ten grains of saccharated pepsin with ten minims of dilute hydrochloric acid every three hours, with the object, I presume, of promoting the complete digestion and absorption of the food, and so leaving but little residue to ferment and decompose in the small intestine, the mineral acid being also an antiseptic. He also gives ten grains of subcarbonate of bismuth every three hours, sometimes both medicines every two hours. He regards these (he has used turpentine and nitrate of silver with advantage) as the best agents for the purposes of intestinal antisepsis. All the preparations of bismuth are doubtless useful for this purpose, especially when there is diarrhœa, as they are very efficacious in controlling the intestinal catarrh. Sir William Jenner testifies to the same effect. "Carbonate of bismuth," he says, "in twenty grain doses every four or six hours is one of the best remedies I know for the catarrhal inflammation of the bowel itself." Dr. Thomson also advocated at the end of the first week a purge of calomel and compound jalap powder, and Dr. Scatterthwaite in the same discussion advised small doses of calomel at the commencement, and also the use of hydrochloric acid as an antiseptic.

I have already referred to the testimony borne by Sir Thomas Watson to the efficacy of mercury in the treatment of continued fever. It is not a little remarkable to find in the present day Liebermeister[5] advocating strongly the use of the same remedy. Indeed, the administration of calomel in the early days of typhoid fever has now a considerable number of advocates amongst practical physicians of eminence. And it has been suggested that the success of calomel may depend as much upon its *antiseptic* as on its purgative properties—indeed, excellent results have been claimed as following the inunction of mercurial ointment into the abdomen and thighs (fifteen grains at a time) in the early days of the fever.[6] Liebermeister has observed excellent results following the use of two antiseptic substances, the one iodine, the other calomel. You will not fail to notice the close chemical relationship between iodine and chlorine, the latter of which I have myself found give such satisfactory results. Liebermeister's remarks are well worth reproducing here. He says: "Inasmuch as typhoid fever is a disease which is generated by a specific poison, the supposition that a specific antidote might exist, and the consequent search for the same, are not so absurd as people thought them during that period when all therapeutic wisdom was supposed to have culminated in the expectant plan of treatment." And he goes on to express an opinion that both iodine and calomel may possibly have a specific influence over the fever. He used a solution of iodine in iodide of potassium, and gave a dose every two hours. In 200 cases he treated in this way the mortality was less than in cases treated at the same time similarly in every other respect, but without the iodine. So also with regard to calomel. Comparing 200 cases treated with calomel with a large number treated without, but otherwise precisely alike, under the calomel treatment the rate of mortality was decidedly lower. He gave it in every case that came under treatment before the ninth day of the fever, usually about eight grains for a dose three or four times in the first twenty-four hours. He treated 800 cases in this way with such excellent results that he resolved to continue the method himself and to recommend it to others. He believes it materially shortens the duration and lessens the intensity of the disease. He considers that an adult should have three or more eight or ten grain doses. He is inclined to conclude that it exerts a specific influence.

Many physicians have recorded their approval of an initial laxative, and no doubt it is well if there is no diarrhœa to begin with one, we shall then have less hesitation in keeping the bowels quiet afterwards. Murchison approved of one or two doses of calomel—three to five grains—during the first week, and before there was much diarrhœa; he believed it rendered the disease milder and shorter. Dr. George Johnson long ago[7] called attention to the ill-effects of locking up the secretions in the bowels in cases of typhoid fever by opium and astringents, and pointed out the advantage of occasionally clearing out the bowels by castor oil or some other aperient. Indeed, it has been said that "purgation and antisepsis are, to some extent, interchangeable terms." An aperient expels the poisonous ptomaines and other decomposing substances from the intestinal canal, and if given in the early stages may actually prevent subsequent serious diarrhœa. But the use of aperients, to be perfectly safe, must be limited to the first ten or twelve days of the fever, the great risk attending their use, in the later stages, is the possibility of the existence of deep ulceration in the ileum, and in that case, as Sir William Jenner has pointed out, an aperient may mean the difference between life and death to the patient. At that period of the disease intestinal antisepsis can only be safely secured by the use of

[2] Nouveaux Remèdes, Nos. 4 and 10, Feb. and May, 1888.
[3] Satellite, Feb. 1890.
[4] Berliner Klin. Woch., 1889, Nos. 20-22.
[5] Von Ziemssen's Cyclopædia of Practical Medicine.
[6] Brit. Med. Jour., Jan. 5th, 1889.
[7] Ibid., vol. i. 1867, p. 274.

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intestinal antiseptics, such as naphthol, thymol, salicylate of bismuth, &c. Thymol is preferred by some; it is innocuous in full doses, and possesses an antiseptic power four times as great as that of carbolic acid. Cantani considers tannic acid an important intestinal antiseptic, and that it checks the vegetative activity of the bacteria, and renders innocuous the poisonous ptomanies. Mosler agrees with this view, and advises its administration by the rectum. I have always, in private practice, when I have found it advisable to control the diarrhœa, or arrest the tendency to intestinal hæmorrhage, given small tannin injections per anum, and with the most satisfactory results. My usual prescription is from ten to twenty grains of tannic acid, and from two to five grains of Dover's powder, in two ounces of thin mucilage, after each loose action of the bowels.

Finally, if we would maintain intestinal antisepsis, as I believe we should in all cases endeavour to do, we must look carefully to the mode of feeding our typhoid fever patients, which, I have reason to know, is frequently ill calculated for the attainment of that object. I have elsewhere described fully what I consider should be the method of feeding a fever patient.[8] I will only now point out a few things which I think should be avoided. And first, and chiefly, let me insist on the fact that no good can possibly come of pouring down the patient's throat a quantity of food that he cannot absorb, and that will only pass through or accumulate in the small intestine and ferment and decompose there, and aggravate in every possible way the mischief which we desire to lessen or prevent. The typhoid fever patient in the acute stage of the fever can absorb scarcely any food by the stomach; nearly all his digestion is intestinal, and that also is certainly gravely impaired. Sir Wm. Roberts has called attention to this. "In the seriously sick," he says, "the stomach becomes often inoperative, and digestion becomes almost exclusively intestinal. In the febrile sick the stomach loses its normal office and becomes merely a conduit to pass on the liquid food to the duodenum." Sir Wm. Jenner has expressed his disapproval of the large quantities of milk that are often given to typhoid fever patients, to their great detriment, and he has urged upon practitioners the importance of looking for the presence of undigested curd of milk in the stools, and to take warning by its appearance of the mistake they are committing. Excess of zeal in feeding fever patients is, I maintain, responsible for much of the intestinal trouble that complicates these cases. Strong beef-tea, milk, port wine, brandy, and beaten-up eggs are given the patient in rapid succession, and they accumulate in his intestinal canal, and form a fermenting mixture, out of which poisonous ptomaines may be formed; while pure cold water, one of the best of eliminators and antiseptics, is often withheld from the patient. Is it to be wondered at that tympanites and painful flatulent distension of the bowels frequently arise after such feeding? I read of practitioners passing a long tube into the bowel three times a day for the purpose of removing "flatulent distension and foul fæcal accumulations"—accumulations that never ought to have accumulated! In feeding a typhoid fever case you should be guided by a careful observation of the digestive and absorptive capacity still retained by the patient, and you should remember that no good, but harm, is done by giving the patient more food than he absorbs. It must be especially remembered that excellent as milk is as a food, it is a *concentrated* food apt to coagulate into *indigestible curd* on encountering any acid secretions in the stomach or intestines. It should therefore never be given *undiluted* to a fever patient, and it should be made distinctly alkaline, so that it may not form an irritative coagulum when it reaches the stomach, but pass on in the fluid form into the duodenum. For this purpose Vichy water is a good diluent of milk, but a less expensive and very convenient method is to add to each cup of milk and water (half milk and half water), an alkaline tabloid composed of bicarbonate of soda, bicarbonate of potash, carbonate of magnesia (each two grains), and common salt, three grains. This will not only assist the digestion of the milk, but it will add certain necessary salts to the food, which from the absence of vegetable foods the patient does not get. Common salt is also an excellent antiseptic. Let me also protest against the common practice of giving very strong beef-tea to fever patients; it has always seemed to me that the too ordinary practice of giving concentrated beef-tea and sweet port wine to a fever patient was precisely the best means of setting up troublesome septic changes in the intestinal canal. And why this desire to give these very concentrated beef extracts? Everyone with any right to speak with authority on this matter has urged the importance of the free administration of water to carry off the products of metamorphosis, as an eliminant and antiseptic. Why not give some of this water in the form of light, clear soups and broths—far more grateful to the fever patient than strong beef-tea, to which they soon take a great aversion. I am not speaking against meat soups and meat juices—I have argued elsewhere in their favour,—but I am enforcing their rational use and their rational preparation. The clear, light, clean-tasting, nicely flavoured *consommé*—flavoured with fresh vegetables and savoury herbs that every first-rate cook serves at the commencement of a good dinner—is the kind of food for a fever patient. But I will not pursue this part of the subject further, as I have elsewhere fully discussed the principles that should guide us in the feeding of acute diseases; I will only repeat the recommendation to limit the food of the fever patient to that which he is able to absorb.

In the preceding remarks I have thought it my duty to call your attention to the progress that the idea of an antiseptic treatment of typhoid fever is making amongst physicians in all parts of the world; authoritative observations in this direction are becoming more and more numerous, and the reported results are uniformly favourable. I say purposely the *idea* of an antiseptic treatment, because I do not wish to lean with any great stress on any particular manner of carrying this idea out, as we probably have not yet arrived at the very best means for doing so. But I think I have been able to make it clear that the possibility and the duty of maintaining intestinal antisepsis in the treatment of typhoid fever—even if we may not hope, as I think we may, to produce a general antiseptic influence on the circulating fluids—have been admitted by a great and rapidly increasing number of careful and experienced clinical observers and teachers. I believe it is our duty to follow in the same direction, and that by doing so we shall promote the credit of our science by diminishing considerably the mortality from this disease.

[8] Food in Health and Disease, p. 363.

THE IMPORTANCE OF THE POST-PROSTATIC (OR TRIGONAL) POUCH IN THE SURGERY OF VESICAL CALCULUS, ILLUSTRATED BY SEVERAL CASES.[1]

BY G. BUCKSTON BROWNE.

THE surgery of vesical calculus may be considered under two heads: first, the finding of the stone, and, secondly, its removal. Errors in sounding for stone have perhaps attracted more attention than mistakes in the diagnosis of any other surgical malady, and the best way of removing a stone from the bladder is even still a frequent matter for argument and difference of opinion. The chief cause of all this difficulty in diagnosis and difference of opinion as regards the method of removal is the fact that the bladder is not always a simple sac, but sometimes has pouches, pockets, or sacculi opening out of its general cavity, in which stones may lie, and escape the diagnostician's sound or the lithotrite, tube or forceps of the operator. All this is simple enough and known to every surgeon, but the fact that vesical sacculi are of very different kinds is not universally known or appreciated, and great error is caused by speaking loosely of pouched or sacculated bladders, as if all the pouches of a bladder were alike. Bladder pouches may be divided into three varieties: 1. There is the well-recognised sacculus which we may call the ordinary sacculus, and which consists of a protrusion of mucous membrane between the muscular fibres of the bladder. Such sacculi are found in the upper part, at the side, and in the floor of the bladder; and where this is covered with peritoneum, they, too, are covered by the same membrane. 2. A pouch often forms behind the trigone—i.e., behind a line drawn between the vesical orifices of the ureters. It is part of the general cavity of the bladder, but is sometimes deep enough to make difficult the discovery of a stone lying within. This

[1] A paper read before the Medical Society of London, April 13th, 1891.

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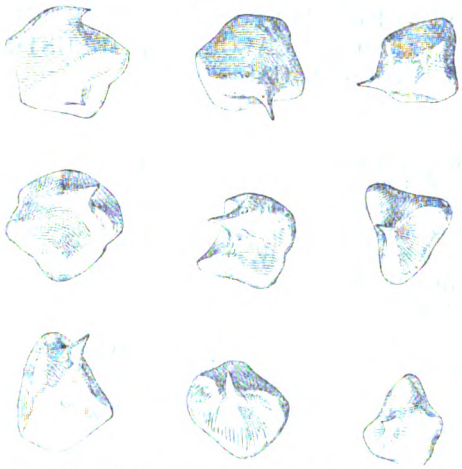
may be called the post-trigonal pouch. 3. There is a post-prostatic or trigonal pouch to which I would particularly draw attention, because I believe it has hitherto received little notice, and because I think it is the chief cause of error in searching for stone and of imperfection in its removal, whether by the lithotrite or by the knife. The post-prostatic pouch is often of extraordinary depth. If the patient be supposed to be lying down, it may be said to consist of the trigone of the bladder, pushed down between the enlarged and projecting prostate in front and a thickened and firm inter-ureteral ridge behind. Where there is much intra-vesical prostatic projection, the pouch may literally be roofed over by this prostatic outgrowth. Calculi in this pouch cause much pain, since the trigone of the bladder has a larger nervous supply than any other portion. Lying as the pouch does in front of and below the orifices of ureters, it is a perfectly contrived trap for the catching and retention of renal calculi upon their entrance into the bladder, and it will readily be seen how favourably the stones are there placed for growth. That they do lie there and grow into extraordinary shapes is shown by several of the stones about to be described. The object of this paper is to put forward the following two propositions for consideration, and to relate illustrative cases. 1. That, owing to the post-prostatic pouch, vesical calculus is often difficult to detect in cases of enlarged prostate, and that if the pouch is deep it may be absolutely impossible to find the stone by any instrument passed in through the urethra. 2. That, owing to the occasional depth of the post-prostatic pouch, lithotrity is sometimes an impracticable operation, it being mechanically impossible to evacuate the bladder of all débris by urethral instrumentation.

CASE 1.—D. T——, aged sixty-eight, seen with Dr. Whittle of Brighton, July, 1886. For seven years all urine by catheter; urine very fetid. By rectum, prostate found very large. A tight urethral stricture at five inches from meatus; urethra nine inches long. Owing to the stricture, catheterism very difficult. I therefore performed internal urethrotomy. After this no difficulty; passed Nos. 13 and 14 with ease.—Feb. 14th, 1887: Patient complains of a pricking pain at the mouth of the bladder; worse when he rides. Sounded him and found a small stone.—Feb. 19th: Lithotrity; a

FIG. 1.



Nine calculi, each bearing a spike, probably the result of friction from being closely packed together in a post-prostatic pouch.

most tedious operation. It seemed that as soon as one calculus was crushed and cleared out the tube and aspirator would suck out another stone from some sac or pocket, for immediately after the débris were withdrawn a stone would rattle against the end of the tube, rendering the reintroduction of the lithotrite necessary. This was repeated over and over again, and I entered in my notes at the time that the bladder must be sacculated. All went well, however, and in July, 1888, I sounded the patient and found nothing. I saw nothing more of him for twelve months, when on June 3rd, 1889, he came up with symptoms which induced me to sound him again, and a stone was found. On June 8th, finding much difficulty in the introduction of instruments, owing to the stricture, and thinking from the sensation my sound gave me when in contact with the stone that it was not a case of calculus free in the cavity of the bladder, I determined to open the bladder above the pubes and found a large intra-vesical prostatic lobe, and below it a pouch almost entirely cut off from the cavity of the bladder, and packed with stones. They were removed one by one, nine altogether, and each bore one curious spike. These spikes, well shown in the engraving (Fig. 1), may simply have resulted from friction, but of this I am not perfectly satisfied. The wound was healed in a fortnight, and on July 12th the patient went home, passing his catheter every five hours, and entirely free from pain. During the summer he walked and rode, and swam in the sea. On July 30th he wrote: "Never better for years. Can cross my legs now, which I could not before, and can sit in any position." On Sept. 13th he came up to London in a dying condition. He had had a long swim, which had been followed by a rigor and severe left renal colic. He died next day, and on the 15th I made a post-mortem examination. The prostate was found projecting into the bladder, as already described, and under it there was an enormous pouch containing one calculus. This calculus was round, had no spike, and was entirely unlike those removed by the supra-pubic operation. Both ureters were dilated, and the left kidney was full of large calculi. It was breaking down into abscess. Fig. 2 shows the prostate and bladder. The

FIG. 2 and FIG. 3.

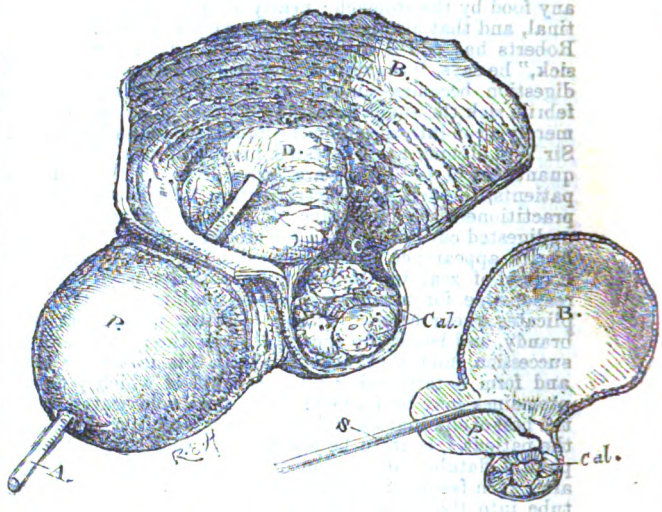


FIG. 2.—A, Piece of bougie showing course of prostatic urethra. B, Bladder wall, behind the inter-ureteral ridge (C). Cal., The nine spicate calculi, in post-prostatic pouch. D, The intra-vesica prostatic growth. P, The prostate.
FIG. 3.—Partly diagrammatic to show how in this case a lithotri (S) introduced through the urethra failed to reach the calcul

prostatic projection into the bladder (D) will be readily noted; under it lie the nine calculi, which I removed nearly four months before death, but which are replaced to make the engraving complete. It will be seen what difficulties such a case must present, owing to the size and depth of the post-prostatic pouch, both to the surgeon sounding for stone and to the lithotritist. It is also conceivable that lateral perineal lithotomy would not have rid the bladder entirely of its calculous contents. There are many cases well known where experienced surgeons have left calculi in the bladder after the lateral operation, and probably such a condition as the one described has often been the cause. Supra-pubic cystotomy here was perfectly successful; the calculus found in the pouch after death had come down from the kidney quite recently, and corresponded exactly with the other stones found in the left kidney.

CASE 2.—W. O——, aged sixty-eight. Before this patient came to me he had undergone five operations of lithotrity during a period of less than two years, obtaining little, if any, relief. He was suffering greatly. I opened the bladder above the pubes, found a stone firmly fixed in a post-prostatic pouch, and took it out with a spoon exactly

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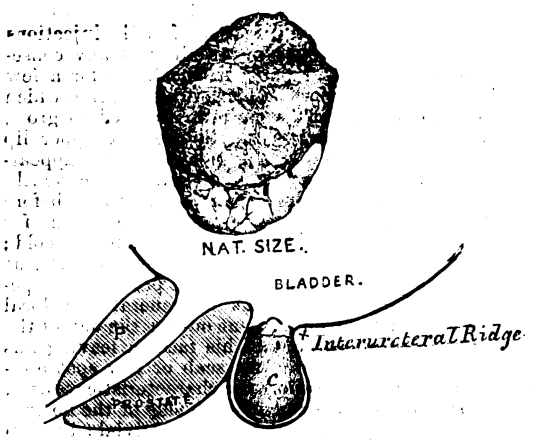
as one would take out half an egg from an egg-cup. The patient was entirely relieved, and made a good recovery. Fig. 4 represents the stone, which was phosphatic, and underneath the engraving shows the relations of this calculus to the bladder and prostate. The stone presented by a small surface in the bladder, and lay in a pouch which was not deep enough to make the detection of the stone difficult by a sound introduced through the urethra, but was sufficiently deep to make successful lithotrity impossible.

The following case, however, is still more remarkable, for while it illustrates the entire futility of lithotrity when the

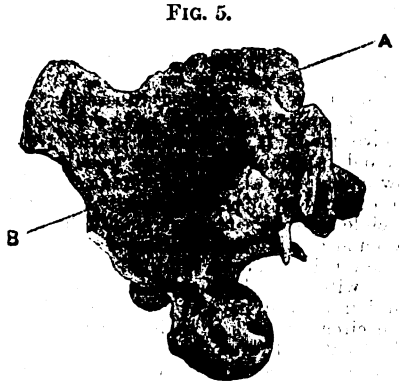
FIG. 4.



calculus is in a deep post-prostatic pouch, the stone is the most unusual one I have ever seen, and is really a cast of the pouch, showing all its irregularities.

CASE 3.—The patient was aged ninety-four. Some years ago he had been subjected to an operation of lithotrity, and more recently he had again undergone that operation. On both occasions the operators had been men of the greatest eminence. Since the last operation he had suffered considerably, and there were now present all the signs of calculus. The effort of rising from his chair brought on violent vesical spasm. Driving and walking were impossible on account of the pain they caused. I told him that he had stone, and begged him to take an anæsthetic and to give me leave to remove the calculus by any means which I might find best at the time of operation, saying that his previous experience of the operation of lithotrity showed that the case was not an ordinary one, but that probably there was some abnormal calculous condition present. Nothing, however, would induce him to undergo another operation, and in three months he died. Upon post-mortem examination the remarkable stone shown in Fig. 5 was

FIG. 5.



removed from behind the prostate. The rough portion marked A was all that presented in the bladder cavity, and this was evidently the surface from which the successive lithotritists had removed the more salient portions of the stone. In front of this rough surface is a smooth cup-shaped cavity, B, in which the intra-vesical prostatic projection played. It will easily be seen that it was impossible to remove this stone by any instruments introduced through the natural passages, and that it could have been thoroughly removed by supra-pubic cystotomy.

(To be concluded.)

CASE OF FACIAL LUPUS HEALED BY KOCH'S METHOD.

BY THOS. WHITESIDE HIME, B.A., M.D., &c.

THIS patient was discharged from the Home for Koch's treatment, Bradford, on March 13th, 1891, cured of his disease, so far as all evidence enabled one to judge. He had been under treatment by Koch's method alone since Dec. 30th, 1890, when he received his first injection, and he had received in all twenty-seven injections, the last on the day of his leaving the Home. He had received the large quantity of 6·367 grammes of tuberculin altogether. The patient is forty-four years old, and a fitter by trade. His family history shows that several maternal uncles and aunts had scrofulous glands, and some died of phthisis, while his father's side was free from this disease. His father died of apoplexy, and his mother is alive and paralysed. Two of the patient's brothers had scrofulous glands in early life, and a brother, now aged about forty-two, has suffered from facial lupus for ten or twelve years, and is now much disfigured by the destructive action of the disease. The patient was healthy as a child, but when about eighteen years of age a hard nodule (gland?) appeared in front of the right ear. It grew slowly for from three to four years, and then began to suppurate, and continued to discharge for from two to three years. There is a white glassy scar about an inch and a half in diameter, and with some pinkish lines running across it, at this spot now. The patient has never had venereal disease in any form. He has a healthy wife, and is the father of seven healthy children. He has always been healthy, except for the lupus, and, so far as he knows, has not been in contact with tubercular cases. About four years ago a roughness of the skin appeared between the eyebrows, and a pimple soon after on the edge of the left nostril. The latter became raw, scabbed from time to time, and gradually spread over the whole of the left nostril, end of the nose, and round to the other nostril. It also extended up the ala of the left nostril and about three-quarters of an inch down the cheek from the angle of the left nostril and cheek. Some months later "a raw pimple" formed on the cheek about half an inch from the left corner of the mouth; later, one appeared on the right upper eyelid, and a few months later still another appeared one inch below the right eye.[1] In the autumn of 1889 he went into the Leeds Infirmary, under the late Mr. McGill, who scraped the nose, forehead, right eyelid, and spot near the mouth, pronouncing the affection to be lupus. The wounds remained healed for some weeks, but then became rather worse than before, and he returned to the infirmary, and the parts were again scraped, as well as the spot below the right eye. The resulting cicatrices broke out afresh in from five to six weeks, and at Whitsuntide, 1890, he entered the Leeds Infirmary for the third time, and the same parts were scraped, and, in addition, the left upper eyelid. The healed cicatrices broke down again in from five to six weeks.

When I saw him the terminal one inch and a half of his nose was of the familiar purple-red colour, hard and brawny; the end was partly scabbed, partly raw, and discharging pus; the right nostril was deeply red at the lower part, the left partially eaten away. The right upper eyelid was scabbed and red; the left red, but not scabbed; the spot at the corner of the mouth was brawny, red, and discharging, being partially scabbed. The patient's general health was good. He complained most of the heat and hardness of his nose, apart from his alarm at the steady extension of the disease. His left upper lip was much thicker than the right, but this he did not complain of; he said it had come on gradually. On Dec. 30th, 1890, he received his first injection of Koch's

[1] The facts of the patient's history, medical and other treatment, I have from himself only.

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tuberculin. The number and amount of his injections, as well as the highest temperature reached after each before the next succeeding injection, were as follows:—

No. of injections.	Date.	Amount injected in milligrammes.	Highest temperature.	Maximum pulse.
1	Dec. 30, 1890	0·001	103·0°F.	92
2	Jan. 3, 1891	0·001	103·0	92
3	,, 6 ,,	0·003	103·8	116
4	,, 14 ,,	0·006	103·0	106
5	,, 16 ,,	0·01	103·0	99
6	,, 19 ,,	0·016	102·8	94
7	,, 24 ,,	0·026	103·0	97
8	,, 26 ,,	0·036	99·8	84
9	,, 30 ,,	0·05	102·0	92
10	Feb. 5 ,,	0·05	102·4	90
11	,, 6 ,,	0·063	98·8	82
12	,, 7 ,,	0·075	99·8	82
13	,, 8 ,,	0·1	98·8	86
14	,, 12 ,,	0·2	98·8	86
15	,, 14 ,,	0·35	98·4	80
16	,, 18 ,,	0·6	97·2	76
17	,, 20 ,,	0·7	98·2	80
18	,, 22 ,,	0·8	97·4	78
19	,, 24 ,,	0·2	97·0	80
20	,, 26 ,,	0·3	100·0	94
21	,, 28 ,,	0·15	97·4	80
22	March 2 ,,	0·3	97·2	74
23	,, 3 ,,	0·4	98·6	80
24	,, 4 ,,	0·5	98·6	80
25	,, 6 ,,	0·6	97·6	78
26	,, 9 ,,	0·25	97·2	80
27	,, 13 ,,	0·3	..	..

Note.—On Dec. 30th, 1890, the maximum respiration was 13.

It will be noticed that the amount injected was at the commencement much less than the initial doses frequently used in Berlin, where 1 centigramme was a common injection to begin with in facial lupus. The result, I consider, shows that 0·001 milligramme was quite sufficient, and a safer dose than the heroic 1 centigramme for my patient. The temperature after the first injections rose to 103° or a little over, which may seem a trivial rise to those who have seen temperatures of 106° and higher after initial injections. But the temperature is not the only or principal feature of a reaction. This patient was very much affected in various ways by the early injections, though his temperature was not excessive. He had severe rigors and headache, and his face was greatly swollen; he could not open his eyes, and breathing through the nostrils was almost impossible; his left upper lip became so swollen as to render the taking of food very difficult; he was very heavy and drowsy and became very deaf, this last being an effect which I have never known to occur in other cases, but which regularly recurred in this patient after many injections, passing off in a day or two. That the patient was profoundly affected, and quite sufficiently so, and that the injection was sufficient when it produced such effects, will, I think, be the general opinion. Indeed, as a result of my own experience with this and several other cases, I would strongly dissuade the administration of large initial doses. When the extent of the patient's general reactive character has been ascertained by careful trial, and after it has been ascertained where local reactions will occur, then the injections may be increased. But if there were no other grounds for caution at the commencement, the fact that most serious local reactions have occurred where utterly unexpected—e.g., in the larynx—and even necessitating tracheotomy, should be a warning. Further, no one can foretell to what extent the temperature, pulse, and respiration may increase, until after trial, and no one should risk, especially without any reason for doing so, the tremendous over-action of the heart (up to 180 beats) and lungs which may be brought on after an injection, even of moderately large quantities of tuberculin. One should always advance slowly and cautiously in the administration of this powerful remedy. I would further add that there are no grounds for supposing that there is any advantage gained, so far as the cure of the local disease is concerned, by inducing such alarming general reaction as is indicated by extremely high temperature, pulse, &c.; and it is certain that the general depression which ensues lowers the local as well as the general vitality, and thus delays, if it does not prevent, ultimate cure. The patient had no serious symptoms throughout. He took nourishment well at all times, and his bowels and kidneys acted well. The quantity of urine passed was normally low; during treatment it once amounted to 56 fl. oz, this being the only occasion when it exceeded 43 oz., the average being about 30 oz. When the temperatures were high at the beginning of the treatment there was at times a considerable deposit of urates (sedimentum lateritium), and sometimes there was a cloud of excessive phosphates. The effect of the very first injection was to cause the dark-red edge of the right nostril to ulcerate, the raw surface extending for a couple of weeks, when it began to heal. After the third injection the spots on the right lid and near the mouth were deeply excavated and suppurating. After the ninth injection the extensive scabs which covered the left side of the nose and left upper lip had fallen off, and the ulcerated lip and nostril were healed—that is, in one calendar month and one day from the commencement. There was never any serious local reaction after this date. The nose continued to become redder after the injections for some time, but there was no swelling of any consequence. Sometimes he had pains in the limbs for a few hours. After the tenth injection his left moustache, which was kept cut to prevent scabs gathering, ceased to grow, every hair fell out, and for a month the left upper lip was perfectly denuded of hair, and had all the appearance, even when seen under a lens, of being permanently depilated. However, the hairs began to grow well before he left the Home. The patient was allowed to go out for exercise after three weeks, although the weather was cold; and whenever it was dry he took walks of several miles, at first on the days between the injections, provided temperature, pulse, and other symptoms of general and local reaction permitted; later on he went out on the day of the injection also. The appearance of his face on leaving was greatly improved. There was no scab or raw spot anywhere. His nose had entirely lost the characteristic redness, but also a portion of the tip and of each side of the nostril. The loss of substance, however, was very trivial; the tip was round and smooth and soft to the touch; the two sides were also soft, and the whole was covered with a skin of perfectly normal appearance, colour, and feel. There was no hardness to the touch in either eyelid. The spot near the lip was white and somewhat depressed, like a scar left after excision, as was the spot under the right eye. The left upper lip is very much smaller than at first, and is hardly larger than the right. The patient had gained three pounds and a half in weight during treatment, and left the Home thoroughly happy and satisfied. He is particularly pleased that his nose is no longer so "hot and burning," and has not the unpleasant brawny feel which became evident every time he moved any of his features. No one seeing the patient now for the first time would, I believe, say he had lupus; every indication of that disease is gone. I do not feel qualified to assume the *rôle* of prophet and announce now what may be the patient's state in six months. But this much is undeniable: no known method of treatment would produce such excellent results except Koch's.

My own experience satisfies me that it is entirely erroneous to suppose that the administration of tuberculin ceases to be beneficial when it ceases to produce marked reactions, either general or local. The same has been the experience of others well qualified to judge. On the contrary, I have watched the rapid improvement of extreme local tubercular disease going on for weeks, while there was no sign of reaction to the injected tuberculin; and in the treatment of phthisis pulmonalis I have observed the same thing. I have made it a practice in the treatment of phthisis to avoid reaction as much as possible, and this I notice is now being done also by Guttmann and Ehrlich at Berlin, and others, who report excellent results. The guiding principle in Koch's method should be *arte non vi*, and the physician who would attain good results must not proceed on the routine practice of blindly injecting as much tuberculin as will produce the maximum of local and general reaction as the patient can bear without fatal results. The circumstances of each case must decide the details of the treatment; and each must be managed from day to day in accordance with the conditions to be treated as they present themselves. It is fatal to success in the following up of this method of treatment to be guided in the steps to be taken to-day by merely noting the quantity of tuberculin injected on the last occasion and the maximum temperature produced; yet it seems to be the general opinion that this is all that need be attended to. Such a practice can only lead to a blind, unintelligent routine, injurious to the patient, to the method of Koch, so promising in brilliant

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results, and calculated to sterilise the observing powers of the practitioner.

Note.—The patient was shown to the Bradford Medical Society at the beginning of the treatment, and again on March 17th, when the treatment terminated.

THE ELECTRIC BATH.

BY W. E. STEAVENSON, M.D.CANTAB., M.R.C.P.,
IN CHARGE OF THE ELECTRICAL DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.

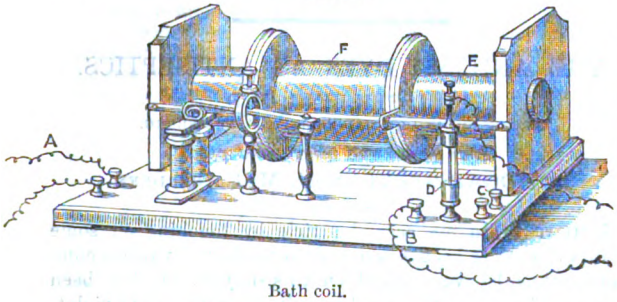
(*Continued from page 711.*)

WHEN the interrupted current is used for the electric bath the primary or the secondary coil may be employed. Special large faradaic coils are made for use with the bath. The strength of the primary coil can be regulated by the core of soft iron wires in its centre being withdrawn to reduce the strength of the current, or pushed in to increase its strength; or the extra current (the one which produces muscular contraction) can be regulated by a rheostat composed of resistance coils of known resistance or by a water rheostat (Fig. 4). The current from the secondary coil can

FIG. 4.

be regulated by the amount of the coil that is allowed to encircle the primary one. It is always best in the faradaic apparatus to have the secondary coil after the Du Bois-Reymond principle—that is, perfectly distinct from the primary coil and capable of being moved over it. (See F, Fig. 5.)

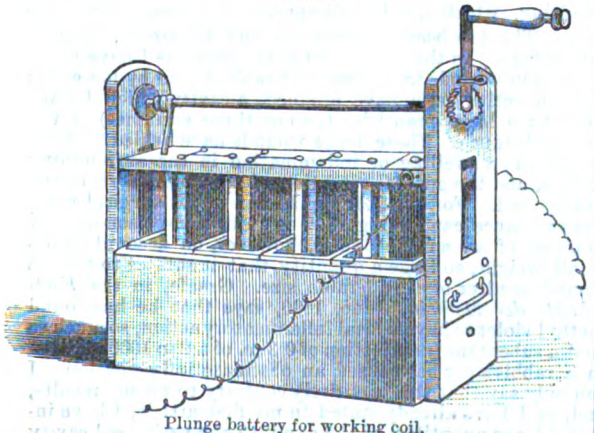
FIG. 5.



Bath coil.

The galvano-faradaic bath.—Treatment by the combined current—constant and interrupted—can be best accomplished by means of a water bath. The two currents can

FIG. 6.



Plunge battery for working coil.

be passed along the same wire, the secondary current (faradaic) passing through the constant current battery and galvanometer without affecting them, and both currents can be felt in the bath. The constant current battery, giving a current strength of 200 milliampères, can be employed at the same time that a strong secondary current is being given by a coil worked by another four-celled battery.

Hot air or vapour electric bath.—It is very common in America to apply electricity to a patient when in a hot air or vapour bath. This form of application is said to possess certain therapeutical advantages. Patients who suffer depression, and are in other ways unable to take the water electric bath, can often bear, and derive great benefit from, the dry hot air or vapour electric bath. The bath is given in a cabinet constructed for the purpose. There is a stool, on which the patient is seated, connected with one pole of the battery. The other pole of the battery can be connected either with the floor of the cabinet, which is lined with zinc, or with special electrodes to be applied to different parts of the body. The cabinet contains a hot water coil, which is connected with a boiler and heating apparatus outside. The condensed steam can be allowed to escape on the outside, or can be admitted into the cabinet by a valve, which opens downwards to prevent the jet of steam playing directly on the patient when seated on the stool. The coil can, therefore, be used for giving a hot air bath or for giving a vapour bath. The hot air is used at a temperature of from 90° to 100° F. It produces perspiration, and is used for chronic rheumatism, stiffness of the joints, and skin diseases. It is also used at a higher temperature when employed for internal congestions. The vapour electric bath cannot be borne at such a high temperature or for so long a time as the hot air; 106° to 110° is the usual limit, but the hot air can be borne up to 130°. The stool is raised or lowered so that the patient's head may protrude through a hole in the lid of the cabinet, and the neck is surrounded by dry warm towels to prevent the escape of hot air or steam. There are two holes, protected by valves, in the side or door of the cabinet, through which the medical man can pass his hands for the purpose of adjusting the electrodes to that part of the patient's body it is wished to treat. There is often a projecting metal arm, with the end covered by sponge, against which the patient's back or epigastrium can be placed. This projecting arm is fixed to the back or side of the cabinet, and connected with one of the poles of the battery. A hot air or vapour electric bath occupies fifteen or twenty minutes. At the conclusion the patient should be cooled down by a shower bath. A common watering pot may be used for this purpose. A drain pipe is connected with the bottom of the bath to carry off the moisture. Although the patient is enveloped with hot air or vapour the electricity can only be conveyed by contact of the electrodes. A series of experiments were made at St. Bartholomew's Hospital some years ago to see if electricity could be conducted by spray. Pure water and salt-and-water were used, and forced out of a metal nozzle connected with one pole of a battery; the jet was directed on to a metal receiver connected with the other pole, and a delicate galvanometer included in what would have been the circuit had the vapour conducted any electricity, but deflection of the needle could not be produced. A hot air or vapour electric bath is therefore nothing more than the application of electricity to a patient, whose skin is rendered a better conductor through the warmth and perspiration that are induced. The skin is softened and the capillaries filled. The vapour electric bath is more relaxing and soothing than the hot-air bath.

Electricity can be conveyed by drops of water, and is the means by which the electrical condition of the atmosphere is gauged; but as far as medical apparatus is concerned, we have not been able to detect the conveyance of electricity by steam. And it would certainly appear that no current of sufficient strength to effect the human body therapeutically can be conveyed by this means.

Chronic rheumatoid arthritis.—The affection for which the continuous current electric bath is most useful is chronic rheumatoid arthritis, a most obstinate complaint that usually resists all forms of treatment. Electric baths will not cure inveterate cases, but will arrest the progress of the disease, somewhat reduce the pain and swelling of the joints, and otherwise produce some amelioration in the symptoms. The tendency of the disease is almost always from bad to worse, but in the worst cases persistent treatment with the electric bath and passive movements may result in some improvement. When the stress of the complaint has fallen on the hands, and they have become distorted and useless, besides the plates already described

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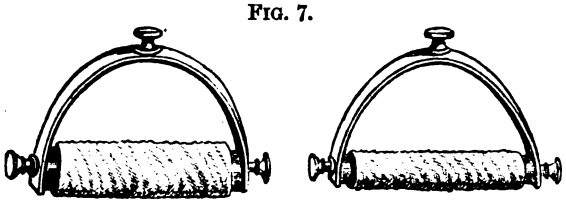
as used for electrodes in the bath, a series of metal handles of different sizes, covered with house flannel, have been employed. (Fig. 7.) The hands have gradually opened out. Small handles are used at first, and gradually increased in size as the patient's hand is able to receive them. The handles are attached to the negative pole of the battery instead of the foot plate. The current then enters the body at the spine, and leaves it by the hand which grasps the handle, and is thus more localised. But this local application of the current should only be used for about the last five minutes of the bath; it should never altogether take the place of the general bath, which probably influences the

FIG. 7.



whole system. The hands may also be made to grasp a metal bar supported across the bath and covered with house flannel,[1] and attached to one pole of the battery. In this position the hands are raised out of the water and probably get more of the current, but the entire current flowing through the battery must be very greatly reduced. When concentrated in this manner on the hands the patient cannot bear more than ten or twelve milliampères. When any of these changes in the direction of the current are made the strength has to be previously reduced to zero, and then increased again after the change has been made. If the wire were detached from the plate at the bottom of the bath when the full strength of 200 milliampères was passing, the patient would receive a very unpleasant and severe shock.

On looking back after the completion of a course of baths to the condition of the patient before the treatment was commenced, it is generally possible to notice some improvement. A patient, for instance, who could only rise from one step to the next, on going upstairs, by pulling on the balustrade, can make the ascent without such assistance; or a woman who could not hold her needle finds that she is able to use it slowly. The theory that the origin of chronic rheumatoid arthritis in many women may be through reflex action consequent upon the irritation of the spinal cord by prolonged congestion and inflammation of the pelvic organs is somewhat strengthened by the fact that the sedative action of the positive pole on the spinal marrow appears to be followed by some alleviation of the symptoms. The chances of this theory being probably a correct one led to the adoption of the use of the positive pole at the head of the bath. The rheumatoid condition is frequently associated with catarrhal endometritis. The question arises as to the relation they bear to each other as cause and effect. The superiority of the results claimed for the treatment of these pelvic troubles by electricity, in which the negative pole is applied to the uterus and the positive to the lower dorsal vertebræ, may also partly be due to the sedative action of the positive pole on the spinal cord.

Rheumatic arthritis of hip-, knee-, or shoulder-joints.—When the larger joints are affected with rheumatic arthritis, such as the keees, hips, or shoulders, the current can be localised by the use of the smaller metal plates (Fig. 2, p. 710), one being placed on either side of the bath, so as to include the affected joints between them. The joints should be afterwards subjected to rubbing and passive movements. Local arm baths or foot baths are sometimes given when one limb or joint only is affected. A porcelain or small wooden bath is the best to employ, and two small metal plates attached to the respective poles of a battery are placed one on either side of the affected member and a current allowed to pass. Sometimes one electrode only is in the water; the other—a carbon disc electrode attached to the negative pole—being applied to the affected joint or limb; for instance, to a rheumatic knee or to the arm in a case of cervico-brachial neuralgia. But ordinary galvanising without the intervention of a bath seems to be more suitable for these localised affections, and does not occupy nearly so long a time or so exhaust the battery.

[1] Vide Ross, Diseases of the Nervous System, vol. i., p. 326.

Gonorrhœal rheumatism.—This affection has also been treated by electric baths on the same plan as that followed in the treatment of rheumatoid arthritis, but not with quite such satisfactory results. The positive pole is placed at the head of the bath, on the supposition that urethral irritation reflected on to the spinal cord may be one of the factors influencing the incidence of the disease. It is advisable to employ massage for the affected limbs after the bath.

Gout.—The galvanic bath is said to be efficacious in gout It helps to effect that much-to-be-desired metabolisis mentioned by Professor Latham—viz., the conversion of uric acid into urea. In a recent paper on the formation of uric acid Dr. Latham has sought to prove that the presence of uric acid in the blood is due to the imperfect metabolism of glycocine, which takes place under certain conditions, one being an insufficient amount of exercise. When a proper amount of exercise is taken the glycocine is transformed into urea and normally eliminated by the kidneys. He has also sought to prove that this more to-be-desired metabolisis is dependent upon a due amount of nerve force, and that the production of nerve force is encouraged by exercise. It has also been proved that the contraction of muscle produces electrical currents. Urea is due to the oxidation of uric acid, and Professor Dewar of Cambridge has produced urea from urie acid by making and breaking a current of electricity when passing through it Professor Dewar has also experimented upon the electrolysis of urea. In referring to this experiment Dr. Latham makes the interesting remark that "if there be any correspondence at all between nerve force and the electrical current this experiment possesses great significance." From the beneficial effects of the treatment of gout by the electric bath these surmises and obeervations receive support. The tophi in gout are composed of urate of soda, and are removed by galvanism, most likely by a process akin to electrolysis, the urate being split up at the negative pole.

Lehr says that in gout the electric bath is a palliative of great value.[2]

(To be continued.)

[2] Erb's Electrotherapeutics, translated by De Watteville, p. 281.

THE ANILINE DYES AS ANTISEPTICS.

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Translated and much condensed
BY EDGAR STEVENSON, M B. ABERDEEN.

I MUST begin my second article by touching on some points that have been suggested to me in the various communications I have received on this subject. It has been said that irritation follows the application of methyl violet. I have myself never seen irritation follow the application of a 1 in 1000 solution of methyl violet in animals, or in men, though I have treated hundreds of patients with it. I have even used 1 per cent. solutions with only a little hyperæmia resulting, which quickly disappeared on diminishing the dose. This has been confirmed by Drs. Wanscher, Nagues, and others. In the course of my experiments I have made large skin wounds in the backs of rabbits, and by loosening the connective tissue have produced a cavity which I have filled with large quantities (two or three grammes) of the pure substance. These large wounds have healed without the slightest swelling or inflammation in the surrounding tissues, and the general condition of the animals remained unimpaired. For external application in all surgical cases the substance can be regarded as quite non-poisonous. A gramme of an aniline dye is, however, on account of its small weight, so large a quantity that it suffices to treat a wound or ulcer of considerable size. Graefe, in the *Fortschritte der Medicin*, June, 1890, says that he has found methyl violet to have a local inflammatory action, so much so that a subcutaneous injection of 0·3 cc. of a 2 in 1000 solution in a rabbit's ear has caused an obstinate inflammation. I can only say that this is entirely contrary to all my results, and, as I have already stated in my first article, I have injected large quantities of the dye into the peritoneal cavity of animals without the least sign of inflammation. These

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results of mine have been fully confirmed by the investigations of Wanscher, Bresgen, and others. Graefe's results are probably due to impurities in the dye, such as chloride of zinc, arsenic, and copper sulphate. The results of my experiments briefly stated are as follows:—1. Methyl violet is about three times as strong as sublimate in its action on the anthrax bacillus, and quite as effectual as sublimate in its action on the staphylococcus pyogenes aureus. 2. It is a perfectly non-poisonous substance. 3. In consequence of this, it is immaterial how strong the solutions may be, even up to the use of the pure substance itself. 4. It does not coagulate egg albumen. 5. It possesses an extraordinary power of diffusion, penetrating in the eye like atropin.

In its action on the normal and pathological states of the cornea the following may be noticed: The normal cornea is only stained if it be scratched and the substance immediately applied, whilst the diseased cornea is very quickly and deeply stained. The more recent the corneitis, the longer the stain lasts, and the larger the quantity of the dye deposited from the solution; the staining can then be observed to gradually fade after a few minutes, and this warrants a favourable prognosis, the opposite to this being an unfavourable sign. Granulations of the conjunctiva are also easily and deeply stained, whilst the normal conjunctiva, in spite of the superficial layer of cast-off cells, is by no means so deeply stained as the granulations. Blepharitis is quickly cured by the application of a 2 per cent. ointment or of a pencil to the roots of the hairs. It is better in these cases to use the yellow dye—auramin,—on account of the slight stain produced by it. Since I began to use the aniline treatment I have generally cured bad cases of blepharitis in a few days.

As regards conjunctivitis I have had the very best results in even the worst forms of the disease by using drops of a 1 in 1000 solution of methyl violet, or by sprinkling with a 2 per cent. yellow or blue powder. This treatment will practically cure a case in twenty-four hours. I have also had good results in blennorrhœa, croupous conjunctivitis, and iritis serosa; for keratitis parenchymatosa the methyl violet solution is almost a specific. Dr. Wanscher of Copenhagen has obtained excellent results in blennorrhœal and gonorrhœal ophthalmia by pencilling the conjunctiva several times a day till the tissue was quite blue. In cases of ordinary acute, subacute, and chronic conjunctivitis I have so far obtained better results with auramin solution of 1 in 1000 strength than with the other substances. The patients also prefer it, as they invariably say that it has a very pleasant, cooling action. Very severe cases of granular lids are not often seen here, but in the milder cases I find the application of the pencil to the granulations quite sufficient. With this treatment there are the advantages that the application is not painful, as is the case with nitrate of silver or sulphate of copper, and also that a cure is more speedily effected.

I might here mention that my friend, Professor Goltz, informs me that purulent inflammation of the cornea going on to perforation and destruction of the eye frequently occurs in dogs after operations on the cerebrum. This inflammation he has succeeded in curing in a few days by at once applying the 1 in 1000 methyl violet solution. As regards the use of methyl violet in ordinary surgical practice, I have received communications from surgeons from all parts of the Continent, saying that they have been most successful in the aniline treatment of ulcers, abscesses, burns, &c., and also of wounds, all suppuration being prevented. The substance must be used till the tissues are deeply stained. I quote one such communication from Dr. Voigt.[1] He says that "the very best results have followed the use of the pure powder, which is easily applied with a brush, especially in acute suppuration, such as carbuncle, whitlow, phlegmon, &c., the pain and suppuration being simultaneously stopped. One need not, if it be necessary, hesitate to make deep incisions in order to bring the substance into thorough contact with the diseased parts. The blue zone can be traced for ½ to 2 mm. deep in the tissues.

The following are the preparations of the dyes:—

1. *Pure methyl violet.*—To be used as powder for large wounds and ulcers.

2. *Large pencils.*—For small wounds, burns, &c. For purulent cases the blue pencil is better than the yellow, on account of its greater antiseptic property.

3. *Small pencils.*—For application to the eye, in cases of corneal ulcer &c.

4. *Powders.*—Of 1 in 1000 strength for mild cases of conjunctivitis, and for more severe cases (blennorrhœa) of 2 per cent. strength. These can also be used as a snuff in affections of the nasal mucous membrane.

5. *Ointments.*—In strength varying from 2 per cent. to 1 in 10.

6. *Solutions.*—Used in strengths of 1 in 1000 to 1 per cent. The 1 in 1000 solution is to be used for ordinary cases of conjunctivitis, keratitis, &c, and in non-purulent cases the yellow dye auramin may be used, on account of its above-mentioned cooling properties. The solutions should be filtered and kept in dark glass bottles, and changed every eight days.

In conclusion, I must once more call attention to the necessity of the substances used being absolutely pure.

Strassburg.

[1] Aerztl. Centr. Anz., 1890, No. 25.

THE BULBAR CRISES OF DIPHTHERITIC PARALYSIS OCCURRING IN CHILDREN.

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THE object of this paper is to describe symptoms of diphtheritic paralysis which are often unexpected, which may often be unrecognised, and which often prove fatal. The symptoms to which I refer may be described as "bulbar crises." They consist in sudden and severe functional disturbances of the vital medullary centres. They resemble in some respects the symptoms of so-called acute bulbar palsy, and it is possible that some cases of the latter disease may be of unsuspected diphtheritic origin.[1] I shall presently describe them fully; but, first, as to the conditions under which they occur.

The premonitory symptoms of bulbar crises are as follows. Children are usually seen in the second or third week of diphtheritic paralysis. They are then suffering from slight weakness of the legs and loss of knee-jerks, staggering gait, a nasal voice, occasional regurgitation of fluids through the nose, and sometimes a "squint." The common reason for bringing them is that they "fall about," seem weak, and "want strengthening medicine." The other symptoms are seldom elicited except on cross-examination. Sometimes, however, children are brought because their speech has lately become defective. The initial sore-throat is seldom mentioned, sometimes it is denied.[2] They are often well nourished and healthy looking. They take food well, except for the occasional return of fluids; they sleep well, and there may seem little cause for anxiety as to their condition. Yet a closer examination will often give grounds for alarm. There is a peculiar apathy and lethargy about the patient which is very characteristic. He will lie all day on his back without attempting to move. He will smile placidly when spoken to, but will not answer unless pressed to do so. Then, speech is attended by obvious effort. A deep, sudden inspiration is taken. The voice escapes in sudden expiratory gasps; it is not only nasal, but also extremely weak and hoarse. The weakness and hoarseness suggest incomplete closure of the vocal cords (adductor paralysis); so also does the occasional loose and almost noiseless cough. More probably, however, there is a certain amount of bilateral paresis of the cords.[3] The character of the respirations often affords indications of danger. They are not usually hurried. They average about 20 per minute, but inspiration is sudden, deep, and forcible, whilst expiration is short and weak. At intervals there is a long-drawn sigh. This sign is almost invariably present, and is highly significant of an approaching crisis. At

[1] Cf. Dr. Stretch Dowse, Med. Soc. Trans., Jan. 29th, 1877: "Extreme voraciousness distinguishes ordinary bulbar paralysis from the bulbar paralysis of diphtheria."

[2] It may be objected that in these cases there is no evidence that the disease is diphtheritic. A similar objection might be raised to the diagnosis of well-marked tertiary syphilis, where no history of chancre can be obtained.

[3] The inspiratory stridor so common after tracheotomy is seldom noticed, except when this operation has been performed.

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the same time mucus begins to collect in the throat, and a few moist râles may be heard in the chest. This is also a grave sign. The diaphragm may not act, or its action may be irregular; in either case, the dyspnœa is much more noticeable. The character of the pulse is also important. Abnormal infrequency of the beat has been noticed in cases of diphtheritic paralysis by other observers, and is usually said to be due to irritation of the pneumogastrics. None of the cases observed by myself have had an abnormally slow pulse, and whilst the pulse remains between 70 and 90 there is no immediate danger. On the other hand, a rapid but not necessarily irregular pulse (120 to 130) has been constant in all cases which have developed dangerous symptoms. Intermittency of beat is often present. Its chief importance, however, is that it may mark the increased frequency. Irregularity is not constant; in some of the worst cases the pulse has been regular and of good volume (at first), in spite of the marked rapidity. It is obvious that a pulse of 120 to 130 occurring in a child over two years of age, lying absolutely at rest, without rise of temperature or physical signs which may explain the symptom, is a grave condition.[4] As regards the heart sounds, murmurs probably of hæmic origin are sometimes present, and the first sound may be weak. There may be slight irregularity, but it is by no means constant. Where albuminuria has existed during the initial disease, it sometimes persists throughout, but it is commonly absent in the paralytic condition. The temperature is usually normal, or between 99° and 100° F. at the highest.

It is in children presenting the above symptoms—viz., (1) marked listlessness and apathy; (2) a weak, hoarse, and nasal voice; (3) irregular and sighing respiration; (4) a loose, weak, and almost noiseless cough, with commencing accumulation of mucus in the throat and air passages; (5) a rapid pulse, together with the other minor signs of diphtheritic paralysis — that bulbar crises are apt to occur. Such crises are sudden, acute exacerbations of the symptoms which prevailed before. Their exciting cause may be a fit of passion or other emotion, sometimes a physical exertion; sometimes they occur spontaneously. During a crisis, instead of the occasional dysphagia which existed before there is complete and sudden paralysis of deglutition. Instead of moderate dysphonia there is complete aphonia. Instead of slightly embarrassed respiration there is the most alarming dyspnœa. Instead of lethargy there is extreme restlessness. The head is thrown back; the alæ nasi work; the mouth is open; the pupils are dilated, and the face becomes bluish, or pallid and sweating. Inspiration is even more sudden, forcible, and gasping than before. Expiration is also much feebler, whilst the sighing and irregularity increase. The diaphragm is often paralysed. Mucus accumulates in the fauces and trickles through the nose and half-opened mouth. Loud moist râles are audible all over the chest. These are due to hypersecretion into the air passages, large and small, and this condition might be, and it is probable that it often is, mistaken for an ordinary attack of capillary bronchitis. The temperature rises suddenly to 102° or 103°; the pulse-rate increases to 140 or 150, or even so high as to be uncountable. There is no loss of consciousness, and the child, though unable to speak, points to its larynx or epigastrium when asked if in pain. This suggests a parallel with the gastric crises of locomotor ataxy, the other symptoms of which—extreme rapidity of the pulse and violent vomiting—render the comparison still more complete. For the next constant and characteristic symptom of a bulbar crisis is copious vomiting of greenish-brown frothy liquid. The dyspnœa often seems to be relieved by the vomiting, and the crisis is thereby ended. The patient lies exhausted, and seems at the point of death, but death seldom occurs during a first attack. Colour, pulse, and respiration gradually improve, power to swallow is restored, and for the time danger is over. Within a few minutes or a few hours, however, similar attacks recur, during which, or after which, death may happen from exhaustion, syncope, cardiac thrombosis, or absolutely from suffocation due to the accumulation of mucus in the air passages. Besides suddenness of onset, therefore, tendency to subside and to recur is a marked feature of these crises; their duration varies from a few minutes to a few hours. They kill according to their severity and continuance, and according to the degree of the patient's exhaustion. After a period of about forty-eight hours they cease to recur, and if the patient survives through this time he usually recovers. They may be expected at any time during the first six weeks from the onset of the paralytic symptoms. I have not seen them occur later.

(To be concluded.)

[4] This pulse-rate without rise of temperature indicates paralysis of the inhibitory action of the vagus.—Dr. Lauder Brunton.

THE REMOVAL OF GALL-STONES BY ETHER SOLUTION.

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ON March 7th, 1890, I was called to see H. V——, a married woman, aged twenty-seven. I found that since the age of nine she had suffered from pain in the body coming on at irregular intervals, but getting gradually more and more severe. These attacks were always put down to indigestion. About four years ago my father, Mr. T. Walker, first saw her, and came to the conclusion that the pain was caused by gall-stones. Since that time she has had several attacks; but the one to which I was called was the most severe ever experienced. Jaundice, with the usual concomitant symptoms, soon supervened. On the third day my brother, Mr. H. S. Walker of Leeds, saw her for me, and was able to push the stone forward into the bowel by digital manipulation, giving instant relief, and the stone was found in the fæces the following day; two days later the pain returned, and I could distinctly feel another stone through the thin abdominal wall, but was not able to push it into the bowel, although I managed to drive it back into the gall-bladder, giving relief to the patient, who felt it pass on. Seven days later I was again summoned to her aid, and though I could feel a stone in the duct I could not move it either way. Morphia was given hypodermically in large and increasing doses, but on March 26th, as the patient was getting worn out with the continuous suffering, and I could not detect any change in the position of the stone, I determined to perform cholecystotomy. For this purpose the patient was removed to the Clayton Hospital, where, on the afternoon of the 27th, assisted by Messrs. T. Walker and W. Stanger, my colleagues, I cut down upon the gall-bladder, making a vertical incision over the fundus. The viscus sought for, though not much distended, was easily brought into view, and on introducing two fingers into the abdominal cavity I could feel several stones within the bladder, and one just within the cystic duct. On making an incision into the gall-bladder and introducing a finger, I was able to remove several stones, and at last came upon the one which had given rise to the trouble, embedded in the cystic duct, about one-quarter of an inch from its vesical end. I endeavoured to push this into the gall-bladder with my fingers inside the abdomen, and pressing along the duct, but was unable to move it; taking a Volckmann's small sharp spoon I passed it on to the stone within the duct, and with my finger tip against the stone succeeded in cutting it in two, the halves being removed by a little manipulation, as also another small stone which was found beyond it. Altogether twenty-seven stones, varying in size from a horse-bean to a mustard seed, were removed. The edges of the gall-bladder were sutured to the parietal wound, a rubber drainage-tube inserted into the bladder, and absorbent dressings applied. The temperature on the 28th was 100° during the day, but fell to 98·6° at 10 P.M., after which it remained normal throughout. On the 29th vomiting was very troublesome, a greenish fluid being rejected; in the evening I removed the drainage-tube, thinking that by irritation it might be keeping up the sickness. After this the vomiting ceased, and convalescence advanced uninterruptedly. On leaving the hospital the wound looked perfectly healthy, but was not closed, a fluid resembling raw white of egg being daily discharged through it, no doubt the secretion from the gall-bladder itself. The patient went to Scarborough, and after remaining there a month returned home feeling quite strong, the fistula, however, remaining. She continued perfectly well and free from pain until four days after a miscarriage

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on Oct. 1st (being then at the end of the second month of pregnancy), when severe abdominal pain came on, caused by another stone trying to pass along the cystic duct; there was no jaundice. The stone could be felt by a probe passed through the fistula into the duct, and appeared to be about the size of a split pea. I endeavoured to extract it with forceps, but failed to do so. I then washed out the gall-bladder with a warm boric solution, and having drawn one drachm of a mixture of equal parts of ether and glycerine into a small glass tube attached to a syringe, passed the tube directly on to the stone, which I could distinctly feel, and injected on to it the ether glycerine, drop by drop. This gave rise to a burning sensation for some time, and the patient felt very exhausted during the remainder of the day, but the pain gradually lessened, and on the second day later I carefully examined the gall-bladder and duct with a probe, but could not feel any stone, and the patient has been absolutely free from pain since.

I believe that the stone which gave rise to this last attack must have passed on towards the gall-bladder at some period ulterior to the operation, as I very carefully washed out that viscus with boric solution at the time and could not feel anything left behind. I do not know whether the plan of dissolving stones *in situ* has been before attempted by injecting ether on to them, as in this case; if the wound had closed it could not easily have been undertaken. I injected the ether very slowly, and there was sufficient space by the side of the glass tube for any vapour to escape; no bad symptoms followed the injection.

Wakefield.

THE TRAINING OF THE MEDICAL STUDENT IN MIDWIFERY.

BY ROBERT REID RENTOUL, M.D., M.R.C.S.

THAT the present system of training the medical student in midwifery is sadly deficient few practical persons will deny. The fact that some old midwives go about boasting they train "the young doctors in midwifery" is a cruel, but unfortunately true, statement. The fact that pupil midwives repeat they are better trained than students sounds strange. The pupil midwife in Glasgow has to prove that she has attended thirty cases of labour before being certificated; and the pupil presenting herself before the Obstetrical Society must show she has attended twenty-five labours. What to-day are the requirements of the medical student? The eighteenth recommendation of the General Council of Medical Education to the examining bodies under the Medical Act, and which is a standing disgrace to our profession, runs thus: "Every student should be required to attend for three months the in-door practice of a lying-in hospital; *or to have been present* at not less than twelve confinements, at least three of which he should have conducted personally *under the direct supervision of a registered practitioner.*" Three confinements! This is the recommendation of an Educational Council which is given almost supreme power by Act of Parliament in the matter of education. The above recommendation is dated May 26th, 1888. Previous to this (in 1886) the Council of Medical Education fixed the number of cases at six. I would call attention to the words, "have been present at," in the above recommendation. They mean that the student may just have looked in at the case and then left, or that he may have been "taught" his midwifery by a midwife,—or, in fact, that he may have bungled along with the case as he well may. Thus forsooth is he "taught" his practical midwifery.

The following table shows that there is a very grave diversity in the manner of teaching midwifery, and of the requirements demanded by the various bodies which grant registrable medical qualifications under the Medical Act:—

Name of examining body.	Lectures on midwifery and diseases of women and of children.	Clinical instruction on diseases of women.	Number of labours.
Royal Colleges of Physicians and Surgeons of England	3 months	3 months and	20
Society of Apothecaries, London	3 ,,	3 ,, ,,	20
University of London	1 course	0 ,, ,,	20
,, of Oxford	0 ,,	0 ,, ,,	0
,, of Cambridge	1 ,,	0 ,, ,,	20
,, of Durham	3 months	3 ,, ,,	20
Victoria University	6 ,,	3 ,, ,,	20
Royal College of Surgeons and Apothecaries' Hall, Ireland	6 ,,	6 ,, ,,	30
Royal College of Physicians and Surgeons, Ireland	6 ,,	6 ,, ,,	30
University of Dublin	6 ,,	6 ,,	Not stated
Royal University of Ireland	6 ,,	6 ,, ,,	20
Royal Coll. of Phys. and Surgs., Edin., and Fac. of Phys. and Surgs., Glasgow	3 ,,	0 ,, ,,	6
University of Edinburgh	6 ,,	3 ,, ,,	6
,, of Glasgow	6 ,,	3 ,, or	12
,, of Aberdeen	3 ,,	3 ,, ,,	6
,, of St. Andrews	3 ,,	3 ,, ,,	6

The Scotch Examining Bodies seem to be the most lax. Indeed, they ignore the Recommendation of the Medical Council. I believe the Scotch representatives on the Council say they have not a sufficient number of cases to allow them to give a better training to their students. I fail, however, to see why the Scotch representatives on the Council should keep back the hands of medical education. If the Scotch student cannot be thoroughly trained in midwifery, then he should go elsewhere. No one expects small towns like St. Andrews to be ever able to supply a sufficient number of lying-in cases. Why, therefore, should the remaining bodies wait for St. Andrews? It is to be hoped that the new arrangements made at the Maternity Hospital in Glasgow will give the necessary number of cases. One fails to see why the pupil midwife is made to attend thirty cases in Glasgow while the medical student attends twelve. Is his midwifery education to be slowly strangled so as to make room for the midwife? Nor do the Scotch examining bodies appear to neutralise their small demand for practical instruction by making the student attend a longer course of lectures or clinical instruction. I think there are a sufficient number of lying-in cases in the large cities of Scotland, for I find that in 1889 eight medical charities gave relief to 4716 women in their confinements. Moreover, surely the hospitals under the Board of Supervision could be used, in so far as midwifery is concerned, for the teaching of the student. It is to be noticed also that the University of Oxford treats with absolute contempt the suggestion that aspirants for their degree should attend any lectures, clinical instruction, or labours; while Glasgow and other Scotch examining bodies allow the student to toss up as to whether he will attend the clinical instruction on diseases of women or look on at six labours. Verily ours is a splendid system of medical education in obstetrics! Is it to be wondered at that so many women die in childbed? Is it surprising that the young doctor is absolutely at sea if called upon to stitch a ruptured perineum; while, on the other hand, he waxes eloquent over the necessary incisions in tying the internal iliac, or first stage of the subclavian arteries? Or is it any wonder the high infant death-rate in this country is a disgrace to the medical profession? How many of the qualifying bodies demand any certificate from the student to show that he has received *any* clinical instruction in diseases of infants and children? Not one. The student is kept grinding at, and paying heavy fees for, attending lectures on anatomy and physiology, while his education in midwifery and diseases of women and infants is reduced to a dangerous minimum. Thus is the public protected. And if we go further, and inquire into another very practical portion of the future doctor's practice—viz., pharmacy,—we find this is equally reduced to a minimum. When it is remembered that the three months' lectures demanded by some examining bodies includes midwifery proper, puerperal dis-

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cases, diseases of women, and diseases of infants, one questions how the student when qualified can possibly have any practical knowledge of these subjects. Dr. J. G. Glover, one of our five direct representatives on the Medical Council, has in his two pamphlets, "The Practical Element in Medical Education," and "The Gaps in Medical Education," called attention to the present lamentable defects in midwifery education; and at the last meeting of the Medical Council he proposed that each student should attend thirty cases of labour. This motion was rejected by only two votes. I would urge that the profession make this big question, of the more practical training of the medical student in midwifery, a living one. Let every practitioner write to our five direct representatives—viz., Mr. C. G. Wheelhouse, Dr. J. G. Glover, Sir W. B. Foster, Dr. W. Bruce, and Dr. Kidd, urging them to bring this question up at the May meeting of the Council. Would it be asking too much of the different obstetrical, gynæcological, and medical societies to discuss this question at their meetings, and to forward a resolution to the Medical Council praying that they give immediate attention to this question? The profession does not keep sufficiently in touch with the Medical Council. If we kept in mind that the Council is a Council of medical education with the power to appeal to the Privy Council, and with power to refuse to register degrees granted on insufficient knowledge, we should appreciate the enormous powers given by Act of Parliament to the Council. I would propose the following recommendation of the Council: "That each student before being admitted to his final examination be required to produce certificates to the examining body showing (*a*) that he has attended a six-months' course of lectures, including midwifery, puerperal diseases, diseases of women and of infants at a recognised hospital; (*b*) that he has *personally conducted* thirty cases of labour under the immediate supervision of a registered practitioner; (*c*) that he has attended for three months the clinical instruction on diseases of women and infants at a recognised hospital." I hope the Medical and Obstetrical Societies will agree to work for this, and request the Medical Council to adopt it. It may be argued that a six-months' course is too long. I would only say look at the wide range of subjects. Let us remember this most important fact, that the examining bodies cannot examine the student in practical midwifery and puerperal fevers. Recognising this, it is imperative that the instruction of the student while at College should be as perfect as possible. In Germany the student, when passing his *Staats Examen*, has to conduct a confinement, attend the woman and infant for nine days, and then write and send in a thesis on the case. In connexion with the thirty cases of labour, I would ask practitioners to remember that the student has now to study for at least five years, and that six months of the fifth year may be spent under the tuition of a medical practitioner recognised by the Council. This would give the senior student—free from attendance on dissections, necropsies, and fever hospital attendances—a good chance of learning his practical midwifery. In the near future, I trust each of our lying-in hospitals will have paid district medical officers, who will each have a senior pupil under their immediate charge.

I would here point out that if midwives are given the power to attend confinements now conducted by medical men and medical students in connexion with hospitals, in the future this would lead to the student receiving his training in practical midwifery *from the midwife*. He might as well obtain his training in surgery from a bone-setter, or his medical education from a herbalist.

Liverpool.

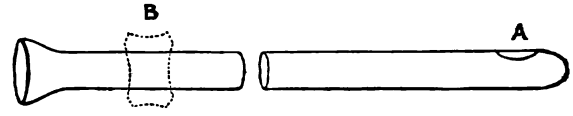
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

INTUBATION IN LARYNGEAL INFLAMMATIONS.

BY HAROLD STALKARTT, M.B.

THE subject of this case was a traveller, aged fifty-two, suffering from marked dyspnœa, very much cyanosed and nearly asphyxiated, breathing with the greatest difficulty. Gouty habit, being attacked every spring. He was suddenly seized with a difficulty of breathing, which increased for five days before I saw him; he was then *in extremis*, and it was a question of immediate surgical interference. Intubation was chosen in preference to tracheotomy. I passed the forefinger of my left hand to the upper stratum and introduced a long tube through the larynx, some way down the trachea, which afforded instant relief. The cyanosis and anxious expression gradually passed off as breathing became re-established. A steam kettle containing compound tincture of benzoin was now set going, and a tent put up. The breathing continued to improve. The tube, which was of gum elastic material and fourteen inches long, was removed next day, and the patient recovered without a bad symptom. (See Fig.) The opening



A, Opening of tube. B, Movable reel.

in the side of the tube prevented blocking on introduction, and if placed so as to lie to one or other side has less chance of contact with the wall of the trachea, as the tube tends slightly to straighten itself in the antero-posterior direction. Its diameter is about a No. 16 catheter, and it may be fixed to the beard. There is a small wooden reel to be placed between the teeth, to prevent compression of the tube. Food enemata or a stomach tube may be used for feeding. I have used this in all cases of laryngitis and diphtheria requiring surgical interference with the greatest success. In cases where vomiting occurs under chloroform and obstruction of the air passages is seen, could not this be used? With leeching and fomentations locally and *natural* salicylate of soda the gouty symptoms abated, the patient being about again.

Kilburn, N.W.

TRAUMATIC CONTRACTION OF FINGERS TREATED DURING HYPNOSIS.

BY GEORGE C. KINGSBURY, M.A., M.D.

T. H——, aged about thirty-six, consulted me on Nov. 28th, 1890. A year previously he cut the palm of his hand at the outer side, and since then his little finger had been gradually contracting, and latterly the ring finger had been following. The patient was hypnotised after a good deal of trouble, possibly due to the fact that he "did not believe in it." During hypnosis the fingers were forcibly extended, but not to the full, and absence of pain verbally suggested. A distinct cracking could be heard as the contracting bands yielded. The patient did his work next day as usual without any discomfort. Two days later he was again hypnotised, and the extension was completed. Immediately on going home he played his violin for two hours, just to test his fingers, the hand affected being his left. This test required their constant exercise, yet he felt no pain. He had not been able to finger his violin for nine months previously. On Dec. 3rd, 1890, the patient came to report that his hand remained all right, and there has been no tendency to relapse since. I have no doubt that this case, being traumatic, the fingers might have been extended under the influence of an ordinary anæsthetic; but, if they had been, the question arises, would the patient have been so free from after pain as to be able to fiddle for two hours immediately after the second extension? I do not say positively that any part of the result was due to hypnotic suggestion, but the influence of the mind upon the body is apt to be underestimated. Trousseau, Stokes, Graves, and others have pointed out that the mind alters not only the secretions, but modifies the nutrition of the organs. Whatever effect the mind may exert upon the body in the waking state seems to be greatly intensified during the hypnotic condition. One great advantage possessed apparently by hypnotic anæsthesia, where it can be induced, lies in the fact that (so far as I know) it has never had a death laid at its door; whereas the list of fatal accidents with chloroform and ether is constantly being increased. It is certain that hypnotism can never replace these agents in general surgery, for it is limited in its applicability; but I believe in a great number of cases demanding minor operations it would, if properly tried, be found quite as satisfactory and infinitely safer than the usual anæsthetics. Where it can be

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applied, hypnotic anæsthesia will be found of great value in another direction; once induced, there is no further need for the hypnotist to devote himself to its maintenance, as in the case of chloroform; and, more than this, the patient will be able to obey instructions, such as to raise his arm or turn on his side, quite as intelligently as if in his normal state. Those who have frequently to operate with very limited assistance will appreciate these points.

Blackpool.

CASE OF NITRO-BENZOLE POISONING; RECOVERY.

By ALGERNON HODSON, M.R.C.S.

R. E——, aged forty-eight, registered chemist, had measured two drachms of nitro-benzole to scent some soap, and by some mistake drank it at 1 P.M. on March 11th, 1891. He then made a hearty dinner of beefsteak pie, and felt no ill effect from the poison except tasting and smelling almonds until 2.30. He then became giddy, and was advised to go home. He was able to walk home, a distance of about half a mile, feeling all the time as though intoxicated, being unable to control his legs or see clearly. On reaching home, about 3.15, he informed his daughter of having taken nitro-benzole by mistake. She went for a doctor, and in the meantime the patient became unconscious. Messrs. Dodd and Philips came, washed out the stomach, and got rid of the contents, consisting chiefly of lumps of meat, smelling very strongly of nitro-benzole, as did the breath and the whole atmosphere of the room. A hypodermic injection of ether was also given. He was then sent to the Hove Hospital. Condition on admission at 4 30 P.M.: Strong, well-nourished man; insensible, collapsed, extremely cyanosed, short and irregular breathing. Pulse hardly perceptible, 60. Pupils contracted, conjunctiva not insensible; no paralysis. Had defecated involuntarily. Stimulants administered and heat to extremities. At 6 P.M the breathing was quite regular; pulse 80; still extremely cyanosed; could open his eyes; looked vacantly if shouted at. Vomited twice. At 12 A.M. he was in the same condition. Micturated involuntarily. Temperature 99°. The next day the patient was much better; sensible, but still very cyanosed. Thirsty, and complained of stiffness and soreness over the whole body. The pupils still contracted; no headache; pulse 84; respiration 18. On the 13th the cyanosis was less marked and the pupils less contracted. Urine drawn off (36 oz.), very dark mahogany coloured, perfectly clear, no peculiar odour, specific gravity 1025. The condition continued to improve and the cyanosis to decrease until the 19th, when the man was discharged cured.

I am indebted to Mr. C. M. Lewis, the house-surgeon, for obtaining the information and verifying it by inquiry. The interest in the case seems to be the recovery after so large a dose as two drachms being taken and allowed to remain in the stomach for over two hours, as there are several cases on record of very small doses proving fatal, and one case where eight or nine drops proved fatal (Letheby). Another point of interest was the intense cyanosis.

Brighton.

ACUTE INTESTINAL STRANGULATION DUE TO VOLVULUS IN A NEWLY BORN INFANT.

By G. NEWTON PITT.

AN infant came under the care of Mr. Lucas for complete obstruction, with a greatly distended abdomen, which was supposed to be due to an imperforate rectum. A left inguinal colotomy was performed, and the child died when two days old. The colon, rectum, and the lower two feet of the ileum were normal. The three feet of intestine above this were distended, black with engorged blood and acutely inflamed. There was a sharp line of demarcation from the healthy bowel above, but less sharp below. No trace of any band or of an intussusception could be found, and it was concluded that the acute strangulation was due to a volvulus, which readily untwisted. The only case on record of a volvulus in a newly born infant was reported by Mr. Harrison Cripps in Vol. xxxi. of the Transactions of the Pathological Society. In this case a Littré's operation was performed; the child died when three days old, and at the post-mortem inspection a volvulus of the ileum was found. The earliest case otherwise appears to be that of a child three years old referred to by Keating.

St. Thomas's-street, S.E.

PRIMARY MUMPS OF THE TESTICLE.

By T. F. RAVEN, M.R.C.S. &c.

A YOUNG man, exposed to the infection of mumps, complained of pain and swelling of the left testis on March 31st. On April 4th both parotid glands began to swell, and the affection of the testicle, which was not severe, subsided rapidly, and was gone by April 7th. Last August he had gonorrhœa, succeeded by gleet. On Nov. 10th he had a sharp attack of orchitis (right), and on December 25th a similar affection of the left testicle. Each of these attacks lasted for more than a fortnight; but for nearly three months, prior to the mumps, he had been quite well and able to take horse exercise frequently. I should imagine that the previous orchitis had rendered the testicle vulnerable, and that the virus effected an easier lodgment there than in the parotid glands. The mildness of the mumps, as compared with the previous inflammation of the testicles, may bear out the distinction drawn by Trousseau between mumps and parotitis. Mumps he regarded as engorgement (*fluxion*), but not inflammation of the gland.

Broadstairs.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASES OF INJURIES OF PERIPHERAL NERVES.

(Under the care of MR. HULKE.)

SUTURE of severed nerve trunks—immediate wherever circumstances admit; where these do not allow it, then secondary suture, unless the interval of time since the accident is so great as to remove all expectation of benefit—is a practice based on such wide experience of its usefulness, and of its freedom from those risks once thought to be attached to it, that its neglect must be regarded as a grave omission. Mr. Bowlby's work, published in 1890, is an excellent summary of this subject, regarded from a clinical and an operative standpoint, and should be read by all interested in this class of injuries. There will long remain, however, some matters respecting which additional information is greatly to be desired. To mention only two points: (*a*) What is the longest interval after division of a nerve when suturing may be tried with some expectation of success? (*b*) the condition as regards restoration of function or otherwise at so great an interval after suturing as to fairly represent the final outcome. As concerns hospital patients, they seldom remain long enough under the observation of the same surgeon; but wandering from one hospital to another, and leaving London for the country, they are early lost sight of, so that in many instances the final results are not known. In the first of the following cases restoration of function soon began; it was not obviously interrupted by the supervention of suppuration, and it became complete. In Case 2, where suturing was also immediately practised, restoration of sensation was imperfect, motor conductivity was greatly impaired, and muscular atrophy was very advanced ninety-three days after the date of the injury. Here there had been considerable loss of blood; the wound had inflamed, there was some sloughing, and also free suppuration—all circumstances unfavourable to repair. In Case 3, the nerve not being completely divided, no suture was applied, the unsevered portion appearing to be a sufficient bond, and the early result was encouraging. In Case 4, which illustrates division of the sciatic nerve within its sheath by crushing,

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the result of abstention from resection and suture was most discouraging; for the hope that the undivided sheath might act as a sufficient bond, and union of the nerve take place, was not realised—one reason, perhaps, being the very damaged state of the nerve ends.

CASE 1. *Division of the median nerve; immediate suture; quick recovery of function.*—On Dec. 14th, 1887, a school-boy aged ten years was admitted under Mr. Hulke with a deep cut crossing the flexor side of the forearm above the wrist, caused by pushing his hand through a window-frame. It reached from three-quarters of an inch above the root of the thumb obliquely downwards and inwards towards the ulnar border of the forearm, its length being about an inch and three-quarters. The distal end of the median nerve and of the tendons of the flexor sublimis digitorum were projecting between the lips of the wound; their proximal ends were not visible, having retracted. The house-surgeon enlarged the wound, found the proximal ends, and sutured the median nerve and also the tendons, using very fine silkworm gut sutures. The hand was flexed on the forearm and this on the arm, and fixed upon a splint. Within forty-eight hours a slight degree of sensibility to tactile stimuli was noted, and on the 19th (four days after the injury) sensibility was very good in the thumb and slightly present in the middle finger; it was yet absent from the index finger. Two days later sensibility was present in the index. Notwithstanding rigid antiseptic measures, suppuration ensued, which greatly retarded cicatrisation. On Feb. 14th. 1888 (two months from the date of the injury) he was discharged from the hospital, sensibility in all the digital branches of the median nerve being perfectly restored.

CASE 2. *Wound of forearm, severing the ulnar nerve; immediate suture; imperfect restoration of sensation; degeneration of motor fibres and muscular atrophy.* — J. C——, aged twenty-seven, an engineer, sustained two deep lacerated wounds in the flexor side of his left forearm through his foot slipping and his hand passing through a window-pane. A fellow-workman stanched the bleeding by tightly binding the wound, and brought him to the hospital, into which he was admitted on Oct. 9th, 1885. The ulnar artery and nerve were completely divided. Both ends of the bleeding artery were secured, and the nerve ends were brought together with fine catgut sutures passed through the sheath. Antiseptic measures and drainage were strictly observed, and the hand and forearm placed in a splint. Suppuration and slight sloughing ensued. On the 28th of the same month the first indications of a return of sensibility in the cutaneous distribution of the ulnar nerve were observed, the patient being conscious when touched with a pencil-point in this area, but was unable to localise the spot. Ten days later the improvement of sensibility was marked in the fifth and fourth fingers, but the patient complained much of a sense of numbness and of pain in them and in the hypothenar eminence. On Nov. 17th the contact of a point was not accurately localised, and pain was not felt even when a pin was so deeply pricked into the skin as to draw blood. On Jan. 11th, 1886, there was complete anæsthesia of the hypothenar eminence and of the extensor surface of the fifth finger. There was marked wasting of the interossei muscles. Dr. Pringle (at that time in charge of the electrical department) reported that none of the interossei responded to strong faradaic currents, but they reacted excessively to a weak galvanic current; the anodal and kathodal contractions were equally well marked. The patient shortly afterwards went into the country. His further history is not known.

CASE 3. *Incised wound of forearm partially dividing the ulnar nerve.*—W. P——, aged twenty-two, a cabinet-maker, on Dec. 6th, 1883, by the slipping of a chisel, cut his left forearm just above the wrist. The gash extended from near the root of the thumb almost to the styloid process of the ulnar, being deepest at the inner side. The radial artery, median nerve, and ulnar artery escaped injury, but the ulnar nerve was seen to be partially divided. The ulnar side of the flexor aspect of the ring finger and both sides of the fifth finger were devoid of sensibility, whilst the dorsal surfaces of these fingers retained it unimpaired. Obviously the injury to the ulnar nerve occurred below where it detaches its dorsal cutaneous branch. The edges of the wound were brought together by strongly flexing the wrist, and fixing the hand and forearm on a splint. Three days afterwards a return of sensibility in the fingers was noticed, and further improvement was observed at the date of his leaving the hospital on the 20th of the same month. He was directed to return after a further interval, but omitted to do so, so that his ultimate condition could not be ascertained.

CASE 4. *Division of the sciatic nerve within its sheath; very incomplete restoration of sensibility; transitory in some branches.*—E. N——, aged twenty-three, a strongly formed, healthy-looking Cornish woman, in domestic service in London, was admitted into Bird ward on May 7th, 1888, for injuries received by falling through a skylight. In the back of the left thigh, four inches above the ham, was a transverse, bruised, torn wound, dividing the deep fascia through a rent in which the muscles were bulging. Hæmorrhage, which had been copious, had nearly ceased. The leg, the patient said, felt dead; voluntary motion was lost, and also sensibility of surface in the distribution of the popliteal nerves and their branches. There was considerable shock and great mental dejection, from which she rallied slowly. On the 12th the wound was enlarged, the internal popliteal nerve exposed, and traced upwards to the sciatic trunk. The continuity of this latter was preserved by its strong, tough sheath, but a distinct difference in the consistence of the nerve cord within the sheath made evident a very small gap where the cord had been pulped and practically divided by the injury. Above this the sheath was blood-stained, and below it for some distance the internal popliteal nerve was also ecchymosed and swollen. The external popliteal nerve was similarly affected, but in a less degree. The muscles at the back of the thigh were found greatly bruised, and both they and the intermuscular cellular tissue were largely infiltrated with extravasated blood. In the expectation that the nerve-sheath would maintain the ends of the severed nerve trunk in very close proximity resection of their damaged parts and suture were abstained from. Notwithstanding careful measures taken at first to render the fresh wound aseptic, and also observed at the operation, a free suppuration and some sloughing followed. On the 16th slight sensibility to touch was discovered in the distribution of the muscular cutaneous division of the external popliteal nerve on the upper surface and also in the sole of the foot. The former subsequently was lost, that in the sole and plantar surface of the toes being retained. It shortly became evident that she was pregnant, and on July 13th she left the hospital for an adjoining parochial infirmary to be confined, with the understanding that when this was over she should be readmitted into the Middlesex Hospital for nerve suture in case the condition of the leg had not appreciably improved. Unhappily she did not return, and subsequent inquiry failed to trace her. There were reasons for thinking that her fall was suicidal and not accidental.

In the above case later experience supports the view that it would have been better practice to have at once cut away the bruised nerve ends and sutured, for the slight indications of restored conductivity in the distribution of nerves derived from the internal and from the external popliteal nerve proved as regards the latter very transitory, and as regards the former, they were scarcely progressive during the nine and a half weeks the woman was in the hospital.

LEEDS GENERAL INFIRMARY.

A CASE OF GROWTH (?POLYPUS) IN THE URETHRA; DEATH; NECROPSY; REMARKS.

(Under the care of Mr. W. H. BROWN.)

TUMOURS of the urethra in either sex are extremely rare, if we except the vascular caruncle, which is not infrequent in the female. Writing on this subject, John Hunter[1] says: "I have in all my examinations seen only two, and these were in very old strictures, where the urethra had suffered considerably. They were bodies rising from the surface of the urethra like granulations, or what would be considered polypi in other parts of the body. It is possible they may be a species of internal wart, for I have seen warts extend for some way into the beginning of the urethra having very much the appearance of granulations." One specimen[2] to which he refers is still in the collection at the Royal College of Surgeons, and forms the only example of this condition in the museum, if we except comparative pathological specimens, amongst which there is a pyriform

[1] On the Venereal Disease, Works, vol. ii., p. 277. [2] No. 4422.

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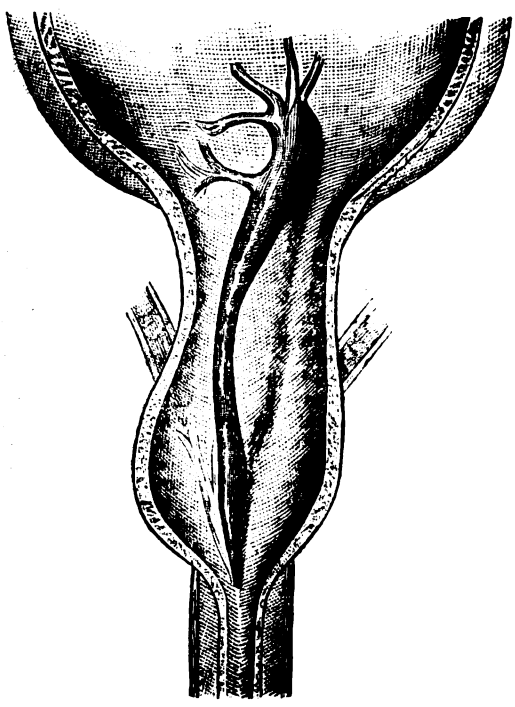
polypus, about two inches long, in the urethra of an ox attached to the veru montanum.[3] Altogether not more than thirty examples of these growths are on record, and few have exceeded the size of a nut, which was the size in M. Forget's patient.[4] Mr. Brown's case is, as he says, without parallel, and shows the symptoms which polypi produce in this canal, frequent micturition, obstruction to the stream of urine, occasional hæmorrhage, &c. For the notes and drawing of the accompanying engraving we are indebted to the dresser, Mr. Dixon.

J. W——, aged eighteen, was admitted on Feb. 14th, 1891, complaining of incontinence of urine. He gave the following history of his trouble:—For the past two years and a half he has had difficulty in passing urine; at times the stream would suddenly stop, and he was obliged to strain violently and bend double in order to void his urine. In the intervals between these attacks he was able to micturate without pain. All his pain was referred to the end of the penis. During the night he frequently passed urine whilst asleep. When walking about the urine was always dribbling away. Two years ago, whilst straining to micturate, he expelled about two ounces of bright-red blood. He stated that on this occasion no urine was passed either before or after the blood. This was the only occasion that blood was seen. On admission the patient was a healthy looking boy, but appeared to be much younger than his real age (eighteen). There was no sign of hair on the pubes, and the penis and testicles were of the size of a boy of nine or ten. There was a very tight phimosis. On his attempting to pass urine the stream was observed to be very small, and a curious



balloon-shaped swelling appeared just over the urethra at the junction of the penis with the scrotum. In front of this there could be felt a small hard mass, not unlike the feeling given by an impacted calculus, but scarcely so hard; this was thought to be due to hardened cicatrix. The balloon-shaped swelling could be emptied by syringing, and the urine passed both backwards into the bladder and forwards out of the urethra. The patient stated that he had been in the habit of expressing the contents of this swelling, and this proceeding always relieved his desire to micturate. The urine was found on examination to be natural.

Feb. 16th.—The patient was put under ether, and Mr. Brown tried to pass a sound, but the phimosis was so tight as to render this impossible. The prepuce was therefore slit up, when the sound readily entered the bladder. No stone was felt. Nothing more was done.

20th.—The boy looks ill and is vomiting; is very cold, and has the usual symptoms of uræmic poisoning. A very small quantity of urine was passed, and on examination this was found to contain one-fifth of albumen. The symptoms continued, and the boy died comatose the next day.

At the post-mortem examination a sound passed into the bladder without difficulty; a cicatricial-like mass was felt at the root of the penis. The organs were removed; and the urethra, having been slit open, was found to contain an elongated polypus-like body about two inches in length. Its posterior attachment was to the prostatic region in the posterior wall of the urethra. The posterior extremity of the polypus was cone-shaped with the base attached. From this attachment the body projected outwards along the urethra, gradually decreasing in size until its middle was reached, then expanding again to its anterior attachment. The portions between the attachments were quite free, and stretched after the manner of a bowstring in the urethra. That portion of the urethra corresponding to the extent of the polypoid mass was largely dilated, being of sufficient calibre to admit almost one's index finger; also its walls in this part stood permanently apart, so that the channel could be looked down, as it were. The bladder walls were somewhat thickened, and here and there roughened. One ureteral orifice was slightly dilated. The mucous surface of the urethra was quite smooth. The ureters were not dilated; their walls were thickened by submucous inflammatory changes (not caseous). The kidneys were extensively diseased, the left much more so than the right. The left kidney was about three times its natural size, and was completely converted into a many-chambered cyst. The outlines of each cyst indicated on the surface in such a manner as to suggest that each cyst had been formed by enormous dilatation of a pyramid and its extension outwards at the expense of the cortex. The cysts all inter-communicated so far as could be ascertained, and were completely filled with a thick, creamy, almost grumous pus, or an exceedingly homogeneous liquefied caseous material. There was no fetor or calculous formation. The appearance was undoubtedly not unlike that of tuberculous disease, but it was thought not to be really so in nature. The right kidney was in the same condition, but in quite an early stage of the change. Testes normal. All the other organs were healthy.

Remarks by Mr. BROWN.—I have not been able to find a record of any case similar to the one just related. The position of the tumour and its twofold attachment are, so far as I know, without parallel. The history of the case and the symptoms, with one exception, did not afford any ground for diagnosis, nor did the general appearance of the boy suggest that his kidneys were in such an advanced state of disintegration. The urine before the operation was natural. The symptom which might have perhaps guided us towards suspecting the presence of new growth was the one copious hæmorrhage (referred to in the notes) without the discharge of urine. Such bleedings being of frequent occurrence in rectal polypi, I am inclined to think that the tumour had its origin in the bladder and grew as the patient grew, being washed into the urethra by the outgoing flow of urine, and that its urethral attachment may have been due to inflammatory adhesions, the result of the patient's constantly handling the penis in his efforts to expel his urine. We failed to elicit any history of injury, of calculus, or of foreign body. It is, I think, only too clear that death was hastened and the shock occasioned by my slitting up the prepuce and passing the sound for the purpose of diagnosis, but I do not see how such an accident could have been either foretold or avoided.

[3] No. 4423. [4] Lond. Monthly Journ., 1852, vol. vii., p. 83.

THE MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—This institution maintains its efficient condition. All the departments are in excellent working order. During the past year 1211 patients were admitted. The daily average number of beds occupied was 95·40. The accident cases, treated as out-patients, and the dispensary cases, numbered 9145. The convalescent home at Bray, in connexion with this institution, continued to be utilised with great benefit to the patients sent there. Improvements in the dispensary, which is detached from the main building, had been effected at a cost of £274 15*s.* It was now complete as an extern department. The financial statement showed a balance on the debit side of £523 18*s.* 5*d.*, including deficiency of £187 4*s.* 3*d.* brought forward from last year.

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Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Measles as a Cause of Endocarditis.—Chronic Traumatic Arthritis.

AN ordinary meeting of this Society was held on April 14th, the President, Mr. Timothy Holmes, in the chair.

A paper by Mr. JOHN H. HUTCHINSON, on Measles as a Cause of Endocarditis, was communicated by Dr. CHEADLE. The author called attention to the rarity of the occurrence of endocarditis as a direct result of measles. He recorded four cases of endocarditis, all of which occurred in an epidemic of measles at a boys' school:—Case 1: Boy, aged ten, with a rheumatic family history, developed mitral murmurs on the second day of the prodromal stage.—Case 2: Boy, aged nine, suffered from measles complicated with catarrhal croup and slight broncho-pneumonia; a mitral systolic murmur was heard on fifteenth day.—Case 3: Boy, aged nine, several of whose relatives had suffered from heart disease, probably rheumatic, developed broncho-pneumonia and pleurisy on the second day of the eruption of measles, and endocarditis on the fourth day.—Case 4: Boy, aged eleven, having had repeated attacks of follicular tonsillitis, but no articular rhematism, whilst apparently convalescing from a rather severe attack of measles, developed a systolic mitral murmur on the fourteenth day. The author suggested that a rheumatic taint might have been a predisposing cause, since the first case had rheumatic history and had suffered from chorea, the third had family history of heart disease, and the fourth had follicular tonsillitis.—Dr. CHEADLE said that there was nothing improbable, on the face of it, that the endocardium should be stirred up by the poison of measles, just as the mucous membranes were; and meningitis, myelitis, and nephritis were known to happen in its course. This cause might account for a certain number of cases of so-called "unexplained heart disease." He had not met with any cases in the course of measles during life, but he had looked up the post-mortem records of the Children's Hospital in Great Ormond-street, and there were only two deaths in which affections of the heart were found amongst patients who died of measles. One was a case of old valvular lesion, and the other was one of pericarditis and pleurisy. He almost questioned whether this epidemic might not have been a very severe one of rötheln, as he had seen many more grave complications with that disorder than with measles. He doubted if in the first case the cardiac lesion could be put down to the measles, but the others appeared undoubtedly to be due to that cause. It was worthy of note that in none of the cases was there concurrent joint affection.—Dr. STURGES felt rather afraid that the author had drawn his conclusions from an insufficient number of cases. He thought it very improbable that endocarditis did follow measles, and in conjunction with this it should be remembered that it was often very difficult to say, from physical signs, whether endocarditis was present or not.—Dr. ROBERT LEE said that if he were asked what disease of the zymotic class left behind the least changes, he would have said measles. He had never been able to trace a single case of disease of the heart to that cause. It had been stated by older writers, no doubt on clinical evidence, that small-pox, measles, and scarlatina were causes of heart disease; but modern observations did not bear out this statement. He thought it probable that some latent constitutional tendency might be aroused into action by the measles poison, and that this tendency might bring about the valve mischief. It should be remembered that negative evidence would also be most valuable.—Dr. HAIG agreed with the author of the paper that more cases would be found if more were sought for. He had elsewhere maintained that endocarditis was due to the action of uric acid on the fibrous tissues of the heart. The action of the measles as a fever on the uric acid probably produced the lesion; one would not, however, expect to find it often in the course of measles, as the fever was usually slight. It was worthy of note that in two of the cases the measles was associated with broncho-pneumonia. He suggested that in the fourth case the cause of the murmur was probably dilatation of the heart.

Mr. W. ARBUTHNOT LANE then read a paper on Chronic Traumatic Arthritis. The author wished, in the face of the recent more accurate differentiation of the clinical conditions originally comprised under the several terms "rheumatoid arthritis," "rheumatic gout," &c., to separate from the mass of clinical and pathological material which was said to be characteristic of that disease, or rather groups of diseases, a definite variety to which he would apply the term "chronic traumatic arthritis," to distinguish it from the two other chief varieties—rheumatoid arthritis and rheumatic arthritis. He suggested this title for the reason that its course was a long one and constantly progressive, and its causation was simply and solely mechanical. He referred to a paper in the Transactions of the Pathological Society for 1886 ("The Causation and Pathology of Rheumatoid Arthritis and of Senile Changes"), in which he dealt with many of these changes in detail, and showed that they were the result of force exerted on one or several occasions upon a joint. These he stated briefly, together with other similar conditions which he had observed, and which he had described in various papers.—Mr. HOWARD MARSH said that he was surprised to hear the author state that no one had alluded to these cases of chronic traumatic arthritis, which were usually mixed up with those of rheumatoid arthritis. He had certainly heard these cases described by Sir James Paget thirty years ago, and he believed that Stanley had also alluded to them. In the museum of St. Bartholomew's Hospital there were hip-joints with the general characters of osteo-arthritis where the changes were the result of injury. He saw a case recently in a woman aged fifty-four who fell and bruised herself. She went about for a fortnight and then had to lay up. He saw her two months later, and there was then severe pain in the joint, which was stiff and the muscles were wasted; the limb was shortened and the foot everted. The injury had caused a chronic arthritis with absorption of the bone. Similar lesions were seen following injury to the shoulder, knee, great toe, or thumb. In certain cases a locking of the joint might result, the injury producing a chronic synovitis with thickening of the fringes, which got between the articular ends.—Mr. LANE of Bath remarked that in cases where an injury set up an arthritis there would be frequently found a history of scrofula. In osteo-arthritis there was a quick pulse and other neuroses which served to distinguish it, but these were not found in chronic rheumatic arthritis. The true rheumatoid joint was enlarged and of spindle shape, but the rheumatic joint was not enlarged, or only very slightly so. Grating, in his experience, was only found in the rheumatoid cases. He believed that some few cases might owe their origin to injury only, while some were mixed cases.—Mr. WARRINGTON HAWARD asked if the causation of the disease could be simply and solely mechanical. It was certain that numbers of people tumbled down and yet these changes in their joints did not follow. The true explanation, he thought, was that the mechanical disturbances evoked something that was previously there.—Mr. GOLDING-BIRD asked why these damaged articulations could not repair themselves. The disease was said to begin in the cartilage and result from a trivial blow; but the changes produced seemed to him impossible to follow from such a cause. He felt sure that they could only be induced in people who had a primary tendency. In cases of arthritis of the shoulder following injury there was not the slightest deformity, unless the patient were rheumatic. In a case were trouble at the hip had followed a blow, he found on examination, three years after, stiffness, pain, and wasting of the muscles, but no shortness or deformity.—Dr. ARCHIBALD GARROD said that the injury was the starting-point of the lesion, but not its actual cause. He referred to the case of a patient who had an injury to a small joint, and this was the starting-point of a general rheumatoid arthritis. The chronic arthritis resulting from injury to a joint in young persons did not present the rheumatoid characters: these lesions would not occur if the joint were perfectly nourished. In some cases the rheumatoid arthritis was local and due to a local cause, while in others it was general and due to worry or to some defect of general health.—Mr. PARKIN thought the three divisions suggested were valuable, the first group, of traumatic arthritis, occurring mainly in males, affecting large joints, associated with grating, but without nervous symptoms. The second affected chiefly young people; there were nervous symptoms, the ligaments were affected, there was sometimes effusion, and the small joints were principally involved. The third class were cases which

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followed on acute rheumatism. The first variety seemed to him deserving of a special name.—Mr. LANE, in reply, said that he saw no difficulty in locating the change in the cartilage. If a thigh were fractured with two inches shortening and the lower fragment set at an angle, the cartilages in the joints would disappear very rapidly at the points of altered pressure; and if this would happen as the result of several slight pressures, he thought it might also follow a violent injury. He had seen rheumatoid arthritis pick out a damaged joint over and over again, but that was an instance of mere super-position, and differed from the cases he had described. He was unaware of the existence of any literature on this special subject.

CLINICAL SOCIETY OF LONDON.

Popliteal Aneurysm.—Lumbar Nephro-lithotomy.

AN ordinary meeting of this Society was held on April 10th, the President, Sir Dyce Duckworth, in the chair.

Mr. A. T. NORTON read a paper on a case of Popliteal Aneurysm in a youth aged seventeen. A parcel-post boy had felt pain behind the left knee for five months, and in March, 1890, being unable to work, he entered St. Mary's Hospital. The tumour occupied Hunter's canal and extended down into the popliteal space, which it filled. The part in Hunter's canal could not be diminished by pressure to such an extent as an aneurysmal cavity should be; there remained an apparent enlargement of the femur; the part in the popliteal space was quite as compressible as an aneurysm. The tumour pulsated and dilated in all directions. During pulsation a loud systolic murmur was heard over the whole tumour. The measurement around the tumour was 14¼ in. as compared with 13 in. in the corresponding position of the sound limb. Pulse 60; temperature normal; urine normal; tongue clean; appetite good; glands in both groins enlarged, also one under the chin. There was a difference of opinion as to the character of the tumour, Mr. Norton considering it unquestionably an aneurysm, others looking upon it as a pulsating sarcoma, chiefly on account of the fact that the femur could be felt enlarged in the position of Hunter's canal after steady compression of the tumour and on account of the youthfulness of the patient. In consequence of the difference of opinion, Mr. Norton determined to watch the tumour for a week, at the same time treating the patient by Tuffnell's method. On March 29th, finding the pain increasing, Mr. Norton tied the femoral artery in Scarpa's triangle. On May 5th the sutures were removed, the wound having healed by the first intention, and pulsation being re-established fully in the vessels below. On May 8th measurement over tumour reduced one inch; left thigh, 13¼; right, 12¾. On June 21st, seven weeks after the operation, both limbs had increased in size, and both were nearly equal in size. Left thigh, 13½; right, 13¼. The position of the popliteal tumour was scarcely to be recognised, but in Hunter's canal could be felt a small sharp edge of bone or exostosis, which in all probability was the cause of the vessel giving way at that part, and hence the peculiarity of the aneurysm in a person seventeen years of age.—In reply to some remarks of the PRESIDENT, the author said that he regarded the femoral exostosis as the cause of the aneurysm; there was no heart disease and no arterial degeneration. He did not propose to deal with the exostosis surgically, as the aneurysm was cured, and the growth would probably not cause any further trouble.

Mr. G. R. TURNER related a case of Calculous Suppression of Urine with Double Pyo-nephrosis in which nephro-lithotomy was done on both sides at one sitting. The patient, a woman aged forty-five, was admitted into St. George's Hospital, under the care of Dr. Whipham, July 21st, 1890. She had led a very intemperate life, and had suffered from symptoms of renal calculi for five years, occasionally passing stones by the urethra. None, however, had passed for the last year. Three days before her admission she had a severe attack of pain in the right loin and groin, and for twenty-four hours before she had passed hardly any urine at all. She was weak and drowsy on admission, and in each lumbar region was a tender, evidently renal, tumour. The right was the larger of the two. On July 23rd, after consultation with Dr. Whipham, Mr. Turner decided to cut down on both of these from the loin. The bladder was quite empty, and no urine being passed. From the left kidney a large calculus weighing just under an ounce was removed. A quantity of extremely offensive pus occupied the dilated renal pelvis. This was irrigated with warm water and drained. The right loin was then dealt with in a similar manner. Pyo-nephrosis was present here also, but there was less pus on this side. Two rounded calculi weighing some five drachms were removed. In all more than two ounces of calculous matter were removed from both kidneys. She rallied well from the operation, a quantity of urine coming away from the drainage-tubes, and about an ounce was drawn off from the bladder by catheterisation. On July 27th she passed 3125 cc. by the urethra, slightly blood-tinged. The wounds did well, and her general condition was satisfactory till August 1st, on which day she became rather suddenly prostrate, and passed no more urine by the urethra, though a quantity of it and increased discharge of pus came from the loin wounds. Two stones the size of hazel-nuts were found and removed from the right side; none could be felt from the left loin. Temporary improvement followed, but the patient finally died of asthenia on Aug. 3rd, eleven days after the nephrolithotomies. Post-mortem examination showed both kidneys to be most extensively diseased, four more stones in cavities on the right side, and another calculus on the left side plugging the ureter about one inch from its commencement. These stones could not be felt from the loin incisions. Remarks were made as to the best treatment for calculous suppression of urine, and it was suggested that, unless the patient's general condition forbade it, or one kidney was obviously hopelessly disorganised, unfit for any excretory work at all, both sides should be relieved by operative interference, not necessarily a nephrolithotomy on the second kidney, but at any rate a nephrotomy to relieve the mechanical obstruction.

Mr. W. H. A. JACOBSON read a paper on eight cases of Lumbar Nephro-lithotomy, forming a sequel to a previous paper on four cases of nephro-lithotomy, published in the twenty-second volume of the Clinical Society's Transactions. Case 1: Symptoms of renal calculus for five years in a man aged fifty-three; lumbar nephro-lithotomy; calculus (lime oxalate, 14½ gr.) removed from upper part of ureter; recovery. There was a history of five years' lumbar pain at intervals, with hæmaturia and frequent micturition. Urine: sp. gr. 1025; abundant lime oxalate crystals; light amount of albumen. Nephro-lithotomy performed on Oct. 7th, 1889. A small circular hedgehog calculus of lime oxalate was found and removed; recovery. Patient went out on Dec. 11th; remains well. The points of interest about this case were the age, the site of the stone (about 1½ in. below the kidney), and the fact that percussion, as advised by Mr. Jordan Lloyd, over the loin at once caused a stabbing pain. The liability of stone to be detained about two inches below the kidney, as well as in the narrow orifice of the ureter and where it bends over the iliac vessels, was pointed out by Mr. Godlee.—Case 2: History of calculus for eighteen years in a patient aged thirty. Large left renal swelling with stinking alkaline purulent urine. Nephro-lithotomy performed in August, 1889. Nine stones removed; urates, oxalates, phosphates, 333 gr. First attack of hæmaturia when twelve years old, occasionally since. Ten months ago rigors and urine turbid. Large tender swelling in left loin. Urine alkaline, stinking, and loaded with pus. No tubercle bacilli. On Aug. 10th, 1889, nephro-lithotomy was performed. Kidney enlarged. Eighty-nine rough, foul stones removed, one jammed in ureter. Patient made a good recovery, but a fetid sinus persisted, from which a large quantity of watery urine came away, requiring a lumbar nephrectomy, which was done in August, 1890. One stone left behind in uppermost part of kidney; recovery.—Case 3: Calculous pyelitis closely simulating tubercular pyelitis in a patient aged twenty-nine. Exploration Nov. 16th, 1889; removal of eight calculi (mixed urates, 39 gr.) and much pus; complete recovery by February, 1890; remains well. Patient was a woman aged twenty-nine, with a much enlarged and tender right kidney. Much pyo-uria; very scanty history of hæmaturia. Morning temperature 99°; evening 100°. Family history of phthisis. Exploration on Nov. 16th, 1889. Removal of eight stones and much pus. Kidney much expanded and damaged; recovery. All soundly healed by Feb. 18th, 1890. Patient remains well.—Case 4: Severe symptoms due to a very small calculus (lime oxalate, 25 gr.) in upper part of kidney; nephro-lithotomy; stone found

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with much difficulty in an upper calyx; recovery. E. S——, aged eighteen, had had frequent hæmaturia, severe pain in left loin and testicle, for a year. Nephro-lithotomy on July, 1890. It was only when search was about to be abandoned that a small lime oxalate calculus was detected, which was extracted with some difficulty. Wound in kidney firmly plugged with strips of sal alembroth gauze; recovery. Patient went out five weeks later with a small sinus. Two weeks later some shreds of gauze presented themselves in this sinus, and three strips (1 in. by 4 in.) were removed by Dr. Lever of Harrogate. Sinus closed firmly, and patient has remained entirely well since.—Case 5: Strong evidence of renal calculus for five years in a patient aged thirty-eight; exploration, August, 1890; no stones found; descent of two in October, one being removed from urethra, the other treated by lithotrity.—M. C——, a shipwright, had been subject to lumbar pain and hæmaturia for five years. In 1885 he passed a calculus. Exploration on August, 1890; good recovery. Went out on Sept. 15th; returned to full work in October. Shortly after a stone was impacted in the urethra and removed by forceps. Since then micturition has been frequent, painful, and interrupted. Small stone detected in the bladder and crushed on Nov. 28th; crushings weighed 20 gr. Patient heard of in March, 1891, in good health, and able to follow his occupation regularly.—Case 6: Symptoms of a year's duration; supra-pubic lithotomy in America; nephro-lithotomy; kidney very high up; calculus (uric acid and oxalates, 54 gr.) removed from pelvis; recovery.—A. C——, aged thirty-three, has had three attacks of left renal colic in the last year. Nine months ago his symptoms being thought to point to vesical stone, supra-pubic lithotomy was performed in the Pennsylvanian Hospital without any result. Nephro-lithotomy, Oct. 10th. Kidney placed very high up. Stone easily felt in pelvis, and hooked out with finger. Recovery. Went out on Nov. 15th. Remains well.—Case 7: Symptoms of ten years' duration in a patient aged twenty-five; nephro-lithotomy; wound of peritoneum; calculus (lime oxalate, 33 gr.) removed from pelvis; uninterrupted recovery. C. K. D——, labourer. Kidney trouble began ten years before; attacks of left side and lumbar pain and hæmaturia frequent. Marked lumbar tenderness. Nephro-lithotomy, Oct. 17th. Peritoneum accidentally wounded. The day after the operation, to ensure safe drainage, the kidney was sutured well up into the wound. Recovery uninterrupted. Patient went out on Nov. 23rd.—Case 8: Fifteen years' symptoms in a patient aged forty. Diagnosis of cystin calculus from deposit in the urine; nephro-lithotomy; grave condition of shock throughout the operation; four calculi removed, three of pure cystin; recovery, but a sinus remained two and a half months after the operation. Miss B——, aged forty, seen in December, 1890. For fifteen years increasing misery with right lumbar pain and tenderness. Occasional hæmaturia. Right kidney very movable. Nephro-lithotomy on Jan. 25th. Four calculi removed from dilated pelvis. Operation easy and brief, but patient's condition most grave from collapse throughout. Recovery, but a tiny sinus allowing of a slight escape of urine was present two months and a half after the operation. Mr. Jacobson suggested the following points to the meeting: 1. That in doubtful cases of tubercular disease, especially of the genito-urinary tract, where, as in Cases 2 and 3, the diagnosis between calculous and tubercular pyelitis remained obscure, the aid of bacteriology—i.e., inoculation of the suspected fluid either into the anterior chamber or beneath the skin of an animal—would readily clear up the case. He alluded to two cases, one of obscure cystitis, the other of a lateral lithotomy wound in a child, which with the inguinal glands became infected, in both of which the case was made plain by inoculation by Dr. Washbourn. 2. Information was sought for the best means of detecting small stones impacted high up in the kidney itself, Cases 4 and 5 showing the extreme difficulty that might be met with here. 3. With regard to the cystin stones removed in Case 8, Mr. Jacobson sought information as to the risk of recurrence, and whether there was anything in the pathology of cystinuria that accounted for the extreme weakness of the patient, and the very grave condition of shock which was present throughout the operation.

Mr. BILTON POLLARD reported a case of Nephro-lithotomy in a boy aged ten. During the past three years the boy had been subject to attacks of abdominal pain associated with hæmaturia. The attacks of pain were not characteristic of renal calculus. The hæmaturia was sometimes profuse. The urine contained no pus, and when free from blood it appeared to be healthy. The right kidney could be felt; it was not tender on pressure, and there was no renal tumour. The boy's general condition was good, although he was anæmic. On Dec. 25th, the right kidney was explored through the lumbar incision at the North-Eastern Hospital for Children. The stone could be felt in the pelvis of the kidney by the finger, and was also struck by the exploring needle. It was easily extracted through the cortex of the kidney. The stone weighed twenty-seven grains. The kidney bled rather freely, but the bleeding was stopped easily by plugging the wound in the kidney with gauze. The gauze was removed on the following day, and the tube on the second day after the operation. No blood appeared in the urine after the operation, and as the discharge of urine from the wound did not diminish materially, the renal pelvis was again explored on the fourteenth day after the operation, as it was thought possible that it might be plugged with blood clot. No clot was found. A fine tube was passed in the direction of the ureter, and some lotion syringed through it with the object of dislodging a clot if there was one impacted in the ureter. The quantity of urine which escaped from the wound now diminished quickly, and ceased entirely after the fifth day, and the patient made a complete recovery. It was now sixteen weeks after the operation, and the patient continued well. From inquiries which Mr. Pollard had made, he thought nephro-lithotomy was a rare operation in childhood. Mr. R. W. Parker had twice operated for renal calculus in children at the East London Hospital, but no cases of the kind had occurred in three other London children's hospitals, nor yet at the Pendlebury Children's Hospital. Mr. Pollard reported the case with the view of ascertaining the experience of others in regard to renal calculus in childhood.

Sir DYCE DUCKWORTH referred to the preliminary medical treatment of renal calculus, alluding to the success which had been met with in large numbers of cases by "flushing out" the kidneys with indifferent waters, such as those of Bath, Buxton, or Contrexéville. He said that the presence of cystine in the urine was often associated with severe forms of dyspepsia, but he did not know that it was connected with a scrofulous family tendency. In the cases which had been related the occurrence of a loin sinus had been singularly infrequent.

Mr. PARKER referred to the case of a little girl on whom he had performed nephro-lithotomy, and who for several years had suffered from indefinite renal symptoms. Stones had often been found in the kidneys of children post mortem, when there had been no evidence pointing to calculus during life. In a boy aged twelve, particulars of whose case he had published, the first symptoms followed a fall over a form at school. He died of suppression of urine, and at the necropsy the right kidney was found enlarged and full of stones, while the left was a mere sac, and was also full of stones. During life there had been no symptoms like those of renal calculus. It would be very interesting if in cases of calculus in adults an accurate history of the earliest symptoms of stone were invariably recorded.

Mr. JACOBSON, in reply, said that in one case he had operated on a persistent sinus had remained, due, he believed, to his leaving a calculous fragment behind. A persistent sinus would be likely to follow in cases of multiple stones with pus; but these, fortunately, were rare. In one instance, where the kidney was unusually low down, he unfortunately, during digital examination, opened the peritoneum.

Mr. A. T. NORTON said that a calculus might lodge in the ureter about two and a half to three inches in the bladder, and this was the explanation of a persistent fistula which followed in one case in which he had opened an enlarged kidney through the loin. In another instance he had performed nephrectomy and a persistent fistula had resulted; this also, he felt sure, was due to a calculus lodged in a similar position; and the intermittent escape of pus by way of the bladder, which had several times taken place, was probably from a loculus in the neighbourhood of the stone. He proposed opening the peritoneum in order to discover the source of the obstruction.

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MEDICAL SOCIETY OF LONDON.

The importance of the Trigonal Pouch in the Surgery of Vesical Calculus.

AN ordinary meeting of this Society was held on April 13th, the President, Dr. Douglas Powell, in the chair.

Mr. G. BUCKSTON BROWNE read a paper on the importance of the Post-prostatic or Trigonal Pouch in the Surgery of Vesical Calculus, and he illustrated his remarks by several cases. The first portion of this communication will be found in another part of our present issue.

Mr. HOWARD MARSH had a case to relate which bore on the subject of the discussion. An old man of seventy-nine complained of frequency of micturition, accompanied by such severe pain that it caused him to kneel on the floor and grasp any furniture that might be within his reach. On examination he was found to have a greatly enlarged prostate. He had suffered from stone for many years, and lithotrity had been performed. The stone could not be found with the sound until its beak was turned down behind the prostate where it lay. It appeared impossible to do lithotrity successfully, and, lateral lithotomy being quite out of the question owing to the size of the prostate, he determined to perform the supra-pubic operation. Four curiously facetted calculi were found lying under an overhanging prostate, and were removed, the patient making a good recovery. He himself was impressed in favour of the supra-pubic operation, even in children, and he failed to recognise those drawbacks to it which had been expressed by some surgeons, who appeared to regard it as an exploded method.

Mr. REGINALD HARRISON entirely concurred in the two propositions put forward in the paper. Lithotrity in a normal bladder was quite a different procedure from what it was in the cases which had been related. He was sure that a great many recurrences of stone were due to the fact that lithotrity had been attempted under what were practically impossible conditions. As to the selection of supra-pubic cystotomy, he believed that many of these cases could have been better treated by median perineal lithotomy. He had practised it many times; it drained a misshapen bladder better; one was often able to do something with the enlarged and obstructing prostate, and the necessity for using a catheter was no longer required. He did not go so far as some in his opposition to supra-pubic lithotomy, for indeed he had often performed that operation, but yet he felt that there was still a place, and perhaps a large place, for the perineal method.

Mr. SWINFORD EDWARDS failed to see how some of the calculi could have been removed by the perineal route. One of the cases described appeared to be a variety of encysted calculus, and this class of case did not lend itself to lithotrity. He had had one fatality in attempting to crush an encysted stone, and so also had Mr. Butlin, the junction of the cyst with the wall of the bladder being damaged. In another of the cases the symptoms appeared to him to be due more to the large and projecting prostatic lobe than to the small stone behind it. In some instances the stone could be dislodged by inverting the patient and pressing the stone from the pouch into the bladder. He inquired if supra-pubic wounds had been found to heal kindly in old people.

Mr. PEARCE GOULD referred to the case of an old man aged seventy, in whose bladder he found a stone in October last. Lithotrity was performed and the patient left relieved. Two months later he returned with his old symptoms, and after repeated soundings another calculus was found. On passing the lithotrite Mr. Gould was unable to seize the stone. He felt inclined to do the supra-pubic operation, but was persuaded by a colleague to perform the perineal operation. By this route his finger failed to reach the post-prostatic pouch, but he removed the calculus with the forceps. The wound again healed, and the patient left, only to return later with recurrence. This time supra-pubic lithotomy was done and seven small calculi removed; the patient died on the sixth day. There was no doubt that the only ready means of removing calculi from the post-prostatic pouch was by supra-pubic lithotomy.

Surgeon-Major KERGAN felt that the paper would fill a gap in the literature of vesical calculus He asked if it was right to perform any operation for stone in a very old man. He thought that recurrence was extremely likely to happen. The sound which was exhibited he regarded as a valuable instrument.

Mr. CAMPBELL WILLIAMS related a case in which supra-pubic lithotomy was followed by median cystotomy. The patient, who was sixty-four years of age, and possessed an enlarged prostate, disliked the crushing operation, and therefore supra-pubic lithotomy was done. A large stone was removed, and the bladder being illuminated, it was certain that it was completely evacuated. Three months later he came back with his old symptoms, and was cut from the perineum, three stones being removed. He was certainly worse after the perineal than after the supra-pubic operation. In one case of supra-pubic lithotomy which had proved fatal in Mr. Hill's practice, there was violent hæmatemesis after the administration of the anæsthetic. It should be remembered that even inversion might not remove a stone from the post-prostatic pouch.

Mr. MARMADUKE SHEILD suggested that the spiked calculi which had been shown were probably oxalates. He held that it was of value to make a rectal examination at the same time that sounding was being done. If a patient presented great irritability of the bladder with occasional hæmorrhage, he thought exploration was justifiable, even if the stone could not be felt with the sound.

Mr. BUCKSTON BROWNE, in reply, said that the case related by Mr. Marsh had been under his own care seven years before, and at the lithotrity there was great difficulty in clearing the bladder, a perpendicular lithotrite being used. It was a pity that there was a prejudice amongst many members of the profession in favour of the lateral operation, for such prejudices were unsurgical. The particular cases which he had related were those which discredited lithotrity, whereas a good search by means of the supra-pubic method cleared the bladder for certain. The median perineal cystotomy was a bad operation in cases of prostatic enlargement. The case of the old man referred to by Mr. Edwards was operated on because of the extreme suffering he was undergoing, and in that case a large portion of the prostate was also removed. The supra-pubic wounds healed remarkably well if but little was done to them—one stitch being placed in them, the bladder being left to itself after good drainage was provided. He held that if an old man suffered much he should not be denied an operation for vesical calculus on account of his age, for death from stone in the bladder was usually terribly painful. The supra-pubic wound healed better, there was no bleeding, there was complete access to the bladder, there was usually no fistula, and the drainage was as good as by the perineal route, for the bladder was not a pelvic but an abdominal organ in cases of enlarged prostate. The spiked stones had not been analysed, but those found in the kidney of the same patient were undoubtedly uric acid. It appeared to him to be very difficult to sound the bladder if a finger at the same time were kept in the rectum. An independent rectal examination had been made in all the cases he had related. He concurred that the rule prohibiting operation unless a stone were felt was one requiring modification.

EPIDEMIOLOGICAL SOCIETY.

A MEETING of this Society was held on March 18th, Jos. Ewart, M.D., F.R.C.P., President, in the chair.

A Retrospect of the Successive Epidemics of Cholera in Europe and America from 1830 to 1890.—Dr. EDWARD F. WILLOUGHBY read a paper on this subject. After alluding to the doctrine of epidemic influences, telluric and atmospheric conditions, and other unknown agencies as at once baseless and needless, and to the opposite delusion, prevalent in the south of Europe, of its being infectious in the same sense as small-pox, he asserted that all independent and scientific students of the subject in Europe and America were now agreed that the vehicle of contagion was contained in the evacuations, that it was thus carried by fomites as soiled clothing &c, while persons suffering from the disease even in unrecognised and mild forms infected the soil and water of places through which they passed. Insanitary conditions favoured its development, but the most insanitary towns—as Rome, Seville, and others—had escaped, since they had been provided with pure water supplies. The incubation period he believed to be as a rule from one to two days, four being an ample limit for quarantine pur-

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poses. Its transportability and conveyance wholly and solely by human intercourse was proved not only by the progress of every epidemic having followed the great routes of trade and pilgrimages, but by the rapidity of this progress having corresponded to the facilities for travel, whether by caravans, river boats, railways, or ocean steamers, quoting in this connexion Dr. de Renzy and others as to the altered circumstances of travel in Northern India; and he thus explained the immunity of Australia and Chili, virtually the most isolated communities in the civilised world. It was, he said, in 1821 that cholera, so far as was known, first advanced from India westwards, reaching Astrakhan in 1823, but subsiding until 1827, when a fresh wave swept over Persia, entering Russia in 1829. In 1830–31 it was fomented by the war in Poland; in 1831–32 it spread over the whole of Europe; and in 1832–33 over North America, lingering in each continent for about two years longer. It was remarkable, and totally inconsistent with the theory of conveyance by winds, that, though some cases had occurred on board ships in the Medway as early as July, 1831, it did not reach London till February, 1832, having effected a landing at Sunderland and travelled *vid* Newcastle, Edinburgh, Glasgow, Belfast, Dublin, and Cork, whence it was at length brought to London. A wave rolled over Persia, Arabia, and Syria between 1836 and 1839, but retired again. In 1840 it entered China, then passed westwards through Central Asia, re-entering India from Afghanistan and through North Persia, reaching the Caspian and Black Seas in the summer of 1847. Following the military road then in course of construction from the Caucasus to Moscow and the river highway of the Volga, it was intensified and spread by the fair at Nijni Novgorod and the massing of the Russian, Austrian, and insurgent Hungarian armies on the Danube, and in the course of 1848–49 had attacked every country in Europe except Denmark and Greece, which were saved by stringent quarantine. It extended to America in 1849, but died out in the course of the following year. The epidemic of 1854 was not strictly a separate invasion, but rather a resuscitation of the last, which had lingered in the south and east of Europe and the west of Asia until called into fresh activity by the Crimean war. Every country in Europe and America was again invaded. The incidents of the outbreaks in America threw great light on the conveyance of the disease by fomites. The epidemic of 1865-66, which was the first to come wholly by the Red Sea, spread rapidly over Europe and America; but had scarcely subsided when a fresh explosion occurred at the Hurdwar fair in India in 1867, whence it was carried to Persia and Russia, being reintensified *en route* by the pilgrimage at Great Mesched in 1868 and the fairs at Nijni Novgorod in 1869 and 1870. At the close of the Franco-German war every country in Europe was attacked except Great Britain, and America succeeded in averting its importation until 1873 By 1874 it had, however, disappeared everywhere on this side of India. In 1881-83 it prevailed in Arabia and Egypt; in 1884 it made its appearance in France, and soon raged throughout Italy and Spain. The influence of pure water supplies was brought into special prominence, not only in the case of single towns in Italy and Spain, but in the almost complete immunity enjoyed by Germany, which had previously suffered heavily in every epidemic. Cholera lingered in the south until the end of 1885, since which date it had been absent from the continent of Europe until the isolated outbreak in Spain in 1890. This, Dr. Willoughby was convinced, was not imported from the East, but was a recrudescence of the epidemic of 1884–85, brought about by excavations in infected ground. Still cholera had since 1888 been slowly but steadily advancing by the Persian Gulf and the extensions of that route. It had last year reached the shores of the Caspian and Black Seas, and had raged at Mecca, though Egypt had almost miraculously escaped, and it had persisted at Aleppo and the Syrian ports certainly as late as January of the present year. He had little doubt that, as its march had closely corresponded with that in 1845–47 we might expect history to repeat itself in an invasion of Southern and Eastern Europe during the coming summer, unless, as in 1823 and 1839, it should retire, after having thus approached the confines of Europe. If, however, it had not already really died out, the vast increase of communication between the two continents rendered such recession less probable than it was fifty years ago. The paper was illustrated by a number of maps showing the great routes and the course of each epidemic in Asia, Europe, and America.—Sir W. MOORE gave his experience of an outbreak at Aden following the unloading of cargo which was proved to have been soiled with cholera excreta at Bombay, the crew remaining healthy; and Mr. MURPHY alluded to Dr. Simpson's having traced the occurrence of cholera on board certain ships moored in the Hooghly to an infected milk supply.—Surgeon DAWSON argued in favour of epidemic influences, but Dr. WILLOUGHBY, in reply, urged that in the case of the ships at sea quoted by Mr. Lawson the crews who must have been most exposed to atmospheric influences escaped, the steerage passengers only being attacked; while such negative evidence as that of the Southampton and Theydon Bois outbreaks in 1865 was worth nothing. It was more probable that someone suffering from mild and unrecognised cholera had crossed over from France, and, leaving the infection behind, had perhaps returned, than that Mr. Groombridge had inhaled it with the sea breezes on Weymouth pier. Such difficulties were incident to all cases even of small-pox, the source of which no one doubted.—The PRESIDENT complimented Dr. Willoughby on having brought within the compass of a single paper a mass of information hitherto inaccessible, and on having by his demonstration of the almost "postal regularity" with which the late epidemic followed the routes of travel by road, rail, and steamships, regardless of prevailing winds, but refusing to cross the Scandinavian and Carpathian mountain ranges in mid-winter, given the *coup de grâce* to the doctrine of atmospheric waves which in the case of this disease he had until that evening accepted.

HUNTERIAN SOCIETY.

A MEETING of this Society was held on March 11th, Dr. Stephen Mackenzie, President, in the chair.

Phonographic Illustration of Disease.—Dr. HUGHLINGS JACKSON and Dr. RIVERS showed a phonogram recording the abnormal talking of a patient the subject of disseminated sclerosis. The phonogram was exhibited by Mr. Cole, of the Edison United Phonograph Company. The patient whose talking was reproduced was a man aged twenty-six, who in the course of about five months became affected in an extreme degree with the symptoms of disseminated sclerosis—viz, oscillation of the head, nystagmus, coarse jerking of the arms and legs on voluntary movement, increased knee jerks, and ankle clonus, as well as a typical high-strained jerking and syllabic utterance, which was very well reproduced by the phonograph, the first verse of "Old Mother Hubbard" being rendered by the instrument.

Sarcoma of Brain.—The President brought forward a microscopical specimen of Tumour of the Brain from a man aged forty-eight, who died with grave cerebral disease, surmised to be syphilitic. There was found a tumour of sarcomatous structure the size of a nut, situated between the medulla and cerebellum, apparently arising from the floor of the fourth ventricle.

Osteo-myelitis of Tibia.—Dr. J. LANGTON HEWER showed a specimen of chronic osteo-myelitis of the tibia. A young man aged twenty had suffered from childhood. The interest of the case lay in the fact that two operations had been performed at seven years' interval. At both the diseased bone was thoroughly removed, and the medullary canal was fairly cleared out and flushed. The first operation was done under strict antiseptic precautions, and the large aperture left in the bone was allowed to fill with blood-clot, which in due time organised. The second operation was made entirely without antiseptics, and the wound filled with granulations. Recovery from both was equally speedy and good, but in the first case a tender scar was left, which gradually became again painful, and broke down. The cicatrix left after the second operation remained firm and sound. Dr. Hewer's suggested inference was that sounder tissue was obtained by the method which involved some inflammation and granulation than by the aseptic method which excluded inflammation.—Mr. J. POLAND referred to other cases of osteo-myelitis.—Dr. F. J. SMITH thought this an illustration of the beneficial action of morbid germs. He was reminded of the experiments of inducing erysipelas for the cure of tumours; next to these came the discovery of phagocytes and the strife they wage; and surely the next stage would be that physiologists would

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fully describe the life histories and uses of micro-organisms, and we should be enabled to give our patients doses of them, much as we now give soda and gentian.

Ulcerative Aortitis.—Dr. TURNER showed two specimens of ulcerative aortitis from surgical cases in elderly women; one of injury (run over); one of gangrene of the toes. It is common to find slight ulceration of the aorta in cases of injury, but not, as in these cases, extensive lesions. Sections were made of the aorta in one case, but no micrococci were discovered, contrary to expectation. Drawings were exhibited of other specimens observed by Dr. Turner, showing in one case masses of micrococci in the inner coat of the vessel, and in another masses of fibrinous coagula attached to the wall.—The President, Mr. G. J. B. Stevens, Dr. Galloway, and Dr. Pitt discussed the specimens and referred to other cases.

Hydronephrosis.—Dr. G. NEWTON PITT showed two specimens of hydronephrotic kidneys, one of them illustrating how aberrant renal vessels, when the pelvis is slightly distended, may cause a kink or bending in the ureter and obstruct the passage of urine. Massage might be useful in such a case. The second specimen was from an infant, dying from some other disorder, in whom one ureter was found to open into the pelvis by a mere pin point orifice, and the pelvis was somewhat dilated. The condition was apparently congenital. In stricture of the urethra attended with backward pressure it was not uncommon to find the pressure exerted unequally upon the two kidneys, one pelvis being distended.—Mr. F. R. HUMPHREYS referred to a case of congenital stricture in a boy, where one kidney was hydronephrotic, the other granular.

Buccal Lipoma.—Mr. J. HUTCHINSON, jun., showed a small pedunculated fibro-lipoma from the inside of the cheek of an infant. He suggested that it was really a protrusion of a portion of the pad of fat (Cloquet's pad or the sucking pad) which lies behind the buccinator.

Sarcoma of Lower Jaw.—Mr. J. HUTCHINSON, jun., also exhibited a soft periosteal sarcoma removed from a man of thirty-five. There were curious polypoid projections along the mucous membrane, which had caused some difficulty in the diagnosis. The disease had recurred.

Polypus of Rectum.—Mr. J. HUTCHINSON, jun., likewise brought forward a microscopical section showing the structure of a polypus.

At the close of the meeting Mr. COLE kindly gave some interesting illustrations of the Phonograph, and explained its mechanism.

A meeting of this Society was held on March 25th.

Tumour of the Neck.—Dr. S. H. APPLEFORD showed a case of rapidly growing cervical tumour in a man aged thirty-three. A large hard mass occupied the lower part of the neck beneath the right sterno-mastoid muscle, and there were some hard glands along its hinder edge. The voice was hoarse.—The PRESIDENT referred to several such cases, and thought the diagnosis lay between lymphadenoma and syphilitic disease of the glands, inclining to the former.

Recovery from Hydrocephalus.—Dr. HINGSTON FOX showed a boy, now aged six years and nine months, who had at nine months much enlargement of the head following pneumonia, a wide median fissure extending from two inches above the root of the nose to near the nape of the neck, clearing the frontal and occipital bones. The head was now well ossified throughout, though bulky, 23½ in. in circumference. Some lateral nystagmus existed, but sight and hearing were fairly good; intellect rather babylike. A favourable prognosis might perhaps have been based six years ago on the absence of convulsions or vomiting, the good family history, teeth formation undelayed, and perhaps the occurrence after a specific disorder.

Modern Methods of Performing Cæsarean Section.—Dr. GALABIN read a paper on this subject. These operations were more numerous abroad than in this country, and statistics must be based on continental experience. Some would even prefer it to craniotomy, which had indeed at Guy's a high mortality—16 per cent. or more,—but he ascribed this largely to the adverse effect of previous attempts to deliver by forceps &c. Porro's modification in 1876, by which the entire uterus and ovaries were removed, was described and discussed. Sänger's method was published in 1882, his object being to close the uterine wound by a system of deep (muscular) and superficial (peritoneal) sutures, and so keep the uterine and peritoneal cavities shut off. Success depended much on the operation being a primary choice, without attempting other means first. In a multipara one need not wait for labour to commence, but it was usually best to puncture the membranes. The use of an elastic ligature around the neck of the uterus was on the whole good. Silver wire was preferred for the deep sutures; the superficial are so arranged as to bring flat surfaces of peritoneum in contact. A specimen was shown in which the uterine wound had closed well on this method; the patient died from accidental opening of the abdominal wound on the ninth day. Cameron of Glasgow used no superficial sutures, thus shortening the operation, and has published ten cases with only one death. Adhesion of uterus to the wall of the abdomen, which often occurred, was not altogether undesirable. Sterilisation of the patient by removing ovaries or tying the Fallopian tubes near the outer end was often advisable. Notes of a successful case were read: a woman with a contracted and flattened pelvis, none of whose children has survived. Sänger's method was followed, and except for inertia of the uterus, hæmorrhage, and later on a sinus at one part of the wound which gave a little trouble, she did well and recovered. The use of "delta" metal for the pins and wires for the pedicle in Porro's operation was noticed. The mortalities of the two operations respectively to end of 1889 are: Sänger's, 23 per cent.; Porro's, 58 per cent. Porro's may be the better after long attempts to deliver through the pelvis, and it is simpler to execute for those who are inexperienced.—Dr. HERMAN read notes of a recent case in the London Hospital. A woman, aged thirty-seven, had been in labour eighteen hours. A hard mass was felt in the left iliac fossa; there was œdema of the perineum, and the pelvis was filled with a hard elastic tumour. Catheterism was impossible. On opening the abdomen this tumour was found to be the full bladder. The uterus was opened, and the placenta on its anterior wall cut through, and the child extracted by the feet. Free hæmorrhage occurred. The abdominal walls were held close during extraction, and the application of sutures of silk and catgut. The child survived. Paroxysmal abdominal pains and vomiting continued, and the patient died on the third day. At an imperfect necropsy, a large osteo-sarcoma was found in the iliac fossa; the uterine wound was well healed. Cæsarean section could never, Dr. Herman said, supplant craniotomy, the mortality from which ought not to be higher than from natural labour. The size of the pelvis can be measured, therefore risk should not be increased by trying other methods. Turning out the uterus added to the risk of the operation; the walls could be held by assistants. The elastic ligature was likely to interfere with the contractile power of the uterus, as was shown by experiments on animals, although it lessened the hæmorrhage for the time. The peritoneum must be accurately brought together; it unites well and is the strongest part of the uterine wall. Exposure of the bowel was a frequent cause of death, as probably in his own case, and this was the chief drawback of Cæsarean section as compared with Porro's operation, for careful suture of the uterus was essential and takes a long time.—Dr. HORROCKS preferred Cæsarean section to Porro's operation, as much less mutilating and involving less shock. In certain cases, as rupture of the uterus or cancer, Porro's may be preferable. In a case operated on a year ago he found it very difficult to apply the elastic ligature before opening the uterus. Time was of great importance, and on another occasion he would follow Cameron and not put in sutures at all, except about two for the peritoneum; this shortened the operation by one half. In his own case he tied the Fallopian tubes with kangaroo tendon, following Dr. Champneys; no pregnancy had followed. The lumen was by this means well occluded.

MANCHESTER MEDICAL SOCIETY.

A MEETING of this Society was held on April 1st, Thomas Jones, M.B., B.S., F.R.C.S., in the chair.

Cerebral Abscess.—Mr. SOUTHAM showed a case of trephining for an abscess situated in the anterior lobe of the brain, following a punctured fracture of the frontal bone. On the fifth day after the operation there was a copious discharge of cerebro-spinal fluid from the wound. This appeared to come from the lateral ventricle, owing to

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the formation of a communication between it and the abscess cavity. After continuing for a week the discharge of fluid ceased, and the wound afterwards healed, the patient making a complete recovery.

Acute Lympho-sarcomatosis (acute Hodgkin's disease).—Dr. DRESCHFELD related the following case. A man aged twenty-three was admitted into the Manchester Infirmary on Feb. 19th, 1891, complaining of great weakness, cough, and dyspnœa. He had always enjoyed good health, being temperate, and never had syphilis. In the beginning of this year he began to be troubled with a cough, but went on with his work till Jan. 23rd, when he had a rigor, followed by pain in the right side of the chest. He then took to his bed, but, getting weaker, he sought admission into the infirmary. On admission he was found intensely anæmic. The examination of the chest showed some dulness over the upper part of the sternum, extending to the second and third intercostal space on the right side; there was dulness on the left side of the thorax behind, extending to the angle of the scapula, with diminished breathing and diminution of fremitus; localised dulness in the interscapular region on the right side with increased fremitus and crepitations; there was some muco-purulent expectoration. The pulse was 110, small, and very compressible; the liver was found slightly enlarged, likewise the spleen. The superficial glands in the neck, axilla, and groin showed no enlargement. Both retinæ showed extensive hæmorrhages; otherwise the nervous system showed nothing abnormal. The temperature was 100°; the skin dry; the body fairly well nourished. The examination of the blood showed a marked increase of leucocytes (one to about thirty red blood-corpuscles); most of the leucocytes were very small, mono-nuclear, the nucleus finely granular, the granules not staining well with eosin; the red blood-corpuscles showed numerous microcytes and poikilocytes. Urine, sp. gr. 1020; very pale; contained a large sediment of urates, which, from the absence of blood-colouring matter, appeared only very slightly tinged; no urobilin. The clinical diagnosis was intra-thoracic tumour of the nature of lympho-sarcoma, effusion in the left pleura, pneumonia of right middle lobe, hyperplasia of spleen and liver with secondary deposits, acute leucocytosis. Arsenic was administered, but the patient became worse, the breathing becoming quick and laboured, and he died on Feb. 23rd. The necropsy showed a growth of firm consistence, but containing in its interior a few cysts, in the anterior mediastinum; localised pneumonia of the right lung; the left pleura contained about a pint of clear serum. The liver was enlarged, the spleen weighed 16 oz.; to the naked eye the spleen and liver showed no deposits, but in the hilus of the liver several large soft glands were seen; the retro-peritoneal and mesenteric glands were found considerably enlarged, both kidneys contained numerous white masses of varying size. Microscopic examination of the mediastinal tumour showed it to consist of small mono-nuclear round cells with adenoid tissue and firm fibrous tissue; the liver contained small deposits of round cells round the portal canals; the growths in the kidney consisted of similar round mono-nuclear cells. Numerous small thick bacilli were found in the kidney, filling capillaries and small vessels, and also in and around the capsules of the glomeruli. These bacilli stained readily with Gram's method, and differed therefore from those described by Kelsch and Vaillard in a case called by them "acute leucothymalia" The case is chiefly interesting on account of the acute course which the disease ran, and the large increase of leucocytes in the blood, which had the same character and appearance as the cells in the lympho-sarcomata, as if there had been a sudden flooding of the blood with these cells. Micro organisms have now been found by several observers in Hodgkin's disease, but their exact relation to the disease has yet to be made out.

Mr. WHITEHEAD showed three specimens of papilloma he had recently removed from three male patients. He had selected them from a considerable number on account of their illustrating in a marked degree some of the more important symptoms in bladder growths. Amongst other features they demonstrated the ordinary fact that the closer a growth was in proximity to the prostate the greater the pain usually experienced—that the size of the tumour bore no relationship with the frequency or the amount of hæmorrhage, or with the length of time symptoms had been observed.

Dr. DIXON MANN read a paper on the Elimination of Lead in cases of Chronic Lead-poisoning.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on Friday, March 6th (John Poland, F.R.C.S., President, in the chair), the President announced another list of fifty books recently presented to the library.

Cardiac Failure and its Treatment.—Professor CURNOW, M.D., read a paper on this subject. He specially reviewed the onset of cardiac failure in aortic and mitral valvular disease, pointing out that precedent to failure dilatation of the cavities of the heart must have necessarily occurred, altering the percussion dulness, and more especially the position of the apex beat. He pointed out the varying position of this sign in the different forms of valvular disease, and went on to refer to the modes of dying in these forms. The dangers of any and every kind of effort or exertion which might cause cerebral anæmia in aortic disease and of all pulmonary complications in mitral disease were insisted on. Fainting and giddiness in aortic affections, and hæmoptysis, bronchitis, and the earliest signs of dropsy in the extremities were symptoms of grave import. The various drugs used in cardiac failure were referred to, and the author advised a careful scepticism as to most of the newer ones. He much preferred digitalis to strophanthus, which he had frequently used, although it had not benefited his patients. Morphia hypodermically and small doses of brandy were much praised for the relief of insomnia and dyspnœa, and special stress was laid on treatment by food and the careful watching and relief of dyspeptic and other complications. The paper was discussed by Drs. F. T. Tayler, Cable, Moon, Hingston Fox, MacGavin, and Mr. J. Marshall.

At a meeting held on April 3rd,

The PRESIDENT exhibited a lad with deformity of the leg and foot, and arrest of growth of the tibia following separation of the lower tibial epiphysis.

Graves' Disease.—Dr. HINGSTON FOX read a paper on Graves' disease, especially with reference to cardiac conditions. After speaking of the four cardinal symptoms—rapid heart, tremor, goitre, and exophthalmos, any one or two of which may be absent in an undeveloped case—he dwelt on the mental condition found in severe cases. The emotional centres seem to be in unstable equilibrium, disturbed by slight influences, a condition allied to hysteria and to the effects of chronic alcoholism in women about the climacteric. Muscular weakness and impaired nutrition with neuralgia and the well-known eye symptoms were noted. Severe gastric crises had attended one case, the patient nearly dying from the vomiting, diarrhœa, &c., which appeared to be the effects of "bowel hurry." Dr. Hunter Mackenzie's theory of the pathology of the disease was adopted, the symptoms being regarded as an expression of a permanent condition of the emotional nervous centres, set up in the first instance by terror or fright. Darwin's graphic description of the effects of sudden fear upon animals was alluded to, the thyroid enlargement being the only important symptom of Graves' disease which is there unrepresented. The fright may have been sudden, or a repetition of small shocks. Instances were quoted in illustration of this. This theory brings us, of course, only one step nearer the true pathology. As regards the heart, beyond a hæmic murmur, and eventually dilatation, there is not usually any sign of disorder, except the rapid and irregular action. Some cases show simply tachycardia, others mainly irregularity; in some the condition is continuous, in others paroxysmal. The graphic record of one severe case in a lady aged forty-nine years was shown, extending over eight months. Here attacks of irregular and rapid heart action occurred at intervals of a few days or a week, and lasted twenty-four hours or so. For treatment numerous remedies have been advocated. The author would lay stress on (1) moral and hygienic care, in its widest sense; (2) improvement of nutrition, much milk, cod liver oil, iron; (3) of drugs, belladonna in mild and early cases, iodides in later stages, pushed fearlessly to large doses, bromides in some cases; (4) locally, the weak continuous current, following Dr. Sansom in persevering long with its use; it should be applied to the thyroid with a large plate; Leiter's cold coil also gives some promise; (5) for tracheal obstruction, tracheotomy, incision of capsule of tumour, or compression laterally, in some cases inhalation of chloroform; and lastly, division of the isthmus, often the best hope of relief.—The paper was discussed by Dr. Moon,

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Dr. Cable, Dr. Horrocks, Dr. MacGavin, Dr. Fullerton, Mr. Jessett, and the President.

The Surgical Treatment of Carcinoma Uteri.—Mr. F. B. JESSETT read a paper on this subject. After briefly describing the most usual site in which the disease is found, the author described the method of treatment adopted by him in very advanced cases, by which he had been able to considerably alleviate the suffering of the patients and relieve their symptoms. He next discussed the different forms of operation, condemning caustics as dangerous and unreliable. The actual cautery and galvanic écraseur he also thought were not devoid of danger. Supra-vaginal amputation of the cervix with scissors he extolled, as being in his hands the most reliable method of removing the disease when limited to the cervical canal, and the mucous membrane of the vagina unaffected. By this method he claimed to be able to cut away the interior of the uterus to its fundus. In those cases in which the disease commences in the body of the uterus he advocated vaginal hysterectomy, so long as the uterus was freely movable and the vaginal mucous membrane unaffected.—Dr. MacGavin, Dr. Horrocks, and Dr. Moon took part in the discussion which followed.

Reviews and Notices of Books.

The Causes and Prevention of Phthisis (the Milroy Lectures for 1890). By Dr. ARTHUR RANSOME, F.R.S.

IN these lectures Dr. Ransome gives an exhaustive review of the etiological relations of pulmonary tuberculosis. The importance of the subject needs no emphasising. Tubercle is responsible for about 70,000 deaths annually in the British islands, and kills about one-third of those who die at the most useful period of life—viz., between fifteen and forty-five. Nor, even apart from the question of the value of Koch's treatment, which must remain for the present *sub judice*, can it be said that the tubercular process is so much beyond our control as to make its study unprofitable. Dr. Ransome agrees with the opinions of Niemeyer, Pollock, C. T. Williams, and others that a cure is not so rare as is still commonly believed, and quotes the pathological researches of Cruveilhier, Rogée, Bollinger, Standacker, and Harris in support of the opinion that "a very large proportion of our population suffers from tubercular disease and recovers from it." As regards preventability, Dr. Ransome believes that much has been already accomplished, and quotes the returns of the Registrar-General to show that "in the last thirty years the annual rate of mortality from phthisis has been reduced by more than one-third." We should be glad to believe that this statement is literally accurate, but we are disposed to suspect that a part of the apparent improvement is due to more careful diagnosis and the removal from the column of phthisis of cases formerly included in it.

The question of the pathology of tubercle being now a closed controversy, we need not follow Dr. Ransome in his disquisition on this head. His remarks on the affinities of tubercle are worthy of attention. He points out its analogies to chronic glanders, actinomycosis, frambœsia, Madura foot, syphilis, and leprosy. The closest affinities exist between tubercle, syphilis, and leprosy. "All these disorders are of microbic origin, they are capable of varying degrees of intensity, and possess the power of renewing their ravages after varying periods of dormancy; they produce growths that are strikingly similar in pathological characters, and they are or have been universal in their distribution, apart from conditions of climate, race, and habits of life." This last clause is too sweeping. Habits of life have a great deal to do with the genesis of tubercle, as Dr. Ransome fully admits in a subsequent lecture; they are also probably potent in the case of leprosy. Climate, again, has an influence over tubercle, as shown by the comparative infrequency of the disease in arctic and subarctic regions and at high altitudes. Dr. Ransome discusses at considerable length the affinities of tubercle and leprosy, and shows in an interesting way how many of the controversies now raging regarding the communicability, hereditary character, &c., of tubercle, have been already fought out with regard to leprosy.

Lecture II. is occupied with the topographical distribution of tubercle. The disease is world-wide, and probably no large aggregations of population are anywhere wholly exempt from its ravages. As a general rule the disease is most prevalent in proportion to the density of the population and to the number of persons engaged in unhealthy trades and occupations. A striking corroboration of the doctrine that occupation and mode of life are the most essential factors in the production of phthisis is afforded by Dr. Ransome's tables regarding the relative frequency of the disease among males and females. In large towns, where men are usually engaged in in-door trades, they suffer most, but in country districts where their avocations keep them in the fields they suffer much less than women. We cannot too emphatically teach the doctrine that a confined in-door life and the close aggregation of persons are the most fundamental of the conditions that predispose to tuberculosis. When we consult a map giving the geographical distribution of phthisis we find a comparative immunity from the disease in—(1) deserts and sparsely populated places; (2) mountain ranges and high plateaux; and (3) arctic and subarctic regions. These districts are all scantily populated, but Dr. Ransome points out "that it is not merely the scarcity of possible victims that makes the disease uncommon, for the proportion of cases to the number of inhabitants in these districts is also low, so far as we are able to judge from the imperfect data at our command." He endorses the statements of Hirsch, Lombard, Livingstone, and others as to the rarity of the disease in Nubia, Upper Egypt, Abyssinia, Central Africa, South Africa, Mesopotamia, Syria, Arabia, the interior of Australia, Tasmania, &c. We are disposed to doubt if the existing evidence on such points warrants very positive statements. Dr. Ransome's assertion that "in the interior of Australia and in Tasmania tubercle is almost unknown" is certainly open to question. Bonwick gives the rate of phthisis in Tasmania, calculated over a period of seven years, as 10·29 per 10,000 living. As regards the immunity of dwellers at high altitudes, Müller has shown that the occupations of the people in Switzerland have a much greater influence than the elevation at which they live. "Industrial *in-door* pursuits give a rate varying from 6·5 to 10·2 per cent., and one of the highest of these rates (9·8) is at an elevation of 3400 ft. to 4400 ft." We wish Dr. Ransome could give us some authoritative information regarding the strong statements that have been made in many quarters regarding the extreme rarity of phthisis in the Andes and upon the Mexican plateaux. If what has been asserted as to the practical immunity from phthisis enjoyed by the inhabitants of such large towns as Mexico, Potosi, Santa Fé de Bogota, &c., were even approximately true, the beneficial influence of altitude would be rendered very probable, but we must confess that the evidence on the subject seems to us most unsatisfactory.

As regards the influence upon soil in the production of tubercle, Dr. Ransome endorses the views of Bowditch and Buchanan—viz., that ground damp is a potent cause, and that the best results may often be obtained from a thorough system of drainage.

Dr. Ransome thinks cold is hostile to tubercle, remarking: "It is now certain that not only is there comparatively little consumption in cold climates, but that many people predisposed to the disease, or actually consumptive, derive great benefit from a sojourn in the keen, dry, cold air of Canada, or from a winter spent amidst snow and ice at

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Davos Platz or the Engadine." Such facts are clear enough, but it is not so evident that the cold is the essential factor, although we are not disposed to deny that it may have some influence. But the humidity of the air and the general effect of the climate upon the habits and mode of life must also be allowed for. Dr. Ransome does not think that exposure is, *per se*, a cause of consumption, and inclines to the view that its effect is rather protective than otherwise. He discusses the influence of occupations, which he regards as predisposing to consumption in proportion as they expose those engaged in them to—(1) the inhalation of dust; (2) stooping postures at work; (3) changes of temperature; (4) bad ventilation. Statistics show that the most irritating kinds of dust are those derived from steel and flint, and that next after these come fine cuttings from bristles and the spicula of glass and porcelain. Dr. Ransome believes that the most potent of all the causes predisposing to consumption is bad ventilation and the breathing of foul air loaded with organic impurities. In this view we entirely concur, and its truth is now so well recognised that we need not reproduce the striking evidence brought forward by Dr. Ransome in its support.

As regards the influence of heredity, Dr. Ransome believes that "it has much less to do with consumption than is commonly supposed." This is too large a question to be dealt with cursorily, but it should be remembered that the influence of heredity has been denied or minimised by such good observers as Louis and Niemeyer, and that it is on every ground undesirable to do anything to augment the already excessive apprehensions that exist on this subject amongst the laity.

Dr. Ransome does not think that tuberculosis is often directly transmitted from one individual to another, and inclines to the doctrine of Koch and Cornet that the disease is mainly spread by the inhalation of dried tubercular material derived from sputum and floating in the air.

The fourth and last lecture is devoted to the subject of the prevention of phthisis. The writer discusses with sobriety and discrimination such questions as the prevention of the marriages of tuberculous individuals, the proper rearing of tuberculous children, the value of free ventilation, the choice of suitable dwellings on proper soils, the inspection of meat, and the provision of suitable hospitals or homes for phthisical invalids. On all these topics he has much to say that is worthy of attention.

Die Zuckerbildung im Thierkörper, ihr Umfang und ihre Bedeutung. Professor Dr. J. SEEGEN. Berlin: August Hirschwald. 1890.

SINCE Claude Bernard first demonstrated the glycogenic function of the liver in 1853, a great deal has been written concerning the formation of glycogen and its conversion into sugar. A compilation of the various views which have been expressed on this subject would be useful, and such is found in Dr. Seegen's work. This book, however, is by no means merely a compilation, but contains a vast amount of original work. Dr. Seegen is already well known for his researches on the amount of sugar contained in the blood of animals, and consequently his experiments and deductions will be read with great interest. The first four chapters are introductory to the general scope of the work. In the first full directions are given for the testing and quantitative examination of sugar in animal tissues and fluids; in the second we find an admirable disquisition on ferments; in the third the formation of sugar in the digestive tract (mouth, stomach, and small intestine); whilst a fourth contains a very interesting historical account of the glycogenic function of the liver, including the writings of Bernard, Pavy, Schiff, Ritter, and others. The fifth and sixth chapters are taken up with a discussion on the formation of "liver sugar." Dr. Seegen's own experiments are described minutely, and compared with those of other writers, such as Boch and Hoffmann. The chapter on the occurrence of sugar in the blood would naturally be expected to be particularly interesting, nor are we disappointed. Tables are given of the amount of sugar found in the carotid arteries, jugular veins, and portal veins of animals experimented upon whilst taking various forms of diet, the result being that the amount of sugar present is found to be almost independent of the diet. The most interesting chapters are of course those on the glycogenic function of the liver. From his own observations Dr. Seegen arrives at some very important and rather startling conclusions. He shows that the amount of sugar present in the blood can be considerably raised, even when the decomposition of glycogen is prevented, and that "the formation of sugar and disappearance of glycogen do not stand in an etiological relation to one another," and consequently that glycogen is not the source from which the liver sugar is formed. He further shows that the liver cells possess the power of decomposing peptones and fat, sugar being the principal product, but that the main source of the sugar are the fats of the food absorbed; further, that this sugar is independent of the carbo-hydrates taken.

After the perusal of these physiological experiments, we hoped to find more light thrown on the pathology and treatment of diabetes mellitus than is given in the chapter devoted to that disease. In fact, here we can discover very little that is new. Like many other authors, Dr. Seegen divides cases of diabetes mellitus into two classes. In the first class the constitutional symptoms are slightly marked, the patients look fairly healthy, and are generally of middle age; in the second class, the patients are young and the constitutional symptoms very grave. With the first class, the glycosuria disappears when sugars and carbo-hydrates are omitted from the dietary; with the second class, the nature of the food makes very little difference. Dr. Seegen ascribes the first form to the disability of the liver cells to decompose the carbo-hydrates in the ordinary manner. In the second form he considers that the whole organism is more or less affected, and that after the usual amount of sugar has been formed by the liver there is a failure to decompose it again for the use of the organism. With regard to treatment also we learn very little. In the first form dietary is everything, no sugars or carbo-hydrates should be taken; but in the second class of cases treatment of any kind is of little use. Dr. Seegen lays no stress on recommending patients to abstain from fat and all flesh food, merely repeating that the glycosuria in the more severe form is hardly affected by the nature of food taken by the patient.

Maladie de Paget. Par le Dr. LOUIS WICKHAM. Paris: G. Masson.

THIS is an excellent example of the value of the Paris system of presenting an original thesis for the doctorate. In it the author, an internat in the Hôpital St. Louis, gives a complete *résumé* of previous work in this field, and supplements this by his own observations, both clinical and pathological. The second part is especially valuable, as in it he confirms and extends the observations recently made by Darier on this subject, who discovered the presence of psorosperms or coccidia of Leuckart's class spirozoa; and he considered that the first excoriated, and then the ulcerated surface characteristic of Paget's disease of the nipple is due to the irritation excited in the tissues by the presence of these psorosperms in the epidermal cells. The subsequent cancerous development in the affected region is possibly only a result of long-continued irritation, though Dr. Wickham

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is inclined to ascribe it to a more direct action of the parasites.

After a few preliminary observations the author gives an abstract of sixteen previously published, followed by six unpublished cases, the latter derived from the various cliniques in the Hôpital St. Louis. From these he draws up a general description of the clinical features and course of the disease, showing amongst other things that two out of the twenty-three cases occurred in men, one in the male breast and one in the scrotum. This last is valuable, as affording a proof that it is not a disease of the breast only.

The histological description occupies Part II. Commencing with a review of antecedent observations, the author goes on to relate his own, made on specimens from the six unpublished cases and from the scrotal case recorded by Dr. Crocker. In all Dr. Wickham found psorosperms in abundance, contained in the epithelial cells of the epidermis or glands, and he ascribes to these parasites a primary importance. The discussion of the pathogeny of the disease occupies Part III. The treatment suggested by this theory is of course an antiparasitic one, but no opportunity for thoroughly testing it has occurred, though in one case, in which, owing to the perversity of the patient, it was imperfectly carried out, Darier obtained sufficient improvement to afford hope for a successful result in the pre-cancerous stage, if the treatment was efficiently managed.

Well-executed coloured drawings, both of the clinical and microscopical appearances, illustrate the work, and there is a bibliography up to date. The work is in every way a creditable one to the new school of dermatology in France.

Medical and Surgical Memoirs. By JOSEPH JONES, M.D. Vol. III. New Orleans. 1890.

THE author of these memoirs, which embrace an infinite variety of topics concerning the etiology, geographical distribution, nature, and treatment of diseases, must certainly be regarded as one of the most industrious and prolific of medical writers. From time to time he has issued under his personal supervision volumes of his collected writings, which contain an abundance of material gathered from his own researches and observations, extending over a period of nearly forty years. And yet, whilst these bulky tomes speak strongly in favour of his energy and industry, they are so overladen with facts, so copious in detail, and so disconnected that we fear they will be passed over in favour of more systematised and less laborious work.

The present volume (whose bulk has necessitated its issue in two parts, each of great dimensions) consists in the agglomeration of many monographs and essays bearing on the sanitary and economic conditions of the State of Louisiana; on the subject of quarantine, and the measures to prevent the dissemination of infectious diseases; on vaccination (including reprints of the memoirs of Jenner, Pearson, and Woodville), of which an elaborate and detailed history is given; several public addresses of great prolixity and profundity dealing with subjects of epidemiology, of education, and of the treatment of the insane, besides special memoirs upon teratology, and some other physiological topics. Moreover, there are interpolated a profusion of most elaborate statistical tables relating to the health, commerce, and climatology of New Orleans, and maps and charts of the Mississippi delta. When we call to mind his previous volumes—almost as bulky as these—and the subjects of which they treated, we cannot forbear the hope that the learned author will one day be enabled to present the world with some less diffuse and more systematic treatise on some of the many subjects to which he has given so much thought and attention. For in their present form these memoirs are of comparatively small service to the general body of the profession. They will find a place on the shelves of medical libraries, and be occasionally referred to by the statistician or the epidemiologist; but their very exhaustive and elaborate character, and the general style in which they are compiled, render it most difficult to extract therefrom material facts. Added to which the lack of an index is of itself enough to daunt the spirit of the inquirer. The monograph upon Vaccination, which occupies upwards of 500 closely printed pages, is especially valuable for the attention given to the subjects of spurious vaccination and vaccinal syphilis; and here the author's experience in the Confederate army is put to good use, whilst his literary studies are wide and ample.

New Invention.

SINGLETON'S AMBULANCE CHAIR.

THIS strikes us as a simple and ingenious appliance for raising and transporting injured persons from situations such as ships' holds, engine-rooms, docks, pit shafts, coal bunkers, and other places difficult of access to the ordinary ambulance stretchers.

The chair is made of sail cloth, stiffened at the back with leather and provided at the sides with fixed leather straps and buckles for securing a disabled person in it. There are brass eyelet holes at the front and back to which iron clip-hooks and rope slings are connected, surmounted above by an iron ring, to which the rope slings are joined. By fastening a rope to this ring, or, better, by means of a block and tackle, the chair can be raised or lowered with a person in it in the most convenient and comfortable positions. By means of a guide rope attached to the chair, it is easy to prevent it from coming in contact with any obstacles or projections when used. When raised or lowered the disabled person need not be removed from the chair, but may be at once placed on a stretcher; or if one be not accessible, a wounded or sick man may be conveniently moved to any distance by simply putting a pole or handspike through the ring or under the slings, with an individual at either end of the pole to carry him. The apparatus is simple in construction, very portable, not at all likely to get out of order, and is consequently likely to prove, as it has already proved in practice, extremely useful in places and under circumstances where other means of removal and transport could not be applied. It is the invention of Messrs. Singleton, two workmen of Jarrow-on-Tyne, who are both medallionists of St. John Ambulance Association and officials of the Jarrow Ambulance Corps. We can recommend it as a safe and easy means of transport, and well adapted for the requirements of large engineering and manufacturing works.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—At the seventy-second annual meeting of the governors of this charity, the resignation was received of Dr. William Hutchison, who had been for a long period one of the honorary medical officers of the institution. In the committee's report for 1890 the circumstance is thus alluded to:—"The committee desire to place on record their sense of the value of the honorary services for many years rendered by Dr. Hutchison, who, having left the town, has placed his resignation in their hands." At the same meeting Dr. Hutchison's son, Mr. William Hutchison, L.D.S., was appointed honorary dental surgeon to the institution.

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THE LANCET.

LONDON: SATURDAY, APRIL 18, 1891.

THE London Public Health Bills have been read a second time in the House of Commons, and referred to the Standing Committee on Law. It is probable that the same course will be adopted as in the case of the Bills on the Housing of the Working Classes—that is to say, the Amendment Bill will be considered first, and the Consolidation Bill afterwards, and then the two Bills will be consolidated.

The clauses have been so carefully drawn that it is not probable any extensive alterations will be required. Nevertheless questions will be raised upon them, for already there is evidence that the provisions of the Bills have not been fully understood. Thus in our issue of last week a correspondent, writing under the *nom de plume* of "Fairplay," asks "on what ground is the district medical officer singled out to be debarred by law from pursuing that branch of his profession for which his public position particularly fits him?"—or, in other words, why is the provision repealed which specifies that the Poor-law medical officer may be appointed a medical officer of health? The answer probably is that the provision is superfluous. There is, so far as we know, no statutory power prohibiting him holding the latter office, and so long as he is qualified in accordance with the requirements of the Public Health Act and of the Order of the Local Government Board, it is within the discretion of any sanitary authority to appoint him, and of the Local Government Board to confirm the appointment.

The position which Mr. RITCHIE has assigned to the London County Council in the health administration of London was commented on in the House of Commons by two members representing metropolitan constituencies. But a little consideration will doubtless show that the course Mr. RITCHIE has adopted is inevitable if London is to be properly governed. There is an absolute necessity that a central power should exist for the purposes of the sanitary requirements of London as a whole, and seeing that maladministration in one district in London may prejudicially affect the whole county, the right of intervention must be given to the central authority. Not long ago we commented on the activity of the sanitary authority of St. Olave's in stamping out an outbreak of typhus fever. If this outbreak had been less energetically dealt with other districts would probably have been affected, and as a matter of fact the disease did spread to the neighbouring district. It cannot be held that the administration of one district does not concern others. London, great as it is, is but one town. The only question that remains, therefore, is whether this power shall be exercised by an elected body like the County Council or by a staff specially appointed by a Government department. The County Council has already important health duties under the Housing of the Working Classes and other Acts, and is empowered to appoint a medical officer of health for the whole county. To add to the health duties of this body is, we believe, the only course open to the Government, and the welfare of the metropolis necessitates that this should be done completely.

Mr. RITCHIE has borne witness to the assistance the Council has given him in the preparation of the Bills, and the useful work done by Captain JAMES, the late chairman of its Sanitary Committee, and by other members of the Council, has been the subject of favourable comment in the press. There is therefore no doubt that the Council is fully impressed with the importance of efficiently performing any public health duties imposed upon it, and London will gain by the watchfulness the Council will exercise over the proceedings of the forty-one authorities in the administrative county. That there should be a temporary feeling of apprehension on the part of those bodies who wish to maintain a position of independence is not unnatural; but we have no hesitation in saying we are convinced this feeling will pass away when there has been experience of the new conditions.

There are a few points in the Amendment Bill which we think should be further considered. To one of these we have already referred on a previous occasion—viz., the proposal to send to every elementary school manager the returns of notified cases of infectious disease prepared by the Metropolitan Asylums Board. If this intention be carried out, we fear that it may be the beginning of the end of notification. That the Notification of Infectious Diseases Act has hitherto worked with very little friction is, we believe, due to the circumstance that the information which has been given has been regarded as confidential. We are not at all prepared to say that there may not be advantage in providing that other public bodies than the County Council shall receive these returns, and that such bodies would not be able to use the information given in the interest of the public. But to enact a law requiring these returns to be sent broadcast over the metropolis, without any experience as to the effect of such distribution, is, we think, fraught with danger to the future successful working of the Notification Act. We would gladly see this provision mended, giving full discretion either to the Managers to determine as to whom the returns shall be sent, or to some other authority having public health functions. It would then be found possible to modify or cancel any arrangement found to work badly without the necessity of going to Parliament.

A restriction to be placed in future on the medical officers of health who will be appointed after the passing of the Act demands comment. These officers, it is provided, are to reside within the boundaries or within a mile of the boundaries of their districts. With regard to this, we would point out that a feeling is undoubtedly growing, and especially since the passing of the Notification Act, that public health duties militate against private professional practice; and it is not uncommon for sanitary authorities to prohibit their medical officers of health from thus practising. We may conveniently cite the case of Chelsea, a district in which this course has been taken, as illustrative of our argument. A small salary is offered, too small to encourage a man of any standing to devote the whole of his time to the duties of the office. As he is not now subject to this restriction as to residence,

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he may probably add to his income by work of more than one kind, but there are few who would be able to do this and to reside in Chelsea or its immediate neighbourhood. We fear that this restriction is only generally practicable when the whole of the officer's time is engaged, and the amount of his salary is based upon such an arrangement.

The Standing Committee on Law will doubtless find other points which can with advantage be modified, but with the Bills as a whole we must express our full satisfaction, as well as our conviction that Mr. RITCHIE deserves the thanks of all for the sincere effort he has made to give London a thoroughly effective health administration.

IT is now some years since any official report has been issued in this country with regard to cerebro-spinal meningitis. Severe outbreaks of that disease occurred in the villages of the Lower Vistula in 1864–65, and Dr. BURDON SANDERSON prepared a lengthy report on the subject, which was published in the report of the then Medical Officer to the Privy Council; for a number of subsequent years, however, the subject did not arouse much attention in England. But there would appear to be some evidence to show that since 1885 the disease is becoming more recognised, if not more common, in different parts of the world. In the seventh volume of the new issue of the Transactions of the Epidemiological Society of London there is an excellent account, by Colonial Surgeon BOLTON C. CORNEY, of a serious epidemic of that disease in the Fiji Islands during 1885, and this was followed during 1887–88 by a diffused but somewhat widely spread prevalence of the disease in the basin of the Mediterranean. This latter prevalence, which was reported on by Dr. THORNE THORNE in the account of the proceedings of the Medical Department of the Local Government Board for 1888, affected a number of places from Cyprus and Asia Minor at the eastern, to Sardinia near the western, extremity of that basin.

As regards this country, only scattered cases tend to occur year by year, if we may judge by a few fatal attacks annually reported by the Registrar-General. They are very generally distributed over a number of different counties and places, and they exhibit no disposition to localise themselves. They have also but rarely been subject to any detailed investigation as to their causes or distribution. But, as pointed out by the Medical Officer of the Local Government Board in 1888, the mere fact that such occurrences do periodically take place affords a reason for watchfulness on the part of sanitary authorities, their officers, and others. And, as if to prove the need for such warning, we now learn that there has been some localised prevalence of this fever in certain of the eastern counties.

Reporting on the subject, Dr. BRUCE LOW[1] gives some general description of the sanitary circumstances of a number of villages and places in Suffolk, Norfolk, Essex, and Lincolnshire, where cases occurred; he also states the symptoms and clinical appearances met with. The attacks at Oakley in Suffolk, where about a dozen cases occurred, may be taken as fairly typical of the rest. The patient was as a rule taken ill suddenly with vomiting, vertigo, headache, and great prostration. Next day, or even later, there were pain and stiffness in the neck and back, passing sooner or later into complete retraction of the head, in some cases amounting to opisthotonos. Early in the illness there was great drowsiness; in young children fits of screaming occurred when they were awakened. There was rise in temperature, which ranged from 100° to 106° F., delirium following in most cases. Some suffered from conjunctivitis, others herpes of the mouth, and there was usually great sensitiveness of the skin. All, or nearly all, had more or less loss of power in the lower limbs. Emaciation was rapid, convalescence slow, the pulse was sometimes noticed to be dicrotic, and the respiration was hurried or interrupted. Some cases exhibited neurotic sequelæ, and a rash was occasionally seen. In a typical case of death the patient became drowsy and comatose, and died forty-eight hours after seizure; post mortem the brain presented great congestion of the whole of the membranes, the cerebral venous system was gorged with blood, and both on the upper surface and at the base there was evidence of lymph having been thrown out. There was much serum in the ventricles, and the substance of the brain was soft. As regards the spinal cord, the principal lesion observed indicated much congestion of the membranes in the upper dorsal region.

There appeared to be nothing worthy of much note to distinguish the sanitary surroundings of persons attacked from those who escaped, and there were no indications of privation such as have at times been associated with this disease elsewhere. Food-supplies, and notably grain foods, were inquired into without result, and apart from the fact that two and even three attacks occurred in some households, nothing seemed indicated as to method or cause of spread. Some twenty-four cases in all came under observation; but apart from these there have been occurrences of disease which it had been difficult at the time to explain, and some medical practitioners are inclined to agree with Dr. BRUCE LOW that in a number of instances the disease had prevailed in a form which had been unrecognised.

Taking the four counties referred to in connexion with this prevalence, it would appear that only eleven deaths have been registered from cerebro-spinal meningitis during the five years 1885–9, nine of these having occurred during the last three years. As regards England and Wales as a whole, 132 such deaths occurred during the quinquennium referred to. On the whole, there seem grounds for believing that in England, as elsewhere, the fatality varies much; that a number of mild attacks may only be recognised on the occurrence of one or more of the type that has been termed "foudroyante"; and that the disease is not so exceptional in this country as the mortality statistics seem to indicate. This view is taken by Dr. BRUCE LOW, who says that fatal attacks are probably certified under the name of "fever," tubercular meningitis, or convulsions, whilst non-fatal attacks are looked upon as sunstroke, "violent cold," and similar ailments. Obviously, there is need for watchfulness in this respect.

THE debate in the House of Commons upon the opium traffic has brought the question one step further than usual. Sir J. PEASE has succeeded in inducing the House to

[1] Official Report to the Local Government Board, February, 1891. Eyre and Spottiswoode, London; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Dublin; price 4d.

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recognise by its vote that the system by which the Indian opium revenue is raised is morally indefensible. The question was approached from many different sides, and a semblance of resistance was made, although from the first it was evident that in point of argument there was no real defence. The charge is that while opium should be treated and used as a drug, as a nation we must admit that for the sake of pecuniary gain we have promoted, and directly encouraged, the growth of the poppy and the sale of opium for other purposes. Historical assertions were made calculated to diminish the self-esteem of the British subject, but the accuracy of many of these was disputed. Arguments were adduced from an economical standpoint, but they mainly resolved themselves into fears of the possible bankruptcy of India if any restrictions were placed upon the revenue from opium. From the first the defenders of the opium traffic appeared faint-hearted, scarcely in earnest, and almost indifferent, and, unfortunately for their cause, they seemed not to have agreed upon any line of defence more definite or more moral than that of loss of revenue. Apart from this idea, the lack of logic characterising the speeches was extremely amusing, and doubtless contributed largely to the resulting division.

The House decided against the morality of the opium traffic after a purely academic discussion. At the same time, a seemingly uncomfortable impression remains that the trade is declining, and that therefore we can afford to be moral, even if morality is not forced upon us. The Chinese have acquired the craving for this drug, and now a large part of the country is under opium cultivation. In spite of legal restrictions, contraband supplies are passing overland into the seaports, while the quantity imported from India is declining. In the Presidency of Bengal there are 100,000 acres less of land under poppy cultivation than there were ten years ago, while the number of chests of opium manufactured in British India is now only 4800, as against 5606. This is not as satisfactory as it appears, since it merely indicates that the Chinese are growing their own opium, not that the amount consumed is less.

Regarded from a medical aspect, there can be no real difference of opinion about the opium traffic and its baneful influence. Two speakers only attempted its defence, but the defence was weak, and hinged mainly on the comparison of the evils resulting from alcohol and opium. Those of the former were graphically described—the ruin of the liver, the heart, and the brain, and the ultimate miserable death from the secondary results; while a point was made of the fact that "the opium smoker might be quite useless, but at any rate he was not mischievous; he did not beat his wife." In the same light bantering spirit, which is surely out of place in dealing with such a serious question, another speaker said if "COLERIDGE had taken spirits instead of opium, and if he had suffered from delirium tremens, the Confession would have been ten times worse, and it was lucky that COLERIDGE took opium and not spirits." And then a little later, in the heat of debate, forgetting that he had been abusing alcohol, the speaker described the cultivation in Bengal, and the care taken to make sure that the opium was not distributed among the people. "The people had spirits, and that was thought sufficient for them without opium, and therefore we made sure that the opium went direct out of the country. It was for the physical welfare of the people that the system was carried out." After all, there was practically no defence beyond the plea that the abandonment of the revenue would make India bankrupt. With such questions we have no concern. Whether the revenue from opium is increasing, or whether, as stated, it has fallen from 8,451,000 rupees in 1880–81 to 3,000,000 rupees, matters little from a medical standpoint. The question is merely whether this drug, which has been called the gift of GOD to man, is being legitimately employed purely for medicinal purposes. Now, although reference was made to its tonic effects in small doses in preventing ague and its influence in lung and bronchial affections, those who took a serious view of the question declined to pretend or to argue that the large revenue of India was derived from opium employed for any of these purposes. There appeared to be a general feeling that the less said the better about the destination of the opium and the purposes of its employment. In this country the sale of opium and its preparations is surrounded with every possible precaution, clearly for the "physical welfare of the people." The morality of adopting a different code of ethics for the native races under British rule requires no discussion. Sir J. PEASE deserves hearty congratulations upon the success that has at last attended his efforts to induce the House to urge the Indian Government to take measures to restrict the supply to the legitimate demand for medicinal purposes. The resolution has not yet been made an order of the day, since the leader of the House of Commons thinks it requires much further consideration before it is accepted. Should further discussion arise, we trust it may be conducted upon broad principles. The question should be strictly limited to the amount of encouragement at present afforded to the opium habit, and not allowed to wander into futile comparisons with alcoholic intemperance. The task of dealing with the one evil at a time will sufficiently tax the powers of legislation.

THE Register of Trained Nurses, which has been in course of preparation for a period of three years past, is now given to the public, and its merits can now be discussed not only from the theoretical point of view, but also in the light of the plan which it proves actually capable of vindicating for itself. It may be hoped, therefore, that the discussion which has already arisen concerning its utility, and which will certainly be stimulated by the appearance of the first annual volume, will gain in point, and that the objects which the promoters of the scheme have in view will now become clearer to such of their critics as have heretofore attacked them with more energy than appreciation. It is no disparagement of the good work already done by the Registration Board to say that intelligent criticism may be very usefully employed upon their labours. The volume now before us contains about two thousand names of nurses, all of whom have received more or less training, and most of whom hold certificates such as will command general respect. That the registration authorities should not at first be very exacting as to qualifications was only a thing to be expected. The fact could not have been otherwise; nor is it even desirable that it should. The object of the Register is to

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identify trained nurses and authenticate their credentials. If in some cases the credentials themselves amount to a guarantee of less than could be desired, the remedy for that should be sought in improved training first, and in restricted registration only after such an interval as shall have afforded to the improved facilities of training a reasonable opportunity of bearing fruit. One very important result of bringing together in one view the various certificates and qualifications which nurses rely upon to avouch their competency will probably be that the inferiority of imperfect methods of training will be more clearly perceived by the nurses themselves and those who supervise their education, and improvements will in the result be introduced for the correction of these defects. With this object it would, we think, be in itself a good thing if the Register were supplemented by some explanation as to the effect of the various certificates placed upon it. Whether it is practicable to add such a feature we cannot tell. Its value is obvious, and we doubt not that the suggestion, if it has not already been considered, will receive attention at the hands of the Registration Board. But, even while putting it forward, we perceive that there would be serious difficulties to be surmounted, and are prepared to learn that for the present at least its adoption would not be wise. Another suggestion that occurs to us upon an examination of the present volume, and one which would probably be with less difficulty carried into effect, would be the addition to the present alphabetical list of names of a list arranged according to localities. The primary object of the Register is no doubt what we have above stated—that is to say, the identification of trained nurses and the authentication of their claims to professional qualifications. But, incidentally, it would often be a great advantage to have a ready means of ascertaining the address of a trained nurse near at hand. Nurses are usually wanted in emergency, and often the most important of all qualifications is the being within easy call. A local list would greatly facilitate an inquiry directed to this point, and we hope to see it made a feature of future issues of the Register.

Annotations.

"Ne quid nimis."

OPEN SPACES ABOUT HOUSES.

IN the debate on the second reading of the London Public Health Bills, Mr. Stuart urged that the London County Council should possess the same power of making by-laws as to open spaces about houses as was enjoyed by every urban authority in England and Wales, and referred to a recent article in THE LANCET in which this necessity was pointed out. The Bills now before Parliament do not contain these provisions, but this circumstance is to be explained by the fact that whereas urban authorities generally possess these powers under a section of the Public Health Act of 1875 which authorises them to make by-laws for new streets and buildings, the London building provisions are not incorporated in the Public Health Bills. The evident interest Mr. Ritchie takes in municipal government, and the zeal he has shown in consolidating and amending the Housing of the Working Classes and the Public Health Acts, create the hope that it is his intention to consolidate and amend the Building and Metropolis Local Management Acts. There would then be ample opportunity for incorporating the provisions as to open space to which Mr. Stuart referred. For our own part we think it matter of little importance whether London is to be dealt with in this respect by by-laws or by statute. The question is really whether Parliament or the London County Council would be prepared to make the most adequate provision. The Council at the present time is so fully alive to the necessity of air space within the metropolis that there is no doubt the subject would be dealt with liberally. Whether the next Council will be equally appreciative of this health necessity in London can only be seen after the next election in January. On this point we are quite prepared to trust Mr. Ritchie, who has in his own department at Whitehall all the experience which would enable him to frame an admirable measure if he intended the details to be settled by Parliament. If our hopes are well founded, we may at no distant time see London in one way or the other given all necessary opportunity for preventing the crowding of houses, and for bringing to an end the preparation of areas for improvement schemes, to which the London County Council now has to resort, at enormous cost to the ratepayers.

HINTS TO BRITISH TOURISTS AND RESIDENTS IN GERMANY.

THERE has just been published in the form of a Foreign Office paper, which may be procured for the modest sum of one penny, an exceedingly useful collection of suggestions made for the benefit of British travellers and residents in Germany, which all who contemplate visiting the Fatherland would do well to peruse. The writer is Acting Consul General Goldbeck, who has been led by his experience of his office to believe, we doubt not with good reason, that he will be rendering a valuable service to those who are in a sense his special charge by pointing out to them what are the unpleasantnesses to which they are most readily exposed, and how they may best be avoided. He runs over in a cursory way such topics as passports, the traveller's supply of money, Customs' regulations, disputes with cabdrivers, tradespeople or lodging-house keepers, taxes and the like, and he gives some valuable hints as to the selection of a place of residence. Many hundreds of Englishmen will shortly be betaking themselves to the region within which the writer of this paper exercises his representative office, and most of them will certainly find their advantage in first acquainting themselves with the rules which are here submitted for their adoption and observance. Not the least valuable of the acting consul's hints is that those who know how to set about it will easily find among the Germans the boon of what our neighbours themselves call "English comfort."

POLYNEURITIS OR BERI-BERI AMONG FISHERMEN.

FROM time to time during the last few years cases have been reported in American journals which in their clinical symptoms are closely analogous to what has until recently been considered to be a disease of the tropics—viz., beri-beri. In an important article in the *Journal of Nervous and Mental Diseases*, Dr. Putnam of Boston, taking as his text a case which had recently come under his observation, discusses the nature and etiology of this condition at some length. The patient was a man of thirty-nine, the mate of a vessel just arrived from the Grand Banks, who had enjoyed good health until two weeks before he was seen. He had then experienced pain on the inner surface of the thighs. The following day he was sick, and the legs

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and thighs became swollen, and he was obliged to keep in his bunk for several days, while a steady diminution of strength took place in his legs and feet. On examination he was pale, had difficulty in getting his coat on and off, and walked with a waddling gait. There was slight toe-drop, and difficulty in standing with his eyes closed. There was a feeling of numbness in the legs, but no marked impairment of sensibility. The inner surfaces of the thighs and the calves were tender, and there was distinct pitting on pressure along the shins. The knee-jerk was lost. On inquiring more closely into the conditions under which the illness commenced, it was found that for nearly six months before his illness came on he had been on a vessel engaged in fishing off the Grand Banks. The vessel was badly provisioned, and the voyage had been unduly protracted, so that for a time the rations consisted only of molasses, fried pork, and pancakes, with bad water. Nine or ten men besides the patient were attacked with illness, the prominent symptoms being weakness and swelling of the legs, and one of them, afterwards seen by Dr. Putnam at the Marine Hospital, presented the typical symptoms of multiple neuritis, well-marked ankle- and wrist-drop, impairment of sensibility in hands and feet, with tenderness on deep pressure of the muscles. Several other cases were afterwards seen, and by means of inquiries among medical men, information was obtained of similar symptoms in numerous others exposed to the same conditions, and there seems to be little reason to doubt that the disease has a strong analogy to scurvy and to beri-beri, and that bad or insufficient food and water are important factors in its causation.

DISTRIBUTION OF DAIRY PRODUCE.

THE Earl of Meath, in an effective paper in the current number of the *Nineteenth Century*, argues for the provision in London and our large towns of improved facilities for the distribution of dairy produce. He finds a text in a description which he gives of the great dairy of Herr Bolle at Berlin, from which quantities, varying with the season from 35,000 litres to 50,000 litres of milk in its natural form, or under the equivalent of milk products, are daily distributed throughout the city. The salient feature of the system established and carried on under the supervision of Herr Bolle is that the most exact care is taken to prevent any adulteration or alteration of the substances sold while in the hands of the subordinate officials whose duty it is to deliver at the customer's door. Thus the milk is sent out from the central repository in locked cans from which it is measured into the customers' receptacles, an arrangement which doubtless effectually prevents the watering of the milk. Equally scrupulous is the care taken to ensure the purity of the other produce, a result which is the more easily attained by reason of the vast scale upon which the operations are carried on. It appears, however, that the beginnings of this large enterprise are very recent, and that ten years ago it originated in a very small dairy business. Indications of a more or less similar movement among ourselves are not far to seek, for of late years there has been a notable improvement in respect of cleanliness of appearance in the dairies of the metropolis. Nor is the improvement a matter of appearance alone. The exposure in THE LANCET of adulterations, the work of inspectors, and the growth of an enlightened public opinion have done much to carry reform into the heart of the trade in foods, and in milk particularly. Still, there is much yet to be done, and though it would probably be rash to expect that the introduction of Herr Bolle's methods into London, for example, would be followed by success commensurate with that which has attended them in Berlin, we hope that the suggestions made by the Earl of Meath will not be wholly without fruit, and doubt not that they are capable of being not only usefully but also successfully carried into practice.

INFECTION THROUGH THE SOIL.

THE question is often raised whether there is any direct or indirect proof of the infectivity of the bodies of those dying from specific fevers, or whether the soil of graveyards may become really dangerously contaminated thereby; but it is also one to which comparatively little attention has been given by the experimentalist. One aspect of the matter has been lately studied by Dr. Justyn Karlinski of Konjica, Herzegovina; in a series of experiments (*Centralblatt f. Bakteriol.*, ix., 13) undertaken to determine whether the organs of the body undergo any change in temperature during the natural process of decomposition after burial in the earth, and especially whether any differences in this regard are to be met with in the case of infected subjects. His results show that invariably the putrefactive process is accompanied by a rise of temperature above that of the circumjacent soil; and also that this rise in temperature is markedly higher when the parts examined have been taken from the bodies of men or animals who have succumbed to infective diseases than it is in the case of healthy bodies. He further examined into the question of the survival of the pathogenic bacteria in the affected parts, and states that the typhoid bacilli may retain their vitality in the decomposing spleen for three months, and are only completely annihilated by rapid putrefaction and the presence of a large number of the bacteria of putrefaction. Dr. Karlinski says that he had previously shown that typhoid bacilli could retain their vitality for a period of five months in soil, but that if the earth were thoroughly saturated with rain water they were destroyed in from seven to fourteen days. The part played by the soil in the origin of epidemics should not, he thinks, be under-estimated, since typhoid bacilli can only exist in water a comparatively short time.

ARMY MEDICAL SERVICE.

WE have dealt so recently with the present position of the service in connexion with the late correspondence between Sir Andrew Clark and Mr. Stanhope thereon, that there is no need for further remarks at the present time; but it may interest medical officers serving at home and in the colonies to know that in India a lively correspondence has been taking place in the *Pioneer* and other journals regarding this subject, and especially regarding army medical officers' rank. The discussion has reference, however, to the first, and not the last, portion of the correspondence between the War Office and Sir Andrew Clark.

CREOLIN IN DENTAL PRACTICE.

AN American dental journal publishes a communication by Dr. Wm. H. Potter on Creolin as an Antiseptic. Creolin consists of a mixture of the sodium salts of some resinous acids with the part of oil of tar known as "irod oil." It is made from English pit-coal by distillation, and is of a brownish-black colour and syrupy consistence. It is not a definite chemical compound, but a mixture of various ingredients. It is insoluble in water, but quickly forms with it a brownish or milky emulsion. It also mixes with oil and glycerine, and is soluble in absolute alcohol, chloroform, and ether. Esmarch's experiments seem to prove that it is a more powerful germicide than carbolic acid, and in quantities likely to be used is non-toxic. It is a reliable hæmostatic and a powerful deodorant, and does not roughen the hands or injure instruments. Its disadvan-

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tages are that the emulsion, besides being opaque, is apt to become sticky after being allowed to stand for any length of time, and so clings to instruments. For dental purposes it is suggested that it may be of use in various ways. First, as a mouth wash, one or two drops of creolin added to half a tumbler of water forms an emulsion pleasant to the taste, a powerful deodorant, a reliable germicide and antacid. A second sphere of usefulness is in the treatment of fistulous tracts or any suppurating surface. In such cases it tends to diminish secretion, and induce a healthy state of the tissues. It is also a good drug for root canals, and will quickly deodorise a dead pulp. A minor use to which creolin may be put is that of taking rust off instruments, to accomplish which the full strength should be used, and the instrument rubbed with a rough cloth.

DISEASE OF THE CAUDA EQUINA.

BECHTEREW has recently met with a case in which he has diagnosed affection of the conus medullaris and the cauda equina. An abstract is given in the *Neurologisches Centralblatt*, No. 5, 1891. For some weeks before the patient came under observation he had suffered from a gradually increasing weakness in the legs, together with urinary trouble and weakness. On examination there was loss of sensibility with regard to tactile and also to painful impressions on the penis, scrotum, perineum, and gluteal region. There was also similar impairment on the inner and posterior aspects of the thighs. There was much muscular weakness, so that the patient could not walk without the help of a stick. The knee-jerk was normal, and of the superficial reflexes none were lost with the exception of the gluteal. There were incontinence of urine and obstinate constipation, although at times there was involuntary defecation. There was marked tenderness over the sacrum. The author concludes that the case is one of lesion of the conus medullaris and cauda equina, and draws attention to the correspondence of the clinical symptoms with those produced experimentally in dogs by section of the cauda equina.

THE SANITATION OF TUNIS.

SINCE its annexation by the French ten years ago Tunis has taken a new departure. The city is being enlarged, reconstructed, and, not least important, rehabilitated in a sanitary sense. Hitherto its death-rate has been high, and the offensive odours from which even its most fashionable quarter is seldom free indicate the chief cause of its sickness and mortality. Typhoid fever is almost endemic, and though the winter season, when the city is most frequented by foreigners, minimises the death-rate from this source, still the disease constitutes an ever-present danger. The Lac de Tunis, or El Bahira, as the land-locked sheet of water between Tunis and its port Goletta is called, has for forty centuries been the receptacle of all the drainage and refuse of the city, insomuch that its depth has gradually diminished to little more than a metre in its deepest part, and its navigation is impossible for any but the lightest craft. The prevailing winds lie between the north and east, and a glance at the map will make it at once intelligible how the air currents between those two points, in passing over that spacious cesspool, are fraught with foul smells, and as a consequence with lowered vitality, disease, and death. From a report now before us on "L'Assainissement de Tunis," we learn that elaborate steps are immediately to be taken for the suppression of this nuisance. A "grand collecteur"—a sort of cloaca maxima—destined to reunite the whole drainage of the city in a common stream will carry the sewage below the level of the Lac to a great reservoir constructed *ad hoc*, whence it will be conveyed by special steam pumps and pipes to a distant point of discharge in the Lac itself. This, however, is only provisional, the immediate object being to purge the air of the odours which, in a north-easterly wind, make the much-frequented promenade of the Avenue de la Marine a far from salubrious or pleasant resort. The next and more important step will be to divert the sewage from the Lac and carry it out to the fields which surround the city on its three sides. The fertility of these, already great, will be enhanced tenfold by this accession of their natural manure, and the increased fecundity of the Tunisian market gardens, famous for the quality and abundance of their kitchen produce, will be a new source of wealth to the neighbourhood. Another project for the development of the attractions of Tunis is the construction of a sanatorium at Carthage, which will enable even the invalid to avail himself in winter of the advantages of that ideal site, sheltered as it is from the north and interesting to all time for its mighty past, of which the relics are being steadily brought to light by Cardinal Lavigerie and the Abbé de Lattre. The sanatorium in winter will be transformed, in the hot season, into a resort for the seaside sojourner, drawn thither by the cool refreshing breeze and the admirable bathing facilities. We hope, however, French enterprise will stop there, and not assume the developments it is prone to take at other frequented points of the Mediterranean seaboard—the establishment of casinos and gambling saloons. That, indeed, would be the ignoblest fate that has yet befallen the city of Dido.

THE "MEDICAL HAT" QUESTION AGAIN!

IN our issue of Feb. 21st we took occasion to notice a proposal that a hat of particular make should be used as a distinguishing mark of medical practitioners. It now appears that the desire for peculiarity has not been limited to this country. As if by a side wind of suggestion, medical opinion in Berlin has, it is said, arrived at nearly the same point. There is a difference, however, and a material one. This time it is not the doctor, but his coachman, who is about to undergo alteration. In future a white hat will be for him like the fireman's helmet—a sign of urgency before which ordinary traffic will be expected to give way. The idea, it must be allowed, gives promise of some practical advantage, and many busy practitioners would be only too well pleased if by so simple a device they could scatter the obstructions which in town practice render the daily round a protracted and a devious task. By the sick whom they visit it should be hailed as an earnest of speedy relief. If, therefore, any suitable distinction commends itself to professional taste, no serious objection, we presume, could be urged against it. There would still remain the uncertainty whether the charioteers of other interests would be willing to admit the claim of medicine to precedence on the road. On the whole, therefore, we should prefer, before advising the adoption of any scheme of hat reform, to watch the progress of the new departure in the German capital. The matter is not so urgent but that it may be still further considered.

TREATMENT OF PNEUMONIA WITH LARGE DOSES OF DIGITALIS.

AT the last International Medical Congress Professor Petresco of Bucharest read a paper on this subject. He makes an infusion of sixty grains of powdered digitalis leaves to six ounces of water, a little syrup of orange being added to sweeten it. A tablespoonful of this mixture is given every half hour. In spite of the largeness of the dose, he says that he has never met with a case of poisoning, and maintains that these doses are therapeutic, and not toxic. The best results are obtained in fibrinous or croupous pneumonia. The author states that if used in the way he describes digitalis will frequently cut

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short an attack of true croupous pneumonia. In from twenty-four to forty-eight hours after taking the drug a certain fall of temperature occurred, from 104° F. to 98° F.; this being accompanied by a decrease in the frequency of the pulse and respiration. The digestive tract was little affected. The most marked changes were noticed in the pulse, which became slow, full, and of high tension. The conclusions to which Professor Petresco has come are published in the *Therapeutische Monatshefte*, Feb. 1891. They are as follows: 1. When given in therapeutic doses digitalis has a direct antiphlogistic action. 2. The dose may be raised as high as from 60 to 120 grains of the leaves given as an infusion within twenty-four hours. 3. This treatment may be continued for from two to four days if the severity of the case requires it. 4. When improvement takes place in the circulation and respiration, this is speedily followed by a disappearance of all local signs and symptoms. 5. The success of this treatment is confirmed by the statistics. In an elaborate table of statistics Professor Petresco shows the superiority of digitalis over the other methods. Thus the highest mortality in pneumonia (34·5 per cent.) occurred when bleeding was practised, and the lowest (3 per cent.) when tonics, alcohol, &c., were employed. When digitalis, however, was administered the mortality sank as low as 2·06 per cent. 6. From an experience of a very great number of cases, both of his own and of other medical men, he maintains that the doses, as given above, are perfectly harmless. 7. After a comparison of the various methods of treating pneumonia, Professor Petresco affirms that the expectant plan is not only without reasonable foundation, but even dangerous; and his experience has demonstrated that an attack of pneumonia may be aborted if the treatment is commenced at the very earliest stages of the disease.

THE RECURRENCE OF INFLUENZA.

DURING the past few weeks there has been unmistakable evidence of a return of the influenza in epidemic form, and in the United States it has shown a severity surpassing the outbreak of 1889-90. Chicago seems to have been one of the first cities of importance to have been thus visited, and in many other important towns of the Western States the disease is very rife at the present time. It appeared in New York about three weeks ago, and has been gradually increasing in intensity, and the latest reports show that it has caused a considerable rise in the death-rate there as in Chicago. In this country, although sporadic cases have been noted in the metropolis and elsewhere during the past winter, it has as yet, so far as we know, only assumed the epidemic form in certain towns and villages of Yorkshire—notably in Hull, Sheffield, and Driffield—and also in Birmingham, where, however, it is said to be more limited, and of a milder character than last year. It is hardly to be expected that the disease will be confined to these localities, and the coming week may witness a much wider extension of its area. The occurrence of milder and brighter weather may possibly serve to check its progress; but, if the contrary conditions prevail, the probabilities, judging from past experience, would be in favour of a severe recurrence of the disease.

A DRAINAGE SYSTEM FOR DURBAN.

THE important town of Durban, South Africa, is at last likely to obtain a system of drainage. The present mode of disposal of excreta and refuse by pails is very unsatisfactory and expensive, costing as it does nearly £8000 per annum for a population of 12,000 Europeans. The engineer, Mr. Fletcher, has drawn up a scheme for a drainage system which will cost under £5000 per annum for a population of 20,000, and £5350 even when the population has increased to 40,000. The difficulty that has always been recognised in connexion with any system of drainage for Durban is the disposal of the sewage. The highest point of the town itself is only twenty-six feet above low water level, an altitude that hardly suffices for removal by gravitation. Mr. Fletcher proposes to overcome this drawback by adopting the Shone system of pneumatic pumping. The sewage of the town is to be conveyed by main and subsidiary sewer pipes to tanks at the Point, where it will be "screened" from solid matter. That matter will be at once destroyed in refuse destructors. The liquid sewage—containing not more than 2 per cent. of solid matter—will then be conveyed to the end of the north pier, and ejected into the sea during the first four hours of every ebb tide. Mr. Fletcher advances evidence tending to show that freshly removed sewage thus poured out into tidal water is taken out to sea, and disposed of without risk, unpleasantness, or pollution of the waters that wash the shore. He considers that the fear that the excremental matter thus ejected into the ocean might be returned to the beach is set at rest by the destruction of all solids in the sewage, by the dilution of all fæcal matter, by the tidal dispersion of the outflow, and by the disinfecting agency of the sea itself. As the number of persons who go out to South Africa in search of health is constantly increasing, it is of great importance that one of its principal seaports should be put into a thoroughly sanitary condition, and we are sure the inhabitants will never regret the initial expense of carrying out such work in a thoroughly efficient manner.

THE STANDING COMMITTEE ON TRADE AND FACTORY SURGEONS.

WE offer our hearty congratulations to the Factory Surgeons on the triumphant vindication of their case before the Standing Committee on Trade of the House of Commons. The Home Secretary's proposal to abolish their office was rejected by the overwhelming majority of thirty-nine to nine. We are delighted to see that the divisions on this subject followed no party lines, but that men of all parties vied with each other in declaring that the *rôle* of certifying surgeon was a useful one, and essential to the working of sound factory legislation. It would be invidious to make fine distinctions where so many did well, but the profession will remember with gratitude the able and persistent part played in this discussion by Dr. Farquharson, Mr. Mundella, Mr. Shaw Lefevre, Mr. Chamberlain, Viscount Cranborne, and others. Nor are we disposed to be very angry with Mr. Matthews for making his unfortunate and unreasonable proposal. We can easily imagine that he was much pressed to do so. He should, of course, not have yielded to pressure in such a life and death matter as the removal of the only impartial judges of the health-fitness of children of tender years for factory labour. But he has indirectly and unintentionally taken a course which should establish the claims of the factory surgeons, not only to have their present uses recognised, but to have their functions extended rather than curtailed. We cannot doubt that the Home Secretary will reconsider his views on this subject in the light of the evidence that has been adduced, including the remarkable proofs furnished through Mr. Mundella, by Dr. Barr, of the way in which many employers have exacted fees from parents in large excess even of the charges of the certifying surgeon—a fact which so well explains the objection of some parents to the certifying surgeons. Sir William Houldsworth's opposition to the certifying surgeons has very much surprised some of his friends. Probably the member for North-west Manchester has been imperfectly reported, and we believe he may yet be found favourable to legislation that will make the work of the factory surgeons still more real and effective than it is. They must not rest on their oars. The contest may yet be renewed under other

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forms; but if factory legislation has any justification, the humane and impartial office of the medical expert must be maintained.

HEALTH OF PROFESSOR TYNDALL.

THREE weeks ago a serious relapse placed Professor Tyndall's life in great jeopardy from pneumonia with double pleurisy. Improvement, however, took place, and by our last account the chest symptoms had, to a large extent, subsided. There remained necessarily much weakness, but the prognosis is distinctly favourable if no further relapse should occur.

FOREIGN UNIVERSITY INTELLIGENCE.

Berne.—Dr. Tschirsch has been promoted to the Ordinary Professorship of Pharmacognosis.

Ghent.—Dr. Visscher has been promoted to the Ordinary Professorship of Forensic Medicine.

Paris.—The number of students entering for the diploma of *officier de santé* during last year was only 358, as against 3528 entered for the doctorate. Of these last, 114 were women, mostly Russians.

Pennsylvania.—Dr. George E. de Schweinitz has been appointed Lecturer on Medical Ophthalmoscopy in the University.

Prague (*German University*).—Professor J. Schnabel of Gratz has been appointed to the chair of Ophthalmology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Rull, Professor of Midwifery in the Faculty of Barcelona, at an advanced age.—Dr. Julio M. Rodiguez of Matánzas, Cuba.—Dr. Eicke of Lasdehren.

AT the usual weekly meeting of the London County Council on Tuesday, the Main Drainage Committee presented a report with reference to the joint report of Sir Benjamin Baker and Mr. Binnie, the chief engineer of the Council, upon the main drainage system of London. They recommended that detailed plans be prepared of the new sewers on both sides of the river, as proposed in the joint report. After some discussion the following rider was added to the motion for the adoption of the report: "And that the committee be instructed to obtain a further report which shall have special reference to the separation of the rainfall from the sewage, the better prevention of storm overflows into the Thames and Lea, and the better purification of the river."

A CASE of centenarianism which would probably have satisfied even the late Mr. W. J. Thoms is afforded by the instance of Sir Provo William Parry Wallis, G.C.B., the Senior Admiral of the English Fleet, who completed his 100th year on Sunday. He was born at Halifax, Nova Scotia, on April 12th, 1791. He had maintained active habits up to Christmas, but since then, from illness, had kept his bed.

IT is reported that "the medical authorities of the University Hospital at Bonn have decided to discontinue the use of Dr. Koch's tuberculin, as well as of Dr. Liebreich's anti-tuberculosis remedy." We have not, however, seen any official announcement to this effect.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the above fund, held on the 14th inst., T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £45 was distributed among the several applicants.

Pharmacology and Therapeutics.

PIPERAZIDINE AS A SOLVENT FOR URIC ACID.

IT is stated in a German pharmaceutical journal that piperazidine dissolves uric acid more readily than any other substance of a basic nature. Urate of lithia requires 368 times its own weight of water to dissolve it, but urate of piperazidine dissolves in fifty times its weight of water. It may therefore be expected that this drug will become a fashionable, let us hope too an efficient, remedy in gout and allied diseases.

THE EFFECTS OF STRYCHNINE ON THE STOMACH.

The effect of nitrate of strychnine on the functional activity of the stomach has been recently made the subject of a careful research by Dr. Gamper of St. Petersburg, who employed for the purpose of his experiments four healthy young hospital assistants. He found that strychnine increased the amount of gastric juice secreted, the general acidity, and the quantity of free acid in the secretion. It also hastened the absorption from the stomach, and strengthened the mechanical movements. Its effect, too, continued for some time after its administration had been stopped. Like many other Russian observers, Dr. Gamper seems to have been highly impressed by the value of strychnine in chronic alcoholism, declaring that it is the most effective of all drugs in such cases. The thesis contains a long list of references to the literature of stomach affections, published in six or seven languages during the last ten years.

THE ALKALOIDS IN NUX VOMICA.

The effective strength of preparations of nux vomica is believed to be very variable, and that there is good ground for this belief is shown by analyses made by different observers. Thus, while some specimens of Ceylon nux vomica have been found to contain as much as 5½ per cent. of alkaloids, others from a different source have been found to contain as little as 1½ per cent. It is indeed impossible at the present time, as a pharmaceutical contemporary remarks, to fix what should be considered a fair average.

GELATINISATION OF INFUSION OF DIGITALIS.

Infusions of digitalis which have been kept some time occasionally become gelatinous or mucilaginous, the cause of the change not being very obvious. The matter has lately been engaging the attention of some German chemists, who have found that the peculiar thickening referred to depends upon the presence of pectin or some very closely allied body. It has been noted that this substance does not appear when the infusion is made carefully from leaves which have been deprived of their longer stalks, especially when the process of maceration is stopped in about fifteen minutes.

THE ACONITE ALKALOIDS.

The subject of the aconite alkaloids was discussed at a recent meeting of the Chemical Society, when a paper was read by Professor Dunstan and Dr. Ince. These authors investigated the alkaloid obtained by them from the root of aconitum napellus. The yellowish crystals melted at 188·4° C., and by crystallisation from the alcoholic solution were proved to be associated with a small quantity of a gummy amorphous base. The alcoholic solution was found to be, contrary to the statements of previous authors, dextro-rotatory, though the aqueous solution of the hydrobromide is lævo-rotatory. Two aurochlorides were obtained without difficulty, and these compounds afford a satisfactory means of identifying aconitine, which may be recovered from them in a pure state. It is not appreciably affected by heating at a temperature below its melting point, but at this temperature it is gradually converted into the uncrystallisable base aconite. Prolonged boiling in an aqueous solution induces a similar change, but not to the same extent unless an alkali is present. Boiling with water acidulated with hydrochloric acid also produces decomposition. Dehydraconitine or apo-aconitine is a base differing from aconitine by the absence of a molecular proportion of water. It may easily be prepared by heating aconitine with saturated aqueous tartaric acid in closed tubes. The crystals melt at 186·5° C. It forms crystalline salts, and in other respects closely resembles the parent alkaloid. By heating aconitine with water in a closed tube an amorphous base, apparently identical with aconite, was obtained. This substance is still under investigation

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THE LANCET

Special Sanitary Commission.

REPORT ON THE SANITARY CONDITION OF ESHER.

IN THE LANCET of March 21st attention was drawn to an epidemic of diphtheria which has prevailed in the village of Esher during the last six months, and in our issue of April 4th we published a letter from Mr. Izod, in which that gentleman complained of the martyrdom the inhabitants of Esher have been enduring of late from the horrible odours arising in connexion with the establishment of a new drainage scheme.

Very alarming rumours have been circulated, but on inquiry the extent of the epidemic proves to be less considerable than the reports in some of the local papers would imply. Still, in a population of about 2000, sixteen houses were invaded, and thirty-two cases were notified between Oct. 24th and April 6th, with five deaths. During March no fewer than seventeen children were certified as suffering from diphtheria; but within a short time after the closure of the national schools, on March 20th, the number of cases began to diminish, and the hope may be entertained that the worst is now over.

Whatever the origin of the disease may have been, there can be no question that an important factor in its dissemination during March was the communication of diphtheria from one child to another at the national schools, and the authorities are to be congratulated on having promptly taken the most practical means of preventing a further spread of the epidemic. Esher is some fifteen miles south-west of London on the Portsmouth road. Its south-eastern limits are situated on the London clay, while the higher ground to the south-west is the Lower Bagshot sand, and to the north and west are river drifts. The Mole winds along the western boundary of the parish through low-lying marshy meadows, in close proximity to which is the outlying hamlet of Esher, known as West-End. The village itself is pleasantly situated on higher ground, over which the Portsmouth road runs on its way past Claremont Park in gentle undulations, the south-western extremity of the parish presenting ground of the most considerable altitude; on the south-east a declivity slopes downwards to another low-lying offshoot of the village known as Hare Lane. Esher has been until the last few months singularly free from zymotic disease. It derives its water-supply from the Lambeth Water Company, and surface wells seem to be things of the past. In the matter of drainage, Esher is passing through a critical period of its history. Until quite lately a cesspool system prevailed, but within the last two years a new departure has been made.

The new drainage scheme was designed to deal with the drainage of Esher, Claygate, Thames Ditton, and the western portion of Long Ditton. The work was commenced in August, 1889, and has continued with intermissions ever since, some of the inhabitants of the district manifesting considerable unwillingness to have their houses "connected." Roughly speaking, it is estimated that rather less than half the houses in Esher are at the present time still unconnected with the new sewers. The local authority, according to Section 23 of the Public Health Act, has only power to deal with houses lying within 100 ft. of the sewer, and in which the drainage is not effectual. Some of the unconnected houses lie at more than the specified distance from the sewer, and of those that do not exceed that distance some have doubtless adequate independent drainage. There are still, however, situated in close proximity to the sewers several cottages, the drainage of which is anything but effectual. The new scheme is theoretically a perfect one: adequate ventilation is provided, and the flushing arrangements when complete should secure all that can be desired; the effluent is dealt with in a satisfactory manner on a sewage farm. Unfortunately, however, at several flushing points the projected arrangements had not been completed at a time when a considerable number of houses were already connected with the sewers. The result seems to have been beyond anything which language can describe. Those who have had experience of the horrible odours arising from manholes and interceptors express their inability to convey any idea to the uninitiated of the smells which prevailed in the village during the early months of this year. In passing near a manhole "you had to cut your way with your stick." This state of things is now happily past history, and no smells whatever could be detected in the neighbourhood of manholes in the early days of this month. At this time, however, the flushing arrangements were still not quite completed.

Towards the end of last year more complaints of the smells, it is said, came from Claygate than from Esher, but of late the brunt of the battle seems to have been borne by the latter parish. It has been suggested that inasmuch as Esher lies somewhat higher than the rest of the area comprised in the new scheme it would naturally be expected to suffer more from the gases which have accumulated in the inadequately flushed pipes. Those who attribute the outbreak of sore-throat at Esher to the smells arising from the manholes and interceptors lay stress upon this point. It has been very justly urged that the new scheme of drainage dealt with a large area, in only a section of which deaths from diphtheria have occurred; and it has been argued if the manholes are responsible for the outbreak how is it that no death has this year been ascribed to diphtheria in Claygate, Long Ditton, or Thames Ditton? Here, on the other hand, it is urged the question of relative altitude comes into consideration, the noxious gases manufactured in the whole area, having found their way to the highest points in the sewer system, have escaped at those points and there produced disease. This argument appears plausible at first sight, but it must be remembered that the difference of altitude in question is not considerable; again, the free ventilation supplied by the manholes renders it incredible that foul gases produced, for example, in Claygate should travel such a distance along the sewers as to reach Esher, without escaping by the manholes on their way; indeed, the numerous complaints of the smells at Claygate strongly militate against the view that Esher has suffered to any appreciable extent from sewer gas conveyed by the pipes from adjoining parishes. The non-existence of diphtheria in any other portion of the drainage area cannot, in point of fact, be dismissed in this manner; it remains as one of the problems to be solved by those who attribute the prevalence of sore-throat in Esher to the opening of the new drainage scheme.

To turn now to the state of things which the new scheme was designed to supersede. There can be no doubt that in many parts of Esher there has been a most deplorable development of the evils which a cesspool system is capable of producing. The ground in the immediate neighbourhood of tenements is in many cases riddled with cesspools, some of which communicated directly with the interior of the house, and many of which no one can remember ever seeing emptied. No attention, in fact, was given in many instances to the emptying of cesspools until their contents overflowed. One woman was afraid to throw anything down the sink because the neighbours said "it stirred the cesspool up"; and others describe how they have noticed solid excrement floating about in the garden. Much has been done by the medical men in calling attention to these iniquities, but there can be no doubt that evils still exist which should be promptly remedied. One woman states, for example, that her husband's mother noticed fifteen years ago that a smell proceeded from a sink which emptied into a cesspool, and that the communication was accordingly stopped up, the plan adopted ever since being to dig holes in the garden for the reception of slops and waste material.

In the national schools the closets were supplied with pails, and earth was provided for the children to throw upon excreta, the pails being emptied twice weekly. The earth does not appear, however, to have been often used; at all events, the children are almost unanimous in their complaints of the smells which prevailed. One mother forbade her child to use the closet on this account, and the mother of a boy the subject of diphtheritic paralysis, stated

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her son dreaded the smells of the closets so much that he would "punish himself" rather than use them.

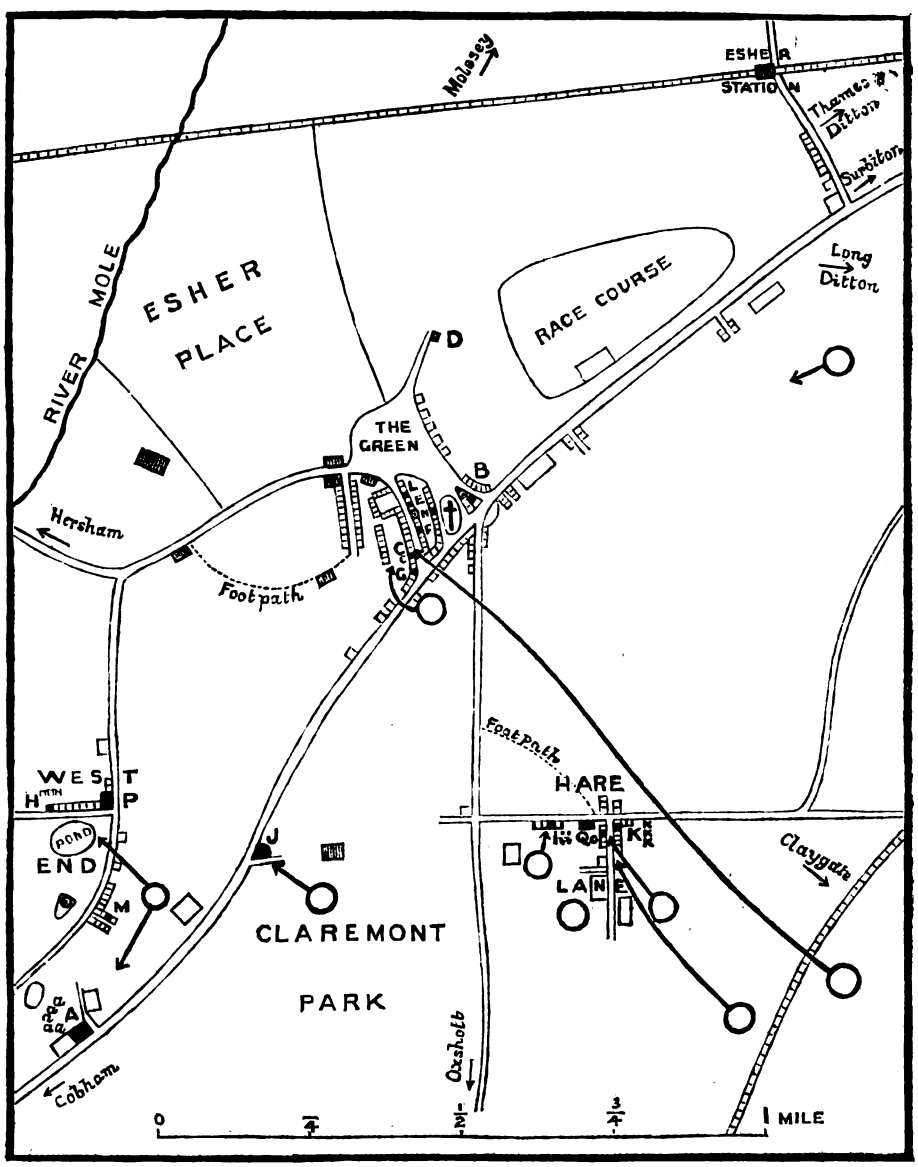
Dr. Gibbes, the medical officer of health, investigated the system of removal of slops and liquid excreta at the national schools on March 19th, and found that there were three cesspools, viz.:—No. 1 for the sink of the master's house, which had an overflow into No. 2, situated in the girls' and infants' playground, which also receives the urine and washings from the girls' and boys' latrines. No. 3 received liquid refuse from the governess' house, and urine and washings from the infants' latrines. None of the cesspools were ventilated. No. 2 had not been emptied for two years. No. 3 was emptied about two months ago, because it was found to be incapable of holding more. In the girls' closet there was direct communication with the cesspool, there being no trap; in the boys' closet and under the master's sink were placed absolutely ineffective bell-traps. The stench arising from this cesspool, conducted by way of the sink to within a few feet of the master's door, was at the time of our visit last week indescribable. The cesspool is now happily emptied, a complete reform of the national school drainage having been effected in the last few days.

In the annexed map is shown the situation of the households in which cases of diphtheria have been notified in Esher since the outbreak of the epidemic in October last. The milk-supply of families in which attacks have occurred has been ascertained in many instances, and it will at once be seen that the sources from which milk has been obtained are most diverse; no less than eight such sources have been already counted, and there are doubtless others. In no instance has any expression of dissatisfaction with the character of the milk been elicited.

To Dr. C. C. Gibbes, medical officer of health to the Kingston rural sanitary authority, and to the medical men of Esher we are much obliged for their kind assistance in the prosecution of this inquiry. To Mr. Briscoe, assistant to Mr. Izod, we are especially indebted, his intimate acquaintance with the several districts of the parish having been placed completely at our disposal.

MAP OF ESHER,

SHOWING THE SITUATION OF HOUSES IN WHICH CASES OF DIPHTHERIA HAVE BEEN NOTIFIED.



The capitals A, B, C to Q denote primary attacks of diphtheria in the order of their occurrence; the small letters secondary attacks occurring in the corresponding households. The nine circles indicate sources of milk-supply.

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EXTENSIVE ARSENICAL POISONING.

BY ALEX. THOM, M.A., M.D. & C.M. ED., D.P.H. R.C.S.E.

INDIVIDUAL cases of poisoning by arsenic are not very uncommon, and have lately attracted considerable attention, but such poisoning is fortunately somewhat rarely met with on an extensive scale, and I think I am warranted in placing on record an occurrence of that nature where the symptoms were very characteristic and the *materies morbi* was clearly traced to some sugar.

On Saturday, Sunday, and Monday, the 4th, 5th, and 6th of April, the inhabitants of the lower part of Crieff, known as the Bridgend, were thrown into a state of consternation by what seemed to them the outbreak of an epidemic of vomiting with severe pain. The greater number of the cases, of which there were over a hundred, occurred within a limited area which might be embraced by a radius of an eighth or a sixth of a mile, and, speaking generally, were in families of the artisan class. The chief symptoms were pain and heat in the stomach, nausea, retching, and vomiting (the vomited matter being frequently brown and bilious-looking, and in some cases streaked with blood), great thirst and extreme depression, injection of the conjunctivæ, and sometimes swelling of the face and eyelids. My assistant, Dr. Andrew Young, who attended the great majority of the cases (he saw over eighty in the course of four days), reports that in some cases severe purging and tenesmus were marked symptoms at the outset of the attack, but were not present as a rule, and that strangury was complained of only by a few. Several complained of cramp in various muscles. The symptoms appeared in from ten minutes to three hours after ingestion of a meal, which in almost every instance included tea. As a rule the more acute symptoms passed off in from thirty-six to forty-eight hours, though in some instances they lasted four or five days, but left the patient weak and depressed. Many suffered for days from severe headache and nondescript abdominal pains of a colicky nature. Where the symptoms lasted longer there was well-marked œdema of the eyelids and swelling of the face, with white furred tongue, great thirst, also sharp pains in the intestines and diarrhœa, with shreddy mucous discharge tinged with blood. Many complained of feeling the cold acutely, and a few suffered from severe coryza. I regret to say that there have been two fatal cases—a wood carter aged seventy-two, and his wife aged about fifty-four. Both these suffered severely from purging and tenesmus, with great heat in the intestines, and excoriations round the anus, scrotum, and labia, and in their case retching and vomiting continued until death, which occurred on the eight and ninth days respectively.

Poisoning by arsenic at once suggested itself as best explaining the symptoms. Indeed, in many of the patients these were so typical that there was almost no room left for doubt, and the treatment adopted was in accordance with that opinion. It was not difficult either to arrive at a conclusion as to the probable vehicle. The water and milk supplies were at once eliminated, and also all the ordinary articles of diet except tea and sugar. Some of the sufferers had noticed that the tea had a dark appearance and a peculiar taste, but the majority had been using the same tea for a considerable time, having had a large stock. All the families attacked had got a fresh supply of sugar, however, on the Friday or Saturday, and from one particular merchant. In one family some members took no sugar with their tea, and these escaped, while the others who did take sugar all suffered. In another family, one member had taken no tea and escaped for a time, but suffered like the rest after having partaken of the sugar along with pudding. Many other facts pointed directly to the sugar as the cause. The merchant in question had got a cargo of sugar in five bags or sacks (not barrels) about the beginning of March, and these were all emptied one after the other into a large barrel for storage, and from this barrel supplies were taken as required into the shop for retailing. Nearly half of the barrel had been disposed of to customers and no ill-health had resulted hitherto when this outbreak suddenly occurred.

On examining the empty sacks, one was found with a stain on each side fully a foot square, which showed plainly that some fluid material had passed through the sack and its contained sugar at right angles to its long axis. Examination of the sugar at the level reached in the barrel showed a quantity more damp and of a darker colour than the rest. As I do not possess a laboratory and could not obtain a supply of sulphuretted hydrogen or other reagents within a reasonable time, I despatched a portion of this sugar to my friend Mr. Falconer King, city analyst, Edinburgh, who kindly telegraphed to me on the Tuesday that the rough tests showed the presence of arsenic, thereby confirming our opinion. Mr. King's report has since then been confirmed by the county and other analysts. On communicating with the wholesale house, the merchant was informed that over 100 bags of the same sugar had been despatched at the same time to various customers, and that there were no other complaints. It was impossible therefore to avoid the conclusion that in transit this particular sack had got part of its contents infiltrated with the poison. So many fluid preparations, such as one particular sheep dip and several weed-killers, contain so much arsenic, and so often leak, that it is not difficult to imagine how the impregnation of the sugar could occur. The patients comprised people of all ages, children suffering least, probably because vomiting being for them such an easy process they at once ejected the poison. In the cases where the poison proved fatal a considerable quantity of the sugar had been partaken of.

Since writing the above I have been informed that the police and the sugar refiners, acting together, have traced the course of the sugar during its transit, and are of opinion that they have discovered the source of the poison—viz., some leaking tins of a liquid weed-killer, with which it is said the sacks were in contact. Samples of this material, and also the stained sack, are in the hands of the public analyst for the county, and the whole matter is engaging the attention of the authorities.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

President's Address.—Dr. Naunyn on Gall-stones.

THE tenth annual meeting of the Congress für innere Medicin took place at Wiesbaden from the 6th to the 8th inst. Professor Leyden of Berlin presided, and in his opening address referred briefly to the history of the Congress during the decade of its existence. There had been a notable increase in the number of its associates, although death had robbed them of many eminent colleagues, as von Frerichs, von Langenbeck, and Rühle. The practice of having subjects chosen for discussion, in which the first two speakers were selected beforehand, had been found of great scientific and practical value. He said that medical science had continued to advance, and although this had led to increasing specialisation, yet "internal medicine" would always continue to be regarded as representative of the whole science; for it dealt with the whole individual, and not merely with special regions of the body. The endeavour towards localisation of disease and the pursuit of local diagnosis and local therapeutics, which characterises the age, ought not to replace the study of general conditions. Curative treatment cannot be limited to local lesions; it must be directed towards assisting the whole organism to withstand the inroads of disease. From antiquity these two aims had been kept in view—viz, the subjection of the disease and the treatment of the sick individual; and the task of our time is to follow both lines. The first is being met by the new pharmacology, through various new remedies, and through bacteriology, under the leadership of R. Koch; it must be the aim of internal medicine to prevent this tendency becoming too strong. The tenth year of the Congress had been a notable one in the history of medicine. It began with the remarkable epidemic of influenza, then came the Vienna meeting of this Congress, next the International Congress at Berlin, and lastly the discovery of tuberculin. We are still noting the effects of this remedy, and can hardly as yet arrive at a final judgment upon it.

Professor Quincke (Kiel), Demme (Berne), and Naunyn (Strasburg) were the elected vice-presidents, and Drs. Morig (Munich), Mührer (Prague), Reinhold (Freiburg), and Romberg (Leipzig) were appointed secretaries to the Congress.

A discussion upon Diseases due to Gall-stones was then

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opened by Dr. Naunyn, who said that they exhibited various types in the typical severe attacks as well as in the more chronic irregular forms. Since surgery is increasingly, and with great success, coming to treat these cases, internal medicine should not be backward, and must seek for new methods of cure for these very chronic and insidious forms of disease. The questions as to the origin and formation of the calculi are of fundamental importance for treatment, but have been very variously answered. Some consider their formation due to an excess of cholesterin and bilirubin concretions in the bile, or that the disease depends on the materials being made insoluble through changes in the chemical composition and reaction of the bile. But cholesterin occurs not only in the bile; it is found in the blood, and the bile contains almost a constant quantity (2½ per cent.), without relation to the kind of nutriment, or of the amount in the blood, which often exceeds that in the bile. The amount of lime salts in the bile is also very constant. Chemical changes determining the precipitation of certain constituents of the bile are not proved as indispensable. In the aged there are often but few symptoms, so that during life no diagnosis is made; for whereas among younger persons 5 to 6 per cent., or even 10 to 12 per cent., of all bodies examined contain gall-stones, in aged subjects the proportion is much higher. According to Schröder, women are affected five times as frequently as men; before thirty they are rare; about 25 per cent. of the cases occur after sixty. Women who have borne children suffer more than others. It is inferred, therefore, that conditions causing stagnation of bile are the cause of the affection, such as pregnancies, tight lacing, &c. The type of costal respiration in females is a favouring circumstance. The frequency of the affection in the aged points also to stagnation due to atony. Artificial inspissation of bile does not form calculi, nor does the precipitation of insoluble substances; but it is far more probable that they arise exclusively from a change in the epithelium of the mucous membrane of the bile ducts. The calculi, at first small and rough, generally possess a central cavity filled with pulpy material or fluid. Bilirubin and lime salts are precipitated, and then cholesterin; and the former may form a sort of shell, within which consolidation subsequently takes place. Often the cavity contains clear fluid, and such stones are very friable. Cholesterin is deposited on the surface, and may penetrate into the interior; often calculi are quite white from cholesterin. These soft stones may harden from deposit of carbonate of lime. The biliary mucous membrane is always affected—desquamative angiocholitis. The condition of stasis also gives opportunity for the inflamed membrane to become infected with bacilli (one form resembles the bacterium coli commune of Escherich), which may sometimes even penetrate the calculi. The phenomena of the disease may be divided into regular typical cholelithiasis and irregular atypical forms, the latter often leading to cancer, and therefore of bad prognosis. As to treatment, he remarked that but little was to be expected from so-called solvents, as it had been shown that only very small amounts—of poisons, for example—passed into the bile. The effect of "cholagogue" remedies so generally prescribed had been left in doubt by experiment. A mixed diet causes a larger flow of bile than any drug, and solvent remedies are irrational, since the bile itself is a complete solvent for material contained in it. The excretion of bile must be mechanically aided by improved clothing. The use of salicylic acid &c. to prevent bacterial infection is not of much service. Since every error in diet brings on attacks, a main indication is strict dieting. The good effect of Carlsbad waters is perhaps due to excitation of peristalsis. Surgical treatment has, owing to the position of the gall-bladder, a fair prospect of good results, and in many cases the gall-bladder should be entirely removed. It is usual in practice to regard jaundice as the chief symptom, but very often there is no jaundice present, and the suffering in such cases is often only regarded as gastralgia.

(To be continued.)

A BURMESE BUDDHIST AND VACCINATION.

THE readers of THE LANCET will be interested to hear something of the quiet progress of civilisation in Burmah and measures of Government, apart from punitive expeditions against hill savages and the suppression of dacoits. The accompanying letter formed part of a correspondence which has lately been published in the vernacular issue of the Government *Gazette* and widely distributed through the country. It is optional here with municipal boards to make vaccination compulsory within their limits. Since the occurrences herein related several of the larger towns have followed the example of Rangoon and adopted compulsory vaccination. On his return from leave in October last, Dr. Pedley found a letter from the Sanitary Commissioner waiting for a reply. It stated that the President of the Township Committee of Allanmyo had failed in his endeavours to persuade the people of that place to adopt vaccination, but had heard that the late Chief Commissioner, Sir Charles Bernard, had in Durbar awarded a gold chain to a Loogyee (head man) for furthering the cause of vaccination amongst the Burmese. He inquired by what means the Loogyee had so succeeded.

The following was the reply from Dr. T. F. Pedley, Health Officer, Rangoon Municipality, to the Sanitary Commissioner and Superintendent of Vaccination, Burmah:

Rangoon, Oct. 7th, 1889.

SIR,—In answer to your letter, No. $\frac{3728}{15\ V}$, dated Aug. 8th, 1889, with enclosures, I have the honour and pleasure to give you an account of the valuable assistance rendered by Oo Dway in furthering the cause of vaccination in Rangoon. Small-pox was prevalent in this municipality in 1883–84. During this epidemic some 2000 people were attacked and 885 died; of these 615 were children. Vaccination was not compulsory—in fact, the Burmese were so prejudiced against the operation that the municipal committee could not decide to have the Act enforced. When the epidemic began the subject of vaccination was much discussed among the Burmese, and a special meeting of the Loogyees was held to consider the matter. I was present, and explained the advantages of the operation, and begged them to assist me in getting the children vaccinated, for many of them were dying in the town. I received many promises, but was greatly discouraged, for very few of the men really interested themselves in the matter. When I and the vaccinators visited their quarters they were ready with all sorts of excuses, but did little or nothing to use their influence among their people, so that few children were vaccinated. Oo Dway, Myogan Loogyee (village head man) of Dalla came to me and asked me to pay a visit to his village, which is on the other side of the river, opposite Rangoon. He promised to have a number of children ready, and fixed what he considered would be a fortunate day. I went to Dalla accordingly, and was most agreeably surprised to find that the Loogyee had gathered the women and children, with a large crowd of people, at his house. I was allowed to vaccinate all the babies—Oo Dway's grandchildren first,—which I did with great care and gentleness, promising medicines and special care if any of them should suffer from the operation.

After this, every child in this large village was vaccinated, for Oo Dway persuaded the other Loogyees, and brought me the Sayas (native doctors) and inoculators, whom we showed how to vaccinate, and convinced them of the efficacy of the operation. This last was not difficult, for it soon became known that, while many children in the adjacent villages were ill or dying of small-pox, in Dalla there were very few cases, and no deaths from it, among the children. Oo Dway's example had a good effect among the Loogyees in Rangoon, for they began to interest themselves, and many of the Sayas threw aside the old practice of inoculation and learnt how to vaccinate, some of them becoming municipal vaccinators. The prejudices against the operation were broken down; and when the proposal was made to the municipal committee the next year to enforce vaccination, the Burmese members voted with the Europeans for it. Since then we have had no trouble, and regard the good work of the vaccination department with pride, feeling convinced that large numbers of lives and much suffering have been saved by its efforts.

One day after the epidemic had ceased, I asked Oo Dway how it was that, while the other Loogyees had disappointed me and given so little assistance in this work, he had come forward. I think his reply is well worthy of record, and his reasons, if widely made known, might do good among his fellow countrymen. He said that he was present at the meeting of Loogyees, and came to the conclusion that if vaccination would, as they had been told, save the lives of

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the children, it was a work of *great merit*, and worthy of the best attention of a good Buddhist. Regarding the matter thus seriously, he made special visits to the Shoay Dagon Pagoda, and in prayer sought the guidance of the higher powers. One night about this time he had a dream. He thought that while sitting on the bank of the river he saw a number of pieces of wood floating down to the sea. He thought it a pity that they should thus be wasted. So, getting into a canoe, he paddled out into the stream, and succeeded in collecting a large quantity, which he piled on the shore, and was much pleased with his good luck. He says he thought much about this dream, wondering what it might portend. It dawned upon him that the driftwood meant the lives of the children, which might be saved if he could persuade their parents to have them vaccinated. He hesitated no longer about the matter, but acted as I have above described. I believe Oo Dway to be a kind-hearted man, who lives up to the best teachings of his religion. He is much beloved by the people of his quarter, and respected by those who know him. I referred to the assistance he had given me in my Sanitary Report for 1884, and mentioned the matter to the Chief Commissioner. Sir Charles Bernard expressed great pleasure in being able to publicly recognise Oo Dway's good work. I know that the reward of the gold chain was not expected, and believe that the highest motives prompted his benevolent endeavours.

I have the honour to be, Sir, your obedient servant,

T. F. PEDLEY,
Health Officer, Rangoon Municipality.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Teignmouth Urban District.—Dr. Cecil H. Piggott calculates the death-rate during 1890 for the two component parts of this district as 17·2 per 1000 for Teignmouth and 19·3 for Shalden; and, in referring to the infectious diseases, he explains that, the existing means of isolation being inadequate, no cases were removed to the hospital. On the question of drainage generally, Dr. Piggott reports that the authority has every reason to congratulate itself upon the satisfactory completion of several much-needed improvements. Oddly enough, this same authority, on receiving the report, declared that it tended to convey a "wrong impression to the outside public as to the drainage of the town." We regret to hear this, for if, as Dr. Piggott says, the drainage is now a matter of congratulation, the authority must know something against it which their medical officer of health has not reported on. But this seems hardly possible, and hence we look through the report again to see this meaning of this warning which the local board has made so public; and the only other explanation of it lies in a detailed account of the sanitary circumstances of a building where enteric fever took place. Happily for Teignmouth, no general faulty condition was found to be concerned in this preventable disease; it was due to local conditions affecting the actual premises attacked, and Dr. Piggott, drawing the right and proper inference, suggests that action should be taken to prevent any further similar occurrence. But he adds that in Teignmouth there are, happily, few such spots to be found. And yet this officer is asked for the future so to report as not to prejudice the health of the town. The things that are prejudicial are the high death-rate and the resolution of the authority, and the one comforting fact is a report which explains that faulty circumstances affecting public sewers and house drainage are not allowed to remain when once discovered. Fortunately, intending visitors to Teignmouth can, so long as the present medical officer of health remains in office, feel assured that improvements called for in the interests of public health will, as heretofore, be continued; and that, if the present high death-rate admits of being speedily reduced, the authority, and the public electing them as their representatives, will be openly advised as to the measures that are needed to this end. The authority would do well to pass resolutions which will give confidence to the public, instead of such suggestive ones as that recently adopted. A resolution, for example, to provide at once some adequate means of isolation would be much more to the benefit of Teignmouth than the attitude now adopted.

Sutton Coldfield Urban District.—The maintained small death-rate, averaging some 12 per 1000 per annum, must be regarded with satisfaction by the Town Council and by Dr. Bostock Hill, their health adviser; and the small zymotic rate adds to the satisfactory result. Where preventable disease occurs, the defects are pointed out and remedied, and this work is made the more complete by the adoption of the Notification Act. The carelessness which goes on in the face of the high mortality from measles in this country is adverted to, and the action which can be taken in controlling it by restricting school attendances is pointed out at some length. Excellent records are embodied in the report as to the systematic sanitary action and inspection in progress, and as to the meteorology of the locality; but the year's sanitary history is in one sense satisfactorily brief; for, as Dr. Hill asserts, Sutton Coldfield for three consecutive years has taken its stand in the first rank of healthy towns, and in 1890 it had the lowest rate of general death and of infant death of all the boroughs in the county of Warwick.

Uxbridge Urban District.—Mr. W. Rayner shows the excellent use to which the joint hospital for infectious diseases was put during the past year, and with the steady isolation of diphtheria, which is evidently in progress, we may hope that this disease, which some time since was severely epidemic, may be permanently checked, for inspection of schools and other allied work seems also to be steadily maintained. Happily, only one death from any zymotic disease took place, and where any such cases occurred cleansing, disinfection, isolation, and removal of insanitary circumstances were fully carried out.

Stroud Rural District.—Some detailed account is given by Mr. Partridge as to the general inspection of this district during 1890 and of the results attained, as also of the causes of death which prevailed. The death-rate from all causes has been almost continuously falling since 1875, and it was 14·7 per 1000 last year; the zymotic rate was also small—namely, 0·8 per 1000. Some diphtheria occurred, and, as is commonly the case, it prevailed chiefly amongst children aggregated in one of the elementary schools. Occasion was properly taken to remedy a number of sanitary defects, both at the school and at the houses of those who were attacked. There were also fifty-three attacks from scarlet fever, but no death. Some extension of the public water-service has taken place, but there is need of similar progress in respect of public sewers.

Stroud Urban District.—Unlike the Stroud rural district, this town is stated to be hesitating about the desirability of learning whether infectious disease is prevailing in its midst or not, and at the date of Mr. Partridge's report notification was still in abeyance. The annual death-rate for 1890 was 16·2 per thousand. Steps are being taken to remedy a deficiency in the public water-supply, and it is to be hoped that when this is completed no further accounts of unwholesome supplies will be possible.

Bisley Urban District.—This district is also under Mr. Partridge's health supervision, and it had a death-rate last year of 15 per thousand living. Some cases resembling enteric fever were found to be associated with defective sanitary surroundings; the water-supply is from wells, many of which are of a doubtful character, and this although a public service would appear to be available. Reading between the lines of this report, it is clear that the health officer is of opinion that the death-rate of this little town is too high, and that there are conditions within it capable at any time of causing much greater mortality.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6615 births and 4400 deaths were registered during the week ending April 11th. The annual rate of mortality in these towns, which had been 21·2 and 22·4 per 1000 in the preceding two weeks, further rose to 22·9 last week. The rate was 20·0 in London and 25·3 in the twenty-seven provincial towns. During the thirteen weeks of last quarter the death-rate in the twenty-eight towns averaged 23·0 per 1000, and slightly exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these

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towns last week were 18·3 in Brighton, 19·4 in Birkenhead, 19·5 in Norwich, and 19·8 in Nottingham; the highest rates were 29·7 in Manchester, 34·1 in Newcastle-upon-Tyne, 34·2 in Manchester, and 42·5 in Hull. The deaths referred to the principal zymotic diseases, which had been 414 and 468 in the preceding two weeks, declined again last week to 438; they included 157 from measles, 147 from whooping-cough, 40 from diphtheria, 36 from scarlet fever, 30 from "fever" (principally enteric), 28 from diarrhœa, and not one from small-pox. These diseases caused the lowest death-rates in Brighton, Sunderland, Birkenhead, and Wolverhampton, and the highest rates in Leicester, Blackburn, Huddersfield, and Portsmouth. The greatest mortality from measles occurred in Bristol, Blackburn, Huddersfield, and Portsmouth; from scarlet fever in Bradford; and from whooping-cough in Newcastle-upon-Tyne, Leicester, Derby, and Halifax. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 40 deaths from diphtheria included 26 in London, 4 in Salford, and 2 each in Manchester, Liverpool, and Sheffield. No fatal case of small-pox was registered in any of the twenty-eight towns; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1018, and showed a further decline from recent weekly numbers; the patients admitted during the week were 77, against 81 and 98 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 466 and 489 in the previous two weeks, declined to 464 last week, but exceeded by 30 the corrected weekly average. The causes of 94, or 2·1 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Preston, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were recorded in Salford, Sheffield, Hull, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 26·7 and 26·2 per 1000 in the preceding two weeks, further declined to 25·0 during the week ending April 11th, but exceeded by 2·1 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 15·4 in Perth and 16·4 in Greenock to 30·4 in Glasgow and 52·5 in Paisley. The 653 deaths in these towns showed a decline of 31 from the number in the preceding week, and included 33 which were referred to measles, 25 to whooping-cough, 7 to diarrhœa, 6 to "fever," 5 to diphtheria, 4 to scarlet fever, and not one to small-pox. In all, 80 deaths resulted from these principal zymotic diseases, against numbers increasing from 73 to 100 in the preceding three weeks. These 80 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased in the preceding five weeks from 16 to 41, declined again last week to 33, of which 19 occurred in Paisley and 12 in Glasgow. The deaths referred to whooping-cough, which had been 34 and 28 in the previous two weeks, further declined to 25 last week, and included 16 in Glasgow and 3 in Leith. The 6 fatal cases of "fever" exceeded the number recorded in any recent week; 3 occurred in Glasgow and 2 in Aberdeen. The 5 deaths from diphtheria showed a decline of 4 from the number in the preceding week, and included 2 in Glasgow, where 3 of the 4 fatal cases of scarlet fever were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 201 to 166 in the preceding four weeks, were 164 last week, and exceeded by 38 the number in the corresponding week of last year. The causes of 63, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·1 and 23·9 per 1000 in the preceding two weeks, rose again to 30·6 during the week ending April 11th. During the thirteen weeks of last quarter the death-rate in the city averaged 39·2 per 1000, the rate for the same period being 22·6 in London and 21·8 in Edinburgh. The 207 deaths in Dublin showed an increase of 45 upon the number in the preceding week, and included 5 which were referred to "fever," 2 to whooping-cough, 1 to diphtheria, and not one either to small-pox, measles, scarlet fever, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had declined from 11 to 5 in the preceding three weeks, rose again last week to 8; they were equal to an annual rate of 1·2 per 1000, the rate from the same diseases being 1·8 in London and 0·9 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 4 to 1 in the previous three weeks, rose again to 5 last week, and exceeded the number recorded in any week since January last. The fatal cases of whooping-cough, which had been 3 in each of the preceding two weeks, were 2 last week. The 207 deaths in Dublin included 34 of infants under one year of age and 57 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon those recorded in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 59, or more than a fourth, of the deaths occurred in public institutions. The causes of 24, or nearly 12 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

THE REVISED SCHEME OF THE LONDON UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—You will, I hope, sufficiently bear in mind the motto at the head of your correspondence column to allow me to say a few words in favour of the scheme of the Senate of the London University to which you are so strongly opposed. Your first argument against it is that it is not formed on the lines laid down by the Royal Commission, and your chief reason for this statement is that the new scheme will admit provincial constituent colleges to the University. This is a mistake. It will not admit them; it will only render it possible for them to be admitted, for Section 26 says that the admission of provincial constituent colleges shall be determined by the Senate, and Section 27 gives the Senate power to remove provincial constituent colleges. The London and provincial parts of the University are kept so distinct that the latter may be brought in or taken out without any interference with the London Colleges. It is quite conceivable, and even probable, that either none of the provincial Colleges may apply for admission, or that, if they do, the Senate may not be satisfied with the grounds given for such admission. The London Constituent Colleges—viz., University College, King's College, and the London medical schools—are, however, constituent colleges in their own right; so that your statement that "it [the scheme] endeavours to bring under the central control of Burlington-gardens all the University Colleges of Arts and Science in England and Wales, instead of adapting its organisation mainly to the London Colleges and medical schools," is incorrect, especially as there is no intention of admitting "all the University Colleges," for the chief of them are already affiliated to the Victoria University. You next contend that the scheme is at variance with the report of the Royal Commission because it does not alter the M.D. degree. It alters it by making it much more accessible than it has been hitherto, for it proposes that by one set of professional examinations, conducted by examiners appointed conjointly by the Royal College of Physicians, the Royal College of Surgeons, and the University, the candidate may take his L.R.C.P., his M.R.C.S., and his M.B., thus saving expense, diminishing the number of examinations, and consequently decreasing the risk of failure. But it does not follow, as you seem to think, that power to give degrees will thus be handed over to the Royal Colleges, for while, if the Colleges are satisfied, the candidate will be granted his L.R.C.P. and M.R.C.S., he will only be granted his M.B. if the Senate and the University Board of Studies are satisfied. I think I have shown that the scheme is not so opposed to the spirit and working detail of the report of the Royal Commission as you suppose.

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Your second argument is that the scheme will not satisfy any of the bodies interested. I should have thought it was obvious that when so many bodies are interested, and each would like as much as it can get, it would be impossible to satisfy them all; but surely it speaks well for the scheme that it has already been adopted by the Senate, the Royal College of Physicians, the Royal College of Surgeons, Guy's, St. Bartholomew's, St. Thomas's, London, Charing-cross, St. Mary's, Middlesex, St. George's, and Westminster Hospitals, the London School of Medicine for Women, the Incorporated Law Society, and (with certain reservations with regard to the provincial colleges) by University and King's Colleges. Probably everyone thinks he could improve the scheme, but it seems to me that it ought to be strongly supported by Convocation, for it is the only one which has yet been proposed which commands support from almost all the bodies concerned. Further, those who oppose it should consider what will happen if it is rejected, for then one of two things will come to pass: either the medical faculty of the London schools will be left in its present unsatisfactory state for many years to come, or a second university will be founded in London. This will lead to dangerous rivalry, and probably to the degradation of the degrees in one or both of the universities. Also, there will be great confusion between the two London degrees.

I am, Sirs, yours faithfully,

Harley-street, W. W. HALE WHITE, M.D. Lond.

*** If Dr. Hale White compares the proposed constitution of the Senate in the new scheme with that proposed by the Royal Commission he will see that provincial representatives are included in the former and not in the latter. He should also be aware that the "latest" scheme differs from the one before the "latest" in making arrangements for including provincial colleges, and was introduced as the outcome of a distinct objection on the part of those colleges to be excluded from a share in the reconstituted University, as well as in its management. This is in direct opposition to the recommendation of the Royal Commissioners, who merely suggested "access to the examinations and degrees" for provincial students, as is now the case. Unless the scheme lowers the M.D. degree by changing the earlier matriculation and preliminary scientific examinations, it cannot render that degree more accessible. It simply *compels* every London pass M.B. student to come under the examination system of the Royal Colleges, and that at an increased expense to the intending graduate. Does Dr. Hale White intend to convey that the members of the medical staffs of the various London hospitals have officially met to consider the scheme, and that it has been regularly voted on and agreed to by them? Dr. Hale White should not have accepted so readily arguments employed in an *ex parte* memorandum, which would seem to be drawn up by the Senate of the University to influence the voting of Convocation on May 12th next.—ED. L.

THE ELECTRIC BATH.

To the Editors of THE LANCET.

SIRS,—The experiment quoted by Beard and Rockwell, to which Dr. Steavenson alludes as proving that the body conducts the electric current better than water, has little to do with their relative conductivities, but depends entirely upon the difference of potential between the two positions in the bath in which the two hands are immersed. If there were a difference of 50 volts between the head and foot electrodes, and the hands were immersed three feet apart, there would be a difference of potential of about 20 volts between the right and left hands, and the current through the body would equal in fractions of an ampère that voltage divided by the resistance in ohms, and as the distance between them is diminished so also will be the voltage and current. If, however, the hands were placed the same distance apart across the bath there would be no difference of potential and consequently no current. Another experiment was quoted to me a short time ago which was supposed to prove the same thing, and is as follows. If a galvamometer be included in the circuit of a galvanic bath and the current noted, through the water alone and also when the patient is immersed, it will be found that the current is considerably increased under the latter condition. This result is, however, in no way due to the superior conductivity of the body, but to the fact that its conductivity is added to that of the water, since they are practically in parallel circuit, or the sectional area of that portion of the circuit may be regarded as thereby increased, and consequently its resistance diminished. Again, it is quite true that if salt or acid be added to the water, it will become a better conductor, but not that the whole of the current will then pass through it. In fact, but little current will be thereby diverted from the patient, since as the resistance of the circuit is diminished the total current is increased, and will be divided between conductors in parallel inversely as their resistances; so that whilst the current through the bath would be increased, that through the patient would be but little diminished, and that diminution would not be due to the current selecting the path of least resistance, but because, by increasing the conductivity of that portion of the circuit, the gradient of potential is rendered less steep. I must not be understood as calling in question the fact that the body may under some circumstances be a better conductor than the water, but only as stating that the above experiments have no direct bearing upon the question.

I am, Sirs, yours faithfully,

Southport, March 30th, 1891. FREDERICK GEORGE, M.D.

THE ARMY MEDICAL DEPARTMENT.

To the Editors of THE LANCET.

SIRS,—An able and lucid article in THE LANCET of March 28th, 1891, concludes as follows: "We would protest against the assumption that the profession of medicine is in need of any reflected dignity. It has every bit as much title to respect as the profession of arms." It has more right to respect than the profession of arms, which is not a learned profession, but unfortunately in the army, at any rate, it does not obtain the respect to which it is entitled, and never will until its officers have distinct and intelligible military rank and titles. This is lamentable, but it is true, as army medical officers well know; and it is to this aspect of the case I crave the powerful support of THE LANCET. I wish you could see the state of things at the station from which I write. It is a very large one, where society is exclusively naval and military, and the medical department is at the bottom of the social scale, not from any peculiarity of its members, many of whom have brothers, cousins, or schoolfellows among the combatant officers of the garrison, but solely because they have no military rank or status. It may be difficult for a civilian to understand this, but to those accustomed to military habits the question is simple enough, and they will see that among military society a man without rank and title is nowhere. I can assure you that if Sir Andrew Clark or Sir James Paget formed part of this garrison they would have their corns trodden upon many times every week. They would find that they were not considered fit to preside over even a sanitary committee, of which the most junior subalterns of the station, who might even be their own sons, formed a part. That they could not form part of a court martial by which one of their own men was tried, and that they and their belongings were avoided by society for fear that those who associated with them might be branded with social inferiority; and all this because they have no military rank and status. How can any officers, except they are superhuman, perform their duties, with zeal and interest under such circumstances?

I am, Sirs, yours truly,

April 14th, 1891. MEDICAL STAFF.

PRE-HISTORIC TREPHINING.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers who are interested in the question of pre-historic trephining to know that a very full and most interesting account of the operation is to be found in Miss A. W. Buckland's paper, "Surgery and Superstition in Neolithic Times," read at the meeting of the Anthropological Institute on Feb. 8th, 1881, and published in the journal of the Society, vol. xi., pp. 7-21. On

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May 10th, 1887, Mr. Victor Horsley read a paper before the same Society on "Trephining in the Neolithic Age," which gave rise to a most interesting discussion. The discussion and an abstract of the paper appear in the Society's journal, vol. xvii., pp. 100–107. As your correspondent, Mr. Keyworth, states, M. N. Joly, in his book, "Man before Metals," being the forty-fourth volume of the international series, deals very fully with the subject; he accepts the usual explanation, which also has the approval of M. Broca, that the operation was due to the superstition of "possession" by an evil spirit—a superstition that long continued, as evidenced by the form of exorcism which was used during the baptismal service in the Church of England which appears in the Prayer Book of Edward VI., A.D. 1549, as follows:—"I commande thee, uncleane spirite, in the name of the Father, of the Sonne, and of the Holy Ghost, that thou come out, and departe from these infantes, whom our Lord Jesus Christe hath vouchsaued to call' to his holy Baptisme, to be made membres of his body, and of his holy congregacion. Therefore thou cursed spirite, remembre thy sentence, remembre thy iudgemente, remembre the daye to be at hande, wherin thou shalt burne in fyre euerlasting, prepared for thee and thy Angels. And presume not hereafter to exercise any tyrannye towarde these infantes, whom Christe hath bought in his precious bloud, and by this his holy Baptisme called to be of his flocke."

Children were occasionally credited with being possessed by good spirits; such a one was the infant of Kherberg, an account of whom was published in this city by Dr. Arthur Jacob in A.D. 1823. A great deal of information dealing with the subject of "possession" is contained in Herbert Spencer's Sociology, chap. xvii., vol. i., 2nd edit, A.D. 1877; Clodd's "Childhood of Religions," A.D. 1875; Reginald Scott's "Discoveries of Witchcraft," A.D. 1584, a reprint of which by Dr. Brinsley Nicholson was published by Elliot Stock in A.D. 1886.—I am, Sirs, yours truly,

GEORGE FOY, F.R.C.S.I.

Cavendish-row, Rutland-square, Dublin, April 10th, 1891.

"ASTASIA-ABASIA."

To the Editors of THE LANCET.

SIRS,—On page 791 of THE LANCET there is a record of a case with a big name, "astasia-abasia," reported by Mr. G. H. Hammond of New York. Five cases of a similar affection were reported by me in the St. Bartholomew's Hospital Reports, vol. xxv., p. 201 (copy of which I enclose for reference), under the title "Disuse of Limbs after Severe Disease: a Pseudo-Paralysis," and I have just now discharged from the Colchester Hospital a similar case, a brief report of which I enclose. The affection can hardly be considered a paralysis, for when the weight of the body is supported by the bed or by nurses, the limbs can be moved. It is rather an exhausted condition of muscles, which under suitable treatment are easily repaired. The first point is to obtain the confidence of the patient and to induce a belief that recovery is certain. The first use of muscles after a long period of disuse is very fatiguing; but, recovery being assured, patients soon find power returning after efforts made, and, being encouraged by this to proceed, improvement becomes rapid.

I am, Sirs, yours obediently,

ALEXANDER WALLACE,

April 14th, 1891. Physician to Essex and Colchester Hospital.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Uncertified Deaths in Durham.

DR. JEPSON, in his annual report to the Durham Rural Sanitary Authority, notices the large number of uncertified deaths. Of 321 deaths 91 were uncertified; and, deducting deaths from injury where inquests have been held, he says that 29 per cent. have not been properly accounted for, and justly remarks that the term "natural causes" is unacceptable as a registered cause of death. With regard to an outbreak of scarlet fever in October, he says it appeared to be coincident with the return of children to the various schools.

A Durham County Centenarian.

Mr. Thomas Ironsides, farmer, of Kibblesworth, a few miles from Gateshead, celebrated his 100th birthday on Sunday last. He is said to be in robust health, and exhibits so few signs of decay that it would be difficult for a stranger to hazard a guess at his age. The farm which he occupies, of 200 acres, is on the estate of the Earl of Ravensworth, and the house in which he now resides is the one in which he was born. Mr. Ironsides has a large family, most of them living, his eldest son being now over seventy years of age. He is, although not a teetotaller, always moderate in his use of alcoholic drinks.

Railway Ambulance Work at Gateshead.

Certificates and badges have been presented to the members of the North-Eastern Railway Ambulance class at Gateshead. The class is a large one, and has been examined by Surgeon-Major Halton for the St. John Ambulance Association. On behalf of the class, Dr. Purdie, its instructor, was presented with a splendid edition of Sir Walter Scott's works in twenty-five volumes.

Carlisle Infirmary.

It is stated that the "Jubilee Endowment Fund," which Mr. Parker of Carleton Hill, the late treasurer of the Cumberland Infirmary, Carlisle, raised as a memorial of Her Majesty's Jubilee, has now reached £2225. Lord Leconfield has just contributed £25.

Sunderland: the Asylum Question.

What is to be done with lunatics chargeable to Sunderland is now a prominent question in the town. Hitherto the Durham County Asylum at Sedgefield has been able to receive them, but now even that vast establishment has not sufficient room, and declines to take any more from this borough. It appears that Sunderland has contributed nearly £16,000 towards the Sedgefield institution, and this sum is offered by Sedgefield as a sort of compensation to Sunderland, and to enable it to build an asylum of its own, but Sunderland asks for £50,000. The difference between these sums is so great that the commissioners appointed under the Act will have to decide what proportion Sunderland is entitled to. It is quite certain that the authorities will have to build, and build largely, to provide the requisite accommodation. The local papers publish quite a large list of subscriptions to the Infirmary, and they are for the most part from working men and organised subscriptions from workshops in the town and district.

Horseflesh.

At the Gateshead Police-court last Friday two men from Sunderland were fined for ill-treating and working a horse while in an unfit condition. Evidence for the prosecution showed that while being spoken to as to the unfitness of the horse for work it fell dead. It transpired that it was being driven to a tanyard for slaughter, and that a higher price was given in Gateshead than in Sunderland because the flesh was afterwards forwarded in tubs to Antwerp by steamer.

The Perils of Football.

On Sunday last a young man aged twenty died at Middlesbrough. On the previous day deceased played in a football match at Haverton Hill, and was injured in the abdomen. He walked home, and was afterwards medically attended, but died rather suddenly. During the progress of a match at Leasingthorne, on Saturday, one of the home team had the misfortune to have his leg fractured, and another broke his collar-bone.

A most successful concert, under the patronage of the mayor, was given last week for the benefit of the building fund of the Eye Infirmary.

The Liverpool Sessional Grand Jury has issued a presentment for the demolition of 500 houses which had been condemned on account of their insanitary condition.

Newcastle-on-Tyne, April 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University General Council.

Reports have been issued in view of the statutory half-yearly meeting of the General Council of the University by committees appointed by the Council, and these reports contain points of importance as regards the medical faculty. With reference to examiners and examinations, they

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approve of the proposals that (1) the extra-mural teachers should be included in the list of examiners for their respective subjects along with qualified persons neither professors nor extra-mural teachers; and (2) that the number of examiners should be sufficient to prevent the possibility of any candidate being examined wholly or chiefly by the professor or the extra-mural teacher in the subject of his own lectures. The committee are also in favour of oral examinations for degrees being open to all members of the University. As regards the remuneration of professors' assistants, the committee are of opinion (1) that any fees derived from instruction given by assistants and not by professors should, after deduction of whatever might be deemed reasonable for university purposes and class expenses, be appropriated to the payment of the assistants who give such instruction; (2) that the aim should be to obtain for senior assistants who give their whole time to university work a salary at least equivalent to that attached to tutorships at the English universities, which may be estimated at from £200 to £300 a year, and for junior assistants payment in proportion to their time employed.

Edinburgh Public Health Committee.

THE statistics submitted to the Public Health Committee of the Edinburgh Town Council show that the total number of deaths in the city during the month of March was 513, making the death-rate 22·35 per 1000, while the average during the same month for the five preceding years was 19·59 per 1000. The rate differed greatly in the different districts, it being 17·29 in the southern district, 19·99 in the New Town, and 27·36 in the Old Town. As regards age, 31·96 per cent. of the total deaths were under 5 years, 11·11 per cent. between 5 and 25, 25·34 per cent. between 25 and 60, and 31·57 per cent. above 60 years. The deaths from diseases of the chest numbered 185, and from zymotic diseases 52. Of the latter, 5 were from typhoid fever, 6 from diphtheria, 4 from scarlatina, 9 from measles, 26 from whooping-cough, and 2 from erysipelas. During the month 521 cases of infectious disease were reported in the city, as against 1199 in March of last year. The cases included 362 of measles, 91 of scarlatina, 47 of typhoid fever, and 21 of diphtheria. The number of patients in the City Hospital at the end of the month was 223, of which 51 were cases of typhoid fever, 8 of diphtheria, 101 of scarlatina, 28 of measles, 11 of whooping-cough, and 10 of erysipelas. The amount of unsound meat seized or condemned during the month was 35,435 lb. Of 138 carcases seized or condemned during the last fortnight of March, 79 were unmarketable, 13 tuberculous, and 10 decomposing.

Extension of Edinburgh Royal Infirmary.

The question of the extension of the Royal Infirmary is still under consideration, and it is understood that a deputation waited upon the Estates Committee of George Watson's Hospital with a view to the possibility of acquiring the elementary department of the college for boys. The difficulty here also is to obtain suitable accommodation for the juvenile department of the school if the present site and buildings are disposed of to the infirmary.

Fever Patients at the Leith Hospital.

The directors of the Leith Hospital have given notice to the Town Council of Leith, as local authority, that they have resolved to terminate the arrangement under which fever patients have been received into the hospital. This will necessitate the provision by the local authority of a hospital for the reception of such cases.

Health of Edinburgh.

The mortality last week was 94, making the death-rate 18 per 1000. Diseases of the chest accounted for 34 deaths, and zymotic diseases for 4. The intimations for the week included 2 from typhoid fever, 2 from diphtheria, 27 from scarlatina, and 109 from measles.

Death of Dr. Alexander Geddes.

The death occurred at Buckie on the 18th inst. of Dr. Alexander Geddes from typhoid fever, contracted in the exercise of his professional duties. Deceased began practice in Buckie in July, when he had just graduated M.B., C.M., at Aberdeen University. During the course of his medical studies he obtained distinction in several of the classes, and acted as demonstrator of anatomy to Professor Struthers for two years. His untimely death at the beginning of a very promising career is undoubtedly due to the great devotion displayed by him during the present outbreak of typhoid fever. He was twenty-six years of age, and is survived by a widowed mother, with whom the community deeply sympathise.

Complimentary Dinner to Dr. J. C. M'Vail.

On the 10th inst. Dr. J. C. M'Vail, the late medical officer of health for Kilmarnock, was entertained to a complimentary dinner in the George Hotel, Kilmarnock, on the occasion of his leaving town to enter upon his duties as medical officer of health under the County Councils of Stirlingshire and Dumbartonshire. There were about eighty gentlemen present. Provost M'Lelland occupied the chair, and the croupiers were Mr. Thomas Kennedy, of Glenfield Works, and Dr. Alexander Dundonald. The Provost, in proposing the toast of the evening, passed a high eulogium upon Dr. M'Vail for the valuable services he had rendered to Kilmarnock.

A sum of £1000 has been given to St. Andrew's University towards the endowment of a botanical lectureship or future Chair in the United College.

April 14th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Ether Drinking.

AT a meeting of the members of the General Synod of the Church of Ireland held last week the following resolution was adopted: "That this Synod thankfully acknowledges the action taken by the Government for the restriction of the traffic in ether as an intoxicant, and respectfully urges that further legislation is necessary for its suppression."

A Mistake in a Prescription: Damages £200.

An application was made last week before Master Bruce by Mr. Gray to recover damages laid at £500 against a firm in Dublin for negligence in compounding a prescription whereby injury was occasioned to the plaintiff. The principal ingredient in the prescription was aromatic spirits of ammonia, but on taking the first dose the patient suffered intense pain in the throat, and for a fortnight was unable to take ordinary solid food, and his throat since then has required treatment. Probably instead of the aromatic spirits of ammonia the solution of ammonia was substituted, and its corrosive action would explain the symptoms complained of. There was no statement of defence, and the plaintiff having marked the usual interlocutory judgment, the jury assessed the damages at £200.

Irish Branch of the British Dental Association.

A meeting of the Irish Branch of the British Dental Association was held at the College of Surgeons last week, presided over by Mr. Booth Pearsall, F.R.C.S.I. A vote of thanks to the outgoing president (Mr. J. C. Clarke of Belfast) was agreed to, and regret expressed at his absence from illness. Mr. Pearsall having delivered the presidential address, Dr. R. T. Stack read a paper, followed by Dr. A. W. Baker, on "Some Septic Sequelæ of Tooth Extraction." Models of abnormal teeth were exhibited by Mr. O'Meehan, and the proceedings terminated.

Royal College of Surgeons.

Mr. William Thomson has resigned his seat on the Council of the Royal College of Surgeons, and will probably be a candidate for an examinership in surgery at the elections early in May. It is stated that the vacancy on the Council will be filled up on the 28th inst.

Arbitration in a Case of Insurance Claim.

Mrs. Nicholls of Navan, having claimed a sum of £1000, being amount of a policy effected by her late son, a medical man, with the Accident Insurance Company, and he having died from blood poisoning, the matter was left to arbitration. The arbitrators decided, after hearing evidence, that Mrs. Nicholls' claim had been sustained; but as no satisfactory proof of this had in the first instance been furnished to the Insurance Company, it was agreed that the company should be entitled to deduct the costs of the arbitration.

Mr. B. J. Neary, medical officer of the Howth and Baldoyle dispensary district for nearly a quarter of a century, died last week at his residence, Howth, aged fifty-three years.

Dublin, April 14th.

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PARIS.

(FROM OUR OWN CORRESPONDENTS.)

New Procedure in Abscess Treatment.

THE treatment of chronic or cold abscess by the method of aspiration and injection of antiseptic solutions, such as iodoform dissolved in ether, is a favourite plan of some French surgeons, and is the one usually adopted for some time past in the wards of M. Verneuil, now the senior professor of clinical surgery in the Paris Faculty; but it appears to have been reserved in this country to Dr. Piéchaud of Bordeaux to have adapted the method with success to the treatment of acute inflammatory abscesses. Instead of the time-honoured free incision of the most dependent part Dr. Piéchaud aspirates the abscess, after which he injects a solution of 1 in 1000 of corrosive sublimate. For the past ten months he has invariably adopted this method in his hospital practice, and, he declares, with marked success. Even if the skin over the seat of the abscess be thinned and undermined, this is no bar to the procedure, for which he claims as advantages that it is less painful, leads to more rapid healing, and leaves no traces of scar.

Operative Treatment of Goitre.

M. Reverdin of Geneva has performed thyroidectomy in this disease in fourteen cases with only one death. His cases were composed of ten females and four males. He speaks very favourably of the operation, but insists that care must be taken not to remove any but pathological tissue, and that to avoid undue loss of blood each vessel must be progressively and securely tied or compressed. He makes a median incision over the tumour, and advocates enucleation for this latter. Before undertaking operative measures he advises a prolonged trial of treatment by iodoform, which he administers internally in the form of pills.

Cocaine in Minor Buccal Surgery.

M. Combe records 200 minor operations performed on the mouth with the aid of cocaine as an anæsthetic. He claims that its advantages over chloroform or other general anæsthetic are as real as they are apparent—with ordinary care accidents are very rare. He insists on a freshly prepared solution being used, and he advises that one centigramme only be injected at first, and then a lapse of five minutes allowed before the next injection is made; for he has observed that, in those who are disposed to be unfavourably affected by cocaine, warning symptoms become manifest after very small doses.

Pathology and Treatment of Sympathetic Ophthalmia.

The procedure proper to be adopted in this grave affection is often of serious moment and consideration to the surgeon as well as to the patient. The modern microbic theory in medicine would appear to fit in very accurately as an explanation of the pathology of this hitherto insufficiently accounted for affection. And this thesis M. Abadie very ably sustains in the paper which he read at the recent Congress of Surgery. In effect, the microbes invading the wounded or diseased eye gain the optic nerve and chiasma, and so reach the sound organ. At the first sign that the latter is involved M. Abadie advises the free cauterisation with the galvano-cautery of the diseased organ, and the injection into the vitreous of a drop of a solution of 1 in 1000 of sublimate, which injection should be repeated in a few days if necessary. If this be done well and sufficiently early, not only will the sympathetic disease in the sound eye be arrested, but the original affection so modified that it may often be possible to save the other eye. M. Abadie points out that success by this method can be hoped for in recent cases only. In any others enucleation is indicated, and should be followed by mercurial frictions for a prolonged period.

A Case of Hermaphroditism.

At a recent meeting of the Academy of Medicine M. Polaillon read notes of a case of this curious condition, of the reality of which histological investigation stood witness. It was a question of a person twenty-five years of age, to all external appearance a female, but who had never menstruated. The external genital organs were well formed, but the vagina was represented by a little depression, scarcely two centimetres deep. The uterus was completely absent. In the inguinal region were two little tumours, reducible and tender to pressure. These proved to be atrophied testicles, for on histological examination the seminal tubules were readily recognised. There was no trace of prostate.

The Forthcoming Congress of Hygiene at London.

The Minister of the Interior has organised a committee charged to assure the participation of France at the Congress on Hygiene to be held in London next August. The committee has for its honorary president M. Pasteur, and president M. Brouardel, Dean of the Paris Faculty; vice-presidents, M. Minod (director of Public Hygiene at the Ministry of the Interior), M. Bergeron (permanent secretary of the Academy of Medicine), and M. Proust (Inspector-General of Sanitary Services). Amongst the members of what appears to be a very influential and representative committee are Professors Cornil and Grancher, of the Paris Faculty, and Dr. Vintras, of the French Hospital in London. Altogether France promises to be well represented, and to take an important part in the coming Congress.

Paris, April 14th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

The Koch Treatment.

PROFESSOR KOCH himself was so struck with the advantages of the climate of Egypt and its beneficial effects upon his own health that he has persuaded Messrs. Cook and Sons to construct at Luxor, but upon the west or Thebes side of the Nile, a few houses which might be utilised for tuberculous patients and their attendants during the months of December, January, and February when Cairo is apt to be both cold and damp. It is thought that numbers of phthisical patients will come to Egypt in the future, if not actually to undergo one of the many "cures" now before the medical world, at least to live through a period of convalescence after treatment. The experiments with tuberculin have been discontinued by Mr. Milton for surgical cases, but are still being carried on in Mr. Sandwith's phthisical wards. Dr. Schiess at Alexandria is injecting very large quantities of tuberculin, with some apparent benefit to leprous patients.

Small-pox Epidemics.

During the month of March small-pox has been reported from four provinces of Lower Egypt, but apparently only eight villages have been attacked, giving a total of sixty cases, of whom thirteen have died. The sanitary department is trying to make vaccination compulsory in Egypt for foreigners as well as natives, and for this purpose is introducing weekly a supply of animal vaccine from France, this being found much cheaper than the creation and maintenance of a vaccine institute in Egypt.

Typhus and Relapsing Fevers.

This is the time of year when fevers are reported from various country districts, and as the native officers of health are not yet competent to diagnose one fever from another, they are classed together as "fièvres typhiques." Past experience has shown that enteric fever is not one of the component parts of these outbreaks, but that typhus and relapsing fevers often exist side by side in the same village. In studying the returns, a high mortality is convincing proof of the prevalence of typhus fever, while a low death-rate leads one to believe that the cases are mostly, if not entirely, due to relapsing fever. During the month of March there have been these fevers in all the six provinces of the Delta, no less than twenty-five villages having been attacked. There have been during the past month sixty-six deaths out of a number of 620 reported cases, and there remain under treatment now 248 patients. At the beginning of March the weekly average of new cases was only seventy-seven among the various villages, but for the last two weeks the new cases have been returned as 110 and 169. As the sanitary statistics do not pretend to be very exhaustive, we may assume that many more than 620 of the fellaheen have suffered from one of these fevers during the month of March. No relapsing fever has yet been seen in Cairo, but several cases of "typhus fever"—a few real and many spurious—are being treated in tents in the desert outside the town.

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The New Agricultural College.

The Egyptian Government has lately opened a new school under English management, which bids fair to be a great success. The farmer-peasant of this country works hard, but he has not yet learnt that there are aids to farming which his ancestors were not acquainted with. Hence the intelligent Egyptian pasha is clever enough to see that he and his friends may gain something by a little insight into scientific farming, and this accounts for the popularity of the new school. Out of some 260 applicants fifty-nine have been selected to work for four years under Mr. Williamson Wallace and his assistants, and the school can already be congratulated upon having produced three novelties—first-class butter, good potatoes destined for the London market, and a native football team. The school is conducted upon the principle that a young man will be better able to learn to plough if he goes through a preliminary course of daily compulsory football.

The manufacture of good butter, which is now sold to the principal residents of Cairo, is a great boon to the phthisical visitor, who until now has always had to be content with salted butter or margarine from Europe. A dairy of twenty Egyptian cows provides milk yielding 10 per cent. of cream and fresh butter, while the separated milk is being experimentally tried as a special diet at Kasr-el-Aini Hospital for the native patients to whom ordinary milk acts as an aperient.

Cairo, April 5th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Meeting of the Federal Convention.

THE meeting of the Federal Convention at Sydney on Monday next is the most important event in the history of these colonies at the present time. From a medical standpoint federation is a thing much to be desired. A federal government would—though not perhaps at first—have many medical questions to deal with. First and foremost would come the question of quarantine. As I pointed out last month, the quarantine regulations differ in each of the colonies. Victoria has the reputation of being the most erratic in its treatment of foreign arrivals. The Victorians assert that the other colonies are not sufficiently strict in their examination, and they point out that small-pox, cholera, or any other dire disease admitted to one of the eastern colonies would soon spread over the whole continent. It is therefore quite probable that before long a federal quarantine authority will be established to watch over the interests of the colonies at large. Then there is the great question of medical registration. Each colony possesses a distinct register, and the registration certificate of one colony carries no authority to practise across the border. In New South Wales, besides producing diplomas, the person desiring to register must also hand in a recent photograph with an autograph signature, and appear personally before the Medical Board. The other colonies are not so exacting. Many hard-headed people here think it is a far cry to colonial federation, but at present it is so much in people's minds and on their tongues that something is sure to come, whether it be close political union or only consultative action. Amongst the delegates it is interesting to note that the two who stand pre-eminently above their fellows are Sir George Grey and Sir Henry Parkes, both men who have spent their lives amidst political turmoil, and are now, when verging on fourscore years, both eloquent and far-seeing leaders of men. The only medical man in the convention is Dr. Cockburn of Adelaide, the late Premier of South Australia, who is a graduate of the London University.

Koch's Treatment.

The Koch discovery created a great sensation in these colonies when the announcement was made by cable. The various colonial Governments immediately appointed medical delegates to investigate the subject in Berlin, and their return has been awaited with much interest. There are so many phthisical immigrants to these shores every year that the death-rate from phthisis in Melbourne and the other large cities is quite equal to that of London. The spread of the disease amongst the native born Australians has become a very serious matter, and in a country where charlatanism reigns supreme it was to be feared that the Koch treatment would have been run for profit. The action of the Medical Society of Victoria, in calling on the Government to cause the Koch remedy to be included in the list of poisons, and thereby to prevent unqualified persons from using it, is much to be commended. The authorities of the Sydney Hospital have refused for the present to allow experiments to be made in that institution, so that any experience to be acquired must be gained in private practice. The attitude of the profession here with respect to the matter is one of reserve. We are so accustomed to "booms" of various kinds that this last medical "boom" has not caused much surprise.

A Typhoid Fever "Specific."

Undeterred by the evil results arising from the premature disclosure of Dr. Koch's remedy, a Melbourne surgeon of some standing has announced the discovery of a typhoid fever specific. It appears that when operating last year on a case of suppurating hydatids in which the pus had a most offensive odour Dr. O'Hara of Melbourne by some mischance opened up the chyle duct. Immediately the chyle came in contact with the pus the stench ceased as if by magic. Dr. O'Hara was so much struck by this that he handed a bottle of the chyle to a bacteriologist, who made many experiments with a "fungus not unlike common yeast," which he cultivated from the chyle. He found the cerevisia to be a powerful deodorant and germicide. It was fatal to the cultivations of typhoid and diphtheritic bacilli to which it was added, and had cured a case of typhoid fever when given as a last-chance medicine. On these qualities of chyle becoming known to Dr. O'Hara, he used the "fungus" which the bacteriologist had sent him, and, according to his own statement, with great success. Several patients who were *in extremis* from typhoid fever rapidly recovered, and diphtheritic throats on which the remedy had been sprayed quickly got well. Then Dr. O'Hara, who is a leader in the profession and a surgeon to the Alfred Hospital, induced some of his colleagues to try the "specific." They did so, but the trials were carried out in so unsatisfactory a manner that for an accurate estimation of the value of the remedy they were quite useless. On hearing what was going on the committee of the Alfred Hospital very wisely dissociated the institution from the whole business.

Sydney, Feb. 28th.

Obituary.

HENRY PARRELL DAVIS, M.D. ST. AND, M.R.C.S.

WE regret to have to chronicle the death, after a painful illness, of Dr. Henry Parrell Davis. He was born in London in 1817. His father was a well-known practitioner, who lived in Red-lion-square. In his early career Dr. Davis was devoted to the study of classics, and for a few years he taught Latin and Greek in a large school at Ealing. He retained through all his life a great love for these languages, his favourite book being the Greek Testament, which he read even on the day he died. He entered Westminister and Middlesex Hospitals, and qualified in 1841. He assisted his father in a very laborious practice, but in 1846 he married and settled in the north-west of London, where he remained in active practice until 1880, when he retired, much to the regret of his patients, who were deeply attached to him on account of his simple and unaffected manners. He was through all his life a sincere but unostentatious Christian, his motto being *In Deo spes mea*. He leaves behind him three daughters and two sons; both the latter are following their father's profession.

WILLIAM ROYSTON PIKE, M.D. DURH.

DR. ROYSTON PIKE began his professional career by the old-fashioned pupilage to Dr. Michael Foster, then of Huntingdon. He afterwards studied at St. Thomas's Hospital, and became a Licentiate of the Apothecaries' Hall in 1870. Dr. Pike then sailed for Australia as "ship doctor," and remained for a short time in practice at Melbourne as an assistant. Returning to England, he passed the examination for the membership of the Royal College of Surgeons in 1872, and shortly afterwards became visiting surgeon to the out-patients at the Royal Portsmouth Hospital. He had great enthusiasm in his work,

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especially in operative surgery and difficult midwifery, and a large scope for practice among the poor was offered to him by his appointment as medical officer for the parish of Southsea. He also acted for a short time as medical officer of health for Southsea. Cultivating a large general practice, he gave up his paid appointments and acted as surgeon for out-patients, and afterwards as full surgeon to the Royal Hospital. By his hospital patients he was regarded as a friend, and in private practice he was very successful, gaining the confidence and esteem of an increasing *clientèle*. Little more than a year ago he graduated as M.D. at the Durham University, and since that time his health has steadily failed. Obscure symptoms pointing to some form of blood-poisoning ended in degenerative disease, with albuminuria and dropsy. After a long rest in the autumn of 1890 Dr. Pike struggled on through the winter, attending several arduous cases, and making a great fight for life and work. Even when laid aside in the autumn, and suffering from urgent dyspnœa, he insisted on accompanying the writer to a very severe case of hæmatemesis. Many medical men have fallen at their posts, stricken down as surely as by the rifle bullet or the sabre stroke, and on that long death-roll must be inscribed the name of William Royston Pike. Dr. Pike was, very shortly before his death (which took place on April 3rd, 1891) appointed senior physician to the Royal Portsmouth Hospital, with which institution his name has been in some way associated for twenty years.

DR. GEORGE BERNARD HOFFMEISTER.

IT is with great regret we have to record the death of Dr. George Bernard Hoffmeister, M.A., M.D., M.R.C.S., at the early age of thirty-two, thus closing a career of exceptional promise and ability. His death was caused by his being thrown from his horse on Tuesday, March 24th, producing concussion of brain, followed by right hemiplegia. Mr. Thomas Smith was immediately summoned, and performed the operation of trephining. The patient's condition fluctuated much from day to day, and did not terminate fatally till the sixteenth day after the accident, consciousness never having been thoroughly regained. Dr. Hoffmeister was educated at Epsom College, afterwards at Gonville and Caius College, Cambridge, whence he proceeded to St. Bartholomew's Hospital. He also studied at the universities of Bonn and Vienna. Amongst other honours he obtained the B.Sc. Lond. (first in honours in Botany), 1879; M.A. Camb., 1884; B.A. (first class Natural Science Tripos, specially distinguished), 1880; M.D., 1890; M.R.C.S. Eng., 1884; gold medalist in Medical Botany of the Apothecaries' Society, 1883; first prizeman Natural Science, Caius College, Cambridge, 1877–80, and Natural Science Scholarship, 1877–84; Shuttleworth Scholarship, Cambridge University, 1879–81; Gilchrist Scholarship, University of London, 1877–79; Epsom Scholarship, St. Bartholomew's Hospital, 1877–84. He was surgeon to the Royal Yacht Squadron; late surgeon to the royal mail steamship *Bengal*, P. & O. Company; house physician to St. Bartholomew's Hospital, 1885; lecturer on Biology, Royal Medical College, Epsom, 1881–84. Among his contributions were the following: "Bismuth and Bismuth Compounds" (*Journ. Med. Soc.*, 1881); "The Influence of Race on the Course and Treatment of Disease," *Practitioner*, 1890. A firm believer in the old quotation, "Mens sana in corpore sano," he distinguished himself in the athletic world and secured many honours. He had ever the greatest love for the sea, and had acquired considerable reputation in the yachting world by his clever handling of small racing yachts. He accompanied Lord and the late Lady Brassey on what proved the latter's last voyage in the yacht *Sunbeam*, and was with Lady Brassey at her sad death. He was appointed, with his father, the late Sir William Hoffmeister and his brother, Dr. William Hoffmeister, as one of the surgeons to the Queen and Royal Family in the Isle of Wight in 1888.

THE SERVICES.

ARMY MEDICAL STAFF.—The undermentioned Surgeons-Major retire on retired pay (dated April 15th, 1891): Henry William Joynt and David Leckie, M.B.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Fleet Surgeon Evelyn R. H. Pollard to the *Orlando* (undated); Staff Surgeon Jas. A. Collot to the *Superb* (dated April 14th, 1891). Surgeons: Walter H. S. Stalkartt to the *Superb* (dated April 14th, 1891); Martin H. Atock to the *Orlando* (undated); John H. Thomas to the *Orlando* (dated April 24th, 1891); Percy W. Bassett-Smith to the *Penguin*, and John L. Barrington to the *Nankin* (both dated April 15th, 1891); Mr. H. F. Temple to be Surgeon and Agent at Budleigh Salterton.

VOLUNTEER CORPS.—*Rifle:* 2nd Volunteer Battalion, the Suffolk Regiment: Henry Cecil Harper, Gent., to be Acting Surgeon (dated April 11th, 1891).—2nd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): The undermentioned Acting Surgeons to be Surgeons:—H. M. Kemmis and T. L. Laxton (both dated April 11th, 1891).—2nd (Berwickshire) Volunteer Battalion, the King's Own Scottish Borderers: Acting Surgeon T. L. Crooke resigns his appointment (dated April 11th, 1891).—2nd Volunteer Battalion, the Worcestershire Regiment: Acting Surgeon A. C. Keep, M.D., to be Surgeon (dated April 11th, 1891).—3rd (Dundee Highland) Volunteer Battalion, the Black Watch (Royal Highlanders): William Kinnear, M.B., to be Surgeon (dated April 11th, 1891).—3rd Middlesex: George William Henry French, Gent., to be Acting Surgeon (dated April 11th, 1891).—1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade): Acting Surgeon J. D. Pratt, M.D., to be Surgeon (dated April 11th, 1891).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an extraordinary meeting of the Council of the College, held on the 10th inst., the Report of the Committee on the Proposed Regulations and Examinations on the Extension of the Medical Curriculum to Five Years was considered and discussed, but the decision on the subject will not be made public until it has been agreed upon with the Royal College of Physicians.

THE ROYAL BRITISH NURSES' ASSOCIATION.

A MEETING of the Royal British Nurses' Association was held at 20, Hanover-square on Thursday last, at which Sir William Savory, Bart., took the chair. Her Royal Highness Princess Christian was present.

Mr. Bedford Fenwick pointed out that the meeting was convened to consider the position of the Association in view of recent attacks which had been made upon it by certain interested bodies because the Association sought to be registered under the Companies Acts without the word "limited," and without which they would not be legally entitled to receive and administer trust funds. Sir James Crichton Browne, Lord Chancellor's Visitor in Lunacy, in moving the first resolution, took occasion to refer *seriatim* to the arguments which had been urged by the opponents of the Association. He characterised them as "flimsy and sophistical, and in many cases distinctly incorrect." Mr. Brudenell Carter, in seconding, said he had been at a loss to conjecture what reasons could be urged by their opponents against the proposals. He found, however, they had no reasons, but pretexts only of the most frivolous character. Mrs. Bedford Fenwick Dr. Pavy, Dr. Bezly Thorne, and Mrs. Catherine Wood also gave short addresses. Sir Edward Sieveking moved and Sir Joseph Fayrer seconded a vote of thanks to Sir William Savory for presiding. On the motion of the chairman, a vote of thanks to Princess Christian for being present was heartily accorded. We reserve a fuller account of the meeting for our next issue.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the next quarterly meeting of the Medico-Psychological Association, to be held at Brislington House, Bristol, on May 1st, at 3 P.M., the following papers will be read:—Dr. Hack Tuke, on "Pritchard and Symonds in especial relation to Mental Science." Dr. Weatherly, on "The Use and Abuse of Hyoscine." Dr. Bonville Fox, "Notes on a few unusual cases of General Paralysis."

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Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Examiners on the 9th inst.:—

Anatomy and Physiology.—W. E. Leetham Horner, Joseph E. Waite, T. Villiers Crosby, and G. H. Cawley Way, of University College; John W. Haines, Alexander C. Gurney, J. Burnell Great-Rex, G. Raymond Fox, Courtney H. Drake, and J. Lyttleton Dalby, of St. Bartholomew's Hospital; Edward Bromet, Alfred E. Russell, Sidney W. F. Richardson, and Henry W. Harding, of St. Thomas's Hospital; Charles J. E. Cock and William T. White, of Charing-cross Hospital; C. Kemble James, of Middlesex Hospital; Nathaniel D. S. Towne and C. Poulett Harris, of London Hospital; W. Charrington Wood and Mark A. Saltmarsh, of St. Mary's Hospital; F. Kenneth Wilson, of Westminster Hospital; and Courtnay R. Colley, of Guy's Hospital.

Anatomy only.—Dan Davies, of London Hospital; Leonard J. Miskin, of St. Mary's Hospital; Charles H. Nicholson, of Middlesex Hospital; H. Gallway Larnder, of St. Mary's Hospital; and Barnet Saul, of Charing-cross Hospital.

Physiology only.—Hubert Williams, of Middlesex Hospital; A. Walter Austen and William H. Chute, of Westminster Hospital; and Ernest G. Annis, of Guy's Hospital.

Passed on the 10th inst.:—

Anatomy and Physiology.—L. E. V. Every-Clayton, of Guy's Hospital; Albert W. Riley and William H. Thomas, of London Hospital; Frederic Cecil Robinson, Walter H. Pollard, E. Lawson Pawlett, Harold B. Meakin, and Thomas Hampton, of St. Bartholomew's Hospital; W. West Linington, Antony A. Martin, Robert Corfe, and Colin D. Lindsey, of St. Mary's Hospital; John Harper and Arthur Dobson, of St. Thomas's Hospital; F. Nesfield Cookson, of Middlesex Hospital; Charles E. Wallis and Frederick C. Spawson, of King's College; H. Matthew Dowler and C. Dudley Garrett, of Westminster Hospital; and H. R. Belcher Hickman, of St. George's Hospital.

Anatomy only.—Hobart J. W. Barlee and Francis H. Bailey-King, of Middlesex Hospital; Philip G. Williams, of London Hospital; and Arnold Stockton, of King's College.

Physiology only.—Arthur Barnes, of Charing-cross Hospital; Alexander M. Watts, of University College; Frederick A. Cooke, of St. Mary's Hospital; William E. Lee, of St. Bartholomew's Hospital; and Archibald J. Campbell, of St. Thomas's Hospital.

Passed on the 13th inst.:—

Anatomy and Physiology.—J. Macpherson Stewart and T. Bernard Stedman, of University College; Charles G. Cory and Sydney Cornish, of St. Bartholomew's Hospital; W. Archibald Propert, of St. George's Hospital; Wilfred Fleming, of Westminster Hospital; Daniel E. Evans, H. Gwynne Lawrence, Edgar J. Morgan, and G. Bushman Riddick, of St. Mary's Hospital; J. E. Gilbert Rogers, of London Hospital; Percy J. Probyn and T. Elgee Cundy, of Charing-cross Hospital; Charles H. Watson and W. Pope Seed, of Middlesex Hospital; R. Hilton Fagge and G. Leslie Eastes, of Guy's Hospital.

Anatomy only.—Leonard Harman, of St. Thomas's Hospital; A. Condell Strand, of Middlesex Hospital; Herbert C. Wimble, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; and J. West, Summerhays, of St. Mary's Hospital.

Physiology only.—T. H. Pryce Morris, of Middlesex Hospital; William R. Larbalestier and H. Walker Whitley, of Charing cross Hospital; H. Naunton Robson, of St. Thomas's Hospital; and Charles H. Wilmer, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed on the 14th inst.:—

Anatomy and Physiology.—William Gardner and John Garrett, of St. Mary's Hospital; Hugh M. Rigby, Victor J. Batteson, and Harry E. B. Porter, of London Hospital; Thomas W. W. Burgess, Percy C. Barford, Evelyn G. B. Adams, Percy E. Adams, Frederick W. Robertson, and Percy E. Turner, of St. Bartholomew's Hospital; Walter F. Henley, of Charing-cross Hospital; John F. Sarjeant, William Way, Wilfred E. Hudleston, and John Kekwick, of Middlesex Hospital; Elias F. Harwood, Arthur P. Nuttall, John P. Kitson, and Thomas R. Llewellyn, of University College; Frederick S. Penny, of King's College; George A. Clarkson, of St. George's Hospital; and Arthur F. W. King, of St. Thomas's Hospital.

Anatomy only.—Harold J. K. Bamfield, John H. Campbell, and John B. Yelf, of St. Mary's Hospital; Henry A. Andrews, of St. Bartholomew's Hospital; Edgar J. Rowbotham and Hubert A. Madge, of Charing-cross Hospital; and Walter L. Stuart, of Guy's Hospital.

Physiology only.—Moses J. Reubens, of Grant Medical College, Bombay

Passed on the 15th inst.:—

Anatomy and Physiology.—Reginald N. Weekes, H. T. M. Whitling, C. Mackenzie Hewer, and Robert H. Wilkin, of St. Bartholomew's Hospital; C. Beauchamp Hall, of St. Mary's Hospital; Moyle Breton, of St. George's Hospital; F. J. Godwin and Edmund B. Jones, of Charing-cross Hospital; W. David Jones, Adam Cowes, and J. Lloyd Davies, of University College; Charles H. Dickens and P. Clennell Fenwick, of St. Thomas's Hospital; Henry W. Collier, Guy E. Manning, and Harold P. Barker, of Guy's Hospital; Martin W. Loy, of London Hospital; Mark Farrant, of Westminster Hospital; and Ernest Playfair, of King's College.

Anatomy only.—W. Berkeley Murray and Richard S. Olver, of King's College; Alfred J. Grant, of St. Thomas's Hospital; and William Wyllys, of St. Bartholomew's Hospital.

Physiology only.—T. Dobson Bell, of University College; Arthur J. Mathison, of Guy's Hospital; and George R. Harcourt, of St. Thomas's Hospital.

UNIVERSITY OF GLASGOW.—The following gentlemen have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

John Ewing Adam, Andrew Phillips Aitken, John Allan, John Gibson Anderson, John Bain, David Blair, M.A., James Boyle, Walter Buchanan, Edward Napier Burnett, Archibald Campbell, Thomas R. A. A. G. Crawford, Thomas Crossan, James Donaldson, Duncan Drummond, William Moyes Duff, James Findlay, William David Findlay, Robert Scott Frew, Robert Howieson Gemmell, Ernest William Graham, Thos. Holmes, William Humphreys Jamison, Edgar Milwynne Jenkins, John Connan Lauder, John Herbert Lawson, John Joseph Lowell, James Wm. van Millingen, Alan Muir, Wm. Edgar Macharg, Chas. M'Kay, John M'Kenna, Jas. Campbell M'Neillie, Alfred George Newell, Peter Patton Petrie, M.A., Wm. Salmond, Joseph Scott, John Selkirk, M.A., Henry Beveridge Smith, Thos. David Smith, James Thomson, M.A., Robert Nicol White.

The following gentlemen have passed the Second Professional Examination:—

Walter Isaac Buchanan, Archibald Prentice Campbell, David James MacGoun Campbell, William Campbell, John Joseph Carruthers, David Charters, Thomas Colvin, William Copland, William James Couper, Robinson Ruddock Coyle, James Conway Davies, John Stanley Davies, M.A., George Edgar, James Donald Finlay, Alfred Forrest, M.A., Henry Niven Gardiner, Alfred Alex. Cumming Grant, David Fraser Harris, B.Sc., William Munn Hunter, James Jack, Henry Edward Jones, Alexander Kelso, David Millar King, William Anderson Kirkwood, James Lang, Robert Langmuir, M.A., Robert M'Farlane Marshall, Thomas Burns Marshall, James Binnie Millar, David Ramsay Miller, Edward James Morris, John Morrison, Wm. M'Niven Muat, Wm. Muir (Paisley), Colin Campbell M'Call, Alex. Hutchison M'Cracken, James Morton MacLauchlan, John Alfred Naismith, George Nicoll, John Paxton, James Pettigrew, Eugene Louis Pollonais, Archibald Robertson, M.A., Hector Monteith Robertson, Francis Small, Nathaniel Stevenson, M.A., Robert Tennent, James Thomson, Alfred Webster, John Cameron Young.

The following gentlemen have passed the Third Professional Examination, including, in the cases marked with asterisks, the subject of Pathology:—

James Aitken, William Limont Brown, Adam Guthrie Burrell, *Alexander Baillie Craig, John Alexander Creighton, John David Davies, Donald Stewart Dewar, Robinson Simpson Dickson, Thos. Divine, *Neil Downie, *Andrew Findlay, Robert Forsyth, *David Frame, M.A., *David Wyllie Girvan, *John Green, John Atkinson Harrison, James Hunter, Hugh Kerr, M.A., David Clark Laird, *Peter Alexander Laird, James Lamont, John Lindsay, M.A., Jas. Buchan Littlejohn, Samuel T. M'Clintock Lowry, *Robt. Mortimer Malcolm, *William Cochrane Murray, Alex. Christie M'Arthur, Donald Douglas Macdonald, *Donald Neil Macfarlane, *John M'Gregor, *Charles Hugh M'Ilwraith, M.A., Alexander John M'Kechnie, John Pearson, Henry Joseph Rankin, *David Smith, Peter Maclean Smyth, *Maurice Tancred Stack, *William Steel, *William Caldwell Steele, John Stewart, David Robert Thomson Strong, *George Mervyn Sydenham, *James Allan Wilson, Charles Frederick Wylie.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF IRELAND: CONJOINT SCHEME.—The following have passed the First Professional Examination:—

A. T. Benson, J. G. Berne, C. A. Black, E. A. Bourke, E. A. Culligan, G. S. Davidge, C. J. Fallon, Marie Goodwin, R. Hassard, G. Martin, E. J. Moore, D. O'Brien, M. G. Sterling, W. F. Thomline, W. A. Twigg, E. Tynan, and J. H. Walsh.

ROYAL COLLEGE OF SURGEONS IN IRELAND: SCHOOLS OF SURGERY.—The following prizes have been awarded:—*Practice of Medicine:* 1. E. J. Goode. 2. Acheson Aiken and J. A. Walsh (equal). *Chemistry:* First Prize—E. A. Bourke and G. Sandys Davidge (equal). *Midwifery:* 1. S. Kelly. 2. John Gilbert. *Surgery:* 1. W. J. Trewhella. 2. J. J. Brennan.—Mr. A. G. Chance has been admitted a Fellow of the College.

PHARMACEUTICAL SOCIETY OF IRELAND.—The following have obtained the licence:—L. Murray, S. Adamson, J. S. Wilson, and W. White.—The undernamed have passed the examination to act as registered Druggists for the sale of the scheduled poisons:—H. C. Backhouse, R. S. Chapman, T. J. Connery, J. Darcy, D. Donohoe, H. Farrell, J. A. Gardiner, T. Gordon, W. Gore, B Haydock, E. M. Hewetson, F. C. Judge, L. Kingsmill, J. R. Midleton, J. Mullen, J. J. O'Donnell, J. H. Parker, R. H. Percy, R. Poole, P. C. Roche, R. E. Scarlett, W. Selkirk, W. Wade, R. T. White, and W. Willis.

THE WATER-SUPPLY OF CHESTER.—A well-attended meeting of the Chester Medical Society has been held at the Chester Infirmary to discuss the water-supply of the city. Dr. Roberts presided. Dr. Dobie read a paper on the subject. He stated his belief that the river Dee was a contaminated source of supply, and to be condemned on that ground. He submitted a motion to that effect, and considerable discussion ensued. Ultimately a resolution was adopted that the Town Council be requested to ask the Local Government Board to hold a public inquiry into the conditions of the water service of Chester.

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ROYAL COLLEGE OF SURGEONS IN IRELAND.—Mr. Arthur Gerald Chance, having passed the necessary examination, has been admitted a Fellow of the College.

LONGEVITY IN IRELAND.—During the December quarter there were five deaths of persons registered who were centenarians. Two of these were 100 years, two 103 years, and one 106 years of age.

VEGETARIANISM.—The London Vegetarian Society has arranged to hold a public debate at the Memorial Hall on Thursday, April 23rd, when they will maintain the advantages of pulses, grains, fruits, and nuts *versus* fish, flesh, and fowl. Supporters and opponents should at once send in their names to the organising secretary, Memorial Hall, Farringdon-street, E.C.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Mr. B. L. Cohen presided at the festival dinner of this institution, held at the Hôtel Métropole, Whitehall, on Wednesday. A large company was present. The chairman, in proposing "Success to the Hospital," urged the claims of the charity, and solicited a generous response. The extension of the hospital had become necessary to cope with the growing demands upon it, and £6500 was specially desired to be raised for that purpose, and to add thirty new beds. Towards this object £2500 had already been contributed. The secretary subsequently announced a long list of subscriptions.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the quarterly court of directors of this Society, held on April 8th, the President, Sir James Paget, in the chair, one new member was elected and the deaths of two reported. A fresh application for a grant was made by a widow, and an immediate grant of ten guineas was made pending the inquiry into the case. The death of one widow was announced, and one had ceased to apply for assistance, and two orphans had become ineligible through age for further grants. Applications for grants were read from sixty-two widows, twelve orphans, and three orphans on the Copeland Fund, and £1383 10*s* was recommended to be divided among them at the next court. The expenses of the quarter were £68 9*s*. The following gentlemen were nominated for election as directors at the annual general meeting:—Dr. Russell Reynolds, in the place of Dr. Matthews Duncan, deceased; and Dr. Ogle, Dr. Church, Mr. Durham, Mr. Vasey, Dr. Hickman, and Mr. G. E. Keele in the place of the six senior directors, who retire. The annual general meeting was fixed to be held on Thursday, May 28th, at 5 o'clock.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Thos. Walker of Doncaster bequeathed £500 to the Doncaster Infirmary. — The Companies of Merchant Taylors and Mercers have made grants of £200 and £500 respectively to the Buildings Completion Fund of the Royal Free Hospital, Gray's-inn-road.—Under the will of the late Mrs. Jane Entwistle of Reading and Tunbridge Wells, the National Hospital for the Paralysed and Epileptic and the Hospital for Sick Children, Great Ormond-street, receive legacies of £200 each.—The late Mayor, James Atkinson, of Cleveland-square, London, bequeathed conditional legacies as under—viz., £2000 to the Royal Hospital for Diseases of the Chest, £1000 each to St. George's Hospital and the Cancer Hospital, and £500 each to the Westminster Dispensary, the Victoria Hospital for Sick Children, and the National Convalescent Institution, Margate.—Mr. W. Cramond, late of Derby, bequeathed £500 each to the Derbyshire Infirmary and Children's Hospital, Derby.—Mr. Philip Horsman, late of Wolverhampton, bequeathed £800 each to the Wolverhampton and Staffordshire General Hospital and the Wolverhampton Eye Infirmary.—The late Mr. F. B. Ellison, of Hazlecroft, contributed £250 to the Harrogate Cottage Hospital.—Mr. B. T. Woodd, J. P., of Knaresborough, has forwarded a donation of £100 to the treasurer of the Royal Bath Hospital.—The Company of Goldsmiths has made a grant of £1000 towards the completion of the buildings of the Great Northern Central Hospital, Holloway-road. — The late Mr. A. Pickard of Ossett bequeathed £1000 each to the Leeds Infirmary and Wakefield Infirmary, and £250 to the Leeds Hospital for Women.—The Clothworkers' Livery Company has granted a further donation of £50 to the National Hospital for Consumption, Ventnor.

ACCIDENTAL DEATH OF A MEDICAL PRACTITIONER. An inquest was held at the Coroner's Court, Paddington, last week, on the body of Mr. George Henry Blackmore, L.R.C.P. Lond, M.R.C.S. From the evidence it appears that on the 30th ult., whilst being driven by his coachman in the St. Peter's-road, Hampstead, the horses took fright and bolted. The carriage was upset, and Mr. Blackmore was dragged along for some distance, sustaining severe fractures to the ankle and ankle-joint. He died from lockjaw in the St. Mary's Hospital on the following Friday. The coachman was uninjured.

PRESENTATIONS.—On Easter Tuesday a very handsome testimonial was presented to Dr. Walter Grosett Collins as a parting gift from patients and friends on the occasion of his leaving Midhurst. The present consists of a silver tea and coffee service, together with a silver kettle and stand, the latter bearing a commemorative inscription. The whole are enclosed in a substantial case of polished zebra wood.—Dr. G. M. Lowe of Lincoln has been presented by the ladies of the city and district, composing a class of the St. John Ambulance Association, with a carriage companion, containing a clock, memoranda, and the usual appendages, as an expression of gratitude for his able instruction to them on rendering first aid to the injured.

KING'S COLLEGE HOSPITAL.—The annual festival dinner of this hospital was held at the Whitehall Rooms of the Hôtel Métropole on the 10th inst., when new donations and annual subscriptions were announced amounting to £2388 10*s*. 6*d*. The Lord Mayor made a strong appeal for increased support, especially in view of the recent opening of two wards of twenty-eight beds, making a total of 220 in daily work. All the beds in the hospital are now occupied, and the working average is greater than at any period in the history of the hospital. The Lord Mayor and Lady Mayoress had previously visited the wards, and were much pleased at the many modern improvements which were pointed out to them, for in late years nearly £10,000 had been spent by the committee in remodelling and improving the sanitary arrangements.

SMALL-POX IN ST. LOUIS, MONTREAL.—A man stricken with small-pox in a lodging-house was taken to the City Hospital and placed in an isolated ward. He died a few days later. The ward was fumigated and the clothes burned. A fortnight later two patients were seized with the disease and hurried to quarantine. The ward they occupied was fumigated and the clothing destroyed. Subsequently a waiter in a restaurant, who was a patient in the hospital, was taken with the malady, and he too went down to quarantine. The room was disinfected, and his clothing destroyed. It was now thought the disease was subdued. But it appeared again at the aforesaid lodging-house, in the person of a man who had been there when the first case occurred, and had left, coming back only a few days afterwards. In this way he escaped the fumigation. At the same time another case made its appearance at the City Hospital. This patient was also sent to quarantine, and was still there.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on April 14th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	150	49	..	43	2	244	442
North-Western Hospital	128	46	..	14	1	184	442
Western ,,	148	13	..	13	1	175	224
South-Western ,,	147	28	..	13	1	184	340
South-Eastern ,,	174	11	..	21*	1	207	462
Northern ,,	205	16	..	10	..	231	480
Totals .. — —	947	158	..	114	6	1225	2391

SMALL-POX.—*Atlas* hospital ship, 7.

* Infant with mother.

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MEDICAL NOTES IN PARLIAMENT.

The Disposal of the Dead.

IN the House of Commons on Tuesday night it was the intention of Dr. Cameron to call attention to the state of the law respecting the disposal of the dead, but the discussion on local government in rural districts left him no opportunity. Dr. Cameron intended to move for the appointment of a Select Committee to inquire into the sufficiency of the existing law as to the disposal of the dead, for securing an accurate record of the causes of death in all cases, and especially for detecting them where death may have been due to poison, violence, or criminal neglect. Having in view the advanced period of the session, it is doubtful whether Dr. Cameron will be able to find an opportunity for moving his motion before the prorogation.

The Pharmacy Acts Amendment Bill.

Mr. Hozier has given notice that when this Bill comes on for second reading he will move its rejection.

Ether Drinking in Ireland.

Mr. Samuel Smith has given notice of a question for Monday next, with reference to ether drinking in the north of Ireland. He will ask the Chief Secretary whether he is aware that ether is sold there by "chemists, publicans, grocers, and hawkers or ragmen, who go through the country districts; and whether the Government can see their way "to put down the sale of this drug by reimposing the tax upon it, or otherwise."

Stillbirth Interments.

On Thursday there was ordered, on the motion of Dr. Cameron, a return showing (1) the number of stillbirths interred during the year 1890 in each of the Burial Board Cemeteries in England and Wales enumerated in the Local Government Manual for 1891; (2) the number of such stillbirths interred in each such cemetery without a certificate of a registered medical practitioner; (3) the total number of interments other than of stillbirths; (4) the aggregate number of interments in the said Burial Board Cemeteries under each of the preceding sub-heads; and (5) the total number of deaths registered in England and Wales during the year 1890.

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed their inquiry on Thursday, Earl Sandhurst presiding.

Staff Appointments in London Hospitals.

Dr. J. W. Moore, Fellow and Registrar of the Royal College of Physicians in Ireland, came forward to give evidence as to the exclusion of members of that body from the staff appointments in London hospitals. He knew of no case, he said, in which a member of his college had obtained one of those appointments without first getting a London qualification. He did not go so far as to say that the rule was universal, but there were many hospitals where it applied. He did not know of any hospital where it did not apply, but he should be sorry to say that it was universal. In the case of a provincial hospital a graduate of the University of Dublin applied not long since for a staff appointment, and he was declared to be ineligible. A man with perhaps twenty or twenty-five years' practice, and holding the highest qualification of his own college, would be very reluctant to subject himself to the lowest grade examination in a sister college in order to qualify for an appointment. He would not care about it. It would be very unpleasant. His college had not approached the London authorities, but had sent a statement of their case to various institutions in England. Until 1876 an exclusive rule existed in Ireland with reference to all the county infirmaries. This rule required that every successful candidate for county infirmary appointment should be a licentiate of the Royal College of Surgeons in Ireland. That rule was abrogated in 1876 by Act of Parliament. All these appointments were eagerly sought for by the leading men in Ireland, and were now open to all registered medical practitioners. What they asked from England was reciprocity. One of the surgeons in his hospital—the Meath—held no Irish qualification in surgery; he was a licentiate of Edinburgh. The exclusive policy adopted by the London hospitals was felt to be an injustice and a wrong.—By Lord Monkswell: The discipline exercised by the Irish Colleges was very stringent; it was even more stringent than that of the London authorities. Quite recently they had erased from their roll of licentiates the name of a gentleman who was accused and convicted of unprofessional conduct. From time to time it had been his duty as Registrar of the College of Physicians to require explanations from erring licentiates. He did not think there would be any occasion for putting Irish licentiates under the discipline of the London authorities were they allowed to hold appointments in the London hospitals. The powers of the Irish Colleges and those of the General Medical Council were sufficient to meet the case.—By Lord Cathcart: The grievance applied to licentiates from Scotland, where the same disaffection prevailed.—By the Earl of Lauderdale: They had a large number of Scotch practitioners in Ireland, but he could not recall any cases of English practitioners.—By the Chairman: The way he looked at this question was that the College of Physicians had 700 or 800 licentiates practising in England, and those men were excluded from reaping the reward of their professional knowledge and experience by this rule. Their education also was interfered with.—The Earl of Arran: As a rule, you prefer in Ireland having men brought up in your own hospital to strangers?—Dr. Moore: As a matter of fact, the competition for the Dublin hospitals does not materially extend to England and Scotland. We have got very good men in Ireland, but if a first-class man came over from London his candidature would receive every consideration, and if he proved to be the better man he would get the appointment.

Mr. Henry Gray Croly, President of the Royal College of Surgeons in Ireland, said that his College felt that their licentiates had passed a very stringent examination. During the Crimean War they found that men who failed to pass that examination went over to London and came back with diplomas in their pockets. Their examination in surgery, in fact, was much more stringent than the examination in London. From the advertisements inserted with regard to Liverpool and Bristol Infirmaries, his College felt that only English licentiates could compete for the appointments advertised. Those advertisements were a reflection upon the Irish bodies. They considered in Ireland that their teaching was quite equal to that in London; it was not a nice thing to say it was superior. He could not give the name of any distinguished man who had been refused an appointment in a London hospital because of the want of the London qualification. He knew, however, that if he himself went to Bristol and sought the appointment in the infirmary there, he would be told that he was ineligible.

The West-end Hospital for Diseases of the Nervous System.

The next witness was Major-General T. W. Mercier, Chairman of the Board of Management of the West-end Hospital for Paralysis and Epilepsy. He stated that the hospital was founded twelve or fourteen years ago. It was not entirely a free hospital, although no person was refused treatment because of his inability to pay for it. Many of the applicants desired to make some payment. Last year they received £497 from patients. The hospital was at present being rebuilt, and would be ready for occupation in June or July, when they would have forty-five and probably sixty beds available for patients. The funds were derived entirely from public subscriptions. They received a grant from the Hospital Saturday Fund, but nothing from the Hospital Sunday Fund. No reasons had been given for the refusal of assistance from the latter fund. He believed the committee had heard evil reports of the hospital. There had been differences of opinion between the former chairman (Lord Robert Montagu) and the medical staff, and those differences had led to very disagreeable incidents on the Board.

Dr. Tibbits, the honorary medical superintendent of the hospital, said he was the founder of the institution, and the funds in the first instance came from his friends. The Ice Carnival two years ago yielded a net profit of £1400, but "The Coming Race" at the Albert Hall resulted in a loss, which, he might say, fell on his shoulders alone. He had no idea why the hospital was refused a grant from the Hospital Sunday Fund. For a time the medical profession made a "dead set" against the hospital. There was always jealousy in the medical profession when a special hospital was founded. He contended that a medical man had no time to treat a single patient for three-quarters of an hour, as massage required, and that massage demanded special training. Therefore it was that he trained nurses in the work of massage. The medical profession, on the other hand, contended that the doctor only should treat the patient. It was simply the trades unionism of the mass of the medical profession that he had to contend against when he started the hospital.—By Lord Cathcart: No woman would ever be treated with his permission for disease of the uterus with massage. It was a monstrous thing and ought never to be done. Although the building had been used as a butcher's shop, its drains were put in order when adapted for a hospital.—By the Earl of Arran: The school, of Massage, he was afraid, did not pay its own expenses. Times were not prosperous. Any profit would go to the proprietor of the schools, who was his wife. At the end of her training, the nurse underwent an examination before she received a certificate of efficiency. As soon as she got her certificate she could go anywhere she liked, and make what charge for her services she chose. The average fee per hour was five shillings, but if a nurse could get seven shillings so much the better.—By the Earl of Kimberley: The only connexion that the school had with the hospital was that the latter received the gratuitous services of the students, and that he was allowed to lecture to them in the hospital. It was the case that uncertified masseuses were allowed to treat patients without the presence of medical men, but under the written direction of medical men. This was the only practicable system, and he regarded it as satisfactory in the interest of the patients.—By the Chairman: There had never been any profit from the hospital for the founder. It had been a dead loss to him.

Mr. Alexander Dowell, honorary secretary of the hospital, said he did not reside in the institution, but visited it twice a week, and sometimes oftener. In the building now demolished, the space was so limited that it became almost impossible to carry on the work. They could not afford room for resident officers. The system of appealing to the public for funds suited their case. Last year they had a surplus, which of course was swallowed up by the expenses of the new building. They had already spent £5000 upon the building.

The Committee afterwards adjourned.

FACTORIES AND WORKSHOPS BILL.

PROPOSAL TO ABOLISH CERTIFYING SURGEONS.

The Standing Committee on Trade appointed to consider this Bill met on Monday, and disposed of the amendments relating to periods of employment.

On Clause 19 coming up for discussion, Mr. Macartney proposed to leave out Subsection 1, which states "that after this Act certificates of fitness for employment of children and young persons shall not be required," thus abolishing the office of the certifying surgeon.

Mr. Mundella said that this clause had come upon the country as a surprise. The Home Secretary believed that the functions of the certifying surgeons were practically obsolete, but those Home Secretaries who had the care of the first Factory Acts had insisted on no point so strongly as that the factory surgeon should be maintained. They had been of the greatest value in protecting children and persons who were in an unfit condition for working. The right hon. gentleman had said that since the passing of the Act of 1878 there was no necessity for certifying surgeons, but the register up to 1879 showed their necessity by the returns. Now no return was required, but several certifying surgeons had forwarded to him their own private returns. In one case the persons presented numbered 334, certificates granted 239, and children rejected as being unfit for employment 95. A statement was put into his hands on Friday, and he had seen some of the gentlemen whose names appeared on that list, a list of private records kept by nineteen certifying surgeons since the necessity of keeping a record was omitted from the Act of 1878. Dr. Pearce of Manchester had kept a record for twenty years of every child presented to him and of every child rejected by him, and it shows his average refusal of children per annum, taking the last three years, amounted to 168 children. Out of 4000 children, 1818 were refused. Dr. Pearce was present, and was prepared to place his

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noted for the last twenty years in the hands of the Home Secretary. Instead of abolishing the certifying surgeons, he thought their functions ought to be extended. Another very important document had been circulated by the four factory surgeons of Leeds, in which they spoke of children who had been examined by them and found to be suffering from syphilitic sores in the mouth, scarlet fever, and small-pox. He could go through probably fifteen of these documents showing the extent of the rejections and the terrible kinds of diseases with which they had to deal. He had been connected with factories all his life, and he could see no reason why the workmen in Lancashire should take exception to the certifying factory surgeons until he learned that the operatives had to pay the fee of the certifying surgeon; and he had heard of a number of cases in which employers had charged parents 2s. 6d. for the fee, although only 6d. had to be paid to the surgeon in respect of each child. The statement concerning the charges made there took him by surprise. He had never heard in his life before that the employer charged the child for the surgical examination. He was sorry to say that was the practice in Lancashire. Mr. Coddington: Such a thing is unknown in Lancashire. Mr. Mundella: If the hon. member had only made inquiry of some of his own friends who were within his immediate reach, he would have no difficulty in ascertaining the accuracy of the statement. There had been certifying surgeons who had brought into discredit the whole thing by the perfunctory manner in which they have discharged their duties. He hoped that when the next inspectors of factories were appointed a medical inspector would be chosen, who should keep his eye upon the way in which certifying surgeons did their duty. There were, on the other hand, men who performed their duties under great difficulties, socially and otherwise, meeting with a good deal of resistance from employers and others. He hoped the Home Secretary would take care that what had been pronounced by such men as Lord Shaftesbury and Lord Cross to be of importance in the working of the Factory Acts should be continued, and that it should remain complete and thorough and effectual.

Mr. Matthews, in placing before the committee his position in relation to the Bill, assured them that at the first start in this matter he had no preconceived opinion at all, but in two successive years, 1889 and 1890, he received two deputations of the utmost weight and importance representing the manufacturers and the operatives of Lancashire, who came and said to him unanimously that this institution of certifying surgeons had degenerated into a mere farce. Mr. James Mawdsley of Manchester, a working man of twenty years' experience, said to him, "I have never in the course of my own personal experience come across a single case where a child had been objected to by a certifying surgeon on account of disease, or anything except want of age." (Mr. Mundella: He ought to know better.) In 1889 similar statements were laid before him. He then saw a deputation of factory surgeons, and he was bound to say that these gentlemen made out a very miserable case, and none of the figures which we have in such abundance to-day were forthcoming. Having weighed the balance of evidence as well as he could, he came to the conclusion that this was a burden to the employers and to the operatives, who are charged one-half of the fee. By Subsection IV. of the principal Act it is provided "that the employer may deduct the fee or any part thereof, not exceeding in any case 3d., from the wages of the person for whom the certificate was granted." Now one of the reasons that acted upon his mind in putting this clause in the Bill was that this initial certificate of the capacity to work either went too far or not far enough. It was not satisfactory. Supposing a child changed his employment from one mill to another four times in a month, he must by law have four certificates of fitness. Although there was no change in the circumstances of the child, there must be a fresh certificate of fitness for every fresh employment. And, on the other hand, however long a child continues in the same employment, he never comes under review of the certifying surgeons again, and therefore this certificate of fitness is of little use for the purpose for which it is intended. He could not help thinking that labour in mines required much more physical strength and energy than was required in factories, but no certificate of fitness was required for that labour. It struck him that the clause requiring examination by factory surgeons was a survival of the early days of Lord Shaftesbury, when abuses with regard to children were brought before Parliament; but that state of things had passed away, and when this Bill was drawn the weight of the evidence before him was enormously on the side of those who objected to the continuance of the factory surgeons. Since the Bill has been before the House of Commons these gentlemen have been stirred up. He could not get from them anything like the percentages of cases rejected that had been placed before them to-day. At the same time, giving them all the consideration he could, he did not think that the benefits derived from the certificates of fitness were sufficient to countervail the burden placed upon the employers. It seemed to him that if they imposed penalties upon the employers of an unfit child and penalties upon the parent, and gave the power to the inspector which is given in section 29 of the principal Act, which was retained, they had done what was sufficient. It was not a question, however, upon which he felt strongly himself.

Mr. McLean (Oldham) was not fully satisfied in his own mind whether it was a good thing to abolish this office. He was in Lancashire the previous night, and talking to a number of working men on the subject. He did not think there was the same strong feeling in favour of the abolition of the certifying surgeons as there was previously. He should not oppose the doing away of this clause of the Bill.

Dr. Farquharson pointed out that though Lancashire was an important place, it was necessary to get evidence from other parts of the country, and the evidence from other great centres of labour in England, as well as from Scotland and Ireland, was of the most complete and satisfactory character as regards the retaining of the factory surgeons. Mr. Mundella had said that there was a considerable mass of evidence of their good work for the benefit of children and for the community at large in rejecting a large number of weakly children who ought not to be employed, and in checking infectious diseases, which but for the interposition of the surgeon would frequently enter workshops and factories. A great number of the employers of labour were in favour of the surgeons. Sir H. Vivian said that "the present system worked well, and ought not to be lightly changed." They had very strong evidence indeed from employers of labour in Stockton, Blackburn, Belfast, Manchester, Bristol, Waterford, Radcliffe, Dublin, Preston, Derby, Bury, Accrington, Ashton, Barrow, and Chipping Norton. In addition to the large number of children rejected, there were many who could not be brought forward in evidence because there was the deterrent influence at work which prevented parents from bringing up weakly children for examination, since they well knew that they would be rejected. A great many of these cases were settled out of court, so to speak; that is to say, the parent would bring up the child to the doctor and ask whether he thought the child would pass or not, and very often the answer was, "No." An opinion of this kind was usually given gratuitously. He agreed with the Home Secretary that it would be an advantage that the inspection should be continuous, and that the surgeon should be able to keep his eye on the child during the whole period of his industrial employment, so as to see that the work was not pressed too heavily upon him, and decide in some cases that they should change from one employment to another. He referred to public opinion on the subject. He had presented petitions from several of the most important medical institutions, colleges, and schools, as well as from medical men, in addition to which he was about to receive one from the Society for the Prevention of Cruelty to Children, showing that the clause was neither a purely medical one nor one for the employers of labour, but should be viewed from the standpoint of humanity and general hygiene. It was also rather a hard thing to deprive so many men of a certain proportion of their income, a considerable number of whom depended entirely on this certification for their professional income. Under these circumstances it would be right and proper to give compensation, which, however, would be very difficult to assess. He referred to the two deputations, and observed that one of the principal speakers, Mr. Buckley, put forward as an advocate for retaining the nineteenth clause, gave evidence by saying that this imposed a tax of £80,000 a year on the employers, and it was necessary for the Home Secretary to point out that the cost was only £35,000.

Sir W. Houldsworth (Manchester) had heard nothing from the employers except a determined desire on their part that the certifying surgeons should be done away with, and the statistics furnished within the last few weeks were complete news to him, and to most of those who had any experience in factory work. Parents, as a rule, did not unduly press children who were incapable of doing work. The children were employed by the piece worker, who was, of all persons, the most interested in having no child working with him who was unfit for work. He sympathised with those who view this question upon the grounds of humanity, but they must go a great deal further than they did. Periodical and systematic inspection of all the children in factories was what they had to get. There were very many children working in the factories who, on the ground of humanity, ought not to be. It was said that infectious disease might be communicated in factories, but the same might be said about schools, and there was no medical inspection of schools. If infectious diseases were to be prevented schools, much more than factories, would have to be placed under inspection. The fact was, this was a survival of an old arrangement, introduced when the principle of "age" was before the mind of Parliament, and it was to assist the doctor in determining the age that a little more discretion was given to him, and so he was allowed to prevent the child from going to work. If they were allowed to remain it would impose a very severe tax upon the employer of labour, and upon the workmen for a very small result indeed. He hoped the present system would be brought to an end, and that gentlemen who hold the opinion of the member for Sheffield (Mr. Mundella) should introduce a new clause into the Bill for the purpose of giving periodical examinations the expense of which ought not to be borne by the employers or the operatives, but by the State, on the same grounds as the expense of the factory inspectors is defrayed by the State.

Mr. Campbell pointed out that there had been no deputation whatever from Scotland against the continuance of the factory surgeons, and that this clause ought not to apply to Scotland.

Mr. Fenwick was addressing the Committee when the Committee was adjourned.

On resuming the consideration of the clause on Thursday,

Mr. Addison remarked that though he did not impugn the good faith in which the hon. member for Sheffield (Mr. Mundella) had made the statement concerning the charges made by employers in Lancashire, he thought the statement was founded upon very inaccurate information. That charge was illegal, and it was almost idle to suppose that it could go on without frequent complaint being made. The practice would not be tolerated amongst the men in Lancashire for a moment. He hoped the hon. member would withdraw the statement, or give them fuller particulars about it.

Mr. Mundella said he had been informed by representatives of workmen since the committee had been sitting that such was the case, and he held in his hands a letter signed by a medical man, an M.D., and a professional man of experience, which corroborated every word he had said. If the Home Secretary would give a committee to inquire into the office of certifying surgeons, and how it had been worked in the past, he would place the evidence he had before it, or he was willing to place it in the hands of the Home Secretary himself. They could not charge him with making an unfounded statement when he spoke on the written statements of professional men of standing, of liberal education, who spoke of this matter from their own experience. Mr. Mundella then announced that a note from Dr. Barr of Bury had just been placed in his hands, stating that several cases of such unjust payment had occurred in his practice, and he was present and prepared to prove it.

Viscount Cranborne could not help feeling that there were some employers who did take advantage of the fees, and it was probable that some parents sent their children to mills in an unfit condition. Under these circumstances, was it a good thing to take away the protection which the law provides, at an expense absolutely trifling, for these children who, in the case of employers or parents failing to do their duty, had nothing to fall back upon except the certifying surgeon? The surgeons did reject large numbers, but even if they rejected few, those who were not presented on account of the preventive operation of the certifying surgeon may be very many. Though his constituency was decidedly against the retention of the certifying surgeons, he could not bring himself to destroy the protection which may be necessary in some cases, however few, and he would support the amendment.

Mr. McLean (Oldham) said he held in his hands a list of ninety-one employers who pursued the practice spoken of by Mr. Mundella. He

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entirely agreed with the remarks of the hon. member (Viscount Cranborne), that sufficient evidence had not been placed before the committee to show that it was desirable to do away with the certifying surgeons. They must see from the very remarkable evidence of Dr. Barr that it was not a farce, and that in many cases sickly and diseased children were prevented from going to work in mills. He did not think that public opinion in England would be satisfied if the certifying surgeons were abolished, so long as children of tender years are at work in factories. It was necessary that there should be some impartial guarantee from without to protect children when necessary against the greed either of parents or of employers.

Mr. Shaw Lefevre said every Home Secretary up till now had considered the institution one of the essential elements of factory legislation, and he could not but think that the discussion of the subject in that Committee would have a very great effect upon any future medical examinations which had to be made.

Mr. Chamberlain said if it was the case that parents were charged for the certificates it was improper and reprehensible, but it had nothing to do with the merits of the appointment. In Birmingham no complaints whatever had been received. They were perfectly satisfied with the existing arrangement. It was not necessary, in justifying factory surgeons, to impute misconduct to parents or employers. It was quite impossible to hold the employer personally responsible for the condition of health of the children who offered themselves for employment. Although some cases had been brought to notice involving serious condemnation of the parents, in some cases the parents themselves were not aware of the character of the disease or injury from which the children were suffering; and therefore it was to their advantage, and to the advantage of the employer, that some experienced and thoroughly competent and impartial authority should be called upon to decide the matter, seeing that the expense was so small. There was undoubted proof that in a very considerable number of cases serious evils had been prevented by their employment. He expressed the hope that the Government, who from the evidence in their possession had brought forward this proposal, would be willing, in view of the further evidence now received, that it should be withdrawn.

Mr. Byron Reed, Mr. Sidney Buxton, Mr. Barran, Mr. Fenwick, and Mr. Hoyle having taken part in the discussion, Sir Wm. Houldsworth thought it would be better to stop the present system, and to raise the whole question by amendments or in some other form, and examine it from an unprejudiced point of view.

Mr. Briggs Priestley strongly opposed the retention of the certifying factory surgeons. The discussion that morning had suddenly given a great premium to the medical profession. They would now want doctors almost innumerable. They could not stop where they were. If he was asked to answer the question, "What shall we do with our boys?" he thought the best thing to say was, "Send them into the medical profession."

On a division the following members voted 'Ay" for the retention of the Clause proposing to abolish the Certifying Surgeons:—Mr. Addison, Mr. Barran, Mr. Coddington, Mr. Fenwick, Sir William Houldsworth, Mr. Matthews, Mr. Briggs Priestley, Mr. T. H. Sidebottom, Mr. Stuart Wortley.

The following thirty-nine members voted for its rejection:—Messrs. Abraham (Rhondda Valley), Baring, Barnes, Brunner, Buchanan, Sydney Buxton, J. A. Campbell, Joseph Chamberlain, Colman, Craig, Viscount Cranborne, Sir Charles Dalrymple, Mr. Dixon-Hartland, Colonel Eyre, Dr. Farquharson, Sir Julian Goldsmid, Messrs. Howell Hoyle, George Shaw Lefevre, Lowther, Sir John Lubbock, Messrs. Macartney, J. M. Maclean, M'Lagan, Mundella, Sir Stafford Northcote, Messrs. Oldroyd, Briggs Priestley, Randell, Byron Reed, Edmund Robertson, Brook Robinson, Samuel Smith, Mark Stewart, Dr. Tanner, Messrs. Tomlinson, Wallace, Whitley, Stephen Williamson, and Wood.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHWELL, MICHAEL H., M.R.C.S., L.S.A., has been appointed Consulting Physician to the North Staffordshire Infirmary and Eye Hospital, Stoke-upon-Trent.

BARRITTT, G. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Spalding Workhouse and the Eastern District of the Spalding Union, vice Morris, resigned.

BERRY, EDMUND, L.K.Q.C.P. Irel., L.F.P.S. Glasg., has been reappointed Medical Officer for Leyland.

BETTS, WILLIAM ANDREW, M.B., C.M. Edin., has been appointed Junior House Surgeon to the Royal Southern Hospital, Liverpool.

BIDWELL, L. A., M.R.C.S., has been appointed Assistant Surgeon to the West London Hospital.

BROCK, W. J., M.B., C.M. Edin., B.Sc., F.F.P.S. Glasg., has been appointed Medical Officer of Health for the combined counties of Mid Lothian, West Lothian, and Peebles.

BRONNER, ADOLF, M.D. Heidelb., M.R.C.S., has been appointed *Honorary* Laryngologist to the Bradford Infirmary [not "Laryngologist," as announced last week].

BUTTERFIELD, H., M.R.C.S., has been reappointed Medical Officer of Health for the West Kent Combined Sanitary District of the Sevenoaks Union.

DAVIES, EDWD., M.D. St. And., M.R.C.S., has been reappointed Medical Officer for the No. 2 Rural District of the Wrexham Union.

DAVIES, E. P., M.R.C.S., has been appointed Consulting Surgeon to the Carmarthen Infirmary.

DISTIN, HOWARD, M.R.C.S., L.R.C.P., has been appointed Resident Clinical Assistant at Bethlem Hospital.

FIELD, FREDERICK ARTHUR, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the West Norfolk and Lynn Hospital, King's Lynn.

GODFREY, H. J. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Second District of the Bridlington Union.

HESLOP, WM. J., L.R.C.P. Irel., F.R.C.S. Edin., has been reappointed Medical Officer of Health for the Stretford Union District.

LANE, J. E., F.R.C.S., has been appointed Surgeon in charge of Out-patients to St. Mary's Hospital, vice Pye.

LENDON, A. A., M.D. Lond., M.R.C.S., has been appointed Honorary Physician to the Adelaide Hospital, South Australia.

MCALISTER, W. R. A., M.D., M.Ch. Irel., has been appointed Medical Officer of Sheils Institution, Carrickfergus.

MCLEAN, CHAS. J. RUSSELL, M.D., C.M. Edin., has been reappointed Medical Officer of Health to the Yeadon Urban Sanitary Authority.

MORROW, J. S., B.A., M.B., has been appointed House Physician to the Belfast Royal Hospital, vice W. A. Wheeler, resigned.

NEILSON, H. J., M.D., C.M. Glasg., has been appointed Surgeon to the Midland Railway *employés* for those Districts rendered vacant by the death of Mr. W. Maltby.

NICHOLLS, HUBERT, M.R.C.S., M.B. Cantab., has been appointed Assistant Physician to the North Staffordshire Infirmary and Eye Hospital, Stoke-upon-Trent.

NUTHALL, ROBT. L. S., M.R.C.S., L.R.C.P. Lond., has been appointed Fifth Assistant Medical Officer to Hanwell Asylum.

OSBURN, H. B., M.R.C.S., L.R.C.P., has been appointed Anæsthetist and Registrar to the Royal Hospital for Children and Women, Waterloo-bridge-road, vice V. W. Wheaton.

ROBINSON, G. DRUMMOND, M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Chelsea Hospital for Women, vice Dr. Mortlock.

SAYRES, A. W. F., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

STURGE, W. HOWARD, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the London Hospital.

SWIFT, HARRY, B.A., M.D. Cantab., M.R.C.S., has been appointed Honorary Assistant Physician to the Adelaide Hospital, South Australia, vice Lendon.

THORNE, J. M., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Royal Hospital for Children and Women, Waterloo-bridge-road, vice Enoch Moss.

TILL, GEO. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Rural Sanitary District of the Worcester Union, vice Strange.

TURNEY, HORACE G., M.B. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Assistant Physician to St. Thomas's Hospital.

VANN, A. M., M.R.C.S., has been appointed, *pro tem.*, Assistant Medical Officer for the Brandon Union District, Durham.

WHITTINGDALE, J. F. L., M.B. Camb., M.R.C.S., has been appointed Medical Officer of Health for Sherborne, Dorset.

WILLIAMS, E. R., M.R.C.S., has been appointed Honorary Medical Officer to the Carmarthen Infirmary, vice E. P. Davies, resigned; also Surgeon to the Great West Provident Society, vice J. Hughes, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Extra Acting Physician. Salary £60 per annum.

CHELSEA.—Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner. Salary £450 per annum.

COUNTY BOROUGH OF BRADFORD FEVER HOSPITAL.—Resident Medical Superintendent. Salary £200 per annum, with board and residence. (Apply to the Town Clerk, Town Clerk's Office, Bradford.)

DEVONSHIRE HOSPITAL, Buxton.—House Surgeon. Salary £100 per annum, with board, furnished apartments, and washing.

DEVONSHIRE HOSPITAL, Buxton.—Assistant House Surgeon. Salary £50 per annum, with board, furnished apartments, and washing.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff. Assistant House Surgeon for six months. Board, lodging, and washing provided.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

GENERAL INFIRMARY, Leeds.—Resident House Physician for twelve months. Board, lodging, and washing provided.

GENERAL INFIRMARY, Leeds.—Two Resident House Surgeons for twelve months. Board, lodging, and washing provided.

GENERAL INFIRMARY, Leeds.—A Resident Officer at the Ida Hospital for six months, with honorarium of £25.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.

HULME DISPENSARY, Manchester.—Honorary Surgeon.

JENNY LIND INFIRMARY FOR SICK CHILDREN, Norwich.—Physician.

KING'S COLLEGE, London.—Demonstrator of Public Health.

LIDDELL PROVIDENT DISPENSARY, Jarrow-on-Tyne.—Medical Practitioner. Salary £150 per annum and all midwifery fees.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £70 per annum, with furnished rooms, attendance, and board.

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Assistant, out-door. Salary £120 per annum. (Apply to the Secretary, 12, North Parade, Lincoln.)

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer at Bowdon, Cheshire. Salary £60 per annum, with board, apartments, and washing.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Salary £90 per annum, with apartments, gas, coal, and washing free.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer for six months.

NOTTINGHAM BOROUGH ASYLUM, Mapperley-hill.—Resident Clinical Assistant for six months. No salary. Board and residence provided.

SUSSEX COUNTY HOSPITAL.—House Physician. Board and residence in the Hospital, with washing, and a salary of £60, rising to £80 per annum, at the discretion of the Committee of Management.

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WALLASEY DISPENSARY.—House Surgeon. Salary £110 per annum, with furnished apartments, coal, and gas.
WESTERN SKIN HOSPITAL, 179, Great Portland street, W.—Honorary Physician for twelve months in the first instance.
WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon and Dispenser, who shall also be Assistant Secretary, for two years. Salary £100 per annum, with board, furnished rooms, fire, lights, attendance, and washing.
WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant for six months. Rooms, with board and washing, provided.
YORK DISPENSARY.—Resident Medical Officer. Salary £130 a year, with furnished apartments, coal, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BRAND.—On April 6th, at Invery, Great Driffield, E. Yorks, the wife of Dr. Brand of a son.
CUNNINGHAM.—On April 9th, at De Vere Gardens, Kensington, W., the wife of Surgeon-General J. M. Cunningham, C.S.I., of a son.
ELLIS.—On March 23rd, at Apsley Villa, Wellington, Somerset, the wife of Dr. W. Gilmore Ellis, of Singapore, of a son.
FIRTH.—On April 7th, at Parrock-street, Gravesend, the wife of Charles Firth, M.D., F.R.C.S., of a son.
FRENCH.—On April 8th, at Winterbourne, Hornsey, the wife of George French, F.R.C.S. Eng., of a daughter.
EVANS.—On April 9th, at Denmark Lodge, The Grove, Clapham-common, the wife of Dr. Lewis Evans of a daughter.
GRIFFITHS.—On April 11th, at Kensington-square, the wife of Herbert T. Griffiths, M.D., of a son.
PETTY.—On March 11th, at Belgrano, Buenos Ayres, Argentine Republic, the wife of Dr. Michael John Petty of a daughter.
SCOTT.—On April 10th, at Fallowfield, Manchester, the wife of W. Sawers Scott, M.D., of a son.
SHUTE.—On April 8th, at Granby-place, Northfleet, Kent, the wife of G. S. Shute, M.D., of a daughter (premature).
STEVENS.—On April 15th, at High-street, Stoke Newington, N., the wife of A. Felix Stevens, M.D., of a son.

MARRIAGES.

BILLIALD—EDMONDSON.—On April 9th, at St. Mary's Parish Church, Dolgelly, Richard Atherstone Billiald, L.R.C.P., M.R.C.S., of Kington, Herefordshire, to Annie Amelia, third surviving daughter of Alfred Edmondson, Esq., of Dolgelly.
BRAYE—AYRES.—On April 2nd, at St. Mary's Church, Reading, by the Rev. S. H. Soole, Vicar of Greyfriars, Reginald James Braye, of Leicester, L.R.C.P., M.R.C.S., youngest son of James Hardwick Braye, of Wellington-square, Hastings, to Jessie, youngest daughter of the late Charles Ayres, of Reading.
COX—ILES.—On April 14th, at Watford Parish Church, by the Rev. R. Lee James, Alfred Edward Cox, M.R.C.S., L.R.C.P., youngest son of the late William Henry Cox, Esq., of Duffield, Derbyshire, to Sybil Maud Iles, third daughter of the late F. H. Wilson Iles, M.D., of Watford.
LIDIARD—SLATER.—On April 9th, at the Friends' Meeting House, Hull, Sydney Robert Lidiard, of Berkeley House, Anlaby-road, Hull, M.R.C.S. and L.R.C.P., son of the late James Thomas Lidiard, of Brixton, to Margaret Slater, of Westbourne-avenue, Hull, youngest daughter of the late William Slater, of Carlisle.
LUSON—LESLIE.—On April 6th, at St. George's Church, Folla Rule, Aberdeenshire, Thomas Luson, F.R.C.S.E., of Cromer, Norfolk, to Mary Walker, second daughter of the Rev. Alex. Leslie, M.A., Rector of Folla Rule.
MOLSON—LEESON.—On April 11th, at St. Andrew's, Wells-street, John Elsdale Molson, M.B. Cantab., son of S. Elsdale Molson, of Montreal, to Mary, elder daughter of A. E. Leeson, M.D., of Dorset-square.
SAVAGE—BOUSFIELD.—At Cape Town, South Africa, S. Radford Savage, M.B. &c., Principal Medical Officer, Basutoland, to Mary J. Bousfield, daughter of the Right Rev. Bishop of Pretoria, Transvaal.
SHELSWELL—BERRIDGE.—On April 8th, at St. Peter-ad-Vincula, Ratley, Warwickshire, William Arthur Shelswell, L.R.C.P. Lond., M.R.C.S., of Shenington, to Ida, third daughter of Mr. T. W. Berridge, of The Uplands, Banbury.

DEATHS.

BLACKMORE.—On April 7th, at St. Mary's Hospital, Paddington, the result of an accident, George Henry Blackmore, M.R.C.S., L.R.C.P., of Worcester Lodge, Shepherd's-bush, second son of the late Christopher Blackmore, Esq., of Shaftesbury-road, Hammersmith, aged 40.
BOLTON.—On April 5th, at Kustendjie, Roumania, Teresina Arpalice Emily Beda, aged 9 years, of diphtheritic scarlatina, a loving and loved child, daughter of Dr. A. Irwin Bolton and Teresina Bolton.
HALL.—On March 24th, at the Lodge Avenue, Southampton, William Henry Hall, M.D. Glasg., M.R.C.S., L.R.C.S Irel., aged 72.
HOFFMEISTER.—On April 9th, at Clifton House, Cowes, George Bernard Hoffmeister, M.A., M.D., youngest son of the late Sir William Hoffmeister, M.D., aged 32.
LAMB.—On April 11th, at 18, Price-street, Birkenhead, Joseph Lamb, M.R.C.S., aged 50.
PENNINGTON.—At Pembroke-place, Liverpool, T. Richardson Pennington, L.F.P.S. Glasg., aged 48.
TIZARD.—On April 7th, suddenly, at Baycliffe, Weymouth, Henry Tizard, M.D., aged 67.
WARD.—On April 14th, at Blyth, Northumberland, Henry Debord Ward, M.D., M.R.C.S., L.M., second son of Gilbert Ward, M.R.C.S., aged 53.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 16th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 10	30·16	N.E.	43	42	63	51	41	·08	Overcast
,, 11	30·14	N.E.	42	41	70	50	39	..	Overcast
,, 12	30·14	N.E.	42	40	69	49	38	..	Cloudy
,, 13	30·09	E.	42	39	60	49	38	·15	Overcast
,, 14	30·15	N.	43	39	89	52	38	..	Cloudy
,, 15	30·19	W.	45	43	83	58	42	..	Overcast
,, 16	30·21	W.	50	46	93	56	43	..	Cloudy

Medical Diary for the ensuing Week.

Monday, April 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. G. A. Heron: The Use of Koch's Remedy in Lupus Vulgaris and in Tuberculosis of the Lung. Patients on view at 8 P.M.

Tuesday, April 21.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. J. Scott Keltie: The Geography of Africa.
ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, Jermyn-st., S.W.).—7.45 P.M. Dr. J. Charles Steele: The Charitable Aspects of Medical Relief.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. J. C. Mackenzie: Melanotic Sarcomatosis.—Mr. Sydney Jones: Perforation of Gall-bladder.—Mr. H. H. Clutton: Osteitis Deformans of Tibia.—Dr. W. B. Hadden: Ulceration and great Contraction of Stomach.—Mr. W. H. Battle: Acute Epiphysitis.—Mr. E. Hurry Fenwick: Tubercular Bladder after Koch's Treatment.—Mr. Solly: Myeloid Tumour of Tibia with Secondary Growths.—Mr. W. Anderson: Fæcal Fistula at Umbilicus.—Mr. W. H. Battle: Sarcoma of Femur.—Dr. West: Secondary Sarcoma of Lung. Card Specimens:—Dr. Howship Dickinson: (1) Aneurysm of the Abdominal Aorta opening into the Duodenum; (2) Aneurysm of the Thoracic Aorta opening into the Left Bronchus.—Mr. H. H. Clutton: Extensive Rodent Ulcer of the Scalp.—Mr. J. H. Targett: Melanotic Sarcoma of Bladder.

Wednesday, April 22.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. A. T. Davies will exhibit a case of Graves' Disease. Mr. F. R. Humphreys: Two cases of Pneumonia (migrating) with complications.—Dr. E. G. Gilbert: Some Remarks on Colds.—Dr. J. Langton Hewer: Extra-uterine Fœtation.—Mr. A. H. Tubby: The Pathology and Treatment of Acute Necrosis of Bone.

Thursday, April 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Adjourned Discussion on Dr. Bell's paper ("The Treatment of Chronic Disease of the Uterine Adnexa").

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Friday, April 24.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8 P.M., Living Specimens:—Mr. Bilton Pollard: Old (? Congenital) Dislocation of Patella reduced by Intra-articular Operation.—Dr. J. Taylor (for Dr. Hughlings Jackson): Two cases of Muscular Atrophy.—Mr. F. B. Jessett: (1) A case of Estlander's Operation; (2) A case of Gastro-enterostomy for Pyloric Cancer.—Dr. Ewart and Mr. W. H. Bennett: A case of Gastro-jejunostomy for Pyloric Obstruction.—Mr. W. H. Bennett: Symmetrical Enlargement of Parotid Glands.—Mr. Bruce Clark: Case showing a New Method of Amputation just below the Knee-joint.—Dr. F. Hawkins: Two cases of Congenital Disease of the Heart.—Mr. W. H. Battle: (1) A case of Recurrent Dislocation of the Patellæ; (2) A case showing Recovery from Lupus Erythematosus after Internal Treatment only; (3) A case showing the result of Plastic Operation for Extroversion of the Bladder. 9 P.M., Papers: Mr. W. H. Brown: A case of Gastro-jejunostomy.—Mr. Arbuthnot Lane: Two cases of Resection of Intestine by Senn's Method.—Mr. C. J. Symonds: Two cases in which a Sequestrum was Removed from the Neck of the Femur without injury to the joint; recovery in both, and in one with a perfect joint.
ROYAL INSTITUTION.—9 P.M. Rev. Canon Ainger: Euphuism—Past and Present.

Saturday, April 25.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. Prof. Silvanus P. Thompson: The Dynamo.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

A FATAL RESULT OF BAPTISM BY IMMERSION.

A MOST distressing occurrence is reported in a German medical journal. A young woman who was a candidate for baptism by immersion amongst the Baptists, after undressing to her chemise and stockings in the vestry, put on a cotton wrapper and came into the chapel to be baptised. She was completely immersed in the baptistry, which was filled with rain-water at a temperature of about 40° F., the ceremony not lasting above a minute. After this she walked back into the vestry, but immediately became unconscious, and, notwithstanding all possible efforts being made to resuscitate her, succumbed. The post-mortem examination revealed that there was cardiac disease. As, however, there was no doubt that the immersion was the determining cause of death, the unfortunate minister who performed the ceremony was at first sentenced to a week's imprisonment. This was, however, ultimately remitted. The neighbouring Baptist congregations have, it is said, taken warning by the case, and have arranged to have the water for immersion always warmed in future, as is, we believe, the custom in this country. Another suggestion naturally arises from such an occurrence as the above—namely, that persons suspected of heart disease should have the benefit of a medical examination before being submitted to the rite of immersion.

The Registrar of the College of Physicians and Surgeons, Ontario.—The information contained in the last Students' Number of THE LANCET regarding the requirements as to preliminary education in France, Germany, and other foreign countries is, we believe, quite correct. It was collected from official sources and by means of conversation and correspondence with many foreigners and Englishmen who were in a position to give trustworthy opinions on the subject. We do not think there is any room for doubt that, speaking broadly, medical students in almost every continental country are required to produce evidence of an amount of general education quite equal to that which would obtain for an English student the degree of B.A. The main exception, the case of the French *Officiat*, is now on the point of being abolished.

MEDICAL EDUCATION IN INDIA.

THE following is taken from the *Madras Times*:—

"Dr. Wellington Grey, the Principal of the Grant Medical College, Bombay, has taken up the old question of raising the standard of the Entrance Examination. It has been whispered about for some time now that Government is pressing for reforms, especially in regard to those extra qualifications which the University should insist upon as a preliminary to professional study; and, as if in view of this demand, Dr. Wellington Grey has laid before the Faculty of Medicine a comprehensive scheme for dealing with the regulations. Dr. Grey's propositions go further, and cover wider ground than any previous suggestions on the subject; but it would appear that they are not likely to meet with much support from the University, as, among other things, they suggest the reduction of the qualification of Licentiate of Medicine and Surgery from a degree to a mere licence, and nothing more."

Mr. J. Gallop should apply to M. de Clausen, 37, Fitzroy-square, W.

DISPENSING BY MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "Prescriber," has given us much of the *pros* and *cons* of this question, and I am glad to see that, to some extent, he agrees with my letter; but I cannot agree with him in the proposal that dispensing by medical men should be given up gradually. If we have to wait for gradual processes, I am afraid the result will be nothing. The whole profession ought to rise and deal with the present evil at once—as one should deal with all evils—with one voice and one common act. No one practitioner is likely to give up the practice until all his rivals have given it up also. Gradual, one-by-one processes certainly will not do. "All together, and at once," should be the watchword in this matter, the watchword of the profession. From my experience of druggists in those parts of the country—e.g., even the north of Scotland, where they do all the dispensing, and the "doctors" do none—I am fully satisfied that such druggists are perfectly reliable and trustworthy. It is in the places where the "doctors" do their own dispensing that druggists may not dispense the occasional prescriptions which come to them exactly as ordered. And why? Because, under such circumstances, the poor struggling druggist cannot afford to keep in stock every representative of the Pharmacopœia, officinal and non-officinal, for the sake of occasional prescriptions. I have had to alter my prescriptions again and again to accommodate them to the limited stock of a druggist's dispensary. No, the druggist has to keep in stock, and rely for his living upon, patent medicines, his own stock mixtures and salves, and his own prescribing. I have not yet met with a single druggist—and I have spoken with many about this matter—who would not be willing to give up all his present struggle methods, legitimate and non-legitimate, of making a living, if practitioners would give over their dispensing to them. They would give up prescribing, and the patent medicine trade would probably decay. They would, also, then be able to afford to keep in stock every best drug and requisite prescribed by the "doctors."

As for prescriptions being left with druggists and appropriated by them for their own stock medicines, and as for patients taking their prescriptions to be "made up" again and again without the knowledge of the prescriber, practitioners and druggists should be able to arrange these matters mutually and amicably. For instance, the prescription should be sent by prescriber's or by patient's messenger to the druggist; the druggist retains the prescription, he charges the prescriber a stipulated amount for dispensing the prescription, and the prescriber includes that charge in the fee he claims of the patient. This works very well, and quite pays the prescriber in the end, for he may thus need no assistant, and of course no private dispenser. Or, suppose the practitioner charges a moderate fee for his advice or attendance: the patient sends the prescription to the druggist, who retains the prescription, and charges a moderate fee to the patient. Or, presuming that the patient pays a larger fee for the prescription, suppose an arrangement is made whereby the druggist refuses to repeat the medicine according to the prescription retained by patient unless ordered in writing by the prescriber. This method would prevent dangerous medicines being abused at the patient's ignorant will, as instanced by your correspondent "Prescriber." Of course there are other alternatives, according to the particular convenience of doctors, druggists, and patients. In order to secure proper mutual understanding between practitioners and druggists carrying out one of above methods, even Ethical Associations with tariffs, &c., might be formed, in which the two professions would combine. I think the subject is ripe for careful consideration and discussion by the whole profession of general practitioners.

One thing more permit me to say, and it is this: that it is surely unwise, if not unjust, in these days, for we principals to expect qualified assistants, men often of great training and refined tastes, in addition to walking their rounds &c., to do the hurried, slopping, manual drudgery of dispensing. Such men, in the receipt of an honourable salary too, ought to be allowed time for general and social culture, as well as for following up the medical literature and science of these progressive days. In this latter direction such gentlemen might greatly help their principals, and much more time might be given, with advantage to patients, "doctors," and to science, to the details of diagnosis and treatment. Certainly no dispensing practitioner, even with a qualified medical assistant, should be without a dispenser, whose duties should be only those of dispensing and bookkeeping, on duty in the dispensary the more important hours of the daytime.—Yours truly,

April, 1891. SICK OF DISPENSING.

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SUPERNUMERARY FINGER.

WE have received a communication from a correspondent in Cambridgeport, Mass., U.S.A., accompanied by a specimen of supernumerary finger, but without name and address.

Miss A. Palmer (Madras).—There is no special training institution of the kind alluded to by our correspondent. Nurses can receive their training at any large and recognised hospital. The *Army Circular*, India, of Nov. 5th, 1890, gives full information, and a copy could probably be obtained by application to the Surgeon-General's Office, Her Majesty's Forces, Madras.

Assistant has not stated whether he is qualified or not, and this is an important element in the question. Anyway, it is a matter for a solicitor to decide, in view of the terms of the agreement.

H. B.—The information is given in our last number.

MEDICAL PRACTITIONERS' UNION AND "THE DOCTORS' CLUB."

To the Editors of THE LANCET.

SIRS,—If it be true that "It's never too late to mend," I, with the majority of general practitioners, hail with satisfaction the formation of a General Practitioners' Union, a Union which will have ample scope in this country for bettering the lot of the "great underpaid." Let us trust it may have equal power. There is no doubt, as your correspondent says, we shall succeed if we are only united. Unfortunately, our hopes must rest on that little word "if."

One serious grievance under which we chronically suffer I would urgently recommend to the notice of the Union—viz., the indiscriminate charity which is bestowed on a large section of the community under the pseudonym of "medical providence." I allude particularly to those societies for sponging on medical men—societies whose agents infest the country and make a regular house-to-house canvass of the working classes and even tradesmen, and induce them to enter their wives and children in the "doctor's club" for the paltry pittance of 1*d.* for a woman and ½*d.* for each child per week, in return for medical attendance and medicines. Such a system of insurance may possibly "pay" the medical officer in the case of the Oddfellows and Foresters, in which societies the members are male adults, and are only admitted if in sound health. But what are we to say in the case of women and children, especially the latter, who are constantly liable to illness, and yet, strange to say, pay one-half the subscription paid by a healthy man? Any insurance company which issued policies with premiums so small, and where the certainty existed of being called upon for benefits proportionately so great, would soon be insolvent. Yet we carry on such a system with the same result, the difference being that the benefits we give are in the form of labour instead of money. The principle, however, remains the same.

Take this instance of the injury done to us by such societies, which know no such restrictions as wage limit. The wife of a first-class artisan, who previously has paid her doctor well, enters her first child a few months old in a medical provident society, of which her doctor is medical officer. Supposing that child never so healthy, the chances are it will require medical attendance every year for some years to come, which means an annual payment of, let us say, £1 to the family doctor; but by the simple expedient of paying a miserable 2*s.* per annum, hey! presto! the doctor's bill disappears. So also the doctor's profit. It must be conceded that this is a good bargain for an anxious mother, with all the horrors of difficult dentition, measles, convulsions, &c., looming in the not far distant future, and the Friendly Societies' Medical Alliance solemnly records "with satisfaction the friendly spirit" evinced by both parties to such a contract. Look on the other side. There is a loss of £4 per annum to the medical profession in this one case, for it cannot be contended that the donations of the other members of such a club compensate for this loss when the numerous and frequent ailments of women and children are considered. Another far-seeing mother will say: "I have entered myself and all my children in the club, as we are always having illness in the house"; and this is the sort of thing on which is based that "friendly spirit" with which the president of the Friendly Societies' Alliance says the medical faculty regards its methods. The question naturally presents itself, Why do we as intelligent members of society make contracts on terms which an ignorant labourer would repudiate as an insult to his intelligence? The answer, in my opinion, is this. Firstly, we have a minority disloyal to themselves, their profession, and to their *alma mater*, to whom they have vowed to uphold the honour and dignity of their calling; secondly, want of union in our ranks. I feel sure statistics in abundance will be forthcoming to show clearly the rottenness of a system carried on independently of wage-limit and other safeguards against abuse—a system conferring a real boon, though maybe in some cases a doubtful one, on the "benefited" family, and inflicting an undoubted curse upon the already underpaid practitioner. The question of these clubs is one equally pressing as hospital abuse, and medical men for all time will owe a large debt of gratitude to the Practitioners' Union of to-day should it be the means of remedying this and many other glaring abuses which are at the root of a general and widespread dissatisfaction amongst us. While barefaced quackery flourishes, unqualified practice is rampant in our midst, chemists usurp our lawful functions, and cheap doctoring is the order of the day. We may wait in vain for those results for which we have toiled and striven and paid so dearly.—I am, Sirs, yours faithfully,

April 14th. G. P.

ADVERTISING PRACTITIONERS IN MILE-END-ROAD.

WE have received a letter from Messrs. Francis and Calley, solicitors, of Austin Friars, who say:—

> "Our client, Dr. Richard Loughrey, in practice at 146, Mile-end-road, has consulted us with reference to a publication in your issue of the 11th inst. (page 864) headed 'Advertising Practitioners in Mile-end-road,' commenting upon 'A remarkable handbill, emanating from 146, Mile-end-road.' We beg to inform you that our client on the 31st January, 1884, purchased from the executrix of the late Dr. Hanks the lease of 146, Mile-end-road, and no such handbills have since that time (upwards of seven years ago) been issued from such premises. If any such handbills were in circulation prior to that date, Dr. Loughrey was in no way privy to, or interested in, the circulation."

Of course, if we had been aware of the facts above stated by Messrs. Francis and Calley, we should not have drawn attention to the matter, though the handbill in itself deserves the comment.

Registered.—1. If our correspondent will refer to the last Students' Number of THE LANCET, he will see that several of the colonies require a fee on registering a practitioner with British qualifications, even though he has been registered in Great Britain. Some of the colonies also, in addition to a large fee (in British Columbia it is $100), oblige candidates for registration to pass an examination. The Jamaica fee of £1 is therefore an exceedingly lenient infliction compared with that enforced in some other colonies.—2. There is no University degree which precludes the holder from dispensing medicines; and it is not very unusual for M.D.'s of Oxford, Cambridge, and London to dispense, whether they practise in the colonies or at home. An F.R.C.S. may dispense, but must not keep an open shop Surgeons to London hospitals are usually precluded by the hospital rules from general practice and from dispensing. M.R.C.P.'s are precluded from dispensing, from making arrangements with chemists, from entering into partnership, and from suing for their fees.

Army Surgeon is thanked. The erroneous statements to which our correspondent calls attention had not escaped our notice, and will, we imagine, be at once recognised by anyone acquainted with the subject.

IRIDESCENT COOKED MEAT.

To the Editors of THE LANCET.

SIRS,—Cooked and salted meats, as ham, beef, mutton, veal, pork, &c., frequently show iridescence similar to that produced by light falling upon the scales of freshly caught fish. This iridescence usually affects only a part of a cooked or salted joint; but it may possibly be associated with decomposition in another portion of the same joint. This iridescence (apparently bacterial) seems due to conditions probably preceding decomposition, rather than necessarily accompanying putrefaction. Where the meat has been otherwise sound, sweet, and healthy, often have I eaten, and seen others eat, iridescent cooked and salted meats without my having been able to trace any subsequent disturbance or illness therefrom. However, I consider iridescent meat as suspiciously doubtful, and especially inadvisable where any lesions may exist along any portion of the alimentary tract, and above all to be avoided where there may be ulcerations about the intestines. Whilst myself further investigating this matter, I shall be grateful to learn of any clinical, pathological, or bacterial work or research on this branch of meat inspection—a subject which has received too scanty attention from medical men.—I am, Sirs, yours faithfully,

Brighton, April 6th, 1891. J. LAWRENCE-HAMILTON, M.R.C.S.

KOOPMANN'S FIRE BLOCKS.

A CORRESPONDENT desires to be informed where the above fuel, which is said to be smokeless, may be obtained.

Prescriber.—These questions are discussed very fully in the chapter on Dispensing Foreign Prescriptions in "The Art of Dispensing," published at the *Chemist and Druggist* office.

Dr. Rentoul's communication should be sent to one of our contemporaries. It would be altogether out of place in our columns.

Dr. James Gairdner (Crieff) is thanked. He will see that the lamentable occurrence is fully reported in our present issue.

THE RECENT DRAMATIC ENTERTAINMENT FOR THE BENEFIT OF THE ROYAL FREE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—As no notice may have been sent you of the entertainment given by the Amateur Dramatic Club of St. Bartholomew's Hospital on behalf of the rebuilding fund of the Royal Free Hospital, may I be permitted to at least personally express the warm thanks which are due to the Club for the extreme kindness which prompted a large and rich hospital thus to aid a smaller and less independent neighbour? That the entertainment at St. George's Hall on the 9th inst. was a great success, before a crowded audience, is known to all, the performance, "On Guard," being represented and placed upon the stage without a flaw. The many points of humour and pathos in the comedy were fully appreciated. The lady orchestra equally well acquitted themselves in the selections of music.—I am, Sirs, yours faithfully,

FREDERICK T. ROBERTS,

April, 1891. Consulting Surgeon to the Royal Free Hospital.

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AGORAPHOBIA AND "EREMOPHOBIA."

To the Editors of THE LANCET.

SIRS,—The modesty which habitually restrains the members of our profession from rushing into print is so notorious that it will surprise none of them to hear that I have waited some years to allow someone else to do what I am at length reluctantly compelled to undertake.

I propose the abolition of a *lucus a non lucendo* which I discern in the word "agoraphobia." I see from a recent number of THE LANCET that the word is still used in the sense of "fear of a deserted place." I am nearly 7000 miles from my "Liddell and Scott"; but I fancy I am not mistaken in thinking that ἀγορα means a market-place—i.e., a densely crowded spot. It is asserted that in such places agoraphobiacs feel no fear, and only suffer it under exactly opposite conditions. I therefore venture to suggest the word "eremophobia" to describe this condition, deriving it, of course, from ἐρημος, a deserted place.

I offer apologies in anticipation to all those gentlemen who have already made this suggestion.

I am, Sirs, yours faithfully,

WALTER F. DALE, M.R.C.S., L.R.C.P.Lond.

Darwin Harbour, Falkland Islands, Feb. 12th, 1891.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Halè White, London; Dr. Steavenson; Mr. F. J. Gant; Dr. Macnaughton Jones, London; Mr. Poland, London; Mr. S. Snell; Messrs. Griffin and Co., London; Mr. Eschwege, London; Mr. Stilliard, Birmingham; Dr. Billinghurst, Midhurst; Dr. Collier, Oxford; Messrs. Hardman and Sons, Bury; Mr. C. C. Becke, Northampton; Messrs. Blondeau et Cie., London; Mr. Berridge, Loughborough; Messrs. Francis and Calley, London; Mr. N. S. Manning, Birmingham; Drs. Peacock and Pieterson, Kingswinford; Dr. Pyne, Toronto; Messrs. Rowntree and Co., York; Dr. Auld, Glasgow; Mr. Maylard, Glasgow; Dr. Bezly Thorne, London; Mr. Mossop, Newhaven; Mr. W. F. Dale, Falkland Islands; Dr. Rentoul, Liverpool; Dr. Coghill, Ventnor; Messrs. John Richardson and Co., Leicester; Dr. Cook, Winstree; Messrs. Pound and Co., London; Mr. E. A. Piggott, Clare; Messrs. Hearson and Co., London; Mr. Clifford, London; Dr. Thorn, Crieff; Mr. Buckston Browne, London; Dr. J. B. Pike, Loughborough; Messrs. Christy and Co., London; Miss Yates, London; Messrs. Lazard Bros. and Co., London; Mr. J. Berry, London; Dr. MacAlister; Messrs. Byles and Son, Bradford; Dr. J. W. Allan, Glasgow; Mr. W. Mawer, Wood Green; Mr. Messum, Pretoria; Mr. Blackett; Messrs. Mitchell and Co., London; Dr. Swann, Batley; Dr. J. Oliver, London; Mr. S. A. Gill, Formby; Dr. B. Walker, Spondon; Dr. Kirk, Partick; Mr. S. S. Brown, London; Prof. Charteris, Glasgow; Dr. H. N. Joynt, Birmingham; Dr. Wallace, Colchester; Dr. Malins, Birmingham; Mr. W. G. Nash, Plymouth; Mr. Pimm, Poultry; Mr. Grew, Birmingham; Dr. J. Gairdner, Crieff; Mr. Garnett, Bloomsbury; Mr. Parkhouse, Wellington; Dr. Bottentuit, Paris; Dr. Moure, Bordeaux; Mr. Nance, Hampstead; Mr. Crowther, London; Mr. Sampson, York; Mr. Lund, Bournemouth; Mr. Dayson, Monmouth; Mr. Frost, London; Dr. W. Wallace, Crick; Mr. Cameron, Bayswater; Mr. W. B. Burke, Wolverhampton; Mr. Birchall, Liverpool; Mr. Watt, London; Mr. Millard, Teddington; Mr. Anderson, Bodmin; Dr. Skerritt, Bristol; Mr. Wise, Trowbridge; Mr. Hunt, Manchester; Mr. Storer, Nottingham; Dr. T. Williams, London; Mr. Macadam, Edinburgh; Mr. Weiss, Russell-square; Mr. J. S. Aplin, Yeovil; Dr. McCallen, co. Derry; Mr. Read, Canterbury; Mr. Finlay, Longford; Mr. Griffin, Saltburn; Mr. Heap, Cheshire; Mr. Radford, Manchester; Mr. Evelyn, York; Mr. Cooke, London; Mr. Woodcock, Bradford; Mr. Hornibrook; Mr. Edwards, Birmingham; P E., Middlesbrough; Surgery, London; O. F., London; B. F. P.; Registered; Pontypridd; Sympathy; Secretary, Jarrow Dispensary; G. P.; Secretary, General Infirmary, Leeds; Maltine Manufacturing Co., London; Medicus, London; Secretary, Bolton Infirmary; Caradoc; Hon. Secretary, Noble's General Hospital, Isle of Man; Spes, Colchester; Omega, Cardiff; Secretary, St. Mungo's College, Glasgow; Secretary, General Hospital, Loughborough; Bona Fides, Brighton; A. M. D., London; Secretary, Caledonian Insurance Co., Edinburgh; Medicine, London; Iota, London; Secretary, West Herts Infirmary.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Scott, Manchester; Mr. Armstrong, London; Messrs. Towers, Ellis, and Co., Bayswater; Mr. Sutherland, London; Messrs. Freer, Hett, and Hett, Brigg; Mr. Gilyard, Bradford; Mr. Bigg, London; Mr. Young J. Pentland, Edinburgh; Mr. F. E. Hodder, co. Cork; Messrs. Down Bros., Borough; Mr. W. Coulson, Lincoln; Mr. Halford, sen., Upper Tollington-park; Mr. Bringloe, Stratford; Miss Thompson, Tunbridge Wells; Mr. Scarlett, London; Mr. Lee, Exmouth; Messrs. Bilbrough and Kitchingman, Bradford; Dr. Swift, Adelaide; Mr. Wells, West Hampstead; Mr. Rust, Kidderminster; Messrs. Herman, Lescher, and Co., London; Mr. Knowles, Birstall; Mr. Ballance; Messrs. Benger and Co., Manchester; Mr. Graham, Dumfriesshire; Messrs. Austin and Son, Clifton; Mr. Tyte, Minchinhampton; Dr. Raby, Caterham Valley; Dr. Ryley, London; Mr. Tully, Hastings; Mr. Savage, South Africa; Mr. Dixey, Chepstow; Mr. Goodden, Bristol; Dr. Lawrence, Chepstow; Dr. Shute, Northfleet; Mr. George, Preston; Mr. Wilson, Devizes; Mr. Shimmald, Guildford; Mr. Ayres, Reading; Mr. Diver, Caterham; Mr. Simpson, Essex; Mr. Buller, Martley; Dr. Simmons, Newbury; Mr. Baker, Willenhall; Mr. Freer, Rugeley; Mr. Greville, Edinburgh; Mr. White, London; Mr. Harvey, London; Messrs. Keith and Co., Edinburgh; Mr. Branthwaite, Warwick; Messrs. Ferris and Co., Uxbridge; Dr. Hyslop, Blackpool; Miss Galloway; Dr. Deane, Ellesmere; Mr. Christy, Jarrow; Mr. Webster, Bewdley; Mr. Thin, Edinburgh; Mr. Johnston, Leicester; Mr. Dickson; Mr. Heywood, Manchester; Chemist, London; F. A. X., London; Fidelis, London; Cymro, London; W. B. V., Whitby; Garthroy, London; Warneford Asylum; M.D., London; Y. O. G., London; Secretary, Norfolk and Norwich Hospital; Hydro, Lincoln; A. E. B., Coventry; Hackney Furnishing Co., London; Assistant, London; Secretary, Taunton and Somerset Hospital; A. B. N., London; E. O. R., London; Mason, Kensington; L. D. S., Haymarket; Alpha, Manchester; Cheltenham General Hospital; Spes, London; J. G., Leeds; Manipore; Eastern Counties, London; J., Barnesley; Florence, Yorks; A. B., South Norwood; Kensington, London; Medicus, Edinburgh; Medicus, Doncaster; Scotus, London; Prompt, London; X., York; M. F. M., Birmingham; A. C., London; Victim, London; X. Y., Truro; Doctor, Kensington.

NEWSPAPERS.—*Allen's Indian Mail, Birmingham Post, Sheffield Telegraph, Manchester Evening News, Glasgow Herald, Le Temps* (Paris), *Huddersfield Examiner, Madras Times, Builder, Northern Daily Mail, Scotsman, Sunday Times, Bombay Gazette, West Middlesex Standard, Surrey Advertiser, Mining Journal, Architect, City Press, Bristol Mercury, Law Journal, Spectator, Saturday Review, Liverpool Daily Post, Scottish Leader, Yorkshire Post, Weekly Free Press, Hertfordshire Mercury, West Middlesex Advertiser, Leeds Mercury, Insurance Record, Reading Mercury, Beckenham Journal, Windsor and Eton Gazette, Carlisle Journal, West Sussex Gazette, The Newspaper, Lincolnshire Herald, North China Herald* (Shanghai), *Dundas Star* (Canada), *Maidstone Journal, Farm, Field, and Fireside, Admiralty and Horse Guards' Gazette, The Record, The Labour World, Bath Gazette, Carlisle Express and Examiner, Dundee Advertiser, Lincolnshire Chronicle, Chester Courant, Western Morning News, Windsor and Eton Express*, &c., have been received.

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PART OF

An Address

ON

THE NEUROTIC COMPLICATIONS OF UTERINE DISEASE.

Delivered to the Nottingham Medico-Chirurgical Society,

BY W. S. PLAYFAIR, M.D., LL.D.,

PROFESSOR OF OBSTETRIC MEDICINE IN KING'S COLLEGE, AND PHYSICIAN FOR THE DISEASES OF WOMEN AND CHILDREN TO KING'S COLLEGE HOSPITAL.

GENTLEMEN,—In accepting the flattering proposal of your Society that I should address you this evening, I have been greatly embarrassed in the selection of a subject. I should perhaps have fixed on some particular disease among the many inviting discussion, and prepared upon it a paper; but this would have involved an amount of study and literary work which the time at my disposal since I received your invitation did not enable me to undertake, even if I had felt otherwise fit for the task. I have, therefore, chosen a topic which has occupied my attention a good deal of late years, and chiefly because, independently of its own importance and interest, it seems to me suited for the interchange of opinion and debate, which I take it is one of the chief objects of a Society such as this. Every practitioner who devotes the slightest thought to his patients must have some experience of the matters I propose to discuss, which, if elicited, will certainly be valuable. The subject, however, is immensely large; to treat it thoroughly would require a volume. All I can pretend to do to-night is to lay before you some reasons for giving it more serious attention than it has generally received. I wish particularly not to be misunderstood. I trust no one will accuse me of minimising the importance of local disease of the reproductive organs in the female. I am profoundly convinced that the work which has been expended on gynæcology within the past quarter of a century, or little more, has led to more substantial advances than any other department of medicine can boast of. What other specialty, if I may use the term in an unobnoxious sense, has such a record to show? Are there not a whole host of some of the most important diseases which human flesh is heir to, our knowledge of which has been entirely gained within the last half century? Before that time gynæcology in its modern sense did not exist. Our fathers knew that women had wombs and ovaries, perhaps some of them knew that they had Fallopian tubes, but there their knowledge ended. Far less was known of diseases of the reproductive organs in women than of diseases of the lungs and heart before Laennec's immortal discovery of the stethoscope. What other department of medicine can show such substantial addition to its study as is involved in the mere mention of such topics as ovarian disease, fibro-myomata, hydro- and pyo-salpinx, and others far too numerous to mention? It is not surprising, it is only most natural, that when so much new ground has been opened up, so many new diseases formerly unknown have been made the subject of study, many errors should have been made. If the tendency of this paper is to impress on you the belief that injudicious and excessive treatment of local pelvic disease often leads to much mischief, I beg you not to draw the inference that I wish to depreciate the importance of such disease in itself. I believe such errors to be inevitable in comparatively new and untrodden paths of study. All I wish to do is to point out the pitfalls that lie in front of us, so that we may try to avoid them as much as possible.

Now I do not hesitate to say that the one important lesson which has been impressed on my mind by my professional work of the past few years is the danger, in treating the less important of the so-called diseases of women—I mean such as do not admit of any operative interference—of developing a neurosis; and that is the text on which I wish to preach my sermon to-night. In order to appreciate the importance of this topic it is above all things necessary for us to do what the public call "understand the constitution" of our patients; and the one thing needful in the work of the gynæcologist is that he should thoroughly appreciate, and bear constantly in mind, the highly strung and emotional nervous organisation of his female patients, and the strong impressions produced on them by any disease, or supposed disease, of the reproductive organs, or by any local treatment or even examination of them. It is perhaps difficult for any man properly to understand the amazing influence which being told that some uterine trouble exists, or of having local examinations made, has on certain women. The practitioner means very little when he tells his patient that her "womb is displaced," or that she has "ulceration of the cervix," but what an awful vista of far-reaching consequences is often conjured up by these terms which convey so little to his mind, and so much to hers. A medical man thinks it a trivial thing to introduce a pessary, but what a terrible thing is the disease, alas! so common, of pessary on the brain. Some years since my esteemed friend, Dr. Clifford Allbutt, delivered his excellent Gulstonian lectures on the "Visceral Neuroses," which very properly attracted much attention. In these he gave some very hard hits to the specialist, particularly to the gynæcologist. There was very much to be learnt from his words of wisdom.

> "O wad some power the giftie gie us
> To see ourseis as others see us!
> It wad frae mony a blunder free us,"

is the aspiration of an illustrious Scottish poet. In these lectures we had the gift given us free, gratis, and for nothing. Let us try to benefit from it if we can. Dr. Allbutt tells us that whenever anything is found wrong with the womb the patient "becomes entangled in the net of the gynæcologist, who finds her uterus, like her nose, a little on one side; or, again, like that organ, running a little, or as flabby as her biceps, so that the unhappy organ is impaled on a stem, or perched upon a prop, or is painted with carbolic acid every week of the year, except during the long vacation, when the gynæcologist is grouse shooting, or salmon catching, or leading the fashion in the Upper Engadine." Now, I admit at once that in a certain sense this caustic sentence conveys a truth which we should all take to heart; it also conveys an insinuation which is unjust. I believe it to be a fact that such treatment as is here sketched, which no form of disease known to me could justify, has unhappily been often carried out with disastrous results to the patient; what I disbelieve is that it is ever carried out with deliberate intention, as is insinuated, and that there is more blame to be attached than error of judgment. In justice to the specialist, it is right to say also that he is not the only sinner. Very many faults of this kind are due to misdirected energy of treatment on the part of those who make no pretension to special knowledge, and on whom a little special knowledge would not be thrown away. This is, however, an unpleasant part of my topic on which I do not care to dwell.

I should like it to be recognised as an important factor in uterine disease that there is in almost all women a strong nervous tendency, and that we should be perpetually on our guard in any local treatment we may adopt to avoid anything that may encourage and foster it. In some this is so exaggerated that treatment perfectly admissible, and even highly judicious, for certain minor uterine troubles, such as the use of pessaries and the like, becomes absolutely pernicious. The remedy in such cases is, in fact, far worse than the disease, and the judicious practitioner, recognising the tendencies of the patient, will minimise to the utmost all local treatment, or abstain from using it altogether. Cases of this kind are, in my opinion, very common indeed, and could easily be illustrated. Thus only a week since I saw a young married lady who had been in the hands of several practitioners for local symptoms. She had been told that she had a retroflexion, and the diagnosis was perfectly accurate. A pessary had been introduced, of suitable shape and, no doubt, well adapted for relieving other cases of the kind. In this instance, however, the effect had been disastrous. The patient was chained to the sofa, was afraid to move across the room, and could think of nothing but the mysterious instrument within her. Its removal, and the assurance that she had better do nothing but use hot irrigations, and might go to the theatre, had the happiest effect. In a couple of days she was cheerful and bright, and will probably do well without any further local treatment at all. No doubt this is an extreme case, but it is one of a kind we should always recognise as possible. We should be careful, however, not to allow one or two exceptional cases of this kind to lead us into the opposite error, and generally condemn,

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as some have done, the use of pessaries and other such measures altogether. No mistake could be more fatal.

Usually the growth of neurotic complications in connexion with uterine disease is more gradual, and is the outcome of the persistent and slow influence of minor ailments on an originally weak constitution. Take the common enough case of a lady after confinement with a heavy, subinvoluted uterus, possibly retroflexed, and with some endometritis. Under such conditions there is naturally pain, bearing down, and the like. The medical man properly advises rest, amongst other measures. He is not, however, always there to supervise the carrying out of his advice. The rest is taken, and gradually more and more, until the patient is eventually hardly ever off her sofa. With this soon comes the mischief which inevitably attends a case in which no steps are taken to deprive rest of its evils. As there is little or no fresh air and exercise, the appetite necessarily fails, and less and less food is taken. The patient becomes pale and etiolated like a hot-house flower, her bowels are deranged, her menstruation is irregular, her sleep disturbed, her muscles flabby, and in a word her body is thoroughly out of condition. She must have an exceptionally well-balanced mind if, under such circumstances, her nervous system does not become out of condition too, and then is started a state of things which must be familiar enough to you all. I suppose there is no practitioner of experience who cannot at once call to mind some example of this deplorable bedridden, neurotic condition, which is the curse of so many households, and which, for want of a better name, has of late received that of "neurasthenia." The name has been objected to by high authorities; why I do not exactly know. It has the objection common to all names which assume a theory about which there is a difference of opinion, but still it is sufficiently descriptive, and some name is required. The important thing, however, is to recognise the fact that there is a distinct and common morbid state, very insufficiently described in our medical works, which is not only a fruitful source of illness and misery, but which, when once thoroughly understood, is readily capable of cure. I should like to point out that this illness is by no means only, or even chiefly, a result or accompaniment of disease of the reproductive organs in the female. There are many other conditions, such as some exhausting form of illness, shock, mental distress, and the like, which may cause it. To-night, however, it is mainly its connexion with uterine disease that I am concerned with. When once this unhappy state is developed, it is like some noxious weed, which, by its unhealthy growth, completely overshadows the original malady, and becomes the main and all-important factor in the case. I am obliged to say, for I have seen many illustrations of the fact, that far too often medical attendance, however well meant, only makes things worse. Here, again, I do not for a moment impute any intentional fault, though lack of judgment there often certainly is. Undoubtedly the position of the ordinary medical adviser in such a case is most difficult. The friends naturally are constantly sending for their doctor. He, poor man, is at his wit's end; he must do something, and that something generally resolves itself into endless prescriptions, innumerable pessaries, visits to health-resorts if the patient is rich enough to afford them, and other equally futile recommendations, nine out of ten of which only make the patient go steadily from one depth to a lower one still. It is fortunate if, in these days of energetic operation, the desperate resource of removing the uterine appendages is not suggested or practised—a remedy the futility of which under such conditions I have recently elsewhere tried to prove, and on which I shall not now dwell. I should like to point out particularly that the morbid state thus developed is as far removed as possible from the condition generally described as "hysterical," if by that is meant something fanciful, within the control of the patient, and unreal. This class of case most often occurs in emotional, highly strung, and clever women, who have no desire to be ill, and who would give much to be strong and well if they only knew how. It is a positive injustice to most of them to assume, as is so often done, that they can throw off their invalid condition by an effort of will. They cannot be preached into health; the effort to do so only makes matters worse. The essence of this disease is a profound defect of nutrition, the gradual and progressive outcome of the long continued action of many causes. My main object to-night is to show how in one part of our work the risk of developing the disease may be foreseen and avoided by a little common sense. To show at length how to deal with this state of things when it is unhappily established would require much more time than I have at my disposal. It is by no means an easy task. It requires much time, patience, tact, and the access to certain machinery in the way of skilled nurses and the like. Until recently there were no established principles to guide us. Now and again a chance case may have improved; but, if so, it was certainly more by luck than good management. Happily that is no longer the case now. To that eminent American physician, Dr. Weir Mitchell of Philadelphia, undoubtedly belongs the merit of systematising a method of dealing with such cases, based on a common sense appreciation of their causes, so that they are no longer an *opprobrium medicinæ*, but are as readily curable as anything can be, provided only the treatment is intelligently and thoroughly carried out, and the cases properly selected.

ON KOCH'S TREATMENT IN TUBERCULOSIS OF THE LUNG AND IN LUPUS VULGARIS.[1]

BY G. A. HERON, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

I DESIRE, before touching upon the subject of our proposed debate to-night, to express my thanks to the Council of the Society for the honour they have done me in inviting me to open this discussion. I hope and believe that some good will come out of it, in the shape of a further clearing up of the position which Koch's remedy for tuberculosis is to occupy in clinical medicine. To the clear defining of that position nothing, it seems to me, will give so much help as a statement of what is seen to accompany and follow the use of this remedy in the human victim of tuberculosis. That being my belief, it is clearly incumbent upon me to state to the Society what I have observed in my own practice in hospital cases, and to travel as little as possible outside of my own experience in this matter. So much has been already stated in the medical press, both at home and abroad, concerning the uses of tuberculin, that were I now to attempt even to summarise, and to comment upon these records of a new subject, I should have to occupy much more than the whole of the time allotted to-night to our weekly meeting. What has been published concerning Koch's new remedy is, as a matter of course, familiar to all medical men who take interest in the progress of medicine. This branch of our discussion to-night should, I apprehend, come, for the most part, from those amongst us who have, from various causes, devoted themselves more to the study of the literature of the subject than to its investigation at the bedside.

The patients under my care at the City of London Hospital for Diseases of the Chest, were all subjected to the same rules, so far as was possible, both before and during the time that they underwent Koch's treatment. Many of the patients asked to have this treatment followed out in their own cases, and in no instance was it commenced unless the patient had previously expressed a wish to have it, and had spent at least one day, and, as a rule, two or three days, in a ward where several other persons were undergoing the treatment. The tuberculin used for these patients was sent to me fortnightly by Dr. Libbertz of Berlin, and it was therefore practically impossible that any error of consequence could have arisen in the important matter of the trustworthiness of the drug. The remedy was administered by means of Koch's syringe in the usual way—that is to say, it was injected under the skin between the shoulder blades and the line of the spines of the dorsal vertebræ, and with those antiseptic precautions which Koch himself practised. The doses ranged between 1 mgr. and 1000 mgr. in amount, and in cases of tuberculosis of the lungs were given, as nearly as possible, every day. Before the treatment of any case of suspected tuberculosis of the lung was begun, the expectoration of the patient concerned was searched daily for tubercular bacilli. No proof of the presence of the bacillus of tubercle was found, so far at least as the evidence

[1] A paper read at the meeting of the Medical Society of London, April 20th.

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of Ehrlich's test goes, in four of the cases of tuberculosis of the lung, and one of them had no sputum.

Following another of Koch's recommendations, the temperature of each patient about to undergo this special treatment was taken and recorded for two or three days before the first dose of the remedy was given. As the treatment of the case went on, this early record of what had been the patient's temperature, when it was uninfluenced by tuberculin, was found to be very useful for purposes of reference and comparison.

Choice of Cases for Treatment.

In my selection of cases for the purpose of ascertaining by their means the value of tuberculin as a remedial agent, I was influenced solely by the very explicit statement of his own views on that important matter, which Koch himself made to me for my guidance. In effect he told me that, so far as tubercular affection of the lungs is concerned, he hoped for the best results from his treatment only in cases in an early stage of that disease. By this, he explained to me, he meant cases where a small portion of one lung only was found to be affected to a slight extent, and where there was no evidence of excavation. That was the type of case in which Koch looked for cure of the disease. Where the tubercular condition was found to affect slightly, in the way already indicated, small portions of both lungs, there too a cure was reasonably to be expected. Any departure from these types of cases in the direction of increase of the extent of the disease lessened, by so much, in Koch's opinion, the chances of a cure, although even in more advanced cases amelioration of symptoms was, he believed, likely to result from the use of the remedy. It required, however, but a very brief experience to convince me that the sort of case which, in my opinion, expressed in its symptoms of disease what Koch meant by his description of cases likely to be cured, was a kind of case by no means common amongst the people who came to the City of London Hospital for treatment. And especially as regards the male patients was it remarked that, not only among the in-patients, but also among the out-patients, it was very uncommon to find examples of these very early stages of tuberculosis of the lungs. This fact was also observed by several of my colleagues in charge of the out-patient department, and who have to deal there with a practice which is considerably larger than that of any other similar hospital in London or elsewhere. Among the female patients one was now and then found illustrating perfectly, so far as I could judge, what Koch had described to me as the typical case for the use of tuberculin. In the dearth of such cases, it was often necessary to select, for this special treatment, those patients whose conditions of disease were least distant from those of the typical case. Thirty-seven patients were treated by means of tuberculin under my supervision in hospital. It is, of course, practically impossible for me to bring all those cases here to-night. I propose, therefore, to speak in general terms of them all.

To the thirty-seven patients with whose cases we have to deal (some of them are still under treatment), over 1200 injections had, up to April 7th, been given. The smallest number of injections given to any patient for purposes of treatment was eight; the largest number was, up to April 7th, sixty-six. The shortest residence in hospital of any patient who was treated there was twenty-one days, and three cases of lupus remain to-day under treatment, two of whom came into the hospital at the end of November, and one in the first week of December.

To the pain produced by the prick of the needle of the syringe all the patients soon became more or less indifferent. The minimum of pain from this cause is secured by using only smooth and sharp-pointed needles, and by completing the puncture quickly. In most cases the local pain of the puncture soon passes away, but often among the first injections it begins to return in from three to twelve hours or even later, and then it will be found to be among the early symptoms of the beginning of the reaction which is likely to follow the injection. This pain, when it sets in with the other symptoms of reaction, is sometimes very considerable in degree, and it may persist until the rise of temperature due to the reaction has passed away. In one case, which was an exceptional one, there were, in addition to this pain, redness and swelling extending not only from the site of puncture, but also from the little swelling which showed where the tuberculin had been expelled from the needle into the tissues. This swelling was hard throughout its extent, and very sensitive when even gently handled. In this patient these symptoms usually set in about eight or twelve hours after the injection had been given, and in thirty-six hours they had, for the most part, disappeared, leaving behind them only a slight sensitiveness to gentle pressure, and a little redness over the site of the swelling. These exceptional symptoms did not begin to show themselves until after the patient concerned had received four injections. After the tenth injection they became so trivial in amount that they were not noted, and they only once again showed themselves in a marked manner during the treatment of the case. This patient was an ill-fed-looking, undergrown girl of sixteen years of age, extremely susceptible to the action of the drug. Tubercular disease involved the upper part of both of her lungs, to about the level of the fourth rib on each side, and the glands on both sides of her neck. On the left side of her neck was an open sore, from which, before treatment was begun, there flowed a considerable discharge of pus. The sore was about the size of a florin—rather smaller.

In none of the thirty-seven cases, nor in any of the cases, was there ever, as a consequence of the treatment, any evidence of abscess. In several of these patients, after about forty injections had been given, the skin, which had been so often pierced by the needle, became somewhat indurated. This was shown by the increased resistance in certain spots to the passage of the needle through the skin, and by a feeling of toughness of the skin, when it was gently pinched between finger and thumb. This condition of skin was apt to be accompanied by an increase of sensitiveness to the prick of the needle. As a consequence of this in eight patients, five men and three women, the condition of whose backs was more or less troublesome, the injections were given below the skin over the deltoid muscle, and on the outside of the forearm just below the elbow-joint. In every instance, within two or three hours, the new site of puncture became red and swollen, and very tender when touched. Redness and swelling also appeared about the same time over the spot where the fluid had left the needle and entered the tissues. This was all the more remarkable, because no such symptoms had previously occurred in any of these eight patients while the remedy was administered between their shoulder blades. It would seem to indicate that a local tolerance of the drug had gradually been established at the earlier site of the injection while small doses of tuberculin were being given, which was wanting in the arm when, on first puncturing it, a large dose of the remedy was injected.

Some of the Points noted during Reaction.

Of the common features of the familiar reaction which often follows the administration of tuberculin I do not propose at present to speak, because they are already too well known to need further notice now. There are, however, certain points on which I may be allowed to dwell for a short time. From Nov. 23rd, when tuberculin was first used at the City of London Hospital, until a month after that time the temperatures of the patients undergoing the treatment were taken, as nearly as was convenient, every two hours during the day and night. As a rule, the thermometer was placed under the tongue in the usual way. The temperatures were taken with great care by Dr. Adamson and Dr. Scott, who for more than three months acted as my house physicians in connexion with this special work, and of whose devotion to their duties I cannot speak too highly. It was very soon evident, from observations made in the wards, that temperatures taken in the mouth are more liable to error than those taken in the axilla or in the rectum. This was found to be especially the case when the temperatures were taken during the night. The thermometers when placed under the patients' tongues were occasionally found to register too low a temperature. It was noticed that patients who had been sleeping with their mouths open, or who had, as sometimes happened, drunk a little cold milk or water just before using the thermometer, returned temperatures of between 95° and 96° F., when their temperature in the axilla was ascertained to be a point or two above 97° or below 98°, and in the rectum below 99°. Dr. Adamson, who is a healthy man twenty-five years of age, found that the temperature under his tongue was only 95° in the morning after his cold bath, and that the thermometer remained persistently at that point until he sat down to breakfast, about a quarter of an hour after he had

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bathed. After that meal, the same thermometer placed under his tongue rose to the ordinary temperature of the body. These low temperatures were taken or checked by instruments tested at Kew. Of course the patients to whose temperatures reference is here made were, as a rule, more or less under the influence of tuberculin; and many of our observations show that temperatures of from 96·6° up to 97° are not very rare in such cases, especially when the temperature has reached its lowest point after a reaction. These low temperatures generally occurred between midnight and 4 A.M., and were not noticed to bring with them symptoms of any kind. What has just been said was well illustrated in the case of a girl of fourteen years of age, referred to in THE LANCET and *British Medical Journal* under the initials H. D.

Another case, also mentioned by those journals, is that of B. W——, a man aged twenty-two years, whose temperature, instead of rising, habitually began to fall in five or seven hours after the injection of tuberculin, and often reached as low a point as 96° in from nine to twelve hours after the injection. In this case twenty-seven injections of tuberculin were given in six weeks, in doses beginning with 2 mgr., and ending with 100 mgr., which was the amount given in each of his last ten doses. On three occasions only did this patient's temperature rise above 99°; once it rose to 99·8° after a dose of 5 mgr. of the remedy, and on two occasions well-marked reactions followed the injection of 100 mgr.

Another patient, F. S——, a man twenty-two years of age, received fifteen injections in fifteen days, in doses ranging from 2 mgr. to 20 mgr. He never showed any symptom clearly caused by the remedy, for his temperature only once reached as high as 99·8°, and on only three other occasions it touched 99·6°, a point to which, however, it had risen before he began to use tuberculin. On two occasions he had very trivial headache, but it could not be certainly ascribed to the use of the remedy. He left the hospital because the treatment did not affect him as he saw it affect others.

These two cases were instances of tuberculosis of the lungs, and in both of them tubercular bacilli were found repeatedly, and in large numbers, in the sputa. F. S—— is an undoubted illustration of the fact, that certain cases of well-marked tuberculosis of the lung do not react in an unmistakable way to tuberculin in moderate doses. In addition to the fact that F. S—— had numerous tubercular bacilli in his sputum, all the time that he was in the hospital, the physical signs of his disease were plainly marked, and indicated, surely, tubercular infiltration of about one-third of the left lung in its upper part; and one or two patches of crepitation in the same lung towards its base were due, in all probability, to the same cause.

Very severe reactions with high temperatures are, as a rule, consequences of large doses of tuberculin given at the beginning of treatment. Where treatment is commenced with doses of 1 or 2 mgr. it is exceptional, in my experience, to find that there result either very high temperatures, or other symptoms of very severe reaction. Therefore I have seen, in my own practice, very little indeed of those symptoms of apparently serious depression which have often followed the administration of tuberculin. In only one of my patients have any of these symptoms been present. That was an instance of lupus in a young girl twenty-one years of age, whose case is referred to in THE LANCET and *British Medical Journal* under the initials L F. Hers was the first case treated by means of tuberculin in this country. Following the Berlin practice, I began her treatment with a dose of 10 mgr. The reaction which followed was moderately severe, and it was only on the sixth day after the giving of the injection that the temperature again touched the normal line. Twenty-four hours after the administration of the tuberculin, the temperature in the rectum was 104°. On the ninth day of treatment a second injection was given. The dose (10 mgr.) was taken from the same specimen of tuberculin which had been used for the first injection. Eight hours afterwards the temperature in the rectum was 105·8°. That high temperature had been preceded by three severe rigors, great nausea, and delirium, besides the ordinary symptoms of a severe reaction. I had seen in Berlin several reactions to tuberculin more marked by nervous symptoms than was the case here. This experience, however, decided me never again to begin the use of tuberculin by the administration of a large dose of it, and so 5 mgr. of the drug have since then marked the limit of my largest first dose, for, as occurred in this instance, and as indeed often happens, much more violent effects are apt to follow the second dose of the remedy than have resulted from a first dose of it of the same strength. I have been guided in increasing the dose in all cases, more by the presence of such symptoms as rigor, nausea, vomiting, headache, and marked joint pains than by a rise of temperature unaccompanied, to a moderate extent, by any of these symptoms. The dose should never be increased until tolerance of the dose in use is shown to be established by the absence of these subjective symptoms, and then the dose can be increased by 10, 20, 50, or even, towards the end of treatment, by 100 mgr. daily. With proper attention to these points I am strongly of opinion that tuberculin can be administered with safety.

There was in this case of L. F—— another condition which was often seen amongst my cases in a modified form, but only in her case were its characteristics markedly exaggerated, especially on three occasions. This condition has been noticed by others, and its chief features are marked increase of the rate of respiration, with a striking softness of pulse and of radial arteries. The pulse-rate was not at these times materially quickened in this case, nor was it irregular. It varied then between 72 and 96, while the respiration numbered from 60 to 96. There was no dyspnœa, but merely extreme rapidity of breathing, which recalled to my mind what we have all noticed in dogs on a hot summer's day, when they sit panting in the sunshine, with the exception that, of course, the patient's tongue was not protruded. If a dog in this condition have his attention arrested by any cause, he ceases for the time to breathe quickly. So it was with my patient, because when she was spoken to while in this condition the rapid breathing ceased at once, and she conversed without effort of any kind, and in her usual tone of voice. It seemed as if she breathed in this way because it was a comfort for her to do so. She has not shown any symptom during the five months that she has spent in hospital which, in my opinion, could be called hysterical. The symptoms referred to above occurred as a rule while the temperature was between 101° and 102°, and falling after a reaction and after all other subjective symptoms had passed off. These special features first showed themselves prominently thirty-four hours after the administration of the second dose of tuberculin, then the pulse was 96, and the respirations numbered 60 per minute. On another occasion the pulse was 96 and the respiration 90, and on a third occasion the record stands: pulse 72, respiration 96. These symptoms lasted from half an hour to less than an hour at a time. The instances just quoted are the most marked ones, but putting pulse-rate first and that of respiration second, 50 and 30, 60 and 24, 130 and 60, 120 and 40, were rates often noticed in the case of L. F. These conditions were unaccompanied by any other symptoms.

(To be concluded.)

THE IMPORTANCE OF THE POST-PROSTATIC (OR TRIGONAL) POUCH IN THE SURGERY OF VESICAL CALCULUS, ILLUSTRATED BY SEVERAL CASES.

BY G. BUCKSTON BROWNE.

(Concluded from page 863.)

THE next illustrative case is also one where the stone was of remarkable shape, being like half a bird's nest, with a loose stone like a bird's egg in it. The calculi consisted of solid uric acid, the larger one in reality presenting a cast of a not very deep post-prostatic pouch.

CASE 4.—P. B——, aged seventy. Seen with Dr. G. D. Thane, November, 1888. The patient suffered from great irritation of the bladder. He was often disturbed every ten minutes to pass urine; riding in a carriage caused great distress, but there was no pain after micturition, and blood had never been seen in the urine. I sounded him, found a stone, and thought that perhaps there were several stones. Three days after the patient was anæsthetised, and the stone seized with a lithotrite, but I was at once conscious that the calculus was fixed and not free in the cavity of the bladder, and therefore at once proceeded to supra-pubic

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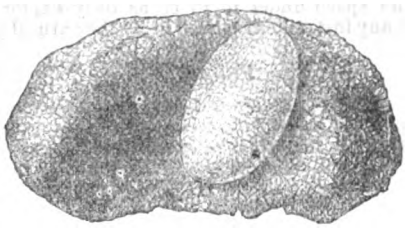
lithotomy. When the finger entered the bladder I had reason to congratulate myself upon the decision, for there was a cup-shaped mass of uric-acid stone (Fig. 6) lying underneath a prostatic projection together with a small free uric-acid stone. It would have been impossible thoroughly to crush and evacuate this stone by lithotrity, it was far too firmly and too deeply fixed. I removed it with a scoop,

FIG. 6.

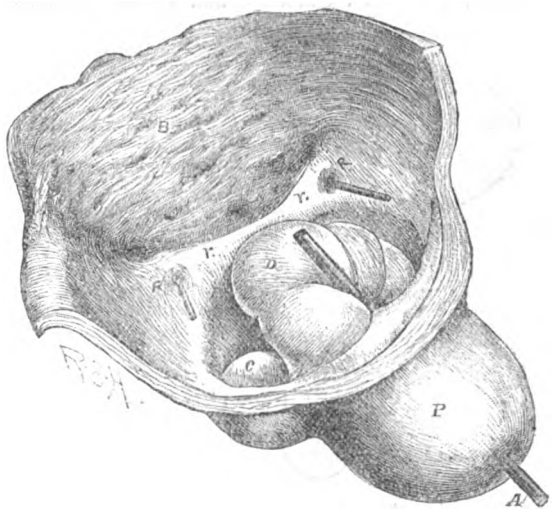


and the patient made a good recovery, and he has remained well ever since. The larger stone presents anteriorly a cup-shaped hollow, in which the intra-vesical prostatic projection lay.

The following case is of perhaps greater professional interest than the others, for the patient had been in several hands before he came to mine, and during the time he was under my care I had occasionally to contend with the greatest difficulties due to the depth of the post-prostatic pouch; owing, however, to the fact that this condition was thoroughly realised, these difficulties were always successfully overcome. When at last the patient died, I was allowed to examine the parts concerned; and am therefore able to give a complete account of the case.

CASE 5.—B. V——, aged seventy, seen with Mr. H. Fraser Stokes. Retention of urine, Aug. 1887, and ever since all by catheter. In July, 1888, Mr. Stokes wrote asking me to see the patient, and saying: "He has been sounded several times by Mr. —— and Mr. ——, and by myself, and nothing can be detected." On the 24th I visited him. The catheter was passed every three hours; there was much spasm and great pain in the penis; the urine was acid, with much pus; sp. gr. 1018. I sounded, and at first felt nothing; but after a little search found a stone, apparently on the floor of the bladder. On July 27th Mr. Moss administered ether, and I seized a medium-sized stone with reversed blades and crushed it. The operation was satisfactorily completed, and the patient made a very good recovery. The stone weighed 2 drachms 25 grains, and consisted of an oxalate centre with phosphatic incrustation. January, 1889: The patient had been very well, going six hours between his catheterisations, but he now complained of pain before and after using the catheter. He was sounded, nothing found, and the bladder washed out with a No. 16 tube and lithotrity aspirator, obtaining no result nor hearing the smallest rattle of stone against the end of the tube. The symptoms continuing, I was asked to sound him again, and on Feb. 5th did so, and found a stone apparently on the floor of the bladder, and withdrew the sound. Mr. Stokes, who was standing by, said he had not heard the stone, and asked if I would let him hear it. So the sound was reintroduced; but no stone could be felt, nor was it until after careful search had been made for several minutes that the beak of the sound seemed to find its way into a pouch on the floor of the bladder, and immediately there encountered the stone. Next day lithotrity was performed. The stone was difficult to find, but was seized with reversed blades, and then carried into the cavity of the bladder. While held there we discussed the question of performing lithotrity or of opening the bladder above the pubes, and we decided in favour of the former. The stone was therefore crushed and entirely removed, a rectal bag being introduced into the bowel to press up the floor of the bladder, and to prevent as far as possible débris from falling into the pocket behind the prostate. The patient made a good recovery, and continued very well and active until October, when he began to experience again a little pain after catheterism. On the 25th I sounded and found stone. The urine was very offensive, and there was much spasmodic pain before and after catheterism. Next day lithotrity was performed, and two calculi were successively picked out from the pouch on the floor of the bladder, with which I was now very familiar. Great pains were taken to evacuate every particle, and no trace of more stone in any part of the bladder could be felt; and although the patient's consent had been obtained to supra-pubic cystotomy, if necessary, we thought it well to be content. Unfortunately he was not at all relieved by this operation, and the spasms continued before and after each catheterism, which had to be performed every hour. This went on until Nov. 4th, when he was so ill that I decided to open the bladder, and next morning performed the usual supra-pubic operation. Directly the finger entered the bladder it found an intra-vesical prostatic growth as large as a chestnut, growing from below and rather to the right of the vesical urethral orifice; and under the growth, at the bottom of a deep pocket, there was a calculus as large as a pea. The prostatic outgrowth offered itself temptingly for removal, but taking into consideration the patient's weak state we reluctantly left it alone. He was so ill afterwards with vomiting and hæmatemesis that we were very glad we had done so. He slowly recovered, and on the 29th the wound was firmly healed. During the middle of December he had a severe attack of right renal colic, and on the 21st I washed out of the bladder a distinct calculus through a No. 15 evacuating lithotrity tube. During January, 1890, he enjoyed good health, frequently held his urine seven hours, and was entirely free from pain. On Feb. 1st he had another severe right renal colic with rigors, and gradually passed into a dying condition, and sank on Feb. 12th. On Feb. 14th I made a post-mortem examination, and obtained the bladder and prostate shown in the engraving (Fig. 7). A stone has been put in to show where the stone lay

FIG. 7.



A, Piece of bougie lying in urethra. B, Bladder wall—post-trigonal pouch. C, The calculus. D, Intra-vesical prostatic growth. P, The prostate. R R, The vesical openings of the ureters. r r, Inter-ureteral ridge.

during life, and it will readily be seen why difficulty was so frequently experienced in the detection of the successive calculi and in their removal through the urethra, and how it was that one calculus was never touched until the bladder was opened supra-pubically. The intra-vesical prostatic growth completely roofed over the post-prostatic pouch, and was practically in contact with the well-developed inter-ureteral ridge, so that exploring instruments were only with great difficulty, and even uncertainty, passed into the pouch. At the post-mortem examination, the deep post-prostatic pouch was entirely free from calculus. The ureters were only slightly dilated, and the right ureter was almost blocked by a calculus about an inch below the kidney. This was the only stone to be found. The kidneys were congested and passing into an interstitial suppurative condition. This patient evidently from time to time passed stones into his bladder from his right kidney, which were trapped by the post-prostatic pouch—indeed, they had not a chance of escape by the urethra. It was unfortunate that his vital powers failed when they did, for there was only one more renal stone to be passed, and that was engaged in the ureter at the time of his death.

CASE 6.—The stones in the case just related were only small, and it may be urged that that was one reason, at any

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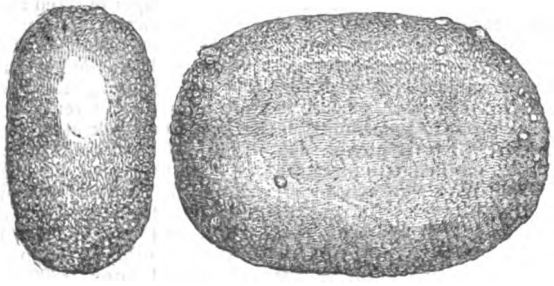
rate, why they were not easily found, but really large stones sometimes lie in this pouch and escape detection. Fig. 8 represents a calculus weighing thirteen drachms and a half, which I recently removed by supra-pubic lithotomy from a patient aged eighty. He lived eight weeks after the operation. The stone was hidden away in a post-prostatic pouch.

FIG. 8.

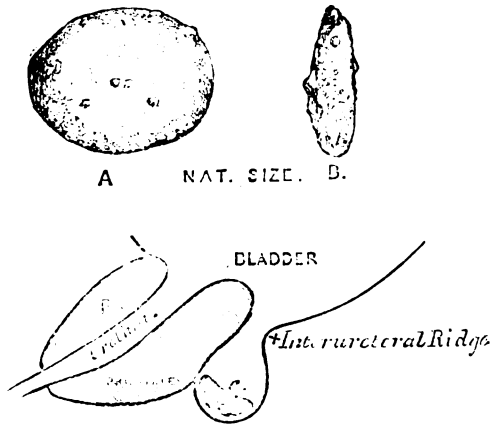


A. B.

An excellent surgeon had within a few months performed lithotrity in the general cavity of the bladder without, it may fairly be assumed, ever touching this large calculus.

The next case (Case 7) is one of a uric-acid calculus weighing fifty grains, and shown in Fig. 9, which I entirely failed to find by sounding, in the bladder of a gentleman aged eighty, although I examined him thoroughly three

FIG. 9.



times, once when he was anæsthetised, using lithotrity tubes and aspirator and sounds of various sizes and curves. My conviction that he had a stone was, however, not shaken, and as his sufferings were severe he submitted to supra-pubic cystotomy. On entering the bladder with the finger the stone was found with great difficulty, owing to the depth of the post-prostatic pouch in which it lay. The diagram represents the parts as I found them. This case is an important illustration of what I maintain to be a fact—viz., that vesical calculus may exist under such conditions as to be absolutely out of the reach of all instruments introduced through the urethra.

If time and space permitted I could give further examples of a more ordinary character from my practice, where I and others have failed to find stones when sounding in the usual way, owing to their lying in post-prostatic pouches. In one case the bladder was opened by lateral perineal cystotomy for drainage and exploration, and the stone was not felt by the staff or detected until the finger entered the bladder; but I think enough has been related to illustrate the importance of the post-prostatic pouch in the surgery of stone in the bladder, and to prove the two propositions with which I commenced this paper.

The practical outcome of my paper is therefore—1. The insistance in all doubtful cases of vesical suffering, where the prostate is enlarged, upon careful search being made behind that organ. In sounding in such cases it is not enough merely to reverse the beak of the sound, but thorough examination must be made, with the reversed beak, for the slit-like opening between the intra-vesical prostatic growth and the inter-ureteral ridge, which may be the sole means of access to a large post-prostatic pouch, when such a pouch exists. For this investigation a sound I have designed with a beak like a flat-bladed lithotrite will be found useful. The broad flat beak is easily reversed when in the bladder, and it slips with greater facility than the beak of an ordinary round-ended sound under the projecting lobe of the prostate, allowing the space under it to be as fully explored as is possible by any instrument passed in by the natural passage.

FIG. 10.

Bladder sound, with broad flat beak (the author's).

Help may sometimes be afforded in this exploration by introducing a rectal bag into the bowel before sounding, or by an assistant making upward pressure with his finger in the rectum. The endoscope, as in too many of the really obscure troubles of the bladder, is here of no use; nor is distension of the bladder with fluid, which in the case of a post-trigonal pouch is always useful, of any avail when the stone lies concealed in a post-prostatic pouch. 2 When there is reason to believe that there is a deep post-prostatic pouch it will be well, save in very exceptional cases, not to attempt lithotrity, for it is when performed under such conditions that lithotrity is likely to be discredited, because it may be impossible to clear the pouch of all stone by instruments passed in by the urethra. Case 4 is a good example of this. Here lithotrity was abandoned in favour of supra-pubic lithotomy. It is reasonable to believe that such a stone, situated as it was under a projecting prostatic mass, could not have been entirely removed by lithotrity, and the result has justified the decision, for the patient has had no return since the operation, two years and a half ago, of calculous troubles. 3. Finally, when calculous symptoms and vesical distress continue in spite of treatment, and no stone can be found by the usual methods of examination through the urethra, and also in cases where a stone is found, but lying deeply in a post-prostatic pouch, it is urged that the bladder should be opened by supra-pubic incision in preference to all others, for, combined with firm upward rectal pressure, the surgeon thus obtains complete command over the post-prostatic pouch, such command indeed as can be obtained by no other cystotomy, while at the same time it is incomparably safer than any perineal operation, being almost bloodless, in cases which by their very nature (great prostatic enlargement) are certain to bleed freely if any incision is made from between the legs.

THE ELECTRIC BATH.

BY W. E. STEAVENSON, M.D.CANTAB., M.R.C.P.,
IN CHARGE OF THE ELECTRICAL DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.

(Concluded from page 872.)

Lateral sclerosis.—This is another affection that appears to be greatly benefited by electric baths. The bath is given in the way already described for giving a general galvanic bath. The direction of the current is not specially indicated in the treatment of most affections by the electric bath, but in rheumatoid arthritis and lateral sclerosis the positive pole should always be placed at the head of the bath, so that the current enters the spinal cord between the shoulders. It seems to have some specific action upon the cord, and in the case of lateral sclerosis appears to reduce the tendency to increased reflex excitability. Under this treatment the spastic gait is improved, and the tendency to tonic spasm in the limbs reduced. Early experience led to the belief

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that these cases of spastic rigidity, accompanied by severe tremblings and sudden contractions of the limbs in bed, were more amenable to treatment when the result of injury to the brain or spinal cord by direct violence, but latterly cases due to lateral sclerosis and descending irritative lesions of the lateral columns have also been found to greatly improve by treatment with electric baths.

Metallic poisoning, plumbism, &c.—A method of removing poisonous metals from the body by means of an electro-chemical bath has been employed. The method was introduced by Vergnés of Havannah. He had a bad ulceration on his hand, produced by metallic irritation in consequence of the process of electro-plating. He connected his hand with the positive pole of a battery, and placed it in a bath, and immersed in the bath a metal plate connected with the negative pole. After a current of electricity had been flowing for fifteen minutes, he found that the negative plate had on it a thin film of gold or silver. He repeated this hand electric bath a few times, and found that his ulcer healed. For the removal of metallic impurities from the body, it is best to use a bright copper bath, which is attached to the negative pole of a battery, the patient holding out of the water a handle covered with house flannel (Fig. 7), first in one hand and then in the other, for eight or ten minutes, or the patient may grasp the metal rod before mentioned; but the rod cannot be allowed to rest on the sides of the copper bath; it must have some special insulated supports, and be connected with the positive pole. When the metal is lead that has to be removed from the body, the water in the bath has to be acidulated with sulphuric acid. When gold or silver is to be removed, then the water should be acidulated with nitric acid. When a copper bath is unobtainable, a porcelain one may be used with a large sheet of copper immersed in the water, and connected with the negative pole. The current enters the patient's arms, passes through his body and then to the copper, taking with it the metal, and depositing it on the surface of the bath or copper plate. Some of the metallic poison is also said to remain in the water, and to be capable of detection in the air of the room from evaporation.

Mercurial tremors are also treated by electric baths. As many as five and twenty have been required to produce a cure, but *alcoholic tremors* can often be cured by six or eight baths.

The introduction of medicinal substances, chiefly metallic, into the body, has been recently revived by Dr. Cagney of St. Mary's Hospital. The system was advocated and practised by Vergnés in 1855. He employed phosphate of iron and nitric acid. The patient was made to sit in a bath containing a solution of one of these substances, and the bath, or the solution it contained, made positive, the patient in this instance holding the negative pole out of the water. The current has to pass through the water into the patient, and out at the arms; in its passage it carries some of the substance in solution into the patient. Drs. Beard and Rockwell say "there is little question that the passage of the current through the body immersed in certain medicated solutions aids in the absorption of some portion of the compound."[1] Weakly and anæmic patients might in this way be made to absorb phosphate of iron.

Dr. Cagney in his recent paper referred to the experiments of von Bruns and Hermann Munk.[2] A saturated solution of the substances experimented with was placed in two of Dubois' conducting tubes, and the tubes closed with pieces of clay soaked in the solution; they were then applied to the part of the body it was especially wished to influence. The direction of the current was reversed every five or six minutes, because more is absorbed by this means. If the current is continued too long in the same direction, it is retarded through polarisation taking place in the tissues. It is therefore necessary to charge both electrodes with the solution it is wished should enter the patient. The current should be fairly strong and kept flowing for from fifteen to forty-five minutes. A considerable quantity of a drug can by this means be introduced into the system, and it is introduced in a nascent state, and therefore in a condition of maximum activity; traces can be discovered in the saliva and urine for several hours afterwards. The drug which gives the best results when administered in this way is the iodide of potassium, and when only one charged electrode can be used it should be attached to the negative pole, because the iodine is electro-negative and has a tendency to travel towards the positive pole. It is the iodine which can be successfully introduced in this way; for instance, in goitre or strumous glands. It has also been used in cases of labyrinth deafness and in lead palsy,[3] also in syphilitic gummata and diseases of the skin. Iodide of potassium can be employed in this way when it disagrees with the stomach, and the effects of the iodine can be more distinctly localised.

Raynaud's disease.—The electric bath is most useful in all cases of bad circulation, including those cases of local asphyxia described as Raynaud's disease, in which the extremities often become blue and very liable to chilblains, and sometimes become gangrenous. The galvanic bath is the one to be employed, and should be used as previously described. (See pp. 710, 711.) The patient's general nutrition and circulation will be found to have improved at the end of a course, and the tendency to chilblains lessened. The complete bath is the best, but Dr. Thos. Barlow, in his appendix to the translation of Raynaud's two essays on Local Asphyxia,[4] recommends local arm electric baths in the following words:—"The use of the constant current, as recommended by Raynaud, has been adopted with advantage by several observers in cases of local asphyxia. The method which has been found most satisfactory by the translator in four separate cases has been the following. Immerse the extremity of the limb which is the subject of local asphyxia into a large basin containing salt and water; place one pole of a constant current battery on the upper part of the limb and the other in the basin, thus converting the salt and water into an electrode. Employ as many elements as the patient can comfortably bear; make and break at frequent intervals, so as to get repeated moderate contractions of the limb. In a typical paroxysmal case, if the two limbs are similarly affected, it will be found that the limb which is subjected to the above treatment will more rapidly recover than the one which is simply kept warm. It will also generally be found that the patient can tolerate the above mode of stimulation much more readily than he can bear friction with the hand, and that the use of galvanism in the way indicated, or by simply 'painting' with two sponge electrodes held on the limb at a short distance from each other, will so far diminish the pain that the patient becomes able to bear shampooing afterwards. In chronic cases, although the relief is not so obvious, there can be no doubt at times as to the value of this measure in improving the nutrition of the limb and in keeping the threatened gangrene at bay. Even when gangrene in the limited form which Raynaud describes has supervened, galvanism to the parts above and around may be tried with advantage. Shampooing ought certainly to be employed in conjunction with galvanism, especially in the chronic cases in which the extremity of the limb undergoes a degree of atrophy, or in which contractions and fibrous ankylosis take place." If the local arm bath is used, it is best that the electrode out of the water should be applied to the nape of the patient's neck so that the whole nervous supply of the arm may be in the circuit. When the complete bath is employed there should be no breaking and making of the circuit, for if this were done the patient would receive a most unpleasant shock, and there seems to be no particular advantage to be attached to the direction of the current.

Sciatica and lumbago are sometimes treated by electric baths, but much better results can be obtained in the treatment of these affections by applying electricity locally.[5] The monopolar galvanic bath might prove very useful in the treatment of some obstinate forms of *neuralgia*. It is hardly applicable to the treatment of neuralgia of the sciatic nerve, as it would be difficult in a bath to keep the region over the sciatic nerve out of the water, but in cases of cervico-brachial neuralgia, or facial neuralgia, a labile application with the positive pole might easily be made to the painful area. Galvanism applied in the ordinary way is, perhaps, the best means we possess for treating sciatica; it is unnecessary, and certainly less satisfactory, to complicate the treatment by applying it through the medium of a bath.

Therapeutical uses of the interrupted current bath.—As a

[1] Medical Electricity, p. 738.
[2] Erb's Electrotherapeutics, translated by De Watteville, p. 127.
[3] Dr. Cagney: Brit. Med. Jour., Nov. 16th, 1889, p. 1102.
[4] Selected Monographs. Translation published by the New Sydenham Society, pp. 198, 199.
[5] Vide THE LANCET, Jan. 19th, 1884, p. 105; and July 17th, 1886, p. 113.

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general tonic the interrupted current bath is preferable. It can be used most beneficially in many hysterical conditions and in neurasthenia, and may with advantage be combined with massage. The secondary current can be more easily regulated than the primary, and is the better stimulant. Its use is indicated in hysterical affections. The faradaic bath is also of use in alleviating the distress connected with the discontinuance of the morphia habit. The following conclusions have been arrived at by the various observers on the effects of the galvanic and faradaic electric baths:—"Metabolism is promoted considerably by the dipolar, slightly by the monopolar, bath (Lehr); and there is increased secretion of urine. Appetite and digestion are improved. The genital functions are stimulated. Circulation and nutrition are benefited, sleep notably restored, and new vigour imparted to the mental and physical faculties. In short, the electric, and especially the faradaic, bath is credited by all with powerful invigorating and refreshing action upon the human frame."[6]

"There can be no doubt as to its efficacy in states of debility and impaired nutrition, and especially in the various functional neuroses—e.g., neurasthenia of any kind, and particularly sexual neurasthenia, nervous dyspepsia, palpitation, hysteria, hypochondria, Basedow's disease, &c. Further, it is beneficial in tremulous states (mercurial and alcoholic tremor, &c.), and even in paralysis agitans, where it will effect at any rate a decided alleviation of symptoms. It has been known to do good in the spasms and rigidity of hemiplegia and spastic spinal paralysis (Lehr)." "In muscular rheumatism and old and chronic forms of articular rheumatism it has been given with great advantage (Bouillon-Lagrange, Barth, Schweig, Lehr)."[7]

THE PREVENTION OF OPHTHALMIA IN THE NEW-BORN.[1]

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THERE are few things more sad in my experience than to witness infants of only a week or two old brought for treatment with one or both eyes either already lost or irreparably damaged. Nor is this feeling rendered less by the reflection that the disease which has led to such dire results could have been in the first instance prevented, or if that opportunity had passed, timely treatment would have brought about recovery of sight. The subject is a distinctly obstetrical one. Therefore, though my own practice lies clear of obstetrics, I offer no apology for bringing it under the notice of those who either as specialists or as general practitioners must feel an interest in a matter of so much concern. The importance of the subject will not I think be contested. A moderate estimate gives 30 per cent. of all cases of blindness as due to this disease alone. The census of 1881 gave the total of blind as 22,832, and therefore no less than 7000 of this number must be considered as being rendered blind from ophthalmia neonatorum; 30 per cent. is, however, a rather low proportion—my own statistics place it higher. I have kept a record of all children admitted into the Sheffield School for the Blind since its opening. I find that after excluding three (which were not seen by me, or for some other reason) there is up to the present a total of 116. Of these in no fewer than forty-six can the cause of their blindness be traced to the disease of which we are speaking—a percentage of 39·6. The *employés* at the workshops of the Institution for the Blind give a rather lower estimate. These are adults; and causes such as accidents, and to which I need not further here refer, have come into force which had not done so, or in a less degree, in the cases of the children. But with this deduction the proportion is left at fully one-third of every hundred blind that I have examined at the two institutions. But mention has been made thus far only of those who have been rendered blind in both eyes, and have in this way become fitted as inmates of or workers at a blind institution. What means have we of estimating the number of others suffering from the loss of one organ, or with one or both more or less damaged?

It is needless to discuss now the means of treating the disease when once it has been set up. It is sufficient to say that it is recognised that, if adopted promptly, treatment is eminently satisfactory. My object is rather to deal with the important question of prevention. The present is peculiarly a time for preventive medicine and surgery, and in few instances can, I think, there be found a brighter field for recognising and obviating the causes of disease than the affection which if neglected leads to the disastrous results already set forth.

We may divide the subject into two portions. 1. Prevention of the disastrous results of the disease. 2. Prevention of the onset of the disease.

1. *Ignorance as to the nature of the malady.*—The ignorance prevailing as to the serious character of the disease is great. Much, then, can be done by diffusing information as to the dire effects of neglect of early treatment. The Ophthalmological Society some years ago appointed a deputation to wait upon the Local Government Board, with the object of obtaining the assistance of the Poor-law and birth registration organisations. It was proposed to cause the distribution of a paper at the time of birth registration with brief directions setting forth the gravity of the affection and the need for early treatment. This, however, led to no result. But in the absence of an elaborate scheme much can be done in simpler ways. For instance, for the last few years every parent or friend bringing an infant suffering from ophthalmia neonatorum to the Sheffield General Infirmary has been presented with a card with directions somewhat similar to, but more brief than, those suggested by the Ophthalmological Society. They are desired to preserve it and to show it to their friends. It reads as follows:—"*Important:* If a baby's eyes run with matter and look red a few days after birth, take it at *once* to a doctor. *Delay* is dangerous, and one or both eyes may be destroyed if *not treated* immediately." The words in italics are printed red. Dr. Swan M. Burnett of Washington, who wished me to furnish him with samples of this card, has recently written an article[2] in which he urges the distribution of one similar to it by the Health Department, District of Columbia. In Bradford, Dr. Bell has secured the voluntary assistance of the registrars, in distributing a slip with directions of similar import (copy of directions of Ophthalmological Society) attached to the birth certificates. Copies have also been sent to me of a slip of printed directions, which is being distributed by the registrars (I think) in Scotland, but I do not know how widely. By all these means we shall by degrees extend a knowledge of the gravity and of the curability of the disease. I do not think we need as yet quite give up the Local Government Board. In a discussion on this subject at the British Medical Association meeting at Leeds last year, I suggested the adoption in the Ophthalmological Section of a resolution,[3] probably on the same lines as that arrived at by the Ophthalmological Society, and then getting it adopted at a general meeting, as, indeed, has been done on previous occasions—notably the subject of colour-blindness in railway and marine *employés*. Action by so powerful an association should have much more force than that of an isolated society, however eminent.

2. *Prevention of the disease.*—I cannot doubt that much of what I am about to say must be quite familiar to many or probably most of you. I do not hesitate to make these observations, however, because an inspection of works on midwifery, manuals for midwives, and nursing books would appear to indicate that, whatever the authors themselves might know or practise, they have certainly failed in these works to inculcate either the importance of using means for preventing the disease or insisting on its recognition and immediate treatment. I cannot and do not pretend to have searched all works, but I have had the assistance of friends in forming the conclusion I have done. My views, moreover, find support from

[6] Erb's Electrotherapeutics, translated by De Watteville, p. 280.
[7] Ibid., p. 28

[1] A paper read before the North of England Obstetrical and Gynæcological Society at Sheffield, June 20th, 1890.

[2] Medical Record, Feb. 12th, 1890.

[3] At the annual meeting at Birmingham in August, 1890, the idea was so far acted upon that a committee, consisting of the President of the Section (Mr. Lloyd Owen), Dr. Grossman, and myself, was appointed to prepare resolutions for the next annual meeting.

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the article of Dr. Swan M. Burnett, to which reference[4] has already been made. He says, "I am not aware to what extent the teachers of obstetrics in our schools throughout the country dwell upon the importance and necessity of the prevention and early and prompt treatment of this affection, but I have had an examination made into the text-books on Midwifery, from some of which the American student is expected to obtain the knowledge requisite for the proper care of the lying-in chamber. Dr. Gill, resident of the Emergency Hospital, who was kind enough to make this research for me, found that in more than thirty standard works on obstetrics in English in the library of the Army Medical Museum there were only four which considered the preventive measures of which we have spoken. These were the Encyclopædia of Obstetrics and Gynæcology, and the treatises of Barnes, Lusk, and Cazeaux and Tarnier. In only six others, and they were mostly old works, was there any consideration given to the treatment of the disease when once it had been established." It appears to me of the highest importance that in lectures, text-books for students, as well as for midwives and monthly nurses, reference should prominently be made to the disease and its prevention and treatment. Credé showed several years since (1881) at Leipzig how prevention was much more within the range of the obstetrician than the ophthalmologist. The plan he advocated, as is now well known, was directly the umbilical cord was severed, the eyes were cleansed, and a two-per-cent. solution of nitrate of silver was dropped into the eyes. By this means he succeeded in reducing the percentage of the disease from thirteen to less than one per cent., and with even better results later. Others have witnessed to the efficacy of this method, which is practically an absolute preventive of ophthalmia. Credé thought at first that the child became infected during birth from the maternal secretions. With the object of overcoming such influences, injections of carbolic and salicylic acids were used before and at the time of delivery. This, however, appeared to diminish but not abolish the disease. Hence his resort to direct cleansing of the eyes, as before mentioned. His opinion, moreover, is supported by others. Ludwig Korn[5] discusses this subject, and goes further than Credé. The method he employed at the Dresden Clinic for Women was thorough irrigation with solution of perchloride of mercury; during parturition the irrigations were repeated several times before and after every digital examination. As soon as the head was born the eyelids and surrounding parts were scrupulously cleansed by means of cotton soaked in hydrant water. Especially all the smegma was removed. The cotton was rubbed from the outer to the inner canthus, until the lids were perfectly clean. It was tried to prevent any opening of the eyes until the cleansing was finished. The results were very good. But as it seemed evident that no infection could take place during the passage of the child, the irrigations were gradually dispensed with. When no examination was made, no sublimate was used; and as it was thought that no infection took place during the birth of the child, nitrate of silver was not used. Irrespective of the cleansing of the parturient mother, the eyes of all infants born in the clinic were washed in the manner spoken of. The results were excellent. Three cases of ophthalmia only occurred in 1000 instances—one in the last 700, and not one in the last 420. I was able to mention in a paper on this subject, read before the Yorkshire Branch of the British Medical Association[6] in February, 1888, that previously to the publication of these observations of Korn's a very simple but efficacious plan had been in use at the Jessop Hospital for Women in Sheffield. I was indebted to Mr. J. M. Willey, late house surgeon, for kindly supplying me with the particulars, which I then gave as follows:—"The patients are among the poorest; some are inmates of the hospital, but the great majority are confined at their own homes. The midwives have received instructions that immediately the head is born attention must be directed to the baby's eyes. Then with little pieces of lint moistened in tepid water the eyes are carefully washed, as well as the eyelids and parts adjoining. Subsequently in washing the child care is taken to guard against reinfection. During the last three years there have been 2242 labours among the in-patients and out-patients. In the first 200 there were a few cases of purulent ophthalmia, but in the last 2000, since the method has been systematically adopted, not a single case occurred. Directions were also given to the nurses that if a child's eyes looked red it was to be taken at once to the hospital for a drop of nitrate of silver solution to be dropped into the eye." The plan depends for its efficacy on simple cleansing, and its success seems to be well worthy of note.

From all this it appears, then, established that the ophthalmia of the new-born is a disease which permits of distinct prevention, and that even careful cleansing with plain water is sufficient. There may be reasons against entrusting such a strong solution of nitrate of silver as Credé advocated to nurses, but a much weaker solution would suffice. It may, however, be perhaps as well to use some antiseptic with the water employed for cleansing, in the manner used at the Jessop Hospital. Directions are now freely given to nurses and midwives as to the employment of antiseptics for the lying-in woman, and the sublimate solution freely ordered will do excellently for bathing the infants' eyes. Some of us who see the terrible effects of the disease are earnestly impressed with the importance of doing all we can to prevent its occurrence. As far as we are able we must spread knowledge as to the dangers of delay and the benefit resulting from early treatment. The obstetrician has, however, the opportunity of preventing the disease. The teacher can find occasion to bring the subject before his pupils, and the writers of text-books, whether for medical students, midwives, or monthly nurses, should urge the importance of the affection and give directions as to the means necessary for prevention. No text-book should, I think, be published without some such teaching. The disease is particularly met with among the poor—much less frequently among the well-to-do. Hence the importance of midwives, who by degrees are acquiring a better and more recognised status, receiving thorough instruction in the subject.

[4] Medical Record, Feb. 12th, 1890.
[5] Archiv f. Gynecologie. Translated in American Journal of Ophthalmology for November, 1887.
[6] THE LANCET, vol. ii. 1888, p. 412.

THE BULBAR CRISES OF DIPHTHERITIC PARALYSIS OCCURRING IN CHILDREN.

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(*Concluded from page 874.*)

Pathology.—Both the symptoms of diphtheritic paralysis and the pathological changes discovered after death point to a disturbance of function occurring in the nerve centres and in the nerve fibres, rather than to the existence of inflammatory mechanical or essentially destructive lesions. The functions of the diaphragm, for instance, are frequently modified. The muscle acts feebly, or even not at all, during respiration. For a time it may seem absolutely paralysed, then again it acts spasmodically. Vomiting or hiccough is present. With equal caprice it is found acting normally. So, again, the phenomena which suggest paralysis of the vagus and other bulbar nerves are present one moment and may be gone the next. As regards the pathological changes observed, the central ganglia have been found in various stages of granular and fatty degeneration, sometimes swollen and cloudy, sometimes vitreous, and sometimes atrophied and empty (vacuolation). This last change Dr. Percy Kidd regards as typical of that which occurs in cells, the nutrition of which has been gravely altered. The changes in the nerve fibres are "parenchymatous"—they are precisely similar to the trophic changes seen in the distal end of a divided nerve (Déjerine). Sometimes the central ganglia appear perfectly healthy, whilst extensive degeneration has taken place in the nerve fibres. This condition, together with the fact that the nerve changes usually predominate over the ganglionic, lends support to the theory that diphtheritic paralysis is essentially a peripheral neuritis. But it seems unnecessary to suppose that the peripheral changes are other than secondary to the ganglionic. "Transient and slight lesions of cells cause considerable degeneration in nerve fibres" (Gowers). The integrity of function and nutrition of nerve fibres depends upon a like

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integrity of the central nuclei. This, again, depends upon the occurrence of certain chemical changes in the nuclei themselves. "The function of organic matter and, *par excellence*, of nervous matter..... is to assimilate material having potential energy (anabolism), and to decompose that material (katabolism), with liberation of energy."[1] This material is assimilated from the fluid in which the cells are bathed, and according to the constituency and condition of the surrounding fluid, the cell functions are modified in the direction of excessive or defective action.

Stagnation of the surrounding medium—on Dr. Jackson's theory—causes excessive chemical activity in the cells of the motor cortex, nitrogenous or phosphorous bodies becoming more nitrogenous, and thus produces the variety of epileptiform convulsions which bears his name. Hyperphysiological activity in the cells may also be produced by poisons such as strychnia, or those of tetanus and hydrophobia, with certain distinctive characters about the symptoms, according to the selective action of the three poisons on special centres. In none of the above cases are the macroscopical or microscopical changes discovered adequate to account for the symptoms. Similarly the hypo-physiological condition may be produced in the cells by the circulation of poisons, such as that of diphtheritic paralysis. The effects of the poison upon the nutrition and function of the ganglia may be comparatively slight and transient, but yet sufficient to cause extensive degeneration of the nerve fibres. The ganglia may completely recover; but the effect on the nerve fibres may be more lasting, and may prevent them from obeying the stimuli to which they formerly responded. On the other hand, should the poisonous dose be large and continuous the ganglia themselves may be irreparably damaged. Finally, it is obvious that extremely slight interference with the function and nutrition of important centres, such as the medullary, may cause death, and yet leave no pathological changes which can be discovered even by aid of the microscope.

TREATMENT.

1. *General principles.*—Absolute rest in bed is indicated during the first six weeks from the onset of paralysis, even in the absence of the symptoms of failing vitality which I have described, for dangerous symptoms may occur on the slightest provocation. After this time, should the pulse and respiration remain normal, the open treatment usually recommended may assist in completing recovery. Abundant nutritious food, tonics, especially strychnia, should form part of the treatment from the first.

2. *The treatment of the crises.*—Their nature is to subside and to recur; therefore the utility of any special treatment is open to question. Death is due to the paralysing action of a poison upon the cardiac and respiratory centres, but this action is not persistent, and were it not for the hypersecretion of mucus into the air passages recovery might be the rule. So an antidote which both stimulates the failing centres and arrests the flow of mucus must be sought. Strychnia is a powerful stimulant to the respiratory and cardiac centres. Atropia arrests pulmonary and other secretions, but to produce this effect large doses are necessary, and these might still further increase the risk of cardiac failure.[2] This objection may be met by combining the two drugs. Three cases observed by myself, in which the characteristic crisis occurred, were treated on Henoch's plan by strychnia injections alone; two of these died. Three cases were treated by injections of strychnia and atropia, of each $\frac{1}{100}$ gr.; two of these recovered. The latter remedy is worth a further trial, and perhaps the best results might be obtained by giving larger doses of strychnia ($\frac{1}{60}$ to $\frac{1}{30}$ gr.), combined with smaller doses of atropia ($\frac{1}{120}$ to $\frac{1}{100}$ gr.) The physiological effects of atropia are rapidly produced in a child by a single dose of $\frac{1}{100}$ gr.; whilst belladonna in the form of the tincture is practically inert. The nasal tube has always been employed in these cases as soon as deglutition failed. Owing doubtless to the anæsthesia of the naso-pharynx, little or no discomfort is caused by its use. A stronger objection to its use is that digestion is probably much impaired at these times. Predigested food only should therefore be administered, and in the smallest quantities. It would be perhaps better still to rely entirely on rectal alimentation.

As regards the death-rate in diphtheritic paralysis, Landouzy gives the mortality as 16 in 117 cases, Lorain and Lépine give 12 per cent. of fatal cases. Drs. Bristowe, Eustace Smith, and Hilton Fagge are all agreed that deaths from diphtheritic paralysis are extremely rare, but the value of the last named author's statements is lessened by the fact that the nature of two fatal cases which he quotes remained unrecognised during life. The statistics of Paddington-green Children's Hospital (whence the materials for this paper have been obtained) give the following result:—Excluding a very large number of cases in which death occurred before the symptoms of the initial diphtheria had subsided, although the majority of these might well be included under the head of "deaths from diphtheritic paralysis"; twenty-nine cases have been treated from 1885 up to the present year. Eight deaths have occurred, giving a mortality of 27·4 per cent. Statistics based on such small numbers as these are, perhaps, not of great value. But in addition to this high rate of mortality there are other reasons for believing the death-rate of diphtheritic paralysis to be under-estimated. As mentioned above, one of the most prominent symptoms of a bulbar crisis strongly suggests an attack of capillary bronchitis. A medical man called in for the first time to see a case at the height of a crisis could hardly avoid the error of diagnosing "bronchitis or congestion of the lungs and cardiac syncope," especially in the absence of a history of diphtheria. A verdict to this effect is sometimes seen in the reports of coroners' inquests held on children who have died within a few hours of seeming perfectly well. But children suffering from bronchitis or congestion of the lungs do not seem well, within a few hours of death, neither do they die of syncope from these causes until many days after they have been obviously and seriously ill. It is possible that diphtheritic paralysis may account for some of these otherwise mysterious deaths. The treatment advocated by the authors of the leading text-books must tend to withdraw the patient from observation, and may also hasten his death. Adults are too often allowed to follow their daily work with the disease upon them. Many of the children brought to the hospital had been running about by doctors' orders, although they were known to have recently suffered from diphtheria. The early and minor signs of diphtheritic paralysis are seldom regarded as indications of a disease which may rapidly prove fatal. Fresh air and exercise are prescribed when absolute rest in bed should be enjoined. A confident prognosis is given when the greatest reticence and caution should be observed.

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[1] Hughlings Jackson, Lumleian Lecture, ii., 1890.

[2] Cf. Von Bezold: Von dem Einflusse des Atropias auf die Ursprunge des Herz Vagus.

THREE CASES OF STRANGULATED HERNIA OF THE CÆCUM IN INFANTS.[1]

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IT is an old saying that if a man gets one curious case he is sure to have another like it soon. By an odd chance of this kind, I have had in the last three months three cases of strangulated hernia in infants; and all three were cases of hernia of the cæcum. Mr. Howard Marsh, in the tenth volume of the St. Bartholomew's Hospital Reports, has collected forty-seven cases of strangulated inguinal hernia in children. In thirty-four the sac was opened at the operation. Out of these thirty-four, only one was a hernia of the cæcum. As regards the anatomy of the parts concerned in hernia of the cæcum, it has been described by Mr. Treves, in the tenth volume of the Transactions of this Society, and by Mr. Lockwood, in his Lectures on Hernia. They draw attention to two facts:—1. The existence of a proper sac in these cases. 2. The existence of a fold of peritoneum, containingmuscular fibres—the plica vascularis,—which passes down from the cæcum along the back of the sac, and helps to cause the hernia by drawing or guiding the cæcum into the sac. Both these observations are illustrated by my cases, which are as follows:—

CASE 1.—On Jan. 27th, a male infant one year old, strong

[1] A paper read before the Medical Society of London, April 7th, 1891.

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and well-nourished, was admitted to the West London Hospital with strangulated right scrotal hernia. The rupture had been noticed soon after birth; the child had worn a truss. The day before admission the rapture came down; the child vomited several times and had difficulty in micturition. On admission it looked well, and was not in pain. The hernia was large and tense; there was no impulse; the scrotum was red and inflamed. I operated at once. There was a proper sac; it contained a loop of small intestine and some omentum, and above these, at the neck of the sac, was the cæcum. There was no fluid in the sac. The intestine looked bruised, but was not discoloured. I divided the stricture and reduced the cæcum, and then the small intestine ran back of itself. The bowels acted twice that evening, and the child did well.

CASE 2.—On Feb. 11th, a male infant three months old was admitted to the same hospital with strangulated right scrotal hernia. The rupture had been noticed three weeks after birth; the child had worn a worsted truss. The day before admission the rupture came down; there was repeated vomiting, and retention of urine. It was a very small baby, a seven months' child, and the thirteenth in the family. It looked free from pain, and was not collapsed. The hernia was large and tense; there was no impulse. I operated at once. There was a proper sac, with about a drachm of clear colourless fluid; in it was the cæcum. The vermiform appendix, which was unusually long, came forward from the lower aspect of the cæcum. The cæcum was very slightly congested. I divided the stricture, letting out some more fluid. Then the infant's legs were held up high, and the cæcum was reduced. The bowels acted a few hours later. The wound healed, and the bowels acted regularly; but the infant had been brought to the hospital in the middle of a frosty night, and four days after the operation it showed signs of acute bronchitis, and of this it died on Feb. 23rd, twelve days after the operation.

CASE 3.—On Dec. 18th, a male infant three months old, neglected and starved, was admitted to the same hospital with strangulated right scrotal hernia. There was vomiting, and some retention of urine. The hernia was large and tense, and without impulse; there was acute inflammation of the scrotum. With chloroform I reduced the hernia, and could now feel that the testicle and the cord were greatly swollen. After this all went well for eleven days; the bowels acted freely and regularly; the infant took a quart of milk daily, and gained flesh. But on Dec. 29th the scrotum was again inflamed, and on the 30th it was acutely inflamed and distended, and resonant on percussion; the child vomited once; the bowels acted freely. On Dec. 31st the infant was restless; it vomited twice; the bowels acted freely. The scrotum was intensely inflamed, and at one spot, the size of a sixpence, it was thinned and soft. It was resonant on percussion. The prepuce was œdematous; the penis was twisted. In the inguinal canal was a hard cylindrical swelling; the spermatic cord could not be felt. Under chloroform the swelling was partly reduced, with a loud gurgling sound; the scrotum was now less tense, and the testicle and the cord could be felt again. But in a couple of hours things were as bad as ever: the œdema of the prepuce was increased, and there was distinct emphysematous crackling at the bottom of the scrotum. It was plain that the bowel had given way. I cut down carefully, and found no distinct sac. The bowel and the sac were all matted together; at the lower part of the bowel was a ragged opening; the tunica vaginalis was full of fæces, and the testicle was acutely inflamed. I passed a director in at a pinhole opening which I had made in the bowel during dissection, and out at the ragged opening lower down, and laid the two openings into one, and stitched the bowel in the wound. For about a month the infant did well; the cavity of the tunica vaginalis granulated up, the bowels acted twice daily through the wound, and there was never any great prolapse. But at the end of a month the infant began to lose flesh, at the rate of a quarter of a pound a week, and it died between five and six weeks after the operation.

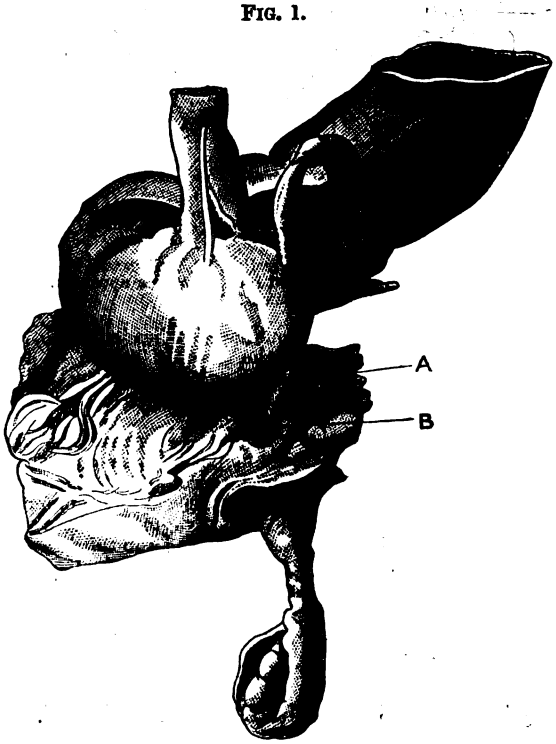
These cases seemed to me worthy of the notice of this Society, because strangulated hernia seldom occurs in infancy. Mr. Marsh says, "Many surgeons have passed through a long career of hospital practice without meeting with any instance of it, and I believe the only case in which an operation has been performed at the Hospital for Sick Children in the course of the last twenty-three years is that which I have just recorded."

In a very large majority of Mr. Marsh's cases the hernia was congenital; indeed, so far as the notes tell us, only four were not congenital. The hernia was more frequent on the right side than on the left, in the proportion of three to one. As regards the contents of the sac in Mr. Marsh's cases, the sac was opened in thirty-four out of the forty-seven cases. Of these thirty-four cases one was a hernia of the colon, one was a cæcal hernia on the left side of the body, and one was a hernia of the sigmoid flexure; and two were cases of hernia of the ovary.

As regards the symptoms of strangulated hernia in infants, I may point out that in my cases there were two symptoms which we seldom find in adults. One of these was the retention of urine; the other was the acute inflammation of the skin of the scrotum.

Of my three cases the first made a good recovery. The second case recovered so far as the hernia was concerned. But it was a seven months' child, and the thirteenth in a poor family; it was brought to the hospital in the middle of a cold night; and I am sorry to say that after the operation it was put in a cot near a window, instead of in a basket near the fire. From these causes it caught the bronchitis of which it died. The specimen (Fig. 1) from this case

FIG. 1.



A, Plica vascularis. B, Mouth of sac, contracted.

shows the plica vascularis passing down into the sac. The sac is contracted. There is no communication between the sac and the tunica vaginalis. The great length and free mobility of the vermiform appendix suggest that it may have made its way first into the sac, and so may have drawn the cæcum after it; and we know that cases have occurred where the appendix alone was found in the sac at the time of operation.

In the third case I cannot doubt that I really reduced the hernia when the child was admitted. There was distinct slipping back of the bowel under my fingers, with a loud gurgle. The vomiting stopped for eleven days; the infant took a quart of milk daily; the bowels acted freely and regularly. They continued to act freely up to the time of operation, when the bowel had actually burst into the tunica vaginalis. It is therefore impossible to say exactly at what time the cæcum came down again and became strangulated.

As regards the treatment of this case, it appears from Mr. Marsh's paper that it would have been better to have done less. He gives two cases. In one of them the hernia had been strangulated for many days; the scrotum

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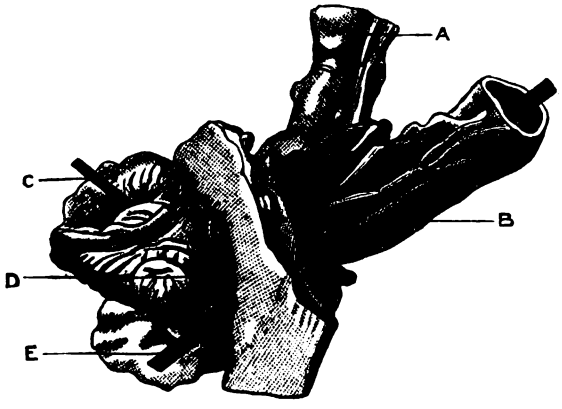
had given way, and there was a free discharge of fæces. No operation was done, the openings in the scrotum gradually closed, and the child recovered. In the other case the bowel was found to be gangrenous, and firmly adherent to the sac. It was poulticed, and came away in a few hours. Twelve days later the bowels acted the right way, the wound closed, and the child recovered. Perhaps therefore it would have been better in my case to have done nothing, or to have simply incised the scrotum. There might thus have been no prolapse of the bowel. On the other hand, as it was a hernia of the cæcum, the continuity of the bowel would perhaps not have been restored as it was in the cases quoted by Mr. Marsh. The specimen (Fig. 2) shows

FIG. 2.



A, Large intestine. B, Small intestine. C, Rod passed into large intestine. D, Rod passed into vermiform appendix. E, Rod passed into small intestine.

the prolapsed cæcum, of a curious hammer-headed shape. A very fine rod is passed into the everted mouth of the vermiform appendix. A rod is passed into the ascending colon, which is contracted from disuse, and a rod is passed along the ileum.

In all three cases there was a complete hernial sac. In the third case this, of course, could not be made out at the operation, but it is clearly seen in the specimen. As regards the question whether in these cases there was any communication between the sac and the tunica vaginalis, there was no communication in the first two cases; the third case is of course uncertain.

I wish, in conclusion, to express my thanks to Mr. Eccles, the house surgeon, for his constant care of the children, and for his help in putting these notes together.

Wimpole-street, W.

QUININE AS A CARDIAC STIMULANT.

By F. E. HARE,

RESIDENT MEDICAL OFFICER (ON LEAVE), BRISBANE HOSPITAL, QUEENSLAND.

AT the last general meeting of the British Medical Association at Birmingham, Sir Walter Foster stated that he had found quinine of great service for reducing the pulse-rate in Graves' disease, when given in sufficiently large doses. This action of quinine is, I believe, but little known, and yet it is one that is in many cases so marked and of such great utility that it is difficult to see how it has so generally escaped recognition. In typhoid fever, at any rate, there is no drug that possesses anything approaching its power. At the Brisbane Hospital the cold bath treatment of typhoid fever has been carried out in its entirety for the last three years. Baths usually reduce the febrile temperature with ease, but in some cases, owing to its obstinacy, they fail. In these some antipyretic drug is evidently indicated. Quinine was therefore commonly given for this purpose, in doses of from thirty to forty grains, as recommended by Liebermeister. Now, of course, anything which depresses the temperature reduces the pulse-rate. Baths have this effect in common with all the antipyretic drugs; but such reduction is almost always temporary, and in proportion, roughly speaking, to the fall in temperature, passing off as soon as the latter has regained its former elevation. In those cases, however, in which quinine had been the antipyretic given, it was gradually observed (1) that the pulse-rate, although it rose with the returning temperature, almost always failed to attain its previous frequency; (2) that sometimes it remained slower, in spite of the temperature having gained an even greater elevation; and (3) that not uncommonly, when the drug failed altogether as an antipyretic, the pulse-rate was markedly affected. These observations seemed to point to an action on the heart independent of the antipyresis. Experiments were accordingly made to discover if this effect could be gained from doses too small to have any appreciable influence on the temperature; for if so, the independence of its action on the circulation would be established. The anticipation was fully realised. The following is an illustrative case.

Mrs. S. B——, aged forty, was admitted to the Brisbane Hospital on the fifth day of typhoid fever. During the next three days she had nineteen baths, of from fifteen to twenty minutes' duration. On the last of these her pulse had varied between 124—with a temperature of 103° F. before the bath—and 110, with a temperature of 101·4° half an hour after the bath. Three grains of quinine were ordered every three hours. The following day (the eighth of the attack) her pulse varied between 110—with a temperature of 103° before the bath—and 100, with a temperature of 100·8° half an hour after. Ninth day of fever: pulse 108, with temperature of 103·4° before bath; half an hour after, pulse 96, temperature 102·4°. Thenceforward no further anxiety was felt concerning the pulse, which continued to range between 110 and 92, although the case did not convalesce until the thirty-first day. The effect on the pulse is not limited to a reduction in frequency; the beats become stronger, more sustained, and more distinct, and the change is especially striking in a case where the pulse had been inclined to "run." The explanation appeared to be that the drug acted as a powerful tonic or stimulant to the heart. It was determined to treat systematically in this way every case that commenced to exhibit signs of cardiac failure, and the following rule was laid down—three, five, or seven grains of quinine to be given every three hours whenever the pulse-rate commenced to range above 120.

The first case was treated on April 15th, 1889. From that date to the end of the year 306 cases were admitted. Of these, sixty-nine came under the rule. Of the 306, eighteen died, a mortality of under 6 per cent.; but eleven of these were from perforation, two from profuse hæmorrhage, and three from dysentery. In the latter, extensive ulceration of the rectum was disclosed post mortem, so that in all of the sixteen death was the direct result of the intestinal lesion. Two only therefore remain to be considered. One of these succumbed to acute double lobar pneumonia, coming on suddenly before any sign of cardiac failure had appeared, and proving fatal in less than twenty-four hours. The other was altogether unusual. The patient, a young girl, had convalesced and been allowed to get up, when suddenly the temperature rose, a painful inflammatory swelling developed in the right submaxillary region, and she rapidly sank with hyperpyrexia in spite of treatment.

The above analysis of the eighteen fatal cases is enough to show that during the eight months and a half no patient died of the usual form of cardiac failure, which under ordinary circumstances is the most frequent cause of death. Most of this result is undoubtedly due to systematic bathing, which exerts a most powerful check upon the tendency to progressive enfeeblement of the circulation. The bath, however, occasionally fails, and it is always more potent as a prophylactic in this respect than as a remedy when once the condition is developed. Consequently quinine is especially useful in those cases admitted late in the course of the fever. Alcohol is, of course, given in the same cases as the quinine, but these are the cases in which alcohol always has been administered; and certainly the amount found necessary during the included period has been vastly less than formerly. Only quite exceptionally has more than four or six ounces of whisky been given even in severe cases, whereas previously eight, twelve, and even sixteen ounces were no infrequent quantity.

Some points in connexion with the action of quinine on the heart are worth noting. 1. The slowing of the pulse-rate is tardy in appearing, usually twenty-four hours

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elapsing before its effect is distinctly perceptible. 2. The effect, when obtained, is somewhat permanent, so that if the drug be withheld the pulse does not attain its previous rate for two or three days. Both of these are in contrast to its action on the temperature, which is never prolonged beyond thirty-six hours, by even the largest antipyretic dose. 3. Its action is not limited to typhoid fever. I have obtained similar results in the last stages of phthisis, in croupous and broncho pneumonia, and in surgical cases with hectic. I venture to think that the recognition of this use of quinine is a point of great importance, and that by it alone many lives might be saved. The difficulty of meeting the emergency of heart failure in fevers is testified to by the number of drugs that have at various times been recommended for it. I have given the great majority of these a more or less extended trial, without ever being able to satisfy myself that I obtained any result, except, perhaps, from digitalis. Digitalis, however, had nothing like the effect of quinine, while it appears to have, in doses sufficient to reduce the pulse-rate, dangers peculiar to itself.

Most works on therapeutics seem to imply that quinine is a cardiac depressant. What is the influence of this teaching on practice? A case of typhoid fever is being treated with small doses of quinine, two or three grains every few hours (a common routine treatment). Later on, in the usual course of events the pulse becomes weaker and more frequent. The drug is then probably withdrawn on the supposition that it is weakening the heart's action, whereas this is the very time that the dose should be doubled or even more largely increased. All this has, at any rate, frequently happened to myself.

Aberdeen.

VERY SEVERE PAIN IN ANTERIOR EXTREMITY OF URETHRA.

SUPRA-PUBIC CYSTOTOMY; FORCIBLE DILATATION OF CONTRACTED PROSTATIC URETHRA; RECOVERY.

BY W. ARBUTHNOT LANE, M.S.,
ASSISTANT SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

J. W. P——, aged forty-two, builder's foreman. His mother died from consumption, and his six brothers and sisters from various diseases—two from inflammation of the lungs, one from abscess in the side, one from blood poisoning, and two from convulsions in infancy. He was a married man, and had always been stout and vigorous till the onset of his present symptoms. These developed about the middle of 1888, and consisted of almost unbearable pain in a position corresponding to the floor of the anterior extremity of the penile urethra. This pain was so violent and constant as to make it impossible for him to continue his occupation. He was unable to eat his meals and he lost flesh rapidly. He stated that he was for some time an out-patient in St. Peter's Hospital, where nothing was found, and his pain was not relieved. I saw him at the out-patient department of Guy's Hospital, and admitted him into the hospital under the care of a colleague. When under observation, it was seen that though the man complained of constant pain, he was subject to violent exacerbations lasting from a few minutes to three or four hours. During these attacks he appeared to be in the greatest agony. Though the pain was increased by his getting about, yet he had severe attacks when kept perfectly at rest. The right testicle was undescended. Nothing could be made out by examination with the cystoscope, sound, finger, &c., either at this time or on subsequent occasions. His weight was about 8 st., and he appeared wasted and distressed. His usual weight was about 10 st. His urine was acid, sp. gr. 1008, and contained no blood or pus. Some crystals of triple phosphate were present. He was treated with various drugs, dieted, and kept in bed for some time, and apparently with some benefit. He left the hospital on Sept. 1st.

He was readmitted under my care on Sept. 22nd, having spent three weeks at a convalescent home. He asserted that it was impossible to continue life in his present condition. Considering that the cause of the pain might be some condition of the prostate not apparent by the cystoscope, sound, or finger, in the rectum, I determined to open the bladder above the symphysis, and examine it bimanually. I may say that I had carefully examined the position of the kidneys and ureter, and made him take violent exercise of a varied nature, to find if possible any complaint of pain elsewhere than in the end of the penis, or any alteration in the urine, without any success. Therefore, on Oct. 22nd, I opened the bladder above the symphysis, and found its interior healthy, as we had previously found it on examining it with the cystoscope. On attempting to introduce the tip of the little finger into the prostatic urethra, the greatest resistance was felt, and it was only after using much force, both with the finger and with instruments, that it was possible to dilate up this portion of the urethra. Nothing abnormal could be detected in the prostate except that its right lobe was smaller than the left. Hardly daring to hope that this dilatation of the prostatic urethra would be of any service to the patient, I introduced a drainage-tube and closed the wound. On Nov. 1st the drainage-tube was removed, and he passed urine through the urethra. (The reason I took the unusual course of introducing a drainage-tube into a healthy bladder was that I wanted to keep the prostatic urethra at rest for a few days.) He was delighted to find that he had lost the pain since the operation. He left the hospital on Nov. 8th, with the object of spending some weeks at the sea-side. I saw him about the beginning of this year, and found him looking strong and in much better condition. At times he said he felt a very slight pain in the position of his old trouble, but it did not seem to cause him any concern.

I felt that this case deserved to be put on record because of the obscurity of the causation and pathology of the condition of the prostatic urethra, of the apparent causal connexion of the prostatic stenosis with the local penile pain, and of the happy termination, almost accidentally arrived at, of a complaint which would not only have considerably abbreviated the course of the man's life, but would also have rendered it exquisitely miserable, if in all human probability the intensity of his misery did not lead him to terminate his existence. I trust that this communication may lead others to publish accounts of some similar cases they may have observed, which may help to throw light upon this condition, apparently a very rare one. Should the pain recur in this case I will dilate the prostatic urethra forcibly and extensively with a suitable lithotrite.

I regret to say that after a time the local pain returned, but with less severity than before. Forcible dilatation of the prostatic urethra relieved this pain, though it did not remove it. No further light has been thrown upon the condition since the first operation.

St. Thomas's-street, S.E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

HÆMATURIA IN EAST CENTRAL AFRICA.

BY R. F. CASTLE, M.B., B.C. CAMB.,
LATE MEDICAL OFFICER, USAMBARA DISTRICT, EAST CENTRAL AFRICA.

HÆMATURIA is certainly one of the commonest causes of complaint both amongst the natives and the Europeans resident in Zanzibar and on the adjacent mainland. The hæmaturia may be roughly divided into two great classes—one dependent on the presence of a parasite, the other not. The *parasitic* form is due to the presence of the trematode bilharzia hæmatobia in the body, and the ova can invariably be seen in the urine, although the latter may appear to be free from blood. The persons who suffer from this disease are very numerous, are usually of the male sex, and are almost invariably under the age of thirty; after that age the symptoms seem to disappear. All the cases which came under my observation were directly traceable to the patients drinking water from one of two small rivers which drain part of the Usambara district. In both these rivers I have found the free-swimming embryo. In other parts of the same district where water was scarce and the natives derived their whole supply from mud-holes the disease was apparently unknown. The Europeans living in this district are in the habit of boiling and filtering their water before using it; consequently none suffer from the disease. Again, a native will drink three or four times as much water in the day as a European will, a small

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boy taking, as a matter of course, a quart bottle of water to bed with him and finishing it before the morning. Therefore a native always runs a greater risk than the European does. The only treatment which I found to be of any use was small doses of buchu and opium freely diluted. This seemed to allay the irritability of the bladder (which was the prominent symptom) better than anything else. The *non-parasitic* form of hæmaturia was always associated with a high temperature. The usual course of a typical case was as follows: First, a rise in temperature ranging from 103° to 105°; this would last for about two hours, by which time the patient had probably gone to bed. Secondly, a severe rigor, lasting perhaps twenty minutes; about an hour after the rigor the temperature falls to about 102° (probably influenced by antipyretics). Thirdly, a feeling of faintness comes on, marked by great pallor; the first quantity of urine which is passed after this will be absolutely black, and is found to contain a large quantity of grumous material, composed of disintegrated blood-cells. At this stage of the disease no actual blood-cells can be discovered by the microscope; but as the patient recovers, and the amount of blood passed is less in quantity, it becomes more like real blood in its appearance, and cells more or less altered can be readily made out. The hæmorrhage usually continues for about three days under treatment; perhaps it would last longer if not treated, but naturally one did not care to try. And then follows, fourthly, the stage of convalescence; the hæmorrhage has ceased, but there is still a temperature of about 102°, which may persist for a month or until the death of the patient. Probably the system, weakened by the great loss of blood, is unable to resist the malarial poison as it otherwise would; for an African fever is generally sudden both in its onset and in its retrocession; the man who has been moaning with pain and delirium, with temperature 106° one day, will in two days' time be out stalking antelopes. This, however, is not the case after an attack of hæmaturia; recovery is then always very slow and tedious. This disease is common amongst the Europeans, but rare amongst the natives, although they are frequently attacked by ordinary malarial fever. I have heard of another form of hæmaturia in this district (hæmoglobinuria), but as I have not had a case under my care I give no description of it.

Darfield, near Barnsley, Yorks.

TREATMENT OF ULCERATED SCARLET FEVER AND DIPHTHERITIC THROATS BY IRRIGATION.

BY N. S. MANNING, F.R.C.S.,
MEDICAL SUPERINTENDENT OF THE CITY HOSPITAL, BIRMINGHAM.

I HAVE used the following method of treatment in the ulcerated throats of scarlet fever and diphtheria in the Birmingham City Hospital for about two years and a half. The appliances necessary are a small indiarubber bag syringe, 4 or 6 oz., according to the size of the patient, two small basins, and a towel. The medicament used is boric acid dissolved in hot water (about 105° F.). In order to facilitate the solution of the boric acid, I have a saturated solution in glycerine, prepared by Messrs. P. Harris and Co., Edmund-street, Birmingham, of which the following are the proportions: Powdered boric acid, four parts; glycerine (sp. gr. 1260), three parts. The glycerine should be heated by steam, and the boric acid (best quality, carefully powdered) stirred in till the solution is perfect. Of this solution, a large tablespoonful is dissolved in about a pint of hot water. The method of procedure is as follows:—Place the patient sitting up, or, if too weak to sit up, place him on his side with his face over the edge of the pillow. Apply the towel round his neck to keep him dry if any water accidentally gets spilled; withdraw the nozzle from the syringe before filling it, and fill with the solution; replace the nozzle, and direct the patient to open his mouth; then put it into the mouth well over the back of the tongue, and forcibly empty the syringe; at the same time receive the water which rushes out of the mouth and nose into the empty basin. In this way the mouth, fauces, pharynx, and in some cases the posterior and anterior nares, are irrigated. The operation is repeated till the parts are washed quite clean. In cases of purulent discharge from the nose or nasal diphtheria, the same procedure is applied to the nostrils. The irrigation may be performed every two or four hours as circumstances require. In this hospital during two years over 1500 cases of ulcerated scarlet fever and diphtheritic throats have been treated by this method. From this experience I can recommend it as superior to any other I have ever tried. I believe its efficacy is due to the fact that it is founded on the rational principle of washing away all septic discharges with a non-irritating, non-poisonous fluid. It is not in any way disagreeable to patients; on the contrary, when the mouth is dry or foul, it is most comforting. The solution is rendered sweet by the glycerine, so that only a small percentage of even very young children offer any objection to it. Occasionally children swallow some, but without any subsequent ill effects. It should be borne in mind that, in order to prevent any septic matter being sucked into the syringe, the nozzle should always be withdrawn when filling.

Birmingham.

A CASE OF AINHUM.

BY GORDON MESSUM, M.R.C.S., L.R.C.P. LOND.,
CONSULTING MEDICAL OFFICER TO THE VOLKS' HOSPITAL, AND DISTRICT SURGEON OF PRETORIA.

THIS complaint is commonly met with amongst the natives (Kaffirs) of South Africa, especially in Northern Transvaal, and is usually limited to the little toe; both feet are, however, generally attacked, though not simultaneously. The toe at its junction with the foot has the appearance of being gradually cut off by means of the continuous pressure of a ligature tied round the toe at that spot. The following is an example, extracted from my note-book, of the usual history attached to such cases.

Tozini, aged thirty-four, married. The little toe of his left foot is already gone. About a year ago the dorsum and outer side of his right foot swelled up to a considerable extent and gave him much pain of a burning character, the pain running down into the little toe. The swelling gradually subsided, leaving a small pustule on the inner and dorsal aspect of the metatarso-phalangeal joint of the little toe. This pustule, on evacuating the matter, assumed the appearance of a crack, which slowly extended round the toe, eating deeper and deeper through the tissues; all feeling gradually left the toe, though the foot remained very painful until the toe dropped off (or in some cases gets accidentally knocked off). The wound quickly healed and gave no more discomfort. The complaint appears to be one of nerve origin, and differs entirely from the "mutilans" form of leprosy. The only cure consists in amputating the toe.

Pretoria, S.A. Republic.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASES OF INJURIES OF PERIPHERAL NERVES (*continued*).

(Under the care of MR. HULKE.)

WE continue below the interesting series of injuries to peripheral nerves which we commenced at page 877 of our last issue. The cases already brought forward include two of wound of the ulnar nerve, one of recovery of function after immediate suture of median, and one of division of the sciatic nerve within its sheath followed by very incomplete recovery of function.

In Case 5 the presence of small sensitive islands in the palm was singular, in presence of the fact that the divided ends of both median and ulnar nerves were separated by not inconsiderable intervals. The relatively early return of sensibility in the palmar distribution of the median nerve after suture, although the ends of this could not be brought into contact, imperfect as it was, and transitory as it proved in some branches, is a remarkable circumstance. In Case 6, the position of the smaller and posterior of the two scars in

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the ham, taken in connexion with the distinct gap in the tendon of the biceps, plainly told of a tenotomy of this muscle; whilst the condition of the parts supplied by the branches of the external popliteal nerve was strongly suggestive of the accidental simultaneous division of this nerve. Were this so, the longer scar might probably mark the incision for a subsequent suture of the nerve, the final result of which left much to be desired. In this case the scars about the hip unquestionably marked excision of the upper end of the femur, probably with removal of portions of the os innominatum. In Case 7, a gunshot injury, it must remain uncertain whether the nerve was severed by the bullet or by a splinter of bone, or was compressed by an excess of callus. The completeness of loss of function made the former more probable. At the late date of the patient's entry into the Middlesex Hospital little expectation could be entertained of benefit from nerve suture, even had the patient been willing to allow it to be attempted. Case 8 exemplifies nerve irritation from interference by a fragment in a case of comminuted fracture. Case 9 is an instance of trophic lesions consequent on implication of nerve fibrils or a scar. It is suggested, as advocated by Mr. M. Baker, that for whitlows of the terminal phalanx a lateral incision is preferable to a median incision in the pulp of the finger. Instances of this are not very infrequent.

CASE 5. *Late suture of the median and ulnar nerves; very imperfect restoration of sensibility, and this in some branches transitory.*—On Oct. 22nd, 1888, E. C——, aged twenty-three years, a general servant, was admitted into Bird ward for the effects of an injury of the right forearm sustained six months previously. Crossing the anterior surface of the forearm from near the radial styloid process obliquely inwards and upwards to the inner border of the forearm was a scar, which apparently implicated all the structures down to the bones. The muscles forming the ball of the thumb were wasted, as were also all the interossei. The thumb and all the fingers were flexed and rigidly contractured. Separation and closure and flexion and extension of the fingers were lost. The scar was tender. The small triangular area of the forearm between the scar and the wrist, the palm, and three small oval areas continuous with the palm in the clefts between the four fingers retained a slight degree of sensibility; the patient was conscious when touched with a needle within the limits indicated, but she could not localise with any precision the part touched. The palmar surface of the two phalanges of the thumb and that of all the fingers, excepting the ulnar half of the little finger, and that of the dorsal surface of the terminal and middle phalanges of the three outer fingers, was devoid of sensibility to touch and to stimuli with hot and cold substances. Dr. Pasteur, at that time in charge of the electrical department, found that all the muscles on the distal side of the scar did not respond either to faradaic or to galvanic stimulation. She stated that the scar was the result of a gash occasioned (six?) months previously by the accidental breaking of a pane of glass at East London in the Cape of Good Hope. A local doctor closed the wound with silver wire sutures and sent her into a hospital, where a week later the stitches were removed. Two days after this bleeding recurred, and having recurred on the following two days the wound was reopened and the vessels were tied. In consequence of this she was in bed during a month. Her hand remained useless. Galvanism and massage proving useless she was sent back to England, and two days after landing entered the Middlesex Hospital. On Oct. 30th the trunk of the ulnar nerve was exposed; it was found to have been divided a short distance below where it gives off its dorsal digital branch. The interval between the two ends of the nerve (about three-quarters of an inch) was bridged by a slender band of connective tissue; the proximal end was distinctly bulbous and the distal tapering. The trunk of the median nerve was less readily found. The upper bulbously swollen end had retracted to a much greater extent than had that of the ulnar nerve. A cicatricial band passing distally from it divided near the wrist, one slip being attached to the tendon of the flexor carpi radialis, and the other slip connected with the distal end of the nerve, very close to the anterior annular ligament. The interval between the two ends of the severed nerve was estimated to be two inches. The altered ends of each nerve having been removed, the sectional surfaces of the ulnar were brought into close contact by sutures passed through the nerve itself, other sutures taking up the connective sheath of the nerve only proving insufficient to withstand the strain. Actual coaptation of the ends of the median nerve was impracticable, an interval of quarter of an inch remained after stretching the proximal part of the trunk, and bringing up the distal end by strong flexion of the hand. Strict antiseptic precautions were observed at the operation and in the subsequent dressings. On Nov. 9th the dorsal surfaces of the terminal and middle phalanges of the two middle fingers were found slightly sensitive, to tactile stimuli, and the sensitiveness of this surface of the thumb, which had previously seemed blunted, was increased. Sensitiveness, previously limited to the ulnar half of the palmar surface of the little finger, was now verified for the whole of this surface of this finger. On Nov. 10th the palmar surfaces of the second, third, and fourth fingers, were found sensitive to the touch of a needle. On Nov. 15th the palmar surface of the index finger was found sensitive, and on the 19th it was noted that the sensitiveness of all the parts of the finger and thumb previously insensible had become well marked. Later this sensitiveness to a tactile stimulus diminished. Sensitiveness to the contact of hot and cold objects never returned. On one occasion she scorched her finger-tips whilst toasting a piece of bread. The operation incisions healed slowly, and a small superficial granulating part remained open when, on Feb. 26th, 1889, repeated insubordination made it obligatory on her to leave the hospital. Massage and electrical treatment had proved useless. The fingers then had the tapering, smooth, glossy bluish-red appearance characteristic of the trophic impairment following nerve injuries. The patient subsequently entered St. Thomas's Hospital under Mr. Croft. It is greatly to be regretted that in this case the severed nerves and also the tendons were not each securely united by sutures by the person who saw the recent wound and closed it; but the place where the accident occurred and the other attendant circumstances must be accepted as extenuating this grave omission. Doubtless also the secondary repeated hæmorrhages were adverse to the union of the nerve ends, which may take place even in the absence of suturing. As we are as yet unable to fix in any particular case a term after which union of nerve and restoration of function are impossible, it seemed right to attempt the union of the nerve ends, notwithstanding the advanced trophic disturbance present when the patient entered the Middlesex Hospital. The return of sensitiveness to touch in the parts before insensible to this stimulus, ascertained first on the tenth day after the operation, and subsequently verified by frequent testing, is a remarkable circumstance in connexion with the fact that the ends of the divided median nerve could not be brought together, but an interval of a quarter of an inch remained between them. It had been intended to intercalate a piece of a living nerve, and an animal was at hand for this purpose, but an unexpected difficulty happened at the last moment, and this design had to be abandoned. Other noteworthy circumstances were the presence of three small sensitive islands at the palmar ends of the digital clefts, and of the anæsthetic areas on the dorsal surfaces of the fingers in the distribution of the radial nerve not itself implicated in the injury. A satisfactory explanation of these seeming anomalies cannot be offered.

CASE 6. *Division of the external popliteal nerve whilst dividing the tendon of the biceps; suture; imperfect restoration of sensation only.*—B. M——, aged nineteen, seamstress, was admitted into the hospital on April 4th, 1889. The right lower limb was seven inches and a half shorter than the left; of this shortening five inches represented the disparity of the thighs. All the parts of the right limb were ill-developed in comparison with the corresponding parts of the left; the muscles were limp and flabby. When standing the outline of the limb was obviously curved, the concavity looking forwards, the summit of the curve being at the knee. The foot presented the deformity characteristic of equino-varus. There were extensive scars about the hip. One of these extended from below the middle of Poupart's ligament round the inner side of the thigh to its posterior surface, and another reached from the tuber ischii to the situation of the great trochanter, and thence four inches down the thigh. Another scar nearly two inches long was present over the outer hamstring, two inches above the lowest point of the femoral condyle, and behind this was a fourth smaller scar. All these scars had the distinctive characters of those of surgical incisions. A palpable gap was present in the bicipital tendon corresponding to these lower scars.

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All the muscles innervated by the external popliteal nerve were completely functionless, and the sensibility of the cutaneous area supplied from this trunk was very markedly impaired. The patient stated that she was supposed to have hurt her hip when six years old by falling out of a carriage. One year afterwards she entered a hospital with hip disease, where, in the course of two years, she underwent several operations.

CASE 7. *Paralysis of the musculo-spiral nerve resulting from a bullet wound.*—L. N——, aged twenty-nine, a strong hale man, a French polisher, formerly soldier, was admitted into Founder ward on May 17th, 1890, for the results of an injury to his right arm, received, he said, at the battle of Tel-el-Kebir. At the date of this note the marks of the injury were—a small, depressed scar on the front of the arm, three inches below the shoulder; a larger, rayed scar at the middle of the back of the arm, having close to it the opening of a small sinus, from which a small quantity of serum could be pressed; obvious irregularity and thickening of the humerus between these scars; evident wasting of the extensor muscles on the back of the forearm, with wrist-drop; slightly impaired tactile sensibility of the surface along the radial border of the forearm and the posterior surface of the thumb and forefinger; slightly diminished range of flexion of forearm on arm, and distinct weakness of grasping power of the right hand.

The following memorandum on the electric reactions was written by Dr. Wynter:—"The extensor muscles of the right forearm exhibit complete absence of irritability to the faradaic and the galvanic current, indicating complete wasting of the nerve ends and trunk, the stage of progressive degeneration being passed. There is considerable wasting of this group of muscles. The flexors appear to be in a normal condition, as electrically compared with those of the other forearm." The patient stated that at Tel-el-Kebir he was shot through the arm; the bone was broken. An abscess formed in the wound and burst three weeks later whilst on his voyage to England. At Haslar Hospital the fracture which had united was rebroken and reset, the bone being found in a faulty position. His impression was that the wrist-drop instantly followed the injury. Early in May, 1890, an abscess again formed in the site of injury, leaving the existing sinus at the back of the arm as its sequel. Whilst the symptoms were conclusive as to the occurrence of an injury to the trunk of the musculo-spiral nerve the history was not sufficiently precise to warrant a positive opinion as to whether the lesion was the immediate severance of the nerve by the bullet or by splinters of the broken humerus driven before it; or if it was the compression of the nerve by the displaced ends of the broken bone or by callus. To the patient's impression that his wrist-drop dated from the moment of the injury little value could be attached, since it was judged improbable that he could, under the circumstances of the moment, have correctly distinguished between the dropping of his whole arm when the humerus was broken, and the dropping of the wrist apart from this. In the presence of the advanced atrophy of the peripheral branches of the nerve and of the extensors, little benefit was expected from an attempt to reunite the ends of the severed trunk or to extricate it from compression. This, as a tentative measure involving little risk, appeared justifiable, but the patient would not allow it; nor would he permit the exploration of the sinus, though the occurrance of this suggested the presence of a sequestrum, or perhaps a splash of lead. He soon left the hospital, and his subsequent history is not known.

CASE 8. *Irritation of the median nerve by the displaced fragment of a comminuted radius; extrication of nerve; good result.*—M. C——, aged fifty, a hale-looking country woman, whose raven hair was slightly streaked with grey, was admitted into the Middlesex Hospital on Feb. 1st, 1883, for a sequel of an injury to her forearm sustained four months previously by a fall in which she struck this forearm against the edge of a stair. The radius and ulna had been broken in their lower third, and the former comminuted. Good union, with slight angular deviation of the axis of the bone, had occurred; but a detached piece of the radius, about half an inch wide and somewhat longer, projected so strongly at the flexor side as to press upon and raise the integument. Here and for some distance around it there were great tenderness and pain, and severe pain was felt also in the palmar surface of the two middle fingers. She said that the pain was so intense that it made her quite unable to use the limb, and it prevented her working. On Feb. 3rd the projecting piece of bone was laid bare and cut away. It had pushed the median nerve—which was found resting in a groove in the outer border of the fragment—out of its normal course. A fortnight later she returned home. The wound had very nearly healed. The pain had ceased.

CASE 9. *Painful scar of an incision into a whitlow; wasting of finger; amputation.*—E. S——, aged twenty-one, an anæmic brunette, a cook, was admitted into Bird ward on March 16th, 1887, for a painful state of the middle finger of the left hand, which prevented her working, the pain being sometimes so acute as to oblige her to drop whatever she held in this hand at the moment. Nearly in the long axis of the palmar surface of the terminal phalanx of this finger was the depressed scar of an incision made for a whitlow eighteen months previously. This phalanx was shrunken, tapering markedly in figure; its skin smooth, glossy, and red; and its temperature 0·50° F. lower than that of the other fingers. The middle phalanx was affected similarly, but in a less degree. The pain, she said, never ceased, and it was increased by cold. Topical sedatives, electricity, massage, and tonics had been tried without benefit. Under these circumstances the finger was amputated, and the woman soon left the hospital perfectly relieved.

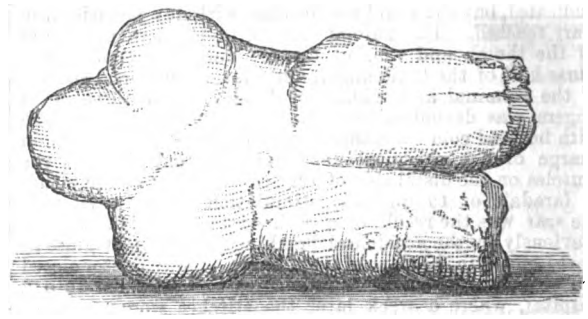
LEEDS GENERAL INFIRMARY.

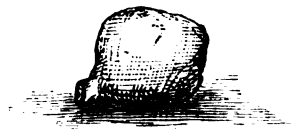
A CASE OF POLYPOID GROWTHS IN THE KNEE-JOINT; REMOVAL.

(Under the care of Mr. A. W. MAYO ROBSON.)

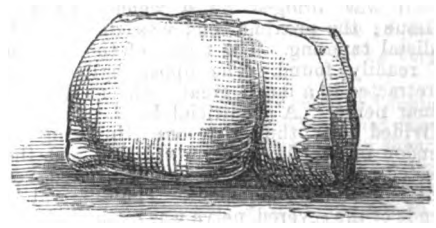
THIS case is of interest not only on account of the rapid recovery following such an extensive operation in the interior of the knee-joint, but because of the unusual nature of the disease for which operation was performed. The tumours seemed to be genuine fibroid polypi arising from the deeper layer of the synovial membrane, and not the ordinary hypertrophied fringes, which may become pedunculated, but which are seldom seen to attain so large a size. For the account of this case we are indebted to Mr. Basil Hall, house surgeon.

J. R——, aged thirty-eight, a sailor, was admitted on Oct. 27th, 1890, with the right knee-joint greatly distended





From inner incision.



From outer incision.

with fluid. The history was that the knee was struck two years previously by a heavy piece of timber. He remained in bed, and was treated for sixteen weeks, after which he

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worked for some time, although the knee remained weak and painful. Although the swelling subsided after the accident, it appeared again after a few weeks. Latterly it increased very considerably, and on admission he was unable to walk. When admitted the joint was very much distended with fluid; more especially was it noticed that the prolongation beneath the quadriceps extensor seemed to be more tightly distended than the rest of the joint. No foreign body could be felt in the joint. For a month rest on a splint, lead lotion, and counter-irritants were tried without success. As there was no redness or heat about the joint it was aspirated, and four ounces of thick straw-coloured fluid were drawn off. A movable mass could then be felt for the first time on the inner side of the joint above the patella, and a second tumour on the outer side just below. The first was as large as a hen's egg, the second about one-third the size. A week later (Dec. 4th) the knee-joint was opened first on the inner side, and the mass, which was a fibroid polypus attached by a broad base to the synovial membrane, was removed, together with the disc of membrane from which it sprang. A smaller growth was also found and removed. Exploration by the finger revealed a third polypoid growth on the outer side of the joint, which was removed through an external incision. A drainage-tube was inserted and an antiseptic dressing applied, the knee being placed on a back splint. The growths were of an irregular shape (see appended engravings) more or less lobulated, and composed of fibrous tissue covered with synovial membrane. They were all pedunculated. On the third day the drainage-tube was removed. On the tenth day the wounds were healed. On the fourteenth day a Thomas's splint was applied, and two days later the patient went to a convalescent home. Five weeks later the patient walked without limp into the hospital, carrying his splint under his arm, and describing himself as perfectly well. He was then following his occupation as a seaman. The movements of the joint were perfect, and there was no swelling or tenderness.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Melanotic Sarcomatosis.—Perforation of Gall-bladder.—Osteitis Deformans.—Ulceration and Contraction of Stomach.—Tubercular Bladder after Koch's Treatment.—Myeloid Tumour of Tibia.—Umbilical Fæcal Fistula.

AN ordinary meeting of this Society was held on April 21st, the President, Dr. Dickinson, in the chair.

Dr. J. C. MACKENZIE contributed a paper on Melanotic Sarcomatosis, the specimens being shown for him by Dr. Woodhead. The patient was seventy-five years of age, and an inmate of Morpeth County Asylum. The primary growth occurred in the left iris; there was infiltration of the optic nerve, but the brain and spinal cord were free. The general symptoms observed during life did not bear on the pathology of the case. There was extensive infiltration, with secondary nodules, of the skin of the chest and abdomen, and at the necropsy secondary deposits were found in the substance of the heart, the inner surface of the pericardium, the lungs, the pleuræ, diaphragm, liver, gall-bladder, pancreas, spæn, adrenals, kidneys, intestines, stomach, bladder, mesenteric glands, testes, thyroid body, portal vein, and left pulmonary veins. The rarity of secondary growth in several of these situations was commented on, and it was pointed out that the chief interest of the case lay in the very wide distribution of the malignant deposits.

Mr. SYDNEY JONES exhibited a Perforation of the Gall-bladder, the specimen being taken from a lady aged fifty-three, of phthisical history and delicate, who had suffered at times from attacks of "spasms." Twelve months ago, in one of these attacks, she became jaundiced, but she had since been in good health. On Feb. 16th she had an attack of severe abdominal pain, with vomiting and symptoms of obstruction, and two days later there was well-marked acute general peritonitis. Later still obscure fluctuation was detected on the right side, and on incision a quantity of fluid was evacuated, together with bile-coloured lymph. The left parotid gland, which was also swollen, was incised, and sero-purulent fluid removed. The right parotid likewise swelled, but it was not incised. The patient died thirty-one days after the commencement of the symptoms. At the necropsy fifty-three stones were found in the gall-bladder, varying in size from a mustard seed to that of a pea, together with some bile. At the bottom of the gall-bladder was a minute perforation. No stones had escaped, but the peritonitis appeared to have been set up by the leakage of a small quantity of bile into the peritoneum. The walls of the bladder were thickened, but the lining membrane was free from ulceration. He referred to a case, shown at the Society in December last, in which perforation of the gall-bladder followed upon a general ulcerative condition, unaccompanied by the presence of stones.—Dr. SHARKEY remembered seeing post mortem a case of single ulcer of the gall-bladder, which caused death by perforative peritonitis. No calculi were present.

Mr. H. H. CLUTTON showed a specimen of Osteitis Deformans of the Tibia. A vertical section showed enlargement from one end to the other with the exception of the articular extremities. The medullary canal was almost completely filled up with new bone, which was as dense as the wall of the shaft. A few pits and spaces were filled in the recent state with granulation tissue. The specimen was removed by amputation from a woman aged thirty-five, who had been an out-patient at St. Thomas's Hospital for ten years. No other bone was affected, and there was no history of syphilis; no old or recent syphilitic lesion could at any time be discovered. She suffered from a great deal of pain, but obtained no relief from anti-syphilitic remedies given over long periods and in full doses. Mr. Clutton was inclined to look upon it as an unusual case of osteitis deformans: 1. From the absence of any evidence of syphilis either in the history or in the examination of the patient over a long period. 2. From the pathological appearances of the bone, which were as much in favour of osteitis deformans as of syphilis. Objections, he thought, might be raised: 1. From the age of the patient; but in one of Sir James Paget's cases evidences of the disease were first noticed at the age of twenty-eight. 2. From the fact that only one bone was affected; but in the Pathological Society's Transactions (1883) Mr. Bowlby had recorded a similar case in an elderly subject, and he (Mr. Clutton) had himself recorded one in 1888, in which the bones were unsymmetrically involved. 3. From the absence of any curvature of the bone. In answer to this objection, he stated that the patient scarcely ever put her foot to the ground except to come to the hospital. She was a pensioner, and had an angular curvature of the spine; and only one bone being affected, she naturally stood on the sound one, and never leant heavily on the leg that was so painful.—Mr. SYDNEY JONES asked if a microscopical examination of the bone had been made.—Mr. BARKER inquired as to the cause of the angular curvature of the spine.—Mr. CLUTTON, in reply, said he had not made a microscopical examination of the bone, as he failed to see that it could throw light on its causation. The angular curvature was of tubercular nature.

Dr. HADDEN showed an extremely Contracted Stomach, which was taken from the body of a woman aged thirty, who had suffered for several months before death from vomiting. She lived on liquid food only, which she took with marked slowness. The walls of the stomach were much thickened from a chronic and œdematous condition of the submucous coat. There was some ulceration of the lower half of the œsophagus and the first two inches of the stomach. There was some chronic broncho-pneumonic consolidation of the upper lobe of the left lung, with a cavity of rather recent date. The condition of the stomach was probably due to extensive ulceration with subsequent contraction. It was probable that the ulceration might have been due to the action of some corrosive poison, although the history, which was indefinite, did not furnish information on the point.—Dr. LONGHURST asked if there had been any hæmatemesis.—Mr. WILLIAMS called attention to the excellent series of specimens of ulceration of the stomach which were to be found in the museum of St. Thomas's Hospital.—The PRESIDENT asked if there was any evidence of morbid growth in the gastric walls.—Dr. HADDEN replied that there was no mention of hæmatemesis in the history of the cases and microscopically there was no evidence of malignancy.

Mr. HURRY FENWICK showed the Urinary Tract of a

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man aged thirty-two. Obscure symptoms, apparently of urinary tuberculosis, had been observed for two years, and yet only very slight vesical ulceration was found after death. Before Koch's injection the tubercle bacillus was discovered in large numbers in the urine, but none could be detected in any part on microscopical examination of the diseased tissues. Instrumental interference was considered unadvisable, from the constant presence of the bacillus, so 1 milligramme of tuberculin was injected. The reaction was immediate and moderate. But vomiting and profuse hæmaturia set in, and the patient sank sixteen days after with symptoms of pyelo-nephritis. On post-mortem examination the left ureter was found congenitally occluded and the left kidney atrophic. The right kidney was of large size and pyelo-nephritic; the bladder was ulcerated, and there were several small submucous abscesses in the apex of that viscus. Mr. Fenwick did not consider the death to be due to tuberculin, though he thought it had hastened it. He had injected another case, and had watched the ulceration change very markedly, but no permanent benefit seemed to have resulted, although a temporary improvement took place.—Dr. WOODHEAD asked if there was any histological evidence of tubercle in the pelvis of the kidney or in the walls of the small abscesses.—The PRESIDENT supposed that the shrunken kidney was an instance of simple atrophy from obstruction.—Mr. TARGETT said that the right kidney was an instance of simple dilatation; on the other side the abscesses were pyelo-nephritic and non-tubercular. At the neck of the bladder there was giant-celled growth, with small round cells.

Mr. SOLLY showed a specimen of Central Myeloid Sarcoma of the Shaft of the Tibia, situated a little above the centre of the bone. The patient was a lad aged seventeen, who had only noticed the growth fourteen days before the leg was amputated, and at the operation the popliteal glands were found to be infected. Recovery appeared complete for about five months, but secondary growths became evident in the lungs and axillary glands, and death took place six months after the operation. Secondary deposits very rarely followed central myeloid sarcomata of bone, but the statistics of Gross and others showed that they were most frequent in tumours springing from the diaphysial part of the bone rather than from the epiphysial ends.

Mr. WILLIAM ANDERSON brought forward a case of Fæcal Fistula at the Umbilicus, with Imperfect Development of the Large Intestine. The patient, a seven months' child (male), was found on the day after birth to have a fæcal fistula at the umbilicus and an absence of development of the lower part of the large intestine. He died of asthenia a fortnight afterwards, the functions in the interval having been discharged normally, and the bowels evacuated without difficulty through the umbilical aperture. The post-mortem examination showed a hernia of the ileum at the umbilicus, at a point an inch and a half from the cæcum. The umbilical orifice was single, but the probe passed freely into the intestine in both proximal and distal directions. The large intestine was filled with fæces, and terminated in a blind conical extremity about six inches from the ileo-cæcal valve. There was little doubt that the umbilical protrusion consisted of a kind of Littre's hernia (the result of persistence of the condition which normally obtained during the early period of fœtal life), a portion of which had been cut off when the cord was divided. Its adjacency to the cæcum made it probable that the hernia was determined by a persistent Meckel's diverticulum, which drew the ileum close up to the umbilical aperture, and favoured its escape when the ventless gut became filled with accumulated excretion. The placental end of the cord was unfortunately not preserved.—The PRESIDENT referred to a child which had been under his care at the Children's Hospital with habitual discharge of fæces from the umbilicus. Nothing was attempted in the way of treatment, and the child left the hospital in much the same condition.—Mr. BARKER had seen several cases where fæcal fistulæ had lasted a long time, and had then closed spontaneously.—Dr. WOODHEAD looked upon the case rather as one of persistence of the omphalo-mesenteric duct than of true fistula.—Mr. D'ARCY POWER asked if any swelling was visible in the cord before division, which might have been a caution against dividing it too closely to the umbilicus.—Mr. ANDERSON, in reply, said that a swelling was noticed in the stump of the cord after the scissors had been used. Perhaps the opening of the gut at the time was the most fortunate thing for the child, as there was no other outlet for the fæces.

The following card specimens were shown:—

Dr. LEE DICKINSON: (1) Aneurysm of the Abdominal Aorta opening into the Duodenum; (2) Aneurysm of the Thoracic Aorta opening into the Left Bronchus.

Mr. H. H. CLUTTON: Extensive Rodent Ulcer of the Scalp.

Mr. J. H. TARGETT: Melanotic Sarcoma of Bladder.

MEDICAL SOCIETY OF LONDON.

Debate on the Use of Koch's Remedy in Lupus and Pulmonary Tuberculosis.

AN ordinary meeting of this Society was held on April 21st, the President, Dr. Douglas Powell, in the chair.

Dr. G. A. HERON read a paper on the Use of Koch's Remedy in Lupus Vulgaris and in Tuberculosis of the Lung, which is published in another part of our present issue. An exhibition took place of many of the patients whose cases were described in the paper.

Dr. THEODORE WILLIAMS considered that the author had taken a very moderate view of the value of this treatment. He himself had not had so many cases under his care. Of those which had been treated at the Brompton Hospital at present no report had been published, and he would only refer to his own cases. He went over to Berlin to study the treatment, and he came back with the impression that he had not seen many material successes; only a small number appeared to be genuinely improved. He had had fourteen undoubted cases of phthisis under this treatment; all were under treatment for a considerable time, none less than six weeks, and others as long as ten. For the most part they were injected three times a week, in quantities varying from a milligramme to a decigramme. In five cases the disease was in what Dr. Heron would describe as the first stage; one was a case of softening, five had single cavities, and three had double cavities. Only six out of these fourteen improved generally in weight and strength during the injections; the rest were all decidedly worse. As to the effect on the lungs in the five cases of the first stage, four of them showed cavity formation somewhat rapidly, tubercle bacilli became more numerous, and lung tissue was constantly found in the sputum. In the excavation cases also extension of the disease was observed, and in one of the double cavity cases two other cavities formed. At the end of the treatment excavation was found in twelve of the cases, excavation accompanied by tubercular spread in six, and tubercular spread without excavation in one. In two of the cases the cavities appeared to contract, and the patients left the hospital better, but the others could not be said to have done at all well; in fact, they could not compare with the results of the ordinary expectant treatment. He remarked on the extraordinary effect the drug appeared to exercise in increasing the amount of lung tissue expectorated. It was found in the sputum in almost all the cases, and was detected as long as the patient remained under treatment. He had observed when at Berlin that at most of the hospitals they did not appear to look for lung tissue. In most of the cases there was also an increase in the number of bacilli expectorated. As regards diagnosis, it might prove very useful, but he observed that in two cases of laryngeal tuberculosis, though there was general, there was no local reaction. The searching nature of this remedy might be made use of by combining other drugs with it, and so eventually attacking the bacillus in its own nest after it had been hunted thither by the tuberculin.

Dr. RADCLIFFE CROCKER desired to direct his remarks to the treatment of lupus by this drug. He quoted a case which showed the advantage of giving the injection locally, for reaction was obtained after the ordinary injection in the back had ceased to have effect. In one case, in a boy, who left the hospital with scarcely any perceptible lupus, he hoped he had obtained a cure, for all that remained were some little brown nodules below the level of the skin. After three weeks at the seaside, however, the nodules had appeared above the skin, and showed signs of incrustation. As regarded permanence, therefore, this remedy did not compare favourably with scraping alone. But in the treatment of lupus he had for some time not only scraped, but had swabbed the surface with sulphuric, or carbolic, or some other strong acid, and by this means

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he had found the time before recurrence considerably lengthened. The great drawback to Koch's treatment was that it seemed to stop short just where one hoped it would go on. He had recently adopted a modification. He scraped away as much as he could and then injected, and the result so far in one case was very good. He thought we could only look on it as a supplementary treatment which would not replace other methods. He had treated a marked case of lupus erythematosus by injections, and the patient, a woman, had great general and but little local reaction, and there was only slight improvement in her condition.

Dr. WATERHOUSE referred to some experiences in general practice. His first case was that of a lady far advanced in phthisis; she died two months after treatment, and her death did not appear to be accelerated by it. In another case the patient was in the second stage; she was not at present well, but she was in a very satisfactory condition, having gained strength, and the expectoration being very much diminished. He observed that the immediate result of the injection seemed to be often for a time to make the lung appear to be much worse than it was. He had treated four cases of tubercular disease of the joints in children; one was a hip case with extensive sinuses, which refused to heal. These sinuses were closing in, and the progress towards recovery had been more in two months than it had been for two years before.

Dr. BAGSHAW, of St. Leonards, referred to the case of a gentleman who had tubercular pneumonia of the right lung, the sputum containing a number of bacilli. Thirteen injections of Koch's fluid were given, and then, no decided result being obtained, he paused. The middle lobe then broke down into a large cavity, and following this an ulcer formed under the tongue. There was swelling of the joints, symptoms indicating probably some ulceration of the bowels, and hæmaturia. All these conditions had now altered for the better; the pulmonary cavity had practically healed up, and there was little or no expectoration. He was unable to decide whether the treatment had done the patient good or harm.

Dr. THEODORE ACLAND desired to ask one or two questions. Had those cases done best in which toleration of the drug had been established, or were the results better when the patients were injected once or twice a week, a reaction being obtained each time? He presumed that the cases referred to were, while undergoing this treatment, provided with warm clothing, good food, and the other comfortable surroundings of hospital treatment. Could the author, therefore, be sure that the good which had followed was the result of the drug, and not of the other measures? This chance of error should certainly be eliminated, and he had found that the investigations of most of his friends were in this respect as unscientific as his own. It was remarkable that we were still discussing what was practically a secret remedy. He felt that a protest should be made against the great and irreparable harm that this secrecy was doing to the cause of science and of medicine.

Dr. HERON, in reply, said that the patients not only expressed themselves generally improved, but there was evidence of it in the condition of the lung; the coarse sounds got finer and the moist sounds drier; that, generally stated, was the condition of the lungs of the first class of cases, and it applied also to the others. In his experience he had not found in any instance satisfactory evidence that a new cavity had formed in any part of a lung. There was only one case in which this remained doubtful. He thought that Dr. Williams' experience of tuberculin as a cavity-maker was an exceptional one. He had often found a considerable amount of lung tissue as well as bacilli, but not to such an extent as Dr. Williams had described. He could not demonstrate in any instance extension of the disease in the lungs while under treatment. He had found the injection in the back to be quite as satisfactory as local injection in lupus. It was remarkable that, though the patient might remain quiescent at first, a marked reaction might take place after a fourth or fifth injection, and this might be the herald of a beneficial result. He had obtained the best results with those patients who reacted well at first with the drug, and who soon ceased to react at all. Often where there was no general reaction, a local reaction was observable after the injections, and this was a valuable indication. He said that, as a rule, his cases had not been treated at first in hospital by ordinary means, but they came in direct from the out-patients' department. Referring to the question of ethics, he said that it was quite enough for him to know that a man like Dr. Koch wished to keep a certain part of his work to himself. He felt sure that this was not done for a selfish motive, but for the benefit of mankind at large.

The PRESIDENT desired to add one remark to what had been said. He thought it was much to be regretted that Dr. Koch (though perhaps for reasons not altogether within his own control) had at first kept this remedy secret. But now he had published its composition and the general grounds on which it was prepared, and he had given his reasons for not publishing the further particulars which he had withheld.

SUNDERLAND AND NORTH DURHAM MEDICAL SOCIETY.

THE usual monthly meeting of this Society was held on Thursday, April 16th, J. Adamson, M.D., President, in the chair.

The Value of Perimeter Measurements in the Diagnosis of Brain Diseases.—At the invitation of the Society, Dr. Byrom Bramwell of Edinburgh delivered an address on the above subject. Owing to the limited time at his disposal Dr. Bramwell, after a brief *résumé* of the most recent knowledge of the deep origin and connexions of the optic nerve, discussed chiefly that form of hemiopia which is a symptom and physical sign of cortical lesion of the ophthalmic lobe. He showed perimeter charts, and read the notes of cases in which the above diagnosis was made, and verified post mortem. Other forms of amblyopia were briefly alluded to. Dr. Bramwell promised that the full text of his address would be published. A vote of thanks to the lecturer, moved by Mr. Morgan and seconded by Dr. Brady, brought the proceedings to a close.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on March 18th, Mr. Joseph White, F.R.C.S., in the chair.

Rupture of Intestines.—Mr. ANDERSON read notes upon several cases of this accident, drawing special attention to the difficulties attending diagnosis in almost all of them. He insisted upon the practical worthlessness for diagnostic purposes of the presence or absence of liver dulness. In conclusion, he strongly urged the desirability of speedy operation after the diagnosis had been determined.—Dr. ELDER gave an account of a case in which an accidental rupture of the first part of the rectum took place through forcible separation of old adhesions in the course of an ovariotomy, but in which complete recovery supervened without suture of the opening in the gut, a large drainage-tube only being inserted through the abdominal wound.

Colotomy.—Mr. ANDERSON further read notes upon cases illustrating several varieties of this operation, and strongly advised the adoption of that in the inguinal region whenever possible.

Nævus.—Mr. W. E. TRESIDDER exhibited and described a case of nævoid condition of the skin of unilateral distribution in a boy aged twelve. The right side of the face and trunk and the right arm and leg showed an ordinary capillary nævus, the left side being practically free, the port wine stain, however, passing across the middle line on the back to a slight degree. In one or two places the abnormal state showed a tendency to become cavernous. There was also some abnormally large and much distended superficial veins, the most marked being a prominent venous arch extending across the lower part of the abdomen from one saphenous opening to the other. The condition was congenital. The unilateral distribution appeared to indicate that the etiology of the condition might be some vaso-motor nervous disturbance of central origin, and occurring early in intra-uterine life.

Granulations on Mitral Valve.—Mr. TRESIDDER also showed a heart with granulations on the auricular surface of its mitral valve. The patient was the subject of chorea and acute rheumatism; with the latter was associated fever, and on the onset of chorea the fever subsided, recurring, however, again with the rheumatism. The patient died

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suddenly.—Dr. BROOKHOUSE suggested that the cause of the sudden death was the involvement of the heart in choreic movements. There was no appearance of myocarditis. The heart at the necropsy was dilated and full of clot, some of which appeared to be ante mortem.

The Midwifery Contract.—Dr. ELDER read notes of cases seen in consultation illustrative of the inadequate protection to the best interests of the patient and the reputation of the medical attendant given by the present general acceptance of the obligations of the midwifery contract, and suggested, amongst other matters, a supervision—more or less continuous, according to the health condition—of the patient during gestation and for a month or six weeks following parturition.

Actinomycosis.—Dr. WILLIAM B. RANSOM gave an account of a man aged forty-four, who was passing spherules of actinomyces in his urine and fæces, and specimens of the fungus were shown. The case was still under observation.

Brain of a Case of Hemianopia.—Dr. RANSOM also described the case of a woman aged sixty-two who had right hemianopia for a year after a sudden stroke. She died from extensive thrombosis of cerebral arteries, and the necropsy revealed old softening and shrinking of the left occipital lobe, posterior part of angular gyrus, and of superior temporal convolution.

Reviews and Notices of Books.

Researches on Micro-organisms. By A. B. GRIFFITHS, Ph.D., F.R.S.Edin., F.C.S. Illustrated with fifty-two figures. London: Baillière, Tindall, & Cox. 1891.

UNDER the above title, Dr. A. B. Griffiths has given an interesting outline of what is at present known of bacteria. Some parts of the work, however, deserve to be styled something more than an outline, and, as one would expect from the dedication of the book to Dr. Armand Gautier and Dr. P. Miquel, two special features are the consideration of the distribution of microbes in the atmosphere and in water, and the biological chemistry of these organisms, especially that which may be looked upon as the outcome of work done in the French and Italian schools. A considerable number of the original observations have already been published in the Proceedings of the Royal Society of Edinburgh and in the Proceedings of the Chemical Society, but the author has expanded most of his papers very considerably, and has added much new matter, more particularly in the way of bringing his work and references thoroughly up to date.

Dr. Griffiths commences with a description of the birth of bacteriology, gives an outline sketch of the theories of fermentation and a general consideration of the relations of microbes to disease. After a chapter on methods come a general classification of microbes, a description of their characters, their pleomorphism or monomorphism; then follows a good chapter on the distribution of microbes, in which the various methods as given by Miquel, Frankland, Gautier, and Hesse for the determination of microbes in the air, microbes in the soil, and the processes of nitrification are described. The animal alkaloids are very fully described, and an account of the researches of Gautier, Etard, Guareschi, Mosso, Brieger, and others is given; the ptomaines from infectious diseases are also described. The chapters on soluble ferments, on pigment formation, phosphorescence, the action of heat, light, electricity, and various gases on micro-organisms, on vaccination, on germicides, and anti-parasite therapeutics are all interesting.

The latter part of the book deals with the biology of some of the more important microbes, but the descriptions of these, with one or two exceptions, are rather too sketchy to be of any very great value. Dr. Griffiths has devised a method of treating phthisis, but it is difficult from a *résumé* of the cases he gives to say how far his method of treatment has been successful. He found that by causing the patient to inhale iodine and by the injection of natural salicylic acid (obtained from certain members of the vegetable kingdom, such as meadow sweet, winter green &c.) into the blood, he was able in certain cases, apparently, to interfere with the rapid course of this disease. This acid, which Dr. Griffiths considers has no detrimental action on the blood and tissues, has, he thinks, some curative action on the local lesions in consequence of its germicidal power. There is an enormous amount of material in the book, and the author has taken great trouble to collect a large number of the references bearing on the points he mentions. The work must serve rather as one for reference than for continuous reading, as except in one or two of the chapters, as already mentioned, we have little more than collections of bare facts somewhat disjointedly strung together. We do not say this in disparagement of the work, for it is impossible in a book of the size of the one before us to give all the information it contains in anything more than mere outline form.

Journal of Researches into the Natural History and Geology of the Countries visited by H.M.S. "Beagle." By CHARLES DARWIN, M.A., F.R.S. A New Edition, with Illustrations by R. T. PRITCHETT of places visited and objects described. London: John Murray. 1890.

WE are delighted to see a new edition of this charming book published with excellent illustrations. Like White's "History of Selborne," it is a book that eminently lends itself to illustration. Darwin's accounts of the scenery, the inhabitants and their habits, the animals and plants of the various regions he visited, have a perennial value. They are still novel, still in most instances rare, always interesting. No page can be opened which does not bear witness to his exceptional power of observation. The Fuegians, he says, speaking of South America, are excellent mimics; as often as "we coughed or yawned, or made any odd motion, they immediately imitated us. Some of the party began to squint and look awry, but one of the young Fuegians, whose whole face was painted black, excepting a white band across his eyes, succeeded in making far more hideous grimaces. They could repeat with perfect correctness each word in any sentence addressed to them, and they remembered such words for some time. ..... All savages appear to possess to an uncommon degree this power of mimicry. ..... How can this faculty," he adds, "be explained? Is it a consequence of the more practised habits of perception and keener senses common to all men in a savage state as compared with those long civilised?"

It is exceedingly interesting to see how the observations here recorded were gradually shaping themselves into the connected chain which afterwards reappeared as the "Origin of Species." For example, in speaking of the geological features of Patagonia and the vast gravel beds found in this region, Darwin is lost in wonder at the time that must have elapsed in the process of their formation. "When we consider," he says, "that all these pebbles (forming a bed 200 miles long by fifty feet in depth), countless as the grains of sand in the desert, have been derived from this slow falling of masses of rock on the old coast lines and banks of rivers, and that these fragments have been dashed into smaller pieces, and that each of them has been slowly rolled, rounded, and far transported, the mind is stupefied in thinking over the long absolutely necessary lapse of years." But these beds of gravel lie on a peculiar white stone which extends for more than 500 miles, and is in some places 800 feet thick, and which is composed to a considerable extent of infusoria. Below this, again, are beds with tertiary shells. In the same chapter he dwells on the changed state of the American continent, pointing out that formerly it must have swarmed with great monsters, gigantic sloths,

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and armadillo-like creatures; whilst now it is occupied, apart from such animals as the horse, which has been lately introduced, with mere pigmies. The illustrations by Mr. Pritchett, which are upwards of 100 in number, are excellent, and very materially add to the interest of the text. We can pay them no greater compliment than by saying that we wish their number had been doubled.

OUR LIBRARY TABLE.

Jenner-Literatur: Catalog der Bibliothek. Von Dr. L. PFEIFFER in Weimar.—The enormous amount of literature that has arisen out of the discovery of vaccination since the days of Jenner is well represented in the valuable collection originated in 1830 by Dr. von Bulmerincq in Warsaw, and continued down to 1890 by Dr. L. Pfeiffer of Weimar, in whose possession the library now is. It contains upwards of 2000 volumes, monographs, essays, &c., upon variola, inoculation, and allied topics, as well as portraits and drawings; and it is proposed to dispose of it as a whole in the hope that it may find a permanent establishment as a memorial of the illustrious man whose ideas have borne such fruit. The collection is one of great value, and its acquirement by Jenner's countrymen would be fitting, if it were feasible.

Asthma, considered specially in relation to Nasal Disease. By E. SCHMIEGELOW, M.D. London: H. K. Lewis. 1890.—The discovery by Professor Hack of the relationship between many cases of spasmodic asthma and nasal disease has been undoubtedly of great service in the successful treatment of the former affection. Comparatively little attention has been given to the subject in this country, and therefore we are grateful to the author of the work before us for producing an English edition of it. The argument is based on the conception of asthma as being a "bulbar neurosis," which may develop after debilitating circumstances, or may be excited by reflex irritations. Among the latter the nasal mucous membrane is a frequent seat, and local treatment of this tract may, in conjunction with general tonic measures, succeed in curing the tendency. For the development of this thesis we must refer to the work itself, which deserves careful study.

Home Nursing. By E. MARGERY HOMERSHAM, Lecturer for the National Health Society and Forsyth Technical College. London: Allman and Son.—We are glad to see a second edition of this excellent little handbook from the pen of so thorough and practical a nurse and so able a teacher as Miss Homersham. The book is published under the auspices of the National Health Society, and is an attempt to epitomise such knowledge as a nurse ought necessarily to possess for her guidance in the sick room. A good nurse is marked out by the amount of importance and weight which she attaches to those apparently trifling circumstances, the attention to, or neglect of which, in a sick room tends so much to soothe or to vex the sufferer. A special feature of Miss Homersham's work is the careful and scientific manner in which the necessity of attending to these innumerable details is set forth. The arrangement of the sick room and the details of nursing are indicated in a style at once attractive and instructive. In the present edition the chapter on diet has been enlarged, and many useful directions have been added in the way of preparing food for invalids. Chapter IV., on External Applications, such as poultices, mustard plasters, fomentations, blisters, and rubbing, is added in the present edition. Only they whose experience has shown them the stupendous ignorance which exists in many directions on this subject, and the fearful consequences resulting from the erroneous application of such remedies, can appreciate fully the attempts made by Miss Homersham to set forth in a concise form knowledge which may be of the utmost consequence in periods of domestic trouble. Chapter VII., on the Complications which are likely to arise in the Course of a Disease, is especially worthy of attention. Miss Homersham's little book should occupy a place in every household library.

Barker's Facts and Figures, 1891. London: Fredk. Warne and Co. — A large body of information, chiefly statistical, upon matters of current and permanent interest has been brought together by Mr. Thomas P. Whittaker under this title. Handbooks of much the same general character have been greatly multiplied of late, and it is not easy to hit off in a word or a sentence the distinctive character of the present compilation. It is perhaps enough to say that it seems well adapted to take rank among standard books of reference relating to moral, social, economical, and political subjects.

Saint-Raphaël, with Valescure and Boulourie, as a Winter Health Resort. By HOWARD D. BUSS, M.R.C.S. Eng., L.S.A. Lond. St. Raphael: V. Chailan. — This is an unpretending little book, intended to point out the attractions of St. Raphael to those invalids who seek absolute seclusion and are regardless of such festivities as exist at Nice or Cannes. Mr. Buss claims that St. Raphael is well sheltered from the cold winds by the Esterel and Maure Mountains, but that this protection is so far removed as to avoid the stuffy closeness or stillness which characterises the more perfect wall of mountain at such a place as Mentone. Doubtless there is some point in these arguments, and they apply with great force when speaking of the early spring or late autumn. To those who have enjoyed the greater heat, the much more certain shelter of such places at Beaulieu, Petite Afrique, Monte Carlo, and Mentone—St. Raphael will be very useful as a breezy break before reaching northern climates. There are numerous pleasant excursions to be enjoyed in the neighbourhood, and to archæologists the Roman ruins at Fréjus will prove a great attraction. To such visitors the guide-book Mr. Buss has published will be acceptable.

The Insurance Year-book, 1891. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited.—This compilation of insurance statistics will be chiefly interesting to those more immediately connected with the subject of insurance; but it is illustrated by a number of articles written for the general reader, and dealing in an elementary way with the principles of insurance in its various branches. The paragraphs devoted to the several offices give in a compendious and collected form statistical information which is thus brought into a very available form.

The Insurance Blue Book and Guide, 1890-91. London: Champness and Co.—This collection of insurance statistics is planned upon the method of putting its materials in tabular form, an arrangement which enables the facts to be exhibited very perspicuously, but makes the process of referring somewhat too laborious for the general reader.

New Inventions.

A NEW SAFETY CHLOROFORM INHALER.

ANY form of inhaler which will contribute to the safety of chloroform administration should be welcomed by the profession. The results of the Hyderabad Chloroform Commission, though questioned, still have directed more attention to the importance of watching the *respiration* equally if not more than the *pulse*. The illustration represents what I have named the "Safety Inhaler for Chloroform Administration," made for me by Messrs. Arnold and Sons, London, who have taken a great deal of trouble to perfect my idea, the

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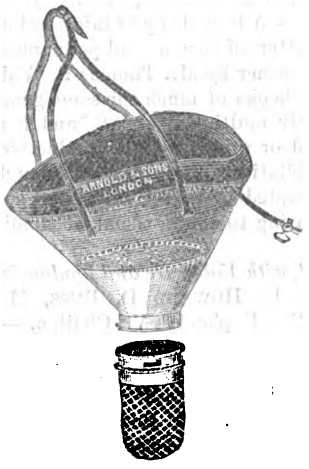
main advantage being that every inspiration and expiration, however faint, will cause the valves through which the air must pass to produce a sound audible to the administrator, and so give immediate notice of danger both to himself and the bystanders at the operation. I find it a good plan to apply the mask with no chloroform in it at first, and allow the patient to breathe naturally through it for a few moments,



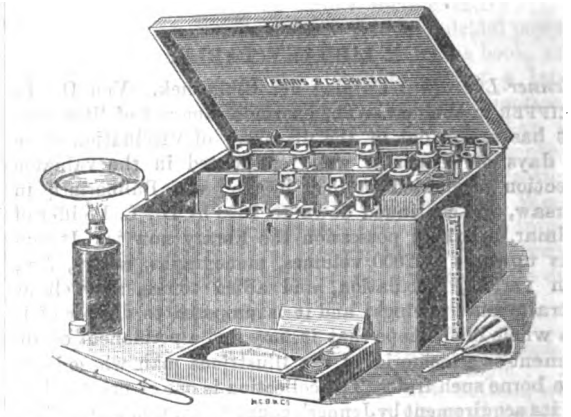
which establishes confidence and banishes a great deal of the nervousness usually met with. The cage of wire containing a small cup sponge being separate, the amount of chloroform considered advisable can be poured on and the receptacle (attached by bayonet joint) fixed in an instant without removing the mask from the face of the patient.

With nervous patients I consider it advisable, and it has always been my practice (where possible to do so), to give, half an hour previously to the operation, half a glass to a glass of whisky in a cup of hot milk, taken in mouthfuls, with a few minutes' interval. I have remarked when this is done the patient faces the ordeal more cheerfully, and there is (as a rule) no sickness of stomach or vomiting. I have always preferred chloroform to ether, having had personal experience of both. I think my inhaler, if given a fair trial, will be found a great saver of anxiety, if nothing else.

Dublin. ALEXANDER DUKE, F.R.C.P.I., &c.

APPARATUS FOR CLINICAL DETECTION OF MICRO-ORGANISMS IN BLOOD, SPUTUM, AND URINE.

IT has occurred to me in the course of ordinary work that it would be very convenient, especially for those engaged in hospital practice, to have in a small compass and handy form all the materials necessary for the staining of micro-organisms in the excretions and in the blood. When the reagents are not thus gathered together there is often much time wasted in finding the particular ones required for a given investigation. At my suggestion Messrs. Ferris and Co. of Bristol have devised a small box which contains, conveniently arranged, the materials most commonly required. The box is of small size, so as to be easily carried about. Briefly, it contains the following:—Ziehl-Neelsen fluid, with solution of nitric acid for decolourising, and methylene blue solution for ground stain (tubercle bacilli); the materials for making the Weigert-Ehrlich fluid, which requires to be freshly made, and is one of the most generally useful staining fluids; Gram's solution of iodine and iodide of potash for use with the Weigert-Ehrlich fluid, and a solution of acetic acid (1·5) for use with the same staining fluid for the examination of blood after Gunther's method; the methylene blue is also very useful as a general stain for micro-organisms. The box also contains bottles of distilled water, absolute alcohol, and Canada balsam dissolved in xylol; vesuvin and Bismarck brown in powder to be dissolved in water as required for use; needles, pipettes, glass rod, forceps, glass measure of 10 cc. capacity; funnel and filter papers, watch glasses, test tubes, microscopic slides and cover glasses. There is a spirit lamp and a box with close-fitting cover, in which the cover glasses can be left to dry. A support for carrying a watch glass above the lamp can be pushed out when the box is open. There is an extra bottle which has been purposely left empty for the addition of any particular fluid that the owner may desire in addition to those enumerated above. I think that the box contains everything that is



ordinarily required, and will be found a great convenience for the purposes for which it is intended. The box, fittings, and bottles are strongly made, and arranged so as to be portable, and to bear carrying about without injury.

Clifton. J. MICHELL CLARKE, M.B., M.R.C.P.

Analytical Records.

ÆSCULAP HUNGARIAN NATURAL MINERAL WATER.

(THE ÆSCULAP BITTER WATER COMPANY, LIMITED, 81, FARRINGDON-STREET, E.C.)

Æsculap enjoys a world-wide reputation. This may be attributed in a great measure to the constancy which is exhibited from time to time in its composition. A recent analysis carried out in our laboratory practically agrees with that made some years since by the Government analyst of Buda Pesth, in which place the spring has its origin. The total solid constituents of one litre dried at 100° C. weighed 47 grammes. They were found to consist chiefly of the sulphates of sodium, magnesium, and calcium, with chloride and carbonate of sodium; while manganese and iron are present in quantities which may be regarded as more than mere traces.

COCA WINE.

(WATERS AND SON, 33, EASTCHEAP.)

Coca, it is now generally known, acts when given internally as a stimulant, tonic, and restorative. Whatever substance this action may be due to, chemists have shown the existence of two alkaloids in the plant—viz., cocaine and ecgonine, the former body of course being known as a local anæsthetic. The following are our analytical notes, which show the genuineness of the preparation under notice:—Ether, after being made alkaline with carbonate of soda, became tinged with green (chlorophyll), and on evaporation yielded a residue bitter to the taste and producing on the tongue the local anæsthetising effect of cocaine. Treated with hydrochloric acid characteristic crystals of hydrochlorate were identified under the microscope. Alcohol 14·45 per cent. by weight, 17·81 per cent. by volume; extractives 1·21 per cent.; mineral matter 0·53 per cent. The wine exhibits a mingled flavour of coca leaves and good port.

PEPTO-PAPAIN POWDER, LIQUOR, AND TABELLÆ.

(PERKINS & CO., 9A, PICCADILLY, W.)

It is stated that the advantage attaching to these preparations is that, by virtue of the papain contained in them,

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the peptonising process not only takes place in the acid juices of the stomach, but also in the juices of the intestines, where an alkaline reaction is exhibited. According to our experiments this statement is not without foundation, as we had little difficulty in showing that the pepto-papain rapidly dissolved small sections of hard-boiled egg. Experiments like these do not always of course represent the precise and often complicated action which must really take place in the human body. Nevertheless, pepto-papain seems to us likely to rank amongst useful aids to digestion.

PARADOX DIETETIC BISCUITS AND PARADOX DIGESTIVE SALT.

(WALTER THORP AND CO., PARADOX WORKS, GLOSSOP.)

A very slight examination serves to show of what Paradox Digestive Salt is principally composed. It is saline to the taste, effervesces on the addition of acid, and gives a marked reaction for soluble phosphate. As a corrective in excessive acidity of the stomach this salt may probably be used with advantage, but we have not gained any decided evidence which would enable us to regard it as a digestive agent *per se*. Paradox salt is intended to be used as and in lieu of table salt, a form of administration which is both simple and convenient. Paradox biscuits are said to contain meat fibrine and albumen, as well as extractive, together with a preparation of malted food, all of which would evidently contribute towards the amount of nitrogen constituent. Our analysis shows 1·90 per cent. nitrogen (equal to 12·02 nitrogenous matter)—an amount little superior to that contained in good bread. The microscope shows the presence of a trifling quantity of meat fibre, and we agree that the biscuits are rich in bone-forming material, as the ash, amounting to 1·70 per cent., consisted largely of phosphate.

MOUNTAIN DEW SCOTCH WHISKY, FINEST OLD.

(ED. YOUNG & CO., LTD., SEEL-STREET DISTILLERY, LIVERPOOL.)

Unfortunately the age of a whisky cannot satisfactorily be determined by chemical analysis; it can only, and then not with certainty, be indicated. The palate, as is well known, is the best guide. Mountain Dew whisky is evidently a sound and wholesome spirit, and of satisfactory alcoholic strength. The results of analysis were as follows: Alcohol by weight, 42·48 per cent.; by volume, 50·01 per cent.; equal to proof spirit, 87·64 per cent.; extractives, 0·14 per cent.; mineral matter, 0·01 per cent.

"VIGOROSO" TONIC WINE.

"Vigoroso" is, we judge, a light port of excellent character, possessing a slightly bitter flavour derived from a herb which is said to give to it tonic properties. Our analysis yielded the following figures: Alcohol, 16·54 per cent. by weight; 20·33 per cent. by volume; extractives, 7·52 per cent. (chiefly glucose); mineral constituent, 0·08 per cent. Chloroform extracted a small quantity of bitter substance.

COD-LIVER OIL EMULSION WITH HYPOPHOSPHITES.

(G. MELLIN, 16, PICCADILLY-CIRCUS, W.)

It will suffice to give briefly the results of our examination in order to show the excellence of this preparation. In appearance and consistence it is like cream, the taste pleasant, with obvious cinnamon flavouring. Reaction to test paper was perfectly neutral. The microscope showed an infinite number of tiny oil globules of uniform size, resembling closely the condition of fat in milk. The emulsion permits dilution with water just as does milk, without undergoing any separation of fat. Alcohol yielded a coagulum, and the filtrate gave testimony to the presence of hypophosphite. The residue on evaporation reduced silver nitrate to black (silver), gold chloride to blue (gold), and perchloride of mercury to white (calomel). With strong sulphuric acid the emulsion gave a magnificent purple colour. The more perfect the emulsion, the more readily is cod-liver oil absorbed. This preparation, therefore, may be held to be of great value in the treatment of those chronic diseases which are attended by wasting.

THE SUSSEX PATENT BROMOFUME AND IODOFUME NIGHT-LIGHTS.

(HERTZ AND COLLINGWOOD, 4, SUSSEX-PLACE, LEADENHALL-STREET, E.C.)

The steady diffusion of iodine or bromine vapour into the air has been hitherto a matter of no easy or convenient accomplishment. It may, however, be done by incorporating certain bromo- or iodo-organic compounds with the paraffin wax of an ordinary candle. Then when combustion ensues both halogens are steadily given off in the condition of element. This is the ingenious method which is adopted by Messrs. Hertz and Collingwood. We have carefully tested the action of the night lights, and we find that both are active in evolving iodine or bromine vapour. On placing a moistened starch paper a few inches above the "iodofume" candle a blue colour was almost immediately developed. Starch paper moistened with iodide gave a similar result when placed over the "bromofume" light. Of course iodine and bromine, like chlorine, are well-known antiseptics and deodorants, but while it is probable that these candles may be useful in the treatment of throat and chest affections, and for general aerial disinfection, in no instance should they be used without the approval of the medical adviser.

MINERAL WATERS.

(BANGOR CITY MINERAL WATER WORKS.)

The water used in the production of these aerated drinks is evidently of a high standard of purity. We obtained no evidence of organic matter, or of injurious metals like lead or copper, which, through careless working, are occasionally found in artificial mineral waters. The soda water contained at least the amount of bicarbonate of soda stated on the label—viz., 15 gr. per pint, our analysis giving 15½ gr. The lemonade, though somewhat thin, which some may prefer, was excellent in flavour. The seltzer water is evidently genuine, for both magnesia and sodium chloride as chief constituents were found, but the manufacturers would do well to increase the proportion of potass and lithia carbonates in the respective waters, as examination showed that the amount of the active ingredients was considerably less than that prescribed in the Pharmacopœia.

PAPAIN.

(DR. FINKLER AND CO. DEPOT: B. KÜHN, 36, ST. MARY-AT-HILL, LONDON.)

Papain or papayolin is obtained from the juice of the leaves and fruit of the Carica papaya (Papaya vulgaris). This preparation affords very satisfactory results, for experiments conducted in our laboratory demonstrated how easily it digested hard-boiled egg either in weak acid, alkaline, or neutral solution. It is evidently a trustworthy product, and one which may be relied upon for uniformity of digestive power.

DIABETIC CHAMPAGNE.

(PATENTED BY SECKBACH & CO., FRANKFORT-ON-MAINE.)

In spite of the fact that this champagne contains practically no sugar, the analysis conducted by us gave results which exhibit in other respects a close approximation to the composition of ordinary champagne. Alcohol by weight, 10·15 per cent.; by volume, 12·58 per cent.; extractives, 1·90 per cent.; mineral matter, 0·14 per cent. The flavour, which there seems no reason to doubt is derived from the grape, is good, though somewhat sharp. This champagne is offered as a drink that may be useful in cases of diabetes on account of its freedom from sugar.

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THE LANCET.

LONDON: SATURDAY, APRIL 25, 1891.

THERE will soon be no excuse for persons rushing into the medical profession under any delusions in regard to its merits as a calling. That it has great attractions to certain classes of minds is undeniable, and many a man will be found toiling in it with little worldly advantage, who will frankly avow his satisfaction and declare that had he his life to begin again he would study medicine. But it is well for all persons to understand what to expect in it, and what is not to be looked for. An article of much interest and aiming at giving a fair representation of the rewards and responsibilities of medical practice will be found in the April number of the *Quarterly Review*. It is obviously written by one who is himself a medical man, and not the least interesting parts of it are those in which the writer gives an account of his own case and experience as a practitioner. We shall give briefly a *résumé* of his principal points, and such comments on them as occur to us. His article is based on Mr. SIDNEY YOUNG'S recent work on the Annals of the Barber Surgeons of London, from which he culls various extracts. These are of great interest, but they must not detain us from the chief feature of the article—its account of the rewards and responsibilities of the practice of medicine as at present seen. He deals first rather with the responsibilities, about which there can be no doubt. Many of our brethren will be able to say, "Well, I have seen plenty of the responsibilities of the profession, but as to its rewards I cannot speak so freely." The author highly approves of the lengthening of the period of study to five years, and advocates the raising of the age at which a qualification can be obtained to twenty-two. Touching the complaint that there is no court of honour, no court of appeal to adjudicate on disputes and questions of behaviour, he does not think that such a court, even possessing legal status and authority, would have much advantage. We are not so sure of that. Whenever the corporations or the General Medical Council do exercise their authority it has a decided influence; and if it were asserted a little more frequently and strongly there is reason to believe that the occasions for its exercise would become more infrequent. Many a young man drifts into unprofessional ways from the want of a kindly word of warning and remonstrance from his college or university. Such a word might be fitly spoken much more frequently than it is, and would have much more weight than the remonstrances of mere neighbours, who might be credited with jealousy and other unworthy motives. If our profession is to maintain its high reputation, these powers will have to be exercised. Yet it is notorious that the universities scarcely possess them, and that some of the corporations are either without them or afraid to use them. The public has an enormous interest in the *morale* and honour of the medical profession being held high. Such powers as medicine confers should involve subjection to certain constituted authorities, and the competitions and complications of professional life only make it more necessary that such authorities should both exist and act. In any really serious attempt to place our medical institutions on a strong and satisfactory basis, their disciplinary powers should be strengthened and provision should be made for cases in which the bodies are reluctant to use these powers. Many professional scandals would be averted or remedied in this way.

The author's account of the sources from which the profession is recruited and of the earnings of the profession will be read with interest. He thinks the middle class that which mainly supplies the ranks of the medical profession. He makes much of the fact that while the other professions—the Army, the Church, the Bar—are confessedly not to be relied on as sources of income, the medical profession is thought to be a calling which will insure a good income in any part of the kingdom. He adduces many facts to greatly qualify this estimate. Reverting to the calculations of Dr. PAGET THURSTAN three years since, based on the average value of 175 practices advertised for sale in THE LANCET, which gave £625 as the gross annual value of those practices, he argues that this should be reduced in various ways to a net value of £355, and that by including members of the profession who have no saleable or actual or independent practice, which he placesat almost half the profession—such as assistants and ship-surgeons,—we should arrive at an average of £200 a year; and that even this, apart from purchase, will not in ordinary circumstances be reached in a dozen years. He descants on the enormous amount of gratuitous work done by young consultants, and the miserable pay for attendance on the poor and the working classes. Many graduates of Oxford and Cambridge are obliged to do club and parish work. The members of the profession increase apace, from the double fact of the diminishing mortality of the profession and the increased numbers of those entering it. Moreover, the expenses of practice, even where the income is large, as in the high-class general practice of great towns, eat up the income and even more. Not only are the emoluments of practice slight, but its burdens and anxieties are great. The rivalries, the scientific difficulties, the ever recurring demands on time by day and night, making holidays impossible and even ordinary social engagements almost impracticable, make the profession different from, and more arduous than, every other. After all this lamentation the author depicts, or rather quotes Canon LIDDON to depict for him, the singular authority, nobleness, and glory of the calling of medicine when practised by men of culture and in the spirit of Christianity. It cannot be denied that it is discreditable to the public, and even to the working classes, that men whose preliminary and professional education is bound now to extend over eight or ten years are so lightly regarded and so inadequately remunerated. The sweating system is being applied by some of the great Friendly Societies in combination to medical attendance in a way of which individually they would be ashamed. One of our correspondents lately said that druggists have told him that they would not give the mere drugs to club and parish

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patients for the sum that medical men usually get for both medical attendance and medicines combined. This is a most significant statement, and may well cause guardians and the advocates of cheap medical associations to reflect. Such low terms are inconsistent with justice either to patients or practitioners. They tend to lower the medical profession and its *morale*, on which far more depends than is dreamt of in the philosophy of economists who think themselves shrewd in rewarding intellect with what will not even satisfy labour. The author of the article seems to think that the medical profession does not have the same place in society as the other professions. If this be so, so much the worse for that which is pleased to call itself society. There are social and even political disadvantages, but the profession may well stand on its own dignity; and it is certain that if its members walk in the lines of its own high traditions and pursue their own science and art for their own sake, society will be ready, as all judges of men have been, to see in medical men material for the very best company.

WE recently had occasion to notice the experiences of leading physicians and surgeons in Germany with regard to the employment of KOCH'S tuberculin as a remedy for tubercular disease. Few of the trials recorded in those official reports extended beyond the close of last year, when the nature of the remedy was still unknown, and when, too, it had hardly passed out of the phase of indiscriminate eulogy and sanguine anticipation with which it was first received. We are now in a position to appraise its value more correctly, thanks to the proceedings of the German Congress at Wiesbaden (recorded in another column) and to the statement of his observations before the Medical Society last Monday by Dr. HERON, as well as to the debate on Dr. BRISTOWE'S paper last week at a district meeting of the Metropolitan Counties Branch of the British Medical Association. In dealing with the subject it would be well if we could all follow the advice of Professor CURSCHMANN to the Wiesbaden Congress, to view impartially and calmly a remedy that seems to be sharing the fate of many a vaunted cure, and rapidly passing from a stage of violent and enthusiastic adoption into one of total neglect, and even denial of the least that has been claimed for it. It ought to be possible to treat it dispassionately now that the glamour has passed away and left us with clearer vision.

In closing a fairly exhaustive review of the abundant literature that has appeared on the subject of tuberculin, Dr. L. GALLARD[1] arrives at the conclusion that it is of no use either as an aid to diagnosis or in therapeutics, and that it should forthwith return from the pharmacist's shop to the laboratory whence it had too prematurely escaped. This is the real question at issue. Has the experience of its trial been such as to justify its continuance, or has it been so discredited thereby that it can no longer be held worthy of a place among our medicaments? We have no hesitation in ranging ourselves with those who still contend that it can occupy a place hitherto unfilled in therapeutics; but we equally believe that a great part of the discredit now attaching to tuberculin is due to the exaggerated estimate formed of its capabilities. Dr. HERON was careful to remind his hearers of the precise conditions formulated by KOCH as essential to its curative effect. We venture to say that those conditions have seldom been fulfilled in the treatment of cases of pulmonary phthisis, of which now we only propose to speak. Even Dr. HERON himself has treated cases of marked infiltration of the lung and of excavation with this method, but he justly remarked that few hospital patients are seen in the earliest stages of the disease. Throughout it has seemed to be futile to expect any notable effect in a curative direction from a remedy that can obviously only be efficacious (on the experiments which led to its introduction) in those earlier stages of the disease which are almost beyond the reach of physical diagnosis. No unequivocal cure has been reported in cases of more advanced tuberculosis. A certain proportion, it is true, have much improved in health, but we seek in vain for convincing evidence of amelioration in local signs, whilst no small number have pursued the steady downward course so common to the disease. Dr. THEODORE ACLAND'S reminder of the well-known fact that under improved surroundings many a phthisical patient gains in health—at least for a time—should hardly have been necessary if a less exalted notion of the powers of tuberculin to influence morbid processes had been borne in mind. In spite of this, however, the fact remains, clear and unmistakable, that in this substance KOCH has produced an agent that can so hasten the necrotisation of tubercle as to justify its use in cases where the deposit is limited and recent.[2] Such a limitation of its employment may to some seem tantamount to its entire abandonment; but surely, if sufficient attention be paid to incipient phthisis, cases might frequently be selected for its trial.

It is somewhat remarkable that the most damaging criticism upon the use of tuberculin as a remedy—that, namely, which was made on the authority of Professor VIRCHOW—should have been passed over in silence by Dr. HERON. It was one of the strongest arguments employed by Dr. BRISTOWE in the previous week in his plea against the use of tuberculin; it forms the main ground for its rejection advanced by Dr. GALLARD. It is, of course, most difficult to prove that an exacerbation of the disease, or the supervention of pneumonia or of miliary tuberculosis, occurring in the course of any case of phthisis, is due to the treatment employed. That tuberculin, which exerts so powerful a disintegrating effect upon tubercle, might well be accused of producing such accidents is reasonable. Still, apart from the effects of this or any other remedy, such occurrences form some of the ordinary modes of termination of the disease. Dr. HERON'S contribution was very largely occupied with the effects of the injections as clinically noted, and all praise is due to him and his able assistants for the painstaking records they have compiled. The interpretation of these effects is left open, so that it may be quite possible to claim for some of them an indication in favour of VIRCHOW'S contention. At Wiesbaden

[1] Revue des Sciences Médicales, xxxviii., 2, April, 1891.

[2] The view that its properties are simply those of a septic poison was forcibly argued by Drs. Bristowe and H. Mackenzie, but it lacks the evidence derived from observation of the action of known septic agents upon tubercle and allied diseases.

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this part of the subject was clearly enunciated by Professor ZIEGLER, who admits that the special action of tuberculin involves the risks necessarily attendant upon rapid softening of a tubercular focus without destruction of its contained bacilli.

We do not propose here to enter minutely into all the points raised in the consideration of this subject, but we cannot fail to note marked discrepancies in the results obtained by various observers. Especially we would remark on the favourable opinion expressed by Dr. MORITZ SCHMIDT of its effect in laryngeal tuberculosis, as contrasted with the experience of Dr. HERON. Its value in lupus was clearly shown by Dr. CROCKER to be subsidiary or rather complemental to other methods of dealing with this disease. Professor HEUBNER, at Wiesbaden, pointed out that it had hardly any action upon tuberculous glands, and that thus its application in childhood was much restricted. Opportunity will be afforded next week for a fuller discussion of its effects in surgical affections, after the reading of Mr. WATSON CHEYNE'S paper at the Royal Medical and Chirurgical Society, which comes opportunely to supplement the views of German surgeons at the Surgical Congress lately held in Berlin under the presidency of Professor V. BERGMANN.

In an admirable report to the Government of Victoria, summarising his personal experiences of the use of tuberculin in Germany and England, Professor H. B. ALLEN makes some just observations as to the spirit in which the new remedy should be approached. He goes on to say that "It may prove to be a great addition to the resources of the medical practitioner, but it does not supplant in any degree the teachings of old experience. Every remedy that was useful before will be useful still." We may now trust that it will take its rightful place, not being wholly discarded, but being employed with most careful discrimination, and certainly with less extravagant hope of attaining the unattainable than has hitherto marked its adoption.

OUR columns have recently contained some very interesting communications regarding certain sanatoria in Southern Algeria, upon the edge of the Great Sahara. Of these Biskra is the best known, and, in spite of many and grave drawbacks, is probably also the best adapted to the needs of the invalid or holiday traveller. Biskra is connected with Algiers by rail, and is reached by the East Algerian (Algiers and Constantine) Railway, *vid* El Guerrah. From Algiers to El Guerrah is a distance of 265¼ miles, and 125½ miles intervene between El Guerrah and Biskra. Unfortunately, travelling on the Algerian railways is extremely slow. The run from Algiers to El Guerrah occupies about sixteen hours, and from El Guerrah to Biskra seven hours, unless some acceleration has very recently been achieved. Nor can much be said for the comfort of travel, or for the conveniences to be found *en route*, which are about on a par with the speed. But we may safely reckon on some early improvement in these matters. The English-speaking races, who in so many parts of the world constitute decidedly the most influential section of the travelling public, will sooner or later succeed in insisting upon reasonable comfort and decency in any resort which they frequent either for health or pleasure, and they are the more likely soon to obtain their desires, inasmuch as they are both able and willing to pay.

A holiday contributor in THE LANCET of April 11th, though almost bluntly candid regarding the drawbacks of these desert sanatoria, draws a seductive picture of the attractions of Biskra. "Its stillness, its estrangement from the fever and the fret of the populous European centres, its pure exhilarating atmosphere, its varied inducements to open-air life, are all in the invalid's favour, while its natural and historical interest is sufficient to keep the intellect in gentle activity." As regards climate, for six months in the year Biskra is all that can be desired. Its mean temperature on an average of ten years is 73° F., rain seldom or never falls, and the only objectionable feature is the occasional prevalence of high winds more or less charged with sand. Everyone familiar with Egypt will recognise a description which would apply without essential alteration to portions of the Nile Valley. While climatically analogous, Egypt and Biskra differ in other important points. Egypt is one of the oldest sites of primæval civilisation, and has been, and still is, one of the great marts and highways of commerce of the world; Biskra is a solitary outpost on the edge of the Great Sahara, with its vast expanse of silent sand, broken only here and there by an oasis, or intersected by a camel track. The water-supply of Biskra is, we are informed, ample even in the driest seasons, thanks to the boring of artesian wells by the French, and the vegetation of the oasis is abundant and varied. Another resource of Biskra is its sulphur baths, of a temperature of 112° F., which were known to the Romans, who possibly on this account made Biskra one of the outposts of the Third Legion. Northern Africa is somewhat rich in hot mineral springs. The baths of Hamman R'Irha, close to Bon Medfa, a station on the Algiers and Oran Railway, fifty-six miles and a half from the former town, are well known in this country. They possess hot sulphur waters, and the climate is excellent in spring, but somewhat cold in winter, owing to the considerable elevation. Our correspondent draws attention to another and less known sulphur bath, Hamman Meskoutine, on the line of railway between Constantine and Bône. This bath, the "Aquæ Tibilitinæ" of the Romans, has a temperature of 203° F., and contains sulphur and large quantities of carbonate of lime. Unfortunately here also a bad railway service and inadequate hotel accommodation are serious deterrents to intending visitors.

Time was when it seemed a "far cry" to the Sahara, but that time is no longer. The globe-trotter and the sportsman who go everywhere, and the invalid who receives without demur marching orders for Colorado or Tasmania, will think little of a few days run to Southern Algeria. There can be no doubt that these desert sanatoria have some decided advantages over their European rivals. As our correspondent points out, they are "sun-baths in the severest winter, when the French and Italian Riviera and the Mediterranean islands are but a shade less trying to the victim to weak heart or impaired lung than the sheltered spots on our south and west coasts." In fact, as travelling invalids are fond of saying, they pay for sunshine, and whereas on the northern shore of the Mediter-

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ranean sunshine in winter is only a probability, on the southern shore it is a certainty. The "islets in the great sand sea" have a winter climate which is practically invariable, and of which the chief characteristics are sunshine, warmth, and rainlessness.

There remains for consideration the important question regarding the classes of persons for whom the desert sanatoria are most adapted. With the case of the globe-trotter and sportsman we have little concern. The victim of overstrain, especially of commercial or professional life, and the neurasthenic invalid, constitute one of the classes surest to benefit by these resorts. The profound calm and restfulness of the desert, the absence of the customary excitements and distractions of civilisation, the open-air life, and the stimulation of the constant sunshine, are points of great importance. In some of these particulars the life in the desert is comparable to life on shipboard, very different as are these two modes of existence in other respects. Anæmia, general debility, "weak heart," some forms of rheumatism, and incipient cases of Bright's disease and of phthisis will often be benefited by the air of the desert. On the other hand, marked hysteria or great nervous irritability is a contraindication, the general effect of the climate being on the whole stimulating. Hepatic disease, very grave dyspepsia, and ophthalmia are likely to be aggravated rather than benefited by the climatic conditions of the desert. It is hardly necessary to point out that, while early and uncomplicated phthisis will often do very well in Southern Algeria or Upper Egypt, the discomforts of travel, the nature of the hotel accommodation, and the absence of efficient medical care, are peremptory reasons for declining to send thither cases of active and progressive disease.

A DEPUTATION of women employed in the nail and chain making trade, for which Cradley Heath and the Black Country have acquired an unenviable reputation, waited upon the Home Secretary last week. The object of the deputation was evidently to prevent any check being placed on the work of women who, at the sacrifice of their own health and that of their offspring, labour at a price which no man would accept. A few stalwart women were selected and brought up to impress Mr. MATTHEWS with the healthiness of the trade in which they are engaged. But we have no very precise details given us as to the nature and duration of the work these women perform, as to the number of children that have been born to them during the time they have worked at the trade, as to whether the accouchements were satisfactory and normal, and as to how many of these children are now in the enjoyment of good health. Also, we should be curious to know who paid the expenses of this deputation to town. Was the cost defrayed by persons defending the interests of labour and of public health, or by those who act with those votaries of the "dismal science" who so believe in the virtues of *laisser faire* and *laisser passer* that not only would they refuse to sanction such legislation as might prevent starvation, but who think we should also, rather than interfere with what they call the liberty of the subject, give free passage to death and disease? The arguments generally adduced are that women should enjoy equal liberty with men to earn their living. This principle we also are willing to accept, but we see in this no reason for falling from one extreme to the other. At one time it was thought that women should do absolutely nothing but remain at home and attend to their domestic duties. Now it is recognised that, in many instances, women are justified in entering the labour market and seeking to earn their living. This, however, no longer seems to satisfy some advocates of women's rights. They want women to be even more free than men. There are any number of laws to restrict and regulate the work of men when such work is found to be injurious to the workers themselves or to their neighbours. Yet when a law, based on the same principle, is proposed so as to protect the health of women workers, a great outcry is raised. We are told that women are unfairly dealt with, that men in their selfishness are driving them out of the market, that there should be equal laws for both sexes, &c.

With regard to the nail and chain makers, we maintain that the work is physically unsuited to women; that the work should be checked because, economically, it is productive of starvation. Men would, and do, earn better wages when engaged in the heavier work which is now destroying the health of so many women. But more especially it should be checked because of its physical effect on the women. Women have to spring on the treadle of the Oliver hammer, throwing the whole weight of their body on the one leg and foot, and this many hundred times every day. They have to carry very heavy weights on their heads and shoulders, with the result that spinal disorders occasionally ensue. Medical evidence clearly establishes that accouchements are difficult, false presentations very common, and that instruments have to be used more frequently with the chain and nail makers than with other workwomen. The death-rate of children under five years is appallingly high throughout the district.

These facts cannot be refuted because a few healthy-looking women have been brought up from the nail and chain making district to interview the Home Secretary. One of our Commissioners, when investigating the matter at Cradley Heath, came across a very healthy-looking chain maker; but, on questioning her, found that for one or two days a week she worked as a charwoman, and for this comparatively light occupation she received much higher pay. This woman was therefore able to live in greater comfort, and had thus so far preserved her health. The special reports we issued on the chain and nail makers of Cradley Heath and neighbourhood have never been seriously controverted. These were published on the 9th and 16th of March, 1889, and one of our Special Sanitary Commissioners gave evidence on the subject before the House of Lords' Committee on Sweating on March 22nd of the same year. In the Worcester portion of the sanitary district, which includes Cradley, there were thirty-eight deaths of infants under one year old out of 100 deaths in 1887, instead of 14·5, the proportion throughout all England. In the Cradley Heath district the mortality of children under five years was about double that of England as a whole. These fatal consequences must result, in a great measure, from the nature of the work performed by the mothers of these children. Instead of the few healthy women, many of them

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belonging to a previous and more prosperous generation, who were presented to Mr. MATTHEWS, we could bring together a crowd of wretched, half-starved, stunted, chicken- or flat-breasted women, with angular, sinewy limbs and colourless cheeks, that would certainly shock by their appearance the humane susceptibilities of the Home Secretary. The district which Mr. RUSKIN described as the most dismal and dreary in the civilised world has not earned its evil repute undeservedly. The degradation, especially of the women workers, is a disgrace to our modern civilisation and a danger to the coming generations.

Annotations.

"Ne quid nimis."

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

MORE than 700 graduates have sent in their names in opposition to the "latest revised scheme" of the Senate for the reconstitution of the University, and a second list is being formed, so that it is evident that the lines upon which this last scheme is drawn are far from meeting with the approval of the general body of the graduates, whilst among the opponents are several teachers in the metropolitan medical schools, as well as many of the most influential of the non-official members of the University. University and King's Colleges have definitely decided by their Councils to oppose the scheme, and will at once send in their objections to the Lord President of the Privy Council. The Birmingham and Sheffield Colleges also officially refuse to accept conditions under which they would be admitted to the scheme, and their objections will be supported by other provincial colleges. The Fellows and Members of the Royal College of Surgeons will meet on Monday, May 11th, to discuss the scheme. As the meeting of Convocation will take place on the following afternoon, it would seem that the Council has selected a date when these deliberations can have but little importance and no official bearing on this most important question. The opinion of the body corporate of Fellows and Members cannot then possibly alter or affect the action of the Council of the College, or have its due effect on the decision of the University.

THE FIVE YEARS' CURRICULUM.

THE difficulties which will occur to everyone as to the best means of utilising the extended period of education of the medical student are strikingly shown in the report of the Committee of Management of the Examining Board in England which has just been issued, and which will come on for discussion at the next meetings of the respective authorities of the two colleges. The committee are generally agreed on the subjects of the curriculum, but differ as to the number of examinations which should be held during the five years of study. The six members have three different views as to this point, and so three schemes will be submitted to the two colleges for their decision. Under the first scheme, recommended by the medical representatives of the Committee of Management, there would be three examinations, as at present: the first, after six months' attendance at a medical school, would embrace chemistry and physics, pharmacy, elementary human anatomy and elementary biology; the second, at the expiration of the second winter session, would include anatomy and physiology; the final, after the expiration of three winter and three summer sessions from the date of the candidate passing the second examination, would deal with medicine, surgery, and midwifery. During this last period the student must have received clinical instruction in fevers and small-pox. This scheme practically alters but very little the present arrangement, except that elementary biology is added to the first examination, that courses of lectures on public health and therapeutics must also be attended, and that a special paper on forensic medicine, public health, and general therapeutics forms part of the examination. The second scheme, presented by two of the surgical representatives, is similar so far as the first and second examinations are concerned, but the third examination is to be passed at the expiration of two years from the date of passing the second examination, and consists of medicine, surgery, and midwifery, as at present; but the latter subject may be taken at the fourth examination if the candidate elect to do so. Under this scheme the final year is to be devoted simply to an extra year's attendance at a hospital (to include attendance at a fever hospital), and a fourth or final examination in clinical medicine and surgery must then be passed.' In the third scheme drawn up by the remaining surgical members of the committee the student is required to pass a series of annual examinations, the first in chemistry and physics, elementary human anatomy, and elementary biology; the second in anatomy, physiology, and elementary pathological anatomy; the third in anatomy, including histology, physiology, pathological anatomy, pharmacy, and elementary knowledge of drugs; the fourth in the principles of medicine and surgery and in pathology; whilst the fifth or final embraces the practice of medicine, the practice of surgery, the practice of midwifery and diseases of women, and the elements of forensic medicine and of public health. Doubtless there will be many differences of opinion as to the relative value of the schemes, but at present we would only point out that they all agree in introducing into the curriculum the subject of elementary biology; that ophthalmology, diseases of children, and mental diseases are unmentioned; that there is no provision made for spending the fifth year with a practitioner as a pupil, but the extra year practically becomes merely an additional year of ordinary hospital study and hospital work, except that a certain unspecified time is to be given to fevers. We question if these arrangements are such as were anticipated by the General Medical Council when they passed the resolution insisting on this fifth year of medical education.

THE SANITARY STATE OF ST. BARTHOLOMEW'S HOSPITAL.

IN reference to the allegations that diphtheria and other diseases at St. Bartholomew's Hospital have been due to defective sanitary circumstances connected principally with the main drains of the institution, an important statement, signed by the whole of the medical and surgical staff, has now been issued. In it the staff assure the governors that the statements which have been made are not justified by any existing evidence, and they base this declaration both on the experience of their daily visits to the wards, and, especially, on the absence of those unfavourable results after surgical operations which are known to ensue on such conditions as have been alleged to exist. As regards diphtheria, it is opposed to all our knowledge of this disease that it should be limited to a single class of such a large community as that of St. Bartholomew's Hospital, unless it could be shown that that one class was more than another exposed to some one special cause. The drainage conditions are common to a community of about one thousand persons, including patients, and are in no way special to one class; the diphtheria was almost exclusively limited to the nursing and ward staff who had actually been

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exposed to infection whilst on duty in the diphtheria ward, or elsewhere attending on diphtheria patients. It was doubtless this exposure to infection that gave rise to the disease in the nursing staff, and it calls for some reorganisation of the nursing staff in respect of attendance on infectious cases; but there is surely no warrant for making use of such an occurrence in order generally to condemn the sanitary arrangements of the hospital. The statement issued on the authority of the medical and surgical staff cannot fail to give confidence as to the general health of the hospital, the more so as it is understood to be the outcome of a lengthened and very detailed inquiry into the circumstances of each case of disease that has supervened in either nurse or patient. At the meeting of the Commissioners of Sewers on the 21st inst., Dr. Sedgwick Saunders, the medical officer of health, made a statement on the subject. He said that at the last meeting of the sanitary committee he laid before them the plans relating to the sanitary arrangements of the hospital, and pointed out the existence of certain structural defects. He intimated, however, that in his judgment there was nothing to show that to these defects were to be attributed any attacks of disease which had appeared in the institution. After some discussion, the matter was referred back to the sanitary committee for further consideration.

THE QUEEN'S VISIT TO GRASSE.

HER Majesty's stay at Grasse is now drawing to a close, and, if certain rumours which reach us from a source on which we have good grounds to place reliance are true, the country will have additional cause to rejoice that Her Majesty returns to England in excellent health. As has been announced, Miss Reynolds, one of the Queen's attendants, recently died at Grasse from blood-poisoning following a slight injury to her hand. We now learn that there have also been a comparatively large number of cases of such illness as is generally traceable to insanitary surroundings. Moreover, we understand that small-pox has been prevalent about Grasse, and was so at the time of the Queen's arrival there. Doubtless Her Majesty's advisers take measures of precaution when she visits foreign places, but we would point out that where a life of paramount importance to our country is concerned it is absolutely imperative that the most eminent experts in sanitary science should be called in to testify to the hygienic condition of any town or locality proposed to be made the temporary abiding place of our Sovereign. The Queen herself, we have reason to believe, has enjoyed capital health during her sojourn at Grasse, but this is far from having been the case with regard to her *entourage*.

RESPIRATION AND THE CARDIAC IMPULSE.

IT is a well known fact, which is stated in all text-books, that the cardiac impulse changes its position with expiration and inspiration. By most authors this is considered to be due to the movement of the diaphragm. Eichhorst says, in his text-book of clinical examination, that if by any means the movement of the diaphragm is paralysed, the changes in position of the heart's apex no longer occur. Riegel and Tuczek observed some cases in which during inspiration the apex beat became stronger and more perceptible, whilst the reverse took place with expiration. After death adhesions were found between the pleura and pericardium. Eichhorst has also recorded a case in which the same symptoms were noticed when a diffused bronchial catarrh was present, being especially severe in the anterior and lower part of the left lung. In accordance with the theory generally accepted, these phenomena are difficult to explain, but Dr. P. E. Liviérato[1] brings forward some observations which seem to show that the explanation of the variations in the position of the cardiac impulse with respiration is not, after all, the correct one. After describing the apparatus employed in his investigations, he gives the following conclusions at which he has arrived: (1) The heart may undergo, under normal circumstances, considerable changes in its position, which are due to extraordinary movements of the lungs in respiration; (2) in ordinary respiration these changes are not appreciable; (3) the alterations in position of the heart are brought about chiefly by the increase in size of the lungs with inspiration, especially the left; (4) the influence of the diaphragm is only secondary; (5) the same changes of position of the heart can be produced in the dead body by artificial respiration when the diaphragm has no action; (6) in forced inspiration the heart moves to the right, downwards, and forwards; (7) the greatest changes are noticed when the subject is in a sitting position; (8) the movement of the heart to the right is more marked when the expansion of the right lung is prevented by some pathological condition; (9) the movement towards the right is always the one most easily observed, next the downward, the anterior movement being the least; (10) Dr. Liviérato claims that such cases as were quoted above—namely, those of Riegel, Tuczek, and Eichhorst, add additional support to his theory; for in these cases the forward movement becomes very marked, since, owing either to the pleuro-pericardial adhesions or to the infiltration of the lower part of the lung, when a deep inspiration is taken the lung tends to push the heart apex more to the front, and consequently accentuate the anterior movement. It is to be concluded from this that this phenomenon is not diagnostic of pleuro-pericardial adhesions as Riegel and Tuczek maintained.

CLINICAL STUDY OF INFECTIOUS DISEASES AT GLASGOW.

WE have often had to report with satisfaction on the organisation of clinical teaching in infectious diseases in Glasgow. The work continues. It is still done by Dr. Allan, the physician superintendent of the Belvidere Hospital, but it is now carried on by him under the immediate authority of the police commissioners of the city of Glasgow, who have taken the matter into their own control. From May, 1890, to March, 1891, the actual number of students was 146. Ten of these took a second course, making the number of tickets issued 156. About two-thirds took the courses in the summer term. The maximum number that can be undertaken in a year is 150, so that the limit has been practically reached, and students had to be refused from time to time. Dr. Allan reports that, so far as is known to him, none of the students have contracted any infectious disease. He acknowledges the valuable assistance of Drs. Carslaw and Roxburgh. It would be difficult to exaggerate the value of such a course of instruction to the students who are wise enough to take it.

BROMIDES IN EPILEPSY.

DR. SEGUIN, of New York, in his interesting lectures on the treatment of neuroses, directs attention to several points of importance in connexion with the administration of the bromides in epilepsy. Patients, he says, vary much in their susceptibility to the drug, so that a dose of thirty grains will produce a marked degree of bromism in some, while no such effect is observable in other patients. Children bear a much larger relative dose than adults, and as a general rule there is in adults a certain proportion between the size and weight and the susceptibility to the

[1] Centralblatt für Klinische Medicin, 1891, No. 11.

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drug. He is of opinion that organic cerebral disease and also cardiac disease increase the susceptibility to bromides, and he points out the fallacy of regarding the occurrence of acne as in any way indicative with regard to dosage. Dr. Seguin is in favour of a standard solution of the drug in the methodical treatment of epileptics for the sake of convenience, and he regards its large dilution with water as of great importance, both on account of its being thus more easily absorbed, and as tending to produce less gastric disturbance if administered in this way. It is also less unpleasant to take than if combined with syrups or other flavouring agents. Simple water, or better, a slightly alkaline water, may be used, and the administration ought to be regulated so as to render the taking of the drug unnecessary as far as possible during working hours, while the best effect will probably be obtained by giving a large dose four to six hours before the time at which the attacks are likely to occur. Of course regularity in the administration from day to day is insisted upon, but this, unfortunately, except in epileptics under observation in hospital, is very difficult to carry out. It is too much the fashion to prescribe bromide in a rough-and-ready fashion for epilepsy, and Dr. Seguin, from his large experience, can speak with authority as to the importance of those apparently minor details.

INCREASING ALCOHOLISM IN FRANCE.

WE have repeatedly alluded to the increasing consumption of alcohol in France. Our contemporary, the *Globe*, says the consumption per head has steadily increased since 1830, when it was one litre per annum, to four litres, which is the present rate of consumption. Normandy is by far the worst in this respect. In the region around and west of Paris the consumption amounts to six litres per head per year. In Gers and Savoy, on the other hand, it is less than one litre. Our contemporary says the consumption is greatest in the educated, or at least the industrial, centres.

THE ROYAL BRITISH NURSES' ASSOCIATION.

THE special meeting of this Association, of which a report appears in another part of our impression, was held under distinguished auspices, and pervaded by a sanguine confidence amply justified by the circumstances of the gathering and of happy augury for the future of the Society. The supporters of the Society had legitimate ground of congratulation upon the excessive zeal that has precipitated their assailants, as we pointed out a few weeks ago, into an attack which is wholly premature and largely mistaken. The advertisement which appears to-day (p. 63) invites "any person, company, or corporation" objecting to the application which is being made on behalf of the Association to the Board of Trade to address the assistant secretary of the railway department upon the subject. The application itself is merely for leave to omit from the title of the Association the inapt word "limited," and on this issue the only considerations which the board can take into account are such as go to show whether the revenues of the Society are to be turned to profit for its members or exclusively employed in the promotion of some useful object. If we rightly understand the terms in which its objects are set out, it is to this latter class that they must be referred, and no doubt can exist in any mind that the intention of the promoters is to foster not private gain, but public advantage and charitable relief. If this is made clear upon the application now pending, the assent of the Board of Trade to the promoters' request cannot be withheld, and critics who propose to enlighten the assistant secretary as to their private views upon collateral matters, such, for example, as the utility of the new Register, would do well to spare their pains and save their objections for another tribunal. It is transparently clear that the opposition which has been organised at the present moment is not directed to those financial considerations which alone are material to the discussion of the question whether the Association shall be entitled "limited" or not. But the supporters of the movement were well advised, we think, to go beyond the limits of strictly relevant argument, and meet the criticisms which have been levelled at their scheme with such very satisfactory answers, based on the merits of their case, as found expression in the speeches of Sir James Crichton Browne and his colleagues on the platform at the British Nurses' Association meeting.

THE PANCREATIC JUICE IN THE HUMAN SUBJECT.

NO exact analysis of the pancreatic juice in the healthy human subject having been published, advantage has been taken by Dr. Zavadski of a case recently operated on in Warsaw to obtain such an analysis. The patient was a young woman with a cystic tumour of the pancreas. This tumour was removed by Professor Kosinsky by means of the thermo-cautery. On the seventh day the tampon which had been put in was taken out, and a drainage-tube inserted. At first the discharge was purulent, and then for a time watery, but subsequently it consisted of the pancreatic juice alone. Before the wound healed, which it did in about seven weeks after the operation, the secretion of twenty-four hours was collected and examined. It was a somewhat tenacious, yellowish, turbid liquid, with a marked alkaline reaction. On analysis it gave—water, 86·405 per cent.; organic compounds, 13·251 per cent.; albuminoid bodies, 9·205 per cent.; extractive matters soluble in alcohol, estimated as nitrogen, 0·827 per cent. Salts: carbonates, chlorides, phosphates, and sulphates of sodium, potassium, calcium, and iron, 0·344 per cent. At a temperature of 100° F. the juice actively converted starch into maltose, egg albumen into peptone, and olive oil into an emulsion. On the whole, the human pancreatic juice was found, on comparing it with that of other animals, to resemble most nearly that of the dog according to Schmidt's analysis.

OPEN SPACES FOR NORTH LONDON.

THOSE who wish to increase the pleasure and the healthiness of life in this crowded metropolis, especially for the poor, have no more urgent duty than to preserve open spaces and every tree that can be snatched from the heartless blow of the speculative builder. We are glad to see an effort to extend the area of Highbury Fields and to include many fine and rook-harbouring trees. The vestry and the County Council will be well within their duty, as will the inhabitants, in making this effort effectual.

DR. RUSSELL ON PRACTICAL TEACHING IN SANITARY WORK.

AN interesting "Memorandum on Practical Instruction in Sanitary Work of Candidates for Diplomas in Public Health," signed by Dr. Jas. B. Russell of Glasgow, has been sent to us. The Faculty of Physicians and Surgeons had very properly brought under the notice of the Town Council of Glasgow the resolution of the General Medical Council of November last, requiring every candidate for a medical officership of health, after obtaining a registrable qualification, to personally study the duties of out-door sanitary work under the medical officer of health of a county or a large urban district, unless he had personally held the office of medical officer of health. Dr. Russell reports to a subcommittee of the Town Council on the subject. We are glad to say that his report is

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favourable to the principle of practical teaching: he calls it pupilage or apprenticeship. He does not think it would be possible or desirable for the medical officer of health for Glasgow to take more than two such pupils. Others would have to get their practical teaching elsewhere. We should have thought that in Glasgow more pupils could have been taken. But it is much to have got Dr. Russell's approval of the principle, and to have this endorsed by the other sanitary officials and accepted by the subcommittee to which it was referred. He makes the following suggestions concerning such pupils. 1. They shall be called pupil assistants. 2. They shall be appointed by the medical officer for not less than six months or more than *twelve*, and their names reported from time to time to the Commissioners. 3. They shall pay no fee and receive no salary, but shall assist in the work of the department in so far as may seem expedient, subject to the medical officer, and in return shall have every opportunity of studying the duties both of in-door and out-door work. We are glad to see that Dr. Russell includes in-door work in his suggestion.

ANOTHER STREET DANGER.

THERE is no condition of life which has not a conceivable connexion with danger, a connexion which is also to a great extent unpreventable. But, after admitting this fact, it is clear that much of what we describe as accidental is the mere consequence of our own carelessness. Nor need we travel far to find instances which prove at once the value and the daily neglect of caution. The traffic of our streets affords us hourly proofs of such neglect. Only a few days ago a cab horse, frightened by the noise of a drum and fife band, upset a passing bicycle and caused the death of its rider. On another occasion a bicyclist narrowly escaped inflicting most serious injury upon a woman who happened to cross the line of his rapid progress. It is much to be regretted that the otherwise wholesome practice of cycle-riding should have to be classed among the dangers of the streets, but we fear there is, under present conditions, no doubt upon the subject. So long, indeed, as due regard is had to the regulation of speed, the risk should not be great, and what exists affects chiefly the rider himself. But unfortunately such consideration for surroundings does not by any means distinguish all members of this class. Speed is exhilarating, and it is a luxury far too commonly indulged in. We are therefore distinctly of opinion that cycle riding in crowded thoroughfares like those of the City should be subjected to police regulation. In this lies the pedestrian's only guarantee of safety from awkward and dangerous collisions, and on this depends also to a large extent the security of the rider and the furtherance of the general traffic.

HEMIANOPSIA.

THIS interesting but intricate subject is considered by Dr. Noyes of New York in an exhaustive paper in the *New York Medical Record*. From a consideration of various cases already published by several authors, and of certain points in others which he has seen himself, he draws several conclusions, of which the most important are the following: (1) That there is a want of uniformity in the exact position of the boundary between the blind and seeing portions of the fields in hemianopsia; (2) that in several cases of double hemianopsia there is persistence of a small central field in each eye; (3) that sectorial defects of homonymous character are most likely to have their origin in the cortex of the occipital lobe, and that in such cases there may be absence of other significant symptoms, except possibly agraphia, mental blindness, or word blindness; (4) that sectorial defects may originate in the subcortical part of the occipital lobe, in which case the defect is not likely to be so well defined as when the lesion is cortical, and the loss of light sense will probably be less complete; (5) that from certain cases published it appears that sectorial and quadratic defects may arise from lesion of the optic tract; (6) loss of either colour or form perception, with retention of light perception, implies a cortical lesion of the visual centre; (7) Wernicke's symptom, or the hemiopic pupillary inaction, signifies that the lesion is in front of the corpora quadrigemina; (8) that there seem to be positive grounds for concluding that there is a topographical correspondence between the cerebral visual centre and the retina, and that it is precise and extends to details. Thus one case, in which there was found to be blindness of the upper part of the opposite halves of the retinæ, was found to have the lesion in the lower part of the cuneus. Other facts seem to point to a similar correspondence between segments of the retina and parts of the occipital cortex.

SMALL-POX AT COLCHESTER.

A RECENT occurrence of small-pox in Colchester has led to some difference of opinion as to the source of the disease, the responsibility for it being variously allotted between Harwich, Colchester, and the Great Eastern Railway. Dr. Brown, in reporting to the Colchester Town Council on the subject, states that he regards it as absolutely proved that the disease was imported from Rotterdam by means of a Great Eastern steamer, and he alleges that a great lack of caution was shown in allowing it to spread uncontrolled on board and amongst the *employés* of the company. Fortunately the occurrence may now be regarded as at an end; and for this result Colchester has probably largely to thank itself for having had at hand a hospital to which the cases were removed. There are, however, indications of a tendency to increase of small-pox elsewhere, and in the metropolis itself the notified cases have suddenly gone up beyond anything within recent times.

CERTIFYING SURGEONS AND THE FACTORY ACTS.

IT will be well, while the incidents of last week's victory are fresh in the mind, to revert to one or two of its lessons. Not the least lesson is one of gratitude to those who took the trouble to fight. Amongst these, Mr. Mundella deserves the highest praise. Dr. Farquharson did well, as he was doubtless impelled to do by his professional knowledge and sympathy. But even he will confess that Mr. Mundella set himself to the work of saving the certifying surgeons with great purpose and effect, and that, as a layman, as a representative of a manufacturing town, and as a member of the late Government, he did the cause a very great and effective service. He might easily have excused himself doing so on the ground that it was a doctor's question and no business of his. He took the larger view, and with it the larger trouble of stoutly fighting against the Home Secretary, and in doing so he has gained the thanks of the profession and of all who wish to see children protected under the Factory Acts. Another lesson to be gained from the whole incident is the necessity of certifying surgeons magnifying their office a little more than they have been in the habit of doing. They have been so little obtrusive in the discharge of their duties that the owners of factories have underrated the amount and importance of their work. The very quietness with which they have acted has been misunderstood, and made a ground of complaint and disparagement. Doubtless in the future certifying surgeons will make more apparent the reality of their functions. Even under the existing system there is room for this. There will be yet more room if the

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following two clauses which Dr. Farquharson is to move should be carried, as they certainly deserve to be :—

"After the passing of this Act certificates of fitness for employment of children and young persons shall be subject to revocation by the certifying surgeon, if upon inspection he shall certify in the prescribed form that the continued employment of the child or young person named therein is dangerous to the health of such person, and the certifying surgeon shall be bound to make a periodical inspection of all children and young persons holding certificates at prescribed intervals, and shall be entitled to the prescribed fees."

"Every certifying surgeon acting under this or the principal Act shall in each year make at the prescribed time a report to the Secretary of State as to the persons inspected during the year, and the results of said inspection, and also as to the number, sex, and age of all children and young persons employed in factories and workshops inspected by him at the time of his last inspection, and the nature of their employment and their rates of wages, with such other particulars as may be prescribed from time to time, and such reports shall be presented to Parliament annually."

The effect of these clauses will be to secure periodical inspection of the children by the certifying surgeon, to give him the power of revoking certificates of fitness to work, and to provide yearly reports of the result of his inspection to the Home Secretary. If these points be secured, there will not be much risk of any future Home Secretary thinking that the work of the surgeons is confined to ascertaining the age of those whom he examines. Finally, it is gratifying to learn that the opposition to the retention of certifying surgeons was comparatively limited in the area from which it proceeded, and that the representatives of such towns as Sheffield, Birmingham, &c., had no mandate in that direction.

THE INFLUENZA.

WE look anxiously to receive detailed medical accounts of the influenza in Chicago, Pittsburg, and New York, which seems to have been attended with a fatality far beyond that of which we have had experience in this country, or that of other *grippe* epidemics in the United States. So far, such accounts are conspicuous by their absence. The *Medical Record* of New York—where, the telegrams of *The Times* tell us, the deaths on April 21st were 251 (100 more than on the preceding day), twenty-seven being credited to influenza—in its number of April 11th has practically no information of the present epidemic, either in that city, or in Chicago, or Pittsburg. Our contemporary has had of late several general articles on influenza and its epidemics, and we shall doubtless not have long to wait for some explanation of the excessive business of undertakers in the American cities of which we have lately read so much. The *Record* of March 28th has an interesting article on the facts of last year's *la grippe*, as reported from different military homes in the States to General Franklin, the President of the Board of Managers, on inspection of such homes. One in particular gives an admirable abstract of cases treated by Dr. R. Humphrey Stevens, surgeon in charge of the Michigan Soldiers' Home Hospital. The chief features of the cases in the home (575) were lassitude and prostration, followed by fever and pain in the head, chest, or back. Then the malady assumed one of the following forms: First, affecting the sensory nerves, of which there were 351 cases; secondly, affecting the mucous surfaces, 153 cases; thirdly, affecting the muscular system, 71 cases. Cases unchecked by treatment almost invariably passed through the three forms sooner or later. All the cases recovered. Twenty-seven of the first group developed glandular swellings, generally of the throat and neck, but in one case of the groin, and in another of the testicle. Of the second group, twenty-five developed pneumonia. Physico-chemical and meteorological observations were made at the same time, which Dr. Stevens expresses mathematically thus: the prevalence of influenza is proportional to the increase in weight and humidity, and inversely to the amount of ozone and the electrical condition of the atmosphere. When the fever runs high the specific gravity of the urine increases; with increase of urea and urates the urine becomes acid and crystals of uric-acid urates and oxalates appear. In view of the intense nerve depression resulting from uneliminated organic excrementitious products in the blood—which all the reserve nervous force of the body endeavours to throw off and burn up—the too-popular antipyretic sedative treatment is unwarrantable and unscientific. Fatal prostration and heart failure in *la grippe* Dr. Stevens thinks more often to be due to drugs than to the disease itself. More benefit is derived from tonic and eliminative remedies than from all else. Hot air and hot water, externally and internally, followed by anti-periodic alkaloids, are also useful. We think there is much wisdom in these views of Dr. Stevens, and the practical results could not be better. In this country during the past week there has been unequivocal evidence of the spread of influenza to other parts of Yorkshire and Lincolnshire. Driffield, Pontefract, Leeds, York, and Grimsby are among the places especially visited. Several cases have occurred in London, where, however, it can hardly be said as yet to have attained epidemic proportions. Children, who were very slightly affected in the great epidemic of last year, seem to furnish many cases. It has been said that such a recurrence of influenza is contrary to previous experience, but it may be remarked that isolated epidemics of *la grippe* often arise apart from great pandemics, such as that which visited the globe in 1889–90; and the progress of the present outbreak cannot be compared to the rapidity with which that epidemic swept over whole continents.

SANITARY PROGRESS IN FRANCE.

M. HENRI MONOD, who is at the head of the Public Health Department attached to the French Ministry of the Interior, is determined to do all he can to promote the welfare of his countrymen in the matters which come under his especial supervision, and he is rapidly acquiring the considerable influence in this respect to which his marked abilities and his persevering energy entitle him. At a recent meeting of the Comité Consultatif d'Hygiène Publique de France he brought forward a number of vital statistics which he had compiled, and amongst these was a list of twenty-one communes in which some substantial diminution of mortality had taken place within recent years. In the commune of Bessèges, where the general rate of mortality had reached 32·4 per 1000 living during the period 1881–84, there had been a reduction of no less than 13·4 per cent. in the period 1885–90; and it is pointed out that the substantial saving of life which thus resulted had followed on the provision of a wholesome public water service, the distribution of which commenced in 1885. Unfortunately France does not easily lend itself to comparisons in the matter of vital statistics, for no general system of registration of causes of death exists; and great labour is involved in preparing even minor data on which to form a judgment. M. Monod thus finds himself unable to speak with the necessary precision as to the diseases which have been most diminished in the commune referred to; but he is able to say generally that typhoid fever, for which France retains an unenviable notoriety, has hardly been present at all since the completion of the new works. And looking back upon this experience, he exclaims with an energy which could hardly be devoted to a higher cause: "How many are the cities of France, where the general

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mortality is excessive and where typhoid fever is normally endemic, which would best serve their interests by following the example set them by poor rural communes? How much longer will it be before they understand, before their populations perceive, that if there is an expenditure which is justifiable, perhaps indeed obligatory, and at the same time reproductive, it is above all that which has for its certain result the preservation of human life?" M. Monod has often done this country the honour of setting its example before his countrymen in the matter of the saving of life and the prevention of disease as the outcome of well considered expenditure in the sanitary service. Recalling our own experience, we would urge that France is, above all things, crippled by the lack of correct statistical information as to causes of death, and M. Monod's services could not be better utilised than in insisting that his Government should forthwith institute a system of registration of death somewhat on the lines of that which we found necessary over fifty years ago.

THE PREVENTION OF OVERLAYING.

IN spite of coroners' admonitions, and the still graver warnings impressed by numerous fatal accidents, if the phrase be permissible, many parents will persist in taking their infant children to bed with them. A variety of excuses might no doubt be urged by those who seek them in favour of this practice. Either there is no crib and no money to buy one, or perhaps feeding is easier with the child in bed, or the infant, having been accustomed, wrongly, to sleep in the mother's arms, will not lie quietly alone. No subterfuge of argument, however, will suffice to condone a fault the fatal tendency of which has been often proved, and which has lately, during one week, and in the metropolis alone, cost the lives of eighteen overlaid children. Mere education cannot be relied on to provide an effectual remedy. Present need requires more energetic action, and a measure empowering judges to punish as culpable neglect this indiscriminate association of infants with slumbering and often intoxicated mothers would not be at all too severe for the requirements of the case.

BACILLI IN SYPHILIS.

DR. VON MARSCHALKO, who has been working in the pathological laboratory of the Buda-Pesth University at the subject of the bacteriology of syphilis, has devised a method of staining by which bacilli may be found in syphilitic growths of various kinds, such as papules on the skin, the indurated base of a chancre, and condylomata, as well as in the secretion of primary sores, while he has not been able to find them in non-syphilitic growths or in the secretion of soft chancres. Whether they are really inseparably connected with syphilis can of course only be decided by a prolonged series of observations, but there would at least appear to have been a *primâ-facie* case made out for further investigation. The method employed is by double staining, as follows:—The object, after having been hardened in alcohol, is immersed for thirty-six hours in an alkaline solution of methyl blue; it is then rinsed well with water, and re-stained by a concentrated solution of vesuvin in water. The bacilli are stained blue, and can be easily distinguished from the tissues, which are brown.

MUSIC AS A REMEDY.

MOST of us have at one time or another been convinced by personal experience of the fact that perception of pain and of grief depend in great measure on our mental attitude for the time being. It grows under observation, wanes if neglected, and is even obliterated for a time if our emotions are strongly acted on by some shock or counter attraction. It is clearly in this way that we must explain the anæsthesia of hypnotism and the soothing effects of harmony in sound. This very sense of calm has, moreover, as a form of rest, a distinctly curative tendency, so that music may to this extent be regarded as a remedy in illness. The ancient healers understood this, and we find accordingly that hardly any prescription or course of treatment was by them regarded as efficacious unless agreeably combined with the allurements of melody or quaintly blended with an incantation. Egyptians, Indians, Greeks, and Romans in turn wooed in this manner the *vis medicatrix*, and, we cannot doubt, with a fair measure of success. It need hardly excite comment, therefore, that the same attraction of melody has been credited in our own days with a curative property. One of the latest notes on this subject is one which applauds music as an anodyne in gout. The reference, of course, is to the pain endured rather than the malady which occasioned it. This latter is beyond the control of merely neurotic forces. What refinements of molecular change in the sensorium underlie the anæsthesia so readily induced there is as yet no evidence to show. Whatever their nature, however, we may take it for granted that they do occur, and the process which gives rise to them is perhaps not altogether unworthy of experimental use now and then by the modern practitioner.

FOOLHARDY PERFORMANCES.

MANY things are done, and have been done from time immemorial, in the way of acrobatic display with regard to which the definition of a right and natural attitude of public opinion, and its crystallised result, legislation, is not quite a simple matter. For our own part, we had rather not invoke the restrictions of authority wherever they can be dispensed with. Human skill, it is fortunate, can often be so perfected as sufficiently to minimise for the individual performer the possibly disastrous issues of a hazardous calling. But, allowing this, we must still remember that there are limits even to human skill. In this and other matters the word "impossible" may be ignored, but it finds a place in every language notwithstanding. When accordingly we are forced to conclude in regard to any practice that the balance between skill and personal risk inclines decidedly towards the latter, when, moreover, the implied advantage or utility of any practice is clearly dwarfed in the presence of the merely curious and extraordinary, and when life or limb has to pay the penalty of threatened failure—it is clear that sense and reason call for its restraint. The muscular exhibitions of an athlete in themselves entail no mischievous consequence, and require no censor. It is otherwise with some of their more remarkable elaborations. When, for example, a female acrobat fails to grasp an "invisible wire" and is nearly killed in consequence, as happened the other day in Paris, or when life-long injury follows an error on the trapeze, it is quite within the province of law to prevent a recurrence of the revolting incident. If, therefore, other and sufficient means cannot be devised which will secure the safety of performers, there remains no alternative but prohibition of the display.

THE PUBLIC HEALTH (LONDON) BILLS.

THE proposed amendments to the Public Health (London) Bills, of which notice has already been given, are such as sufficiently to satisfy anyone conversant with the subject that very little is to be said against these measures as prepared by Mr. Ritchie. Sir Albert Rollit has evidently failed to understand metropolitan requirements, and were his amendments to be accepted, London would continue in its present condition until some opportunity occurred in the remote future for amending the Health Laws. His amendments

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would perpetuate all the troubles and grievances of those whose fate it is to submit to offensive odours in streets, nuisances from overflowing dustbins, and maladies which now from time to time develop as the result of local apathy. It is not probable that Mr. Ritchie will allow a really useful measure to be rendered abortive by those who would perpetuate existing conditions which have been again and again condemned. We hope, therefore, to see almost every one of Sir Albert Rollit's amendments rejected. We note a proposal by Mr. Powell to require that sanitary inspectors shall be properly qualified; and although there may be difficulty just now in the way of determining by law that the certificate of any particular body should be regarded as a qualification, nevertheless we would gladly see power given to the Local Government Board to prescribe the qualifications of a sanitary inspector. A proposal that the powers of the County Council should extend over the City as over any other sanitary district indicates undoubtedly, from a public health point of view, the only proper way of dealing with the county. It may be expected, however, that other considerations will be allowed to have weight, and that the exceptional position of the City will be preserved yet awhile. But in view of the fact that the medical officer of health of the City is required at the present time to send to the County Council any special report which he presents to his own authority, it is obvious the Council should have a general power of inquiry in the City as elsewhere. Infectious disease, for instance, in the City is not less important to London as a whole than infectious disease in any other district.

CHARING-CROSS HOSPITAL.

THE members of the staff of Charing-cross Hospital, together with the students past and present, have resolved to mark the esteem in which the late Dr. Pollock and the late Mr. E. Bellamy, the two senior officers of the hospital, whose death occurred within six months of each other, were held by their colleagues and by the students. A memorial fund has been inaugurated, and Mr. Stanley Boyd, the dean of the medical school, will act as the representative of the staff, Mr. R. C. Ackland for the past students, and Mr. G. T. Bishop, secretary of the student's club, for the present students, in concerting measures to commemorate adequately the long services of the two deceased officers and teachers.

FOREIGN UNIVERSITY INTELLIGENCE.

Lemberg.—This university, situated in Gallicia, where Polish is spoken, has hitherto been without a medical faculty, an omission which the Austrian Government is now about to remedy.

Buda-Pesth.—The remains of the great Hungarian obstetrician, Professor Semmelweiss, who was a great advocate for the employment of antiseptics in midwifery, have been brought from Vienna by the professional senate and buried in Pesth, where it is proposed to erect a monument to the deceased professor.

Dorpat.—Dr. Chish, of the Panteleimon Lunatic Asylum, is likely to be appointed to the chair of Mental Diseases in succession to Professor Kraepelin.

St. Petersburg (Medical Academy).—Dr. Kianovski has been recognised as *privat docent.*

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Pappajohannu, Professor of Anatomy in the University of Athens.—Dr. Parkes, Professor of Surgery in Rush College, Chicago.—Dr. Edward Goltdammer, of the Bethanien Hospital, Berlin, of carcinoma, at the age of forty-eight.

THE municipal authorities in Paris recently sold as waste paper to tradesmen a quantity of documents relating to the causes of death of persons (whose names were given in full) who had died as lately as 1873. A good many unpleasant secrets have thus been made public which certainly ought to have been considered, for a much longer period at least than eighteen years, as sacred.

SURGEON PIERSON, of the Indian Medical Service, has fallen a victim to the fever which has broken out amongst the coolies employed on the Khojak tunnel. Mr. Pierson was surgeon in charge of the men engaged on the works, and contracted the disease during his professional attendance on the sufferers from the malady.

A CONVERSAZIONE will be given by the President and Council of the Medical Society of London at their Rooms, Chandos-street, Cavendish-square, on Monday, May 4th. An oration will be delivered at 8.30 by Sir Joseph Lister, Bart., F.R.S. The string band of the Royal Horse Guards will attend.

A CORRESPONDENT at Beirut writes:—"The cholera, which has been dormant for some time throughout Syria and Asia Minor, is said to have again started on its insidious progress north-west of Marash, in the district of Anderson. Only a few cases have occurred, but the disease seems to be progressing."

LORD HARRIS performed the opening function of the new Laboratory for Medical Research in connexion with the Grant Medical College and a new Home for Nurses, at Bombay, on Feb. 17th.

MR. PEYTON T. B. BEALE, F.R.C.S. Eng., has been appointed Demonstrator of Physiology in King's College, London.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.[1]

(*Continued from p. 901.*)

Discussion on Gall-stone.—Tuberculin and its Effects.

DR. FÜRBRINGER (Berlin) followed Professor Naunyn, and analysed the histories of sixty-four cases of gall-stone (thirteen males and fifty-one females) treated by him at the Friedrichshain Hospital. Contrasting such cases with renal calculus, he commented on the frequency with which the former are latent, since during five years no fewer than 500 times were gall-stones found in post-mortem examinations. He described the symptoms of biliary colic, noting that with the jaundice the liver was generally swollen and the gall-bladder palpable. Of forty-one cases fever was present in twenty-four, the pulse often being slow. Icterus is by no means constant. The failure to find gall-stones in the fæces did not set aside the diagnosis, for they may pass back into the gall-bladder, or be vomited, or otherwise escape. Abortive attacks, seldom recognised, are of importance. The effects of permanent occlusion of the duct, and the differentiation of inflammatory sequelæ, as cholangitis, cholecystitis, suppurative hepatitis, and perforation, were then considered. Especial stress was laid on the occurrence of intermitting pyæmic fever in association with jaundice and local signs. The pains increase, notably with extension of inflammation to the peritoneum, and perforation rapidly ends fatally from suppurative peritonitis. Gall-stones may escape externally through fistulæ in the

[1] From a report in the Münchener Medicinische Wochenschrift, April 14th.

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abdominal walls which give free exit to bile. From their escape into the duodenum by ulceration may arise intestinal obstruction or perityphlitis. Other results are interstitial hepatitis and adhesions between the liver and neighbouring parts. As to diagnosis, he remarked that the pains might be in any part of the body, and that cholelithiasis was often confounded with other painful abdominal affections—gastric ulcer, gastralgia, intestinal and renal colic, and hepatalgia. The solubility of cholesterin in hot alcohol was a useful test for doubtful masses in the stools. The differential diagnosis from renal tumours was given, but diagnostic puncture of the gall-bladder was deprecated, although an exploratory laparotomy might be justifiable. The intermitting fever might be confounded with typhoid or malaria. Prognosis, always serious, had been improved by surgical measures. Of his cases, 34 per cent. recovered, 42 per cent. improved, 10 per cent were unrelieved, and 14 per cent. died. Of six desperate cases, four were saved by operation. As to treatment, morphine and opium were best for the colic; chloral and chloroform narcosis next. It is impossible to dissolve the stones; neither Durand's method nor the use of biliary salts had succeeded. The alkaline mineral waters were most approved, and salicylate of soda and the oil treatment were worthy of trial. The quantity of food rather than any special form of diet was to be regulated. He did not recommend the process of "kneading" out the stones. Surgical treatment was described as of great value, and a study of the question led him to the conclusion that "the results of medical treatment are not bad enough, nor those of surgical treatment good enough, to justify resort to the latter in the circumstances advocated by 'annexionslustige' operators." But serious danger threatens from the results of gall-stone with which internal medication cannot cope. Then is the time for the patient to seek the aid of modern surgery.—In the discussion that followed, Dr. RIEDEL (Jena) spoke of the surgical aspect of the question, advocating cholecystotomy in two stages, and describing the means to be adopted in cases of stones impacted in the ducts. Out of thirty-two cases, sixteen without icterus were cured, the stones being seated in the gall-bladder or cystic duct; sixteen with icterus gave ten cures, two still under treatment, and four deaths.—Dr. MOSLER (Greifswald) spoke of the prevalence of gall-stone in North-east Germany, which he mainly attributed to gastro-intestinal catarrh. Among determining causes he laid much stress upon tight lacing as tending to promote obstruction to the free exit of bile from the gall-bladder. Catarrh of the ducts is a common source of concretions, and the invasion of bacteria from the duodenum was doubtless answerable for inflammation of the ducts. He advocated large injections of warm water into the intestine for the treatment of catarrhal jaundice as well as of gall-stone, with the addition of alkalies, and stated that such injections had been proved to increase the flow of bile experimentally.

Papers were read by Dr. KNOLL (Prague) on certain Circulatory Disturbances, and also one on the Morbid Changes of Striped Muscle; by Dr. SCHOTT (Nauheim) on the Differential Diagnosis between Dilatation of the Heart and Pericardial Effusion. His main points were the diminution of dulness observed in the former under digitalis or muscular effort (gymnastics) and the results of exploratory puncture, which was not dangerous.—Dr. FÜRBRINGER concurred as to the utility of the last means, and declared that, carefully done, there was no risk of perforating the heart, and that simple puncture of its wall was harmless.

The third sitting, on April 7th, was wholly occupied by the subject of Koch's Treatment. It began with a paper by Dr. CURSCHMANN (Leipzic), who said that any important novelty in medicine is wont to pass through a period of enthusiasm, after which come doubts and objections, sometimes ending in absolute denials of there being any value in such discovery after all. Then is the time for a calm and critical review of the matter, and it has now been reached in this case. The exaggerated hopes excited all over the world by the announcement of a new method of dealing with a dreadful scourge, opening up new paths and prospects in therapeutics, were based on an erroneous analogy between the simple conditions of animal experimentation and the complex conditions met with at the bedside. It was especially in regard to pulmonary tuberculosis that the capabilities of the treatment had been too highly estimated. Hence the numberless failures, disasters, and fatalities which had in their turn evoked a real panic. We are now passing through a stage of depression into the stage of quiet study. It is more and more clear that the great question—which quite wrongly was described as being prematurely published by Koch—can only be matured at the bedside. Apart from unimportant questions, we are all unanimous in holding that in Koch's remedy we have for the first time been given a substance which exerts a specific action on tissues attacked with tuberculosis—a fundamental discovery, and indubitably one of the greatest which therapeutics has yet seen. There is no blinking this fact, and it remains for the future to demonstrate its applicability.—Professor v. JAKSCH (Prague) spoke of its diagnostic and therapeutic results from an experience of seventy-two cases observed during four months. Of these, twenty-eight were injected for diagnostic purposes. They showed that tuberculin can reveal small tubercular foci, although exceptionally tubercular cases do not react, and healthy subjects may react. The second or therapeutic group comprised cases of severe pulmonary tuberculosis, which were not improved, and whose unfavourable course could hardly be attributed to the tuberculin. Of the moderately severe cases the majority improved; some got worse. No subsidence of infiltration was noted, but often the formation of cavities. Eight slight cases without bacilli, but with manifest physical signs, all improved. Three cases of lupus were notably improved, not cured. One case of ostitis fungosa of the hand got well after removal of sequestra. One tuberculous conjunctivitis, apparently cured, recurred, and was again treated and cured. Peptonuria is common. He had never found bacilli in the blood; nor had he seen any serious complications. There could be no doubt as to the diagnostic, and above all the scientific, importance of the discovery. Therapeutically the remedy had not done what it had promised to do.—Professor ZIEGLER (Freiburg) dealt with the pathological aspect of the matter. He propounded three questions: 1. What changes do the injections produce in tubercles? 2. Are these of a curative nature, or do they involve risks? 3. What are the ascertained anatomical results? As to the first, Koch's statement that there is necrosis of tubercle is *a priori* improbable, since tubercle is non-vascular. The action must be in the vicinity of the tubercle leading to inflammation with exudation and emigration of leucocytes, and that to suppuration, secondarily destroying the tubercle. Secondly, cure may arise from casting off of the tubercles from their degeneration and resorption, or their encapsulation, or their conversion into normal tissue. The last is improbable. As to dangers, he remarked that tuberculin does not destroy the bacilli; by detachment the tubercles may set free bacilli to penetrate raw surfaces; by softening, the bacilli may be taken up and disseminated in blood and lymph, or the focus may break into cavities (pleura, pericardium, peritoneum), or the detritus be inhaled into other parts of the lung. However, it does not follow that all escaped bacilli can excite tuberculosis. Encapsulation of the tubercle is without danger. As regards the anatomical facts, the detachment of tubercles which occurs in the lungs, intestine, and skin, may occur spontaneously, apart from the effect of tuberculin, which can only hasten it. So also the softening and resorption had often been erroneously attributed to its action. The same holds with encapsulation, and the probability is that many of these changes are simply the natural process of cure. Tuberculin only acts on processes which occur spontaneously, and then occasionally lead to cure; perhaps it hastens them. If it do not cure it may cause a dissemination of tuberculosis through the absorption of bacilli. Tuberculin apparently only acts on certain predisposed parts.—Professor HEUBNER (Leipzic) spoke of tuberculin in the treatment of children, who, he said, are not more susceptible to small doses than are adults. Diagnostically it was of value. Therapeutically it was limited to incipient tubercle. This in children is more common in the glands (35 per cent.) and bones (42 per cent.) than in the lungs. The paths of entrance are the so-called strumous affections—keratitis, conjunctivitis, eczema; and these generally are rapidly cured by tuberculin. But, as a rule, the treatment is not applied until the glands are involved; and he found the remedy to have very little influence on these glandular affections. Still, he would not term tuberculin valueless. In more advanced conditions of implication of bronchial glands or lungs, the use of tuberculin is dangerous from dissemination of the tubercular virus, or perforation of bronchi or blood-vessels. Tuberculin might be used as a prophylactic in

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hereditarily disposed children, with suspected tubercle, but without physical evidence of it. The action of tuberculin in intestinal tubercle may be to cause perforation, but not often; and the difficulty rests rather in the lack of influence on the infected mesenteric glands. Miliary tuberculosis and tubercular meningitis are always fatal, and nothing is known of the effect of the remedy in renal and genital tubercle.—Dr. MORITZ-SCHMIDT (Frankfort) dealt with tuberculin in laryngeal tuberculosis, giving some favourable results. It produces swelling of the affected parts, a transient greyish-white deposit, formation of fresh ulcers, and then their cicatrisation. He had never seen such swelling as to need tracheotomy. Seven cases previously cured by curetting and lactic acid had shown no local reaction after the injections. One case of lupus of the larynx healed, and so did the lupus of the palate in the same case, whilst that of the nose improved. Ten cases of laryngeal tuberculosis, not ulcerated, were all healed. Altogether, of thirty-nine mild cases eighteen were healed; of twenty-two severe cases seven were healed and one improved. Compared with previous kinds of treatment, he considered that tuberculin acted more favourably than any other known remedy. Some of the unfavourable results observed may be due to the employment of too large doses.—Dr. DETTWEILER (Falkenstein) spoke of Koch's method in relation to climatic treatment. He had had four months' experience with 128 patients. Of these, four, or 3·1 per cent., were discharged quite cured and free from bacilli; improved, forty-three, or 33·6 per cent.; stationary, fifty-one, or 39·6 per cent.; worse, twenty-four, or 19 per cent.; and six died, or 4·7 per cent. These results are very small in comparison with those hitherto obtained at Falkenstein, and even lower than formerly. His statistics were based on fifteen years' experience. His conclusions were: 1. That tuberculin exerts an action in tuberculosis different from that of any remedy hitherto known. 2. The manner of its action (good as well as bad) is not to be estimated beforehand in any individual case. 3. It is uncertain in diagnosis, since indubitable cases of tubercle do not react. 4. The risks involved are not great, but sometimes surprising, and anxious accidents occur. 5. Its curative effect is but small. It might be better if only very small doses were given. He discountenanced its use in moderate and severe cases. 6. The remedy was not a true specific, since it did not render the lung immune or kill the bacilli. 7. At present a final judgment is not possible, and we are still entitled to expect a curative effect in the smallest foci under a careful use of the remedy.—Dr. SONNENBURG (Berlin) spoke of the tuberculin treatment and pulmonary surgery. He related a case where a cavity had been opened in the right infra-clavicular fossa; the patient had greatly improved in general condition and there were no longer any bacilli. When the tuberculin treatment commenced the cavity which had been laid open enlarged from softening of its circumference; then it shrank and finally healed up. He had operated in six cases, of which one was healed, two nearly healed, and two had died. Only cases of isolated cavities were suitable, and their diagnosis was very difficult. Adhesion of the pleura was essential, but this always existed over a cavity.

(To be continued.)

THE TREATMENT OF TUBERCULOSIS BY KOCH'S METHOD.

A MEETING of the Metropolitan Counties' Branch of the British Medical Association, South London District, was held on April 15th, J. W. J. Oswald, vice-president, in the chair. The meeting was held by permission of the treasurer in the court-room of St. Thomas's Hospital, and was largely attended.

A discussion on the Koch treatment of tuberculosis was opened by Dr. BRISTOWE, who commenced by saying that he had hitherto refrained from giving public utterance to his opinions concerning Koch's remedy for tuberculosis, and that from the first he had been highly sceptical as to its value and an amused spectator of what was going on. He observed that infective diseases might be roughly divided into two categories—namely, first, those which had a limited duration, and were in a greater or less degree self-protective, such as small-pox and scarlet fever; and, second, those like tuberculosis and leprosy, which were persistent and ingravescent, and in no sense self-protective. He then pointed out that it was in relation to the former diseases that discoveries had hitherto been made, by means of which the inoculation of an attenuated variety of the disease prevented recurrence; in support of which statement he had called attention to the inoculation for small-pox, to vaccination, and to Pasteur's discoveries in respect of the attenuation of anthrax and hydrophobia. He considered that we knew nothing concerning the real nature of the protective influence thus imparted; but he held that in all such diseases it was not the mere presence of the specific organisms which caused mischief, but the poisonous matter which these organisms discharged, and he quoted the observations of Sanderson in regard to septicæmia and septic poisoning, and as to the deleterious influence which the poisons they manufacture tend to exert over the organisms themselves, and the more recent researches of Wooldridge, Hankin, and Sidney Martin, which show that the specific poison of the bacilli anthracis produces the same effect as the bacilli themselves, though only for a limited time, and equally with attenuated bacilli protects from recurrences. Then adverting to such diseases as leprosy and tuberculosis, he contended that if these are to be cured by injections, it can scarcely be by the injection of an attenuated virus, as they are persistent and ingravescent diseases not tending to cure, and that if curatively dealt with it must be on other principles than those governing the other class of diseases. He said that when he first heard of Koch's remedy he believed, as he thought many others did, that he had discovered something which was inimical to the bacilli. But that when he told us in November last that his remedy had no effect on the bacilli, but only tended to imprison them in an excess of inflammatory products, his scepticism became profound; and that this mental attitude became still more pronounced when his last instalment of confidence was given to the profession. For he could not but feel that it was much less likely that aggravation of inflammation would checkmate the bacilli, than that it would tend to encourage their growth and diffusion. He went on to observe that Koch's fluid tended to cause some temporary febrile disturbance and aggravation of inflammation around tubercular deposits, but that these actions were very uncertain; that the general febrile disturbance did not occur in tubercular cases alone, but also under other conditions; and that the local reaction not only did not develop itself in every case of tuberculosis, but occurred in other granulomata, such as leprosy. Indeed, he suspected that further observation would show not only that Koch's fluid had no specific influence over tubercle, but that it was a property of septic inflammation generally to cause a limited attack of general fever, and to aggravate inflammation in parts already inflamed; and that the effects of Koch's fluid were not specific in any degree as against tubercle, but belonged to the same class of phenomena. The inutility and danger of using Koch's fluid in internal tuberculosis were demonstrated in Virchow's account of the necropsies in the fatal cases of tuberculosis treated by Koch's fluid, which account fully justifies the worst fears that had been entertained; and Mr. Hutchinson's lecture showed that none of the cases of lupus treated in this metropolis had been cured.

Dr. HAWKINS, who showed a number of cases of lupus which had been treated by Koch's method in St. Thomas's Hospital, furnished a report of nearly all the cases which had been treated there on the medical side. Five cases of lupus of the face or neck had been so treated, and of these four had shown slight improvement at first, but soon became stationary, and subsequent treatment by scraping &c. had been necessary in all; while the fifth had refused to continue the treatment after the third injection. One case of lupus of the hand showed slight improvement, subsequent treatment by other methods having, however, been necessary. Five cases of phthisis had been treated. In two early cases the result had been doubtful, but the disease apparently had not increased. In one case with well-marked excavation no apparent change had taken place. In two cases in which the larynx had been also affected the pulmonary and laryngeal disease had made rapid progress, one case having proved fatal; but no post-mortem examination had been made. One case of scrofulous glands had been treated without apparent result.

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In a case of tubercular peritonitis increased pain and tenderness, with continued fever, followed the injection of 0·001 cc., and the treatment had not been continued.

Dr. HECTOR MACKENZIE said the South London district might congratulate itself on having had such a calm judicial opinion as that of Dr. Bristowe on the important subject of the Koch treatment for tuberculosis. He thought that now, when tuberculin direct from Dr. Koch's laboratory was advertised as on sale at the chemist's, it was high time the medical profession should learn what was thought of the remedy by those who had had the opportunities of seeing its effects in hospitals. He contrasted Koch's statements at the International Medical Congress last August with those in his now famous communications of November, 1890, and January, 1891. Koch had said that hitherto physicians had failed to cure tuberculosis because they had gone about it the wrong way, and tried the effects of various remedies on man instead of on the parasites themselves in their pure cultures, and then on the lower animals. Koch, after mentioning that he had tried various substances which hinder the growth in media, but were absolutely without effect in tuberculous animals, made the sensational announcement that he had at last hit upon a substance which had the power of preventing the growth of tubercle bacilli not only in a test tube, but in the body of an animal. The credulity with which statements as to the rapid curing of cases of lupus and phthisis were received about the time when Koch made his communication in November was altogether phenomenal, and within a few weeks we had the spectacle of Berlin crowded with medical men from all parts of the globe to learn the new treatment, and with consumptives struggling to get injections at so many marks apiece from Dr. Cornet and his assistants. Koch talked of speedy cures of lupus and of early cases of glandular bone and joint tuberculosis, and regarded it as certain that phthisis in the beginning was curable by his remedy. Koch had led us to suppose that he had himself fully tested this wonderful remedy of his; that he had found that it prevented the growth of the bacilli in the test tube; and we were surely not wrong in supposing that he had made numberless experiments with regard to its effect on tuberculosis in the lower animals. Two months were allowed to elapse before Koch admitted us to his confidence as to the nature of his remedy and the experiments on which he had satisfied himself of its power. During this time the remedy was employed in probably every hospital in Europe. The account of the fluid in Koch's further communication was bald in the extreme. He gave no indication of the length of time he had experimented with it, and the only experiments he told us of were a few on guinea-pigs. Surely, if he had made the experiments on animals which he had led us to assume he had done, he would have told us of them. The conclusion forced upon us was that he had suddenly left science for empiricism, and, after a few observations on tuberculous guinea-pigs, had proceeded at once to this gigantic experiment on tuberculous man. The official report on the results of the Koch treatment in Prussia formed a striking commentary on the *couleur de rose* communication of November: 5 alleged cures of lupus out of 215 treated, 13 alleged cures of internal tuberculosis out of 1061 treated, 884 out of 1769 acknowledged as unimproved, and 55 out of the same number dead! Dr. Mackenzie had watched the effect of treatment on patients at the Brompton Hospital under the care of his colleagues. Some of these patients before and after the treatment had been under his own care, and he had had therefore the best opportunities of forming an opinion as to the effect of the treatment. He had seen no case of cure. Some were *in statu quo*, some were distinctly worse, some had proved most intolerant of the remedy, so that the injections had to be given up. In some in which there was apparent improvement the signs of disease had become more extensive, and pointed to more active disintegration going on in the lung. The results of the treatment with Koch's remedy compared, he thought, most unfavourably with the results obtained on the usual lines with tonics, cod-liver oil, good food, and good hygienic surroundings. What had been the practical outcome of the whole matter? Honours and decorations to Professor Koch, a brief harvest of marks to his assistants and to the Berlin hotel keepers, loss of time and money to medical practitioners in all parts of the world, a few doubtful cures of lupus, hundreds of patients made to undergo a course of treatment which at least temporarily increased their sufferings, the hopes of thousands raised to the highest pitch, only to be bitterly disappointed, and a number hastened to the grave.

Dr. PHINEAS ABRAHAM, while expressing pleasure at listening to Dr. Bristowe's address, could not go quite so far, especially as Dr. Mackenzie had done, in denouncing Koch and his remedy, believing that Koch's hand had been forced some eight months ago, and that he was hardly responsible for the exaggerated statements of cures and the extraordinary puffing by some of the Berlin doctors and newspaper reporters. Although Dr. Abraham had had four months' experience of the Koch treatment, having injected between forty and fifty patients (twenty-one being cases of lupus), he could not yet speak very definitely on the subject, the inquiry being, in his opinion, still in the experimental stage. Most of the lupus cases had more or less improved, three in so marked a manner as to be regarded almost as practical cures. In a few there was no very obvious improvement at any time, one being a case of erythematous lupus of sebaceous type in which there was considerable constitutional disturbance, but only little local reaction. The injections here caused several crops of chilblains on the hands and feet. Besides the transiently alarming pyæmia &c., he had not met with the appalling results recorded by the French surgeons, and he agreed with Dr. Leslie Phillips in thinking that the St. Louis report was just a little premature. In one case severe facial erysipelas set in just after Boxing-day, when a number of visitors had been in the ward, and the patient also complained of catching cold from a window near her being left open. The injections were commenced again, and then left off, and some ten days or so after the last another attack of erysipelas came on. The connexion of the erysipelas with the treatment was therefore not clear. One case, an old man of over seventy, with supposed lupus, who received one injection of one milligramme, chiefly for diagnosis, subsequently died in about a fortnight. The reaction had subsided, but the injection was not repeated because of his age and chronic bronchitis. Many other old people in the infirmary succumbed about the same time from the severe weather and terrible fogs, and it was therefore hardly fair to put down this death to the Koch fluid. In none of the lupus cases had Dr. Abraham pushed the remedy beyond twenty milligrammes, generally commencing with two milligrammes. A few of them showed skin rashes, the most severe being a scarlatiniform eruption in a boy, and leading to copious desquamation over the greater part of the body, this case turning out one of the best results. According to his experience, those cases act best in which the lupus is hyperæmic and ulcerative; and for such, especially when the disease is extensive and not easily reached by other means, he believed that we had in Koch's tuberculin a remedy of some real value for lupus; but he was now combining with the method the application of other remedies—salicylic and resorcin ointments. He thought there was much in what Mr. Hutchinson said as to the failure of the treatment to act on the myxomatous or "apple jelly" tissue of lupus; but he had seen in a few cases desquamation and diminution to some extent of such tissue.

Mr. H. B. ROBINSON exhibited a case of Lupus treated by Koch's injection. The fluid had been used in increasing doses for three months, and had been discontinued one month before the exhibition of the patient. Although the case had improved greatly, it was feared that the disease was already recurring. Cases of injection in tuberculous bones and joints were referred to; but the success obtained had been limited, occurring to any certainty only in one case where there was an old discharging sinus. It was suggested that the injections might be of benefit in such cases.

Dr. WHEATON said that he had had the opportunity of watching a large number of cases treated by Koch's fluid, and had made post-mortem examinations in two cases subsequently fatal. In no case had he seen a permanent improvement, but in nearly all cases a temporary improvement occurred. The remedy certainly had no effect upon the bacilli, and the changes described in them, such as beading and disintegration, occurred in cases not so treated. In several cases of phthisis he had found the bacilli more numerous after the treatment, and in tubercular glands he had been surprised to find a great increase in the number of bacilli in them under similar circumstances. He agreed with Dr. Bristowe in saying that the fluid acted as a septic

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poison, and instanced the various rashes, tonsillitis, the marked disturbance of respiration, the enlargement of the spleen, congestion of the lungs, anæmia and wasting following the injections, as all pointing to a septic poisoning. In answer to the question has the fluid any effect in tuberculosis, he would say that it certainly caused the disintegration of caseous material, and mentioned a case of tubercular peritonitis where large nodular masses of tubercular deposit were felt on palpation. After several injections the abdomen became greatly distended, acute peritonitis set in, the temperature rising to 105°, and the umbilicus ruptured, from which pus continued to be discharged up to the time of the patient's death, which occurred six weeks later from asthenia. At the post-mortem examination no tubercular deposit was found in the body except a few suppurating glands in the iliac fossa; but there were three distinct collections of fetid pus in the abdominal cavity in the positions formerly occupied by the nodular masses. In another case of phthisis of the left apex and old sinuses persisting after excision of the hip the patient died five weeks after the last injection had been given, from obstinate vomiting and diarrhœa, after an operation for the scraping of the sinuses. Post mortem the lung was found to be shrunken, the pleura adherent, and its upper lobe infiltrated with caseous miliary tubercles, which were evidently undergoing resolution, and had in great part become converted into nodules of fibrous tissue; no other tubercular disease existed except of the hip-joint. These cases differed from those reported from abroad in that no general tuberculosis had been set up by the injections. In conclusion, he said that the treatment was not justifiable except in cases where there was a ready exit for the products of the breaking down caseous material and no risk from the danger of a collection of pent-up pus.

THE ROYAL BRITISH NURSES' ASSOCIATION.

THE Princess Christian was present at a meeting of this Association, presided over by Sir Wm. S. Savory, Bart., on Thursday, the 16th inst., called to consider the action to be taken by the Association in view of certain attacks which had been made upon it by the managers of some nurse training schools and others.

Dr. BEDFORD FENWICK said the chief object of the Association was to provide for the registration of nurses who produced evidence that they had received systematic training. The Association had been strongly opposed; the members had been called the "scum of the nursing profession" who took refuge in this Association to obtain "pseudo-respectability," and in private, nurses who would have joined the Association had been intimidated against doing so. Lady Bloomfield and her committee were desirous to transfer their annuity fund for nurses, which had an invested capital of £4000 to be managed by the Association, but this could not be touched unless it was registered under the Companies' Acts. They could not legally receive and administer trust funds, and therefore it was decided to apply for incorporation. The opponents of the Association had done their utmost to prevent Lady Bloomfield's fund from being received. They had circulated documents to hospitals throughout the country asking them to condemn the Association unheard. The registration of nurses was entirely outside the question. The Register had been compiled and could be published annually to the end of the world, in spite of all opposition, as it had already been without the Association being incorporated. The addition of the word "limited" stamped the Association as a business concern in the eye of the law, and no member of the Royal Family could be officially connected with it. The object of the opposition was either to prevent the Association becoming incorporated at all, and so to prevent it receiving Lady Bloomfield's fund, or to force it to be registered as a trading concern, and so lead to the retirement of the President, H.R.H. the Princess Christian—a contingency which they absolutely declined.

Sir JAMES CRICHTON BROWNE, Lord Chancellor's Visitor in Lunacy, said he was somewhat shocked when he read that a "committee of observation" had been formed to prevent the Association from carrying out its proceedings. This was simply a new manifestation of an old animosity of which they had ceased to have any dread. Its immediate cause was an application to the Board of Trade to sanction the registration of the Association with the omission of the word "limited" in order to have facilities for carrying on the business of the Association for receiving and dealing with the gifts and benefactions for the benefit of nurses, which would, he trusted, flow in upon them bountifully in time to come. He deprecated the hidden tactics and misrepresentations which had been made against them. The opposition was a little premature, as their application had not been advertised in the public prints. The time for opposition arose when that had been done. Their articles of association, which had not yet been approved by the Board of Trade, had by some extraordinary means been obtained, and had actually been printed by their opponents and extensively circulated throughout the country. Notwithstanding all opposition, the Royal British Nurses' Association with its 3000 members was an accomplished fact, and he had no doubt that the application would be successful in spite of all the attacks that malice and envy could direct towards them. He thought the expression "scum of the profession" was a printer's error for "cream of the profession." The Association was capable of taking care of itself. The opposition to them was opposed to the great principles of social evolution. All development implied differentiation of structure and functional and gradual organisation. In the simplest organism every cell performed every function. As division of labour goes on the duties of the separate cells are coördinated. So in social development bodies of persons are set apart for special duties, professions, trades, crafts, scattered throughout the country, working in isolation and individually. In the course of time they establish communication between each other, coalesce, organise round a centre and assume a corporate existence, not only for their own benefit, but for the benefit of the body corporate. Nurses were no exception to that rule, and, in obedience to that inexorable law, they had begun to organise. The opposition to this principle came too late in the day; it was contrary to all great principles of biology, and ran counter to the public interests of this country, for it aided in depriving the public of securities and safeguards which they have long needed and to which they are well entitled. He could not understand why the public had not made a peremptory demand for the registration of nurses long ago. It was a recorded fact that the training institutions sometimes sent before the public women who were raw and immature and imperfectly educated, as well and thoroughly trained nurses. What were the objections which had been urged against this Association? The first was "that the duties and qualifications of a nurse are so different from those of all other kinds of bodies of persons seeking a public registration, and so much depends upon the character and disposition, apart from mere technical skill, that to place nurses upon a Register would merely be to mislead the public regarding their efficiency. He affirmed confidently that while disposition and character were of the utmost importance, they were not of more importance to them than to other professions that were already registered—e.g., medical men who were compulsorily registered by Act of Parliament; and he had never heard it said that the Medical Register was of no use to the public because it contained no reference to the character and disposition of the medical man. Was not the teacher's disposition and character of some account? and yet Parliament was considering whether they should not be registered. Then surely technical knowledge and skill ought to count for something as well as moral character and disposition. A nurse may have the sweetest disposition in the world, but if she allowed a sufferer to bleed to death it would not be much consolation for him to reflect upon her sweet disposition and unblemished character. He went further, and said that the Register did contain some indication of character, and that the objection was altogether flimsy and sophistical. The second objection was like unto it. It was that the authorities of the nurse-training schools are alone, by their position, capable of understanding the qualifications and character of nurses, and of giving information regarding them, and that all these authorities opposed registration. Was that statement correct? Some of the great training schools were represented on the Council and upon the registration board of this Association. He thought it was not a proper thing to go before the Board of Trade with a statement which was distinctly incorrect. He asked if nursing was to be a free profession, or to be confined to a series of little close corporations under the

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thumb of the nurse-training schools? This Register would be a most important check upon the training schools, and would confer in the end great freedom upon the nursing profession, and put into their pockets large shares of their earnings which in the meantime were going to the training schools. Another objection seemed to mean that because there was a movement going on for the registration of midwives this movement for the registration of nurses should be put a stop to. The fourth objection was that the registration of nurses would lead to discord, and prove inimical to the great work of the training schools. It was for the training schools to put a stop to that discord. He believed that, so far from interfering with the work of the training schools, the Association would have the very opposite effect. It would prevent practices which had been objectionable in the past, and it would be of advantage to the sick of this country. He concluded by moving a resolution to the effect that the Association should be registered under the Companies Act of 1867, without the addition of the word "limited."

Mr. BRUDENELL CARTER, in seconding the resolution, said he had not been able to conjecture what reasons could be alleged against the proposals of the Association. He found their opponents had given no reasons, but only pretexts, most conspicuously coloured, which reminded him of the coloured air balloons sold in the parks by itinerant toy dealers. The opposition came from a somewhat tainted source, because while the efforts of the Royal British Nurses' Association had been, and would be to the end, addressed to raise the status, to improve the education, and to increase the earnings of nurses; and to combine them for that mutual protection and support, which the professions carried on by men had found it necessary to secure for themselves, it was notorious that the training schools were not conducted in the interests of individual nurses, but on a basis of totally different motives. Any opposition coming from them should be looked upon by nurses and by the public with extreme scepticism. The nurses should rely upon their own powers of observation, and claim that privilege of effectual combination which the law had given them.

Mrs. BEDFORD FENWICK supported the motion, and contended that the private registers kept in the training schools did not protect the sick from women who chose to term themselves trained, nor from women certified as efficient who afterwards proved unworthy of trust.

The resolution was carried unanimously.

Dr. PAVY moved: "That the Register will be valuable to the public, to medical men, and to nurses, by protecting them from ignorant and untrustworthy nurses by affording an easily consulted guarantee of a nurse's technical efficiency, and as the first attempt ever made to remove from the calling those who discredit their fellow-workers.

Dr. BEZLY THORNE seconded, and said their opponents must be aware that the registration board would not entertain any application from a nurse who could not produce evidence of moral character.

Miss CATHERINE WOOD said that the hospitals which had opposed the registration had been for some time past sound asleep, and were at present in the condition of a person who had been rather suddenly awakened. They did not at present exactly know what kind of work was before them.

The resolution was carried unanimously.

Sir EDWARD SIEVEKING proposed, and Sir JOSEPH FAYRER seconded, a vote of thanks to Sir Wm. Savory for presiding.

Sir WM. SAVORY, in reply, said that he rejoiced at the opposition which the Association had met, because opposition was inevitable to all progress; but it must ultimately enlarge its success. It was most fortunate to have these difficulties to encounter. They were determined to triumph over them. They had existed three years, and had enrolled 3000 members and registered 1700 nurses. Those who opposed the movement might as well attempt to stem the rising tide. In concluding, he moved a vote of thanks to the Princess Christian for her presence at the meeting.

The vote was carried with enthusiasm.

INEBRIETY AND CRIME.

AT the annual meeting of the Society for the Study of Inebriety held recently, after an address from the President, Dr. Norman Kerr, on "Recent Criminal and Civil Trials with Inebriate Complications," the following resolutions were agreed to, on the motion of Dr. Lord, seconded by Mr. Hilton.

1. In all criminal trials in which the alleged criminal act has been committed by the accused when under the influence of liquor or has been committed by an inebriate, there should be an investigation into the previous medical history of the prisoner. There should also be an inquiry into the family history, so as to elucidate the heredity with especial reference to inebriety, insanity, and other neurotic affections, syphilis, and gout. This twofold inquiry should be entrusted either to a medical expert or to a mixed committee composed of a medical and a legal expert acting conjointly. The object of this investigation is to ascertain how far the accused has been cognisant of his alleged criminal offence, and as to whether, if so cognisant and so competent, he was able to resist the criminal impulse. Such an expert inquiry should be provided for the accused, whatever the circumstances, as a judicial provision to ensure a fair and just trial.

2. The appointment of a mixed Commission of judges, counsel, solicitors, and medical experts for the consideration of the question of dealing with inebriates who have been convicted of a criminal offence. This inquiry should have special reference to the best procedure to be pursued, whether, (1) if penal, by cumulative punishment or otherwise; or (2) if curative, by medical treatment for a diseased condition, with due provision for classification, occupation, hygienic measures, and elevating influences. By some researches of this kind such light might be thrown upon the genesis of crime complicated with drinking and the morbid conditions which precipitate not a few individuals into inebriate criminality, as might aid in the prevention of crime, as well as improve the criminal's chances of reformation, and increase the influence and dignity of the law by avoiding even the semblance of injustice.

GENERAL PRACTITIONERS' UNION.

A MEETING of the Executive Committee was held on the 15th inst., Mr. George Brown, M.R.C.S., in the chair.

The following members were also present: Dr. F. H. Alderson; Mr. T. R. Atkinson, M.R.C.S.; Mr. J. B. Cook, L.R.C.P. Edin.; Mr. F. H. Corbyn, M.R.C.S.; Dr. James Dawson; and Dr. Hugh Woods. Forty-four general practitioners, having been duly proposed and seconded, were elected members of the Union.

It having been suggested that it would greatly facilitate the work of the Union if the metropolis were divided into districts, with a secretary for each, it was decided to carry out the suggestion, and the following district secretaries were appointed:—

District.	*Honorary Secretary.*
East Central	W. E. Dawson, L.R.C.P.I.
Hammersmith and Shepherd's Bush	F. H. Alderson, M.D.
South Kensington	T. R. Atkinson, M.R.C.S.
Kilburn	H. C. C. Shaw, L.R.C.P. Lond.
St. John's Wood	F. H. Corbyn, M.R.C.S.
Highgate and Upper Holloway	Hugh Woods, M.D.
Islington	J. B. Cook, L.R.C.P. Ed.
Canonbury and Stoke Newington	J. Dawson, M.D.
West Ham and Barking	Percy Rose, L.R.C.P. Lond.
Camberwell and Peckham	Campbell Boyd, L.R.C.P.I.

District secretaries will be appointed for other parts of London and for the provinces as soon as practicable.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Hartlepool Urban District.—On an estimated population of 40,000 the general death-rate for 1890 was 18 per 1000, the zymotic rate being 2 per 1000. According to Dr. Gourley, the system of compulsory notification is working well, but the uses to which it can be put are naturally very limited in the absence of an isolation hospital. Amongst the diseases notified last year there were 246 of scarlet fever, of which 15 were fatal. There were also 54 cases of enteric fever, of which 9 terminated fatally. In one house eight persons were attacked, and it was found that they derived their milk from next door, where a previous case had

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existed. New public slaughter-house arrangements are stated to be necessary, many of the existing establishments being out of date, dilapidated, and unwholesome.

Hereford Combined Sanitary Districts.—No general report comparing the several districts which make up this combination is issued, each district being dealt with without reference to the others. A number of the reports also deal almost exclusively with statistics and occurrences of disease and death. In dealing with the Leominster rural district, however, Mr. Vavasour Sandford reminds the authority that no action has been taken to amend the faulty conditions of sewerage and drainage at Kingeland, and he urges that the matter should be dealt with before the risk of disease is incurred, and before the hot weather ensues.

Withington Urban District.—If the population of this district is correctly estimated by Dr. Railton, its general death-rate during the past year did not exceed 12·9 per 1000, and its zymotic rate was correspondingly low. In view of a prevalence of measles, and the conviction that it was largely associated with school attendances, Dr. Railton gives some excellent advice as to the detention at home of children who are suffering from preliminary symptoms which are alike premonitory of colds and of measles, and he urges that, whatever the outcome, gain to the child and doubtless to the community will result. Improvement is still called for in the matter of the pollution of streams; but the general sanitary work of the district would appear to be well maintained.

Carlisle Urban District.—This district exhibited in 1890 a slight rise in its general rate of mortality, which was 19·5 per 1000 living. There is thus need for reduction, but when compared with the last decennium, great changes for good have been effected in this respect. No less than 578 cases of scarlet fever were notified, but the mortality was comparatively small—namely, 22 in all. The disease was essentially confined to the working classes; and Mr. Wm. Brown details the action taken by way of excluding scholars from the elementary schools in cases where the disease prevailed in their homes. Unfortunately the results which should have followed were frustrated partly by the number of mild attacks which only came under medical cognisance late in the attack, and partly by the failure of the Carlisle rural authority to adopt compulsory notification. Detailed accounts are given of occurrences of enteric fever and diphtheria, and of the action taken in consequence. But little isolation in hospital was resorted to, only 38 cases in all being thus dealt with. The general sanitary work of the district is briefly referred to, and an account of the vital statistics adds materially to the value of the report.

Ashton-in-Makerfield Urban District.—Mr. N. Hannah has occasion to refer to the difficulty experienced in properly controlling such a disease as scarlet fever by reason of the non-recognition of mild attacks and the utter carelessness and disregard of people as to infection. In a number of cases hardly anything was known as to the existence of disease until the occurrence of secondary nephritis and of desquamation. A full account is given of disease occurrences month by month, and action is advised as to unwholesome places before reported on, but not yet dealt with, as to proper scavenging arrangements, as to the provision of public latrines, and as to improvement in dealing with the sewage effluent. Some improvements have been carried out during the past year; the hospital has proved beneficial in a number of instances; but Mr. Hannah, speaking of a lengthened acquaintance with the sanitary circumstances of the district, is obliged to admit that the township is not now in so good a state as on some former occasions. The death-rate, which was 19·5 per 1000 for 1890, is showing a slight tendency to rise, and the authority should be careful to act on the warnings which this report and its vital statistics afford.

South Shields Urban District.—According to Dr. Campbell Munro the death-rate for 1890 was 22·8 per 1000, or 2 per 1000 above the mean rate for the decade just completed; this result being regarded as largely due to acute pulmonary disease and heart disease following the epidemic of influenza. The death-rate from zymotic diseases, which respond of all others to advance in sanitation, happened, however, to be low last year. But, at the same time, there is much positive evidence of the continuance of circumstances which tend to increase rather than to reduce preventable mortality and sickness. The nuisance inspectorial staff is conspicuously insufficient; the building by-laws, which appear to have been under consideration for a number of years, are most defective; outlying hamlets remain without proper means of drainage; and together with Leeds and Gateshead, the corporation of South Shields, who also claim the dignity of a County Council, still refuse to adopt the system of compulsory notification of infectious diseases. These are only some of the matters which the sanitary authority appear to have a faculty of shelving; thus a visit of inspection with regard to a modified hospital scheme, which was decided on some time since, is reported as not having been paid. Dr. Campbell Munro with this report has resigned his office, and it is a somewhat melancholy leave-taking to find him writing that after eight years and a half of labour he takes this step "with the mournful consciousness that most of what I had hoped to accomplish remains undone." That part which is really mournful is that the county borough of South Shields should have had so little regard to advice which on the face of it was sound, which was based on scientific knowledge, and which came from an officer who, by reason of the character of his labours in South Shields, has deservedly acquired the reputation of an expert in public health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6368 births and 4321 deaths were registered during the week ending April 18th. The annual rate of mortality in these towns, which had increased from 21·2 to 22·9 per 1000 in the preceding three weeks, declined again to 22·5 last week. The rate was 20·5 in London and 24·1 in the twenty-seven provincial towns. During the thirteen weeks of last quarter the death-rate in the twenty-eight towns averaged 23·0 per 1000, and slightly exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 16·7 in Wolverhampton, 17·3 in Birmingham, 17·9 in Brighton, and 18·2 in Derby and in Bradford; the highest rates were 27·6 in Halifax, 27·9 in Hull, 31·9 in Newcastle-upon-Tyne, and 33·9 in Sheffield. The deaths referred to the principal zymotic diseases, which had been 468 and 438 in the preceding two weeks, further declined last week to 420; they included 150 from measles, 141 from whooping-cough, 42 from diphtheria, 36 from diarrhœa, 27 from "fever" (principally enteric), 24 from scarlet fever, and not one from small-pox. These diseases caused the lowest death-rates in Wolverhampton, Birkenhead, Brighton, and Plymouth, and the highest rates in Salford, Sheffield, Blackburn, and Portsmouth. The greatest mortality from measles occurred in Preston, Bristol, Leeds, Huddersfield, Blackburn, and Portsmouth; and whooping-cough in Birmingham, Halifax, Liverpool, Newcastle-upon-Tyne, Nottingham, Derby, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. The 42 deaths from diphtheria included 26 in London, 3 in Manchester, 3 in Preston, and 2 each in Liverpool, in Nottingham, and in Salford. No fatal case of small-pox was registered in any of the twenty-eight towns; 15 small-pox patients were under treatment in the Metropolitan Asylum Hospitals and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 949, and showed a further decline from recent weekly numbers; the patients admitted during the week were 84, against 98 and 77 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 489 and 464 in the previous two weeks, rose again to 504 last week, and exceeded by 78 the corrected weekly average. The causes of 81, or 1·9 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Salford, Cardiff, and in five other smaller towns; the largest proportions of uncertified deaths were recorded in Sheffield, Bristol, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 26·7 to 25·0 per 1000 in the preceding three weeks, further declined to 22·6 during the week ending April 18th, and almost corresponded with the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 6·2 in Perth and 17·8 in Greenock to 25·9 in Glas-

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gow and 38·0 in Paisley. The 590 deaths in these towns showed a decline of 63 from the number in the preceding week, and included 41 which were referred to measles, 25 to whooping-cough, 9 to diphtheria, 3 to diarrhœa, 2 to scarlet fever, 1 to "fever," and not one to small-pox. In all, 81 deaths resulted from these principal zymotic diseases, against 100 and 80 in the preceding two weeks. These 81 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·9 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 41 and 33 in the preceding two weeks, rose again last week to 41, of which 22 occurred in Paisley, 15 in Glasgow, and 4 in Edinburgh. The deaths from whooping-cough, which had declined from 34 to 25 in the previous two weeks, were again 25 last week, and included 10 in Glasgow and 6 in Edinburgh. The 9 fatal cases of diphtheria exceeded by 4 the number in the preceding week; 6 occurred in Glasgow and 3 in Edinburgh. The 2 deaths from scarlet fever showed a further decline from those recorded in recent weeks, and included one in Glasgow and one in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 201 to 164 in the preceding five weeks, further fell to 142 last week, and were 12 below the number in the corresponding week of last year. The causes of 53, or 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 and 30·6 per 1000 in the preceding two weeks, declined again to 27·5 during the week ending April 18th. During the thirteen weeks of last quarter the death-rate in the city averaged 30·2 per 1000, the rate for the same period being 22·6 in London and 21·8 in Edinburgh. The 186 deaths in Dublin showed a decline of 21 from the number in the preceding week, and included 7 which were referred to whooping-cough, but not one to any of the other principal zymotic diseases. These deaths were equal to an annual rate of 1·0 per 1000, the zymotic rate during the same period being 1·8 in London and 2·5 in Edinburgh. The fatal cases of whooping-cough, which had been 3 and 2 in the preceding two weeks, rose last week to 7, a higher number than in any week since March, 1890. During last quarter the death-rate from the principal zymotic diseases in Dublin did not exceed 1·1 per 1000, and was below that in the corresponding period of any year on record. The 186 deaths in Dublin last week included 28 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. One inquest case and 3 deaths from violence were registered; and 61, or nearly a third, of the deaths occurred in public institutions. The causes of 23, or more than 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

THE Queen has been pleased to give directions for the appointment of Francis Lovell, Esq., Chief Medical Officer of the Colony of Mauritius.

The Duke of Cambridge has approved of Surgeon H. Rayner, of the Grenadier Guards, being permitted to accompany Lord R. Churchill to Mashonaland. Beside acting as medical officer of the expedition, Surgeon Rayner will report generally on the climate of the country traversed and on other matters which may be of military value.

ARMY MEDICAL STAFF.—Brigade Surgeon Jas. Young Donaldson, M.D., to be Deputy Surgeon-General (ranking as Colonel), vice J. Landale, M.D., retired (dated Dec. 10th, 1890). The promotions of the undermentioned Officers are antedated as follows:—Deputy Surgeon-General (ranking as Colonel) Edward Corrigan Markey, C.B. (dated Sept. 11th, 1890), vice S. B. Roe, M.B., C.B., retired; Deputy Surgeon-General (ranking as Colonel) Geo. E. Will (dated Nov. 13th, 1890), vice J. G. Faught, promoted; Brigade Surgeon (ranking as Lieutenant-Colonel) John Maturin, F.R.C.S.I. (dated Sept. 11th, 1890), vice E. C. Markey; Brigade Surgeon (ranking as Lieutenant-Colonel) Robt. Collins, M.B. (dated Nov. 13th, 1890), vice G. E. Will; Brigade Surgeon (ranking as Lieutenant-Colonel) Thomas O'Farrell, M.D. (dated Nov. 10th, 1890), vice J. Y. Donaldson, M.D., promoted; Surgeon-Major (ranking as Lieutenant-Colonel) George Andrew, M.B., to be Brigade Surgeon, vice J. Wilson, M.B., F.F.P.S. Glasgow, retired (dated Feb. 14th, 1891).

INDIAN MEDICAL SERVICE.—Deputy Surgeon-General Rudd, Army Medical Service, has been transferred from Allahabad to Meerut, to which station he has been posted in the place of Deputy Surgeon-General Collis, whose term of Indian Service has expired.—Surgeon-Major Bull, in medical charge of the 3rd Bombay Cavalry, has been appointed to the Civil Surgency of Poona.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeon Henry L. Crocker, to the *Boscawen*, for Portland Sick-quarters (dated May 3rd, 1891); Mr. Benjamin Browning to be Surgeon and Agent at Weymouth (dated April 21st, 1891).—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon James Bradley has been placed on the Retired List of his rank (dated April 13th, 1891); Surgeon Richd. Edmund Biddulph, B.A., M.B., has been promoted to the rank of Staff Surgeon in Her Majesty's Fleet (dated March 31st, 1891).

VOLUNTEER CORPS.—*Artillery:* 3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Peter Murray Kerr, M.B., to be Acting Surgeon (dated April 18th, 1891).—1st Herefordshire: Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) T. Turner resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated April 18th, 1891).—5th (Glasgow Highland) Volunteer Battalion, the Highland Light Infantry: Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) T. D. Buchanan, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated April 18th, 1891).

Correspondence.

"Audi alteram partem."

THE PROPOSED RECONSTITUTION OF THE LONDON UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—In your remarks on my letter published in THE LANCET last week you ask me whether I "intend to convey that the members of the medical staffs of the various London hospitals have officially met to consider the scheme, and that it has been regularly voted on and agreed to by them." I meant what I said—namely, that the scheme has been adopted by the medical schools I mentioned, and the ground for my statement is that the Senate have received a letter dated March 3rd, 1891, which says, "the medical schools of Charing-cross Hospital, Guy's Hospital, London Hospital, Middlesex Hospital, St. Bartholomew's Hospital, St. George's Hosptial, St. Mary's Hospital, St. Thomas's Hospital, and Westminster Hospital, having considered the revised scheme for the reconstitution of the University of London, desire to express their acceptance of the scheme as it now stands." This letter is signed by an authorised representative of each of the above schools. In spite of your criticism I still think the scheme renders the M.B. and M.D. degrees more accessible. I do not understand what you mean by the phrase "the examination system of the Royal Colleges," but a candidate can, under the new scheme, take his M.B. without his L.R.C.P. and M.R.C.S., and *vice versâ*. Some of the examinations will be conducted conjointly by the University and the Colleges merely for the convenience of the candidate who wishes to be examined by both, but each body will independently determine whether the candidate shall receive its diploma. I do not know how you arrive at the conclusion that there will be "an increased expense to the intending graduate," for no scale of fees applicable to this scheme has yet been published. As a man will be able to obtain the diploma of the University and the Colleges by the same set of examinations, the risk of failure will be decreased, and therefore to many men the expense will be diminished. Anyhow, it is absurd to suppose that if a candidate wants only his M.B., or only his M.R.C.S. and L.R.C.P., he will be compelled to pay for both. I can assure you I have not accepted the arguments I use so readily as you think. I have compared the latest scheme and the one before it, and

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am well aware of the differences between them; but the possible inclusion—for the Senate are not compelled to include them—of a few small provincial colleges is, to my mind, an unimportant matter; and it will be a thousand pities, because of this, to wreck this scheme, which commands the support of nearly all the bodies interested, and gives a just share in the government of the reformed University to the medical profession. I am, Sirs, yours faithfully,

W. HALE WHITE, M.D. Lond.

Harley-street, W., April 20th, 1891.

*** Dr. Hale White seems to have abandoned the contention in his former letter that this "latest scheme" is not opposed "in spirit and in working detail" to that recommended by the Royal Commission. He does not answer our question as to whether the staffs of the various London medical schools have officially met to consider the scheme. We would remind him that a report of the Committee of Delegates was placed before the Royal Colleges last year, in which the fee, to be paid to those Colleges for the two professional examinations for the pass M.B. degree only were fixed at 25 guineas. The present fees for the corresponding examinations at the University of London are £10. This is how we "arrive at the conclusion that there will be an increased expense to the intending graduate."—ED. L.

"THE REMOVAL OF GALL-STONES BY ETHER SOLUTION."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 18th I notice a short paper by Mr. J. W. Walker under the above heading, in which he says: "I do not know whether the plan of dissolving stones *in situ* has been before attempted by injecting ether on them." It may perhaps interest Mr. Walker and others to know that the dissolution of gall-stones has been attempted on other occasions through the fistula left by cholecystotomy. I believe Dr. Taylor of Birmingham told me that he had employed a solution of ether and turpentine to effect this; and last year having a case of stones impacted in the common duct, where on account of extensive adhesions I had been unable to crush or otherwise remove them, I injected a solution of ether on two occasions with the effect of clearing the passage; but, as most severe pain was produced by the injections, I am not sure that the violent peristalsis set up by the irritation was not the real agent in bringing about the desired effect. On another occasion I employed a few drops of turpentine dissolved in ether, but this produced such severe irritation that I should not dare to venture a repetition of the experiment.

A want of leisure has only prevented me from completing some experiments which I have been thinking over for some time, to ascertain the best solvent for gall-stones should the surgeon be obliged to leave them in the ducts after the operation of cholecystotomy, and I think in all probability one will be able to find some agent which will be capable of dissolving the concretions without injuring the mucous membrane. It seems to me that difficulty will very seldom arise with regard to stones in the cystic duct; at all events, my own experience in a considerable number of operations would lead me to this conclusion; but with regard to calculi impacted in the common duct difficulties must often arise, as it certainly is not always possible to crush them, and it is far from an easy and safe procedure to incise the duct, and effect their removal.—I am, Sirs, yours faithfully,

Leeds, April 21st, 1891. A. W. MAYO ROBSON.

EXCISION OF THYROID FOR MALIGNANT DISEASE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 4th, Mr. Pepper gives a very interesting account of the successful removal of a large bronchocele described as malignant. With all due respect to Mr. Pepper, I venture to suggest that the report of the pathological appearance of the tumour does not point by any means conclusively to malignancy. The presence of "alveoli filled with cubical cells" and surrounded by fibrous tissue does not in the thyroid gland necessarily indicate carcinoma, but rather one of the fibro-adenomatous tumours so frequently found in innocent goitres. Nearly a year ago I removed from a middle-aged lady a solid thyroid tumour weighing nineteen ounces. On section the tumour presented in places the same appearances as those described by Mr. Pepper—namely, fibrous tissue with numerous alveoli occupied by cubical cells. I did not consider this to be evidence of malignancy, and did not remove the opposite lobe of the gland. The patient, when I last saw her a few weeks ago, was in perfect health, and had had no return of the disease. Again, it is stated that in Mr. Pepper's case the malignant portion of the growth formed two masses "distinctly marked off from the neighbouring tissue." Now, it is surely not usual to find primary carcinoma occurring in any situation as two separate masses. I have seen some fifty museum specimens of malignant disease of the thyroid but have never found the above condition present. Innocent solid tumours, however, which are so commonly met with in goitres are often definitely encapsulated and frequently multiple. Excellent examples may be seen in the museums of the College of Surgeons, St. Bartholomew's Hospital, the Royal Free Hospital, and in many others. I should not have considered it necessary to draw attention to Mr. Pepper's case were it not for the important question of treatment involved therein. On the ground that the right lobe of the gland contained a malignant tumour, Mr. Pepper appears to have performed a total excision. Now, the propriety of completely removing a goitrous thyroid gland, even for malignant disease, is at least doubtful. But total excision of the gland which contains innocent tumours only is nowadays almost universally admitted to be an unjustifiable operation. It is not for me to assert that the tumour in Mr. Pepper's case was not a malignant one. What is clear, however, is that the description given would apply equally well to one of the commoner innocent tumours. If the tumour be really malignant, the case is an exceedingly rare one; indeed, it is probably unique. It may be that Mr. Pepper has further evidence of the malignant nature of the tumour. If so, he would do well to give it. It is to my mind highly undesirable to encourage the performance of total excision without much stronger proofs of malignancy than are afforded by the description of Mr. Pepper's case.

I am, Sirs, yours faithfully,

Welbeck-street, W. JAMES BERRY.

POISONOUS PROPERTIES OF PRIMULA OBCONICA.

To the Editors of THE LANCET.

SIRS,—As attention has lately been directed to the poisonous properties of Primula obconica, perhaps the following note of a case of poisoning by this plant, which is becoming a favourite for its pretty flowers and foliage, may prove of interest.

On the 14th inst. a lady consulted me about her right hand, which was swollen and much inflamed, presenting all the appearances of the early stage of acute eczema, which I at first thought she was suffering from. She complained mostly of intense itching and burning pain in the fingers. There was no constitutional disturbance. On further questioning she said she had been cutting flowers the previous day, and on giving her the name of the plant which I thought might have caused the mischief her gardener at once identified the primula in question as the one she had been working with, and stated that his own hands had been sore for some days. He had been engaged in repotting it. With the use of an evaporating lotion and saline purgative all the symptoms had disappeared by next day. From its appearance the irritation caused by handling this plant might easily be mistaken for acute eczema or erysipelas, and perhaps this note may help to eliminate a new source of error in the diagnosis of these complaints.

I am, Sirs, yours faithfully,

Gilford, co. Down, April 17th, 1891. S. A. L. SWAN, M.D.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Wholesale Destruction of Insanitary Property.

AT the City Sessions recently held the grand jury were engaged in an inquiry with reference to over five hundred houses in the city scheduled by the Corporation under the Liverpool Sanitary Amendment Act, 1864, and the Liverpool

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Improvement Acts of 1867, 1871, and 1882. This property, which has been reported by the medical officer of health, Dr. Taylor, to be insanitary, is situated off one of the main thoroughfares of the northern part of the city, and, in allusion to the names of the streets has been sarcastically styled "Poet's Corner," these streets being named respectively Addison, Southey, Pope, Milton, Cavendish, &c. A more unpoetical spot could not be imagined, and it is a melancholy instance of the rapacity of landlords that they could ask for and receive rent for such wretched dwellings. In addition to Dr. Taylor's evidence, there was that of Dr. Littlejohn of Edinburgh, who gave it as his opinion that the houses in question were a scandal to the country and the city. Decency was, he urged, impossible under the circumstances. Professor Corfield considered them unfit for human habitation. Dr. Hope found that the court houses contained a double quantity of foul air. The jury presented the property for demolition, as requested by the medical officer of health.

An Epidemic of Wounding.

At the assizes held in February, Mr. Justice Day congratulated the grand jury upon the absence of the many severe cases of wounding with knives which he remembered at former assizes here; and only last week the recorder (Mr. Charles H. Hopwood) congratulated the grand jury on the absence of stabbing and of violence producing wounds. Unfortunately at the very time when Mr. Justice Day was speaking there had commenced a series of wounding cases which have continued so as to assume the character of an epidemic. Mr. George Hamilton, honorary surgeon to the Northern Hospital, in a letter to the daily papers, gives some startling details which rudely dispel the bright vista pictured by the learned judge and recorder. The following is Mr. Hamilton's short list of some of the more serious cases admitted into the Northern Hospital during the last seven weeks: (1) Wound of arm, dividing main artery; (2) wound of abdomen, with protrusion of bowels; (3) wound of chest and diaphragm, exposing spleen; (4) compound fracture of skull caused by knife; (5) severe wound of chest; (6) fracture of lower jaw; (7) dangerous wound of chest; (8) wound of arm, dividing main artery; (9) stab at upper part of chest; (10) kick, destroying eye; the other eye having been previously destroyed in a similar way; (11) dangerous wound of chest; (12) wound of eye, necessitating removal. These are only the more severe cases admitted as inpatients; many other cases have been treated as outpatients, and Mr. Hamilton's opinion is that wounding has been greatly on the increase. He adds that the cases which come before the courts are by no means all which occur. Some injured persons are deterred by threats; in other cases the charge is dismissed by the magistrate in despair of being able to determine upon whom to fix the blame. The police surgeons, moreover, see many constables wounded where the assailant has made good his escape and is unknown. Clearly the hospitals and dispensaries would prove a better barometer as to the prevalence of wounding than the experience of judges, recorders, or even magistrates.

The Disposal of the Dead in Liverpool.

Since the publication of Dr. Hope's paper, alluded to in a recent letter, a correspondence has been going on in the *Liverpool Daily Post* as to the respective merits of cremation and burial. The large proportion of burials (probably 75 per cent.) takes place in three local cemeteries, and it is a very significant fact that some difficulty is now experienced in procuring the reinterment even in the more recently formed cemeteries of those remains removed from time to time from those local churchyards portions of which are required for city improvements. Were it only the remains themselves, there would probably be no difficulty at all; but unfortunately there are also leaden coffins, which have already monopolised the ground for many years past, and will of course continue to do so for many more to come; and there are also the wooden coffins, which in the past have been far too strong and imperishable, especially where the soil is damp, as in so many old churchyards here and elsewhere. Still, however, these strong, massive, imperishable coffins continue to be used, and there is much truth in the remark of a clergyman that cremation has been suggested in despair of proper burial being ever adopted. The feeling in favour of cremation is very strong here, and is increasing.

Deaths of Local Medical Practitioners.

The deaths of Mr. Joseph Lamb of Birkenhead and of Mr. Thomas R. Pennington of this city, both comparatively young men, have caused much sorrow to their professional brethren and much sympathy with their surviving relatives. The past winter will be remembered as a most fatal one, attacking fatally the old, young, and middle-aged.

Liverpool, April 21st.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Influenza at Newcastle.

INFLUENZA has been prevalent in Newcastle and district now for a few weeks past; large numbers are laid up with it, and I have heard of twenty persons from one establishment being absent from this cause. So far the epidemic does not seem so severe in its effects on individuals as that of last year. Gastric symptoms have been, perhaps, more severe, and head complaints less common. Convalescence has been scarcely so tardy and relapses less frequent.

Ambulance Work.

The great works of Sir Wm. G. Armstrong, Mitchell, & Co. at Elswick have inaugurated their eighth session of ambulance instruction, and at the meeting held last week the following figures were given for last year: the classes opened with 185 students; of that number 135 qualified for examination, 121 passed. During the year 1059 accidents happened throughout the whole of the Elswick Works, and that number received "first aid" before being taken to the infirmary or elsewhere. Mr. R. Clark Newton gave a lecture and demonstration on ambulance work, and certificates and medallions were presented to the students.

Port Sanitary Matters.

At a meeting held last week of the Tyne Port Sanitary Authority it was reported that during February and March a total of 2164 visits had been made to vessels; in 87 cases there were sundry sanitary defects, and with the exception of 10 they had all been attended to; 40 cases of sickness had been inquired into, and six old beds burnt. The drinking water of two vessels had been changed and fresh tanks supplied. Calcutta was reported as affected with cholera. There had been a large increase of emigrants arriving from the Continent *en route* to America. All were well.

The Projected Hospital at Hebburn.

It is stated that the scheme for providing a hospital at Hebburn-on-Tyne is progressing most satisfactorily, and assistance is being extended on all sides. The majority of the men in the large works in the neighbourhood have agreed to give systematic subscriptions; also the various coöperative societies in the district. It is quite certain, notwithstanding all that has been written adverse to the project, that the men have set their minds on having the hospital.

Cumberland and Westmoreland Asylum.

The annual report of the Medical Superintendent of the Cumberland and Westmoreland Lunatic Asylum at Garlands, together with the reports of the Visiting Committee and of the Lunacy Commissioners and the statistical tables of the institution for the year 1890, have been issued. The report was ready for publication a year ago; but in consequence of the Government auditor not having audited the accounts till March, 1891, the issue was delayed. Dr. Campbell shows that the daily average number of patients during the year was 579, and the recovery rate, calculated on the admissions, was 44 per cent. for men and 43 per cent. for women. He shows that the recovery rate for pauper patients was 45·7 per cent., while for private patients it was only 27·7 per cent., and he attributes this circumstance to two causes. In the first place, there is a reluctance to send private patients to an asylum except as a last resource, and often after the period for skilled treatment would have been of avail; and in the second place several chronic cases were transferred to Garlands from other asylums. Forty-nine deaths occurred during the year, the death-rate calculated on the average number resident having been 8·4 per cent. About a third of the deaths were from cerebral or spinal disease. The Lunacy Commissioners conclude their report with the remark that "the asylum continues to be managed with energy and efficiency, while the assistant medical officers should receive praise for the carefully noted case-books."

Cumberland Infirmary, Carlisle.

An influential meeting, at which the Bishop of Carlisle

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presided, has been held to consider a plan for raising funds for increasing the accommodation of the nursing staff of the Cumberland Infirmary, Carlisle. It was mentioned that more than £2000 would be required for the proposed enlargement of the infirmary, so as to embrace a scheme for nurses employed at the institution, including night nurses, as well as private and district nurses.

Death of Dr. H. D. Ward of Blyth.

I heard with regret last week that Dr. H. D. Ward of Blyth had died at his residence on the 14th inst. Dr. Ward was in his fifty-third year, and was a partner with his father, the venerable Mr. Gilbert Ward, F.R.C.S., who is in his eighty-sixth year, and who survives him. Dr. Ward was M.D. St. And., M.R.C.S., and L.S.A. He was surgeon and trustee to the Knight Memorial Hospital at Blyth, in which he took a great interest, also medical officer of health and port medical officer for Blyth. The Wards were a well-known medical family at Blyth, and at the time of the Hartley accident greatly distinguished themselves. Dr. Ward's funeral took place on Saturday last, and the occasion was one of general mourning in the town, as he was greatly esteemed by all classes of his fellow-townsmen, and likewise by his professional brethren in the north, many of whom were present at his interment. Dr. Ward was a bachelor. Much sympathy is expressed for his aged father.

Painful Case at Durham Prison.

A coroner's inquest was held at Durham touching the death of a prisoner who had died in the gaol hospital that day. It appeared that the deceased, a labourer aged forty, was committed by the county magistrates at Bishop Auckland to seven days' hard labour for begging. The prison surgeon deposed that deceased when admitted was suffering from heart disease and dropsy, chronic disease of the kidneys, and bronchitis, and in such a perilous condition that any medical man seeing him would at once have admitted him to hospital instead of prison. The coroner made some very strong remarks, with which the jury agreed, on the harshness of sending a poor dying wretch like deceased to prison for a technical offence; and although it did not appear that there had been any medical man on the magistrates' bench when the man was committed, it would have been easy to have had him seen by a police surgeon or any surgeon in the neighbourhood.

The Middlesbrough Football Fatality.

An inquest was held in the case of the fatal football case noted in my last letter as having occurred in Middlesbrough. It appeared that the deceased was going very quickly, and came in contact with the goal-keeper's knee, the knee striking his abdomen, when he dropped in the field, and died the next day from shock and abdominal injury. The coroner said that such rough practices at football should be discouraged, and the rules adhered to which prohibit raising the knee, and that the jury had almost decided to send the goal-keeper for trial, but requested him to give a reprimand instead.

By the will of the late Mr. Robert Thomas Wilkinson of Rose Dene, Sunderland, and Holystone, Northumberland, various sums have been left to charitable institutions—amongst others, £500 to the Sunderland Infirmary, £100 to the Monkwearmouth Dispensary, and £100 to the Nurses' Home.

Newcastle-on-Tyne, April 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Scottish Society of Arts.

AT the last meeting of this Society Mr. W. P. Buchan, Glasgow, read a paper on the Ventilation of Schools, in which he pointed out the defects in the ventilation of Board schools both in Glasgow and Edinburgh, the faults being in the direction of the want of proper means for carrying away vitiated air and the imperfect system for the introduction of fresh air. He attributed much of the sickness amongst children at school to bad ventilation. He also made a communication on the "Smoke Test for Drains," and pointed out that the introduction of this test had led to an immense improvement in the sanitary conditions of houses.

St. Bernard's Well.

The sources of the mineral water-supply of this well have been undergoing a thorough investigation at the instance of the Edinburgh Town Council. It has been found that with regard to the four springs which supplied the well in only two of them were sulphuretted hydrogen and iron, which are the medicinal constituents of the water, present in considerable quantity; while in the other two the quantities were small. It has been arranged to restrict the supply of the well to the two richer springs. It is also stated that no contamination with organic or other deleterious matters was present; but after the operations are completed, it is proposed to make further anaylses of the water.

National Registration of Plumbers.

The annual meeting of the registered plumbers in the Edinburgh and East of Scotland district was held in Edinburgh last week, Professor Armstrong presiding. In moving the adoption of the report, the chairman dwelt upon the necessity of plumbers being educated in the scientific and sanitary aspects of their work, and said that an incompetent and inexperienced workman might be described as a "pestilence that walketh in darkness," and it was to remedy this that the Association had arisen. Sir Douglas Maclagan was re-elected President.

Royal Maternity Hospital, Edinburgh.

Mr. T. Stevenson Balfour, M.B., C.M., and Mr. H. G. Langwill, M.B., C.M., have been appointed house surgeons to this hospital, and enter upon their duties on May 1st.

Edinburgh Royal Physical Society.

At the meeting of this Society last week, Dr. Fortescue Fox read a paper on the Climate of Strathpeffer Spa, in which he compared the annual mean differences and the average differences between night and day temperatures with those in London and at Greenwich.

Health of Edinburgh.

The mortality last week was 109, making the death-rate 21 per 1000. Diseases of the chest caused 42 deaths and zymotic diseases 13, of which 3 were due to diphtheria, 4 to measles, and 6 to whooping-cough. The intimations for the week comprised 5 from typhoid fever, 5 from diphtheria, 25 from scarlatina, and 67 from measles. The mortality in Leith for the week was 31, making the death-rate 20·15 per 1000.

Health of Aberdeen.

In his report for the month of March, Dr. Matthew Hay, the medical officer of health, states that the death-rate was 19·38 per 1000, being 8·35 less than in the corresponding month of last year. The lowness of the total death-rate during the month is mainly attributable to the distinct abatement of the present epidemic of scarlet fever, and also to a low mortality among aged people, in spite of the inclemency of the weather. During the month 24 patients were admitted into the city hospital, and the average daily number of patients was 61. There was 1 death, that of a child, who was admitted suffering from severe post-scarlatinal dropsy. During the week ending April 18th, the following cases of zymotic diseases were notified to the medical officer:—Puerperal fever, 1; erysipelas, 3; measles, 2; scarlet fever, 6; diphtheria, 2; typhoid fever, 1; whooping-cough, 4.

The County Medical Officership, Aberdeen.

By a majority the County Council resolved to approach the Town Council of Aberdeen with the view of coming to some arrangement whereby Dr. Matthew Hay could undertake the duties of the county medical officership in addition to his present duties as medical officer for the city. The subject was discussed at a meeting between the Public Health Committee of the city and a deputation from the County Committee, with the result that the former submitted a report to the Town Council opposing the proposal. In the report there is the following statement:—"The committee are of opinion that it would not be a satisfactory arrangement for the Town Council if the proposal indicated by the County Council were carried into effect. The large amount of work falling to be performed by the city medical officer renders it necessary that the gentleman holding the appointment should devote his whole time and attention to the duties. The work is also of a most responsible character, and requires to be carried out in the most efficient manner possible, and this the committee fear could not be attained if the city medical officer were also to hold a similar appointment for the county." At the meeting of the Town Council held on the 21st the report of the committee was unanimously adopted.

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The Summer Session at Aberdeen.

The medical summer session at Marischal College commenced on the 21st inst. There is a large attendance of students. In opening the class of Medical Jurisprudence Professor Hay gave, as an introductory address, a short historical account of the building of Marischal College. The buildings had their origin in the monastery of Greyfriars in 1593, it having been built nearly a century before the foundation of the College.

The Crieff Poisoning Case.

Samples of the sugar, to which the poisoning in the above case was traced, have been submitted to analysis by the public analyst of Greenock, and found to contain 14·59 per cent. of arsenic calculated as arsenious acid. The "weed-killer" has also been subjected to examination, and the tests appear to have distinctly revealed the presence in it of a large amount of arsenic, to the extent of 22 per cent.

At a large and influential meeting held in Inverness last week it was decided to form a branch of the Jubilee Institute of Nurses for Inverness.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Resignation of the Regius Professor of Surgery.

MR. COLLES, M.D., F.R.C.S.I., who has recently retired from Steevens's Hospital, has resigned the Regius Professorship of Surgery in the School of Physic, University of Dublin, a position which he has occupied for the past sixteen years. The name of a distinguished Dublin surgeon has been mentioned as his successor.

Royal College of Surgeons.

By Mr. Thomson's resignation as member of the Council a vacancy has arisen, which will be filled up on the 28th inst. There are three candidates—Messrs. Lentaigne, Myles, and Nixon—all of whom are hospital surgeons

National Society for Prevention of Cruelty to Children: Dublin Branch.

So far the Dublin branch has not been self-supporting, but has had to depend upon the liberality of the London committee; but it is hoped that when the usefulness of the Society is better known here, it will be able to exist independently of the assistance it at present receives. The report for the past year very truly remarks that it is a satire on our Christian civilisation that such a society should be necessary in our midst. Proceeding, it says: "It is enough to make us bow our heads in shame to think that there are men and women amongst us who have so far poisoned the springs of parental instinct within them that they lay their hands in passionate cruelty upon their offspring, and be the very means of their death. We who send our sons and daughters to heathen lands to save children, we by whose naval strength the traffic in human blood in Africa is being crushed, have here at home a story of human woe as touching as any slavery, and a 'cry of the children' as pathetic, calling on us to save them from those who blight their young lives, stamp a double measure of their own iniquity upon them, and cast them into a civilised bondage, to be the slave and sport of every passion evil engendered in their nature."

The late Mr. B. J. Neary.

The following resolution was adopted last week:—"That we, the guardians of the North Dublin Union, have learned with the deepest regret of the death of Dr. Neary, medical officer of Howth and Baldoyle Dispensary, and that the clerk be directed to convey to the members of his family our sincere condolence in their present affliction."

City of Dublin Hospital.

During the past year 1088 patients passed through the wards, and 14,578 were attended to at the extern department of the hospital. The mortality was sixty-one, about 5 per cent., but as a large number of serious accidents were admitted, besides fever cases, scarlatina, &c., the result cannot be regarded as unsatisfactory. There are but few pay-patients admitted, the board considering, and very properly, that the benefits of the charity, except under special circumstances, should be reserved for the poor and suffering. In order to increase the accommodation the adjoining house has been purchased, and will be utilised as soon as the funds permit. The expenditure on the year's working as compared with income shows a loss of £548.

Presentatations to Mr. Ormsby, M.D., F.R.C.S.I.

Last week the lady superintendent, sisters, and probationers of the Red Cross Society attached to the Meath Hospital presented Mr. Ormsby with an address, accompanied by a silver claret jug, in recognition of his efforts in establishing and promoting the efficiency of the organisation. At a dinner given by Mr. Ormsby in honour of the winners of the hospital football cup at the Wicklow Hotel, he was presented by the students, past and present, with a massive silver salver and an address in token of their esteem.

Society of Chemical Industry.

A meeting of the committee formed for the reception of the Society of Chemical Industry this year in Dublin was held last week in Trinity College, when it was resolved to invite the Society to hold its annual conference in Dublin in July next. Dr. Emerson Reynolds has been appointed chairman of the executive committee, and Sir Charles Cameron a vice-chairman.

Hydrophobia in Ireland.

An outbreak of hydrophobia has occurred within the last few days in the counties of Wexford, Carlow, and Kilkenny. In Wexford the disease has attacked not only dogs and cats, but horses, donkeys, and cows. The outbreak was first noticed in some sheep-dogs belonging to a farmer residing about ten miles from New Ross. These bit a donkey, which burst out of its stable and attacked several horses, cows, and pigs, and was shot in a bog some days after about six miles from where it started. In several townlands all dogs have been destroyed.

Mr. Jonathan Pim has been elected resident surgeon to Jervis-street Hospital.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Yet another New Treatment of Phthisis.

NOW that the Koch treatment of tuberculosis no longer monopolises attention, clinicians are striving to discover other methods of overcoming the dread bacillus. The latest is that of M. Germain-Sée, who shuts his patient up for two, three, or more hours daily in a hermetically closed metallic chamber, into which is slowly admitted a current of compressed air, which, having passed through a mixture of creosote and eucalyptol, is saturated with the vapour of these substances. Since August last ten cases of phthisis have been submitted to this treatment, all of which cases, with one exception, had reached the period of softening, and bacilli had been detected in the sputa. The results obtained were: return of appetite, even in advanced cases, gain of weight and strength, fall of temperature to the normal in a week or two, disappearance of hæmoptysis, diminution of cough and of purulency of sputa, cessation of dyspnœa. It is claimed that the method reduces the malady to a purely local lesion, all the general symptoms disappearing, even though râles may persist. M. Sée related the history of seven of his cases, all of which were relieved, and some actually cured. The treatment has been found efficacious in fetid bronchitis (dilatation of the bronchi). It is worthy of note that the communication has been lying in a sealed envelope at the Académie de Médecine since Nov. 4th, 1890, the envelope having, at M. Sée's request, been opened at the last meeting of that learned body.

Artificial Quinine.

This is *the* discovery of the week; indeed, we may say of the year. The synthesis of that useful, nay, indispensable substance, quinine, has long been a desideratum, and now, thanks to MM. Grimaux and Arnaud (the former Professor of Chemistry at the École Polytechnique, and the latter having succeeded the late illustrious centenarian, Chevreul, at the Muséum d'Histoire Naturelle) the chemical dream has been realised. The method adopted by these gentlemen is as follows:—The base cuprein contained in the shrub Remijia pedunculata growing in Brazil is treated with sodium, then the combination thus obtained is chloride of methyl. The product is quinine absolutely identical with the substance with which we are familiar.

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This important discovery should have the effect of bringing down the price of quinine, and of rendering us independent of supplies from the usual sources. The discovery presents a further interest in that, by the substitution in the aforegoing process of compounds of ethyl and other higher alcohols for those of methyl, new bodies analogous to quinine may be manufactured—bodies whose therapeutical value may be great.

The Technical Instruction of Surgeons of the Reserve Forces.

In the present condition of high military tension obtaining in this and other continental States, we are always menaced with a sudden declaration of war, and it behoves army medical officers of the active, and even of the reserve, forces to keep themselves in times of peace *au courant* with the duties that would devolve on them in such a contingency. A movement intended to achieve this purpose, as regards the surgeons of the reserve forces, has recently been set on foot in Paris, under the presidency of Dr. Kuhff. A *réunion* is held monthly at the Cercle Militaire—the club in the Avenue de l'Opéra founded by General Boulanger,—at which matters relating to military surgery, medicine, and hygiene are discussed. At the first meeting, held in February, Dr. Kuhff lectured on the organisation of medical aid to the different *échelons* of an army corps. The second lecture was delivered on Wednesday last by Dr. Picqué, who chose as his subject "Antisepsis at the Front, and the Treatment of Wounds of the Joints."

A New Faculty of Medicine.

To the Faculties of Medicine already existing in this country there must now be added that of Toulouse, which has only recently been created. Some few weeks ago Government sent down to that town Professors Brouardel and Proust to give advice on the organisation of the new centre of learning. A staff of professors has been appointed, and on Thursday last these gentlemen were formally installed in the presence of numerous prefectorial and municipal notabilities. Of the 500 students who attended one was a lady. The official inauguration of the Faculty is deferred until a later date, when the President of the Republic will perform the ceremony, and the event will be celebrated by splendid fêtes, at which the Paris Faculty will doubtless be fitly represented.

Paris, April 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Hygiene in the Middle Ages.

THE Hamburg ophthalmologist, Dr. Kotelmann, has published a book of 276 pages on the Hygiene of the Middle Ages, for which he derived his materials from sermons of the thirteenth, fourteenth, and fifteenth centuries, a period in which the clergy of the Catholic Church, then in the zenith of its power and authority, gave their hearers advice on all manner of subjects, with a plainness of speech which would greatly surprise the church-goers of our day. It seems that the priests of the middle ages were of Carlyle's opinion that healthy and holy are the same.

A Newly Discovered Anatomical Essay by Goethe.

Professor Karl Bardeleben of Jena has made an important discovery in the Goethe and Schiller archives at Weimar—viz., a hitherto unknown account of the comparative anatomy of the skulls of mammalia by Goethe. From the handwriting and other circumstances, Dr. Bardeleben concludes with certainty that it was written between the autumn of 1793 and the autumn of 1794, probably in the summer of 1794. He will give further particulars of his discovery at the Anatomists' Congress at Munich in the middle of next month. Goethe was profoundly interested in osteology, as he was in botany, optics, mineralogy, and geology, and his writings contain a considerable number of short essays on osteological subjects. The discovery of the intermaxillary bone, which he announced to Herder in 1784, had been published by Vicq d'Azyr five years before; but it was Goethe, says Lewes, who thoroughly worked out the discovery, and gave it a definite place in science.

A Lexicon of the Natural Sciences and Medicine.

A so-called "hand lexicon"—i.e., a compendious cyclopædia—of the natural sciences and medicine is being published by the firm of Bechhold of Frankfort-on-the-Main. Its authors are Dr. A. Velde, Dr. W. Schauf, Dr. D. Loewenthal, and Dr. Bechhold.

The Medal of the Berlin Medical Congress.

The great memorial medal of the Tenth International Medical Congress of 1890 is now being struck in silver and in bronze. Its diameter is seven centimetres, and its design is the joint work of Professor Virchow and the Government architect Jaffé. Its obverse is adorned with a vigorously modelled Æsculapius sitting on a throne erected on a globe representing the earth. The inscription is, "Tenth International Congress, Berlin, 1890." The reverse represents the city of Berlin as seen from the Column of Victory, with the arms of the city adorned with laurel twigs, surrounded by the arms of the nine most largely represented States and the names of the other thirty-one. Above the view of the city is stamped the name of the member of the Congress for whom the particular medal is destined.

Dr. Eduard Goltdammer.

Dr. Eduard Goltdammer, head physician in the Bethanien (Bethany) Hospital here, died on the 14th instant. He was assistant to Christian August Bartels there from 1866 to 1869, and reëntered the service of the hospital as Bartels' successor in 1873. The subjects on which he has enriched medical literature with his pen are typhus fever, with special reference to intestinal hæmorrhage, spinal apoplexy, spinal paralysis, heart diseases, pulmonary diseases, epilepsy, the operative treatment of pleurisy, ileus, and the application of salicylic acid in articular rheumatism. He was the author of the article on hospitals in Eulenburg's great "Cyclopædia of Medical Science," and of a treatise on eating-houses and lodging-houses for the poor. He was born in Berlin in 1842, and graduated here in 1864.

German Death-rates in the week ending April 4th.

Aix-la-Chapelle, 17·9; Altona, 26·5; Barmen, 17·7; Berlin, 18·2; Bremen, 25·6; Breslau, 25·3; Chemnitz, 33·6; Cologne, 23·4; Dantzic, 24; Dresden, 19·9; Düsseldorf, 21·4; Elberfeld, 17·5; Frankfort, 20·8; Hamburg, 20·8; Hanover, 17·6; Königsberg, 18·2; Krefeld, 22·8; Leipsic, 19; Magdeburg, 20·8; Munich, 33·3; Nuernberg, 21·8; Stettin, 24·6; Strasburg, 23·7; Stuttgart, 21·4.

Berlin, April 21st.

Obituary.

JOHN SPEAR, M.R.C.S., L.R.C.P.

IT is with much regret that we have to announce the death of Mr. John Spear, Medical Inspector to the Local Government Board, at the early age of forty years. Mr. Spear commenced the career in which he distinguished himself when he was appointed medical officer of health for South Shields, Jarrow, and Hebburn districts under the Act of 1872, and his labours in that capacity soon marked him as a leading health officer. Especially did his work in connexion with a prevalence of typhus fever in his northern district give proof of signal ability; and in 1880 he was offered and accepted the official post at Whitehall which he occupied up to the date of his death. Mr. Spear's contributions to the etiology of disease have been numerous and important. To their preparation he devoted much labour and pains, and this often in disregard of his health and comfort; and the results of his work in this respect form a memorial of which his colleagues and his family may well feel proud. At the onset of his official career he was deputed to investigate the subject of anthrax in man, in connexion with a prevalence of woolsorter's disease at Bradford and in neighbouring places in the West Riding of Yorkshire, and it was at that early date that, the presence of the bacillus anthracis in both affections having been established, its causative relation to anthrax was demonstrated by experiments on animals. Study of the same subject was continued when Mr. Spear investigated an occurrence of malignant pustule among persons engaged in the London hide and skin trades; and such was the character of the exhaustive reports which he submitted to the Medical Department of the Local Government Board on this subject, that he was at once regarded as the principal British authority on the etiology of the diseases in question. Unfortunately, during some of the pathological investigations at which he assisted in the course of this work, he himself became infected, and it was at the time feared that his life might have been sacrificed to the performance of his official duties. He was removed to St. Thomas's Hospital, and after a severe and somewhat

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lengthened illness recovered. His early experiences of typhus fever, and the immunity he had thus acquired against the infection of that disease, led to the choices of his services in inquiries as to its prevalence in different parts of the country; and on a number of occasions he was able to detect the existence of typhus fever, and to secure its isolation and prevention, when the nature of the disease had remained unrecognised. His inquiry into the prevalence of typhus fever at Fulham, in 1883, was typical of the value of his services in this respect. The "fever" was locally supposed to be one due to some neglect of sanitary circumstances; for London had been so long free from epidemic typhus that the nature of the malady remained undetected until his arrival on the scene. In November, 1887, he prepared an able report on a case of Meat Poisoning at Retford, and his contributions to the natural history of such diseases as diphtheria and measles, as also his forcible manner of exposing maintained neglect and inefficient sanitary administration, call for notice. Amongst the latest experiences which he recorded were the circumstances attending an outbreak of enteric fever at Mountain Ash, the localisation of which he was able to attribute to infection of water in its passage through a pipe. In his official report on this subject he explained the mechanism of this infection, and at a subsequent meeting of the Epidemiological Society he proved experimentally how suction into water pipes took place, even when these were fully charged with flowing water, a condition of things which had up to that date been regarded by many as impossible.

In many senses Mr. Spear was typical of the class of man who is needed for the purposes of the Medical Department of the Local Government Board. Never content to act the part of a mere administrator, who bases his advice on current knowledge acquired here and there by others, he put the need for further scientific research in the forefront of every piece of work he undertook, and as the result the department in which he served was able to utilise his labours in advancing the public health. In this sense alone he will be deeply missed by his colleagues. His energy was untiring; and if it ever needed to be checked, it was either with a view to his taking more leisure from his work or by reason of a manliness which prevented him from glossing over practices which, in his belief, tended to damage and hinder the cause to which he had devoted all the best years of his life. His death, which took place on the 20th inst., was due to the formation of a rapidly growing tumour, and was preceded by an illness of comparatively brief duration. His funeral, which was attended by representatives of the several branches of the public health services in which he had laboured, took place on the 24th at Elmers End Cemetery. Mr. Spear leaves a large family to mourn his early decease.

THE FORTHCOMING MEETING AT THE ROYAL COLLEGE OF SURGEONS.

THE Central Committee of the Association of Members of the Royal College of Surgeons unanimously resolved, on Thursday, to support at the forthcoming meeting of the College (May 11th) the following resolutions to be proposed by the Association of Fellows of the Royal College of Surgeons:—

"1. That this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the Reconstitution of the University of London before formally accepting this scheme in the name of the College.

"2. That no increase of the power and influence of the Council of the College over medical education and examination is desirable until the constitution of the College has been so amended as to make the Council adequately representative of the body corporate."

These two resolutions covering the whole ground, the Association of Members of the Royal College of Surgeons will not move an independent resolution.

MEDICAL TRIAL.

COPPIN *v.* RENTOUL.

ON April 4th, at Wandsworth County Court, an action was tried before his Honour Judge Lushington, in which the plaintiff, a collector, claimed £5 5*s.* from Dr. R. R. Rentoul of Liverpool, for services alleged to have been rendered in procuring signatures to a petition against the Midwives Registration Bill. It appeared that Dr. Rentoul had taken a leading part in promoting and organising opposition to the Bill, and had sent to about 800 medical practitioners a circular letter, in which he urged them to get petitions signed against the Bill, and mentioned that he himself found that the best way to do so was to pay a man 5*s.* a day to canvass for signatures. A local practitioner at Wandsworth had adopted that course, except as regards the payment of the man, which latter obligation he had endeavoured to impose upon Dr. Rentoul. Hence this action, which was brought by the canvasser on the ground that Dr. Rentoul had authorised his employment. The local practitioner gave evidence that he had received a letter from Dr. Rentoul promising to pay 5*s.* per day, and that Dr. Rentoul had also verbally promised that he would bear the expense of employing a man to get signatures. He, however, admitted that the letter to which he referred was the above-mentioned circular, which (as the judge held) contained no such promise. Dr. Rentoul absolutely denied on oath that he had ever authorised the employment of the plaintiff on his behalf or promised to pay any expense which might be incurred. It was mentioned that although the circular had been sent to about 800 practitioners, this was the only case where a claim of the kind had been made upon Dr. Rentoul. His Honour gave judgment for the defendant, with costs. The plaintiff was represented by counsel and Dr. Rentoul was defended by Mr. T. B. Woods, solicitor.

Medical News.

ROYAL COLLEGE OF SURGEONS.—At the last meeting of the Council Mr. Thomas Turner (Hereford) and Mr. Denis Francis Keegan, of the Bengal army, were elected by ballot to the fellowship of the College under the section of the Charter relating to Members of twenty years' standing.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board at a meeting of the Examiners on the 16th inst.:—

Anatomy and Physiology.—E. F. Herman Hardenberg, H. Allcroft Duffett, and John A. Howard, of Guy's Hospital; Aslett Baldwin, of Middlesex Hospital; T. Harold Woodfield, of St. Bartholomew's Hospital; R. Llewelyn Jones and Thomas Harrison, of University College; Edward W. Joscelyne, of St. Mary's Hospital; Arthur F. Goldsmith, of St. George's Hospital; Joseph A. Edwards, G. Moore Hetherington, J. Smedley Boden, and William R. Bryett, of King's College; and G. Mansell Dawkin, of London Hospital.

Anatomy only.—A. Morris Wilkinson, of Westminster Hospital; A. Godfrey Ince and William Escombe, of Charing-cross Hospital; Courtney C. Parsons, of St. Mary's Hospital; W. Hartland Horton, of St. Bartholomew's Hospital; and R. Ardra Fegan, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Oswald O. Williams and J. Grant Fowler, of London Hospital; John Grech, of St. Mary's Hospital; Henry Hewetson, of Guy's Hospital; and William J. Robertson, of Charing-cross Hospital.

Passed on the 17th inst.:—

Anatomy only.—H. Wrangel Clarke and Edward S. Chilcott, of St. Mary's Hospital; George H. Steele, Augustus White, and Edwin S. Hoare, of Guy's Hospital; C. Milner Spain, W. Sidney Mayne, and Maxwell Dick, of University College; Samuel R. Wright, Mervyn T. Archdall, Ernest Parsons, and Percy C. Spark, of Charing-cross Hospital; R. Wentworth Dillon, C. Westbrooke Grant-Wilson, Henry W. Oborn, and F. W. Jervis Goodhue, of St. Thomas's Hospital; Charles Corban, of St. Bartholomew's Hospital; and G. Read Hannon, of King's College Hospital.

In Anatomy and Physiology 320 candidates presented themselves, of whom 184 passed in both subjects; 45 in Anatomy only, and 35 in Physiology only; 56 were referred in both subjects. In Anatomy only, 29 candidates presented themselves, 21 of whom passed; in Physiology only, there were 28 candidates, of whom 24 passed.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE. At the second examination for the degree of Bachelor in Medicine, the following candidates satisfied the Examiners:

Honours (First Class).—James Atkin Henton White, Queen's College, Birmingham.—*Honours (Second Class):* Arthur W. Scott, Yorkshire College, Leeds; Gilbert C. Burrington Kempe, C. Hilary Bryant, Frederick H. Browne, Harold Ernest Gamlen, Stanley McCoull, and Bedlington Howel Morris, College of Medicine, Newcastle-upon-Tyne.

Pass-list.—Edward Bromley, Yorkshire College, Leeds; Alfred Glover Cooley, Sheffield School of Medicine; Wm. Henry Daniel Patrick D'Esterre and Harold Darwin Hey, St. Mary's Hospital; Francis W. Fullerton St. Thomas's Hospital; Thomas Hartigan, Medical

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School, Catholic University, Dublin; H. Douglas Johns, M.R.C.S., L.R.C.P., Charing-cross Hospital; Geo. Edwyn Middlemist and Morgan Richards, London Hospital; Thos. James Selby, Edinburgh School of Medicine; Frank W. Stokes, University College, London; John Braithwaite, John Stratford Hall, W. Edmund Harker, Arthur Samuel Hedley, Daniel Noel Jackson, Rowland Venables Lloyd-Williams, Henry Bannerman Morison, Alfred Yarker Richardson, Harry Smurthwaite, Arthur E. Thompson, Thomas Christoffel Visser, and Ogden Watson, College of Medicine, Newcastle-upon-Tyne.

At the examination for the Licence in Sanitary Science, the following candidates have satisfied the Examiners:—

Walter H. Cheetham, M.D.; Robt. Plenderleith Shearer, M.B., C.M. Glasgow; Thomas Smailes, M.R.C.S., L.R.C.P. Edin.; and Chas. Hermann Tattersall, M.R.C.S., L.R.C.P. Lond.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The quarterly examinations took place in Edinburgh during April, with the following results:

First Examination.—Of 31 candidates, the following 21 passed:—Alfred Arthur Hill, Norwich; Arthur Holmes Field, Yorkshire; John O'Connell, County Kerry; Edward Augustin Rowan, Kilkenny; Samuel Walter Pitcher, Talbot, Australia; Griffith Hugh Williams-Parry, Carnarvon; James M'Kerrow, Liverpool; George Prentice, Carnwath; Henry William Vaughan, Torrington; Thomas Parker Powell, Talgarth; Clyde Harold van Straubenzee, Dover; Grace Haxton Giffen, Roxburghshire; Mary Janet Dodds, Corstorphine; Patrick Sullivan, County Cork; William Joseph Read, Dublin; John Adam Campbell, Victoria; Patrick Joseph Murphy, Cork; Walter Sheffield Harvison, New South Wales; Adele Jeanne Chrestien, Akyab, India; Melville Gorman Wilkins, Madras; and Joshua Henry Fellows, Wednesbury.

Second Examination.—Of 50 candidates, the following 30 passed:—Arthur William Hall, Lincolnshire; Edward John Winston-Waters, New Zealand; James Joseph Gray, Dublin; Thomas Messenger, Silloth; William Allan Lloyd-Davies, Abergele; Charles Albert Smith, Leeds; Thos. Wm. Bartlett, Southsea; Ralph Harry Frank Bostock, Leicestershire; Gerald Herbert Johnstone, Belper; Alic Phillips, Coventry; Robert James Blackham, Belfast; Robt. Morris, County Cork; Fredk. John Turnbull, Edinburgh; Willie Wardman, Yorkshire; Henry Alfred Jones, County Cork; Henry Campbell, County Antrim; John English, Armagh; Allen Perry Stinson, County Armagh; Philip Francis Evans, Cork; Edith Grace Collett, Madras; Octavius Studdert Maunsell, County Waterford; Robert Dundonald Jameson, Trinidad; William Robt. Thrower, Tasmania; Lawrence Corcoran Murphy, Melbourne; William Lyons Lovett, Tullamore, Ireland; John Thos. M'Arthur, County Tyrone; Joseph Ryan, County Limerick; Peter Russell Cairns, Galashiels; Alex. Aviet Fermie, India; and Arthur James Troughton, Norfolk.

Final Examination.—Of 76 candidates, the following 38 passed, and were admitted L.R.C.P. & S.Ed. and L.F.P. & S.Glas.:—Beatrice Mary Harrison, Brighton; William David Sweeny, County Mayo; Gilbert Stewart Crawford, County Antrim; James Orr, County Antrim; Stewart Kirkpatrick, Sligo; Pestanji Ukarji, Bombay; Christian Jacobus van Coller, Cape Colony; Thomas John Davies, Llanrwst; William Thyne, London; Percy Stainsby, Saltaire; Valentine Evelyn Barrow, Madras; Alexander Anderson MacLeod, Greenock; John Reid, Argyllshire; Walter Buck, Boston, Lincs; William Melville, Bowness; Jas. Burnett Smith, Montrose; Patrick Regan, Crofton, County Roscommon; David Livingstone Heggie, Brampton, Canada; Louis David Leopold Ellis, Manchester; Ardesar Byranji Masani, Bombay; Patrick George Mahoney, Maliopuram; Piers James Hatton, Birkenhead; William Burslem Rotheroe, Queenstown; John White, Easdale, Argyllshire; Arthur Dennison, Leeds; Railton Johnson, York; William John Evans, County Limerick; Margaret Ida Balfour, Edinburgh; Charles Rudinge Martin, Dublin; Arthur Henry Barstow, Spofforth, Harrogate; Tom Balleny Brooke, Cambridgeshire; James Alden Fink, Calcutta; Michael Benjamin Gorman, Castletownroche, Cork; James William Lewis, Cardiganshire; Thomas Hamilton, County Tyrone; Jeremiah Barry, Ireland; William Robert Wallace James, Bangalore; and Roderick Maclean, Alness, Ross-shire.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on April 16th:—

James Wallace Anderson, L.F.P.S., L.M. Glasg. (Glasgow); Richard Henry Barker, M.R.C.S., L.S.A. Lond. (Hungerford); Andrew Graham, L.R.C.P., L.R.C.S. Edin. (Currie); Francis Hollinshead, M.R.C.S., L.S.A. Lond. (Selly Oak); John Hay Honeyman, L.R.C.P., L.R.C.S. Edin. (Auckland, New Zealand); John Fletcher Horne, L.S.A. Lond., L.F.P.S. Glasg., F.R.C.S. Edin. (Barnsley); Lawrence Storrar Mackenzie, L.R.C.P., L.R.C.S. Edin. (Bradford); John Nairn, L.R.C.S. Edin. (Glasgow); Frederic La Coque Thorne, M.R.C.S., L.S.A. Lond. (Leamington); Albert Wheeler, L.S.A. Lond., M.R.C.S., L.R.C.P. Lond. (London).

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF IRELAND: CONJOINT SCHEME.—The following have passed the Second Professional Examination:—

H. C. Beasley, W. Burke, J. P. Cassidy, T. C. Cummins, T. S. Fagan, H. S. Falkner, T. W. P. Hayes, P. J. Henegan, A. X. Lavertine, F. P. Linde, W. L. Martin, M. M. Maughan, J. Maunsell, jun., A. J. Moran, J. Morgan, C. E. Murphy, A. E. McCann, J. D. O'Donnell, W. O'Donnell, P. Peacocke, J. F. Sheppard, E. Smith, and W. A. E. Wills.

UNIVERSITY COLLEGE, LONDON.—Distribution of prizes in the Faculty of Medicine will be held on Thursday, May 14th. Sir Richard Quain, Bart., M.D., F.R.S., will take the chair at 2 P.M.

LITERARY INTELLIGENCE.—Messrs. Skeffington will shortly publish, in their well-known shilling series, "My Doctors," by a patient, with frontispiece by Du Maurier.

RABIES IN HAMPSHIRE.—Replying to a correspondent, the President of the Board of Agriculture writes that, as five cases of rabies have occurred in Hampshire during this year, the last so recently as March 4th, the Board regret that they are unable to revoke the muzzle order at present.

YELLOW FEVER.—The Cunard steamer *Servia* which arrived at Queenstown on the 19th inst., brought intelligence that the Liverpool s.s. *Dryden* arrived at New York from Santos and Rio Janeiro with yellow fever among the crew, three of whom had died from the disease during the voyage.

NEW SEWERAGE SYSTEM, BALMORAL.—A new system is being laid down at Balmoral Castle for the thorough filtration of the sewage before it reaches the Dee, as required by the Aberdeen authorities, for the prevention of the pollution of the river. The most recent and best approved sanitary appliances are being utilised in the work.

THE BIRMINGHAM WATER-SUPPLY.—The Birmingham City Council, on the 21st inst., practically unanimously approved of a scheme proposed by the water committee for the initiation of proceedings to obtain an additional supply of water from the watersheds at the Rivers Elan and Claerwen in Radnorshire.

WATER-SUPPLY IN INDIA.—The ceremony of opening the Allahabad Waterworks was performed on the 26th ult. by the Viceroy. Lucknow also is soon to possess a system of waterworks of its own. The waterworks will be on the model of those at Agra, Allahabad, and Benares. The artesian well experiment, after a cost of not less than a lakh of rupees, is to be given up.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At a meeting of the Council held at Manchester in January last it was resolved to hold the regular meeting of the Society for the month of June in Hull. Arrangements are accordingly being made to hold the meeting on June 19th. Dr. Lowson, 15, Albion-street, Hull, will act as local secretary.

THE MORLEY WATERWORKS SCHEME.—On Saturday the Mayor of the borough, in the presence of a large assembly, performed the ceremony of cutting the first sod of these new waterworks at Mytholmroyd. The water service has hitherto been supplied from Leeds, but the rapid growth and progress of Morley has rendered an independent supply necessary. The cost of the works is estimated at about £100,000.

ROYAL METEOROLOGICAL SOCIETY.—The usual monthly meeting of this Society was held on the 15th inst., at the Institution of Civil Engineers, Mr. A. Brewin, Vice-President, in the chair. Mr. F. J. Brodie read a paper entitled "Some Remarkable Features in the Winter of 1890–91." He pointed out that the season might be called the "anticyclonic winter" on account of the prolonged frost, high barometric pressure, and the undue prevalence of breezes from the cold quarter. Mr. F. R. Wallis gave an account of the rainfall of February, 1891, characterising it as one of the driest months upon record. Mr. H. F. Blandford contributed a paper on the Variations of the Rainfall at Cherra Poonjee in the Khasi Hills, Assam, a place which has long been notorious as having a heavier rainfall than any other known place on the globe. The author placed the rainfall at a little over 500 inches.

ST. MARY'S HOSPITAL, MANCHESTER.—The annual meeting was held on the 13th inst. The medical report recorded another year's satisfactory work. More patients had been admitted and more operations performed than in any previous year since the foundation of the hospital. Important work had also been accomplished in the training of women for attendance in midwifery cases. The net income for 1890 was £3334, and the expenditure £3425. The board of management were now able to announce that an eligible site in Oxford-street for the new hospital had been acquired at a cost of £15,600. The plans will be prepared for the original scheme of 100 beds, but pending the receipt of further subscriptions it is proposed to proceed with sixty beds, leaving a section or wing to be completed, when the funds are adequately replenished. The present calculation points to a deficiency of between £10,000 and £15,000.

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MEDICAL MAGISTRATE. — Mr. Frederick Hero Simmons, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed a justice of the peace for "Rarreekloof" District, Hope Town, South Africa.

THE SANITARY INSTITUTE.—At an examination for inspectors of nuisances, held in London on April 10th and 11th, eighty-nine candidates presented themselves, of whom sixty were certified to be competent as regards their sanitary knowledge to discharge the duties of inspector of nuisances.

ROYAL INSTITUTION.—Dr. E. E. Klein, F.R.S., Lecturer on Physiology at St. Bartholomew's Hospital will, on Tuesday next, April 28th, begin a course of three lectures on "Bacteria, their Nature and Functions" (The Tyndall Lectures); and Mr. H. Graham Harris, M.Inst.C.E., will, on Saturday, May 9th, begin a course of three lectures on the "Artificial Production of Cold."

A MAD WOLF.—News from Vienna states that on the 19th inst. a wolf appeared in the village of Rohozna, near Czernovitz, and bit everyone coming in its way. The animal was not killed until it had wounded no less than thirty-two persons. An inquiry was set on foot, and it is believed the wolf came from the neighbouring province of Bessarabia, suffering from rabies. The injured persons, it is stated, will be sent for treatment to the Pasteur Institute, Paris.

FOOTBALL CASUALTIES.—A man named Barlow (the Sleaford professional bowler), whilst playing football, severely injured his knee-cap.—At Killimer, West Clare, on the 13th inst., during a football game, a player was fatally injured in the abdomen, and died shortly afterwards.—A member of the Sparkbrook football team, aged twenty, of Birmingham, in a match on the 11th inst. between the Sparkbrook team and the Worcester Rovers, fractured his collar-bone.—During a practice on Easter Tuesday of the St. Paulinus's football teams, in the Borough Park, Dawgreen, a young player sustained a broken ankle.

MEDICAL DEFENCE UNION, LIMITED.—The first annual meeting and dinner in connexion with the South Wales and Monmouthshire division took place at the Park Hotel, Cardiff, on April 8th. Although this division has only been in existence for twelve months, it numbers ninety-eight members. The president of the Union, Mr. Lawson Tait, and Dr. Leslie Phillips were both present at the dinner and delivered very interesting speeches. The after-dinner proceedings were enlivened by the singing of Miss Alice Gomez. Other districts would do well to copy the example set by the South Walians, and establish a branch of this useful society in their midst.

THE METROPOLITAN ASYLUMS BOARD.—This Board met on Saturday at the London County Hall, Spring-gardens, Sir Edward Galsworthy presiding. The chairman, referring to the returns of fever and small-pox cases, said that with regard to fever there was a reduction of 90 cases as compared with the previous fortnightly return, when there were 1295 cases under treatment. Proposals came before the managers for the purchase of a site for an additional fever hospital for 400 patients. The hospital was required for the relief of the Eastern Hospital, which had been almost continuously full for years. The only acceptable offer received was a site in the neighbourhood of Stamford-hill, fifteen acres, the price of which was £12,000. The committee in their report recommended that a contract should be entered into for the purchase of this site, subject to the approval of the Local Government Board. The report of the committee was agreed to.

MEDICAL NOTES IN PARLIAMENT.

The Indian Opium Traffic.

IN the House of Commons, on Monday last, Mr. MacLean asked the First Lord of the Treasury whether, considering the anxiety caused in India by the division of last Friday night, and the necessity for letting the Indian Government know what are the real intentions of the House of Commons with regard to the opium revenue, he will give a day for the discussion of the main question raised in the resolution of the hon. baronet the member for the Barnard Castle Division of Durham, and of the amendment proposed by the right hon. baronet the member for the City of London.—Mr. W. H. Smith at present saw no prospect of being able to find time for the renewal of the discussion in order that a definite decision on the whole question may be arrived at. — Sir Joseph Pease announced that it was not his intention to ballot in order to place his motion on the paper as a substantive motion before the House, as he felt it would be extremely inconvenient to introduce the subject at this period of the session.

British Medical Men in France.

Dr. Tanner asked the Under-Secretary of State for Foreign Affairs whether, under the provisions of the recent medical law enacted by the French Government, no British medical man would be permitted to practise in France without having obtained the diploma of doctor of medicine in one of the State faculties, except when a special dispensation was granted by the Minister of State; and whether French medical men were permitted to practise their profession in England.—Sir J. Fergusson: We are not aware in what form the Bill in question has passed the French Legislature, or if it has passed, but inquiry is being made. French and other foreign medical men are free to practise their profession in this country, subject to certain disabilities, unless they are registered under the Medical Act of 1886; but the provisions of that Act in this respect do not take effect unless the country to which they belong has conceded reciprocal privileges.

Army Medical Officers.

Mr. Bartley asked the Secretary of State for War whether he proposed to grant to army medical officers the composite titles suggested by Lord Camperdown's Committee. — Mr. E. Stanhope: I am quite ready to recommend to Her Majesty the grant of composite military and medical titles if such a concession meets the wishes of officers of the Army Medical Staff; but I am met with the difficulty that this concession, although asked for in Sir Andrew Clark's letter of January 17th last, appears to be repudiated in his later letter of March 7th. These officers, I should state, have not approached me or his Royal Highness the Commander-in-Chief through any recognised official channel, but I assume that Sir Andrew Clark is expressing their opinion on the subject.

THE METROPOLITAN HOSPITALS INQUIRY.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed their inquiry on Monday, Earl Sandhurst presiding.

The Relations of General and Special Hospitals.

Dr. Stretch Dowse, examined by the Chairman, said he was a physician, and practised as a specialist in nervous diseases. As a student he had attended Charing-cross Hospital, and to several special hospitals he had been attached. He had been connected with the West-end Hospital for Nervous Diseases. He resigned his appointment about eighteen months ago. To his mind the hospital was not being managed as such an institution ought to be managed. During his connexion with the hospital there was a great deal of difficulty and disturbance. Several other members of the staff were almost entirely opposed to the views of Dr. Tibbits as to how a hospital should be conducted, and that gave rise to a great deal of disturbance. They never had the hospital properly organised. Sometimes they had a chairman and sometimes they had not. He objected to the management of the hospital, not to the treatment adopted by Dr. Tibbits.—The Chairman: You objected to the unbusinesslike organisation?—Witness: That is the very word to give it. There was no business about it. He did not think that the subscribers knew very much about the hospital. They gave them money as an act of charity. All those special hospitals had begun in a very small way, possibly in a house of two rooms. The necessity for them arose from the presence of disease rather than from the interests of medical men, although in his opinion nearly all the special hospitals were started by medical men. It occurred to a medical man that he could make his mark by establishing a hospital for special diseases, and he did so. As a rule, he started under difficulties. He began with two or three rooms, and if successful he soon made a large hospital. Many men of high position in London at the present time owed their success in a large measure to their originating or being attached to special hospitals. To be successful, the thing must be a commercial success. The medical man received no direct financial profit from the hospital he started, but he gained indirect financial profit and reputation. Only a dishonest man would make profit out of the funds of the hospital. Being himself a specialist, he was in favour of special hospitals. He did not think the community could do without them. He did not think that special hospitals had been started in order to create a demand. General hospitals were not equal to the demand made on them. Some years ago no man on the staff of a general hospital would for a second be permitted to act on the staff of a special hospital. Now there was scarcely a special hospital in London, certainly not a special hospital which had gained any reputation, that had not one of the general hospital men on its staff.—The Chairman: Has it ever occurred to you that there could be a certain amount of coöperation between general and special hospitals? Assuming that a very bad nervous case were taken to a general hospital, requiring massage or other special treatment, would it not be possible to have some method of organisation by which the case might be passed on to a special hospital?—Witness: I do not see how it could be done very well, but although it is not done openly at present, I think it is done in other ways.—The Chairman: Is it not the case that instead of these various institutions working with one another they are all competing against one another?—Witness: It is so. I quite agree that there is a feeling among the staff of the general hospital against the staff of the special hospital.—The Chairman: Why could there not be a working-in of these two classes of hospital? Is it because of jealousy?—Witness: The difficulties of organisation would be too great. It might, however, be done.—The Chairman: Might there not be a consultative committee? I would rather have a consultative committee made up of the lay governors, who could arrange for cases being passed from place to place.—Witness: That is quite so, but before that could possibly come to pass I think you would have to organise and make use of those State hospitals and Poor-law infirmaries. I think that the utilising of those infirmaries might in all probability engender a nucleus which might work something of the kind you suggest.—The Chairman: Do you think that medical men keep hold of an interesting case rather than pass it on?—Witness: Distinctly that is so. They would not send away to another hospital a valuable teaching case. Continuing his evidence, Dr. Dowse said that in his opinion the growth of special hospitals ought to be checked. He did not think it should be in the power of any man to start a special hospital and

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appeal to the public for charity unless it were made evident that the hospital was worthy of charity and conducted upon straightforward and businesslike lines. At the present time any man could start a hospital. Witness could get a committee together from among his own friends, as in the case of the West-end Hospital. Dr. Tibbits used to attend the annual meeting. His wife was matron, his brother-in-law was the secretary. The whole thing was therefore a little family party. That was a thing which he could not recognise at all. He condemned every hospital which was of a proprietary nature.—By the Earl of Kimberley: There were twenty-four Poor-law infirmaries in London, containing over 12,000 beds. Those institutions were well officered and well managed, but the organisation might be greatly improved, and what was known as Gathorne Hardy's Act should be thoroughly and consistently carried out. They should be managed and controlled by the County Council, and steps should be taken to organise a staff of visiting physicians and surgeons to give clinical instruction to advanced medical students. If the present superintendents did not feel sufficient confidence to undertake teaching there were many young men of talent and position who would be glad of the opportunity. He would strongly protest against such men being selected as teachers if they held appointments in general hospitals. His reason for suggesting the County Council as the managing body was that he wished to avoid undue partisanship for particular patients. He wished to have a perfectly independent body.—By Lord Saye and Sele: Any evidence he had given must not be regarded as personally antagonistic to Dr. Tibbits.—By Lord Thring: If a hospital were ostracised by the Hospital Sunday Fund it was ostracised by the medical profession, and ought to be ostracised by the public.—By the Chairman: He considered that the out-patient system was abused, and should be better organised. Much of the medicine given at the hospital was not taken by the patient for whom it was prescribed. He was told that people wishing cod-liver oil for a friend went to a hospital for it.

The Metropolitan Hospital Provident Fund.

Mr. Arthur Henry Sandiland, licentiate of the Royal College of Physicians &c, examined by the Chairman, said he resided in Southgate-road, and practised in the neighbourhood of the Metropolitan Hospital. He wished to enter his objection to the statement made to the Committee that the medical men in the neighbourhood of the hospital had withdrawn their opposition to the provident scheme now in force. He did not know that any of them had withdrawn their opposition. This scheme was of no use to the poor, because, after a man had made one visit to the hospital, he was told that he must either contribute to the provident fund or go somewhere else. It was an injustice to local practitioners, because people able to pay for medical treatment in the ordinary way were admitted to the scheme. It was utterly untrue that the local practitioners acquiesced in the scheme. They had made no complaint, for the simple reason that they had no one to whom to complain. He and other practitioners held that the hospital authorities had no right to devote the funds given them for the sick poor to this provident scheme. The institution remained no longer a free hospital.

Mr. George Locke, M.R.C.S., &c., of Kingsland-road, gave evidence of a corroborative character. This provident scheme, he said, was undermining private practices. He had no sympathy with provident schemes.

St. Peter's Hospital for Stone.

Mr. Walter E. Scott, secretary to St. Peter's Hospital for Stone, examined by the Chairman, said there were in the hospital twenty-four beds and two private wards. Last year in the out-patient department each attendance cost 10½*d.* and each bed cost £130. The grant from the Hospital Sunday Fund being very small, the authorities refrained in 1883 from making an application for it. They had, however, renewed their application this year. It had certainly been hinted that a grant would be refused altogether. The institution was in no sense a proprietary hospital. The income was applied to the expenditure of the year or funded. Many of the patients insisted on making a payment towards the cost of their treatment. Those patients who required expensive drugs were asked to pay for them. Each patient in the out-patient department was asked to pay 1*s.* for drugs. He was not always able to make the payment, but received treatment all the same.

Mr. Hurry Fenwick said he was associated both with St. Peter's and the London Hospital, and it was his habit to draft patients from the general to the special hospital. He found no opposition to this practice on the part of his colleagues. Witness explained to the Committee the medical organisation of St. Peter's Hospital.

The Committee then adjourned.

The Committee met again on Thursday, Earl Sandhurst presiding.

St. Peter's Hospital for Stone.

Mr. Hurry Fenwick attended in order to amplify his evidence with regard to this hospital. Usually he said the cases dealt with in the hospital were chronic cases which had passed through the hands of ordinary practitioners, and which required special treatment. A good deal of the educational value of the special hospitals could be utilised if those institutions were affiliated with the general hospitals, and much of the antagonism to the special hospitals would in this way be removed. Special hospitals withdrew from consulting members of the profession a great amount of special material useful for their own experience and for teaching purposes. They affected other members of the profession in a monetary way. He did not think that the profession objected to specialism in the abstract. Every medical man was at heart a specialist, but what he objected to was that specialism should be abused. He believed that the word "hospital" could and should be most strictly guarded. No place should use the word unless under a special licence. All hospitals should be licensed, the licensing body to consist of the heads of the profession, who would be in a position to judge without bias of the merits of the proposed hospital, and the necessity for its establishment. He considered special hospitals to be a growing evil. There were a number of them which should not exist. All the teaching at the special hospitals should be made open, not only to students but to practitioners. At present most of the special hospitals were closed in this respect.—By Lord Thring: He thought the medical profession should have the power of vetoing a special hospital. A quack hospital would not come within the province of the profession. Such an institution should be repressed by law. He spoke merely from a professional point of view. By the Chairman: St. Peter's Hospital was founded about twenty years ago. It commenced in a very small way. An anonymous donor gave £10,000 for the erection of the present building.

The Hospital for Sick Children.

Mr. Arthur Lucas, vice-chairman of the Hospital for Sick Children in Great Ormond-street, and Cromwell House, Highgate, examined by the Chairman, stated that the institution was founded in 1852. He objected to describing it as a special hospital; it was a general hospital with a limit of age. They had 127 beds at present, and when the wing now being built was complete, they would have about ninety more. The House Committee met once a month, and oftener if necessity arose. There was a treble check of the accounts. The audit was done by chartered accountants, who reported four times a year to the Committee, and they had also an audit by the Finance Committee. When the new wing was complete, they proposed to allow wards where infection had broken out to be fallow for a time. There were in London fourteen hospitals devoted to children; his hospital was practically a free hospital. Disease was the qualification for admission. The in-patients last year numbered 20,604 and the out-patients 11,570. Their expenditure amounted to £12,045 and the income to £12,074. Their endowments yielded an annual income of £431. They had a lady superintendent, eight sisters, eleven staff nurses, eleven probationers, eight lady pupils, and seven sisters engaged in private nursing outside the hospital. All new hospitals should, in his opinion, be licensed. He should not wish without further consideration to express an opinion as to the composition of the licensing board; but he certainly thought it should not be composed entirely of doctors, because they would be influenced by professional jealousies. New hospitals undoubtedly sprang up where they were not wanted. He thought the abuse of out-patient departments had been exaggerated.—By the Earl of Kimberley: He would not connect the licensing board with any local body.—Lord Cathcart: Can you grind all the grist that comes to your mill?—Witness: Yes, with difficulty in connexion with the out-patient department.—By the Chairman: His board thought of giving up the Convalescent Institution at Highgate, its situation being now practically in London. They did not think of erecting a new building, but of affiliating themselves with some existing institution.

Dr. W. B. Cheadle, senior surgeon of the hospital, said he was in favour of separate hospitals for the treatment of children. A certain number of students received instruction in the hospital. The fees went direct to the lecturers, who received proportions in accordance with the work they did. There were also some female clinical clerks. Several of the staff were attached to other hospitals. Affiliation of the provident dispensaries with the hospitals was very desirable, although there were many difficulties in the way of affiliation. In all hospitals he thought there was a tendency to make nurses work too long hours.

The West London Hospital.

Mr. B. J. Gilbert, secretary of the West London Hospital in Hammersmith, examined by the Chairman, said that the institution was founded in 1856 as a dispensary, and in 1860 as a hospital. There were 101 beds, of which ten were in special wards. All in-patients must bring a letter of recommendation. If an out-patient came without a letter of recommendation, and was found to be in urgent need of treatment, he was treated at once and told to bring a letter of recommendation. The average number of new cases in the out-patient department for the last three years was 21,000. He received a salary of £250 with a house allowance of £50. The hospital was assessed at £310.

The Committee afterwards adjourned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on April 21st, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	145	49	..	38	2	234	[illegible]
North-Western Hospital	130	43	..	13	1	187	[illegible]
Western "	147	15	..	11	1	174	[illegible]
South-Western "	141	31	..	14	1	187	[illegible]
South-Eastern "	162	12	..	21*	1	196	[illegible]
Northern "	175	10	..	8	..	193	[illegible]
Totals	900	160	..	105	6	1171	[illegible]

SMALL-POX.—*Atlas* hospital ship, 18.

* Infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BALFOUR, T. S., M.B., C.M. Edin., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital, vice Marshall.

BARNES, L. J. J., M.D., L.R.C.S. Irel., has been appointed Medical Officer for the Erith Cottage Hospital.

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BARON, H. N., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sixth District of the Lutterworth Union, vice Dickinson.

BENNET, C. J., M.R.C.S., has been reappointed Medical Officer of Health for the Chapel-en-le-Frith Union.

CLARKE, ERNEST, M.D., B.S., has been appointed Surgeon to the Eye Department of the Miller Hospital.

COKE, WM. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for Ashford, Kent.

DE WATTEVILLE, W. F. R., M.B., L.R.C.P., L.R.C.S. Edin., has been appointed Assistant Medical Officer for the Kingussie District, Inverness-shire.

EATON, JAMES, M.R.C.S., has been reappointed Medical Officer of Health for the Grantham Rural Sanitary District.

EVANS, W. ARNOLD, M.D. Lond., M.R.C.S., has been appointed Medical Officer of Health for Bradford.

FLOYER, WM. W., M.B. Lond., M.R.C.S., has been appointed Medical Officer for the Egham and Thorpe Districts of the Windsor Union.

FULLER, ANDREW, L.R.C.P. Edin., M.R.C.S., has been appointed Certifying Factory Surgeon to the Districts comprising Heyford, Stowe, Muscot, Bugbrooke, and Dodford (Weldon).

GARRY, W. A. M., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Assistant Medical Officer for the Hope Infirmary, Salford.

GRANT, J., M.D., C.M. Aberd., has been appointed Assistant Medical Officer for the Abernethy and Duthil Districts, Inverness-shire.

HOWDEN, ROBERT, M.B., C.M. Edin., has been appointed Medical Officer for the Parishes of Aberlady, Bolton, and Haddington.

JAMIE, R. W., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Ashby-de-la-Zouch Rural Sanitary District.

KYLE, THOMAS W., M.D. Q.U.I., D.P.H. R.C.S. Irel., has been re-appointed Medical Officer of Health for the Ashby Woulds Urban District.

LANGWILL, H. G., M.B., C.M. Edin., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital, vice Alexander.

LLOYD, PERCEVAL A., F.R.C.S. Eng., has been appointed Surgeon to the Pembrokeshire and Haverfordwest Infirmary.

MADGSHON, MINNIE, M.B. Lond., has been appointed Resident House Surgeon to the Clapham Maternity Hospital.

MURRAY, R. M., M.B., C.M. Edin., F.R.C.P. Edin., F.R.S.E., has been appointed Assistant Physician to the Edinburgh Royal Maternity and Simpson Memorial Hospital, vice Barbour.

O'CONNOR, E. M. H., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Certifying Surgeon to the Factories in the neighbourhood of Market Deeping.

O'DONAGHUE, PATRICK, L.R.C.P. Irel., L.R.C.P., F.R.C.S. Edin., has been appointed Medical Officer to the Macroom Dispensary (Macroom Union), vice White.

PEAKE, W. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Leicester Union.

PRIESTLEY, JOS., M.D. Edin., D.P.H., M.R.C.S., has been appointed Chief Sanitary Inspector for Camberwell.

RING, C. G., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Keswick Urban Sanitary District.

SIMON, ROBT. M., M.D. Camb., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Birmingham General Hospital, vice Sir W. Foster, M.P., resigned.

SMITH, MARY, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Assistant Physician to the Clapham Maternity Hospital.

SMYTH, WM., M.B., C.M. Edin., has been appointed Medical Officer for the North Togston Colliery, Northumberland.

SOUTTER, JAS., M.R.C.S., has been appointed Medical Officer for the Sproatley District of the Skirlaugh Union.

UNDERHILL, C. E., M.B. Cantab., F.R.C.P. Edin., M.R.C.S., has been appointed Physician to the Edinburgh Royal Maternity and Simpson Memorial Hospital, vice Hart.

VERNON, RICHARD, M.D., C.M. Glasg., has been reappointed Medical Officer of Health for the Audley Urban Sanitary District.

WILLIAMS, C. R., M.B., C.M. Edin., has been reappointed Medical Officer for the Second and Third Districts of the Ashby-de-la-Zouch Union.

WILLIAMS, WILLIAM ROBERT, L.R.C.P., L.R.C.S., has been appointed Medical Officer for the Penegoes District of the Machynlleth Union, vice A. O. Davies. Also Surgeon to Llwyngwern Quarry.

WILSON, C. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Third District of the Bridport Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BETA, THE LANCET Office, 423, Strand, W.C.—Resident Assistant Medical Officer in a Metropolitan Private Asylum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon, Assistant House Surgeon and Registrar for six months. Salary at the rate of £60 and £50 a year respectively, with board and residence.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant for six months. Board, lodging, washing, and attendance.

COVENTRY PROVIDENT DISPENSARY.—Surgeon.

GOLD MINING COMPANY, Lower Siam.—Medical Officer.

GREAT YARMOUTH HOSPITAL.—Resident House Surgeon. Salary to commence at £90 per annum, with board and lodging.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants in both Out-patient and In-patient Departments.

NEW HOSPITAL FOR WOMEN, 144, Euston-road.—Resident Medical Officer.

NEW HOSPITAL FOR WOMEN, 144, Euston-road.—A qualified Medical Woman as Assistant Physician in the Out-patient Department.

NEW HOSPITAL FOR WOMEN, 144, Euston-road.—Two Clinical Assistants for Out-patient Department.

NORWICH CITY ASYLUM, Hellesdon, near Norwich.—Assistant Medical Officer for one year, in-door. Board, lodging, and washing. Salary £100 per annum.

NOTTINGHAM BOROUGH ASYLUM, Mapperley-hill.—Resident Clinical Assistant for six months. No salary. Board and residence provided.

PARISH OF KENNOWAY, Fifeshire.—Medical Officer. (Apply to the Inspector of Poor.)

ROYAL LONDON OPHTHALMIC HOSPITAL.—Clinical Assistants for one year. Junior Assistantships for six months.

SUSSEX COUNTY HOSPITAL, Brighton.—House Physician. No salary, but residence in the Hospital, with board and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House Surgeon. No salary, but residence in the Hospital, with board and washing.

SICK CHILDREN'S HOSPITAL, Newcastle-upon-Tyne.—Resident Medical Officer. Salary £60 per annum, with board, lodging, and laundry.

WALLASEY DISPENSARY.—House Surgeon. Salary £110 per annum, with furnished apartments, coal, and gas.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon and Dispenser, who shall also be Assistant Secretary, for two years. Salary £100 per annum, with board, furnished rooms, fire, lights, attendance, and washing.

WOLVERHAMPTON EYE INFIRMARY.—Resident Assistant for six months. Rooms, with board and washing, provided.

YORK DISPENSARY.—Resident Medical Officer. Salary £130 a year, with furnished apartments, coal, and gas.

Births, Marriages, and Deaths.

BIRTHS.

CHAMBERS.—On April 20th, at 1, Wilmington-square, W.C., the wife of Eber Chambers, M.B. &c., of a daughter.

GREATHEAD.—On March 28th, at Grahamstown, South Africa, the wife of J. B. Greathead, M.B. Edin., M.R.C.S., of a son.

PARDINGTON.—On April 18th, at Mount Pleasant, Tunbridge Wells, the wife of Geo. Lucas Pardington, M.D., of a son.

STAFFORD.—On April 13th, at College-gardens, Belfast, the wife of Dr. T. J. Stafford, Local Government Inspector, of a son.

STIVENS.—On April 16th, at Kensington-gardens-square, W., the wife of B. Lyne Stivens, M.D., of a daughter.

THOMAS.—At Berwyn, Bolingbroke-grove, S.W., the wife of Arthur W. Thomas, M.D., of a daughter.

MARRIAGES.

BOYD—BERKELEY.—On April 22nd, at the Parish Church, Ware, Herts, Alexander James Boyd, B.A., M.D., B.Ch., third son of Samuel Boyd, J.P., of Illerton, Killiney, co. Dublin, to Constance Mary, elder daughter of Brackenbury Comyns Berkeley.

CORBIN—PEEL.—On April 15th, at St. Paul's, Beckenham, Eustace Rhodes St. Clair Corbin, M.B. Lond., M.R.C.S., of Merivale, Beckenham, youngest son of the late Dr. Charles Corbin, of Belair, Barbadoes, to Linda Augusta Jane, daughter of the late Captain Robert Moore Peel, 6th Inniskilling Dragoons, Moore House, Beckenham, Kent.

DRAKE-BROCKMAN—CHESNAYE.—On March 31st, at St. Mary Magdalene's Church, Mean Meer, Punjab, H. E. Drake-Brockman, F.R.C.S.E., Surgeon H.M. Bengal Medical Service, to May Kathleen, only daughter of Deputy Surgeon-General G. C. Chesnaye, F.R.C.S.E., H.M. Bengal Medical Service, P.M.O. Lahore District, and Honorary Surgeon to H.E. the Viceroy of India.

FRANCIS—MARCON.—On April 14th, at St. Paul's Church, St. Leonard's-on-Sea, Alfred George Francis, B.A. Cantab., M.B., B.S. Lond., F.R.C.S. Eng., of Hull, son of the late Charles W. Francis, of Southchurch, Essex, to Frederica Jane, daughter of the late Rev. Walter Marcon, M.A. Oxon., Rector of Edgefield, Norfolk.

MACKENZIE—GARDEN.—On April 18th, at St. Barnabas Church, Kensington, Ernest Mackenzie, M.D., of Cheadle, Staffordshire, to Ethel Margaret, younger daughter of the late Brigade-Surgeon Alexander Garden, M.D., Bengal Army.

SHONE—FORSTER.—On March 17th, at at St. Peter's, Glenelg, South Australia, William Vernon Shone, M.R.C.S., L.R.C.P. Lond., eldest son of Brigade-Surgeon Shone, of Marlow, Bucks, to Annie Jane Cochrane Forster, eldest daughter of Robert Cochrane Forster, Esq., F.G.S., late of Rock Castle, Innishannon, co. Cork.

DEATHS.

ALLINGHAM.—On April 13th, at Pisa, Italy, after a short illness, Christiana, wife of Wm. Allingham, F.R.C.S. Eng., of Grosvenor-street, W.

BOLTON.—On March 27th, at Kustendjie, Roumania, Flora Beatrice, aged 2½ years; on April 5th, Teresina Arpalice Emily Béda, aged 9 years; on April 8th, Eleanor Jane Dedamia, aged 7 years; on April 14th, Teresina Carlotta Louisa, aged 34 years;—daughters and wife of Dr. A. J. Bolton, from diphtheritic scarlatina.

HEALE.—On April 16th, at Hollington Lodge, near St. Leonard's-on-Sea, James Newton Heale, M.D., late of Winchester, aged 80.

JONES.—On April 21st, at Hanover-street, W., Evan Burnell Jones, M.R.C.S., aged 72.

MCCARTHY.—On Jan. 27th, at Secunderabad, Brigade Surgeon D. J. McCarthy, M.D., F.R.C.S. Irel., 1st Madras Lancers.

SPEAR.—On April 20th, at Flaxted, Farquhar-road, Upper Norwood, John Spear, Medical Inspector, Local Government Board, Whitehall, aged 40.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, April 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. T. Elliott (Tunbridge Wells): A case of Ectopia Viscerum.—Mr. W. Whitehead (Manchester): One Hundred cases of Entire Excision of the Tongue.

Tuesday, April 28.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Dr. Edward E. Klein: Bacteria, their Nature and Functions. (Tyndall Lecture.)
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. William Watson Cheyne: On the Value of Tuberculin in the Treatment of Surgical Tubercular Diseases. A selection of patients will be shown in the North Room at 8 P.M.

Wednesday, April 29.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, April 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.

Friday, May 1.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—5 P.M. Annual Meeting. 9 P.M. Mr. James F. Harting: Hawks and Hawking.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Ordinary Meeting. Dr. Symons Eccles: Chronic Rheumatic Arthritis.—Mr. J. R. Lunn: Notes of two cases of Appendicitis.—Mr. Towers Smith: The Dietetic Treatment of Obesity.

Saturday, May 2.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. Prof. Silvanus P. Thompson: The Dynamo.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 23rd, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 17	30·17	N.	45	41	97	56	40	..	Cloudy
,, 18	30·22	N.E.	46	42	100	58	40	..	Cloudy
,, 19	30·22	E.	45	41	92	50	40	..	Cloudy
,, 20	30·31	E.	45	41	83	51	40	..	Cloudy
,, 21	30·27	E.	47	43	101	57	41	..	Cloudy
,, 22	30·09	S.E.	45	42	80	54	40	..	Cloudy
,, 23	30·04	E.	49	45	108	59	41	..	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MORE INSTANCES OF AUDACIOUS ADVERTISING.

THE following remarkable card, extensively circulated in Brixton, has been forwarded to us for our opinion. Dr. Reynolds explains to us that he knows nothing of the advertisers and has had no communication with them. The unprofessional nature of the card is too apparent. But the liberty taken with Dr. Reynolds' name is unprecedented. It is no slight injury to one who has always acted with due regard to the honour of the profession to use his name in this sort of fashion. However, in the estimation of all good judges it is not *he* who will suffer by such practices.

"New Branch Surgery.—Dr. Partridge, Dr. Frye, and Dr. Sheperd, Physicians, Surgeons, and Accoucheurs, of 888, Old Kent-road, S.E., have taken the Surgery lately occupied by Dr. Reynolds, 369, Coldharbour-lane, corner of Somerleyton-road, midway between Brixton and Loughborough-park Stations. Consultation hours:—morning, 9.30 to 12.30; evening, 6.30 to 9.30. Sundays: 10 to 12 A.M., 7 to 9 P.M. Urgent cases seen at any hour. Every patient and every case of midwifery attended by a qualified medical man. Dr. Frye will reside on the premises at 369, Coldharbour-lane, corner of Somerleyton-road. The charge for advice and medicine will be as low as is consistent with experience and skill."

We have received more than one specimen of the following:—

"A Card.—Dr. Raitt has removed from Elms House, Clapham Common, to Consulting Rooms at Mr. Merrick, Chemist, 16, Clapham Common, next to Clapham Common Post Office. Hours from ten morning, and six to seven evening. Messages answered at any hour. Residence, 114, Clapham Park-road, adjoining Park Hill and near the Elms Estate. To contradict reports, Dr. Raitt takes this opportunity of stating that his charges are the same as any ordinary medical practitioner. (Tuesday and Friday evenings half fee.) He devotes Saturday evenings at his residence free to those really deserving poor who bring satisfactory 'recommends.'"

Wren.—There are several small guides to urine testing—e.g., Wickham Legg, Tyson, Whitaker, A. Husband, Coupland—any of which might serve our correspondent's purpose.

INSTRUCTION IN MIDWIFERY.

To the Editors of THE LANCET.

SIRS,—Allow me to point out a mis-statement in Dr. Rentoul's letter in your last issue. The course of lectures at Aberdeen on midwifery and diseases of women extends over six months, and embraces one hundred lectures. Dr. Rentoul in his table gives only a half.

I am, Sirs, yours faithfully,

Manchester, April 20th, 1891. WM. H. HEWLETT, M.B.

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DISPENSING BY MEDICAL MEN.

THE pressure on our space will not allow us to print the whole of the letter of *M.D.*, *L.R.C.S.E.*, but the concluding portion will serve to express his views on the subject:—

"Human nature is dreadfully ignorant and superstitious where medicine is concerned; and although it may be a loss of time, it is no loss of dignity to 'make up' the physic with or without the assistance of a dispenser. When your correspondent, 'Sick of Dispensing,' complains of 'qualified assistants of taste and feeling' objecting to 'manual drudgery,' &c., he only betrays his ignorance of the requirements of English general practice, in which one of the chief duties is dispensing; and it is impossible to characterise as 'drudgery' any act which can be called a duty. I yield to no man in my admiration for 'general and social culture' in our profession; but these are not to be gained at the expense of the interests of our patients, and the theory and practice of good and accurate dispensing concern the patient as much as, or perhaps more than, the theory of medicine and the hollow conventionalities of society. Few practitioners can afford the luxury of a dispenser, and not one in a thousand a qualified assistant who cannot or will not do dispensing."

UNDERSELLING PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—Attention is often drawn in THE LANCET to the miserable condition of the ranks of our profession. Our internecine squabbles will never allow us to bring about reform by combination or "trades unionism"; for there are always men amongst us ready to rob their brethren by underselling. Amelioration of the lot of the "undesirable fringe" can only be accomplished by Act of Parliament. May I suggest what the Act or Acts should bring about? 1. The establishment of a Central Examining Board or States Examination, the diploma to be M.D. Great Britain, without which no one to be registered. 2. No person to be qualified before his or her twenty-fifth year. 3. The abolition of patent medicine businesses as at present carried on. 4. The rendering punishable by imprisonment without option of fine any kind of unqualified practice. 5. Prevention of dispensing by medical men, except under very special circumstances. 6. The fixation of a minimum fee. 7. The levying of an annual registration fee. There are many things to explain with regard to each proposition, of course; but my letter is already long enough.

I am, Sirs, your obedient servant,

April 6th, 1891. ONE OF THE CROWD.

*** Has our correspondent ever considered the feasibility of getting an ordinary Member of Parliament—to say nothing of a Cabinet Minister—to assent to legislation on such lines?—ED. L.

A GENERAL PRACTITIONERS' UNION.

ON the above subject *Rural* writes:—

"Just to give some idea of the state of things, I will describe my own case. When I first commenced practice in a town I found my nearest opponent, an M.D., did a good private practice, and, not content with that or in order to keep out others, employed a man to canvass for his 1*d.* weekly club among the better class of artisans, many of whom, but for the inducement of the canvasser, could and would have paid a general practitioner a moderate fee. One man does it; others follow suit, on the pretext that it saves making bad debts and that it helps the poor. Many of these so-called poor evidently think a week's medical attendance and medicine less in value than the price of a glass of beer. This degrading and pauperising style of carrying on professional work is solely the result and fault of non-unity among the members of the profession. Our philanthropic spirits would be doing more real good by endeavouring to better the condition of the general practitioner than by attempting to establish a new order of midwifery practitioners."

CONSULTANTS AND GENERAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you would give publicity to the following. Last Saturday I was called in to see an infant suffering from croup, and yesterday morning, the child getting worse, a consultation was proposed, and Dr. —— was called in. He prescribed after consultation, and I left to dispense the medicine. Dr. ——, I may state, has attended the same family as family doctor. A few hours after my leaving I received a note stating that the mother of the child desired that Dr. —— should continue to attend through the child's illness, and this that gentleman has done without paying me the compliment of asking whether I was agreeable or not. I must say I consider this a very extraordinary proceeding on the part of a consultant. Treatment such as the above ought to make the general practitioner careful in calling in consultants. I am, Sirs, yours truly,

April 15th, 1891. VERITAS.

*** The relationship of the parties here was, it must be admitted, somewhat complicated and unusual. It would have been better if the case had been left in the hands of the practitioner first called in, and Dr. —— had attended throughout as a consultant. But it scarcely seems to us to justify the conclusion of our correspondent.—ED. L.

DRINK AND UNTIMELY DEATH IN MELBOURNE.

THE *Pall Mall Gazette* gives the following analysis of the facts of the deaths in the record of the Melbourne Morgue for 1890. It is a miserable record, and shows, as was known before, that the drink factor in the colonies is not less operative than it is at home.

"Inquests were held on 416 bodies, and in thirty-eight cases a verdict of suicide was returned. There were thirteen murders and 153 fatal accidents; alcoholism claimed fifty-one victims by sudden death. And these drink statistics are interesting: Of the eight suicides by shooting, four were directly traceable to drink; all the six self-poisoners were drunkards; and all those who drowned themselves had vainly tried to drown their sorrows while they lived. Of the eight who hanged themselves, three were drunkards; of the eight who cut their throats, four were of the same inclination; one of those who lay down in front of a railway engine drank heavily; three of the six manslaughtered drank, seven of the twenty accidentally killed by the railways, six of the fifteen accidentally drowned, four of the nine tramway victims, ten of the twenty-three run over on the streets, and seventeen of the twenty-eight 'found dead'; and on through to the end of the chapter, drink was the ruling passion."

Enquirer.—It is against the unwritten law of the profession. Such a course has been taken; and we have seen the apparatus thus patented placed beyond the reach of the poorer classes of patients on account of the royalty required by the patentee.

Dr. M. Baines.—The list of Members of Parliament who voted against and in favour of the abolition of certifying surgeons respectively was published in our last number, page 914.

L.R.C.S.I.—R. L. Polk and Co., 280, Broadway, New York; price seven dollars.

HOMES FOR INCURABLES.

To the Editors of THE LANCET.

SIRS,—Can you tell me of a home or hospital for incurables where a congenital idiot girl, aged twenty, can be placed? She is almost destitute, but above the workhouse, having property (in house) bringing in only 3*s.* per week. This her guardians will willingly hand over to any institution which would give her a home.

I am, Sirs, yours faithfully,

April, 1891. SYMPATHY.

SPECIALISM AND THE M.D. DEGREE IN RUSSIA.

IT is proposed in Russia that specialists shall in future be obliged to have taken up the particular subject of their specialty for their doctor's degree. The ordinary practitioner's diploma of *vrach* having been taken, a further examination of a more severe nature has to be passed and an elaborate thesis or dissertation published, which, together with various other propositions, must be defended against the criticisms of some official opponents. The dissertation more frequently than not refers to some minute physiological or histological detail, and might with advantage be more generally on a matter of clinical moment. If the proposed change is made, it is probable that clinical observations connected with various branches of practice will be more in favour with candidates for the doctor's degree.

B. F. P.—1. The treatment of the diseases of these structures is so essentially surgical that it can only be found satisfactorily discussed in works on surgery.—2. The most recent is that by Mr. Bryant. The answer to the first question applies equally to this one.

Assistant must consult a solicitor.

THE PROPOSED ÆSCULAPIAN LODGE OF FREEMASONS.

Dr. Thomas Dutton (P.M.) asks us to state that the above lodge has not been abandoned; but that, on the contrary, the petition will be presented to the Grand Lodge next month, praying for a warrant, and he adds that any medical Mason desirous of becoming a founder may have full particulars by applying to him. An impression appears to prevail that the Galen Lodge (chemists and druggists), which recently obtained a warrant, has taken the place of the Æsculapian Lodge. The report, it is surmised, originated from the fact that the first W. Master of the Galen Lodge was a medical man.

Parish.—The contention of our correspondent is somewhat of a moot point. We should not advise him to risk a law suit on it, though he might fortify his claim by getting from the authorities of the London College a statement of the legal value of their diploma.

Mr. Sanderson Mellor.—Sloughing of the tonsils, uvula, &c., is a well-recognised occurrence in severe diphtheria.

ERRATA.—In our report last week of the proceedings of the Lords' Committee on Hospitals, page 912, for "Major-General Mercier" read Major-General *Mercer*.—In the report of Dr. Hingston Fox's paper, read at the West Kent Medico-Chirurgical Society and printed in our last issue, p. 885, by an error Dr. Hunter Mackenzie was referred to as the propounder of a theory of the pathology of the disease, instead of Dr. Hector Mackenzie.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Joseph Fayrer, London; Dr. H. Snow; Dr. T. Dutton, London; Mr. Watson Cheyne, London; Dr. Sinclair, Manchester; Dr. Castle; Dr. Hale White, London; Mr. Ashdown; Dr. Rentoul, Liverpool; Dr. Theodore Williams, London; Dr. MacFarlane, Preston; Mr. S. Mellor, West Malling; Dr. Harrison, Haslingden; Mr. M. M. Bowlan, Newcastle-on-Tyne; Dr. Hewlett, Manchester; Dr. Coghill, Ventnor; Mr. R. J. Gilbert, London; Dr. A. Yule, Guildford; Mr. W. A. Ellis, London Dr. E. Bellis; Dr. Baines, London; Mrs. Ritchie, London; Dr. John Shaw; Miss Yates, London; Dr. Reynolds, Brixton; Messrs. Thorp and Co., Glossop; Dr. F. J. Smith, London; Messrs. Richardson and Co., Leicester; Mr. W. Drewett, Esher; Miss Pencoffs; Mr. Sherman Bigg, London; Mr. Burghard, London; Mr. R. B. Smith; Mr. Mayo Robson, Leeds; Mr. F. W. Joy, Brandon; Messrs. W. H. Smith and Son, Burnley; Mr. Robertson, Glasgow; Dr. W. M. Elliott, Moreton Hampstead; Dr. Ferrier, London; Dr. Ormsby, Dublin; Messrs. Black and Co., London; Dr. J. W. Taylor, Scarborough; Messrs. Reynolds and Branson, Leeds; Mr. G. Barling, Birmingham; Messrs. Rayner and Cassell, London; Mr. M. Kirby, London; Messrs. Robertson and Scott, Edinburgh; Mr. Dowie, Edinburgh; Messrs. Clarke, Son, and Platt, London; Mr. H. E. Armstrong, Newcastle-on-Tyne; Dr. Hector Mackenzie, London; Mr. A. Burdett, London; Messrs. G. Street and Co., London; Mr. Hannaford, London; Messrs. Wood and Co., New York; Dr. H. S. Lunn, London; Mr. Browne, London; Mr. Cripps Laurence, London; Dr. Morton, Edinburgh; Mr. A. Hind, South Molton; Dr. Bottentuit, Paris; Mr. Eastwood, Hull; Messrs. Hertz and Collingwood, London; Mr. Greville, Sheffield; Mr. Leech, Great Yarmouth; Mr. Gibson, Newcastle-on-Tyne; Messrs. Cooper and Brodie, Edinburgh; Mr. Wintel, Haverstock-hill; Messrs. Keene and Ashwell, London; Mr. Silverlock, Blackfriars; Mr. W. Turner, West Brighton; Mr. Hewlett, Harrow; Mr. Rintoul, Fife; Messrs. Smith and Co., Portsea; Mr. Moullin, Soho-square; Messrs. W. H. Smith and Son, London; Mr. Matthews, Greenwich; Messrs. Orridge and Co., London; Dr. Ward, Oxford; Mr. Hyde, London; Messrs. Oliver and Boyd, Edinburgh; Dr. Coghill, Birmingham; Messrs. Lee and Martin, Birmingham; Mr. Sequeira, Hampstead; Messrs. Rudger and Co., Homburg; Mr. Hornibrook; Mr. T. B. Browne; Mr. Leonard Mark, London; Mr. Tate, Huntingdon; Mr. Lancaster; Dr. O'Dell, Torquay; Dr. Davies, Leicester; Dr. O'Hanlon, Durham; Dr. White, Dartford; Mr. Brear, Bradford; Mr. McKay, Fortrose; Mr. Rawlins, Liverpool; Mr. Cornish, Manchester; Mr. R. C. Bennington, Newcastle-on-Tyne; Mr. Birchall, Liverpool; Dr. Damaine, Trinidad; Mr. Pennington, Hyde; Veritas; Parish; The Hartlepools Salt Brine Co.; L.R.C.S.I.; M.D., L.R.C.S.E.; Zeta, London; Sussex County Hospital; B. M., London; M.D., Leeds; Secretary, Royal College of Physicians, Dublin; Doctor, London; M. S. A., London; Omagh District Lunatic Asylum; M.D., London; C. C., London; Expectans, London; Wren.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Scott, Fallowfield; Mr. Jones, Anglesea; Mr. Swan, Gilford; Mr. Weekes, Chatham; Mr. Hutchinson, Belfast; Mr. Sampson, York; Mr. Heap, Liscard; Mr. Sleath, Coventry; Mr. Hamilton, Brighton; Dr. Dixon, Northampton; Mr. Branthwaite, Warwickshire; Messrs. Bilbrough and Co., Bradford; Miss Millard, Teddington; Mr. Mason, Pateley Bridge; Mr. Lorette, Paris; Mrs. Aplins, Yeovil; Messrs. Blondeau et Cie., Kentish Town; Mr. Morton, Queensbury; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Quinton, Yorks; Mr. Dayson, Ebbw Vale; Mr. Parkhouse, Somerset; Dr. Hyslop, Salop; Messrs. Bailly and Coates, London; Miss Dandison, Chester; Mr. Nicholls, Bury St. Edmunds; Mr. Brooks, Lambeth; Mr. Elliott, Devon; Dr. Wilson, Wolverhampton; Mr. Holmes, Derby; Mr. Tully, Hastings; Dr. Wise, Trowbridge; Dr. Campbell, London; Dr. Laird, Nunhead; Mr. Tyte, Minchinhampton; Mr. Lockwood, Huddersfield; Dr. Dobbs, Southgate; Dr. Williams, London; Miss Armstrong, Ryde; Mr. Eschwege, London; Mr. Maw, Doncaster; Mr. Harris, Norwich; Messrs. Condy and Mitchell, London; Mr. Brown, Dalmally, N.B.; Messrs. McNab and Co., Leith; Dr. Chambers-Owen, Doncaster; Mr. Bowler, Manchester; Mr. O'Meara, Shepshed; Mr. Stainsby, Bradford; Mr. Thin, Edinburgh; Mr. Castello, Taunton; Mr. Cane, Mexboro'; Mr. Le Fevre, Bedford; Dr. Lawrence, Chepstow; Mr. Thompson, South Hampstead; Mr. Corcoran, Loughborough; Mr. Graham, Dumfriesshire; Mrs. MacRosty, Esher; Dr. O'Meara, Carlow; Mr. St. Dalmas, Leicester; Capt. Pead, Dulwich; Mr. Bethell; Mr. Heywood, Manchester; Mr. A. H. Robinson, Bradford; Alpha, London; Borough of Salford; Jamrack, London; Garthroy, London; Secretary, County Lunatic Asylum, Burntwood; Fides, Brighton; Secretary, Bradford Infirmary and Dispensary; Kensington, London; Secretary, County Asylum, Shrewsbury; Q., Clifton; Victim, London; Great Eastern Railway Co., London; M.D., Radnorshire; Secretary, West Riding Lunatic Asylum, Wakefield; Beta, London; Secretary, Royal Victoria Hospital, Bournemouth; Sussex, London; Vega; Secretary, Queen's College, Birmingham; N. B., London; S. F., London; Secretary, The Retreat, York; Surgeon, London; Laertes, London; Matron, Stockport; J. L. S., Dublin; P. P., London; Locum, Pontypridd; M.B., Loughborough; C. M. A., London; M.B., C.M., London; Trustee, London; Doctor, London; Assistant, London; Lake, London; O. R., London; B. M., London; Surgeon, Coventry; Sigma, London; J. D., London; Medicus, Manchester; F. F. D., Derbyshire; G. P. O., Oldham; Matron, Ventnor; Deaconesses' Institute, Tottenham; Alpha, London; Zircon, London; L. D. S., London; Doctor, Kilburn; Fidelis, London; D. C. E., London; Medicus, London; Doctor, Kensington; C. M. H., London; Medicus, Crewe; Assistant, Lancashire; Veritas, London; Masseur, London; East Riding Asylum, Beverley; Graduate, London; Medicus, Colchester.

NEWSPAPERS—*Sheffield Telegraph, Leeds Mercury, Morning Post, Yorkshire Post, Methodist Times, Scottish Leader, Bristol Mercury, Glasgow Evening Citizen, Western Morning News, Northern Whig, Sussex Daily News, Liverpool Daily Post, Manchester Courier, Melbourne Leader, Hampshire Independent, Insurance Record, City Press, Local Government Chronicle, Windsor and Eton Express, Reading Mercury, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Windsor and Eton Gazette, Labour World, Sunday Times, Surrey Advertiser, The Newspaper, Mining Journal, Architect, West Middlesex Standard, Law Journal, Spectator, National Bulletin, West Middlesex Advertiser, Corriere D'Italia (Rio de Janeiro), Norfolk Daily Standard, South Wales Daily News, Journal des Debats (Paris), Manchester Guardian, Hindoo Patriot (Calcutta), La Presse Médicale (Bruxelles), Leighton Buzzard Observer, Sydney Morning Herald, Derbyshire Advertiser, The Therapist, Scotsman, Poole Herald, Durham Advertiser, Ashton-under-Lyne Reporter, The Times (Richmond, Virginia), Optician, La Patria, Schoolmaster, &c.*, have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

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Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Clinical Lecture
ON THE
CURABILITY OF PULMONARY PHTHISIS.

Delivered at the Royal Infirmary, Manchester,

BY THOMAS HARRIS, M.D. LOND., M.R.C.P.,
SENIOR ASSISTANT PHYSICIAN TO THE INFIRMARY, AND PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, MANCHESTER.

THE majority of physicians at the present day believe in the curability of the most common variety of pulmonary phthisis—the tubercular. But although there is almost unanimity in that belief, we are not nearly so agreed as to the frequency with which such a favourable result ensues. There are doubtless a large number, who have had an extensive clinical and pathological experience, who, although accepting the view of the curable nature of the disease, deny that it is a common result; whilst others with similar opportunities for gaining experience believe that it is no uncommon thing for phthisis to end in recovery. To these two groups may be added a group of pathologists who have been guided more especially by the experience of the post-mortem room as to the frequency with which signs of involuted tubercle, in the form especially of old caseous and calcareous foci, are found in the lungs of those who have died from various diseases and injuries. This class of pathologists may maintain that pulmonary phthisis not occasionally, but very frequently, becomes arrested, and even cured, when it is limited and in a very early stage. It is extremely difficult in a disease like phthisis, which may run a very prolonged course, during which temporary improvements of longer or shorter duration take place, to solve the problem as to the frequency with which a favourable result ensues. We may, however, by considering the evidence on which our belief in the curable nature of the malady is founded, arrive at some idea, although not a very exact one, as to the frequency of a favourable termination of cases of consumption. The evidence of the curable nature of tubercular disease of the lungs is in part clinical, in part pathological. The clinical experience has been obtained by watching cases of phthisis over a number of years, and also by the consideration of the history of cases of phthisis, from a study of which we frequently find that the disease was arrested for a longer or shorter period. The pathological data consist in the frequency with which signs of obsolete tubercle are observed in the lungs of persons dying from different diseases.

We possess many records by reliable physicians of the cure of cases of phthisis, cases where the physical signs and the symptoms have been very definite, and where we could not doubt the existence of phthisis, and in which at a later date all symptoms and signs of activity of the disease have disappeared and remained absent for a sufficiently long period to warrant the conclusion that the case was not one of temporary arrest only, but of actual cure. Such evidence has in some cases been still further strengthened by subsequent post-mortem examination, which has proved that the phthisis had become perfectly arrested. Such cases are now fairly numerous and form valuable evidence of the curable nature of consumption, and encourage not only unfortunate sufferers from that disease, but show that certain lines of treatment, especially the climatic one, have the best of evidence, a favourable result, in their support.

Another piece of clinical evidence is one to which less attention has been drawn; but it is one of considerable value. Careful inquiry into the previous health of consumptive patients not unfrequently elicits the fact that at some period before the illness for which they are consulting us began they had some chest trouble, from which they apparently entirely recovered and had a period of good health between that affection and the onset of their present illness. In many such cases we are able to feel fairly confident, from the details given of the nature of the attack, that the illness from which they thought they had recovered was of a tubercular nature, which had become quiescent for the time. The former attack has usually not been recognised as of a phthisical nature, but has been believed to be bronchitis, inflammation of the lungs, or even some disease unconnected with the respiratory apparatus—for instance, typhoid fever. Such cases of unrecognised attacks of localised tubercular disease in the lung are probably far from being uncommon.

The pathological evidence of the curability of phthisis is even stronger than the clinical. Nearly everyone who has had much experience in pathological work has noticed the frequency with which old caseous and calcareous foci, associated with more or less fibrous tissue, are found in the lung apices of those who have died from various diseases. There can be little doubt that these lesions represent foci of former active tubercular disease which has become quiescent. It is difficult to be certain as to the exact frequency with which such signs of involuted tubercle are found, as the statements of different observers differ considerably as to their frequency. As a result of some observations made in the post-mortem room of the Manchester Royal Infirmary during the twelve months from Oct. 1st, 1887, to Sept. 30th, 1888, I found that no less than 38·84 per cent. of the cases of persons above twenty years of age presented such lesions.[1] In other words, 38·84 per cent. of all the bodies over twenty years of age which were examined had had one or more foci of active tubercular disease which had become quiescent, and in the majority of instances such lesions had nothing to do with the cause of death. This high figure bearing upon the curability of phthisis is certainly remarkable. The results obtained show that local tuberculosis of the lung is not only common, but that it very frequently ceases to extend, and becomes quiescent. There are certain facts in connexion with these caseous and calcareous foci which have an important bearing upon the question under consideration, and must be considered. *All* the fibrous cicatrices with and without caseous or calcareous foci which are found in the lungs, and which are regarded as indicating former active tubercular disease, are not perfectly quiescent. Many, which to the naked eye appear quiescent, are found on microscopical examination to show signs of activity at their periphery, and cannot therefore be regarded as examples of involuted tubercle, but rather as very slowly progressing tubercular foci. In addition, those foci which contain caseous material which is not perfectly calcified are a decided source of risk to the person in whose lungs they exist. They may, and probably not unfrequently do, set up either an extensive destructive pulmonary tuberculosis or are the source of infection for a general acute miliary tuberculosis. This danger is undoubtedly a real one, as post-mortem examination, especially in cases of acute tuberculosis, occasionally clearly proves. This danger of a local or general infection from these small centres in the lungs is readily understood when we know that tubercle bacilli have frequently been found[2] in such old caseous foci, and that tuberculosis has been repeatedly set up in animals by inoculation with caseous material from such foci.[3] Cases where no tubercle bacilli can be found may yet be capable of producing tuberculosis in consequence of the presence of the spores of those bacilli which cannot be recognised by our usual methods of staining micro-organisms. From the teaching of experimental pathology[4] we are compelled to regard all old tubercular foci in the lungs which contain non-calcified caseous material as dangerous to the organism. Only those foci can be regarded as perfectly healed, and as true examples of cured phthisis, which are represented either by fibrous tissue alone or by completely calcified caseous matter. Caseous foci which are imperfectly or not at all calcified are probably always a source of danger, and may at any time give rise to a destructive pulmonary tuberculosis or a general acute miliary affection.

In considering the foci of obsolete tubercle in the lungs we cannot forget that the area of disease is nearly always exceedingly small. It is not common for the caseous or calcareous focus to be larger than a walnut, and usually it is much less than that. It is probable that at an earlier date it was more extensive, and that in consequence of the

[1] A detailed account of the result of this investigation, with an attempt to explain the discrepancy between different observers as to the frequency of healed phthisis, was published in the British Medical Journal, December, 1889.

[2] Déjerine: Recherches des Bacilles dans la Tuberculose Calcifiée et Caséo-calcifiée, Revue de Méd., vol. iv., p. 921, 1884.

[3] Kurlow: Ueber die Heilbarkeit der Lungentuberculose, Deutsches Archiv für Klin. Med., vol. xl., p. 437, 1889.

[4] Harris: British Medical Journal, December 1889. Kurlow: Ibid.

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shrinking of the fibrous tissue which was formed its dimensions were considerably reduced. We have no means of estimating the number of cases from among these instances of obsolete tubercle, where distinct symptoms and signs of phthisis at an antecedent date were present. Probably, however, the great majority of cases had occasioned neither symptoms nor physical signs of phthisis, whilst a minority had done so. At the same time it is probable that the early physical signs of phthisis are due to the surrounding catarrh quite as much as, if not more than, to the focus of tubercular disease itself. And as such simple catarrh varies in extent and may completely disappear without leading to further destructive changes in the lung, we can easily understand that what appears to us as a focus of obsolete tubercle, too small to produce any signs or symptoms, may have given very definite indications of its presence at some prior date.

There is yet another consideration which affords evidence of the curable nature of pulmonary tuberculosis. Cases of phthisis differ very much in their acuteness, in the rapidity with which the destructive changes in the lungs are effected, and consequently the duration of life likewise varies. In some the destructive processes are very acute, and the life of the victim is a very short one; in others the destructive change is a slow one, and life is prolonged may be for very many years. In the former class of cases, the acute ones, we find that very little fibrous tissue has been formed in the lungs, whilst the softening is very marked and has proceded rapidly. In the latter class, the chronic cases, we find that much fibrous tissue has been formed, and in some instances an excessive amount, so much that during life the case has presented many of the features of true fibroid or non-tubercular phthisis. We cannot avoid the conclusion, from a consideration of the course of the disease and the changes found in the lungs, that these chronic cases are really instances where there have been attempts to arrest the destructive processes, and that the fibrous tissue really represents a conservative change, an attempt to effect a cure. Many of these cases do become arrested for the time, as a careful consideration of the course and the clinical history will often show. All such fibroid changes in cases of pulmonary tuberculosis are to be regarded as favourable ones, and the more marked they are the more slow has been the progress of the disease and the longer has life been maintained. The frequency therefore with which such cases of chronic tuberculosis, accompanied by the formation of much fibrous tissue in the lungs, are met with is an argument of considerable weight in favour of the curability of phthisis.

In reference to this question of the curability of consumption, we may recognise three classes of cases:—1. Cases of very limited tubercular disease of the lung, where the lesion is small, and is eventually replaced either by fibrous tissue alone or by fibrous tissue and a completely calcified caseous focus. As far as our experience goes, such cases are always instances of very localised and very small foci, and the disease is never an extensive one. These cases are the only ones which can be considered as perfectly healed, and where the lesion (cicatrix or calcareous focus) which remains does not involve a risk to the possessor, such lesions, so far as we know, not being liable to set up either a local or general tuberculosis. These lesions are not unfrequently found in the lungs of persons who have died of various diseases and from injuries, but it is not known how frequently the tubercular change has been extensive enough to cause distinctive signs and symptoms of pulmonary tuberculosis. Probably the majority of the persons in whose bodies such foci of obsolete tubercle are found have at no period of their lives presented the usual signs or symptoms of consumption, the lesion having been very small. 2. Cases similar to the above, but where the remains of the tubercular disease is not at all or only imperfectly calcified. Although the physician, from the examination of the chest and the consideration that all the symptoms of phthisis have disappeared, may regard such cases as cured, they cannot be so considered by the pathologist. The latter knows from the microscopical examination of such foci, and from the results of inoculation experiments with animals, that such foci are dangerous, and may at any time give rise to further destructive changes in the lungs or to general miliary tuberculosis. They are cases, however, in which if the person remains under favourable conditions for preserving health, may pass on to a complete cure, and then deserve a place in Class 1. 3. Cases which run a prolonged course often with periods when the disease remains quiescent and which are characterised pathologically by the formation of much fibrous tissue. It is some of these cases which are so misleading to the medical man, and cause the hopes of the sufferer not only to be raised, but cause him to believe that he is cured. This feeling is a consequence of the disease having become either temporarily arrested, or, as is probably more frequently the case, by its progressing extremely slowly and being associated with few physical signs and symptoms of extending disease. Very many cases of phthisis come under this heading, and it is rare for a case of chronic phthisis to be continually progressive; nearly all such forms of the disease are associated with periods of relative good health when the disease appears to be quiescent. The fact that many cases of phthisis belong to this class renders any conclusions as to the good effects of any particular treatment so fallacious. The enthusiastic therapeutist is very prone to conclude that the favourable results are the consequence of the treatment adopted, and to forget that the favourable symptoms and signs may be explained as manifestations of the natural course of the disease. The history of the treatment of pulmonary tuberculosis is full of such fallacies.

From a consideration of the above classes it follows that some cases of phthisis are completely cured, but that the disease in such instances has never been a very extensive one. The majority of cases of phthisis we are compelled to consider belong to the last-mentioned classes, and consequently to be cases which often show a tendency to cure, but rarely perfectly attain that end. The tendency, however, in very many cases of phthisis is towards arrest, and it is the evidence on this point, together with the absolute proof which we have that in some cases a complete cure does result, that gives us encouragement to persist in treatment, and warrants us in holding out good hopes of recovery to the unfortunate sufferers in the early stages of the disease.

ON KOCH'S TREATMENT IN TUBERCULOSIS OF THE LUNG AND IN LUPUS VULGARIS.

BY G. A. HERON, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

(*Concluded from page 972.*)

Increase and Extension of certain Physical Signs during the Use of Tuberculin.

IN many of the cases there was noticed increase of the mucous râles after the use of the remedy, when their then condition was compared with what it had been before treatment was commenced. The increase was expressed in this, that the moist sounds became certainly coarser, and there seemed to be more of them at the site of the disease. Also, in parts of the lung where certainly no evidence of the existence of disease had been observed before tuberculin was used, there were noticed thereafter, in many instances, crepitations which were undistinguishable from those usually heard over the site of early tuberculosis of the lung. This was observed in several instances in those patients who were suffering from tuberculosis affecting apparently one lung only, and in them it was often observed about the apex of the lung which had seemed healthy. These features were noticeable after a reaction had set in, and they continued probably for twenty-four or thirty-six hours. It was hardly possible to be sure as to the period of their duration, because as soon as the temperature fell to the normal limit, another injection of tuberculin was given, and then these physical signs usually repeated themselves. In most of these instances the new signs were noticed to disappear as the treatment progressed, but in exceptional instances they certainly remained for one or two weeks after the beginning of treatment; though even in these cases the newly developed sounds, it was noticed, always rapidly diminished in amount and in extent. In no case did these new physical signs exist when the patient left the hospital. I was able to satisfy myself that these new physical signs were sometimes, but not always, accompanied with increase of dulness on percussion. These conditions of lung may be reasonably

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explained by comparing what probably takes place there with what we see going on in and around patches of lupus vulgaris. The marked swelling of the affected parts, and of apparently healthy tissue for some distance from them, which forms so familiar a characteristic of the effect of tuberculin on this skin disease, may very well have its counterpart in the tubercular lung, and this would account, it seems to me, for all these new physical signs, although it is difficult to understand why evident dulness on percussion should not always form one of them. In parts distant from the first recognised lesion of the lung, and having no continuity of tissue with it—as, for instance, the apex of the opposite lung,—it may very well be the case that the existence in them of centres of disease, not detectable by the stethoscope, explains the reason why, when tuberculin acts, new patches of crepitation are developed there. It is only reasonable to believe that in every case of tuberculosis of the lung there are, especially in the beginning of the disease, affected portions of tissue which do not convey the evidence of their condition to our senses.

Skin Eruptions.

The patient L. F——, already mentioned, was the only one under my care who showed that peculiar skin eruption which Dr. Radcliffe Crocker has so well described in THE LANCET of Nov. 22nd, 1890. She had it on two occasions early in her course of treatment. There was nothing in these attacks to distinguish them from the many others like them, that have been often mentioned in connexion with the use of tuberculin. Another patient, A. H——, a woman aged twenty-eight, had tuberculosis of about one-half of each of her lungs, with cavity at the apex of the right lung. After she had been twenty-nine days under treatment, and had received twenty-two injections of the remedy, there appeared a purpuric rash, which affected in patches her thighs and legs from the groins to the ankles. It began with small groups of papules, which I noticed in one or two instances were at first colourless, but gradually became red or reddish-brown in colour. Between the groups—they did not lose their colour on pressure—was apparently healthy skin, and at first the little groups of papules varied in size from that of a pin's head to that of a farthing. At the same time that this eruption first appeared, there was slight tenderness and swelling in the right wrist, and at the outer and back part of the right elbow there was a little puffiness, with bluish discolouration. Between the radius and ulna, about half-way down the right arm at its posterior aspect, there was distinct swelling, but without tenderness. There was also pain in both knee-joints, and in the legs, and in the left elbow. In four days both ankles were swollen, and there was swelling of the right forearm in front, in its upper third. The right arm at the level of the swelling measured half an inch more than the left one. There was no evidence of abnormality in the liver or the spleen. On the sixth day these swellings disappeared, and the rash, which had meanwhile become confluent all over the lower limbs, began to fade. On the seventh day after the appearance of the rash there was slight puffiness over the forehead, extending from the middle of the left to the outside of the right orbit, and from above the eyebrows to the roots of the hair, and measuring 4½ in. by 2 in. The puffiness had more the appearance than the feeling of a swelling, and was without discolouration of skin. This swelling disappeared in two days, and did not return. The hæmorrhagic rash, which had seemed to fade for a short time, recurred, and covered practically the whole of the lower limbs. In this condition the patient, at her own wish, returned to her home. She wrote to me on April 8th, saying: "Occasionally the rash reappears, and when it does I am unable to walk about for a day or two, but that has only happened twice during the six weeks I have been at home." On one occasion only was albumen detected in this patient's urine, and then there was but a mere trace of it. Her urine as a rule amounted to between 35 oz. and 50 oz., and presented no feature of special interest. It was examined three or four times a week. This woman received no injection after the purpuric rash appeared. Her highest dose of tuberculin was eight milligrammes, and she had eight marked reactions in response to the twenty-two doses given to her.

Condition of Urine.

It may be convenient to state at this point, that only in eight of these thirty-seven cases was albumen found in the urine, and its presence was always temporary. No observation of consequence was made when the urine was examined under the microscope.

Other Complications.

Of these there were but three of any importance. A girl, whose case is referred to in the journals under the initials H. D., whose age was fourteen years, received on the twenty-first day of treatment a dose of 8 mgr. of the remedy, and to it there was no symptom of reaction. On the day following the girl's temperature began to rise, and no reason for this could be found. It was a rule in the wards, that when a patient who was using tuberculin showed any important symptom which could not be readily accounted for, then, at once, the use of the drug was stopped. To that rule there was never an exception. Accordingly, the treatment was discontinued whenever this unexplained rise of temperature was noted. This girl developed pleurisy of the left side, with a moderate amount of effusion; and it ran an ordinary course. In a fortnight the treatment was reaumed and continued until thirty-six injections had been given, the last three of these having been doses of 100 mgr. each. The girl had abundant tubercular bacilli in her sputa, and both of her lungs were tubercular, the infection extending, without excavation of lung tissue, on the left side to about the level of the fourth rib in front and the sixth one behind, and on the right side to about the level of the second rib in front, and behind to about the line of the spine of scapula. This patient did very well; and I hope there has been an opportunity for you to examine her to-night. Another complication occurred in the case of a girl (S. M——), eighteen years of age, who had coarse râles over the upper half of her left lung, in front and behind, and a slighter affection of her right one. She, after having been two weeks under treatment, and on the day after she had received her ninth injection, developed a pneumothorax of the left side. She blamed the treatment for this condition, and in accordance with her own wish she was not again submitted to the injections. In a few days she passed under the care of my colleague, Dr. Eustace Smith, whose patient she had previously been, and made a good recovery so far as the pneumothorax is concerned. With regard to the cases of laryngeal tuberculosis, they are too few in number amongst these patients to justify a decided opinion being formed about them in connexion with the use of tuberculin. It is, however, a fact that not one of these cases did well as regards the throat condition; indeed one of them, the man referred to in the table under the initials A. D., aged twenty-seven, became rapidly worse while under that treatment. Mention is made in the table of a prominent part that was played by the appearance of a hectic condition in certain cases. Of course patients with tuberculosis of the lungs frequently undergo exacerbations of temperature. Dr. Chaplin, the resident medical officer at Victoria-park Hospital, kindly looked up for me one hundred ordinary cases of phthisis, which had not been treated by Koch's method. He found that during a residence of six weeks in hospital eight of the hundred had exacerbations of temperature. It will be noticed that, with one exception, all my patients who showed hectic symptoms had done so before treatment was commenced. So far as this experience goes, it merely shows that tuberculin did not cure the hectic state of these patients. In all the cases where it occurred, in these patients, the exacerbation of temperature, after lasting for a varying number of days, gradually passed off. But, undoubtedly, it showed its usual tendency to recur, in spite of tuberculin, whether given in large or small doses. In the case of one patient, A. H——, we had her blood examined by Ehrlich's test while she was undergoing an attack of marked hectic, and at the height of her purpuric eruption, but no tubercular bacilli were observed, although very careful search was made for them.

In the table submitted for your inspection I have divided my patients into three classes. In the first class are placed those who come within the limits, as I understand them, of Koch's category of those consumptives in whom cure might reasonably have been hoped to follow the use of the remedy. I cannot say that any one of my patients has been cured beyond danger of relapse. Nor did Koch himself regard such cases, even when the best results had been obtained from treatment, as safe from relapse. He emphasises that opinion of his very strongly in his well-known paper of Nov. 13th of last year. In my second class of cases—those designated as being in the second stage—I include patients whose conditions of lung disease place them outside of that class of people who are suffering from tuberculosis of the

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lung in its commencement. The physical signs of their disease, and their general symptoms, showed that without any evidence of cavity being detectable they had considerable tracts of lung tissue involved in the tubercular process. (Figs. 1 and 2.) In my third class are those who had evidence of cavity in their lungs. In every patient of all three classes, judging from general symptoms and some cough and night sweats, and by a material, and sometimes very marked, increase in the patient's sense of freedom of breathing power. It was remarkable how several of these patients themselves observed this indication of improvement in their condition, and drew attention to the fact that they could walk about the hospital grounds for an hour or so, and then go up to their wards without once

FIG. 1.

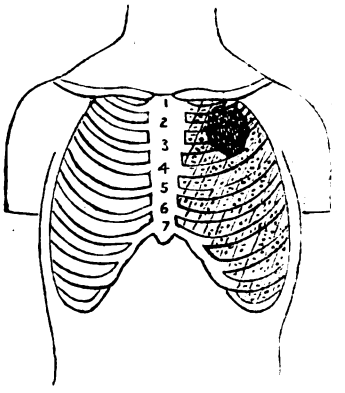
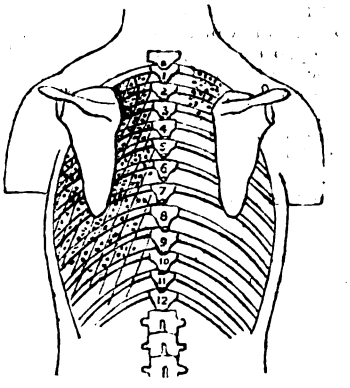


FIG. 2.



Figs. 1 and 2 graphically represent the condition of G. M——, on the first page of the tables, after a course of treatment, on April 7th.

FIG. 3.

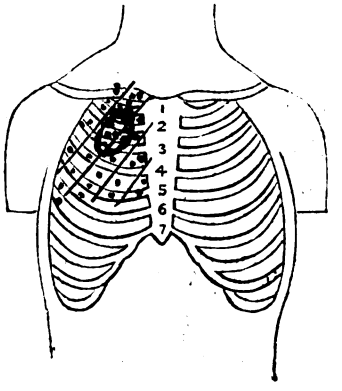


FIG. 4.

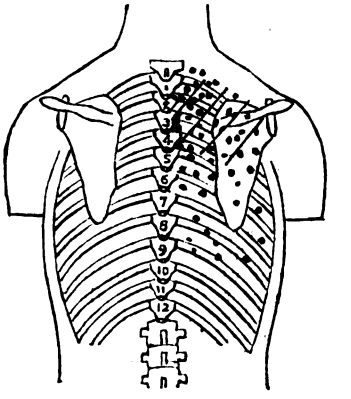


FIG. 5.

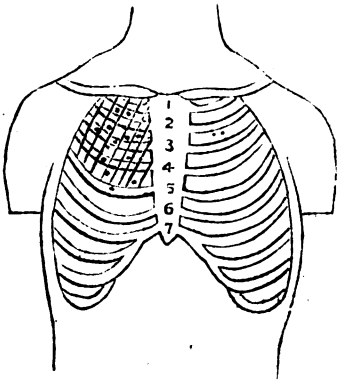
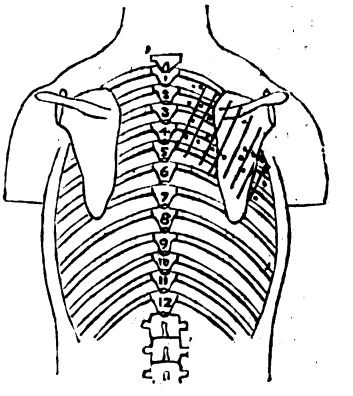


FIG. 6.



Figs. 3 and 4 represent the condition of A. D——, aged forty, the fourth case in the second page of the tables, at the beginning of the treatment, and Figs. 5 and 6 the condition of the same patient on April 7th.

from physical signs, the tubercular process was not tending towards cure, nor was it stationary before treatment was commenced. The contrary of these conditions obtained in every instance. The table indicates that a certain number of these patients have improved in health—some more, some less—under the use of tuberculin. (Figs. 3, 4, 5, and 6. This improvement was best manifested by a gradual disappearance of trouble-stopping to rest by the way because of their shortness of breath, and without being subject to fits of severe cough after the exertion of coming upstairs. Before treatment these patients had been unable to walk even upstairs to the wards without stopping several times on the way to cough and rest.

Then, as regards the evidences of improvement which had their expression in the physical signs of thes

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CASES OF TUBERCULOSIS OF THE LUNG.

Patients' initials.	Age.	Sex.	Condition of disease.	Tubercular bacilli.	Sputum decreased.	No. of injections.	Highest dose in milligrs.	No. of reactions.	Complications.	Weight.		Duration of treatment.	Results.	Remarks.
										Gained.	Lost.			
F. S.	22	M.	1st stage.	Very many.	From to 2 dr. .. scanty.	15	20	None.	None.	2 lb.	—	Days. 16	Great improvement.	Eleven weeks after treatment improvement maintained. At work 7 weeks as packer. Tubercle bacilli, many.
C. H.	27	M.	1st stage.	None.	½-1 oz. .. unaltered.	20	30	10, all below 10 milligrme. dose.	None.	Unaltered.	Unaltered.	35	Improvement.	Sputa examined again and again; no tubercular bacilli found.
F. J. W.	29	M.	1st stage.	Many.	1 oz. .. scanty.	36	100	6 below 10 milligrme. dose; 4 above.	Hectic and abdominal pain; sore over xiphoid.	Unaltered.	Unaltered.	70	Unimproved.	Has not been seen since treatment ended.
Z.	31	M.	1st stage.	Many.	1-3 oz. .. abt. 2 oz.	44	350	6 below 10 milligrme. dose; 6 above.	None.	1½ lb.	—	66	Improved materially.	——
J. K.	35	M.	1st stage.	None.	½ oz. .. scanty.	55	1000	13	None.	—	3 lb.	67	Decided improvement.	Treatment just ended.
T. H.	26	M.	1st stage.	Few to many.	1-4 oz. .. unaltd.	18	20	5 below 10 milligrme. dose; 1 above.	Hectic before, during, and after treatment.	—	7 lb.	32	Became worse.	Hectic before, during, and after treatment. Had attacks of diarrhœa with pain on 4 days.
T. P.	24	M.	1st stage.	Very many.	1 oz. .. ½ oz.	40	400	3 below 10 milligrme. dose; 2 above.	Laryngeal tuberculosis.	10 lb.	—	66	Improved in lung; larynx, trifling improvement.	——
H. D.	14	F.	1st stage.	Very many.	½-1 oz. .. scanty.	36	100	3, all up to 10 milligrme. dose.	Pleurisy; old hip-joint disease.	12 lb.	—	42	Great improvement.	——
H. B.	28	F.	1st stage.	Many.	1½ oz. .. none.	32	100	4 up to 10 milligrme. dose.	None.	10 lb.	—	46	Very great improvement.	Excellent health two months after treatment. Is in work as a general servant.
M. deW.	28	F.	1st stage.	Many.	½ oz. .. 1 dr.	31	50	10 up to 10 milligrme. dose; 2 above.	Tonsillitis; trivial attack.	3½ lb.	—	42	Improvement.	——
O. H.	21	F.	1st stage.	Few.	Scanty .. scanty	69	300	9 up to 10 milligrme. dose; 9 above.	None.	6½ lb.	—	126	Great improvement.	Still in hospital.
L. B.	23	F.	1st stage.	Very many.	½ oz. .. scanty.	38	100	4 up to 10 milligrme. dose; 9 above.	Hectic before treatment.	6 lb.	—	56	Improved materially.	Sputum after treatment ceased. All viscid mucus. Hectic before treatment.
E. S.	20	F.	1st stage.	Very many.	2 oz. .. 1½ dr.	24	100	3 up to 10 milligrme. dose; 4 above.	Hectic before treatment.	Unaltered.	Unaltered.	52	Improvement. Still in hospital.	Hectic before treatment begun. Trace of albumen on five occasions, four of them before treatment. Had rheumatic fever 12 months ago.
J. D.	20	F.	1st stage.	None.	None.	10	4	7	None.	Unaltered.	Unaltered.	36	Unimproved. Left hospital at her own request.	In the hospital 2 years ago with history of hæmoptysis. No sputum then.
G. M.*	23	M.	2nd stage.	Very many.	1 dr. .. scanty.	38	100	3 up to 10 milligrme. dose; 1 above.	Hectic after treatment.	—	2½ lb.	41	Improvement.	Sixth evening after treatment patient became hectic, remaining so 8 days. For 26 days thereafter temperature normal.
B. W.	22	M.	2nd stage.	Very many.	Unaltered; (1 oz. .. 2 oz.).	27	100	2 up to 10 milligrme. dose; 2 above.	Laryngeal tuberculosis.	2 lb.	—	30	Improvement.	Laryngeal condition unimproved.
E. G.	36	M.	2nd stage.	Very many.	2 oz. .. unaltered.	47	500	8 up to 10 milligrme. dose; 3 above.	Syphilis.	—	—	69	Improved materially.	Hectic before treatment. After seventh injection treatment stopped, there having been no reaction up to 12 mgr. Iodide of potassium given for 10 days. Reactions followed.
R. N.	36	M.	2nd stage.	Few; none found after injection.	½ oz. .. unaltered; mucus only; purulent before.	38	100	12 up to 10 milligrme. dose; 4 after.	None.	5 lb.	—	52	Unaltered.	——
J. G.	29	M.	2nd stage.	Many.	4 oz. .. 1½ oz.	33	100	16	None.	2½ lb.	—	51	Improved slightly.	Is able to return to work as museum attendant.
L. S.	45	M.	2nd stage.	Many.	2½ oz. .. 1 oz.	34	100	4 up to 10 milligrme. dose; 1 above.	None.	3½ lb.	—	43	Improved materially.	——
T. L.	49	M.	2nd stage.	Many.	2½ oz. .. 1½ oz.	22	100	2 up to 10 milligrme. dose; 5 above.	Twisted arteries.	10½ lb.	—	35	Improved.	Twisted arteries.

* See Figs. 1 and 2.

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CASES OF TUBERCULOSIS OF THE LUNG—(*continued*).

Patients' initials.	Age	Sex.	Condition of disease.	Tubercular bacilli.	Sputum decreased.	No. of injections.	Highest dose in milligrs.	No. of reactions.	Complications.	Weight.		Duration of treatment.	Results.	Remarks.
					From to					Gained.	Lost.	Days.		
A. A.	16	F.	2nd stage.	Many.	½ dr. .. none.	40	20	21 up to 10 milligrme. dose; 1 above.	Tuberculosis, glands of neck; sore left side.	—	4 lb.	84	Improved. Sore healed.	Lungs both affected. Physical signs unaltered.
A.	—	—	—	—	— —	—	—	—	—	—	—	—	—	Still under treatment.
K.	—	—	—	—	— —	—	—	—	—	—	—	—	—	Still under treatment.
A. D.*	40	M.	Cavity.	Many.	1 oz. .. scanty.	44	100	3 up to 10 milligrme. dose; 2 above.	Hectic before treatment.	8 lb.	—	52	Great improvement. Signs of cavity gone.	Slight hectic before treatment. At work at the dock as a stevedore. Temperature now normal (April 7th).
A. D.	27	M.	Cavity.	Very many.	1 oz. .. 6 oz.; increased.	33	70	1 up to 10 milligrme. dose; 1 above.	Laryngeal tuberculosis; hectic.	Unaltered.	Unaltered.	56	Became worse.	Ulceration of vocal cord, with irregular granulations developed during treatment. Anæmic epiglottis. Arytenoid cartilages and both cords hyperæmic before treatment. Marked hectic from beginning to end.
A. W.	23	M.	Cavity.	Many.	4 oz. .. 1½ oz.	40	40	11 up to 10 milligrme. dose; 9 above.	Hectic from first.	—	1 lb.	62	Trivial improvement.	Hectic from the first.
C. M.	23	M.	Cavity.	Very many.	5 oz. .. ¼ dr.	8	3	1	Hectic before treatment.	Unaltered.	Unaltered.	9	Improved considerably.	Improvement not due to treatment probably. Had marked hectic (102·4°) before treatment. Much less marked since.
S. M.	19	F.	Cavity.	None.	1 dr. .. 4 dr.; increased.	41	150	14 up to 10 milligrme. dose; 3 above.	Hectic before treatment.	7½ lb.	—	79	Slight improvement.	Slight hectic before treatment. None for a week after treatment. Occasional trace of albumen.
S. M.	18	F.	Cavity.	Very many.	2 dr. .. 2 oz.; increased.	9	6	4	Pneumothorax, left lung.	Unaltered.	Unaltered.	14	Became worse.	Pneumothorax occurred 4 days after patient discontinued treatment at her own request.
A. H.	28	F.	Cavity.	Very many.	1 oz. .. 1 dr.	22	8	12	Purpura.	—	5 lb.	35	Became worse.	Trace of albumen on four occasions during rash.
ANÆMIA.														
A. B.	18	F.	Anæmia.	—	— —	15	30	7 up to 10 milligrme. dose.	None.	8 lb.	—	28	Very great improvement.	Injected, with her consent, as a control case at first, afterwards because of unexpected reaction.
LUPUS VULGARIS.														
A. N.	16	F.	Face; elbow.	—	— —	50	1000	18	—	Unaltered.	Unaltered.	104	Arm very greatly improved, face much improved.	Beyond very slight headache on 2 or 3 occasions, this patient had no subjective symptoms of general reaction.
E. F.	57	F.	Face; hand.	—	— —	50	400	8	—	10 lb.	—	124	Much improved. Relapse.	During last weeks of treatment fresh centres of infected skin noted on right temple and on nose.
E. R.	27	F.	Patch under chin; face.	—	— —	59	1000	9	—	10 lb.	—	128	Much improved.	—
L. F.	21	F.	Face, nose, and lips.	—	— —	59	1000	6	—	18½ lb.	—	135	Great improvement; relapse.	Signs of relapse during last month of treatment; fresh spots below right nostril, at root of nose, and on right cheek.
J. B.	27	F.	Right side of nose; right cheek.	—	— —	35	1000	6	—	—	—	63	Very good.	Slight case.

* See Figs. 3, 4, 5, and 6.

N.B.—When this paper was read before the Medical Society, these tables were to have been shown in the form presented here. It was, however, found that the table as it is given in these pages would have been unwieldy on the walls of the Society's room; hence certain additions to the tables are now published.—G. A. Heron.

patients. Weight, as a rule, was gained. This, however, is a condition common to most consumptives during their sojourn in hospital, whether they are or are not treated by tuberculin. Evidences of improvement in the lung itself were found in a change in moist sounds heard there before treatment was commenced. This change consists in a gradual lessening of those qualities of a râle, which enable the trained ear to distinguish between moist crepitations and the dry cracklings associated with sounds due to friction. The moist sounds are heard to approach in quality nearer and nearer to the dry ones, and to become, at least to my ear, indistinguishable from them. In patients who do very well under the treatment there comes a great diminution of both moist and dry sounds; for in a month or six weeks of treatment with tuberculin it is often to be noticed in these cases that, during ordinary respiration, no râles, dry or moist, are audible, although when the patient coughs there come little showers of crepitations, which, however, are only to be heard during the first two or three inspirations that follow the cough. In not one of my patients have these signs absolutely disappeared, though in four of them they have all but gone. In order to ascertain the exact value of these different degrees of improvement much more time and prolonged observation of these cases are necessary before, in my opinion, we can gauge with accuracy, and with justice to all concerned, the real worth of tuberculin as a healer of tuberculosis of the lung. In cases

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at the very commencement of that disease, and when it is not seemingly quiescent, I think the remedy should be tried, because no drug is known to have anything like the beneficial effect of tuberculin upon those tubercular diseases which can be seen and handled, and evidence, it seems to me, is accumulating tending to show that the beneficial effects which we see produced in lupus and other similar conditions by the use of tuberculin are also produced in the diseased lung which we cannot see. And another reason for its use in very early stages of lung disease is that, in cases of this kind, there is, so far as I know, no evidence to show that there is material risk in employing tuberculin. The remedy has been already used in several of these early cases, and no evil, but, on the contrary, material good, to the patients concerned has resulted in no inconsiderable number of these early instances of lung disease. In such cases as these, I can see no reason why there should be any hesitation in using tuberculin as a remedial agent. In lupus vulgaris, however, the beneficial effects following the proper use of tuberculin are so evident and so marked, that I feel sure this remedy will very soon become an essential part of the treatment of that disease. In two of my cases of lupus fresh points of infection were distinctly evident, and these manifested themselves to me, and to the patients and others, during the last four weeks or so of the five months' course of treatment to which these patients were submitted, and while they were taking daily increasing doses of tuberculin ranging between 200 and 1000 mgr. The cases now referred to are those marked on the table as L. F. and E. F. In the former case the points of fresh infection were observed upon the upper lip and right cheek, and in the latter over the right temple. These two cases both show, as is indeed already well known from other sources, that in spite of the excellent results which, up to a certain point, practically always follow the use of tuberculin in lupus vulgaris, danger of the reappearance of the disease is so great that, as Koch himself says, we must make "use of all other auxiliary methods to assist the action of the remedy."

From a paper of this kind it is inevitable that much that is of importance and of interest must be omitted. I have tried to indicate certain points in this question concerning the value of tuberculin as a remedy, but of necessity I have left very much unsaid.

I congratulate the Society upon the fact that you, Sir, preside over our debates, for there is no one else into whose hands the conduct of our proceedings could be better confided, or in whose sense of what is just and right to all concerned we could more surely place a perfect trust.

NOTE ON A SUCCESSFUL CASE OF ŒSOPHAGOTOMY FOR REMOVAL OF A TOOTH-PLATE IMPACTED IN THE ŒSOPHAGUS FOR FIVE YEARS AND NINE MONTHS.

BY WILLOUGHBY FURNER, F.R.C.S.,
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THE longest period of impaction of a foreign body in the œsophagus removed successfully by operation which I can find recorded is three years and a half: the patient was a child; the foreign body a halfpenny. The case is recorded by Mr. Bennett May.[1] In the woman whose case I relate now the foreign body was a silver-gilt tooth-plate with three gold hooks, and carrying three teeth, and had been swallowed five years and nine months before the date of operation.

E. B——, aged forty-four, married, mother of a family, was admitted for the first time into the Sussex County Hospital on Nov. 6th, 1889. She complained of difficulty in swallowing, was thin, but fairly nourished. She said that on the morning of May 4th, 1884, whilst suckling her infant, and turning in bed, a tooth-plate slipped from its position in the upper jaw to the back of the throat; she felt almost suffocated, and being unable to seize the plate pushed it down her throat. Afterwards she experienced difficulty in swallowing and could only take liquid food, occasionally thickened with minced meat or bread crumbs. The dysphagia varied, but was always present and had much increased lately. She referred the seat of obstruction to a point about an inch and a half below the episternal notch. There had been occasional dyspnœa, lasting only for short periods, a minute or two. She was quite sure of the date of the accident, as she was at the time suckling her youngest child. A probang passed down the œsophagus met with obstruction ten inches and a half from the teeth; a coin-catcher got hold, but traction only seemed to tilt the plate into the surrounding tissues. One pair of long œsophageal forceps gripped the body firmly, but slipped off, and no fresh hold could be obtained. Further measures were then proposed, but the patient wished to return home.

She was readmitted on Jan. 30th, 1890. On Feb. 17th, under chloroform, œsophagotomy was performed. The usual incision was made, about three inches in length, along the anterior border of the left sterno-mastoid muscle. The omohyoid muscle was divided. The carotid sheath having been drawn outwards and the trachea and thyroid gland in the opposite direction, the œsophagus with the recurrent laryngeal nerve on its surface was then exposed; a full-sized bougie was now passed through the mouth down to the obstruction, and the œsophagus opened on its posterior surface. On passing the finger into the wound the foreign body could just be reached lying somewhat obliquely to the canal of the tube, the upper part projecting into the canal, the rest of the plate lying in a sac to the right of the gullet. The irregular surface of the plate was so closely surrounded by the walls of the sac that great difficulty was met with in its extraction. Various forceps were tried, but slipped off. It was finally grasped by a strong straight pair, and by a combined movement of pulling and rotation, requiring considerable force, it was at last removed. About an ounce of bright arterial blood followed the removal of the plate. The wound was well washed with weak carbolic lotion. One small artery to the sterno-mastoid required ligature; the œsophagus was not sutured. The upper two-thirds of the external wound were closed, the lower one-third left open, and a drainage-tube reaching up to the œsophagus was fixed in the lowest part of the external incision.

There was only slight shock, but no vomiting, after the operation. The wound was frequently syringed with boric acid solution (ten grains to an ounce of water), some of which the patient was directed to swallow occasionally; the teeth and gums were also cleansed with the same solution. No nourishment was given by the mouth during the first two days, but four ounces of pancreatised beef-tea were administered per rectum every four hours. In spite of all, the wound became offensive, the saliva flowing from it copiously. On the third day, as the wound showed no sign of repair and the patient was losing ground, an attempt was made to introduce food into the stomach through a No. 8 gum elastic catheter passed from the mouth. The mere passage of the instrument down the œsophagus produced retching, and although only about an ounce of milk had passed into the stomach, it all returned through the wound. No further attempt was then made to feed through the mouth until the morning of the fifth day from the time of operation. A small soft catheter was then passed through the mouth into the gullet beyond the wound, but not into the stomach. A little cold milk was then allowed to trickle by degrees through the catheter, but it all regurgitated through the wound. The presence of the catheter in the œsophagus so long unused to solids seemed to produce spasm. During the day the patient became much feebler and very restless, and complained of great hunger. The wound was now covered with greyish exudation, and the whole side of the neck down to the clavicle in front, and to the level of the spine of the scapula behind, was red and puffy. It was determined to make another attempt to get food into the stomach, and on the evening of the same day, the fifth from the operation, the patient was raised and supported in bed, and leaning slightly forward was given some milk to swallow in the natural way. She drank ravenously ten ounces of milk, only about a teaspoonful coming through the wound, which was then syringed out in the sitting posture. From that time she began to recover. She took her food, consisting of milk only, or with an egg and brandy, always in the sitting position. The wound soon discharged copiously, and the redness and puffiness of the neck gradually subsided. On the twenty-first day from the operation she swallowed bread-and-milk; on the twenty-fourth day she took fish; on the

[1] Annals of Surgery, 1887.

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twenty-eighth day the wound was healed. The patient was discharged well a few days later with no alteration of the voice. When seen some months afterwards she was stout and well, and could take food without any trouble.

Remarks.—Out of just 100 cases recorded, including my own, I find twenty-three deaths. In nearly all the fatal result was due to exhaustion and cellulitis of the neck. The two most important questions, therefore, in the after-treatment of these cases are feeding the patient and keeping the wound clean. There are many different opinions as to the best means of feeding the patient. Barton[2] and Markoe[3] are in favour of feeding through a tube introduced into the œsophagus through the wound. This plan involves disturbance of the wound, the more so if the œsophagus be incised on its posterior surface, which may be regarded as the seat of election if the position of the recurrent laryngeal nerve be considered. Southam,[4] in his two successful cases, fed by enemata for the first fourteen days, and subsequently by a soft tube introduced through the mouth. I tried this in my own case and failed. Abbé[5] approves of closing the œsophageal wound and advocates feeding through a tube protruding from the mouth from the first. Lediard[6] allowed rectal alimentation for the first three days, and then fluids by the mouth. Dr. Geo. Fischer[7] says every patient, whether the œsophagus has been closed or not, may be allowed to swallow fluid diet a few hours after operation without the aid of the stomach-tube. So far as the experience of a single case may justify an opinion, I would advise that the patient be fed by peptonised beef-tea enemata, with or without brandy, for the first twenty-four hours or less until the risk of vomiting from the anæsthetic has subsided, and then be allowed to swallow milk. If the incision be made in the posterior portion of the œsophagus, and the patient drinks in a sitting position, very little escapes by the wound, even if the edges of the gullet have not been sutured; no irritation seems to be produced, but vomiting and retching are most injurious. The wound may be syringed out with a weak solution of carbolic acid (1 in forty) whilst the patient is sitting up, if the œsophagus has been incised posteriorly, without any harm resulting. In my case strong boric acid solutions failed to keep the wound sweet. The carbolic lotion was much more effectual. Two teeth have been broken away; one probably when the first attempt at extraction was made with the œsophageal forceps, the other at the time of the operation.

West Brighton.

SOME POINTS ON

THE RELATIONSHIP OF THE EYE TO THE CARDIO-VASCULAR SYSTEM.[1]

BY RAYNER D. BATTEN, M.D., B.S.LOND.,
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SOME points of connexion between the eye and the cardio-vascular system are already well established. Eye symptoms occur in chronic albuminuria, syphilis, diabetes, and anæmia; also in some cases of chorea and epilepsy, megrims, and exophthalmic goitre. Various drugs affect both—e.g., alcohol, tobacco, atropine, lead. Dr. Broadbent, in writing on high-tension pulse, mentions glaucoma as one of the conditions associated with high arterial tension, of which he regards it as a consequence, although the mode of causation is not clear. There being, then, some *primâ-facie* evidence for a connexion between the eye and the cardio-vascular system, I propose to offer some observations tending to show that the connexion is more intimate than it is at present usually considered to be. Dr. Saundby, in his Lectures on Bright's Disease, speaking of optic neuritis, says: "Neuritis probably occurs as an idiopathic affection, especially in hypermetropic eyes." And again, speaking at Birmingham: "I would express my belief that children with hypermetropic eyes are especially liable to severe attacks of optic neuritis, which may be accompanied by headache, vomiting and giddiness, so as to simulate some coarse intra-cranial disease, the whole phenomena being, however, directly referable to the visual disturbances."[2] Dr. Gowers writes: "One other fact must be mentioned in connexion with the diagnosis of the cause of optic neuritis. In many cases in which slight neuritis of chronic course is associated with symptoms which would scarcely suggest the existence of disease such as would cause neuritis, hypermetropia exists. This combination may be noted, for instance, in chlorosis, in epilepsy, apparently idiopathic, and other slight symptoms of cerebral disturbance. It is doubtful, in the present state of our knowledge, what share is to be attributed to the hypermetropia in the production of the neuritis, and from the commonness of hypermetropia the coincidence may have been accidental; but the fact deserves notice."[3] In cases of optic neuritis in anæmia mentioned by other observers, it is also generally noted that the refraction was hypermetropic. And personally I think hypermetropia of frequent occurrence in anæmia. Dr. Stevens[4] of New York considers that chorea is caused by hypermetropia, and Dr. Gowers has noted the connexion of optic neuritis and hypermetropia in chorea.

Now, while this association of hypermetropia with diseases causing optic neuritis has been recognised, I do not think sufficient importance has been attached to the significance of it, especially when taken in conjunction with the fact that optic neuritis from all causes occurs with far greater frequency in the hypermetrope than in the myope, or, I believe, in the emmetrope. Optic neuritis in the myope is, in my experience, unknown, and in the experience of others an occurrence of extreme rarity. So far, I have collected three cases only of optic neuritis in which myopia was noted. Now this fact, if fact it be, of the exemption of myopes from optic neuritis, while interesting in itself, may not at first sight appear to have any connexion with the subject before us. But the whole contention of my paper is that we are wrong in considering hypermetropia and myopia as merely local conditions; they are the outward and visible sign of an inward and vascular state. I hold that both are associated with certain general conditions, that the changes which lead to myopia are not limited to the eye, but are part of a general change, and that the arrest of development in the hypermetropic eye corresponds with similar partial development in other structures—in short, that there is a myopic and a hypermetropic cardio-vascular system. Following on this, it might not be unreasonable to expect that myopes may be free from certain diseases affecting hypermetropes, and also *vice versâ*.

Two explanations have been given me of the absence of optic neuritis in myopes: 1. The comparative rarity of myopia itself. 2. That local disease must have a local cause. I admit that the frequent connexion of optic neuritis with hypermetropia may be partly accounted for by the far greater frequency of hypermetropia than myopia; but this does not, to my mind, offer anything like a sufficient explanation of the total absence of optic neuritis in the myope, save from exceptional causes. Myopia may indeed be rare, but surely not so rare as to prevent common diseases, such as frequently cause optic neuritis, having been observed in myopes, and the occurrence of optic neuritis in a certain proportion of these cases. The extreme rarity of optic neuritis in myopes would appear to point to one of two things—either a structural difference in the myopic eye, or a structural difference in the body of the myope, rendering him less liable to this form of disease. Occasional cases of optic neuritis in myopes, from exceptional causes, show that the condition is not structurally impossible. But on the point as to whether the myope enjoys any exemption from chronic albuminuria and other diseases giving rise to optic neuritis, I can make no statement.

I propose, then, to give shortly the chain of observation which led me to the conclusion that myopia and hypermetropia ought to be considered as indicating a general, instead of a local, condition, and it may be well to observe that my conclusion was arrived at as the result of my observations, and that it differed entirely from my original theory. Amongst other differences between the two classes of hypermetropes and myopes, the mental and physical differences are early forced on one's notice. But while I had for a long time made mental notes on the two classes, and had from time to

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[2] Ibid., July, 1887. [3] Ibid., Sept., 1886.
[4] THE LANCET, Dec. 28th, 1889.
[5] New York Med. Jour., 1886. [6] Clin. Soc., vol. xviii.
[7] Deutsche Zeitschrift Chir., Bd. xxv., Heft 6.

[1] A paper read before the Harveian Society, Nov. 6th, 1890.

[2] Saundby: Optic Neuritis in Children, Birmingham Med. Review, 1885, xviii.
[3] Medical Ophthalmoscopy, p. 85.
[4] New York Medical Record, Aug. 12th, 1876.

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time endeavoured to reduce my mental notes to words, I had made no serious attempt to investigate the physical state. I had, however, long puzzled over an observation of Mr. Mills on the subject of heart failure during the operation of division of the *internal* rectus in cases of strabismus—i.e., in hypermetropes; and when a case of cardiac irregularity, due apparently to an error of refraction, was narrated to me by Dr. Batten of Gloucester, and corresponded closely with similar cases of my own, I determined to endeavour to work out what was the connexion between cardiac irregularity and hypermetropia, and from this I was led on to the larger subject—namely, the relation of the eye to the cardio-vascular system.

As the result of my observations I have come to the following conclusions:—

I. First, as regards the peculiarities of what I will for the present term the hypermetropic circulation.

1. *In the young.*—Under this head I include all those not fully developed, and I consider this period of longer duration in the hypermetrope, who, to my mind, reaches his full development later than the myope. (α) *The pulse* is a quick one, and is easily accelerated by any cause, and varies rapidly; but the pulse-rate does not vary so much with the degree of hypermetropia as with the amount of accommodation. Thus, with latent hypermetropia I expect a quicker pulse-rate than with a high degree of manifest hypermetropia. The pulse is soft and compressible, not easily counted, and the tension is generally low. But in high degrees of hypermetropia with bad vision the pulse is often markedly slow. (β) *The heart*, in the few cases in which I have attempted to take measurements—which I have done by measuring the distance of the apex beat and the nipple from the middle line of the sternum—is, I consider, a small one; but this is not constant, as in some cases the heart appears dilated, and the apex displaced outwards. (γ) *The heart sounds* are generally regular, but with more or less marked accentuation of the first sound. In a certain number, I note a rhythm varying with the respiration, and murmurs of a variable and functional character occur. I have also noted loud apical systolic murmurs with more than average frequency. The heart symptoms, in fact, closely resemble those noted in chorea.

2. *The young adult* with hypermetropia is not a frequent patient for refractive purposes, but I consider him more liable to local inflammatory disease than the emmetrope, and still more so than the myope.

3. In the *middle-aged and old* hypermetrope, I notice, as Dr. Brunton has noted, the failure of *optical* accommodation taking place at the same time as the failure of the *vascular* accommodation, and hence flushings, giddiness, noises in the ears, &c. I note in addition marked cardiac irregularity and intermission, in some cases disappearing with the use of glasses. Dr. Broadbent has mentioned high tension pulse with glaucoma, and I am inclined to associate it with hypermetropia in the old.

(To be concluded.)

FOUR CASES OF TUBERCULAR MENINGITIS IN WHICH PARACENTESIS OF THE THECA VERTEBRALIS WAS PERFORMED FOR THE RELIEF OF FLUID PRESSURE.

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IN many fatal cases of tubercular meningitis coma supervenes with great rapidity and with all the signs of cerebral pressure, whilst after death little can be found besides an excess of cerebro-spinal fluid, often at a considerable positive pressure, to account for the symptoms and fatal issue. The possibility of recovery in this class of cases, where there is commonly little development of tubercle, together with the feasibility of draining away the fluid continuously by the theca vertebralis, suggested this mode of procedure.

The first case in which the method was tried was in February, 1889, in a boy, G. L——, aged three years, who had manifested the usual symptoms, and became comatose on the eighth day. On the next he developed Cheyne-Stokes respiration, became cyanosed and unable to swallow. A consultation was held, and it was decided to endeavour to relieve the pressure which was apparently answerable for the coma. No anæsthetic was needed; the child was supported in a sitting posture, a tiny incision was made in the skin beside the spine of the second lumbar vertebra, and a Southey's tube and trocar inserted till the point impinged against the lamina; the point was then directed slightly downwards and was pushed through the ligamentum subflavum and theca with an inclination towards the middle line. Clear fluid at once welled up into the tube on withdrawing the trochar, a fine indiarubber tube was arranged for continuous drainage, and the child put back to bed. During the next twenty-four hours four drachms of fluid were collected, besides what escaped along the cannula in the wound; the breathing became regular, the colour good, and the child swallowed some milk. Unfortunately the improvement was not maintained, the fluid ceased to escape, and the case proved fatal. The necropsy showed a considerable amount of tubercle at the base, with some opaque lymph, but no excess of fluid. It was not possible to discover the prick in the theca, and no evidence existed of any damage to the cauda equina. The fluid collected had a specific gravity of 1006, and contained only a trace of albumen.

The second case was that of J. L——, admitted to the Middlesex Hospital on Feb. 12th, 1890, under the care of Dr. Cayley. The patient, a girl aged eleven, had pertussis two years previously, and since that had suffered from earache, sometimes with discharge. She had been ailing for nine days with headache, anorexia, and latterly vomiting. There had also been photophobia and delirium. After admission the patient remained drowsy, tache cérébrale was noted, and she vomited at intervals, and flushed occasionally. On Feb. 21st Mr. Hulke cut down on the second lumbar vertebra, removed the spine and right lamina, and punctured the theca with a fine knife. Clear fluid escaped with some force, a drainage-tube was inserted in the vertebral canal, and the wound dressed antiseptically. On the following day the temperature had dropped from 102° to normal. The patient could be roused, and took liquid food well. The dressings were saturated with moisture and had to be changed. On the 23rd there was less escape of fluid, and on the 24th the dressings were nearly dry, and there was an increase of drowsiness, with development of squint. Death occurred from coma at 3 A.M. on the 25th, three days and a half after the operation. The necropsy showed that the aperture in the theca had closed, and when the membrane was incised the contained fluid spurted out in quantity; very little tubercle could be discovered.

The third case was a boy, B. V——, aged two years and four months, admitted under Dr. Coupland, after a week's illness, with headache and vomiting. There had also been a slight fit and tendency to squint. On June 15th, two days after admission, respiration became irregular and there was some twitching of the arms. On the 21st drowsiness had deepened into coma, temperature 102·4°, pupils dilated and not reacting to light. Pressure symptoms being urgent, Mr. Pearce Gould cut down upon and divided the laminæ of the first lumbar vertebra. The theca was fully exposed and incised, some drachms of fluid escaped, the flow being increased with each expiration. A small drainage-tube was inserted in the subdural space and the margins of the theca attached to the sides of the wound. It was noted during the operation that as soon as the fluid was liberated the pupils, formerly dilated and inactive, contracted and regained their reflex activity at once. Twelve drachms of clear alkaline fluid were obtained, having a specific gravity of 1004, containing a large quantity of chlorides, but giving no reaction to tests for albumen or sugar, though a red-brown deposit in Fehling's solution occurred on standing. Subsequently the temperature rose to 104·8, the pulse became rapid and weak, and the child died five hours after the operation.

The fourth case, a girl aged thirteen months, was admitted under Dr. Cayley on April 13th, 1891. She had been ailing for a fortnight, but four days previously had been taken with convulsions, and there was a thin discharge from the right ear. On admission the child was semi-conscious, breathing irregularly, and with a pulse of 160. The fontanelle was rather sunken, and tache cérébrale readily obtainable. On April 15th convulsions occurred, and there was retraction of the head.

At 2.45 a Southey's tube was introduced into the theca

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vertebralis between two lumbar spines, and four ounces of cerebro-spinal fluid were withdrawn, the last two ounces being bloodstained. The fontanelle sunk in. Death occurred at 5.30. The fluid was alkaline, loaded with chlorides. It gave no reaction to tests for albumen or sugar, and had a specific gravity of 1006. The necropsy showed acute general tuberculosis, especially marked in the lungs. The prick in the theca could not be found, but there was slight blood extravasation on its outer surface. The cauda equina was unhurt. Though none of these cases were ultimately successful, no harm in any one resulted from interference. In some there was temporary relief of symptoms, and the necropsy in each case showed ample reason for the fatal termination, either in general tuberculosis or failure in maintaining the drainage. It is much to be regretted that the aperture was allowed to close in the second case, which promised well till pressure was renewed by reaccumulation of fluid. Further experience will no doubt enable a better selection of cases to be made, and the treatment to be carried out more effectually.

A RARE FORM OF HYDATID OF THE LIVER TREATED BY THE CAUTERY.

BY F. W. ROBINSON, M.B., M.R.C.S.

THE following case of abdominal tumour presents so many remarkable and unusual features that I venture to give its history in some detail. The patient is a young, spare man, aged twenty-four, who had always enjoyed good health up to the time that he presented himself to me in December last. For the previous six months, although he was conscious of an enlargement in the abdomen, he was in every way well, carrying on his ordinary occupation, that of a draper's assistant, without any inconvenience. He first noticed that he was getting stout; this gave him no uneasiness, however, and the tumour would probably have been allowed to grow had he not been attacked with severe abdominal pain about a week before he came to me. He has always been a steady man and very abstemious. There is no history of previous illness or of syphilis. He belongs to a consumptive family, two of his brothers having died of phthisis. The pain for which he consulted me was felt mostly over the region of the left hypochondrium and was severe, keeping him awake at nights. It usually lasted for some hours and then left him. In the intervals he was perfectly well. Physical examination showed his organs to be quite healthy, and with the exception of slight inspiratory dyspnœa, caused by the upper limit of the tumour preventing the descent of the lung, I could find nothing abnormal. His urine was healthy, his appetite good, and his bowels regular. The tumour in the abdomen was very extensive, and, the patient being a thin subject, its outlines were well defined. It occupied a large area, extending on the right side as low as to within an inch of the crest of the ilium. From this point it stretched obliquely across the abdomen to the left hypochondrium, disappearing behind the left lower ribs, which were pushed forward considerably. In this course the tumour crossed two inches below the umbilicus. On the left side in front it extended as high as the fourth rib, the heart's apex beating in the third intercostal space a little to the left of the sternum. On the right side in front it was continuous with the liver dulness. Behind on the right side the ribs were more prominent than on the left, and there was dulness from the angle of the scapula downwards to within an inch of the crest of the ilium. On the left side behind there was no dulness, and the respiratory murmur was normal. The parts then rendered most prominent by the tumour corresponded to the ribs behind on the right side below the angle of the scapula and the left lower ribs in front. The lower limit of the tumour in front presented to the touch a well-defined margin, which felt like the rounded border of the liver. There was transmitted pulsation over the front of the tumour. The surface was smooth, but not equally resistant, the parts of the tumour to the left of the umbilicus being firmer and more resistant than those to the right. Auscultation revealed no friction sound, and there was no fluctuation at any part. The tumour did not descend with inspiration. The greatest circumferential measurement was a line crossing immediately below the xiphoid cartilage—viz., thirty-five inches.

From the above it will have been gathered that the bulk of the tumour occupied the right side in front and behind. During the time previously to the operation that the patient was under my care the pain was very severe, and was evidently undermining his health. He became very prostrate, and was entirely confined to his bed, any movement giving him great pain. This was always referred to a region over the left lower ribs in front. From the above history I suspected hydatids, and Dr. Wardrop Griffith, who kindly saw the case for me, was also of this opinion. An exploratory needle was introduced and some clear fluid drawn off; this on examination gave a specific gravity of 1007 and an abundance of chloride of sodium. There was no albumen or bile. Unfortunately, no hooklets could be found. On January 4th, after a needle had been passed and fluid drawn off, I made an incision about four inches long from the xiphoid cartilage downwards. After exposing the tumour and isolating the peritoneal cavity with sponges, I incised the cyst wall to the length of the abdominal incision; several ounces of clear, limpid fluid escaped. The walls of the cyst were quite an inch in thickness and of cartilaginous hardness. The size of the cyst was about that of a "closed hand," and quite free from any communication with the rest of the tumour. It was somewhat irregular in shape, and was lined by a smooth membrane. Its walls were everywhere hard and resistant, and the surface somewhat reticulated. There was considerable hæmorrhage from the thick walls of the cyst, which it was found impossible to check, and it could only be controlled by sponges. I then examined the tumour with my hand in the peritoneal cavity. The sharp anterior edge of the liver could be easily felt, and rising from its upper surface immediately above this a smooth, globular, extremely hard mass extended over all parts within reach of the hand. In the hope of establishing a communication with other cysts, I pushed a curved rectal trocar through the right wall of the cyst in a direction downwards and outwards, and drew off several ounces of clear fluid. The patient was so collapsed from loss of blood at this stage that it was thought advisable to conclude the operation. The peritoneal cavity was well washed out, and the cyst wall stitched to the abdomen. Very severe shock followed the operation, and he subsequently had a sharp attack of peritonitis, which, however, subsided in the course of a week.

On Jan. 14th his temperature rose to 103°, and he complained of great pain; this, however, subsided under treatment, and the improvement continued until the 17th, when the pain and increased fever again recurred. As I considered that his symptoms pointed probably to suppuration in the cysts caused by septic infection through the opening made in the previous operation by the trocar, and which had now almost closed, I reopened the channel with a large trocar, letting out a quantity of pus, and then forcibly dilated the passage with forceps. I could now pass my finger into a cyst in all respects resembling the one first described, only smaller—that is to say, it had the same hard resisting walls, a smooth lining membrane, and a reticulated surface, and, with the exception of variations in size, this description will apply to all cysts opened up during the progress of the case. There was an immediate relief to all his symptoms, the pain completely subsiding and his temperature falling considerably; the improvement was only temporary, however, for in a few days all his symptoms recurred and gradually increased. On the 27th they became very urgent, his temperature was 105°, and his pulse very feeble and rapid. The pain was very severe and the prostration extreme. I determined therefore, if possible, to open up a communication through all parts of the tumour, and for this purpose I used the benzoline cautery. With the finger of my left hand passed through the trocar opening into the cyst previously opened up, and with my other hand on the surface of the tumour externally, I was able to form some conception of the amount of tumour intervening between my two hands. With the knowledge thus gained, I passed the cautery through the cyst wall in a direction downwards and outwards towards the right lumbar region, and opened up a large cyst exactly similar in character to the others described. A large amount of pus escaped. Adopting the same precautions as in the above, I now turned the cautery somewhat backwards, and opened up another large cyst from the floor of the last, pus also escaping from this. I then withdrew the cautery and

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passed it in a direction upwards and outwards through the right wall of the original cyst, opening another large cyst with a similar flow of pus. I then passed the cautery vertically downwards for about an inch or an inch and a half, but without result; and the same negative result followed when I attempted to pass it though the left wall. I was able, however, to open another cyst in the direction of the right hypochondrium. In all these cases pus escaped. The cautery in each instance passed through at least half an inch to an inch of dense cyst wall, and its entry into the cyst was indicated by a distinct slip followed by a flow of pus. Altogether six cysts, counting the orlginal one, were opened up in this manner; all were situated to the right of the tumour, all were of the character described above, and all had a large capacity.

The progress of the case after this operation has been one of uninterrupted improvement. Suppuration was very profuse for about a fortnight; the temperature, however, rarely exceeded 101°. During this time the lining membrane of the cysts was detached in long shreds of slough, and after this process was completed suppuration ceased, and the whole of this portion of the tumour seemed to collapse to its present dimensions. On the left side, in the situation of the punctures which failed to enter cysts, suppuration continued active, all the tissue between the punctures becoming involved in the process and breaking down to form a large cavity, from which pus continued to be discharged profusely for many months and in a diminished quantity up to the present time. It has, however, gradually granulated up so that now it is represented by only a small cavity.

It remains to say a few words about the size of the tumour and the present condition. For the last six months the lower margin of the tumour has occupied a situation of two inches above the umbilicus, whereas before the operation it reached two inches below. The greatest circumferential measurement is thirty-one inches, against thirty-five before the operation. The respiratory murmur has returned over the back of the right lung. The heart has not descended from its abnormal position. For many months the patient has enjoyed as good health as he did before the operation, and he has been quite free from pain. The failure to find hooklets and the absence of anything like daughter cysts in this case, throw some little doubt upon the diagnosis of hydatid disease; but its cystic character and its evident relation to the liver make it, I think, impossible to have been anything else. One can only speculate as to the form of hydatid represented in this case. That there has been an exceptional development of cysts is manifest, but the difficulty is to decide whether these cysts have been extruded from the wall of the parent cyst—as in the exogenous variety of hydatid,—or whether they have formed within the parent cyst. Ziegler alludes to both varieties under the names of "echinococcus granulosus" and "echinococcus hydatidosus" respectively. The points of special interest in this case are the size and number of the cysts forming the tumour, the thickness and hardness of their walls, and the success which has attended the treatment by the cautery.

Huddersfield.

A CASE OF DIGITAL EXPLORATION OF THE PYLORUS.

By JOHN W. TAYLOR, F.R.C.S.,

SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN; CONSULTING SURGEON TO THE WOLVERHAMPTON HOSPITAL FOR WOMEN; AND CONSULTING GYNÆCOLOGICAL SURGEON TO THE BIRMINGHAM AND MIDLAND SKIN AND LOCK HOSPITAL.

M. P——, aged forty-three, married, no children, came from a distance to consult me in July, 1889. She had history of vomiting for several months, the vomit being copious, acid, and frothy. For six weeks the vomiting had been constant after every meal. On examination, the stomach appeared to be moderately dilated. On careful palpation it was thought that a small amount of thickening in the neighbourhood of the pylorus could be detected, but this was always doubtful. The patient was considerably emaciated; her general condition, apart from this, appeared to be satisfactory. On inquiry into her past history, she stated that she had suffered from ulcer of the stomach with hæmatemesis fifteen years ago, but that since that time until the date of her present illness her health had been good. The illness fifteen years ago had been severe, and she was treated largely by hypodermic injections of morphia, the marks of which are still visible. A diagnosis was made of pyloric obstruction with moderate dilatation of the stomach, and it was considered highly probable that the gradual contraction of an old cicatrix following gastric ulcer might be responsible for her present symptoms. For two months the case was under occasional observation. She was treated first of all by a mixture containing carbolic acid and bromides, and afterwards by washing out the stomach, but without any success. The vomiting persisted, and the patient steadily but slowly decreased in weight week by week.

As the case appeared to be a suitable one for Loreta's operation, and no benefit had been obtained by other means, I proposed to open the stomach and examine the pylorus, dilating this if I found it to be contracted. This proposal was accepted by the patient, and on Sept. 18th of the same year I opened the abdomen above the umbilicus. No tumour was found on external examination of the stomach and pylorus, but the former was dilated and extended for some little distance below the umbilicus. The incision was enlarged downwards to the left of the umbilicus, and having drawn out the stomach I opened it midway between the curvatures at the pyloric end, inserted my finger and searched for the internal opening of the pylorus. For a considerable time I could not find it, the stomach from within feeling like a closed sac. When discovered, over a sharply defined ridge of mucous membrane at the highest part of the stomach on the right side, the finger entered it easily and could pass without difficulty down into the duodenum. There seemed to be but little, if any, increase of muscular structure in this situation, and the stomach and intestine were so acutely bent at the pylorus that the orifice was completely obscured until the stomach had been raised and a thorough search was made. With so limited an experience of digital exploration from within the stomach, I would not presume to say how much this differed from the normal; but on careful consideration of the case the kinking of the gut—which only thorough distension of the stomach in the recumbent position seemed able to undo—must, I think, have been the cause of the gastric dilatation and the prolonged and persistent vomiting. I closed the wound in the stomach with a continuous Lembert suture, and the incision in the parietes with silkworm gut. The patient recovered from the exploration without any untoward symptoms, nutrient suppositories being used exclusively for several days as food. From this time the vomiting ceased, and the patient has had no return of it. This is now more than a year ago. In a few months after operation she had increased two stones in weight, and when I showed the case at the recent meeting of the British Medical Association the improvement had been well maintained. Although I did not sew the stomach to the abdominal wall, adhesions have probably taken place between the site of the stomach incision and the under-surface of the liver or the parietes, it being the rule to find adhesions after intra-abdominal suture. If so, this has held the stomach at a higher level, and the passage of food from the stomach into the small intestine has been rendered less difficult.

The kinking of tubular viscera, such as bowel or ureters, is evidently a much more common cause of obstruction than has hitherto been generally recognised. In a case of enormous dilatation of the stomach with pyloric tumour which was under the care of Dr. Foxwell and myself the real obstruction was found after death not to be directly due to the tumour, but to a fold or kink of the intestine below the pylorus, and secondarily to the tumour, which was the cause of the kink. Within recent years (since 1885) Glénard has described a series of intestinal displacements, or "enteroptoses," as accompanying gastric neurasthenia with moderate dilatation, and his writings on enteroptosis, or Glénard's disease, have been either defended or thoughtfully considered by several other writers—by Professor Dujardin-Beaumetz, by Féréol, Trastour, Cuilleret, and Sanctis. According to his view many cases of gastric neurasthenia are due to direct mechanical causes; and although he places his fundamental lesion in prolapse of the right flexure of the colon, it is evident from his illustrations that, if these have any basis of fact, acute pyloric flexure, less in degree, but such as I have been describing, must play no unimportant part in the pro-

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duction of gastric symptoms. When a flexure as marked as in the case I have reported is found during operation, there can, I think, be little doubt that the attachment of the intestinal tube above the flexure at a slightly higher level will be likely to afford the most permanent relief to the patient.

Birmingham.

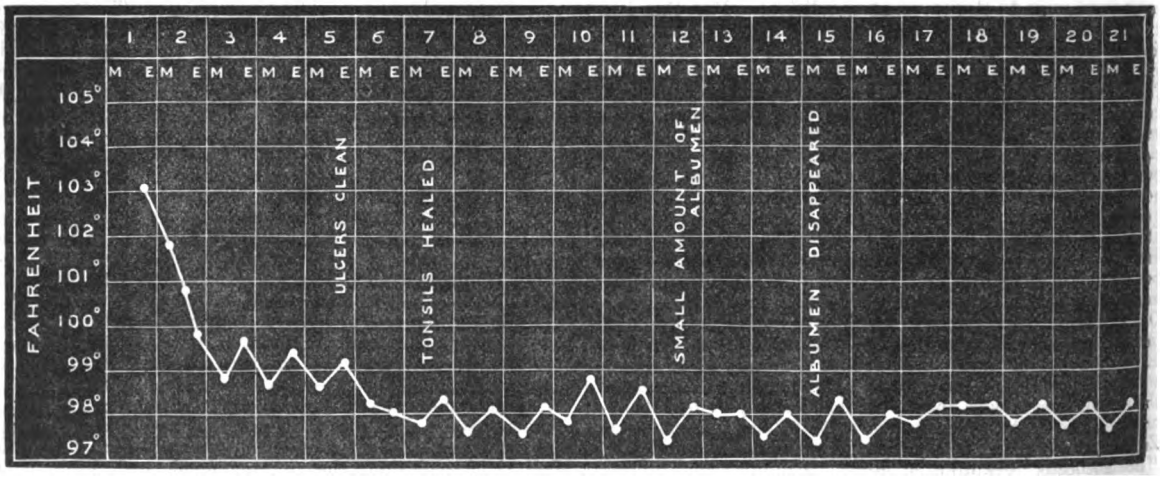
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE PREVENTION AND TREATMENT OF SCARLET FEVER.

BY W. BEZLY THORNE, M.D. ST. AND., L.R.C.P. LOND., &c.

THE prevention, treatment, and, perhaps I may venture to add, the cure of scarlet fever are subjects of so great importance to the medical profession and the public at large that I venture to offer for publication the following brief notes of a case which was under my care at the commencement of this year. If it stood alone, I should be compelled to admit that no practical conclusion could safely be drawn from it; but I have since gathered, from the perusal of a paper read before the Epidemiological Society by Mr. J. Brendon Curgenven,[1] that many other cases of the same disease have been somewhat similarly treated with like striking results, and I think that it cannot fail to serve a useful purpose to invite others who have practised the treatment advocated by Mr. Curgenven to bring forward the results which they have obtained. I ought to add that, now that I have had the advantage of becoming acquainted with the method adopted by that gentleman, I should modify my treatment so as to bring it more into harmony with his.



The patient, fourteen years of age, but of the physical development of ten, was seen within little more than an hour of the appearance of the rash, and was reported to have been "bilious and shivering over the fire" for something more than two days. The face was flushed and dotted with a scarlatiniform rash; the eyes were red and suffused, and both tonsils swollen, inflamed, and ulcerated; the pulse was 120 and the temperature 103°. She was immediately ordered to take internally every four hours five minims of the oil of eucalyptus globulus emulsified with powdered acacia, to use every hour a gargle of carbolic and tannic acids suitably diluted, to undergo daily inunction with an emulsion of eucalyptus oil of the strength of half a drachm to the ounce, and made up with glycerine, to promote adhesion to the skin, and to have the scalp and hair daily sprinkled with a spirit lotion containing eucalyptol, with a small quantity of almond oil. On the following morning—that is, in rather more than twelve hours—I found that the rash had receded from the face. I inquired of the nurse whether any was to be seen on the chest, which she had washed and anointed two hours previously, and was informed that it was "well out," but on examining that region found that it presented absolutely none. It was at that time making its appearance on the lower extremities, was well marked in the evening, and on the following morning had entirely disappeared. No desquamation followed. The chart tells the rest with sufficient detail. It should be added that although the house was occupied during the illness and up to the departure of the patient to the seaside on the twenty-second day by six full-grown adults and four younger persons whose ages range from nineteen to six, besides the sick one, the infection has not spread. A sheet, which was from time to time moistened with a dilution of sanitas, was fixed by the nurse to the door of the sick room in accordance with the instructions of the institution from which she was sent.

South Kensington.

[1] London: H. K. Lewis, Gower-street.

SERPIGINOUS ULCER OF BOTH CORNEÆ CURED BY SCRAPING.

BY A. G. MOSSOP, L.K.Q.C.P.I., L.R.C.S.I., M.R.C.S., &c.

MRS. A——, aged sixty-five, consulted me on the 24th of last November. The history given was of having a cold in her eye for a fortnight. On examination I found an ulcer having a diameter of about two millimetres, situated on the outer part of the left cornea, and extending on to the conjunctiva. The outline was circular. There was great photophobia and pain, with congestion of the conjunctiva and marked debility. I prescribed internally quinine and iron; locally atropine (four grains to the ounce), three times a day; belladonna lotion (two drachms of the extract to a pint of water, with an equal quantity of warm water), to be used frequently. I blistered the left temple and covered the eye. I continued this treatment for five weeks, with occasional blisters. The patient frequently suffered from intense photophobia, which was invariably relieved by the iodine liniment painted on the forehead and temples. During this time the ulcer had gradually enlarged in all directions, implicating the whole of the outer half of the cornea and neighbouring conjunctiva, the latter being greatly congested, and showed no signs of healing in any part. At times there was much pain in the eye, for which cocaine (4 per cent.) was freely used. I had previously tried the yellow oxide of mercury (twenty grains to one ounce of vaseline) for two or three days, hoping that stimulation would cause the ulcer to heal; but as the eye became much more irritable it was discontinued. The patient suffered greatly from pain up the left side of the head, and as the ulcer had become very deep there seemed great danger of perforation of the cornea. At this period an ulcer appeared on the outer edge of the right cornea. On Dec. 31st (rather more than five weeks after I first saw the patient) I placed a drop or two of cocaine in both eyes and thoroughly scraped the ulcers, using a sharp spoon, and then covered the surfaces with powdered boracic acid. Next day all pain had disappeared from the eyes and head, and the patient expressed herself as greatly relieved. Both ulcers healed completely during the

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next fourteen days without any further trouble. After the scraping, atropine alone was used three times a day. A good deal of opacity was left on the cornea first attacked, which has been greatly improved by iodide of potassium (five grains to an ounce of water), dropped into the eye three times a day. In fact, at the present time there is hardly any opacity, the patient having very good vision. This is the first case in which I have scraped an ulcer, and the result appears to me to be very satisfactory. I have been frequently very much impressed by the marked influence iodine liniment, painted on the forehead and temples, has in relieving photophobia, and by the value of iodide of potassium (five grains to the ounce), locally, in clearing up old opacities due to ulceration. I think the great power possessed by the cornea in recovering itself after severe ulceration or injury is very well shown in this case.

Newhaven.

A RARE CASE OF WATERY DISCHARGE FROM THE UTERUS.

BY SKENE KEITH, M.B., F.R.C.S. EDIN.

IN the month of September, 1888, I saw, in consultation with Dr. Gregory White of Bournemouth, an unmarried lady, thirty-six years of age. Dr. White wrote that he had known the patient for eight or nine years, and that for a long time before that period she had suffered from a profuse watery discharge from the uterus, "so profuse as to be beyond anything I have heard or read of." In 1885 a well-known abdominal surgeon was consulted, but did not recommend any operation. Later on another gentleman was seen. He curetted the uterus, and the operation was repeated twice by Dr. White, the result being that after the last scraping there was little or no discharge for three months. Dr. White was of opinion that nothing short of removal of the ovaries was likely to do permanent good; everything else had been tried, and had completely failed. It was found that the lady was in a highly neurotic condition. For many years all her dresses had to be lined with waterproof cloth, and every night her bed had to be made up as for a confinement; otherwise the mattress was certain to be destroyed. The discharge was thin, had a heavy sickly odour, and was like dirty water. Menstruation was regular, and had commenced at fifteen. At the age of twenty, and after a severe attack of inflammation of the lungs, menstruation ceased for some months. It was at this time that the watery discharge first commenced. It came then at irregular intervals and in gushes. Three years afterwards the discharge became more violent, and the lady suggested that this might have been owing to a chill caught while working in her district in rainy weather and during menstruation. The general health was not good. From this time onwards the watery discharge would cease during menstruation if the patient lay perfectly flat in bed; but if she got up the flow became very violent, and the hæmorrhagic discharge either ceased or at least appeared to do so. For ten or twelve years the discharge has been constant, night and day, with frequent sudden gushes in addition. The patient said that it was quite impossible to describe the amount of the floodings. Her description is, "it was greater than I can tell, drenching one from head to foot many times a day." The general health was entirely broken down, and large doses of bromidia were taken every night. The friends of the patient were most anxious that something should be done, and she herself looked forward to an operation as a perhaps speedy end to her unhappy condition. On examination, the uterus was found to be somewhat larger than natural, and on the left side a distinct swelling was to be felt. This, however, turned out to be a thin-walled cyst of the parovarium. There was therefore little in the local examination to guide one as to treatment, but the fact that the discharge had ceased for three months after curetting the uterus seemed to indicate that that organ was at fault; and if it could be rendered inactive, a cure would be the result. It was at the same time evident that the condition was not one of fluid collecting in a Fallopian tube and discharging at intervals, as there was a constant flow of the liquid. Removal of the ovaries was therefore advised, and was performed on Sept. 22nd, 1888. The uterus was flabby and larger than natural; the ovaries were somewhat small but apparently healthy; and the Fallopian tubes were soft, anæmic, and dilatable, and admitted an ordinary cedar pencil for some distance from the fimbriated end. No additional light was thrown on the origin of the disease by the operation. All discharge entirely ceased within a week, and there was not any abdominal disturbance. The patient, however, nearly died from an attack of double pneumonia, strophanthus apparently saving her life. Return to health was slow, but now, two years after the operation, the patient is able to write "my life is simply perfect happiness."

Charles-street, W.

SEQUEL TO A CASE OF ABDOMINAL SECTION.

BY EDWARD MALINS, M.D., M.R.C.P.,
OBSTETRIC PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

SOME years ago I published in THE LANCET (Nov. 1st, 1884) a series of cases of abdominal section for various purposes. Among these was one of a girl upon whom an exploratory opening was made, but the ovaries, apparently showing no signs of disease, were not removed. The following was the history then recorded:—"A girl aged nineteen attended the out-patient department of the hospital for several months, complaining of severe abdominal pain on micturition and defecation. Nothing abnormal could be found in the rectum or bladder. The uterus and ovarian regions were very sensitive. She became an in-patient for five weeks, was subjected to a variety of treatment, and discharged. Several weeks later her mother came and begged for something more to be done for her, as the pain was intense at times. She was readmitted and the abdomen opened. I examined the ovaries, which were intact, and therefore not removed; nothing wrong could be found elsewhere in the pelvis; it was washed out, and the wound closed. The pain never recurred, and the patient got quite well. Some time later she returned to say that her health was better than it had ever been, and to express her thanks for the operation." The case was briefly entered in the hospital "Record of Consultations and Operations" as follows:—"Uterus and appendages appeared normal on examination; nothing removed. Cavity of peritoneum opened by incision an inch and a half long between pubes and umbilicus. On digital examination the uterus and its appendages appeared to be normal. The abdomen was carefully closed with silk sutures (gauze); salicylic wool dressings; hæmorrhage trifling; no spray (ether)." On the strength of these facts, as above narrated, the case was published as one of neurosis or functional disorder, cured apparently by the effect of an exploratory operation. It seemed, however, that this improvement, so marked at the time, was not maintained, and, the girl relapsing, she was taken by her mother to the Women's Hospital, under the care of Mr. Tait. On Jan. 22nd, 1885, Mr. Tait states that he opened the abdomen again, and makes this assertion:—"I found that her statement [the patient's] was accurate. The uterine appendages on the left side had been completely removed; I found the ligature which was applied to the pedicle in its place; I picked it off and have it in my possession now. I found the disease, which I assumed as existing on the left side in July, 1884, very fully advanced on the right side, and I accordingly removed the appendages there." He addressed a printed letter to the chairman of the General Hospital Committee, which was also circulated outside, embodying this statement and commenting with undisguised vigour upon what he called an extraordinary mistake in the records of the hospital. The opportunity was taken in the same letter to discuss the question of hospital mortality "chiefly with a view to what he believed the real public welfare, and not from any spirit of antagonism to this great and valuable institution." The accuracy of the hospital record, I maintained at the time, was without doubt. It was attested by the house surgeon, Mr. Awdry, who wrote as follows:—"The case was one I corresponded with Mr. Tait concerning. If that be so, I am prepared to swear that no ligature was applied, and that no ovary was removed. If it was, you slipped it up your sleeve unobserved by me. I remember it very well, and in my letter to Mr. Tait I told him an exploratory incision had been made for purpose of diagnosis, and nothing else done." Some members of the committee also satisfied themselves as to the truth of the entered record by evidence from those present at the time of the operation. There was no motive in the account written by

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the house surgeon and signed by me, and no reason for its not being strictly correct.

Now, as to the sequel. The patient returned to my care at the General Hospital shortly afterwards as bad as ever. I have kept her under observation and treatment for years—indeed, ever since this alleged occurrence of both ovaries—"uterine appendages"—being *completely* removed. She has menstruated regularly; as she described it, "as regular as the clock." In the beginning of the year 1890 she was married, and on Dec. 24th in the same year gave birth to a full-grown living child. She brought the child to the hospital on Feb. 6th last as a living comment upon her previous illness and long-continued pain. The case is interesting; but I simply desire to state the facts as they happened, and to do so in order that those who are in possession of the printed letter referred to may add to this the subsequent history of the patient, and draw their own conclusions.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

A CASE OF OSTEO-SARCOMA OF THE PELVIS NEARLY FILLING THE PELVIC CAVITY; LABOUR AT TERM; CÆSAREAN SECTION.

(Under the care of Dr. HERMAN.)

WE have during the last few years published several[1] cases illustrating the treatment of patients by the Cæsarean section, or that method followed by Porro's plan of removing the uterus, for deformity with contraction of the bony pelvis, the result of rickets. The most frequent condition which requires this operation is undoubtedly some deformity due to disease of the pelvic bones, and it is rare to meet with a state such as that seen in this patient, where a large sarcomatous growth made any chance of delivering the child by the natural passages an impossibility. By the operation the life of the child was saved, and that of the mother not materially shortened; indeed, the partial examination made post mortem proved the success of the operation, so far as the parts more immediately involved were concerned. In cases such as this under the care of Dr. Herman the necessity for the operation is so evident that the question of delivery by any other method than through an abdominal incision does not require consideration. In malignant disease of the cervix, discovered only when full time approaches, it has been possible to remove the diseased uterus[1] and prolong the life of the mother, but the disease is usually too far advanced to admit of more than hysterotomy.[2] For the notes of this case we are indebted to Dr. E. O. Ashe, resident accoucheur, and Mr. J. Pugh Jones, clinical clerk.

H. S——, aged thirty-seven, was admitted into the London Hospital on March 2nd, 1891. When admitted, she was said to have had labour pains for eighteen hours. She could not say whether the membranes had ruptured or not. Her husband said that neither he nor his wife had supposed that she was ill until the advent of labour.

On admission, the patient was thin and cachectic-looking. The uterus reached to the ensiform cartilage. Between the pains a hard mass could be felt filling the left iliac fossa; in front of this a fluctuating swelling (the bladder). The perineum was pressed down and œdematous. Both labia were swollen and œdematous, the left the more. On vaginal examination, the pelvis was found so filled with a hard elastic tumour bulging from its left wall that the fingers could not be inserted between the right pelvic wall and the greatest diameter of the tumour. The urethra seemed blocked; a catheter could not be got through it. At 2.30 A.M. the patient was put under ether and Cæsarean section performed by Dr. Herman. On opening the abdomen the fluctuating tumour above mentioned was seen to be the full bladder. On opening the uterus, the placenta was found attached to the anterior uterine wall. It was cut through, and the child extracted by the foot. The placenta was then extracted, partly by digital separation and partly by compression of the uterus. The uterus was not turned out of the abdomen before it was opened, but the abdominal walls were pressed close to it by an assistant, and after the child had been extracted the uterus was expressed from the abdomen and the lips of the abdominal incision held close together behind it while the sutures were being put in. After the child and placenta had been removed a catheter was passed and the bladder emptied. A hypodermic injection of ergotin was then given. The uterus was then sutured (after its interior had been swabbed out with sublimate solution), first with interrupted silk sutures passing through the peritoneum about one-third of an inch from the edge of the incision, and not including the decidua, and then with a continuous catgut suture, entered and brought out on each side through the peritoneum, so as to bring the peritoneal surface close together throughout the whole length of the wound. The abdominal wound was then closed in the usual way. After the operation the pulse was 140, but in half an hour it had come down to 100. The child was living and survived. During the following three days the pulse varied between 120 and 140. The temperature showed a slight gradual elevation, reaching on March 5th 100·5°, which was the maximum. The patient complained a good deal of severe paroxysmal abdominal pain, which, except as to its unusual severity, seemed to be like after-pains, but there was no continuous pain and very little abdominal tenderness. From March 3rd onwards there was frequent vomiting and a good deal of flatulent distension of the abdomen. There was throughout need for the catheter, and great pain and difficulty in passing it. There was never more vaginal hæmorrhage than after an ordinary confinement. The œdema of the vulva and perineum persisted.

The patient died on March 5th, at 6 P.M. A complete post-mortem examination was refused, but the abdominal wound was reopened, and an examination of the pelvis and parts concerned in the operation was made by Dr. Charlewood Turner. There was no peritonitis. The uterine wound was perfectly healed, the sutures being buried and covered with a layer of smooth shining lymph. The mass in the iliac fossa and pelvic cavity was an osteo-sarcomatous growth, the interior of which was broken down into a cavity containing blood and pus. As the necropsy was incomplete, the precise mode in which death was brought about remained unascertained.

Remarks by Dr. HERMAN.—In this case Cæsarean section, which was absolutely necessary, failed to save the patient's life. Yet if we leave out of sight the disease from the effects of which the patient died—although the precise mode of death, the necropsy being incomplete, cannot be defined—and look at the operation only, the case was perfectly successful. There was no peritonitis, the uterine wound was well healed; there was no hæmorrhage. Had the patient been healthy there is no reason to doubt that she would have recovered.

[1] Brancamst, Sajous, vol. ii., 1890, p. 17.
[2] Gandell, Phil. Med. Times, 1890.

MANCHESTER ROYAL INFIRMARY.

TUMOUR OF THE BLADDER; OPERATION; RECOVERY.

(Under the care of Mr. SOUTHAM.)

THE case illustrates the facility with which a vesical growth may be removed through the perineum when it is of small size, of soft consistence, and situated near the neck of the bladder, so as to be easily within reach of the finger. If on exploring the bladder the tumour, on account of its size or situation, is found to be not removable by this route, the perineal opening is no bar to the performance of suprapubic cystotomy, but is rather useful than otherwise, inasmuch as it affords a means of combining free drainage in the most dependent position during the after-treatment of the case.

James T——, aged sixty-five years, was admitted on Aug. 13th, 1890. He had enjoyed good health until about six months previously, when he began to suffer from a painless hæmaturia, which at first was intermittent. Latterly

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the bleeding had become continuous and very profuse, so that he was in a very feeble condition. The urine was acid in reaction, and of a bright-red colour owing to the presence of blood in considerable quantity. It was passed without any pain or straining, and micturition was not increased in frequency. More blood was present at the end than at the commencement of the act, and it was often passed in the form of distinct clots. The history of the case and the character of the bleeding pointed to the presence of a vesical tumour, probably of the nature of a papilloma, and the diagnosis was confirmed on careful examination of the urine, for on several occasions minute particles were found floating in it, which, examined microscopically, showed the typical structure of villous processes. Removal of the growth having been decided upon, it was resolved to make the attempt through a perineal opening, for on account of the weak state and advanced age of the patient it was thought that perineal urethrotomy would be a less serious procedure than supra-pubic cystotomy. If, however, this was found impracticable, then at once to proceed to open the bladder from above the pubes.

August 28th.—Perineal urethrotomy was performed in the usual way. On introducing the finger into the bladder a sessile tumour the size of a walnut was felt on the left side at a little distance from the neck. It was of such soft consistence that it was easily removed by scraping with the finger nail and a Volkmann's spoon. Somewhat free bleeding attended the process, but it was arrested on washing out the bladder with hot water. The perineal wound was somewhat slow in healing, urine escaping through it until the end of the fourth week. After this date it was completely closed, and the patient left the hospital a fortnight later, passing all his urine by the natural channel, there having been no bleeding since the operation. Microscopical examination of the growth removed showed it to be of the nature of a papilloma.

Feb. 1891.—There has been no recurrence of the hæmorrhage. The patient remains in a feeble condition, but is entirely free from bladder symptoms.

SAMARITAN HOSPITAL FOR WOMEN, BELFAST.

TWO CASES OF RETENTION OF URINE, CAUSED BY THE PRESSURE OF PELVIC TUMOURS AND FOLLOWED BY SUPPRESSION.

(Under the care of Dr. W. K. MCMORDIE.)

THE following cases demonstrate the fact that advanced chronic disease of the kidneys, the result of obstruction to the urinary passages, whether by stricture of the urethra or the pressure of growth from outside, not uncommonly proves fatal from suppression of urine when the patient is subjected to operation. That the operation was necessary in each case there is no doubt; it is to be regretted that the patients did not submit themselves at an earlier date, for it is probable that in both success would have been attained had they done so. The second case illustrates some of the risks attending tapping ovarian cysts.

CASE 1. *Vaginal fibroid, causing complete retention.*—M. F——, aged forty, a single woman, was sent to the hospital on July 30th, 1890, by Mr. Beck. He stated in a letter "that the vagina was blocked up with a tumour, that she could not micturate, and that there was no room even for the smallest catheter." In addition to what was described in his letter the abdomen was distended with a fluctuating tumour reaching as far as the umbilicus. Both lower extremities were swollen and œdematous. For a year previously to her admission she had suffered from constant hæmorrhage, a frequent desire to micturate, and pain in the hypogastric region. She was weak and anæmic. For seven days previously to her admission she had been unable to pass any urine. Temperature 101°. Under the influence of an anæsthetic the tumour was successfully removed. It grew by a short thick pedicle about one inch in breadth from the fundus uteri. Over three quarts of fetid ammoniacal urine were drawn off. Only a very small quantity of urine was secreted for some days. This was followed by complete suppression, and she died from uræmic poisoning on Aug. 13th.

Remarks.—Such a state of matters as is here described caused by pressure must be very rare; but partial retention caused by pressure of pelvic tumours and adhesions is a frequent cause of the bladder troubles so common in female ailments. With partial retention in existence for some time, then complete retention suddenly coming on would be more likely to act quickly on the kidneys.

CASE 2. *Bladder cyst caused by an adherent ovarian cyst.*—S. W——, aged fifty-six, with a large ovarian tumour, was sent to the Samaritan Hospital for operation by Dr. Forsythe of Coleraine. The measurement round the umbilicus was forty-nine inches. The patient had been tapped once three years previously to her admission to hospital. She complained of a constant dribbling of urine, and on passing the catheter not more than an ounce of urine was at any time drawn off. Sp. gr. 1015. On July 8th, the usual incision for an ovariotomy having been made, twenty-eight quarts of thick dark fluid were drawn off. No separation in any direction could be made between the cyst wall and the peritoneum. What appeared to be a second cyst protruded from the pelvis into the cavity of the large cyst. A trocar was passed, and three pints of fetid urine were drawn off. The hole in the bladder was carefully sutured with fine catgut, and no trouble followed from this mishap. A drainage-tube was left in and the large cavity daily washed out with a 1 per cent. solution of boracic acid. The cavity steadily contracted without an unpleasant symptom for four weeks, when no more than three quarts of water could be injected. The patient could walk about and her recovery seemed assured, when suddenly symptoms of uræmic poisoning appeared and she died on Aug. 14th.

Remarks.—At the operation the anæsthetic was administered by Dr. McKinney and Dr. Henry O'Neill assisted. The very intimate adhesion between the cyst wall and the peritoneum was no doubt caused by the long continuance of the tumour and the fact that it had been tapped three years before I saw her. Tapping ovarian cysts is even yet an operation frequently performed in this part of the kingdom. In cases of simple cysts often repeated again and again, it is one of the great difficulties operators have to contend with.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY

The Value of Tuberculin in the Treatment of Surgical Tubercular Diseases.

AN ordinary meeting of the Society was held on April 28th, the President, Mr. Timothy Holmes, in the chair.

Mr. WATSON CHEYNE read a paper on the Value of Tuberculin in the Treatment of Surgical Tubercular Diseases, of which the following is an abstract. In this preliminary communication the author referred in the first place to the method of administering the drug. In most of his cases the mode of administration was that recommended by Dr. Koch, in which the occurrence of reactions was the guide to the dose. The objections to this method were pointed out, and another plan, which the author had been using for some time, was described. It consisted in establishing tolerance as regarded the general action of the drug as quickly as possible, and then repeating the doses in rapid succession so as to keep up a constant local action. For example, if the initial dose of, say, two milligrammes produced fever, the second dose of the same amount was given as soon as the fever had subsided, probably in two days; so with a third: and in most cases after four or five injections no further febrile reaction occurred with this dose. The same quantity was then injected twice daily, and after two or three days thrice daily. After three or four days the amount was increased, till ultimately doses of one to two or more decigrammes were given thrice daily; in this way a large amount of the fluid could be rapidly introduced without the patient suffering from fever after the first three or four doses, and with marked improvement as regarded the local condition. Another method of administering the fluid was that of giving considerable doses at long intervals so as to avoid the establishment of tolerance. The method most commonly employed of giving small doses at considerable intervals was condemned as being one hardly likely to do any good, and not unlikely to increase the risk of dissemination of

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the disease. The various phenomena observed after injection were referred to very shortly, and the dangers were then discussed. It was pointed out that the danger of dissemination of the disease had been greatly exaggerated, and that the main danger was where the tubercular disease was combined with sepsis, and was due to extension, not of the tubercular, but of the septic process. The question as to what the treatment could do was discussed on the basis of the microscopical appearance of tissues removed after treatment, of experiments on animals, and of clinical observations on man, and the following conclusions were arrived at:—In the first place, in the majority of cases the first effect of the treatment was to produce improvement as regarded the tubercular disease, the degree of improvement varying according to the circumstances of the individual case and the mode in which the remedy was applied; but it was very rarely that this improvement went on to complete cure unless aided by other measures. In most cases, after improvement had gone on for some time it came to a standstill, and if the treatment was given up at this stage, or within three months and a half (the limit of the author's experience), relapse would almost certainly occur. The great question, one which, however, affected medicine more than surgery, was whether by continuing the treatment the disease could be kept at a standstill. The facts observed by the author seemed to show that by continuing the treatment with this object in view the condition of standstill could be maintained in a number of cases for a considerable time. As regarded the length of time, the author could only say four months and a half, the length of his experience; but it seemed not improbable that it could be maintained longer, and of course the longer it was maintained the greater the probability that the tubercle bacilli would die out, and the improvement become permanent. As had just been said, this question affected medicine more than surgery, for in surgery matters could generally be hastened in other ways. The diagnostic value of the remedy was then considered. As regarded surgical practice the conclusions provisionally come to were the following: In cases of intractable lupus tuberculin was of great value when combined with other measures. In tubercular glands it hardly repaid the trouble and inconvenience except in so far as it might reduce the periadenitis, and thus pave the way for operative measures. In diseases of joints the question as to its place could hardly as yet be definitely settled, but the author was inclined to think that it was best not to employ it in the early stages, but to reserve it as a means, after operation, of aiding the prompt healing of the wound. It might also be of value in enabling the surgeon to perform less severe and radical operations than he might otherwise do. In cases of osseous disease it would probably only be useful after operation. In genito-urinary tuberculosis it could seldom come into play on account of the great frequency with which these diseases were combined with sepsis, and for other reasons. In tubercular laryngitis it appeared to be of use in certain cases. While admitting the small value which could be attached to his opinion as regards phthisis, the author could not but think that the dangers of tuberculin in that disease were being unduly magnified and its benefits unduly decried. Some of the imperfect results were no doubt due to timidity in the application of the remedy. Mr. Cheyne showed, by means of the magic lantern, some excellent photographs, taken by Mr. Andrew Pringle, of microscopical preparations of tubercular lesions at various stages during the treatment. They exhibited well-marked retrogressive changes, the epithelioid cells becoming disintegrated, the intermediate zone being invaded with small round cells, and the gradual development of these into fibrous tissue.

The debate on this paper was adjourned to a special meeting of the Society on Thursday, May 7th.

CLINICAL SOCIETY OF LONDON.

Old Dislocation of Patella reduced by Intra-articular Operation. — Pseudo-hypertrophic Paralysis. — Estländer's Operation. — Gastro-jejunostomy for Pyloric Obstruction.—Congenital Heart Disease.—Recurrent Dislocation of Patellæ.—Lupus Erythematosus cured by Internal Treatment.—Plastic Operation for Vesical Extroversion.

AN ordinary meeting of this Society was held on April 24th, the President, Sir Dyce Duckworth, in the chair.

Mr. BILTON POLLARD showed a girl with old (congenital?) Dislocation of the Patella reduced by an intra-articular operation. There was a history of injury in the year 1885, but the limb had been weak as long as she could remember. An operation for genu valgum had been done, but this did not improve the position of the patella. He first cut down on the outer side and divided the vastus externus, and then an incision was made on the inner side of the patella and the joint opened. The outer border of the trochlear surface of the femur was removed with the chisel and a broader articular surface cut. A portion of the capsule on the inner side was resected in order to brace up the structures in that situation. The result was a perfect restoration of the functions of the joint.

Dr. J. TAYLOR showed, for Dr. Hughlings Jackson, two cases of Pseudo-Hypertrophic Paralysis. The first was a boy aged thirteen, who had enlargement of the calves, wasting about the shoulders and thighs, characteristic gait, lordosis, and inability to go upstairs without help. The lowest part of the trapezius was paralysed; the displacement of the scapula, however, was not characteristic of this lesion only, but was due to concomitant paresis of the levatores anguli scapulæ. A boy aged eleven, the brother of the preceding, was also exhibited. He was suffering from the same disease, but of a much less advanced form. No other members of the family were affected.

Dr. J. TAYLOR likewise showed, for Dr. Bastian, a girl aged fourteen affected with the same disease in a very marked form. There were weakness and atrophy of the biceps, of the muscles about the scapula, and hypertrophy of the triceps, deltoid, and calf muscles. The case was shown on account of the occurrence of a pseudo-hypertrophic condition of the first dorsal interosseous muscle in each hand and of the marked enlargement of the tongue. Both conditions were uncommon, the former, according to Dr. Gowers, being extremely rare. There was here also no family history of similar affection.

Mr. F. B. JESSETT exhibited a girl, aged seventeen, on whom he had performed Estländer's Operation or Thoracoplasty. In 1886 she was attacked by pleurisy in the left side, followed by empyema, for which drainage-tubes were inserted. In 1888, an intractable sinus being present, and the patient losing flesh, an incision was made, and considerable portions of the third, fourth, fifth, sixth, and seventh ribs were removed. After a few months the sinus closed, and she was at present quite well, there being very little flattening of the chest and only a slight degree of spinal curvature.

Mr. JESSETT also brought a woman, aged fifty-six, on whom Gastro-enterostomy had been performed for pyloric cancer. She had complained of dyspepsia for some years, and in 1889 felt a lump in the epigastrium, which had slowly increased in size, causing pain and vomiting. In April, 1890, the growth having much increased and the stomach being greatly dilated, gastro-jejunostomy was performed, the incision being in the right linea semilunaris. Senn's plates were used, a few Lembert's sutures being added for precaution. She made a good recovery, and was at present taking solid food, which she could not do before the operation.

Dr. EWART and Mr. W. H. BENNETT likewise showed a case of Gastro-jejunostomy two months after operation. The patient, a drayman aged fifty-two, was admitted into St. George's Hospital under the care of Dr. Ewart on Feb. 14th, 1891, with symptoms of pyloric obstruction. There were great emaciation, frequent vomiting, and a constant feeling of discomfort and distension over the whole abdomen. The stomach was much dilated, the vomited matters very acid, and to the right of the umbilicus a hard movable mass, about three inches in its longest diameter, could be felt. On Feb. 27th, Mr. Bennett performed abdominal section through the middle line above the umbilicus, and found the pylorus involved in a movable tumour free from adhesions, the nature of which was not quite clear, although it was probably malignant. Gastro-jejunostomy was then performed, Senn's decalcified bone plates being used. The patient quickly rallied from the immediate effects of the operation, and made a rapid and uninterrupted recovery. Food was given by the mouth within twelve hours after the operation, and retained with comfort. No dyspeptic symptoms of any kind had occurred since, although the patient's appetite was very large. The size of the stomach was only about half of that prior to the operation. The motions, formerly very pale, were now natural in colour, and up to the present date there had been an increase in weight of two stones and a half. In spite

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of careful examination of the motions, nothing had been seen of the bone plates or the sutures used in approximating them.

Dr. F. HAWKINS showed two cases of Congenital Heart Disease. The first occurred in a boy aged twelve, and was regarded as an instance of pulmonary stenosis with regurgitation. It was peculiar in that the heart lay to the right side, while the other viscera were not displaced. The second patient was a girl aged nineteen, and the lesion was pulmonary stenosis.

Mr. W. H. BATTLE exhibited a woman aged twenty-one, who was the subject of Recurrent Dislocation of the Patella. It was curious that it did not come on till she was sixteen years of age. She was able to keep the bones in place by a splint, to which was attached a semilunar pad on the outer side.

Mr. BATTLE also showed a woman aged twenty-seven who had been the subject of Lupus Erythematosus, which had been cured by internal treatment only. The drugs used were liquor arsenicalis in doses increased from three to ten minims, and combined with increasing doses of the syrup of iodide of iron.

Mr. BATTLE likewise showed a third case of Plastic Operation for Extravasation of the Bladder in a boy aged ten, the result being a very good one. On March 7th a flap was turned down from the median part of the abdomen, the scrotum was dragged up, and the penis brought out through a hole made below it. On April 1st the skin covering the abdominal walls was separated laterally and brought together in the median line. There was no suppuration, the boy was wearing a urinal and walked with comfort.

Dr. SAMUEL WEST sent a case of Spontaneous Fracture of both Calcanea in a case of tabes dorsalis. The patient was a woman aged fifty-one, who had been tabetic for five years. Six weeks ago, on attempting for the first time to walk with assistance, after lying in bed for three months, she noticed something snap in her right foot. Three days later, on again attempting to walk, she experienced a similar snap in the left foot. It was found on examination that a semilunar fragment two inches long and an inch broad was detached from either calcaneum and drawn up about one inch by the calf muscles. There was fibrous union on each side, with some bony union also on the left. The fracture was attributed to the fact that in walking the heels were brought forcibly to the ground. There was a history of gout.

Mr. W. H. BROWN of Leeds read a paper on a case of Gastro-jejunostomy. The patient, a woman aged fifty-six, had suffered from dyspeptic trouble for twelve months. Vomiting had commenced and excruciating pain followed on the introduction of the smallest quantity of liquid into the stomach. There was a well-defined sausage-shaped swelling to the right of the umbilicus, and the outline of the distended stomach could be readily seen. The abdomen was opened in the middle line, and the growth made out to be involving the pylorus and first part of duodenum. A piece of jejunum was seized and opened, and a second opening was made in the anterior wall of the stomach and Senn's plates introduced. The patient bore the operation well, and the pain entirely disappeared. She was able to take liquid food well. She lived four months after the operation in comfort, the pain only returning a few days before death, which was due apparently to the extension of the disease.—Mr. F. B. JESSETT asked if care had been taken to make the opening in the jejunum as high up as possible. The directions usually given to find the upper part of the jejunum were misleading; for, the colon being hooked up, the omentum should be drawn over to the right, and not to the left, as generally recommended. He had performed this operation five times, with three successes, two of the patients being at present alive. He inquired as to the material used for sutures. He had at first used silk for all the sutures, but finding it in one case undigested he had since used chromicised catgut, which answered admirably. In one case it was on record that the communication had closed up; therefore the opening both in the stomach and the small gut should be large, and the sutures placed near the opening. The patient might be fed next day with perfect safety. He had generally used from three to six Lembert's sutures to prevent tilting of the plate.—Mr. W. H. BENNETT said that these cases showed the greatest conceivable improvement after this operation, though of course it left the disease behind. As compared with pylorectomy and the modified Loreta's operation, it was far superior under any circumstances, even if the disease were not malignant. It diverted the flow of digestive fluid from the seat of the disease, and the patient was as well off with the artificial as with a real pylorus. If pains were taken to get near the duodenum no harm to the digestive process resulted from this short-circuiting. It was very important to feed these exhausted patients very early. He agreed that the omentum should be drawn over to the right, and not to the left, and that accessory Lembert's sutures were useful to prevent tilting of the plates. In the plates themselves he recommended catgut for the lateral and silk for the end sutures. He asked the reason for the vertical incision in the stomach.—Mr. STEPHEN PAGET understood that swelling of the parotid was observed. This was not to be considered as a sign of sepsis, for he had found that in other cases of abdominal section it had been of innocent character.—Mr. C. J. SYMONDS said he had performed this operation two days ago. He had difficulty in finding the jejunum, for he had pushed the omentum over to the left. He was a little afraid that the plates he had used might give him trouble owing to their size; the small intestine looked very flat after the plate was inserted. To prevent kinking he had also fixed the jejunum to the stomach a short distance beyond the plates.—Mr. LANE said he had been in the habit of reinforcing the plates by secondary sutures, and as he fixed the posterior ones before he drew the plates together, he had no difficulty in getting them in place.—The PRESIDENT remarked that Mr. Paul of Liverpool had been recently using a cylinder of decalcified bone for this purpose, and the opinion in that town seemed to be that it was a great improvement on the previous methods.—Mr. W. H. BROWN, in reply, said that he found the top of the jejunum by turning the omentum to the right and tracing the small gut up to its origin. He used silk both for the bone plates and the extra sutures. He was glad to know that Senn in a recent paper had advocated the use of these accessory sutures. He performed, previously to the operation, several experiments in the post-mortem room, and from what he saw there he was convinced that the vertical incision in the stomach was the best, and the parts appeared to lie more naturally afterwards. It was the fourth time that he had observed intercurrent parotitis in abdominal operations, the others being two simple cases of ovariotomy and one of exploratory laparotomy. He was glad to hear early feeding so well spoken of, as he was warmly criticised for adopting it in his case.

MEDICAL SOCIETY OF LONDON.

Genu Recurvatum.—Ectopia Viscerum.—Excision of Tongue.

AN ordinary meeting of this Society was held on April 27th, the President, Dr. Douglas Powell, in the chair.

MR. EDMUND OWEN showed an Irish girl of three years and three-quarters who had been the subject of congenital Genu Recurvatum. The mother had had typhus fever seven or eight months before the confinement, when she had imagined herself to be a fish. It was improbable that this active imagination had any influence in causing the physical defect. The child had evidently been badly packed in utero, for though it was a "head first" presentation, the feet emerged resting upon the shoulders. On admission to the Great Ormond-street Hospital the child's favourite attitude was sitting, with the back of each foot resting upon the collar-bone, the knees being hinged with the salient angle backwards—like a stork's. The heads of the tibiæ were displaced so far forwards upon the trochlear surfaces that the back of the femoral condyles and the intercodylar notch could be clearly defined in the popliteal space. There was a transverse furrow at the front of the knees, in the retiring angle, close above which the patellæ could be made out. Flexion of the knees in the proper direction was absolutely impossible; even when the child was under the influence of chloroform the legs could not be brought into a line with the thighs. On Feb. 11th Mr. Owen divided the quadriceps extensor on each side by a free transverse incision, which fully exposed the trochlear surfaces. The wounds were closed with continuous sutures and dressed with sublimate gauze, the limbs being fixed straight in a box splint. The incisions healed promptly. The knees could now be flexed to a right angle, and the child was acquiring some power over them. Mr. Sydney Jones, the registrar, noting on April 21st

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that she could easily stand on the right leg. Massage and manipulation were still being employed. Mr. Owen remarked upon the comparative rarity of the deformity. The instances which he had previously met with had been in infants; he had never seen so marked a case as this, nor one which could not be remedied by treatment less severe than that of myotomy. This operation had been preferred to tenotomy of the ligamentum patellæ, as possibly promising a better immediate result and permanent improvement.—Mr. ADAMS congratulated Mr. Owen on the excellent result he had obtained, though he himself would have preferred to have done the operation subcutaneously.

Dr. T. ELLIOTT of Tunbridge Wells read a paper on, and showed a specimen of, Ectopia Viscerum in a newly born male infant. The mother had had a favourable labour. She was thirty-eight years of age, had borne seven children before, and the only one presenting any abnormality was the eldest son, who had a slight deformity of the left ear. There was no history of "maternal impression." The child was born at full term and was well developed and perfect in every respect, except in the region of the abdomen. It weighed 6 lb. 6 oz., and was eighteen inches high. In the abdominal wall there was a large opening situated to the right of the attachment of the umbilical cord, measuring four inches and three-quarters in circumference. The organs which had protruded through the opening and were lying outside included the lower three-quarters of the stomach, the whole of the small intestine and colon to within three inches of the anus, the testes, and mesorchia, and a part of the bladder. All the coils of the intestine were matted together by recent lymph, and the remaining viscera which protruded were similarly covered.—Mr. EDMUND OWEN had seen two or three examples of this surgical curiosity, and it was not uncommon every now and then to see a small coil of gut in the proximal end of the cord. He had always found a thin filmy membrane covering the bowel, but in the case under discussion this film appeared to have been ruptured in the act of birth.

Mr. WHITEHEAD of Manchester read a paper on 104 cases of entire Excision of the Tongue, which will be published in full in our next issue.—The PRESIDENT inquired if there was any difficulty in deglutition after removal of the tongue, necessitating food to be taken in the semi-solid form. He asked also if there were any danger of food regurgitating into the trachea and whether recurrences were commoner *in situ* or at distant parts. The chief object of the operation was the relief of suffering caused by the local disease in the mouth, and if recurrence *in situ* were commonest and the patient stood the chance of having the same suffering in the mouth in a month or two he would, perhaps with some reason, be reluctant to submit to an operation; but if recurrence took place in a distant part, then death generally happened in a gentler manner. He inquired whether the very large dose of morphia had been administered by mouth or subcutaneously.—Dr. PURCELL said he had adopted this method of operating since the appearance of Mr. Whitehead's first paper on the subject. He preferred to have the patient with his head hanging over the end of the table, for this gave better light and facilitated manipulation. He did not find that dividing the jaw after Syme's method was a satisfactory procedure, for recurrent disease soon attacked the bone, and the state of the patient was made worse. He preferred to operate with the galvano-cautery, the wire being passed from outside the neck through between the two pillars of the fauces, and the amount of electricity being limited to one cell of a Groves' battery in order to cut slowly. Kocher's method of operating was efficient in bad cases. After the operation he was in the habit of feeding by the œsophageal tube.—Mr. BRYANT said that his ideas on this subject were in accord with those of Mr. Whitehead. In his early days he used the galvanic écraseur, and was so pleased with it that, after once abandoning it, he returned to it again. But later still he had discarded it once more on account of the septic condition in which it left the mouth after the operation. The scissors or the knife was preferable, and he had invariably adopted Mr. Whitehead's method for the last few years. He pointed out that a finger placed at the back of the tongue readily controlled the lingual arteries, and they could be then picked up and twisted. The operation could thus be made practically bloodless. It was perfectly right to remove the glands when one could, but he had not always done this at the same time as the ablation of the tongue; he preferred, especially in old subjects, to leave it till a few days later. He looked upon the ligature of the linguals from the neck as an unnecessary procedure, though the same incision was handy for removing the glands beneath the jaw. As to taking away infiltrated glands deeper down, he had grave doubts whether this was altogether justifiable, and he should not have much faith in recommending it. As to results: he knew of a great many of his patients who were alive at the present time whose tongues he had removed ten or twelve years ago. Referring to the recurrence of growth *in situ*, he thought that usually it was the continued growth of something which had been left behind at the first operation. He always recommended an early attack on such cases, and he quoted three instances where excellent results had followed these second removals, one being alive thirteen years afterwards, one six years, while the third had not been heard of since three years after the operation. He considered that death in two-thirds of the cases occurred through involvement of the deeper set of cervical glands. As a varnish, he had been in the habit of using the ethereal solution of iodoform with collodion, and into this he dipped bits of iodoform gauze, which he placed on the stump.—Mr. BUTLIN, referring to the classification of cases, said that it was not so much the comparison of cases where half or the whole of the tongue had been removed, as to whether or not there were complications present, such as adhesion to the jaw or involvement of glands. He was astonished at the number of cases in which Mr. Whitehead had removed the entire tongue. In the London hospitals, if there were growth anteriorly, it was the custom to remove only a portion of the tongue, and recurrence after this partial operation was rare. He remarked that it was very difficult to tell where the secondary glandular affection would occur. Operations on what would be called hopeless cases were not usually practised, but operation was only done where there was a reasonable chance of removing the whole of the disease in the mouth. In one case he dissected extensively in the neck and laid bare the carotid sheath; but he regretted doing so, for the wound did not heal, and he believed that the patient died somewhat earlier than he otherwise would have done. Our hopes usually lay in cases which allowed a small operation for removal of limited cancerous disease. He asked the author if he had adopted the bringing together of the two sides of the wound. He himself usually covered it over with iodoform, and fed either with an œsophageal tube or with a feeder to which a rubber tube was attached. The mortality after the operation for removal of the tongue was at present very small, and the deaths from septic pneumonia had diminished very largely under modern methods of treatment.—Mr. WHITEHEAD, in reply, said he had allowed his patients to swallow food naturally on the day after the operation without any adventitious aid whatever. Recurrence was usually confined to the cervical glands. As he had had to tie the linguals in every case in which he had used the galvanic écraseur, this led him to abandon that method and remove with scissors, the arteries being twisted. He urged the importance of recommending the patients to submit to early removal, and not to wait until the glands were involved. He had never found it necessary to apply pressure to the back of the tongue. For checking hæmorrhage he employed torsion only, and he had never once had secondary hæmorrhage since he had adopted it. When the disease extended to the glands their removal was practised to relieve pain. As for the danger of operating on the neck, every vessel and nerve on one side might be cut and the patient be practically none the worse for it, and he saw no reason why in removal we should stop short of any boundary save that which limited the disease itself. He had practised sewing up the wound by bringing the mucous membrane together from before backwards, but he had found this impede considerably the movements of the epiglottis.

HARVEIAN SOCIETY.

Offensive Lochia.—Leucorrhœa.

A MEETING of this Society was held on March 5th, Mr. H. Cripps Lawrence, President, in the chair.

Dr. BOXALL, referring first to cases of sepsis after childbirth without fetor, related a case in which the patient died of septic infection, although the lochia proceeded

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naturally without offensive smell. Turning next to cases without sepsis, he related other cases in which fetor was present without septic symptoms or illness of the patient. He remarked that in the life history of saprophytic germs lay the explanation of fetor, and that in them and their liability to be associated in various ways, according to circumstances, with pathogenic organisms was to be found the reason why fetor is often present, but sometimes absent, in cases of septic infection (septicæmia). And, further, that, as toxic principles evolved during the process of putrid decomposition were by no means necessarily absorbed into the system of the patient, septic intoxication (sapræmia) did not invariably take place even when the discharges became offensive. He had tabulated a series of 120 cases of offensive lochia which occurred among 640 patients under close observation in the General Lying-in Hospital, where they were all placed under similar conditions, the whole series being completed before the introduction of sublimate as an antiseptic. By the aid of these tables he showed the influence of the character of labour on the incidence of fetid discharges during the puerperium. He discussed the relation of fetid discharges to elevation of temperature, and proved that, though fetor was as a rule associated with fever, the rise of temperature almost invariably precedes the altered character of the lochia. He further discussed the relation which fetor bears to sepsis, and demonstrated that as an indication of septic infection (septicæmia) or even of septic intoxication (sapræmia), the presence or absence of fetor in the lochial discharges is by no means an infallible guide. He remarked that in every case of offensive lochia, as fetor invariably indicates a failure to maintain local asepsis, vigorous antiseptic measures should be at once instituted. He deprecated the use of mere deodorants, and recommended that the vulva and vagina should be first washed and cleansed with a potent antiseptic such as sublimate, and that only after this has been done and where real necessity exists should the cleansing be extended to the interior of the uterus.—The PRESIDENT commented on the importance of remembering that fetor did not necessarily imply sepsis and *vice versâ*.

Dr. W. S. A. GRIFFITH, F.R.C.S., read a paper on Leucorrhœa. The author defined a vulvar discharge of mucus to be leucorrhœa where the quantity exceeds that which can be removed by the usual daily bath. Any discharge causing cutaneous irritation, or which is offensive though not excessive, he also regarded as leucorrhœa. Leucorrhœa might arise in three ways: (1) By the formation of an excessive quantity of an otherwise normal secretion; (2) by alterations in composition, as well as in quantity, of the ordinary secretions; (3) by the addition of some extraneous secretion. The normal secretions were, he said, almost entirely formed by the mucous membrane and glands of the uterus. The vagina had no glands, and being lined with true skin, not mucous membrane, could have no proper secretion, though it is possible that even in health there may be some transudation of fluid from its vessels. Vaginal mucus was uterine mucus retained in the vagina, and its acidity was due to decomposition. The mucus formed in the body of the uterus differs very slightly, if at all, from that formed in the cervix; it was perhaps less viscid. At the vulva the mucus of Bartholin's glands was added to that from the uterus; the other glands of the vulva were sebaceous and sudoriparous. The conditions which gave rise to leucorrhœa were described in detail, as well as inflammatory collections of fluid (pus or serum), which opening into the genital tract may also give rise to leucorrhœa. In the large majority of cases leucorrhœa comes from an intra-uterine source, and all such cases are divided into two classes: (1) those in which the mucous area of the uterus is enlarged; (2) those in which it is not enlarged. Dr. Griffith, in reply to Mr. D'Arcy Power, stated that in one case of myxœdema, whose uterus he had examined after death, there was present a cystic adenomatous degeneration of the mucous membrane, with a large secretion of mucus, but whether this was in any way connected with the major disease he could not say.

The meeting on March 19th was a "clinical evening," Mr. H. Cripps Lawrence being in the chair.

Mr. SILCOCK showed a man who had suffered from Distension of the Frontal Sinus, which not only caused prominent bulging of the bone over the left eyebrow, but also great protrusion of the eyeball and external strabismus. Trephining over the sinus was performed, the mucoid material filling the sinus removed, and drainage by a tube passing into the infundibulum re-established with marked amelioration of symptoms and of disfigurement. In reply to questions by several members, Mr. Silcock said that the infundibulum was blocked, and nothing short of trephining would have succeeded in removing the viscid mucoid fluid. Slight optic neuritis had been present. Recurrence did not take place after thorough drainage.

Dr. BATTEN showed: (1) A child recovering from dry catarrh of the trachea with crusts visible by laryngoscopy; (2) a woman, aged twenty-five, with symptoms somewhat resembling disseminated sclerosis. She suffered from epileptic fits, and had had slight right hemiplegia and aphasia. The right side of the face was smoother than the left. Tremors of the head and hand had come on after recent parturition. Testing for the exaggerated reflexes had induced an epileptic attack. The patient's peculiar gait and movements were demonstrated.—Dr. HANDFIELD JONES suggested that the case was one of hysteria after recent delivery.

The Symptoms of Shaking Palsy in a Hysterical Subject, by Dr. EWART.—The patient, a woman aged forty-two, had been weakened by dental trouble and by basic pleurisy and congestion, immediately after which her tremor and peculiar stoop began (three years ago). She also had influenza in December, 1889. Eleven weeks ago she had pain and slight swelling in her knuckles, followed by general pains, weakness, and ultimately inability to stand. When she was admitted, the slight arthritic affections, the stooping attitude, and the blank facial expression, suggested early rheumatoid arthritis. The two latter signs, coupled with the tremor, on the other hand, were equally in favour of beginning paralysis agitans, But the progress of the case entirely justified the diagnosis which was made of hysteria induced by weakness, and causing besides globus and right hypochondrial pain, a fine tremor of the right hand, and a spontaneous foot clonus of the same side, apt to arise in the sitting posture. Thanks to valerian and galvanism, the patient was now able to stand and to walk almost erect. The foot clonus and the tremor of the right hand, aggravated by attention, were still, however, present. The tremor never affected the left hand unless the right hand was steadied by an observer.

Friedrich's Disease, with Increased Knee-jerk, by Dr. EWART.—In spite of the absence of any history of ataxia in the ascendants or in the collaterals of the patient (female, aged nineteen), the above diagnosis was made on the following *positive* grounds: Slight tremor of the hands on purposive movement, slight lateral nystagmus, marked ataxia of the lower limbs, with very slight loss of sensibility, slight temporary affection of articulation (which had now become quite normal again), integrity of the cerebral functions, without any trace of hysterical manifestations; and on the following *negative* grounds: Absence of the papillary and visceral symptoms of tabes, absence of the spastic features of ataxic paraplegia, and absence of sufficient tremors, nystagmus, and cerebral affection to justify a diagnosis of disseminated sclerosis. The symptoms had begun at the age of sixteen, after which menstruation had become irregular, and had finally ceased. Some general gain in strength and in weight, and some improvement in the power of standing and of walking, and in the steadiness of the hands had resulted under rest, tonics, and massage. It was noteworthy that the affection of speech present a year ago had quite ceased, and that under the treatment above mentioned the right leg, which was previously the weaker, had improved at a quicker rate than the left, and was now the stronger. The exaggerated knee-jerk was the only feature not favouring the diagnosis, but this was a condition specially mentioned by Dr. Gowers and by Dr. Bastian as having been noted in exceptional cases. In reference to Dr. Ewart's second patient, Mr. D'Arcy Power mentioned that he had seen four members of a family affected with this disease whose parents were free from disorders of the nervous system and of speech.—Dr. HANDFIELD JONES commented on increased knee-jerk in hysteria.—Mr. KEETLEY showed a case of intra-articular exostosis of the knee, which latter he had removed as a loose body by operation.—Mr. POWER and Mr. ROUGHTON considered the structure removed more of the nature of an osteo-phytic growth from rheumatoid arthritis than of a true exostosis.—Dr. MAGUIRE brought forward, according to promise, a youth suffering from functional nervous disease, whom he had shown at the Society one year previously, and whose condition was then fully recorded. Time had not cleared up much that was obscure in the case. The President, Dr. Ewart, and Dr. Cleveland made some remarks.—Dr.

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PHILLIPS showed a case of congenital atalectasis of lung with displaced heart, which excited much interest.—The President and Dr. Ewart spoke.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Section of Medicine was held on March 6th.

The Diagnostic Significance of Venous Hum in the Neck: a Study in Statistics.—Dr. BEWLEY read a paper on this subject. He said he had been induced to collect statistics bearing on it by reading a paper by Dr. R. Apetz, "On the Significance of Venous Humming Murmurs for the Diagnosis of Anæmic Conditions," in *Virchow's Archiv*, vol. cvii. He called attention to the differences of opinion held on this subject—some writers attributing considerable diagnostic importance to the presence of a murmur, others believing the phenomenon to be one of no importance. Dr. Bewley then related the details of his investigation. He examined only healthy individuals between the ages of sixteen and twenty-six, age having an important influence on the production of these murmurs. All the cases were examined either sitting or standing. He divided his cases into three classes: 1. Anæmic. 2. Slightly or doubtfully anæmic—i.e., cases which presented no appearance of anæmia, but yet suffered from some of the symptoms of this condition, or *vice versâ*. 3. Not anæmic. He examined in all 51 young men and 149 young women. Of these, 22 belonged to the anæmic class, 31 to slightly anæmic, and 147 to the non-anæmic. In 22 anæmic there were 19 murmurs, = 86·4 per cent. In 31 slightly anæmic there were 27 murmurs, = 87·1 per cent. In 147 non-anæmic there were 85 murmurs, = 57·9 per cent. Dividing the non-anæmics into male and female—in 104 females there were 64 murmurs, = 61·5 per cent.; in 43 males there were 21 murmurs, = 48·8 per cent. The conclusions Dr. Bewley drew from these statistics were the following: 1. Murmurs are more common in the anæmic than in the non-anæmic. 2. More than half of those young persons who are not anæmic have a venous hum in the neck. 3. The presence of a hum is not of any diagnostic importance in any individual case. The loudness of murmurs is not a matter of much diagnostic importance. In his cases Dr. Bewley noticed 15 very loud murmurs, distributed as follows: in 22 anæmic, 3 loud murmurs, = 13·6 per cent.; in 31 slightly anæmic, 5 loud murmurs, = 16·1 per cent.; in 147 non-anæmic, 7 loud murmurs, = 4·8 per cent. He had noted some of the loudest murmurs in particularly rosy and full-blooded persons, and therefore did not attribute any diagnostic value to even the loudest murmur. He added that Dr. Apetz's conclusions, based on very elaborate statistics, were almost identical with his own.—Dr. WALLACE BEATTY remarked that he had, in some cases, heard cervical venous murmurs in patients who certainly did not appear anæmic. Still he thought that the presence of this murmur might be a help in treatment. In one patient under his care, who suffered from persistent headache for months, and who had not an anæmic appearance or symptoms, the discovery of an anæmic murmur led to treatment by administration of iron, which brought about a rapid cure, a great number of other remedies having been previously tried in vain.—Dr. WALTER SMITH expressed his general concurrence with the views put forward by Dr. Bewley. Admitting as a fact that over 50 per cent. of non-anæmic subjects present venous hum in the neck, still we have to deal with the occurrence of venous hum in over four-fifths of undoubtedly anæmic cases. Hence we should look for an explanation of this coincidence in the mode of causation of these murmurs, and the present theories as to the production of these phenomena could scarcely be regarded as satisfactory.—Mr. PATTESON remarked that his experience corroborated that of Dr. Bewley. From the observation of a large number of patients in a general out-patient department, he had long ceased to attach importance to the presence or absence of a venous hum from a diagnostic standpoint in anæmic cases.—The PRESIDENT concurred in the view expressed as to the real basis for coming to a conclusion being the physical conditions which produce such murmur, and until these were settled its variation must be a matter of theory. He called attention to the existence of venous murmurs under the first bone of the sternum, which by position was removed from the fallacies of extraneous influences. They were very much more rare in this situation than in the neck, and were, as far as he could depend upon his memory, invariably associated with some of the graver and more pronounced forms of anæmia.—Dr. BEWLEY, in reply, stated that he had purposely not entered on the discussion of the causation of venous murmurs, because he did not think these murmurs could be satisfactorily explained.

A Case of Myelogenous Leucocythæmia.—Dr. WALLACE BEATTY reported a case of myelogenous leucocythæmia, which had been under his care in the Adelaide Hospital in September, 1890. The patient, an unmarried woman, dressmaker by occupation, had been in ill-health for about three months. Seventeen days before she came into hospital she was attacked with erythema nodosum in her legs. On admission to hospital she was very anæmic; cardiac and cervical venous anæmic murmurs were present; the sternum was exquisitely tender. Dr. Bewley examined her blood; he found the white corpuscles greatly increased in number, the proportion of white to red being 1 to 5. The red corpuscles were diminished in number, being one million to a cubic millimetre. There was no enlargement of the lymphatic glands, and the spleen could not be felt. Dr. Bewley made the post-mortem examination. The spleen weighed 10 oz. Under the microscope it was normal, except that there was evidence of increased hæmolysis in sections stained with ferrocyanide of potassium and hydrochloric acid. There was no enlargement of the lymphatic glands. The marrow of the femur was red and fairly firm, not fatty. Under the microscope were found numbers of mononucleated white corpuscles, large and small red corpuscles (some normal, some irregular in shape), a few nucleated, spindle-shaped, connective-tissue cells, and a few oil drops. The liver was enlarged. On microscopic examination the liver cells were found atrophied in places, and there was a large number of leucocytes between the liver cells. There was no evidence of iron in the liver.—Dr. GRAVES asked what kind were the white cells found in the blood; also whether the red cells were altered in appearance. Dr. Jaksch states that it is probable that no case of pure myelogenic leucocythæmia has yet been recorded, and he mentions that one case which he saw, in which there were changes found in the medulla of the long bones similar to those mentioned by Newman, there was disease of the kidneys. In Dr. Beatty's case there was disease of the kidneys also.—Dr. WALLACE BEATTY, in reply, said, except that there was a great increase in the white corpuscles and a diminution in the red, there was nothing unsual observed by examination of the blood. The cloudy swelling of the renal epithelium he considered accounted for by the fever which was present.

Notices of Books.

Aphorisms in Applied Anatomy and Operative Surgery. By THOMAS COOKE, F.R.C.S. London and New York: Longmans, Green, and Co.—In the preface to this little work we find it stated that it is intended as little more than a syllabus of the work done in the author's courses of operative surgery, preceded by a few notes on the leading points in applied anatomy and surface marking. When the book is used in this manner, as an aid to the memory of work done in some class, instead of note-taking by the student himself, it will answer a useful purpose. The book is divided into three parts:—1. "Surface marking," intended to be read, and its statements verified on the living subject. To this part are also added some tablets on the surgical anatomy of inguinal hernia, Scarpa's triangle, the ischio-rectal region, and the male perineum. 2. "Operative surgery." "Only those operations are referred to which it has been considered most advantageous for the average student to perform, and these are outlined only, and mainly from the cadaveric, as opposed to the practical surgical, standpoint." Hence, we do not find many important operations mentioned. 3. Comprises a series of 100 "typical *vivâ-voce* questions." These will prove of use to the diligent student who takes trouble to work them out, for they are frequently asked at examinations, being of considerable practical importance. In a work which is admittedly compressed as much as possible, it is surely unnecessary to say of the external condyle of the humerus that it is less prominent than the internal and

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situated a little lower, when the preceding sentence informs the reader that the internal condyle is more prominent than the external, and situated a little higher. To speak of "Bryant's test" as a comparison of the vertical distance between the anterior superior iliac spine and the great trochanter on the two sides does not convey much idea of Bryant's ilio-femoral triangle to the student. In one or two other parts clearness of expression is sacrificed to brevity. In excision of the hip no mention is made of the anterior incision, the one which is much more frequently used than the external; whilst of amputations at the knee reference is made but to the methods of Carden and Gritti. In the next edition we shall hope to see depicted (or described) the lines of the important nerves, as well as the landmarks in the various tenotomies and osteotomies which are performed, which are not easily remembered by the student, though sometimes asked by the examiner. As an appendix to the aphorisms in applied anatomy and operative surgery, the author has brought out a small volume of seventy to eighty pages on Surgical Descriptive Anatomy, which many will find of considerable use when working for examinations.

Are the Effects of Use and Disuse Inherited? An Examination of the View held by Spencer and Darwin. By WM. PLATT BALL. London: Macmillan and Co. Nature Series. Pp. 156.—This work is a critical examination of the arguments for and against the dictum of Herbert Spencer that the effects of use and disuse are inherited in kind, and of that of Darwin, that use in our domestic animals has strengthened and enlarged certain parts and disuse diminished them, and that such modifications are inherited; and the author has brought together a very well selected, as well as very numerous, series of cases which tell against the hypothesis. He endeavours to show that the instances on which Spencer and Darwin rely may be, and probably are, the result of other causes than use or disuse—such, for example, as sexual selection. Mr. Ball discusses many interesting points, such as the inferiority of the senses in Europeans, short-sight in watchmakers and engravers, the large hands of the children of labourers, and the thickened soles of infants. He thinks that use-inheritance is normally so weak that it appears to be quite helpless when opposed to any other factor of evolution, and he points out that natural selection develops seldom-used horns or natural armour just as readily as constantly-used hoofs or teeth. Use-inheritance therefore seems to be unnecessary, as its opposition is ineffective. But one of his strongest arguments is the almost universal non-inheritance of mutilations, which leads the author to speak of the true relation of parents and offspring. The parent he considers to be only the transmitters of types of which they and their offspring are alike more or less moulded resultants. A parent, he says, is a trustee. "He transmits, not himself and his own modifications, but the stock, the type, the representative elements of which he is a product and a custodian in one." Weissman ingeniously likens a parent and child to successive offshoots thrown up by a long underground root or sucker, and it is intelligible that, if the best gemmules are used up in the development of an individual, weaker gemmules are left to continue the race, and deterioration consequently ensues. Mr. Ball's work, though short, is interestingly and thoughtfully written.

Leçons de Clinique Médicale faites à l'Hôpital Saint Eloi de Montpellier. Par le Dr. J. GRASSET. Montpellier: Camille Carlet. Paris: G. Masson. 1891.—The University of Montpellier is of ancient repute. At one time the medical doctrines emanating from its professors exerted no small influence upon prevailing opinion; and although in comparison with other and newer centres of learning Montpellier may not have quite its former prominence, it yet contains within it several men well qualified to sustain its old position. Among them may be reckoned Dr. Grasset, who is well known as an original and thoughtful observer. This volume of clinical lectures abounds in interest for the scientific physician. In the opening lecture on Pneumonic Pyrexiæ the author claims for the Montpellier school the credit of having always contended that pneumonia should be more correctly regarded as a specific fever than as a mere inflammation of the lungs. On the other hand, he endeavours to show that there are varieties of pneumonia depending upon malaria, typhoid fever, and other influences, and he enters fully into the discussion of these types. Several lectures deal with subjects in connexion with disease of the nervous system. There is, for instance, a very thorough study of hystero-traumatism, in which the special features of this class are clearly pointed out. A case of male hysteria, with astasia-ataxia—a peculiar oscillating gait, increased by effort, in which the heel is brought down forcibly to the ground—is very completely analysed. The differences from tabes, disseminated sclerosis, paralysis agitans, myoclonus, Thomsen's disease, and other conditions are all in turn discussed. Astasia-abasia (i.e., inability to maintain erect position or direct movements in walking) was first described by Blocq in 1888, and three types are distinguished—one characterised by muscular weakness, another by incoördination, and a third by rhythmical movements. Hypnotism and many other cases illustrative of hysterical neuroses are also treated in these lectures. The volume includes, further, an account of "la Grippe" of 1889–90, and the memoir on Cardio-vascular Vertigo, by which Dr. Grasset quite recently added to our knowledge of the results of arterial sclerosis. In addition to these lectures and essays, there are several clinical records of cases mostly of nervous disease, the whole forming a volume which may be perused with much profit.

Air Analysis. A Practical Treatise on the Examination of Air, with an Appendix on Illuminating Gas. By J. ALFRED WANKLYN and W. J. COOPER. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1890.—This book will be useful to those who would wish to make a rapid and at the same time fairly accurate analysis of air or other gases. Nothing could be simpler than the methods of gas analysis which are described. The apparatus, too, is of the simplest kind, consisting merely of a eudiometer, pressure tube, and an absorption pipette. There are many forms of simple eudiometric apparatus in use, but perhaps Hempel's, which is advocated here, is the most convenient. Instructions are laid down for the analysis of respired air, air from furnaces (containing carbon monoxide), and illuminating gas. For the estimation of small quantities of carbon monoxide the authors give an original process. They pass a large volume of air through subchloride of copper, after which the copper solution is placed in a suitable apparatus and acid bichromate added. The monoxide is thus expelled, and may then be collected and measured. The historically interesting method adopted by Priestley and Cavendish for determining the proportion of oxygen in the air has been revived, and, in the authors' hands, gives very satisfactory results. It will be remembered that in the classical experiments of Priestley and Cavendish nitric oxide (NO) was used to combine with the oxygen of the air. Nitric peroxide (NO_2) was then formed and absorbed by alkali, or, as the authors prefer, by water.

Atti della R. Accademia dei Fisiocritici di Siena. Ser. IV. Vol. II. Fascicoli 3–4 e 5–6. Siena: 1890.—The first of these parts contains an article by G. F. Novaro, on the Surgery of the Stomach, and a very good memoir by L. Guaita entitled Anatomical and Clinical Investigation on the Exenteration of the Eye. The second part contains the following memoirs: Grimaldi Siro, on Diamylphenylhydrate; Staderini Rutilio, on Anatomical Observations; Viti Arnaldo, on Endocarditis according to Modern Microbic Theories; and lastly, Orecchia Carlo, on So-called Albuminous Periostitis.

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THE LANCET.

LONDON: SATURDAY, MAY 2, 1891.

THE consideration of the three proposed schemes of the Committee of Management of the combined Examining Board in England, which was intended to be brought before the Comitia of the Royal College of Physicians on the 30th ult., was postponed until their next meeting. As we showed last week, the schemes differ very much from one another and from the suggestions of the speakers in the debate at the meeting of the General Medical Council, at which a five years' curriculum for future medical students was decided on. As the lengthened curriculum will not interfere with those students who are educated at the different universities, but only with those who are candidates for the diplomas of the various medical corporations empowered to grant licences to practise, it would have been well if the conditions of study for the two classes of candidates had been approximated as closely as was possible. The time spent in a medical education and the expenses will now be as great in the one case as in the other; and as almost everyone is in agreement that the University system is the better, the nearer the other boards can assimilate their course to that system the better educated will the future practitioner be generally, scientifically, and clinically. The first reform should be in the Preliminary Examination. A certificate of the College of Preceptors in the second division, in which the subjects of an inferior schoolboy's education can be passed piecemeal, should not be accepted by the General Medical Council, and many other preliminary examinations which allow a student to be registered are not one whit better than the one mentioned. The General Medical Council should raise the standard of entry into the profession. An ill-educated student cannot intelligently approach the study of the sciences which he afterwards has to learn, or understand the language in which those sciences must be taught; and it is such medical students who bring discredit on the teachers, are rejected again and again by the examiners in science and in medicine, and, if they subsequently contrive to become qualified, appear to an educated public as the blots on a learned profession. Mechanics, as not being generally taught in schools, should be placed with the preliminary sciences. A year should be devoted to these subjects, and until an examination has been passed therein a student should not be permitted to enter on his medical career. If he cannot pass an examination in elementary physics, mechanics, chemistry, and biology, he should be definitely stopped, and this would be at a period of his life when he might readily change his plans, and before his parents or guardians had expended a large sum on his professional education, and thereby be tempted to urge him to continue in a career for which he is evidently unfitted. Elementary human anatomy and pharmacy have no proper place as subjects for a first examination in a well-drawn scheme. Indeed, we would ask how a proper knowledge of "pharmacy" is to be tested except by the Pharmaceutical Society or by a practising druggist. Therapeutics and the actions and doses of remedies, and the manner of their prescription and combination, can only be among the later acquirements; and surely the mere dispensing of prescriptions cannot be meant under the term "pharmacy." If so, it is extremely unfortunate that this should have to be passed at the same time as the elementary sciences. The second examination should consist of anatomy and physiology, and the candidate could fairly be expected to have obtained a sufficient knowledge of these important subjects in a year and a half—that is, after devoting two winter sessions and one summer session to their study. The remainder of the curriculum should be entirely given up to the various subjects included under systematic and clinical medicine, surgery, and midwifery; and as these subjects are those with which he will be concerned on entering practice, and which he must pursue for the whole of his professional career, they should be taken together at the end of his student life. No final examination is fair which does not permit an industrious and intelligent student to pass in these three subjects—in their principles and their practice—at the same time; and one of the most baneful tendencies of the modern examination system is to encourage the candidate to study these all-important branches of medicine separately, and to pass in them one by one. The examination in each is rendered unnecessarily detailed and severe, and the student finds coaching and cramming surer passports into the profession than a good all-round professional education. During this late period attendance at lectures on therapeutics and public health should be insisted on, and there should be a sufficient guarantee that the candidate is familiar with ophthalmic and aural surgery, with febrile diseases, and the distinctive features of psychological medicine. A separate paper on the principles of public health, general pathology, and therapeutics is absolutely essential. The great difficulty is that examinations for medical diplomas are not thorough; if the authorities of hospitals object to their institutions being used for the systematic clinical examination of candidates, there is no sufficient reason why the workhouse infirmaries should not be utilised for this purpose. For the education of the future practitioner acute diseases and injuries are as requisite as chronic cases, and all examinations wherein he is not brought face to face with both classes of cases are unjust to the public and unfair to the candidate. There are many details, to which we may subsequently refer, but it is very important that the general principles on which the education of a well-instructed medical practitioner must rest should be clearly stated at the present time, when the greatest change, since the abolition of the apprenticeship system, is being introduced into our educational curriculum. A scheme of yearly examinations, such as is proposed by Mr. HUTCHINSON, would, considering the varying powers of students, be too rigid to be workable, for hardly any number of students, being at different stages of their examinations, would be available to attend at the same time a given course of lectures.

A REPORT which has been submitted to the Local Government Board by Dr. BLAXALL, upon the sanitary condition and administration of the rural sanitary

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district of Staines,[1] deals, as a matter of fact, incidentally with a question of first importance to consumers of water derived from the River Thames; and, having regard to the Parliamentary inquiry into this subject which is now in progress, the report could hardly have been issued at a more opportune moment. It is with reference to this aspect of the question that we especially draw attention to the subject.

The subsoil of the district is gravel, and this special soil, upon which people are so apt to pride themselves, has been so treated from time immemorial that, as in numberless other places having similar geological features, the gravel has become a leading source of danger. In short, it is in many portions of this district permeated with cesspools which have for generations received the liquid filth of the population; some few of these cesspools are shallow and open, but they are mostly covered in and sunk some feet into the soil, thus facilitating storage of excreta, and admitting of the oozing away of their contents. And it is reported that, notwithstanding the obvious risks likely to ensue on such practice, the authority have been content to allow old cesspit-privies to continue in use regardless of the attendant evils of filth-pollution of earth, air, and water. The pollution of the air, with its attendant evil smells, the rooms of houses "stinking with privy effluvia," the resulting "nausea, sore-throats, and the like," we must for the present leave as a matter of local consideration. But as regards pollution of water and fouling of the earth, in so far as this latter bears upon water, there is a much wider interest to be consulted.

Considering first the mere local effects of this cesspit system on earth and water, we find that cesspools, privy-pits, and wells are sunk in the common gravel within a few feet or yards of each other; that as the water rises and falls in the subsoil, so does the Staines liquid filth rise and fall in these receptacles; that when the subsoil water is low, soakage of filth into the gravel bed takes place readily, and when the water rises, this stuff is washed on into wells and elsewhere. The natural result is, as the medical officer of health has reported, that well water becomes so impure as to be unfit for drinking and domestic purposes. One of the remedies locally relied on seems to be to clean out the wells; but the Staines people must be easily satisfied if such a practice contents them, whilst the fouling of the sources of the water—i.e., of the gravel bed—continues as before. Here again, however, we leave such considerations to those who have the responsibility of electing a local authority to look after their sanitary interests.

But, adds Dr. BLAXALL, "the general filthiness of soil and water in the Staines rural district is probably a matter of more than local concern." The water which courses through this gravel bed, and into which are washed the contents of "several thousand cesspools purposely dug into it" for local convenience, passes after such befoulment, directly or indirectly, into the Thames; the main flow of the subsoil water through the gravel bed in its ten miles passage through this district being apparently from west to east, and its discharge being mainly into the lower portion of the boundary river, in the neighbourhood of Sunbury. And this aspect of affairs assumes the importance of a metropolitan question, for at a short distance below this very neighbourhood, on the southern bank of the river, "are situated the pumping stations of certain great London water companies." Dr. BLAXALL does not profess to measure the amount of impurity which actually reaches the river from this gravel bed and its cesspits, neither does he attempt to discuss the question as to what depuration may possibly go on as the water flows through the gravel. But he does take occasion to utter a warning as to the risk of enteric fever, a disease known to disseminate itself essentially through the medium of water-supplies. It is abundantly clear that the water, as drawn from the Staines gravel bed, is capable of conveying and communicating the infection of that disease, and, judging by the death-rate, it seems that the Staines rural district has had some 500 attacks of enteric fever during the past seven years. But at this special moment we would leave it to the experts who will be called before the Parliamentary Committee on the London water-supply to deal with the question of risk to metropolitan water consumers, merely recording the fact that we have often adverted to the danger of drawing water-supplies from streams which are liable to receive a specific contagium which is undiscoverable by any known processes of chemical analyses, whilst we have urged that its importance should not be underrated by reason of proof of its effect being often obscured owing to the chances of escape from its influence which result from the wide diffusion of a particulate material through large bodies of water.

[1] Eyre & Spottiswoode, East Harding-street, London, E.C.; John Menzies & Co., Edinburgh and Glasgow; Hodges, Figgis, & Co., Dublin. Price 2d.

THE foundations of our knowledge of the physiology of gastric digestion were undoubtedly laid by the careful study of the historical case of gastric fistula by Dr. BEAUMONT—the case of ALEXIS ST. MARTIN. Animal experimentation and the test-tube reactions of the laboratory cannot be compared in accuracy to observations made directly upon the living human organism, when these rare opportunities arise which permit of such a study. Then, too, it may happen that a considerable rectification of current physiological doctrine has to be made, and the laboriously gathered results of many observers have to be replaced by those made upon a single case. Much depends, then, upon the skill and thoroughness with which the study of the processes in the human subject are undertaken. It must be admitted that these qualities are conspicuous in the recently published records of a study of the chemical processes of the small intestine by Drs. MACFADYEN, NENCKI, and SIEBER.[1] The subject of their researches was a female patient under the care of Professor KOCHER, in whom an intestinal fistula had resulted from excision of a portion of gangrenous intestine due to strangulated hernia. The false anus was situated in the ileum just above the ileo-cæcal valve, so that the materials escaping thereby were wholly composed of the chyme which had passed through the whole length of the small intestine. For a period of nearly six months the woman lived under these conditions, permitting of a

[1] Archiv f. Exp. Path. u. Pharmacologie, Bd. xxviii., Hft. 3, 4.

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long series of observations relative to the time and character of intestinal digestion under varying forms of diet &c. At the end of that time Professor KOCHER re-established the natural channel by means of an operation which proved perfectly successful. It may be remarked at once that during the whole period when there was practically no large intestine the patient gained in weight, and, as the urinary analysis showed, eliminated a fairly normal quantity of urea.

The procedure consisted in adapting a flexible tube to the fistulous outlet, so as to collect all the material that escaped, and to note its characters under varying circumstances. In consistency this "chyme"—if it may be so termed—was more fluid and diarrhœal when the diet was albuminous than when it was mainly of a vegetable nature. It was seen that the flow of chyme from the small into the large intestine is steadily continuous, being least marked during the night, owing to no food being then taken; and by some ingenious experiments (e.g., the addition of hard beans to the food, or of salol, which allowed of the detection of salicylic acid in the matters escaping) it was shown that the passage of foods from mouth to cæcum occupies at the least two hours; but all traces of the substances introduced did not disappear for from nine to fourteen or even twenty-three hours. The rate of flow, of course, bears much relation to the consistency of the intestinal contents. As regards the nature and properties of the evacuated materials, it is noticeable that they were almost free from odour, containing hardly any products of albuminous disintegration, such as indol and sulphuretted hydrogen; they were slightly acid in reaction, tinged yellow by bilirubin, and, according to the predominance of flesh or starchy matter in the food, showed muscle fibre, albuminous granules, vegetable fibres, starch granules, &c., and invariably a large number of various forms of bacteria. The filtrate yielded albumen, mucin, peptone, dextrose, the two forms of lactic acid, acetic acid, and the biliary acids and bilirubin. The authors enter very fully into the characters of the bacteria they find, many forms being special to the small intestine, others existing also in the mouth; but, passing over these, which would entail a full description to be intelligible, we may glance at the main results of their researches, which somewhat modify accepted physiological teachings. One point of interest is the fact that albumen is hardly, if at all, decomposed in the small intestine. Even the action of the trypsin of the pancreatic juice is small, for leucin and tyrosin were not to be found. Probably, in health, albuminous disintegration takes place chiefly in the large intestine, and it is only in disease that it occurs in the stomach or small intestine. Amongst the products of such decomposition are iodol, skatol, phenol, sulphuretted hydrogen, carbonic acid, methylmercaptan, &c., all of which may be regained from the large intestine. The bacteria of the small intestine are concerned in the disintegration of the carbo-hydrates into lactic, acetic, and succinic acids, and also into ethylic alcohol. The authors, in noting this last-named fact, cannot avoid a thrust at the total abstainers. It is generally believed that the chyme is rendered alkaline by the secretion of the small intestine, but they find that, owing probably to the reinforcement of gastric acidity by the organic acids resulting from sugar, the total quantity of acid is more than can be neutralised by the bile, pancreatic, and intestinal juices. If, however, the alkalinity of these fluids be diminished, the intestinal contents are hyper-acid, and mucin is precipitated instead of being intermingled with the chyme. This explained the diarrhœal quality of the evacuations noted to be associated with a large amount of sugar and organic acids in the chyme. On the other hand, an excess of alkalinity favours putrefactive decomposition, the acids apparently holding in check the bacteria concerned in albuminous disintegration. A marked contrast in this respect was exhibited between the small and large intestine. Putrefactive bacteria could hardly be at all isolated from the former, whilst they abounded in the latter; but this is not owing to the influence of bile, which NENCKI showed to have no real antiseptic property. The part played by bacteria in intestinal digestion is limited probably to the fermentation of sugar and carbo-hydrates generally, the excess of acid resulting from this fermentation being neutralised by the alkaline intestinal juice. But, much as bacterial life abounds in the intestinal canals, varying according to the kind and quality of the ingesta, it does not appear that the processes initiated by these organisms are of such value or importance in nutrition as the chemical ferments. Certainly the patient who was the subject of these observations gained in flesh, although for six months she was deprived of all the bacterial processes that go on in the large intestine.

WHAT with the recent debate upon opium, the letters upon ether drinking in Ireland, the investigations of the Select Committee on British and Foreign Spirits, and the serious and elaborate, though probably fallacious, calculations of the number of pipes smoked in excess of previous years, attention is at the present time being very vigorously directed to the increase in the forms, and possibly also in the amount, of self-indulgence. The habit of self-indulgence is deemed to be detrimental to the individual, and therefore to the State; and it is being pursued and exposed to abuse, to censure, and, if practicable, to legislation. The instinct is more widespread than the above enumeration indicates. Most new remedies pass through a perilous stage in which their capabilities of furnishing new forms of self-indulgence are tested; the sway of opium and morphine, although they cannot yet be said to have had their day, has been successively threatened by chloral, by cocaine, by antipyrin, and more recently by the newer hypnotics. Many regard with anxiety the consumption of absinthe in France, of ether in certain parts of Ireland, of opium in China and Burmah, and of alcohol in parts of the globe too universal to specify; if some of the substances mentioned create less alarm it is probable that the cause is to be sought in the relative infrequency and secrecy of their employment.

A correspondent from Bombay wishes us to invite a general discussion from medical experts as to the "proper scope of the medicinal value of alcohol," and he formulates a series of questions for consideration. Many of these questions, if devoid of any particular novelty, are sufficiently suggestive. Thus, for example, no medical man would feel

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any difficulty in answering the following: "Is it advisable to recommend the use of alcohol without restriction, or is it necessary to restrict its use like that of other medicinal agents, boldly prohibiting it in certain cases, and giving clear directions as to dose and mode of administration?" But the writer's probable views may be gathered from the wording of another question: "Is the regular daily use of alcohol, in doses generally supposed to be moderate, beneficial or baneful *upon the whole?*" And in his final question he leaves no shadow of doubt about the matter: "Are not the doctors who unnecessarily and unreservedly recommend moderate drinking morally responsible for the ultimate outcome of such recommendation, since they are expected to know something about the frailties of human nature on the one hand and the charms of alcohol on the other?" This indeed lays a heavy charge at our doors, but the subject is scarcely so simple as it would appear. The reference to the frailties of human nature and to the charms of alcohol is not convincing, and the question of self-indulgence in any form must be argued equally with that of alcoholism. Granted that of all forms of preventable disease none are so sad as those which result from self-indulgence, yet it must equally be granted that the downward progress is gradual, and that it must have had a definite starting point. This our correspondent would, in many cases, assign to some careless medical advice, but this is certainly not true for the vast majority. The relief of pain, physical or mental, has often been urged as the determining cause, but this is the extenuating circumstance put forward as an excuse by the habitual drunkard; surely during the time that the seeds of the habit of self-indulgence are sown, during the youth of the individual, he is rarely so sadly situated with regard to pain, physical or mental. The gratification of the sense of taste is still more fallacious during the early stages. The taste may be acquired and cultivated, but probably the starting point for nearly all forms of self-indulgence is a spirit of bravado. The process by which the taste is acquired is frequently painful, as witness the common experience with tobacco, or the effect of the first mouthful of raw spirit; still from a desire for emancipation these discomforts are braved, often in spite of warnings of the dangers of thraldom, but with youthful trust in strength of will to resist. Most forms of self-indulgence involve questions of habit, of lack of self-control fostered by habit, of example of an undesirable nature, and often too they appear largely to be the result of simple drifting from carelessness. Charity looks for reason or explanation in vain; the truth is that the tendency to self-indulgence, regardless of consequences, is one of the weaknesses inseparable from humanity.

Recognising this tendency as one of the frailties of human nature, is the attitude of the medical profession towards forms of self-indulgence at all ambiguous? In spite of all denunciations of the excessive use of alcohol and of the misuse of drugs, grave accusations are still made, which we are invited to discuss. All broad charges require to be reduced to specific issues before they can be met with any chance of success. To accuse the medical profession of favouring habits of intemperance, directly or indirectly, is too serious a matter to be lightly disregarded. Perhaps occasionally, rarely, a hurried and misunderstood piece of advice may be alleged to have led to habits of intemperance, but on inquiry the truth usually appears to be that the individual sufferer possesses an unenviable personal or inherited alcoholic history. On the other hand, there can be very little doubt that the members of the medical profession incur great responsibility for many of the forms of self-indulgence characterised by the perverted employment of drugs, and it is difficult to see how this responsibility is to be avoided under the present conditions of practice and of public interest in medical matters. The general practitioner who dispenses his own medicines sends a sleeping draught, and declares or conceals its active ingredient according to his knowledge of the patient; but when a prescription is given, especially when given by a consultant, with little probability of being able to follow out its subsequent history, the remedy is in the hand of the patient to use or abuse at pleasure.

DR. STEELE, who is well acquainted with the problems of hospital administration and their relation to the public welfare, has recently given his representation of the subject to the Statistical Society. He is a medical man with large experience of the subject in one of the largest hospitals of England, and with a similar experience as to Scotland, where they manage hospitals, as other things, a little more economically than we do here. He may appear to some to be somewhat prejudiced in this matter. The great hospital which he represents has put on a petty charge for medicines to out-patients, a course which many think but little calculated to bring either hospitals or those who administer them into greater respect. At any rate, if the people apply the principle of proportion in estimating the value of medical help, their estimate of the value of the ordinary practitioner must be lowered. They must be tempted to say, "If we can get all the learning and skill of Guy's Hospital's physicians and surgeons for threepence, the value of our medical neighbour, albeit a man of education and one who has been well tortured by the examining bodies, must be something less." This logic is difficult to resist. Nor will such objectors be much conciliated by Dr. STEELE saying that by this charge they are applying the thin edge of the wedge of *self-help*. The end of the wedge here is certainly very thin. It would be far better to let the out-patients of Guy's Hospital understand plainly that they are being served charitably, and that self-help means a very different thing. Dr. STEELE, however, at other parts of his address sufficiently let the cat out of the bag, and practically admitted that it was the exigencies of medical education which necessitated the upholding of the out-patient system. He did not deny its demoralising effects on the patients, and he admitted that some means of repression were necessitated. But he maintained that its educational advantages were such, and that the advantages to the population of consulting experts were such, that it could not be seriously curtailed. Mr. TIMOTHY HOLMES'S opinion, that the out-patient department should consist of serious or difficult cases referred from medical men or provident dispensaries, was rejected by the superintendent of Guy's Hospital on the grounds we have mentioned. He

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was equally ingenious in finding reasons for rejecting the system of the Scotch hospitals in giving advice only and not medicines to the out-patients.

Dr. STEELE seems to find a further argument for the petty charges at hospitals and dispensaries in the fact that they yield a total of £47,708, a larger sum than the yield of the Hospital Sunday Fund. He had a word of praise, too, for the Metropolitan Hospital, which is the home of a provident dispensary at Kingsland, and which competes as a metropolitan hospital with all the neighbouring practitioners, though he admitted, what we can scarcely affect to regret, that it is not a financial success. He is too shrewd a man not to have his own doubts whether, apart from a system of efficient inquiry as to fitness, a petty charge is likely to seriously reduce the number of out-patients. He admits that at Guy's Hospital it has had, in one section at least, an opposite effect. It would be strange if it were otherwise. If the leading butchers of the Borough were to offer their prime cuts at 3*d.* a pound, after the manner of Guy's Hospital threepenny charge, instead of the ordinary charges which even the working classes pay, and can pay, for their meat, they would not find the number of their customers diminish. It is the same with medicine as with meat. The ordinary practitioner, on whom the working classes rely in all the great experiences of life, cannot compete with the consultants of Guy's Hospital and their threepenny terms. Dr. STEELE did not attempt to deny that a strict inquiry system had been found to be practicable and effective at Manchester, and had reduced the unfit cases from 42 per cent. to 7 per cent. of the applicants. But he has another theory on which he justifies the petty charges of his own and other hospitals, which give the more respectable section of the patients the comfortable feeling that they are paying for their benefits. He speaks as if "the working classes were to be reckoned among the poor." This is not complimentary to the working classes. A respectable working man does not admit this theory; and, unless we are to demoralise these classes beyond hope of recovery, we must reject it. The classes who constitute the great friendly societies are not poor. They can pay for everything else, save on occasions of misfortune—for meat, education, tobacco, beer. On what theory are they to be excused from paying for the medical attendance required by themselves and their families? We reject the theory that "the working classes are to be considered among the poor." Many of them are so by their own fault. In that case they must be pitied and treated as such. But it is an insult to the working classes to say that this is their general position, and to cater for them as paupers in respect of the supply of their ordinary medical wants. There remains the other great argument advanced—the educational advantages of the out-patient department. This argument cuts two ways, and comes with doubtful grace from the representative of a great school which turns out yearly a considerable proportion of the men qualifying as medical practitioners. It is a poor compliment to educate men at Guy's Hospital and then send them out to find the very hospital that nurtured them competing with them for cheap practice, and justifying its competition by the suggestion that the bulk of the people require the advice of consultants on pauperising terms. We leave this subject for the present not without a strong impression that Dr. STEELE does not seriously differ from us on the great moral and professional questions which are involved in the enormous and morbid development of the out-patient department. It is obvious that medical students must see practice, but it is monstrous that this practice should be found for them in arrangements that degrade the poor and impoverish the profession.

Annotations.

"Ne quid nimis."

CHOLERA AND THE HURDWAR FAIR.

AN opportune note of warning has been issued by the *Indian Medical Gazette* in connexion with this year's Hurdwar fair. A fair takes place at Hurdwar every year, but a peculiar sanctity attaches to the Kumbh Mela held there in the spring of every twelfth year. It was this latter occasion that was in 1879 associated with a disastrous epidemic of cholera, and it is this special fair that this year has again brought with it. The town is hemmed in to the west by the Sewalik Mountains and the Ganges, and the vast number of pilgrims attending it have hitherto been in excess of any arrangements made for the prevention of disease. The camping-out grounds among the spurs of the neighbouring hills and the bathing arrangements have been essentially such as to cause the diffusion of cholera when once it has set in; and this has been especially the case as regards the process of ablutions, which involve the casting of ashes and other offerings into the water, an external washing, and then a draught of the same filthy fluid to complete the effectual cleansing from sin. In 1879 the dispersion of the pilgrims after the occurrence of cholera was followed by a wide diffusion of the disease in epidemic form; the experience of 1867 being largely followed in this respect. There has been much dispute as to the correct interpretation of the facts relating to the coincidence of epidemic cholera and the Hurdwar fairs; but one thing is certain, that conditions which favour the diffusion of that disease have hitherto been intimately associated with these gatherings and their dispersal, and though it may be impossible to deal with some of the religious practices that tend to spread disease, yet much can be done under energetic local supervision to diminish the risks involved. For some months past certain preparations have been in progress to this end, and we trust that they may be successful, both as regards Hurdwar and in their general influence on the central and local administration of sanitary law in our Indian empire.

KOCH'S TUBERCULIN.

THE literature of Koch's tuberculin has already attained considerable proportions, and has received contributions from some of the most distinguished members of the profession. There is a general opinion, however, among those who heard Mr. Watson Cheyne's paper at the meeting of the Medical and Chirurgical Society on Tuesday last, that it is the most weighty and valuable criticism of Koch's method that has yet been made. Mr. Cheyne has proved himself superior to the influence alike of the unreasoning *furore* which immediately followed upon Koch's first paper and the reaction which is now so marked. But starting with a set purpose to investigate the action and the value of the new remedy, and to devote his wards entirely to this study, he has prosecuted his work in a calm, judicial, unprejudiced, and scientific spirit. His paper does not profess to be a final statement on

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the matter, but only a preliminary one based on the results obtained in some fifty-five cases. So far, however, Mr. Cheyne has obtained some important results. He has, he thinks, made a considerable improvement in the method of using the drug, by which he is able to obtain a maximum of local effect with a minimum of constitutional disturbance—a matter of great importance. By his pathological investigations, which have been carried out alongside of his clinical studies, he has shown what changes the remedy produces in the tubercular growth, and these he not only described but demonstrated by means of micro-photography and a lantern. Of the more important clinical results obtained we cannot speak in full now, but we may say that they tend to narrow the limits within which tuberculin is useful in surgical tuberculosis. The whole evening was occupied by the reading of Mr. Cheyne's paper, and the discussion upon it is to be taken at a special meeting of the Society called for Thursday, May 7th.

PROPERTY IN PRESCRIPTIONS.

AN esteemed correspondent, signing himself "Senex," calls our attention to a matter which he thinks of importance to the public as well as to the profession. His letter is too long for insertion, but the gist of it is this. Some thirty years ago he received from a physician a prescription of a powder for the relief of "rheumatic pains." He valued the medicine so highly that he has never since ceased to have recourse to it whenever he deemed it necessary; and on several occasions, notably when leaving for a long sojourn in India, he obtained copies of the prescription from the chemist who dispensed it. On his return home a few years ago he again had the powder dispensed by the same chemist several times; but on asking for a copy of the prescription recently, as he was leaving London, the chemist has declined to furnish him with one without the prescriber's sanction, so long a period having elapsed since it was prescribed. Our correspondent believes the physician to be dead, and wishes to know whether the chemist has any right to refuse him a copy of what he considers to be his own property. The question is apparently a simple one, turning solely upon the proprietary right of the chemist to the copy of a prescription which he made, not solely as a matter of convenience or for the benefit of his customer, but of his own will and with the intent of its becoming part of his stock-in-trade. We are of opinion that if the chemist takes the trouble to register the prescriptions sent to him, it is quite within his right to decline to furnish copies of his entry, even at the request of the person for whom the medicine is prescribed. No chemist is bound to keep such a register (except in the case of prescriptions containing poisons), and he would always be at liberty to destroy it at any time. No doubt it is to his advantage to file prescriptions, and no doubt also he would seldom refuse copies to the patient or the prescriber as a matter of courtesy. The physician certainly parted with his right in the prescription to the patient, who, by the way, seems to have had several opportunities of taking care that a document so valuable to himself should be preserved. Thus, though we may sympathise with "Senex," we cannot blame the chemist for adhering to the rule of his establishment, which has a good deal to be said for it, from the point of view of the patient as well as from that of the medical man. There are occasions, indeed, when a chemist would be fully justified in declining, not only to furnish a copy of a prescription, but even to dispense it a second time without a reference to the prescriber. The practice in some countries for the original prescription to be kept by the chemist clearly shows that there at least it is recognised that he who dispenses the medicine has a property in it, rather than he for whom it is dispensed.

AN ENORMOUS OVARIAN CYST.

THERE has recently been a patient in the obstetric ward of St. Thomas's Hospital, under the care of Dr. Cullingworth, suffering from an enormous ovarian cyst. She was a widow aged forty-five, who had had no children, and who had been the stewardess on a well-known line of Channel steamers for many years. The swelling of the abdomen was first noticed nine years ago; for three years and a half it had been so large that she had been unable to go beyond her own garden; for two years she had not left her room, and for six months she had not been out of bed. She had persistently refused operation until recently. After admission on April 9th the abdomen was found to be uniformly and enormously distended by a fluctuating swelling, consisting of one large cyst, distending the lower part of the thorax, and hanging down, as she sat in bed, as far as the knees, completely concealing the thighs. The girth 1½ in. above the umbilicus was 67 in.; the measurement from the ensiform cartilage to the symphysis pubis was 38 in. The body was greatly emaciated; she presented a most remarkable appearance, but was very cheerful. There was some albuminuria. On April 13th, preparatory to operation and in order to diminish the shock, the abdomen was punctured by a fine trocar, attached to a long indiarubber tube, with the lower end placed under a measured quantity of solution of carbolic acid, and the fluid from the cyst allowed to flow away for seven hours. Seventy-four pints of thick grumous chocolate-coloured fluid escaped, containing much altered blood. The day after this an attempt was made, under ether, to remove the tumour. The whole of the anterior surface of the cyst was adherent to the abdominal wall. There were comparatively few adhesions posteriorly, but more in the pelvis. At the end of half an hour the patient became seriously collapsed, and the cyst was quickly extracted. It was a large thick-walled single cyst of the left ovary. The patient died before the closure of the abdominal wound had been completed, in spite of persistent efforts at resuscitation. The total weight of the tumour and its contents—including that of the fluid removed on the previous day—was 154½ lb., or 11 st. ½ lb. The weight of the patient was not ascertained, but must have been much less than this. This is probably the largest abdominal tumour of which there is any record; the largest mentioned in the series of 1000 by Sir Spencer Wells did not weigh more than 125 lb.

MORAL OR MORBID?

HAPPILY, in one sense, it is not often that a play is presented for public approval dealing almost wholly with an erratic emotional state of mind akin to insanity; but this enjoyment, if enjoyment it be, has been provided with much earnestness in the performance of Ibsen's "Hedda Gabler." Of late much has been said of Ibsen as a moral teacher, but the moral of this play is rather hard to find. It is a very forcible character sketch in which the interest centres round the heroine, all the others sinking into relative insignificance, although they are each and all sufficiently true to life. The play deals with the career of a young married woman, who from childhood has been in some respects strange and frightening. At school she was always torn by an insane desire to burn the hair of a younger girl. Later she shows an eagerness to know the details and intricacies of the forms of vice finding favour with a young literary man, and then, as it is expressed, when he wishes to change the relationship of comrades, she threatens him with a pistol. Subsequent events are left a little vague, but she has made a sudden, unaccountable marriage with a man for whom she has no

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affection, and when the play commences she has just returned from an inordinately long honeymoon, in which she has been mortally bored by being everlastingly in the company of one and the same person. At first the purely selfish side of her character is displayed. All her plans appear to be arranged solely for her own gratification, and the causes of her *ennui* and her changeful moods are difficult to fathom. She is wantonly rude to her husband's relatives, and excuses herself because these things come into her head and she cannot help doing them. She describes herself as a coward at heart, with a hatred for witnessing disease and death, and most strongly averse to any form of open scandal, and little by little the secret of her past creeps out. The former lover, whose alcoholic habits had been reformed by a new *liaison*, is, under Hedda's encouragement, induced to lapse into a drunken bout, in the course of which a valuable manuscript is lost. In despair he comes to Hedda and announces his intention of committing suicide, and is then merely told to "do this gracefully," and the pistol, that had been presented at him before, is given him "as a souvenir." It is needless to follow the story further. The cause of the trouble is abundantly evident before the curtain falls. And yet, after all, the pre-occupation, the childish whims, and the recklessness are found to be indications of a morbid state rather than of any mere emotional condition. The heroine's actions are not characterised by reason, but by aimless transitions from one subject to another remotely linked to it, as in a nightmare. There is a disregard of consequences, an absolute æsthetic delight in making all go wrong, and in not realising the final catastrophe which is inevitable when the results of her actions crowd around her. All this is essentially morbid, essentially a study of conditions which are only too familiar to medical observation. To see in action the previous history, the predisposing causes, and the symptoms of a simple case may be novel to the public, but not to the profession. Whether any good can result from it all is another matter. Although dramatic criticism is beyond our usual province, a tribute of admiration must be accorded to the marvellous acting of Miss Elizabeth Robbins in the title *rôle*. This fact remains beyond dispute, even to those who venture to doubt the healthy influence of Ibsenism as here represented.

RAILWAY ACCIDENTS IN 1890.

THE Board of Trade Returns of Railway Accidents for the past year give as usual an account, which is upon the whole very satisfactory, of the results of railway working during that period. The number of accidents recorded is not excessive when regard is had to the immense volume of the traffic in connexion with which they arise, and what is no less important than the control of their number is the minimising of their severity when they do occur. The great improvement which has been effected within recent years in the brake apparatus furnished to trains has had a marked effect in this direction. By increasing the control which the officials in charge of a train have over its movements in a moment of emergency they have diminished in more than equal proportion the severity of the consequences of such mishaps as do and must occur. It appears from the report that even in this direction something yet remains to be done, for ineffective brakes still constitute an appreciable source of danger to the traffic. Much more serious, however, than the danger from failing brakes or other defective parts of the machinery and plant are the perils incurred by placing excessive confidence in the presence of mind and diligence of officials who are often overworked. The forgetfulness of signalmen figures over and over again in this report as the primary cause of a disaster, and in one noticeable instance a collision is referred to the failure of a guard to give to his engine-driver the assistance in putting on the brake which the latter was entitled to expect. This failure is accounted for on the hypothesis that the guard was at the time asleep in his van, a circumstance which is rendered the more probable by the undoubted fact that he had been doing upwards of twelve hours' duty. Indeed, although we find less reference in this than in some previous reports to the mischief of overworking servants who are charged with these highly responsible duties, it is abundantly plain from these pages that the railway companies are still sadly wanting in the due appreciation of their public and private duties in respect of the apportioning of work among their servants, and the maintenance of a sufficient staff to deal without undue strain with the work that has to be done.

RESEARCH AT THE LABORATORY OF THE ROYAL COLLEGES.

FROM a report of the Laboratories Committee submitted to the Colleges of Physicians and Surgeons we learn that the following are at present working, or have received permission to work, in the laboratories:—Dr. Pavy, F.R.S., and Mr. Rowntree, Researches on Glycogen and Sugar; Mr. D'Arcy Power, Cancer; Mr. C. A. Ballance and Mr. S. G. Shattock, Malignant Tumours; Dr. Howard H. Tooth, Paths of Sensation in the Brain; Dr. A. W. Macfarlane, Anæsthetics and Hypnotics; Mr. Watson Cheyne and Mr. Cheatle, Tuberculous Disease; Mr. Douglas Stanley, Cancer; Dr. M. A. Ruffer, Immunity against Infectious Diseases; Dr. James Galloway, Malignant Diseases affecting the Peritoneum; Dr. A. E. Wright, Coagulation of the Blood; Mr. R. Cozens Bailey, Surgical Treatment of Wounds of the Intestine; Dr. Vincent Harris and Dr. W. Gow, the Structure and Function of the Pancreas; Dr. W. P. Herringham and Mr. E. Groves, the Execration of Uric Acid and Urea; Dr. Sidney Martin, the Chemical Products of Infective Micro-organisms.

THE VALUATION OF MEAT PEPTONES.

AN important discrepancy in the method adopted by chemists for the analysis of peptones is pointed out by M. A. Denaeyer in a pamphlet of recent issue. In the well-known König process no regard is paid to the determination of gelatine, which it appears is a common constituent of commercial peptone of meat; and as sulphate of ammonia is used for the precipitation of albumose (gelatine being precipitated by the same reagent), the proportion of albumose-peptone is exaggerated. If, as the author states, gelatine enters largely into the composition of many of the preparations in commerce, it becomes a matter of fundamental importance to be able to determine the amount of this body, inasmuch as it is said to present the nutritive value of neither the albumens nor their peptones. The process now published by M. Denaeyer admits of the estimation of all three bodies—viz., gelatine, albumose, and peptone. The following is a *résumé* of the method which he adopts. Two grammes of dry peptone in 10 cubic centimetres of water are treated with 90 cc. of 90 per cent. alcohol. The alcohol precipitates the albumose, peptone, and normal jellifiable gelatine, while it takes up the salts and extractive bases and allotropic injellifiable gelatine. The coagulum obtained by alcohol is then dissolved in hot water, any residue of albumens which have been rendered permanently insoluble by the alcohol being filtered off and weighed. To the dissolved portion, which is carefully neutralised, an excess of saturated solution of bichloride of mercury is added. This reagent throws down albumose and peptone, the gelatine remaining in solution. After filtration the clear solution may be freed from mercury by means of sulphuretted hydrogen. It is then filtered, and the gelatine, after concentration of the fluid, pre-

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cipitated by a saturated solution of ammonium sulphate. On raising the mixture to boiling, the gelatine firmly adheres to the sides of the vessel. It may be washed quickly with cold water and weighed; the weight of the vessel and the entangled sulphate of ammonium being deducted, the amount of normal jellifiable gelatine is given. The quantity of adherent ammonium sulphate is determined by dissolving the coagulum in warm water and triturating with a standard solution of barium chloride. The weight of gelatine so obtained is deducted from the weight of the precipitate given by adding saturated ammonium sulphate directly (as in the König process) to a fresh solution of the alcohol coagulum. As ammonium sulphate precipitates both gelatine and albumose, this last difference gives the albumose. For the estimation of peptone proper two grammes of peptone, freed in the same way from insoluble albumens and extractives, are treated with a solution of acid phosphotungstate of soda, which precipitates the normal gelatine, the albumose, and the peptone. The precipitate is collected on a tared ashless filter, washed well with water containing hydrochloric acid, dried, and weighed. It is then ignited in a muffle until complete incineration is effected. The weight of the residue and that of the filter are deducted from that of the dry precipitate. This gives the gelatine, albumose, and peptone. On deducting the amount of gelatine and albumose the weight of peptone is gained. The alcohol employed for the precipitation of the albumens and peptones is divided into two portions — one in which allotropic injellifiable gelatine is estimated by evaporating to dryness, taking up with water and treating with ammoninm sulphate in the manner already indicated; the other portion is evaporated, and the residue dried to constant weight. From this is deducted the weight of gelatine (injellifiable), and the amount of creatine and salts is arrived at by difference. The process is evidently based on accurate and painstaking observations, and it certainly seems to promise in the hands of careful operators a means for the satisfactory separation and estimation of albumose, peptone, and gelatine. This last body, the author states, whether normal or injellifiable, is not identical, chemically or physiologically, with peptone or albumose, in that it has a greater percentage of nitrogen, and, unlike them, is not organically assimilable. It is therefore desirable to know the proportion of gelatine contained in preparations of this kind, seeing that they are largely advocated and employed as nutrients in the treatment of disease associated with enfeebled powers of assimilation and digestion. M. Denaeyer appears to have been one of the first to recognise the presence of gelatine in meat peptones, and his process will in all probability prove a contribution of no little importance to the analytical domain of chemical science.

OPERATION FOR TUMOUR PRESSING ON THE CAUDA EQUINA.

IN the *Neurologisches Centralblatt* of April 1st Dr. Leopold Laquer of Frankfurt gives an account of a case in which, from the symptoms and history, he was able to diagnose some growth in the sacral canal exerting pressure on the roots of the cauda equina. The patient was a young man of nineteen, with an excellent family history, and in whom any specific affection could be excluded. He began in September, 1888, to suffer from severe pain in the middle of the sacrum. This spot was also very sensitive to pressure. The pain, although for the most part confined to the spot mentioned, not unfrequently spread to the knees on each side, and no impression could be made upon it with all the antirheumatic and other drugs which were tried. It was much worse at night than at other times. Counter-irritation and galvanism effected temporary improvement. The pain was always worst when sitting or lying down, and he was able to walk for an hour or two without much trouble. This was when he first came under observation. At this time all the movements of the different joints could be carried out, the knee-jerks were present, and there was no trouble with the sphincters. There was no muscular atrophy, no disturbance of sensibility, and all the muscles reacted well to both currents. After the temporary improvement following counter-irritation and galvanism, his condition became progressively worse; the pains were more severe, there was some wasting of the quadriceps, the knee-jerk could only be obtained with difficulty on one side and was absent on the other, there was pain upon defecation and micturition, and there was difficulty in emptying the bladder. Power of progression also was more difficult, and the patient was much bent when he walked. There was no impairment of sensibility to be discovered. The electrical reactions were unchanged. A diagnosis was made of a new growth in the sacral canal, compressing the cauda equina. The operation of opening the canal was effected by Dr. Louis Rehn, and a cavernous lymphangioma was formed which was extra-dural, but had pressed the dura and the cauda equina from before backwards. The patient made an excellent recovery, losing his pain and regaining all his former power.

"QUARANTINING A HOSPITAL."

UNDER the above heading the *New York Herald* announces a curious piece of sanitary administration. If our contemporary has been correctly informed, the English Hospital at Elizabeth, New Jersey, was on April 10th placed under strict quarantine for two weeks at least, or until the typhus fever there had been entirely stamped out; and the nature of this quarantine may be judged of by the announcement that none of the physicians, nurses, employés, or patients will be permitted to leave the institution until the quarantine has been raised. This is the first time that we ever heard of such action in the case of typhus fever in a hospital; and experience in this country goes to show that such restrictions are quite uncalled for. Typhus fever is highly infectious at close quarters, and the attendants on the sick run considerable risk of contracting the disease. But whilst this was the case at the London Fever Hospital during the last typhus fever prevalence, it was also proved, as the result of an investigation published in the Local Government Board Report of 1882 on Infectious Hospitals, that whereas no less than 18,073 cases of typhus fever had been treated in that hospital, which is surrounded by a thickly peopled part of the metropolis, some living within from forty-nine to eighty-four feet of the buildings, not a single case of typhus fever could, as the result of two house-to-house inquiries, be found to have occurred amongst the population around the hospital. And this fact becomes the more striking when it is remembered that between 1862 and 1869 the number of typhus fever patients received into that hospital in several years varied between about 1800 to 2500 cases. Since 1871 we have not had much typhus fever in London; of late years it has been a rarity, but we have always been able at once to check it by ordinary hospital isolation, and without any imprisonment of the hospital staff.

THE INTERNATIONAL CONGRESS OF HYGIENE.

AS we foretold in our criticisms of the organisation of the forthcoming International Congress of Hygiene, the confusing connexion established between demography and industrial hygiene has already occasioned strong protests. An organisation which has very greatly contributed to the popularity and the success of these International Congresses of Hygiene is the French Society of Public Medicine and Professional Hygiene. This organisation publishes the

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Revue d'Hygiène as its official organ, and the last issue of this paper gives the programme of the Congress. It also explains that the French Government, being desirous to ensure a large participation of the French nation at this important gathering, has instituted, by a decree issued by the Minister of the Interior, a special committee, thus composed:—Honorary President, M. Pasteur; President, Dr. Brouardel; Vice-Presidents, Drs. Bergeron, Chauveau, H. Monod, and Proust; Secretaries, Drs. Napias, A. J. Martin, De Valbreuze; Assistant Secretary, Dr. L. Vintras. Then there is a numerous committee comprising some of the best known names among the sanitary reformers of France. This committee is about to hold meetings regularly to organise the participation of France in the labours of the Congress. The first act has been the publication in the *Revue d'Hygiène* of the programme of the Congress, preceded by the following remarks:—"The Congress will have two divisions: the first, consecrated to hygiene, will have nine sections; the second is solely devoted to demography, which, according to the programme of the Congress, shall comprise industrial hygiene. This decision appears most singular. It will throw into confusion those persons who wish to discuss subjects concerning professional or industrial hygiene; and doubtless it will be necessary to create a new and special section for this purpose." We trust that the organising committee, in response to the protest received from the Continent, will create another and separate section or subdivision, devoted exclusively to industrial hygiene, and independent of demography.

TRIGEMINAL NEURALGIA AND IODIDE OF POTASSIUM.

IN the last number of the *Neurologisches Centralblatt* reference is made to some interesting facts related by Dr. S. Ehrmann as to the occurrence of severe facial neuralgia after the administration of even small doses of iodide of potassium. In the first case mentioned the patient, a strong working man of thirty-five, suffered most intense pain in the forehead and in the teeth, with sensitiveness over the whole distribution of the fifth nerve, after taking fifteen grains of the drug. A second patient after taking thirty grains had much pain in the region of the upper jaw, with pain and tenderness in separate branches of the nerve, and also œdema of the eyelids on the left side. A third and a fourth patient also suffered from similar symptoms after similar doses. There were associated in all the cases much lacrymation and injection of the conjunctiva, but the symptoms rapidly vanished, and did not reappear on a further administration of the drug. The cases are not only interesting, but important, for it is desirable to know as much as possible regarding any peculiar effects likely to be produced by a drug which is so frequently administered as is iodide of potassium.

THE POLICLINICO AT ROME.

AN Italian correspondent writes under date of the 16th ult.:—"Among Italy's public institutions which, either contemplated or already begun, have had to be postponed or suspended, in compliance with its present policy of retrenchment, the great hospital of the Policlinico at Rome is, I am sorry to say, one of the most conspicuous sufferers. Dr. Baccelli, to whose initiative the undertaking is due, and to whose energy it mainly owes the advanced stage towards completion it has already attained, has appealed to the newspaper press to aid him in averting the loss and disgrace to Italy its temporary abandonment would entail. The representatives in Rome of the leading journals of the Peninsula were invited by him to a friendly collation in the hall of the Ufficio Tecnico of the institution, and heard from him a statement of the objects with which the Policlinico had been started, and of the means required to carry it speedily and effectively to completion. He produced evidence to show that the self-abnegation of his colleagues of the architectural and engineering departments had been rewarded by the estimates not having been exceeded by a single centime, and he further demonstrated that the obstacles thrown in the way of the works already in progress were of purely bureaucratic origin—obstacles proceeding from so short-sighted and arbitrary a financial policy that unless removed or neutralised by the pressure of public opinion, he and his fellow-commissioners on the undertaking would have to resign. This announcement, which no one acquainted with Dr. Baccelli's resolute character could fail to appreciate, means, practically, the suspension *sine die* of the Policlinico. And yet, as he pointed out, Rome, both city and province—nay, Italy itself, were never less prepared to meet such a calamity. The local hospitals are quite inadequate to the public demands on them, and recent examples have not, he said, been wanting of patients far gone in disease, little short, indeed, of moribund, being turned away from the threshold of the cliniques. Not only so, but he reminded his audience that Italy's *amour propre* was in danger of being compromised. In 1893 Rome will be the seat of the great International Congress of Medicine and Surgery, and will harbour within her walls the men of light and leading in the profession from every quarter of the globe. Is Rome, is Italy, he asked, prepared to exhibit to these men and to the world the spectacle of a magnificent Policlinico arrested within sight of completion by a policy of ignoble and short-sighted economy? From official obstruction and apathy, he appealed, therefore, to the Italian public through their leading journals to make the institution independent of bureaucratic caprice, and to intervene with substantial aid for the furtherance and completion of a magnificent undertaking worthily begun. Dr. Baccelli's eloquent words were seconded by a visit to the wards, laboratories, and lecture-rooms already in working order, in the course of which intelligent admiration was evoked by the amplitude and fitness and general efficiency of the plan and the details of the building. It is to be hoped that on this, as on other occasions, the public of Italy will show itself a more enlightened interpreter of its wants, and a more effective vindicator of its dignity, than its official representatives."

THE POLICE AND STREET ACCIDENTS.

As far as mere theory is concerned, the necessity of obtaining prompt and efficient medical assistance in cases of accidental injury will be universally acknowledged. It is when we come to deal with actual emergencies that errors of judgment occur and practical minutiæ may include the whole future of results. Let us briefly quote in illustration the history of a case which was recently the subject of an inquest at St. Thomas's Hospital, and which proves the importance of arriving at a clear understanding on this very critical matter. The deceased, a man of middle age, fell from a tramcar and was laid unconscious on the footpath. Shortly after he was seen by a medical man, who, finding no evidence of serious injury, gave a somewhat hopeful prognosis, but advised his removal to the police station for further examination by the divisional surgeon. Thither he was taken accordingly. Since he smelt of drink, however, and since the view taken of his case was not very grave, he received there no further medical attention. After some hours he was taken home, and thence on fresh advice was transferred to the hospital, where he died almost on admission. In this unfortunate incident the old confusion

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between the coma of drink and that of death is again evident, and the police have not escaped a sharp censure at the hands of the coroner and his jury for their slowness to provide for the more urgent condition. In our opinion, the justice of this reprimand is not altogether above question. The deceased while at the station was undoubtedly dying, and should have been under medical supervision. But could the police be expected to know this? We think not. Ground for suspicion there may have been, but even this was not so evident as to alarm the practitioner first called to the case. Unfortunately, but not unnaturally, the police officers did not recognise the immediate need of obtaining, as advised, a further medical opinion. There is not a doubt that in any case the injured man, who had fracture of the base of the skull, would have died, though the lessons which his death teaches ought not therefore to be overlooked. Any blame attributable in this case should rest upon the course pursued in removal. Errors of judgment like that above recorded would probably best be avoided by establishing a rule that in future any person injured in the streets shall be removed with the least possible delay either to the custody of his friends or to the nearest hospital. The responsibility of the police would thus be clearly defined.

THE INFLUENZA EPIDEMIC.

THE official returns from Sheffield during the past week show very strikingly the extent and severity of the outbreak of influenza in that town—the mortality from bronchitis and pneumonia, as well as that from the influenza itself, having attained serious proportions. That the outbreak, which is believed to have affected one-third of the population, is of a far more virulent character than that of last year is shown by the fact that for the week ending April 25th the death-rate reached the extraordinary figure of 57 per 1000, whilst the highest weekly death-rate during the 1890 epidemic was 38 per 1000. Whilst, in accordance with its usual character, the disease is abating in some of the towns first attacked, it has appeared with considerable severity in others—Liverpool, Bolton, Pontefract, York, Huddersfield, Stockton, Gainsborough, Spalding, and Nottingham being especially noted. Its extension over the country in general has not been characterised by the rapidity of the 1890 epidemic, when it appeared almost simultaneously in widely separated districts; but there can be no question as to its having occurred during the past week both in North and South Wales, as well as in the Eastern counties, whilst several cases have been under treatment in the metropolis. So far, however, London has fortunately not had a repetition of its last year's experience, but it would be singular if it should escape as severe a visitation as it then suffered.

THYROID GRAFTING IN MYXŒDEMA.

IT may be remembered that some fifteen months ago, encouraged by the experimental results of von Eiselberg, Professor Horsley suggested that in transplantation of the thyroid of the sheep into the peritoneal cavity, a method might be found to arrest the progress of myxœdema. In Paris the suggestion was put into practice by M. Lannelongue[1] who grafted a portion of sheep's thyroid in the subcutaneous tissue of the infra-mammary region of a myxœdematous cretin, and in the same city later in the year[2] M. Walther obtained a rather striking result from the like procedure in a well-marked case of myxœdema. We now learn that, on the 2nd ult., at the Temperance Hospital, Hampstead-road, Dr. W. J. Collins transplanted the whole thyroid gland from a sheep into the submammary region of a woman suffering from myxœdema. The organ, which weighed from six to eight ounces, must have become quite "vitalised," as there was no suppuration, and the wound healed by first intention. It is of course too early to speak of any marked result; but, in the four weeks that have elapsed since the operation, the patient's general condition and appearance are stated to have improved. We are not aware of any other case in this country in which this procedure has been put in practice, except one by Mr. E. H. Fenwick, where the disease was too far advanced to admit of any satisfactory inference being drawn as to the efficacy of the method.

[1] See THE LANCET, vol. i. 1890, p. 464.
[2] Ibid., vol. ii. p. 1192.

PROFESSOR TYNDALL.

PROFESSOR TYNDALL has been again obliged to return to his bed in consequence of venous thrombosis in the right lower extremity. He has been suffering considerably from broken rest, but his strength is fairly maintained.

OPERATION FOR EPILEPSY.

A CASE is published in a recent number of the *New York Medical Journal* in which an operation was undertaken with the view of relieving epileptic attacks to which the patient had been subject for some years. The attacks always began with movement of the right thumb, and movements of the wrist, elbow, and shoulder followed in succession. At times the leg also was affected and consciousness lost, but as a rule the attacks were limited to the hand and arm, and consciousness was retained. There was no optic neuritis, and no history of injury to the head to which the onset of the attacks could be attributed. The usual remedies were tried, with occasional temporary benefit, but at last operation was resorted to at the desire of the patient and his friends. The details of the operation it is unnecessary to enter into. The arm centre and part of the face centre are said to have been removed, the area being discovered by means of faradaic stimulation. The buttons of bone were replaced. After the operation the patient rallied well. He had complete paralysis of the right arm, and after two days there was no recurrence of the seizures. In about a week, however, the temperature rose, there was a discharge of cerebro-spinal fluid, and one of the pieces of bone was found loose. At the necropsy extensive inflammatory change was found, the left hemisphere was bathed in pus—a condition in all probability of septic meningitis. It is unfortunate that the favourable promise of the first few days after the operation should have been followed by such a catastrophe, which the author ascribes to the occurrence of a hernia cerebri leading to meningitis.

REFORM IN RAILWAY CARRIAGE ARRANGEMENTS.

THE last few years have witnessed the introduction of important reforms both as regards the comfort and the wholesomeness of railway carriage accommodation. On most of the main lines provision has been made on a scale which is even liberal for rest, sleep, refreshment, and cleanliness, and it might be supposed that, for a time at least, we have reached the limit of improvement. That this is not the case we are reminded by an interesting paper lately read before the Dresden Society of Engineers by Herr Pfuetzner. His remarks on ventilation are especially noteworthy. As regards this matter, he shows that we are landed in a practical difficulty which is only too familiar to all who interest themselves in this subject—namely, that of obtaining sufficient fresh air without draught. The amount of air space provided on the Prussian State railways, if we

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allow for the average percentage of passengers, is—for the first class, 278, for the second, 184, and for the third, 120 cubic feet respectively. In order to maintain even a fairly wholesome atmosphere containing no more than 1 per 1000 of carbonic acid, an average amount of 1055 cubic feet of fresh air per hour must be allowed for each passenger. In other words, the air of a carriage must be changed in the first class nearly 3½, in the second about 5⅔, and in the third nearly 9 times per hour, in order to prevent its becoming close. Thus, with the exception of the first class, which on German railways is but little used, the required atmospheric displacement is essentially draughty. This characteristic, indeed, we may take to be practically inseparable from railway travelling. The rapidity of transit in itself, though it cannot, in spite of closed windows and ventilation panels, avail for due ventilation, must necessarily cause draughts at every outlet. Another suggestion contained in this paper—i.e., the expediency of warming by hot-water pipes—if generally adopted, is calculated to minimise, if not entirely to obviate, this difficulty. Though we can hardly expect to see any great and immediate advance as the result of Herr Pfuetzner's observations, we gladly welcome them as indicating a future brighter than the present as regards health and comfort in railway travelling.

LONDON POST-GRADUATE COURSE.

THIS course has steadily developed, until there are now nine institutions associated with its work. In addition to the five original hospitals—viz., the Hospital for Consumption, Brompton; the National Hospital, Queen-square; the Hospital for Sick Children, Great Ormond-street; the Royal London Ophthalmic Hospital, Moorfields; and the Hospital for Diseases of the Skin, Blackfriars—there are now the Royal Bethlem Hospital, the London Throat Hospital, the Bacteriological Department, King's College, and the Pathological Department, Great Northern Hospital, also associated in the work. The hospitals have given special facilities to members of the course who can only remain in town for a limited period, enabling them to attend the hospital practice at proportional fees. The entry was well maintained during the winter term, notwithstanding the increase of work which the severe weather entailed on many practitioners who desired to benefit by the instruction provided for them. There were fifty-three entries, and the new regulations enabled seven naval surgeons to attend the entire course. The practitioners attending were chiefly British and colonial, including a considerable number of army surgeons and American practitioners.

FRANCE AND CHOLERA RESTRICTIONS.

DR. PROUST, in reporting to the Comité Consultatif d'Hygiène Publique de France on the state of public health abroad, refers to the passage in quarantine through the Suez Canal of British vessels on which cholera has occurred before arrival in the Red Sea, a practice to which it is evident, both from the wording of his report and from the general attitude which he and other leading French epidemiologists have assumed in this matter, he strongly objects. So long as British vessels pass directly from the East to British ports, surely it cannot concern France whether the crews and passengers are sick or healthy. We are prepared to take any risk that is involved; and we have half a century's experience to show that even if cholera prevails in England, it does not spread thence to France. If France and other Mediterranean Powers choose to act otherwise as regards vessels bound for their ports, the matter is an entirely different one. That is their business, and so long as they know that their Mediterranean ports are in a sanitary state such as will not justify any risk being incurred, we have nothing to say to the contrary. But we have in this country done a vast amount of sanitary work in our ports as elsewhere; and it is somewhat intolerable that we should be put on the same footing as some of the southern ports of Europe, which have so recently been condemned by French sanitarians, amongst others, as having done nothing to amend their faulty conditions since cholera last prevailed in them. Amongst those who voted recently against allowing British vessels bound for British ports to pass through the Suez Canal without touching land and under the supervision of the quarantine officers was the French delegate—a course of action we can hardly regard as justifiable. It is certainly in marked contrast to our attitude in this country when cholera last prevailed as an epidemic in Paris, and when the French service to England was maintained without restriction, and also without any resulting mischief.

PARAFFIN OIL AND ALCOHOLISM.

THE number of remedies—not to say nostrums—which have from time to time been vaunted as specifics for alcoholism is legion, some of the latest being red cinchona, strychnine, ichthyol, phosphorus, hydrobromate of hyoscine, and hydrastis. The most recently suggested remedy is petroleum, or paraffin oil, to which the attention of the St. Petersburg medical authorities was called by an accident. It appears that a labouring man, who had been drinking heavily for four days and nights, entered in a complete state of intoxication a grocer's shop, without being conscious of where he was or what he was doing. Unnoticed by the shopkeeper, he staggered up to an open cask of petroleum, and began drinking from it. With difficulty he was dragged away from the cask, and, seeing the large quantity of petroleum he had imbibed, it was expected he would fall down senseless, and be seriously ill. Instead of this, however, it is related that the petroleum had cured him of all the ill effects of over-drinking, the nausea, unsteadiness of gait, and headache disappearing as if by magic. In fact, it is stated he left the shop sober, and quite another man as compared with what he was before he took the draught of petroleum!

ACUTE ASCENDING PARALYSIS.

THE term "acute ascending paralysis," or "Landry's paralysis," is one which has been applied to a collection of symptoms, the most prominent of which are sudden loss of motor power, which then increases gradually, unassociated with marked sensory disturbance, or with disturbance of the functions of the bladder or rectum, and without any muscular atrophy. Some authors, however, have been of opinion that sensory impairment may occur in this disease, and others have held that the organic reflexes may be disturbed, and that trophic changes may occur. While in the majority of cases no morbid appearance has been found corresponding to the symptoms, in a few, changes of the nature of myelitis have been described, and in at least one case the medulla was found diseased. Dr. Eichberg of Cincinnati has reported in the *New York Medical Record* an important case in reference to the pathology of this disease. The patient was a man of twenty-one, who four days before admission to the hospital had discovered weakness in the right leg, with pain in the back and lower limbs, which prevented him from getting out of bed. The weakness soon extended into the left leg and also into the arms. There was some shooting pain in the limbs, but no impairment of sensibility to touch, although the temperature sense was very defective. The plantar reflexes were retained, the knee-jerks were absent, there was inability to

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empty the bladder, and trophic disturbances over the sacrum, buttocks, and feet were manifested. Before death, which took place six days after admission, there were complete loss of power, delirium, inactive pupils, and profuse perspiration, and death took place by failure of respiration. The organs, except the cord, were found normal, but it is to be regretted that neither the medulla nor the basal ganglia were submitted to a microscopical examination. In the cord was found a condition of marked congestion with numerous capillary hæmorrhages, and at one point a small abscess in the lumbar region. The change was most marked in the anterior horns, more slightly in the posterior horns, the cells being either broken down altogether or considerably altered in character; the pia mater had also undergone inflammation. The case in its clinical characters resembles closely the type of the so-called Landry's paralysis, and the presence of a well-marked morbid condition in the cord is significant. The author is of opinion that the process is an infective one, and this explanation seems the most likely, especially in view of the close resemblance between this condition and paralytic rabies. What the character of the poison is remains for future research to determine.

A GERMAN MILITARY SURGEON ON THE TREATMENT OF INFLUENZA.

As influenza is again in our midst, it may be opportune to mention that Dr. Lorenz, staff surgeon in the Prussian Army, has reported that great relief was obtained in eighty cases of undoubted influenza after a single inhalation of a 2 per cent. solution of ichthyol. For this a steam spray apparatus was used, and it was repeated twice a day for a quarter of an hour or twenty minutes at a time. In addition to this, ichthyol was ordered internally in the form of pills containing a grain and a half each, one to five being taken daily. Also a vessel containing a 2 per cent. solution of ichthyol was kept in the room, and from time to time made to boil by applying a spirit lamp under it. In almost all the cases the symptoms are said to have entirely subsided in two or three days, but if the treatment were left off, then the cough and running at the nose were liable to recur.

THE GUNPOWDER EXPLOSION IN ROME.

AN Italian correspondent writes under date, Rome, April 24th: "Italy, in her present critical state—financially, politically, and socially—could ill brook such a terrible disaster as yesterday's explosion, with the far-reaching misery it must produce. This is the third calamity of the kind she has had to bear within comparatively few months, insomuch that suspicion is aroused as to its being due to quite other causes than the spontaneous slow combustion to which it has been attributed. Pending official investigation into the circumstances, it may be interesting to note the scientific aspects of the explosion as just communicated by Professor Pietro Tacchini, the well-known meteorologist and chemist. 'You cannot,' he says, 'have an explosion of 265,000 kilogrammes of gunpowder without the production of physical phenomena which convey the impression of an earthquake,' and this was precisely the first conclusion to which the Roman citizens came. The action of the explosion on the barometric column revealed itself in a depression of from 15 to 16 millimetres; or, to put it more familiarly, the action was equivalent to a force which in an instant produced a variation of weight of about 240,000 kilogrammes on every square metre of surface. The action, moreover, says Professor Tacchini, showed itself in the seismograph as a telluric movement—even at Rocca di Papa on the Alban Hills (twenty miles to the south of Rome), the seat of a seismic station, there were windows broken by the shock, and a railway train advancing on the metals experienced such a violent concussion that the engine-driver, thinking it had collided with some obstacle, lowered the brakes and came to a full stop. The material damage has been tremendous—460,000 lire being the estimate of the Communal Council alone of the expenses it must incur; while the injuries done to St. Peter's, St. Paul's outside the walls, and other basilicas and churches will run the total up to 2,300,000 lire. The hospitals have had their accommodation strained to bursting, and yet have proved inadequate to admit all the cases of contusion, fracture, and concussion brought to them from the scene of disaster. Such an unwelcome confirmation of his warning as to the need of the Policlinico, which still lingers on the way to completion, Dr. Baccelli could not have contemplated. Meanwhile, the mortality from the explosion has been small, thanks to the splendid coolness and courage of Captain Spaccamela, who, on first realising the danger, dismissed every man from the powder magazine to apprise the neighbourhood, in house and on highway, of the impending shock, and left himself but fifteen minutes to effect his own escape. At 300 yards from the powder magazine he was felled to the ground by a stone and conveyed to the Consolagione Hospital in the carriage of the King—first, as always, on the spot to render assistance. The energy and skill of the surgeons at all the hospitals have been conspicuous, and their reports, when in due time made public, will have a wider than local interest for the profession at large."

IMPORTANT IMPROVEMENT IN MICROSCOPIC LENSES.

IT is stated that an immense improvement has recently been effected in the manufacture of glass for optical instruments by means of the addition to the ordinary materials of phosphorus and chlorine, which in some as yet unexplained way cause the glass to be very much more transparent, and enable it to receive a much higher degree of polish than any optical glass hitherto manufactured. Thus microscopes can be made which will render objects of the diameter of only the one-eight millionth of a millimetre visible, whereas with the best instruments now in use the diameter of the smallest object that can be seen is one-sixteen thousandth of a millimetre.

TEMPORARY LIFE ASSURANCE.

WHEN writing in November last on the subject of Life Assurance for Medical Men, we observed that "in many cases it would be a great convenience to a proposer to be able to provide against premature death by means of a temporary assurance running for twenty, twenty-five, or thirty years, while he undertakes the accumulation of his own capital by means of investments which he could keep under his own management and control." Acting on this suggestion, the directors of the Royal Exchange Assurance Corporation have prepared a table of premiums for policy contracts of the kind indicated, which should prove of great value to those for whom it is intended. The advantage of such a form of life assurance is thus rendered very manifest. For example, we find on reference to the table that a proposer of thirty years of age can secure a policy running for a term of thirty years at an expenditure less by about a fourth than he would have to pay upon the lowest-priced table for a policy of equal amount running for the whole duration of his life. The importance of this facility cannot well be overstated. With many men, if not indeed with most, the chief purpose of a life-assurance policy is to secure dependants against the pecuniary disaster of the bread-winner's premature decease. This, in many cases, is done as effectively by a policy that will run for thirty years as by one that will last the

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entire lifetime, since the period is quite long enough to secure the fruits of professional success. In the meantime, the amplitude of the provision made may be augmented in a very important proportion, since the amount of the annual premium is almost always the limiting factor in these arrangements. In this respect the policy of shorter duration is more useful than that of a longer term, and to the scheme of the Royal Exchange Assurance Corporation belongs the merit of having placed this important advantage within the reach of all who desire it.

DRAINAGE OF SPINAL CANAL IN ACUTE HYDROCEPHALUS.

THE cases recorded in another part of this issue from the Middlesex Hospital by Dr. Essex Wynter, will be read with interest in connexion with the communication made at the Wiesbaden Congress by Prof. Quincke. Although these cases terminated fatally, they demonstrated the feasibility and simplicity of the method employed to drain the cerebral ventricles in cases of tubercular or basal meningitis, by means of paracentesis of the spinal subarachnoid channels; and Prof. Quincke's more favourable result is encouraging in favour of a procedure which, if it do not always prove successful in a curative sense, may reasonably be expected to relieve the comatose symptoms attributable to the compression of the brain by the ventricular distension. It may be remarked that these cases seem to show that there is no necessary occlusion of the foramen of Magendie in basal meningitis.

UNQUALIFIED PRACTICE.

EVERY now and again some unwary unqualified assistant finds himself impelled by certain motives to plume himself in borrowed feathers, and to give himself titles to which he has no claim. A gentleman, who had passed all examinations except the final, recently found himself in this condition, that "he, being a medical assistant, practising at Arundel, did make a false statement on a certain medical certificate, bearing date Dec. 29th, 1890, by inserting therein certain qualifications as 'registered'—viz., L.R.C.S.Ed.,—with intent to have the name entered in the register of births and deaths of the district." He pleaded guilty, and expressed his regret for the offence. We quite agree with the opinion of the Bench that it was a very serious offence, which might have led to grave consequences. A fine of £5, with £2 3*s.* 6*d.* costs, will perhaps act as a useful deterrent to anyone who may be similarly tempted.

THE ROYAL BRITISH NURSES' ASSOCIATION.

THE discussion which has arisen concerning the application made on behalf of this institution to the Board of Trade for leave to register without the word "limited" as a part of its title has now received formal expression in two letters which have already appeared in the daily press, and will be found to-day in another column. The party of the opposition do not, indeed, lay down the grounds upon which they proceed; on the contrary, they adopt the view that it is not necessary "at the present moment" to discuss these matters, and they accordingly confine themselves to a statement of the perfectly well-known fact that they do oppose. It is, no doubt, their business to judge of the proper time and mode of putting their arguments forward; but we for our part cannot pretend to understand this somewhat enigmatic reference to the requirements of the hour. We should have supposed that the occasion of announcing the opposition would be the most suitable occasion for adducing arguments in support of it. One consequence of their declining the controversy in this way is that the supporters of the institution are left, for the present at least, in possession of the field, and no one who is swayed by the arguments put forward in the two manifestoes which we to-day publish will hesitate to lend his sympathies to the promoters of the application. Indeed, a careful reading of the letter emanating from their opponents leads us to suspect that even its signatories have not in every instance paid minute attention to what they have been asked to authenticate. For example, there is a eulogistic reference to "the guidance of his Grace the Duke of Westminster" in connexion with the management of the Lady Bloomfield Fund, which stands curiously over the duke's signature, and is certainly by no means in the approved form of polite letter writing. If signatures have been appended by inadvertence one can without difficulty understand that a number of distinguished persons may have signed what they will find it hard to justify. And this appears the more probable when it is borne in mind that the signatures in question are with one exception those of persons unconnected with the medical profession.

DEATH OF MR. T. H. BARTLEET, F.R.C.S., OF BIRMINGHAM.

WE regret to record the death, on the 29th ult., of Mr. T. H. Bartleet, from pneumonia, after a brief illness. Up to within a few days of his last illness Mr. Bartleet was seeing patients as usual. An influenza cold developed with rapidity into pneumonia, and to this disease he succumbed. We hope to publish in our next issue a sketch of the professional career of the deceased surgeon.

FOREIGN UNIVERSITY INTELLIGENCE.

Ghent.—Dr. von Vischer has been promoted to the Ordinary Professorship of Forensic Medicine.

Kazan.—Dr. Fortunatoff, Extraordinary Professor in Tomsk, is to be offered the chair of Anatomy.

Marseilles.—The Municipal Council has passed the vote required for the erection of a Faculty of Medicine.

Munich.—The new Surgical Clinic has just been publicly opened.

Prague (*Bohemian University*).—Dr. Kabrhel has been appointed to the chair of Hygiene. Dr. Helloch has been recognised as *privat docent* in Mental and Nervous Diseases.

St. Petersburg (*Helena Paulovna Clinical Institute*).—Dr. V. N. Reitz has been appointed Professor of Children's Diseases.

Tomsk.—Dr. Burzhinsky, of the Medico-Chirurgical Academy of St. Petersburg, has been nominated to the chair of Pharmacology.

Würzburg.—Dr. Gaetschenberger, a Kissingen physician, who recently died, has left nearly £1000 to be appropriated to the endowment of a chair of Balneology and a Balneological Institute. Dr. Schultze has been appointed to an Extraordinary Professorship of Anatomy.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Joseph von Pircher, a well-known physician at Meran, to whose exertions visitors to that health resort owe the erections of the Curhaus and the excellent water-supply; Dr. Mandon, Professor of Therapeutics in Limoges; Dr. Albarellos, formerly Professor in the Faculty of Medicine of Buenes Ayres; Dr. Luszkiewicz, formerly Professor of General Pathology in the University of Warsaw.

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WE read in the last number of the *Orvosi Hetilap* that the remains of the late Dr. Semmelweis have recently been transferred from Vienna to Hungary, his native country, and, agreeably to the express wish of the family, were, on the 17th ult., quietly committed to their final rest in the Kerepesi Cemetery, at Buda Pesth, in the presence of relatives, professional friends, and the rector of the university; the staff of the Hospital of St. Rochus and the Hungarian Medical Society sent representatives, who deposited wreaths on the grave. Dr. Semmelweis, the originator of antiseptic treatment in puerperal women, which treatment has since been extended to the domain of the whole of surgery, died, as we know from his biography, in an asylum at Vienna, on July 20th, 1865. It is intended to perpetuate the resting-place and memory of this distinguished Hungarian physician in a manner worthy of his struggles and achievements.

UNDER Dr. Cameron's advice the Leeds Corporation have greatly increased their arrangements for disinfection. Some time since they acquired one of the steam disinfectors made by Messrs. Washington Lyon and Co.; they have now added to this one of Messrs. Goddard and Massey's steam chambers, this apparatus being in some respects improved by modifications introduced by Professor de Meyer of Utrecht.

DR. ALEX. EDINGTON, who has been selected by Sir Charles Mills, K.C.M.G., the Agent-General for the Cape of Good Hope, to inquire into the subject of the ravages of the phylloxera in the wine districts, is about to proceed to Capetown in the Union Steamship Company's R.M.S. *Moor*.

AN Italian Pharmacopœia is about to be published. This will be the first national formulary, those hitherto in use having been of the most varied description, consisting largely of more or less correct translations of French formularies, and having no general or official recognition.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(*Continued from page 954.*)

Tuberculin and its Effects.—Angina Pectoris.—Treatment of Hydrocephalus.

PROFESSOR V. ZIEMSSEN (Munich) protested against Dr. Dettweiler's assertion that tuberculosis, prior to Koch's treatment, had never been thoroughly considered in clinics and hospitals, and he warmly upheld the value of the inductive method in medicine and the splendid services of Koch. Although he had several failures, on the whole the general result was satisfactory. Some change in the method, the better separation of toxic substances from the lymph, &c., may lead to progress. He had often seen good results subsequently become worse, due probably to too frequent and large injections. It was very important to select suitable cases, and he referred to Dr. Vogl's experience (*Münchener Med. Woch.*, Nos. 9 and 11) as showing the value of small doses and good hygiene, with selection of incipient cases. Good results had been seen at Meran. Many, no doubt, on return to their occupation and surroundings, lost ground gained during the treatment, showing that it should be repeated. In adults the initial dose should be 1 mgr., and the rise should be slow, never exceeding 50 mgr., or sometimes not more than 10.

Dr. FÜRBRINGER (Berlin) found that of more than 100 cases treated at Friedrichshain Hospital 5 per cent. lost all symptoms, 40 per cent. showed unusual improvement, 35 per cent. were scarcely improved, and 25 per cent. did not improve or grew worse; mortality, 15 per cent. The cases of marked improvement included some with marked infiltration, which, under similar conditions, would, apart from tuberculin, have certainly grown worse. He did not ignore the risks of the injection: (1) marked weakness of bad cases; (2) occurrence of acute, but resolvable, catarrhal pneumonia; (3) outbreak of tubercle around old foci; (4) liability to perforation of pleura, peritoneum, &c. The question whether tuberculin can excite caseous pneumonia and miliary tuberculosis in remote parts of the lung or in other organs was shown by a tabular comparison of eleven post-mortem examinations on subjects treated with tuberculin, and sixty-nine without this treatment.

	Treated by Tuberculin.	Not treated by Tuberculin.
1. More or less general miliary tuberculosis in	18 per cent.	.... 13 per cent.
2. Unusual miliary tubercle in lungs ..	36 ,,	.... 9 ,,
3. Exceptional extension of caseous pneumonia	83 ,,	.... 25 ,,

He said that during the past five weeks under better selection of cases his results had improved.

Dr. NAUNYN (Strasburg) asked whether the risks involved could be avoided. He had seen disasters occur under the greatest care and with a dosage according to Koch's prescription. Continued fever followed on violent reaction, sometimes death. Such dangers were unavoidable; they depended on the degree of reaction, which varied with the individual, not with the dose. One (not severe case) was injected from January to March, with dose increasing from ½ mgr. to 6 mgr., without notable reaction (only once 38° C.); then suddenly, after a dose of from 6 to 7 mgr., permanent fever, above 40° C., and death in a fortnight. He had seen five such cases out of eighty treated, and although he had also had favourable results, he had on this account abandoned the treatment.

Dr. KAST (Hamburg) saw in the contradictory views expressed that the discussion on the therapeutic value of tuberculin was premature; but it might now be decided whether it involves any risk. The weapon employed was not known. Was the lymph always uniform? Could its dosage be exactly estimated? Of 188 cases of phthisis treated at the Hamburg Hospital, 3 per cent. lost symptoms, 22 per cent. improved, 61 per cent. were unaffected, and 14 per cent. grew worse.

Dr. CORNET (Berlin) had treated 420 cases. He had seen very large doses borne without such accidents as he had formerly seen with smaller ones; but following the stream, he would now return to the latter. He had administered it by inhalation (Jahr's apparatus), with the effect of producing even stronger reaction than by injection. He had never found bacilli in the blood. His statistics were very favourable.

Dr. SCHULTZE (Bonn) agreed with Drs. Dettweiler and Naunyn. The hopes he had at first had not been fulfilled, so that since February he had injected no cases, and will not inject any more until more precise explanations concerning tuberculin are made. He protested against frequent surgical operations upon cavities, which may be compared to hollow trunks in a wood eaten up by caterpillars.

Dr. FREYMUTH (Dantzic) was also opposed to Koch's method. In no case had he found objective signs of improvement after the treatment, in spite of an apparent result. Diagnostically it was uncertain, and its composition is unknown. For the present, at least, it should no longer be used in practice.

Dr. PEIPER (Greifswald) had found it uncertain in diagnosis, for healthy people used to small doses. A toleration was rapidly established.

Dr. TURBER (Davos) had, contrary to Dr. Dettweiler, seen good results from the combination of climatic with tuberculin treatment, in unselected cases. Of 53 cases 1 died, 1 grew worse, 4 were unchanged, and 47 improved. In 14 cases the bacilli disappeared from the sputum.

Dr. THOMAS (Freiburg) was, on the whole, opposed to the treatment, although in some cases he had seen improvement.

Dr. VERRIEST (Löwen) held that more details of Koch's experiments should be published, and the experiments on animals be repeated before tuberculin was generally adopted as a remedy.

Dr. LENHARTZ (Leipsic) also urged the publication of further details, especially of the composition of the "lymph." His experience in the policlinic had not been unfavourable.

Dr. STINTZING (Jena) pointed out that diagnostically (1) the non-appearance of fever after injection is no proof against tubercle, and (2) the occurrence of fever is only a

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proof when it follows doses below 5 mgr. His therapeutic results were better than in other methods; but of 130 cases only 5 could be described as relatively cured.

Dr. WOLFF (Görbersdorf) said in his experience selected cases did well under a combination of climatic treatment and that by tuberculin.

Professor NAUNYN summed up the discussion. There was general agreement that diagnostically tuberculin was of less value than therapeutically. On the latter point observation varied essentially in laryngeal and pulmonary cases; for whereas no one had controverted the favourable results obtained in the former by Dr. Moritz Schmidt, on the latter there were most divergent views. On many sides there seemed to have been more favourable results at the clinics this winter; but whereas some of the speakers ascribed this solely to the action of tuberculin, others considered it due to the greater in-rush of patients seeking treatment, which yielded better statistics, which are not comparable with those of previous years.

At the morning sitting on April 8th a discussion on Angina Pectoris was opened by Dr. A. FRAENKEL (Berlin). He described its etiology and clinical history, and its relation to disease of the bloodvessels and other organs. It is sharply distinguished from cardiac dyspnœa (cardiac asthma of Heberden), which, like bronchial asthma, may arise suddenly in heart disease (and granular kidney), but is characterised by severe dyspnœa. The distinction is difficult, as the two conditions frequently concur, for pure, well-marked cases of angina pectoris are rare (Stokes). Arising late in life, and more often in men than women, it is especially associated with sclerosis of the coronary arteries and valvular disease (mostly aortic). Gout, diabetes, syphilis, heredity, emotional disturbance, were causative of it, and he had seen it after acute infective disease. He described a typical seizure, the substernal pain and its irradiation down the arm or to the neck, shoulder, and elsewhere. The pulse during the attack is variable, may be irregular or slowed, or accelerated, or even normal. The heart sounds often have a fœtal character, the action of the heart may be "fluttering." Sometimes only a sense of oppression is felt. The attacks last from seconds to minutes, and even hours. The first attack may be fatal; often a patient may have a series of attacks in one morning, or he may be free for years from a second attack. The chief anatomical lesions are sclerosis of coronary arteries; then aortic valve defects and aortic aneurysm. The coronary disease may lead to softening and fatty changes in the heart wall, or fibrous changes and cardiac aneurysm. Cohnheim and others have shown that closure of the coronaries causes arrest of ventricle in diastole, followed by fluttering, contraction, and then death. The theory of Pavy and Traube explains angina by the sudden occurrence of weakness in an already enfeebled heart, causing dilatation of the ventricle and stretching of the nerves in the heart wall. This sudden weakening may be caused by anything producing a rise in arterial pressure. Against this view is the fact that objective evidence of cardiac weakness is not always present, for the pulse may remain normal. Potain attributed the pain to the supervention of anæmia of the heart muscle from interference with the coronary circulation. The attempts to refer angina to a neuritis of the cardiac plexus or vagus may be considered as exploded. Conditions allied to these were to be described as "pseudo-angina" of nervous origin, and independent of vascular disease, such as attacks arising from the abuse of tobacco, coffee, tea (rare); or in dyspepsia, liver disease, lead colic; or in tabes, hysteria, and Nothnagel's angina pectoris vaso-motoria.

Dr. VIERORDT (Heidelberg) dealt with diagnosis, prognosis, and treatment of the disease. He noted the difficulty in differentiating it from cardiac asthma, and said some cases of angina passed into the latter. He distinguished (1) angina vera from sclerosis or syphilis of coronary arteries; (2) angina from organic heart disease, pericardial adhesion, aneurysm; (3) toxic angina (lead and tobacco); (4) nervous, reflex, hysterical angina. In favour of organic angina (1 and 2) are the age of the patient and the presence of arterial sclerosis; whilst against it is the occurrence of an aura, the frequency of attacks, and the readiness with which they are borne. Prognosis is difficult and delusive in both the apparently slight as well as severe cases. The purely nervous form has a good prognosis, but that due to tobacco is less certain. Therapeutically in nervous angina narcotics, especially morphine injections, should be used. In organic angina first stimulation should be employed (injections of camphor) and then careful use made of narcotics. Morphine holds the first place. In England nitrite of amyl and nitro-glycerine are much used, but Dr. Vierordt would not employ them in organic cases; they were preferably used in nervous angina, especially in the vaso-motor form. Derivatives to heart and extremities were often of value. In the intervals, iodide of potassium and regulation of exercise. As to pathogenesis, he could not admit the theory of cardiac weakness, since it was not always present, and it was more associated with cardiac asthma. He thought the attack rather due to the action on the heart of some unknown agency, which if the muscle be healthy excites pain alone, and if it be diseased causes both pain and weakness.

The discussion which followed was shared in by Drs. Curschmann, v. Frey, Nothnagel, v. Ziemssen, and Schott.

Professor QUINCKE (Kiel) read notes of a case of Hydrocephalus treated, with relief, by trephining and puncture (six times repeated during one month). In another case, with meningitic symptoms, he had produced improvement of symptoms, and finally recovery, by puncture of the subarachnoid space of the spinal cord which communicates with the cerebral ventricles. In another case of an adult with symptoms of cerebral compression, possibly due to chronic hydrocephalus, 80 ccm. of cerebro-spinal fluid were evacuated through puncture in the lumbar region, with improvement in symptoms. A Pravaz syringe is inserted between the arches of the third and fourth lumbar vertebræ, and introduced to a depth of about 2 cm. in children, of from 4 to 6 cm. in adults. The cauda equina being at this spot, there is no risk of injury to the cord. The operation is indicated in cases of acute rise in the cerebro-spinal pressure, especially in tubercular meningitis. Perhaps permanent drainage of the spinal canal might be advantageous.

Dr. BAUMLER (Freiburg) thought that this idea of Professor Quincke was one which raised hopes for the cure of tubercular meningitis, just as laparotomy had cured tubercular peritonitis.

(To be continued.)

DR. KLEIN ON BACTERIA.

THE first of a series of three lectures on Bacteria: their Nature and Functions, was delivered at the Royal Institution on Tuesday last by Dr. E. Klein, F.R.S. He said that perhaps in no branch of biological science had advances in the methods of research within the last twenty-five or thirty years been so enormous as in this subject. In 1828 Ehrenberg recognised the existence in water of minute mobile organisms which he considered to belong to the group of animalculæ known as infusoria, an assumption which was now known to be erroneous. In 1837 Schwann demonstrated the presence in atmospheric air and in dust of living microscopic beings, which he showed by direct experiment to be endowed with the power of producing in certain fluids those chemical changes termed alcoholic fermentation or putrefaction. Pasteur fully established the proposition that the different fermentations, such as alcoholic, butyric, acetous, mucous, and lactous fermentations, and also the decomposition of putrescible matter, were caused by definite and different species of such minute living beings—microbes,—and that without them such changes did not occur. This proposition implied that these changes were dependent on and ultimately bound up with the life and growth of these microbes, and if these were prevented from gaining access to such fermentative matters, they would remain unchanged or sterile. This was the principle which Sir Joseph Lister had applied in surgery, with the well-known brilliant results. The *rôle* of these microbes in atmospheric air had been minutely worked out and beautifully illustrated by Professor Tyndall, whose share in finally establishing that with these simple organisms, belonging almost to the world of the infinitely small, the same fundamental principle obtains as in other living organisms of plant and animal life, be they ever so large and complex—namely, that each organism had descended from an antecedent parent organism, and that no such thing as their

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origin from non-living matter occurred. Within comparatively recent times it had been shown that a variety of the most important and extensive processes of oxidation and reduction occur in nature, such as the oxidation and resolution of dead animal and vegetable matter, the breaking up of complex nitrogenous materials—such as albuminous substances, and their ultimate change into nitrites and nitrates, so essential to the life and growth of plants; that specific fermentation, so important in food stuffs and articles of diet, and many other processes are caused by, and intimately connected with, the growth and life of microbes. Though the importance of some species as useful agencies in nature is recognised, the importance of other species, as being the cause of disease affecting plants, animals, and man, is not less. The term micro-parasite is given to this latter group. Amongst the microbes there is one great group to be dealt with in particular, called "bacteria," because it possesses more or less the shape of a minute rod. Like the true or higher fungi, they are free from chlorophyll, and are composed of cells, a cellular membrane with living matter or protoplasm within, and they multiply by fission, for which reason they are called "fission fungi." Bacteria could then be defined as microscopic elementary organisms, composed of a cellulose investment of the protoplasmic contents, and which multiply by simple fission. They are classified into micrococci or cocci, bacilli and spiral vibriones, according to whether they are spherical, cylindrical, or curved and spiral. The lecturer exhibited a large number of micro-photographs of bacteria, prepared by Mr. Andrew Pringle and Dr. Bousfield.

All these organisms, when they have found suitable nidus, multiply with enormous rapidity. It has, for example, been found from observation—all conditions of moisture, medium, and temperature being favourable—that some multiply in twenty minutes, others in thirty minutes, and others in forty minutes. Staphylococcus aureus, which in its growth produces a peculiar golden-coloured filament, grows with great rapidity when sown in a medium-like, faintly alkaline broth at a temperature of 37° C. Into a sterile broth tube a definite number of organisms are put—say, eight cocci per cubic centimetre. If placed in an incubator for twenty-four hours at 37° C. and then counted, it is found that 1 cc. contains 640,000—that is to say, one organism has multiplied eighty thousandfold in the first twenty-four hours. It would not be expected that the same rate would obtain in the second twenty-four hours, because the materials had been used up. After forty-eight hours' growth the counting yielded 248 millions per cubic centimetre—that is, only four hundredfold. In seventy-two hours it was found that there were 1184 millions per cubic centimetre—that is to say, during the last day each had multiplied only fivefold. As the material is used up the rate of multiplication decreases. Another instance of the rapidity of growth was given. A rabbit was inoculated subcutaneously with 20,000 bacilli of fowl cholera, and died in twenty-four hours. It was found that 15,150,000 microbes were contained in 1 cc of the blood of the animal. The whole of the blood contained twelve hundred millions, showing that each bacillus in twenty-four hours had multiplied sixty thousand times. Those organisms which have their habitat in ordinary temperatures grow very rapidly. Professor Ferdinand Cohn was the first to study the rate of multiplication on the hay bacillus. He calculated that in two days the number of these would be so great that the whole Atlantic Ocean would be densely peopled by them if there was sufficient nutriment, which, fortunately, there is not, and therefore many of them had to go to the wall.

By the motility of bacteria is understood active locomotion. They spin round, they dart to and fro, and pass rapidly over the field of the microscope, and that is on account of their possessing one, two, three, or even a multitude of fine hairs. The organism of typhoid fever possesses several of these flagellæ. It has been shown that for retaining this motility a plentiful supply of oxygen is required. If, in a chamber, at one end oxygen is supplied, and at the other nitrogen or hydrogen gas, the organisms will all move towards the end where the oxygen is. If the oxygen is replaced by nitrogen or hydrogen the movement gradually ceases. If water is covered with a scum, it is most probably a motile bacillus which grows in the fluid, and which is driven to the surface, where it can derive the best supply of oxygen. In many cases the motility of the organisms is interfered with by their own chemical products.

Within certain of these organisms, but not in all, are formed peculiar corpuscles, which bear the same relation to the organisms as the seed does to the plant. This spore formation is almost entirely limited to the order of bacilli, and in this group there are very many species which do not possess this power. In a number of different species of bacilli, some of which are capable of forming spores and others not, those which have this power may look on very quietly, while those that do not will exhaust all the nutritive material present, growth and multiplication will then cease, and they will gradually die away. Those which form spores have a much better chance of bringing forth new generations than the others.

When organisms do not find suitable materials for their growth, certain changes are brought about called "involution changes." When the bacillus ceases to possess that high degree of vitality that the normal typical bacillus possesses, it gradually undergoes changes which lead to its death. Illustrations were given of what had been described as involution changes, but which were not so. For instance, tubercle bacilli grown under not very favourable conditions may be swollen, and others may appear branched. Some observers took these changes to indicate the death of the organism, but the lecturer was not quite sure that such were "involution changes."

In all these considerations, particularly in reference to the formation of spores, there were a number of facts of very considerable practical importance. The germination of those organisms which form spores takes place on the same principles as the germination of the spores in the higher fungi. The envelope is broken, the protoplasm contained within it shoots out in the shape of a rod, which when it is fully formed elongates, divides, and multiplies as in the case of the parent. In this way one bacillus, by repeated multiplication, forms a new crop. When these have reached a certain phase of development they again form spores which go to start a new generation. These spores have a much greater power of resistance than is possessed by the non-spore-bearing organisms, and can withstand high temperatures, dryness, and the influence of light, so much so that it has become almost a recognised method of determining whether a particular species of bacilli forms spores by subjecting the suspected organism to a temperature of 95° C. or 100° C. If they survive this exposure, and if they survive drying, it may be taken as established that the growth is spore-forming.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Torquay Urban District.—Mr. Karkeek devotes a considerable portion of his annual report for 1890 to the circumstances of the influenza epidemic, which was the cause of an increase in the rate of mortality. That rate was 17·1 in 1890, but after making deduction for deaths amongst temporary visitors it is only 15. The zymotic rate was 0·8 per 1000, a rate which many towns of 25,000 would envy; but Mr. Karkeek says it is the highest one for five years past in Torquay. The sanatorium has maintained its useful work; bakehouses, dairies, &c. have been regularly visited, 112 houses have been systematically inspected, and a considerable number of minor improvements have been effected. On the whole, Torquay has not much to complain of, even though a small rise in the general rate of mortality has taken place for a single year.

Chelmsford Rural District.—In referring to an increased death-rate for this rural district—namely, a rate of 15·6 per 1000—during 1890, Dr. Thresh notes a somewhat excessive infantile mortality and an excess of deaths both from measles and whooping-cough. He also draws attention to the high rate of mortality in Ingatestone and in Fryerning, which occurred mainly amongst children, but which he finds it difficult to explain. The results of school-closure in measles have been very various in different parts of the country, and the experience which Dr. Thresh records must be added to the list of the failures, for in one village where the schools were ordered to be closed for one month it is stated that during that period every child in the village

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contracted the disease. The account given of thirty-five attacks of diphtheria is interesting, and it is typical of the careful records kept as to the circumstances associated with other forms of infectious diseases. Nearly all the complications and surroundings which make diphtheria difficult of explanation marked this group of attacks. In a number of cases polluted water seemed the most prominent circumstance; but, on the other hand, there were instances in which this cause seemed suggested, but in which sore-throats, the character of which had been unrecognised, had preceded the attack which had drawn attention to the water. On this subject it is well worth remembering that Dr. Klein's experience, as recently announced at the Royal Institution, is to the effect that the bacillus of diphtheria "is killed when kept for a few days in pure water," although the water to which Dr. Thresh refers may doubtless have lacked the character of chemical purity. Then, again, these Chelmsford cases were associated, some with sewage effluvia, some with emanations from so-called London manure, and others with allied conditions. "Drain sore-throat," as this affection is sometimes termed, preceded some attacks, and emanations such as we have referred to may have conduced to produce a condition of throat liable to receive diphtheritic infection. But sources of error often need elimination in this class of cases; and Dr. Thresh mentions one instance in which certain manipulations of London manure were suspected as a cause of diphtheria, but it was subsequently found that of the group of eight cases in question, the first one attacked only reached home the day after the manure operations commenced, having arrived from a hospital ward where another child lay ill of diphtheria.

Malden Rural District.—Dr. Thresh gives the death-rate for 1890 as 16·1 per 1000 living, against a mean of 14·8 for the ten years 1881–90. In referring to a prevalence of whooping-cough Dr. Thresh points out that school managers and teachers rarely report any outbreak of disease until it has spread amongst the scholars, and then they want a medical order for closing the school. In one case he was asked to give such a certificate antedating the order for closure, apparently so as to secure the grant for the period antecedent to the intervention of the medical officer of health; but this was very properly refused. During the year 27 cases of fever came under notice, 24 of them being enteric fever; but they were widely distributed, and no common cause seems to have been in operation in their causation. No less that 83 cases of diphtheria and croup were notified, by far the majority having taken place in Heybridge, Tolleshunt, D'Arcy, and Tolesbury, and the incidence of the disease is discussed at considerable length. A number of sanitary defects were discovered and remedied, but their connexion with the prevalence was not made clear. In three instances scarlet fever and diphtheria are stated to have appeared synchronously in houses; and having regard especially to the fact that the diphtheria somewhat preceded the scarlatina in two of the three instances, Dr. Thresh is inclined to look upon the two diseases as having some intimate association. The report includes a detailed account of the sanitary work and administration of the district.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6079 births and 4661 deaths were registered during the week ending April 25th. The annual rate of mortality in these towns, which had been 22·9 and 22·5 per 1000 in the preceding two weeks, rose again to 24·3 last week. The rate was 21·0 in London and 27·0 in the twenty-seven provincial towns. During the first three weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·2 per 1000, and exceeded by 1·4 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 11·6 in Brighton, 16·2 in Derby, 17·7 in Salford, and 18·0 in Bristol; the highest rates were 33·0 in Preston, 33·9 in Halifax, 36·5 in Hull, and 57·8 in Sheffield. The exceptionally high rate in the last-mentioned town was due to a severe epidemic of influenza. The deaths referred to the principal zymotic diseases, which had declined in the preceding three weeks from 468 to 420, rose again last week to 428; they included 151 from whooping-cough, 122 from measles, 51 from diarrhœa, 36 from scarlet fever, 35 from "fever" (principally enteric), 33 from diphtheria, and not one from small-pox. These diseases caused the lowest death-rates in Brighton, Sunderland, Norwich, and Derby, and the highest rates in Nottingham, Plymouth, Bradford, and Portsmouth. The greatest mortality from measles occurred in Salford, Blackburn, Plymouth, Oldham, and Portsmouth; from scarlet fever in Halifax and Bradford; and from whooping-cough in Nottingham, Newcastle-upon-Tyne, Plymouth, Bradford, and Leicester. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 33 deaths from diphtheria included 28 in London, 3 in Cardiff, and 2 in Liverpool. No fatal case of small-pox was registered last week in any of the twenty-eight towns; 19 small-pox patients were under treatment in the Metropolitan Asylum Hospitals and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 940, and showed a further decline from recent weekly numbers; the patients admitted during the week were 85, against 77 and 84 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 464 and 504 in the preceding two weeks, declined last week to 471, and exceeded by 83 the corrected weekly average. The causes of 109, or 2·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Derby, Bolton, and Cardiff; the largest proportions of uncertified deaths were registered in Nottingham and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 26·7 to 22·6 per 1000 in the preceding four weeks, further fell to 22·1 during the week ending April 25th, and was 2·2 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 12·2 in Leith to 27·3 in Glasgow and 46·0 in Paisley. The 586 deaths in these towns showed a slight decline from the number in the preceding week, and included 43 which were referred to measles, 32 to whooping-cough, 7 to diarrhœa, 4 to diphtheria, 3 to "fever," 1 to scarlet fever, and not one to small-pox. In all, 90 deaths resulted from these principal zymotic diseases, against 80 and 81 in the preceding two weeks. These 90 deaths were equal to an annual rate of 3·4 per 1000, which exceeded by 1·2 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 33 and 41 in the preceding two weeks, further rose last week to 43, of which 24 occurred in Paisley, 13 in Glasgow, and 6 in Edinburgh. The deaths from whooping-cough, which had been 25 in each of the previous two weeks, rose to 32 last week, and included 20 in Glasgow and 5 in Dundee. The 4 fatal cases of diphtheria were fewer than those recorded in any recent week, and included 2 in Glasgow. The deaths referred to different forms of "fever," which had been 6 and 1 in the preceding two weeks, increased to 3 last week. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 201 to 142 in the preceding six weeks, were 143 last week, and 13 below the number in the corresponding week of last year. The causes of 49, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 30·6 and 27·5 per 1000 in the preceding two weeks, further declined to 27·0 during the week ending April 25th. During the first three weeks of the current quarter the death-rate in the city averaged 27·0 per 1000, the rate for the same period being 20·5 in London and 17·7 in Edinburgh. The 156 deaths in Dublin showed a decline of 30 from the number in the preceding week, and included 4 which were referred to whooping-cough, 1 to "fever," 1 to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria; in all, 6 deaths resulted from these principal zymotic diseases, against 8 and 7 in the preceding two weeks. These 6 deaths were equal to an annual rate of 0·9 per 1000, the rate from the same diseases being

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1·9 in London and 1·7 in Edinburgh. The fatal cases of whooping-cough, which had been 2 and 7 in the preceding two weeks, declined again to 4 last week. The 156 deaths in Dublin last week included 24 of infants under one year of age and 59 of persons aged upwards of sixty years; the deaths of infants showed a further decline from those recorded in recent weeks, while those of elderly persons showed an increase. Three deaths from violence and 5 inquest cases were registered during the week, and 43, or more than a fourth, of the deaths occurred in public institutions. The causes of 20, or nearly 13 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major H. Archibald Fogerty, M.D., is placed on temporary half-pay (dated April 15th, 1891).

INDIAN MEDICAL SERVICE.—Brigade Surgeon Hamilton is appointed to the administrative charge of the Allahabad District in place of Deputy Surgeon-General Rudd; Brigade Surgeon Graves succeeds Deputy Surgeon-General Hinde at Poona; Deputy Surgeons-General Warren and Walsh are under orders for India, the former for Poona and the latter for Allahabad.

NAVAL MEDICAL SERVICE.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Deputy Inspector-General of Hospitals and Fleets William Jas. Eames has been placed on the Retired List at his own request, with permission to assume the rank of Inspector-General of Hospitals and Fleets.

VOLUNTEER CORPS. — *Artillery:* 1st Glamorganshire: George Herbert Hopkins, Gent., to be Acting Surgeon (dated April 25th, 1891).—*Rifle:* 1st Volunteer Battalion, the Royal Warwickshire Regiment: Richd. Arthur Newton, Gent., to be Acting Surgeon (dated April 25th, 1891).—4th Volunteer Battalion, the Cheshire Regiment: Surgeon W. E. S. Burnett is granted the rank of Surgeon-Major, ranking as Major (dated April 25th, 1891).—2nd Volunteer Battalion, the Cameronians (Scottish Rifles): Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) J. Loudon, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated April 25th, 1891).

Correspondence.

"Audi alteram partem."

"THE PROPOSED RECONSTITUTION OF THE LONDON UNIVERSITY."

To the Editors of THE LANCET.

SIRS,—Permit me to make a brief comment on a statement in Dr. Hale White's letter published in your last issue. Dr. White states that the Senate of the University of London received a letter dated March 3rd, 1891, expressing the acceptance of their last promulgated scheme by certain London medical schools (named). I was at the epoch mentioned, and am still, a member of the Medical Council of one of these (named) hospitals and of the governing body of the medical school attached thereto. I am sure that the project of the Senate has never been considered by the one nor has it appeared on the agenda paper of the other of these bodies. I am forced to conclude that the letter in question does not afford very reliable support to the views expressed by Dr. White. I am equally sure that I am not alone among my colleagues in the belief that whilst the scheme in question will destroy the value of the degrees of the London University, it will not meet the legitimate demand of the London medical student.

I am, Sirs, yours faithfully,

London, April 24th, 1891. M.D.LOND., F.R.C.P.

PUBLIC HEALTH AND PROFESSIONAL COURTESY.

To the Editors of THE LANCET.

SIRS,—In your impression of April 4th, 1891, and amongst the annotations, is to be found the above, and upon which you comment. In view of your not having had a copy of my report *in extenso* I beg to enclose you one, which I will ask you to carefully peruse, and specially that part of it relating to the outbreak of diphtheria at Brandon. This part of it is, *seriatim*, a copy of the special report which I presented to the Thetford Rural Sanitary Authority, under whom I act, and also to the Local Government Board, at their request in June last, 1890. Neither of these councils have asked me for an explanation of any of the paragraphs, and therefore I conclude they interpreted them in the light intended by me, but to which exception seems to have been taken by your correspondent. No one has been more astonished than myself at the misconstruction which has been placed upon them, and I can only regret that your correspondent should have imputed to me the charges of professional discourtesy.

I distinctly deny that any part of the report was intended as a reflection upon the conduct of the cases of diphtheria by the medical attendant, but it was rather an admonition to the public generally and a repetition of the tenets which I have repeatedly advocated in former reports, in order that early and timely medical advice should be obtained, and thus give the medical attendant a fairer prospect of conducting his case to a successful issue, and also to facilitate the work of the health officials. In the paragraph of which complaint is made, I was led to infer this (*a*) from the personal statement of the medical attendant to me, and (*b*) his admission by letter, *which I possess*, "that it is a great question whether sepsis may not account for the bronchitis." Under this suggestion had I not reasonable grounds for regarding its possible origin in the illness at Leeder's house? And this eliminates the charge of my *going behind the certificate of death.*

With regard to the examination of the infectious cases, I admit having seen some of them, *but at his request*, as he was anxious about the serious phase the cases assumed. It must be evident there could be no particular wisdom in courting infection myself, except for some mutual or ulterior good purpose. I have endeavoured to lay before you a *bonâ-fide* statement, which I feel persuaded will enable you to absolve me from the charge of which I have been accused.—I am, Sirs, yours faithfully,

Brandon, Norfolk, April 20th, 1891. FREDERICK JOY.

*** We are glad to receive Mr. Joy's letter, which was unfortunately crowded out of our last issue. Our comments were largely based on such expressions as that "the element of fatality in every case, save one, which attended the outbreak was mainly due to imperfect medical supervision," and the assurance of our correspondent that the medical officer of health "never saw, either ante mortem or post mortem, the children Leeder and Dyer." But it would seem clear that such wording of the report as appeared to imply slight were never so intended, and we feel confident that Mr. Joy's assurance to that effect will be accepted in full.—ED. L.

THE TREATMENT OF GALL-STONES: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Mr. Walker's case of "Removal of Gall-stones by Ether Solution," which was published in your issue of the 18th inst., has been specially interesting to me. For some five or six years ago, when a student in the class of physiology and pupil to a surgeon, under whose care I had seen a case of biliary colic, the idea struck me that if ether were to be injected with a hollow needle direct into the gall-bladder gall-stones might be dissolved *in situ*. And ever since then I have been very anxious to test this method, and have mentioned it to several friends with the hope of meeting with a suitable case, but so far I have not been successful. The few cases of biliary colic which I have had the opportunity of seeing have yielded quickly to opiates and general treatment. Of course, in a case such as Mr. Walker reports, where there is a sinus leading into the gall-bladder, the treatment he adopted was as simple as it was ingenious and rational. But, on the other hand, grave difficulties surround the injection of solvent fluids direct into the gall-bladder by the "hypodermic" method. In the first place, we must have a case in which the gall-bladder can be localised against the abdominal

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wall; secondly, we should have the facilities for immediately performing the operation of cholecystotomy should any symptoms of general peritionitis &c. threaten. Next, as to the dangers of intra-cystic injections: (1) Inflammation and suppuration of the gall-bladder and its sequelæ; (2) the needle prick might possibly (the obstruction not yielding) lead to extravasation within the peritoneal cavity, though probably adhesions would ere this have been contracted or lymph have closed the aperture. How might these dangers be obviated? (1) By being careful not to inject too irritating a solvent; (2) by, if possible, removing some of the fluid from the gall-bladder previously to injecting the solution. I have always intended injecting a mixture of ether in olive oil with the hope that the oil would do away with the risk of causing inflammation &c. To this a little chloroform might be added. I should feel inclined always to employ a solution containing some alcohol in addition to the above. For when bile stagnates for any length of time the bilirubin is transformed into biliverdin, which is only slightly soluble in ether and not at all in chloroform. But biliverdin is soluble in alcohol, whereas cholesterin is soluble in either ether, chloroform, or warm alcohol, and bilirubin is soluble in chloroform.[1] And the composition of gall-stones is well known to be either pigment or cholesterin separately; or both these combined.

I feel that the method of treatment which I have thus endeavoured to explain may be at least worthy of a trial; and I cannot but think that had Mr. Walker's patient been subjected to intra-cystic injections of such a solvent as I have suggested it might have so lessened the obstructing stone as to have allowed it to pass into the intestine; and that even possibly under repeated injections the remaining calculi might have gradually been dispersed; and thus the operation of cholecystotomy not been required. (Of course, experience only can show whether or not intra-cystic injection would not be more dangerous than cholecystotomy.) The fact that there is no reference whatever to intra cystic injections for gall-stones in the standard works of medicine, or in Dr. Neale's "Digest," may be a sufficient apology for the above suggestions which I offer for the consideration of your readers.

I am, Sirs, yours faithfully,

MARCUS M. BOWLAN.

Workhouse Hospital, Newcastle-on-Tyne, April 22nd, 1891.

TACHYCARDIA.

To the Editors of THE LANCET.

SIRS,—In an article appearing in the March number of the *University Medical Magazine* (Philadelphia) Professor H. C. Wood has effectively delineated a class of cases interesting alike by reason of rarity and obscure origin. They are the more worthy of note at the present time, when the general subject of angina, to which they are akin, has in the Medical Society of London elicited so various opinions. Dr. Wood proposes the restriction of the name "tachycardia" to those cases in which very violent heart action occurs without obvious reason, and remarks that "most of them belong to one of three classes: first, those in which there is paralysis of the pneumogastric or inhibitory nerve; second, those in which the cardiac disturbances are reflex; third, those in which the affection may be considered as strictly a neurosis. Of the second variety he observes that he has never himself seen a case, "though Rommelaere reports one in which he asserts that an extremely rapid action of the heart was due to the irritation caused by biliary calculus." An instance of this form of tachycardia came under recent observation in the person of an American lady visiting the family of a friend in my immediate vicinity. She was an intelligent woman of middle age, of healthy configuration, but at the moment of my entrance in apparently great distress. Orthopnœa and a degree of cyanosis were present, and her account was rendered in whispers, delivered in an ejaculatory manner.

This was her fourth attack, all of them occurring within a period of two years. They had come on always immediately after a hearty meal, *which had included pickles or fruit, and which followed upon considerable physical fatigue.* She had had skilled attendance, and a variety of treatment during the attacks, but nothing availed until the stomach was emptied medicinally. The pulse was hardly to be felt at the wrist, and was estimated under auscultation at 200. Respiration was hurried and short, and the dyspnœa was painful to witness. At her urgent request I administered emetine in full dose, with a draught of warm water. Upon the first copious emesis the pulse reappeared in full beats, giving five or six impulses at a rate of 48, then, within a half minute, falling into a rhythm of 80, which continued during my observation. All difficulty of respiration passed away with this recovery of the pulse, and in a very short time the patient expressed herself as being "perfectly comfortable." Careful examination detected no evidence of organic disease of the heart, and no other diagnosis now appears so appropriate as that of "reflex tachycardia."

I am, Sirs, yours truly,

H. WEBSTER JONES, M.D.,

Langham-street, W., April 27th, 1891. Yale University.

[1] Vide Landois and Stirling, 3rd edition, pp. 268–9.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

To the Editors of THE LANCET.

SIRS,—Will you allow us to draw the attention of the readers of THE LANCET to the forthcoming International Congress of Hygiene and Demography which will be held in London in August next under the presidency of H.R.H. the Prince of Wales. The last meeting of the Congress took place in Vienna in 1887, where members from all countries were most hospitably received and entertained. Experience of former congress meetings shows that the necessary expenses of the arrangements for the reception of from 3000 to 4000 members, the printing of transactions, correspondence and postage, cannot be kept lower than £6000 or £7000. We venture to appeal therefore to all those who are interested in the progress of hygiene, the improvement of public health, and the amelioration of the conditions under which the inhabitants of towns and other groups of population exist, to aid the committee in their endeavours to make the London meeting of the International Congress not only a success, but worthy of the country which has always been distinguished not only for its hospitality, but as a power in the work of practical sanitation. All donations from members of the medical profession will be acknowledged in THE LANCET.—We are, Sirs, yours faithfully,

DOUGLAS GALTON,
Chairman of the Organising Committee.

W. ROBT. CORNISH,
Chairman of the Finance Committee.

G. V. POORE,
Hon. Sec. General.

N.B.—Full particulars and list of donations will be found on pages 63 and 64 of our advertisement columns.

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—As you are drawing attention to the facilities afforded to medical students for becoming acquainted with the symptoms and treatment of infectious diseases, I think it opportune to remind your readers and the President of the Society of Medical Officers of Health, who also has been alluding to this important subject, that no difficulties have ever attended instruction in this department of medical study so far as Edinburgh is concerned. From the first the corporation insisted on clinical instruction being given in the City Hospital. Classes have been successfully carried on during the last five years, and nearly 200 students annually take advantage of them, from six to eight separate courses being given during the session. I am informed by Dr. Wood, the medical superintendent, that "two years ago it seemed highly probable that one student contracted scarlatina." This is the only case in which there has been any suspicion of infection having been contracted in connexion with these classes.

I am, Sirs, yours faithfully,

HENRY D. LITTLEJOHN,

Edinburgh, April 29th, 1891. Medical Officer of Health.

"THE VALUE OF TUBERCULIN IN THERAPEUTICS."

To the Editors of THE LANCET.

SIRS,—I should feel obliged to you if you would kindly allow me to refer in a few lines of the next issue of

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THE LANCET to a remark made in one of your leading articles to-day.

The first sentence of the paragraph, beginning half-way down page 943 of THE LANCET, runs thus: "It is somewhat remarkable that the most damaging criticism upon the use of tuberculin as a remedy—that, namely, which was made on the authority of Professor Virchow—should have been passed over in silence by Dr. Heron." Whatever Professor Virchow may say concerning a matter of importance in pathology is entitled to be received by every medical man with the greatest respect. My reason for passing over in silence his criticism, to which you refer, is that I have never seen such cases as those mentioned by Professor Virchow. Until I have seen such cases, or until the evidence touching them is completed, it would, I think, ill become me to express any opinion about them.

I am, Sirs, yours faithfully,

Harley-street, W., April 25th, 1891. G. A. HERON.

THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—Mr. Stanhope having intimated his willingness to confer military and medical titles upon officers of the medical staff in accordance with the recommendation of his own committee, the earlier request of Sir Andrew Clark, and presumably with the concurrence of the Director-General, it is to be hoped that you will use your powerful influence in protesting against the refusal of a concession which must have cost "my military advisers" a considerable twinge. The ranks would be better defined, and, as a first step in the direction of a corps of Royal Surgeons, these titles would be of undoubted advantage in familiarising the public and the army to a change which must come sooner or later. The concession would satisfy a large proportion of the officers, and, if substantive titles with the present limited command, were distinctly laid down, should allay agitation in a profession which can point to quite as honourable a history as that of the profession of arms.

I am, Sirs, yours faithfully,

April 26th, 1891. SENIORES.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Small-pox.

AFTER having had no cases of small-pox for two years, the Health Committee report an outbreak in one quarter of the city occurring in four houses. Seven patients were implicated; these were promptly removed to the Borough Hospital and the houses disinfected. It is believed to have been introduced by a traveller, who brought it from Lisbon in his clothes, one who himself escaped the disease. Of course this is somewhat difficult of proof. The outbreak has caused some consternation, and has elicited a series of letters in the local press.

Dr. Koch's Treatment.

A largely attended meeting was recently held at the Medical Institute to hear the results of various local exponents of this treatment. The discussion was opened by Mr. Barling, who gave an interesting series of cases treated by him in the General Hospital. Various other speakers also gave instances, and their respective views were received with considerable attention. On the whole, the tendency of the discussion showed that though in many instances marked benefit had been obtained, there was yet not sufficient evidence of the remedy affording permanent cure. *Apropos* of this meeting, indignation has been freely expressed at a report of it appearing in an evening paper of the following day.

Midland Counties Idiot Asylum.

The annual meeting of this useful institution was held this year at Shrewsbury, under the presidency of the Mayor. According to the most recent figures, the number of idiots and imbeciles in Shropshire was 1730, in Warwickshire 1515, Leicestershire 1341, Worcestershire 1169, and Staffordshire 1164. The institution is situated at Knowle, near Birmingham, and receives fifty patients. A sub-committee was appointed to consider the question of enlargement, and it was resolved to proceed as soon as £2000 had been raised. The financial report was fairly satisfactory, and much good had been done towards improving the condition of the patients.

Prosecution under the Medical Act.

An important prosecution undertaken by the Medical Defence Union took place at Aston on the 28th inst. A Mr. S. E. L. Smith, whose name is on the Register as an L.S.A., was the defendant. It was shown that he had on many occasions signed himself as M.D.; on a brass plate outside his house he is described as "Physician and Surgeon," and on another plate as "Dr." Smith. The defence set up was that the Act was not meant to punish duly qualified practitioners from assuming a higher title than that possessed, but for the prevention of quackery and against those holding no qualification at all. Defendant passed the examination of the Society of Apothecaries in 1885, and in addition obtained the degree of M.D. of Indianapolis. Some amusement was caused in court by the reading of a testimonial in favour of a certain wine being suitable for invalids, and signed with the defendant's name, and the initials of M.D., L.R.G.P., L.M., and L.S.A. (Eng.). On being asked the meaning of the second series, the defendant replied that it meant Legally Registered General Practitioner. Some discussion followed, and eventually the defendant was fined the maximum penalty of £20 without costs. In two other cases defendant was also fined 40*s.* and advocate's fee, and in each instance a case for appeal was granted.

Birmingham, April 27th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary.—Nurses' Pensions.

AT present there has been no new development with regard to either the proposed extension of the infirmary or the erection of a new hospital upon the site offered by the College; in fact, both bodies are, in Yankee phrase, for the time being, "lying low." But all those interested in the question are looking forward with considerable interest to the next move on either side, and periodically communications appear in the daily papers, not unfrequently in strongly worded epistles. Thus one gentleman, speaking evidently from the college standpoint, asks whether "there is less smoke and sulphurous acid in the neighbourhood of the infirmary now than some few years ago, when the site was unanimously condemned by the staff and governing body? Whether it has been discovered that the conditions which have killed the hollies and shrubs around the infirmary are favourable to human invalids? Is fog found to be a wholesome counter-irritant, or are the noise and racket of Piccadilly excellent tonics for weak nerves?" That the Infirmary Board feel they owe their constituents a more explicit statement of the reasons which have led them to decline the College offer was practically admitted by the chairman at the board meeting held yesterday, for he said that a statement was in course of preparation defending their position, and would shortly be placed in the hands of the whole body of subscribers. At the same meeting the Board established a scheme of pensions for their nurses which provides an annuity of £25 per annum to those who have been on the staff for twenty-five years, and who shall have attained the age of fifty-five. It also provides for gratuities or pensions to nurses of ten years' service whose health shall break down whilst in the discharge of their duties so as to unfit them for further nursing work. Hitherto the pensioning and relief of old servants have been carried out in a rather haphazard way, without any fixed or definite rules being laid down.

Air Pollution.

A further report upon the impurities of our atmosphere has been issued by the "Noxious Vapours Abatement Association." Samples of rain water were examined from the centre of the city and from the middle of Ancoats, one of the murkiest and most air-polluted of our districts. The analyses show that the suspended matter is three times more in Ancoats than in the centre of the city. Of the matters in solution, the organic matter was much greater in the city than in Ancoats, but the free ammonia, sulphurous and other acids were largely in excess in the latter district. The figures, for which Mr. William Thompson,

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one of our well-known analytical chemists, is responsible, are as follows:—

	Grains per gallon rain water from Ancoats.	Manchester.
Suspended matter	27·194	9·330
which is composed of—		
Mineral matter	13·962	0·085
Soot, organic matter, combined water, &c.	13·232	9·245
	27·194	9·330
Total solid matter in solution	6·440	6·80
which is composed of—		
Organic matter, combined water, &c.	2 060	5·24
Mineral matter	4·380	1·56
Free ammonia	0·546	0·202
Albuminoid ammonia	traces	traces
Chlorine	0·268	0·833
Oxygen contained in permanganate of potash required to oxidise organic matters &c.—		
Acting at 80 deg. F. during 15 minutes	0·2786	0·3097
Acting at 80 deg. F. during 4 hours	0·8828	0·8571
Sulphurous acid	0·4004	none
Free acid calculated as sulphuric acid	1·029	0·2058

The same subject came up for discussion at the recent meeting here of the North-western Society of Medical Officers of Health, when Dr. Thompson, the President for the year, took it as his text for an inaugural address. In the discussion that followed, many of the speakers, including magistrates, engineers, as well as officers of health, contended that the time was fully come when public authorities should deal vigorously and determinedly with this plague of our large towns, that there were ample powers for so doing, and that practical means were available for very largely abating this unwholesome factor of town life.

Trained Nurses in Workhouse Hospitals.

We have recently had a public meeting (presided over by the Right Hon. J. T. Hibbert) to support the work of the Northern Workhouse Nursing Association. We have now for so many years in Manchester been used to find properly trained nurses in the sick wards of our workhouse that one was apt to think an equally satisfactory condition of things existed generally elsewhere. From the statements and remarks made by various of the speakers it appears that this most desirable, and one might almost say humane, arrangement is far from being universal. If it could but be instilled into the brain of the average guardian, in every Poor-law union, that skilled nursing is in the end more economical than the makeshift, inefficient arrangements which have in the past been far too prevalent, the desired change would be quickly brought about. But a question of this sort ought not to depend merely upon £ *s. d.* An influential and representative committee was appointed for furthering the aims of the Society.

Salford Hospital &c.

Upwards of half a dozen times have the Salford Guardians had the appointment of a resident medical officer to their hospital at Hope before them ere they could make up their minds upon the subject. It has at last been settled by the appointment of Dr. Garry, and it is to be hoped that things at this institution may now proceed more smoothly than has been the case during the past few years. At the last meeting the Town Council ordered the closing of twenty cellar dwellings. Few people fully realise what cellar dwellings really imply to those who are unfortunate enough to inhabit them. It is stated that some 200 of these still exist in our neighbouring borough—at least, Manchester has not this sanitary sin upon its shoulders.

Manchester, April 28th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Increased Death-rate of Newcastle.

WITH regard to the high death-rate recently noted in Newcastle (31 per 1000), the medical officer of health, Mr. H. E. Armstrong, reported to the Sanitary Committee of the Corporation that in a total of 205 deaths during the fortnight ending April 18th, the principal factors were—zymotic diseases 13 (including 10 from whooping-cough) and diseases of the respiratory organs 53; the remaining causes of death were comprised in phthisis, scrofulous diseases, diseases of the heart, diseases of the brain and nervous system, and old age. Excepting with regard to whooping-cough, the zymotic death-rate has not been high.

The Chief Constable on Crime in Newcastle City.

Captain Nicholls, in his report to the Watch Committee, says that the condition of the city as to serious crimes has been satisfactory, but that a comparison of the quarter with the corresponding one of 1890 shows that an increased number of about 600 persons had been proceeded against. The large increase, he explains, is made up by greater vigilance as to drunkenness and parents ill-treating their children. Visits had been made to 177 families, the parents of whom had been proceeded against under the Act of 1889; the families represent 625 children. An experienced constable visits these families, and has so gained their confidence that they now look upon him as their benefactor, and often seek from him advice and assistance.

The Influenza in the North of England.

Since I last wrote the influenza epidemic has considerably extended its area in the north of England, and it may be said to reign from the Humber to the Tyne. Hull has felt it severely; also Scarborough and many of the North Yorkshire towns and villages, especially Ripon and the Northallerton district. In the Hartlepools, and indeed on both sides of the Tees, it has been rife, many of the resident practitioners being much overworked.

Stockton and Trained Nurses.

An influential meeting has been held at Stockton to consider a scheme suggested by Lady Londonderry for an institution for trained nurses for Stockton. The Mayor presided, and there was a very representative meeting. It was proposed and decided to start with four nurses, who would cost about £400, to attend the sick poor in the Parliamentary borough, and that such institution should be established irrespectively of politics or creed.

Darlington and the Cremation Question.

The people of Darlington had the cremation question very fully presented to them at a public meeting at which the Mayor presided, and an able address was given by Professor A. W. Hare, in which he showed that there was no subject which had a more direct sanitary bearing than the disposal of the dead, and that its importance would become greater and greater as from decade to decade the census showed an increase in the population of the country. A motion in favour of cremation and of a crematorium being erected in Darlington was carried with only a few dissentients. Mr. Manson, surgeon, in proposing a motion, mentioned that in Darlington and the district they had heard for some years about the pollution of the river Tees and the consequent pollution of the drinking water. Amongst other pollutions was the drainage from eighty churchyards, and he pointed out that "wherever places of sepulture were they were to be drained, and the Darlington people were drinking the liquid." He said the fact should bring home to their minds that earth burial was dangerous to everyone of them, and that cremation was to be advocated on sanitary grounds.

Middlesbrough.

At a late meeting of the Middlesbrough Fever Hospital Committee it was stated that there were now in the hospital twenty-four patients, and that the expenditure for the past year would exceed the estimate by about £500, owing to the epidemic of typhoid fever with which the town had been visited. At a meeting of the Port Sanitary Authority Dr. Malcomson was reappointed medical officer. A large number of foreign and home vessels had been visited, and seamen found suffering from infectious diseases had been removed to the floating hospital. The annual meeting of the North Ormesby Cottage Hospital near Middlesbrough has been held, and a record of good work has been presented, the medical officers and sisters receiving the warmest thanks of the council. Owing to the great increase in the number of patients in the out-door department, it had become necessary to extend the hospital buildings, there being 9000 attendances during the year. An appeal made to the working men of the district had produced over £600. The house-surgeon's report showed that 483 in-patients had been admitted, and that the increase of in-patients over the previous year had been forty-one.

South Shields.

A numerously attended meeting of representative members of the various friendly societies has been held at South Shields, at which the Mayor presided, for the purpose of promoting the Friendly Societies' Convalescent Home lately

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established at Grange-over-Sands. The Mayor thought it would be an improvement in the management if honorary members like himself could have tickets to use for some of the poorer workmen, and with this suggestion the meeting appeared to agree.

The High Death-rate at the Durham County Asylum, Sedgefield.

Dr. Smith, the superintendent of the Sedgefield Asylum, in his yearly report, in reference to the high death-rate of the asylum, says "deaths had been very numerous. There was an alarmingly large proportion of disease found in patients who had been a long time in the asylum, and who on their admission showed no trace of disease; 37 per cent. of the disease was lung disease. Where large numbers of people congregated in a house there was always a tendency to lung disease, and especially if the rooms were badly ventilated, or, what was the same, overcrowded." Dr. Smith says that another factor in the production of lung disease was the abstraction of oxygen from the atmosphere owing to the use of coal gas as an illuminant, and the escape of its poisonous products into the rooms. This, he believed, was a much more frequent cause of lung disease than was usually thought. During the year the large number of 1490 patients had been under treatment, of whom 147 had recovered. Dr. Smith's opinion of the New Lunacy Act is that it would merely increase the work and expense.

Newcastle-on-Tyne, April 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Opening of the Summer Session.

THE summer session in the Faculty of Medicine, Edinburgh, opens on Monday, the different classes, both in the University and the extra-mural school, being advertised to begin on that day.

Medical Officers of Health Society.

Last week a meeting of the medical officers recently appointed by the County Councils was held in the rooms of the Royal Medical Society of Edinburgh, at which it was resolved to form a society of medical officers of health, and that medical men holding diplomas in Public Health might be associated with it. A committee was appointed to draw up a constitution for the Society, and it was resolved that meetings should be held alternately in Edinburgh, Glasgow, and Perth.

Health of Edinburgh.

The mortality last week was 90, making the death-rate 17 per 1000. Diseases of the chest accounted for 26 deaths and zymotic diseases for 8, of which 5 were due to measles and 3 to whooping-cough. The intimations for the week were 2 from diphtheria, 19 from scarlatina, and 114 from measles.

A new University Hall at Edinburgh.

There has recently been founded in connexion with Edinburgh University a "University Hall," the object of which is to inaugurate among Edinburgh undergraduates a system of social residence such as obtains in the English Universities. Two buildings have been taken over for this purpose—one at Mound-place, another at Riddle's-court, and already there are nearly thirty residents.

GLASGOW.

The Census and the Death-rate.

At the last meeting of the Town Council the fact was pointed out that during the last decade the estimate of the population made by the medical officer of health and that made by the Registrar-General had differed very considerably, and that the result of the census had shown that the medical officer was very much nearer the truth than the Registrar-General. The figures given by the latter as the estimated population of Glasgow in 1890 were 532,282. The census of those within the municipal boundaries made it 564,975, the estimate of the medical officer having been 567,656. The result of this difference in the estimate of the population had been that the death-rate of the city had appeared to be during the last few years 1·5 per 1000 higher than it ought to be.

St. Mungo's College.

At the annual meeting of this institution, held last Monday, it was stated that 100 students had attended the medical classes alone. Referring to the subject of affiliation to the University, the Principal pointed out the absolute necessity of placing the College on a firm foundation financially. Some progress had been made in securing endowment; of the sum of £20,000 aimed at, already £7000 had been subscribed.

Dr. E. Duncan on Plumbers.

In a lecture delivered recently on "The Sanitary Aspects of the Plumber's Work," Dr. Duncan summed up the results of his inquiries as follows:—"(1) Plumbers are not more liable than other persons to the class of zymotic diseases usually supposed to arise from sewage emanations; (2) that, although they do not suffer from typhoid fever or diphtheria, they do not suffer from minor ailments, such as sickness, vomiting, diarrhœa, and sore-throat, in consequence of exposure to offensive emanations from choked drains and soil-pipes; (3) that plumbers in Glasgow, like their brethren elsewhere, suffer to a considerable extent from the toxic effects of lead." In discussing some of the dangers to which plumbers are exposed in dealing with drains, Dr. Duncan observed that "neither decomposing typhoid excreta nor decomposing sputum, whether diphtheritic or tubercular, can give rise to any more noxious gas than any other piece of decomposing organic matter. There is, in fact, no gas in a sewer that you may not find outside of it. The air of a sewer, when it is properly ventilated, is much better from the chemical point of view than the air of crowded churches and schools, or even than the air of the houses in which one-half of the population of Glasgow lives."

Samaritan Hospital.

The fifth annual meeting of subscribers to this hospital was held on Tuesday last. From the report it seems that the number of patients during the past year was 635. Of these, sixty were in-door patients, 575 out-door. On the in-door patients sixty-two surgical operations were performed; in the out-door department there were 127 minor operations. Two patients died in hospital during the year. The financial statement was fairly satisfactory. The bazaar in aid of the building fund had yielded £5300; a sum of about £2000 is needed to complete the fund.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal College of Surgeons.

AN election for a member of Council in the room of Mr. Thomson, resigned, took place on Tuesday, when Mr. Myles, surgeon to the Richmond Hospital, and Professor of Pathology R.C.S., was elected by a majority of votes. The annual elections of examiners for the ensuing year will probably take place next week, and for the vacancies in anatomy and surgery a very large number of candidates will compete.

Royal University of Ireland.

During 1890 the total number of candidates for the various academical examinations was 2845, as compared with 2970 in 1889, or a decrease of 125. The absentee candidates were less than in the preceding year, while the number who passed the several examinations was greater both absolutely and relatively, being 1803 in 1890 and 1625 in 1889.

Suicide from Phosphorus.

A lad aged nineteen died in Mercer's Hospital last week from phosphorus poisoning, self-administered. The deceased, who was subject to epileptic fits, took the poison while in a state of temporary insanity, and a verdict to this effect has been recorded by a coroner's jury.

Criminal Statistics for Dublin.

The total number of indictable offences committed within the Dublin district last year was 2465, against 3067 in 1889, or a decrease of 602. The charges of drunkenness not combined with other offences numbered 11,319, against 11,144 in the year preceding. Of the 27,069 persons arrested by the police, 283 were under 10 years of age, 491 under 15, 2431 under 20, 4897 under 25, 5028 under 30, while 985 were 60 years and upwards. These returns indicate an increase of

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juvenile crime, while the large number of arrests for drunkenness is also a serious factor in the statistics for 1890.

Health of Dublin during March.

As compared with February, there were slight increases in the mortality from whooping-cough, diphtheria, and typhoid fever; but in both months the deaths from zymotic diseases numbered the same—viz., 31.

Death of a Medical Coroner.

Dr. Thomas J. M'Grath, coroner for the East and South Divisions of Tyrone, died on Tuesday, April 28th, from an overdose of a narcotic.

The Bishop of Down and Connor, president of the Royal Irish Academy, has given £500 towards the expense of publishing the "Book of Armagh."

An election for a visiting surgeon to Jervis-street Hospital will take place on Thursday, the 7th inst.

The Irish Cyclists' Association will hold a meeting on May 23rd, in aid of the funds of the Dublin hospitals.

Surgeon-General Thomas Farrant, A.M.S., was last week sworn in as a Justice of the Peace for the County Cork.

Dublin, April 28th.

BELFAST.

Professor Gairdner in Belfast.

At a meeting of the Ulster Medical Society, held in the Museum on Wednesday, April 22nd (the President, Dr. Dempsey, in the chair), Professor Gairdner, who had been invited by the Council, delivered an address on "Remedies, New and Old; Errors and Fallacies; with Suggestions for the Improvement of Therapeutic Methods." Having thanked the members for the honour they had paid him, and having complimented Dr. Whitla, the new professor of Materia Medica, as being the right man in the right place, Dr. Gairdner pointed out how few of them had the means of testing thoroughly any one great therapeutic advance. He declared that to be compelled to undertake personally a comparative investigation of any one of the scores of new claimants along certain well-understood lines of progress would more than exhaust the resources he had at disposal as a teacher and hospital physician in any reasonably limited period. Hence he advocated the coöperation of medical men for purposes of unbiased and independent judgment in regard to new remedies. In describing the errors and fallacies attaching to the new remedies, and their application to disease, it would not appear to them surprising or incongruous if he attempted to point a moral in a few instances from some of the older ones. He then referred to the chequered history in the past of mercury and antimony. In reference to the newer remedies, he was afraid, instead of diminishing, they were rather adding to the difficulties of medical men. He did not think they could possibly overtake the flow of new remedies. Dr. Gairdner then referred to Koch's new treatment for tuberculosis, saying that, whatever judgment might be ultimately arrived at on the matter, few of them would be disposed to deny that they were now in the very trough of a wave of reaction, or rather discouragement, from the hopes and expectations entertained in November last. Criticising the cases recently reported from Berlin, he said the results were less favourable than those obtained twenty years ago in the Brompton Consumption Hospital. He advocated the principle of scientific coöperation for the investigation of new remedies. A therapeutic committee sitting in London, or a multitude of such committees dispersed over the country, would be an education in itself for the persons concerned in it, which could not fail sooner or later to leaven the entire profession with a new kind of fellow feeling, and also a sense of responsibility, for the fate of new remedies which was at present greatly lacking with many of them. In conclusion, Dr. Gairdner asked if they—somewhat upon the lines of his discourse—could do anything towards initiating or devising a better way of dealing with new remedies. Dr. Cuming, Professor of Medicine, Queen's College, Belfast, in moving a hearty vote of thanks to Dr. Gairdner, spoke in the highest terms of the address, but said that personally he was not so sanguine as the professor seemed to be as to the advantages to be derived from coöperative research in reference to the value of new drugs. The vote of thanks was seconded by Dr. Lindsay, and passed most cordially. In the evening Dr. Gairdner was entertained at dinner in Thompson's Restaurant by the Ulster Medical Society. Dr. Dempsey presided, and there were over seventy members of the profession present, in addition to the Mayor of Belfast and the President of Queen's College. Dr. Dempsey proposed "The health of Our Guest, Dr. Gairdner," who, after replying, gave the toast, "Queen's College and Belfast Medical School," to which Dr. Hamilton (President) and Professor Cuming replied. Professor Dill proposed "The City of Belfast," and the Mayor replied. The health of the President of the Ulster Medical Society was proposed by Dr. Whitaker, medical officer of health for Belfast, and Dr. Dempsey responded. An admirable programme of music was excellently rendered. Too much praise cannot be given to Dr. McCaw, secretary of the Ulster Medical Society, for the great trouble and pains he took to make the dinner so successful.

The Royal Hospital.

I understand the following bequests have been left to the Royal Hospital: £500 from Lady Johnston and £1000 from Mr. Howard and Mr. Garrett Campbell, being the amount received by them as trustees of the will of the late Henry Campbell, which trusteeship they have now resigned.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Cæsarean Section twice successful in the same subject.

AT the last meeting of the Academy of Medicine, M. Crimail of Pontoise recorded the somewhat rare occurrence of the successful performance twice running of Cæsarean section on the same patient. The woman was a dwarf twenty-four years old, whose pelvis, while it bore no evidence of rickets, was, as might be imagined, very much contracted. Her first pregnancy took place in 1888, when she was subjected to the first operation, and on its successful issue she was warned as to the consequences of future pregnancies. Notwithstanding this, she again became pregnant, and in February of this year it was found necessary to subject her once more to this formidable procedure. On this occasion, however, M. Crimail, with a view to preventing future pregnancy, ligatured the Fallopian tubes in two places, and divided them between the ligatures. She made an excellent recovery. It may be mentioned that the sutures were composed of carbolised silk, and that the dressings consisted of iodoform dusted on the wound, and the whole covered with iodoform gauze and cotton wool impregnated with the same antiseptic. It is interesting, too, to add that both the infants thus brought into the world survived, and are perfectly well.

Illegal Practice of Pharmacy by a Sister of Charity.

The Society of Pharmaciens of the Lyons and Rhone districts recently instituted a curious indictment against a Sister of Charity of illegally practising pharmacy. The Sister, it appears, had a remedy for a rather common complaint—viz., anæmia,—and this nostrum she was in the habit of selling for money amongst her friends, acquaintances, and others. The pharmaciens, considering this an encroachment upon their privileges, objected, and instituted legal proceedings. The Court of First Instance took a lenient view of the affair, and declined to condemn the amateur pharmacien; but the Society insisting on an appeal, the higher Court responded by fining the Sister a small sum for illegal practice, and cautioning her as to her future conduct.

A Step in Advance.

Many things are, no doubt, managed better in France than on your side of the Channel, but by no means all. It is true we escape income-tax, but the imposition of this tax cannot be said to contribute to shutting out from our dwellings the light and breath of heaven, and the consequent respiration of a vitiated atmosphere. The tax on doors and windows which is levied in this otherwise enlightened country may, on the other hand, be fairly held to have this effect, especially in country and poor districts where all possible thrift and economy are practised. The Council General of the Gironde is evidently at last of this opinion, for it has voted that all taxes on doors and windows should be suppressed as contrary to the due observance of the laws of hygiene.

Correction.—In the paragraph headed "Artificial Quinine" in my letter last week an error has crept in which it is de-

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sirable should receive correction. The sentence commencing on the ninth line of that paragraph should run thus: "The base cuprein contained in the shrub Remijia pedunculata, growing in Brazil, is treated with sodium, then the combination thus obtained is *further treated with* chloride of methyl. The product is quinine."

Paris, April 28th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch.

IT will be remembered that the Minister of Education and Medical Affairs freed Professor Koch from his professional duties during the past winter session, to enable him to devote his undivided attention to the study of tuberculosis. The private lecturer, Dr. von Esmarch, a son of the famous surgeon of Kiel, lectured on hygiene in his stead, and conducted the practical work in the Hygienic Institute. In his speech in the Prussian House of Deputies, the Minister, Herr von Gossler, stated that this arrangement was only temporary, and that the chair of hygiene should afterwards be entrusted to a new ordinary professor, in order to allow Professor Koch to devote himself exclusively to his new institute for the study of infectious diseases. This appointment, however, has not yet been made, owing perhaps to Herr von Gossler's resignation, and Dr. von Esmarch will take Koch's place this session also both in the University and in the Hygienic Institute. The usual lectures on bacteriology, however, will not be delivered.

Death of Dr. Julius Jensen.

The eminent alienist, Dr. Julius Jensen, died here last Friday, aged forty-nine. He was head physician of the East Prussian asylum of Allenberg for about ten years, and of the great Berlin asylum at Dalldorf for about a year. The most important of his writings are—a treatise on the furrows and convolutions of the human cerebral hemispheres; investigations into the relations between the cerebrum and mental derangement; a report on 453 brains of insane East Prussians divided and weighed by Meynert's method; reports of remarkable observations made at the necropsies of insane persons, of a case of arrested development of the tonic sphere, of defects in the parietal and frontal lobes without obvious disturbance of motion during life, of prenatal scars in the right cerebral hemisphere, of a microcephalous skull, &c., an essay on prognosis in mental disease, an answer to the question, "What is the meaning of the word insane?" an article on insanity with rigidity of muscles in Ersch and Gruber's Encyclopædia, and two popular lectures on "Dreaming and Thinking" and on "Doing and Acting."

German Death-rates in the Week ending April 11th.

Aix-la-Chapelle, 28·4; Altona, 22·2; Barmen, 19; Berlin, 18·6; Bremen, 22·8; Breslau, 30·0; Chemnitz, 28·5; Cologne, 22·3; Dantzic, 21·9; Dresden, 23·4; Dusseldorf, 23·2; Elberfeld, 20·3; Frankfort-on-the-Maine, 19·6; Hamburg, with its suburbs, 19·5; Hanover, 21·3; Königsberg, 20·4; Krefeld, 23·8; Leipsic, 16·7; Magdeburg, 24·1; Munich, 29·0; Nurnberg, 19·3; Stettin, 24·2; Strasburg, 28·7; Stuttgart, 21·4.

Berlin, April 28th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Montreal Medical Notes.

AT the annual Convocation for conferring degrees, held April 1st, the M.D. C.M. degree was conferred upon forty-eight graduates. Of this number nineteen were residents of the province of Ontario. The number in attendance in the medical department was 260. The Convocation of Bishop's College Medical School was held on March 31st.

University of Toronto.

The examinations in the medical department commenced on April 1st. During the session the classes have been well attended, the register showing: Fourth-year, 65; third-year, 60; second-year, 81; first-year, 78; being a total of 284. The sum of $1200 has been offered by seven of the city banks as endowment of a scholarship in the first year in the department of political science. Rebuilding operations are steadily progressing, the roofing-in of the main portion being nearly completed, while the site of the old convocation hall presents evidence of the stonemasons' work in that direction.

Medical M.P.'s.

Already seventeen doctors have been gazetted members of the House of Commons—certainly a useful number to see that the enactments of that body are of a "healthful nature."

Asylums of Ontario.

The annual report of the Inspector of the Lunatic and Idiot Asylums of the province has just been issued. At the close of the official year—Sept. 30th, 1890—there were upon the books 3318 patients, against 3181 upon the same date last year. The average number in residence during the year was 3266. Comparing this with the numbers given in the first report, 1877, there has been a yearly increase of 103. Of the 669 admissions during the year 256 were of other than Canadian birth.

Medical Health Officer for Toronto.

After months of delay the post of health officer for the city has been filled by the appointment of Dr. H. Allen.

The Lakeside Home.

Through the liberality of Mr. J. Ross Robinson this summer home for invalid children is to be enlarged to accommodate 250, at a cost of $10,000, thus providing for the many applicants who, for want of space, have previously been refused.

Medical Missionary Magazine.

Not satisfied with supporting a medical missionary in Corea, the missionary board of the Medical Students' Young Men's Christian Association of Toronto decided to publish a small magazine, *The Medical Missionary*, the first number of which appeared last month. It is to be hoped it may be the means of arousing sympathy and of helping this commendable work.

April 4th.

ROYAL COLLEGE OF PHYSICIANS.

A COMITIA of the College was held on Thursday last, Sir Andrew Clark, Bart, President, in the chair. At this meeting nine gentlemen were elected Fellows of the College and nine were admitted to the Membership. The lists will be found in another column. Licences were granted to the ninety-seven successful candidates.

A communication was received from the Manchester and Salford Sanitary Association suggesting that the College should join in the attempt to put the practice of hypnotism under some restrictions similar to those which affect the practice of vivisection. It was decided that the letter should lie upon the table.

The President being desirous of entertaining at dinner representatives of the International Congress on Hygiene and others in August next, the Fellows resolved to sanction the use of the College for that purpose.

After some discussion, it was resolved that the course of medical study required for the Licence of the College should be extended to a period of five years.

The report of the Committee on the Midwives' Registration Bill was then considered, and although the Bill has been withdrawn, it was thought well to direct that the report should be printed and sent to members of the House of Commons, to the Local Government Board, and to the General Medical Council.

It was announced that Dr. Francis Warner had been selected as Milroy Lecturer.

Reports from the Finance Committee, the Committee of Management, and the Laboratories Committee were received and adopted.

THE DEPUTY-CORONERSHIP FOR ANGLESEY, vacant by the death of Mr. J. Cemlyn Jones, solicitor, Bangor, has just been filled by Mr. R. Jones Roberts, the coroner, who has appointed Mr. Roland Philip Williams, L.R.C.P. Edin., Holyhead, his deputy. Mr. Williams is a member for Holyhead on the Anglesey County Council, a member of the standing joint committee, and has just been re-elected a member of the Holyhead board of guardians.

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Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen have been elected Fellows of the College:—

William Allen Sturge, M.D. Lond.; Alfred Henry Carter, M.D. Lond.; Richard Grainger Hebb, M.D. Camb.; Sidney Philip Phillips, M.D. Lond.; John James Pringle, M.B. Edin.; William Pasteur, M.D. Lond.; Sidney Harris Cox Martin, M.D. Lond.; Archibald Edw. Garrod, M.D. Oxon.; Samuel Herbert Habershon, M.D. Camb.

The following gentlemen have been admitted to the Membership:—

William Gordon, M.B. Camb; George Redmayne Murray, M.B. Camb.; Bedford Pierce, M.D. Lond.; Samuel Otway Lewis Potter, M.D. Jefferson Coll.; James Taylor Robb, M.D. Aber.; Gustave Isidore Schorstein, M.B. Oxon.; W. Knowsley Sibley, M.B. Camb.; Ernest Henry Starling, M.D. Lond.; Dawson Fyers Duckworth Turner, M.D. Edin.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE. At the Convocation held on April 28th the following were recommended for the degree of Doctor in Medicine for Practitioners of fifteen years' standing:—

Norman Bruce Elliot, F.R.C.S. Eng.; John Hamilton, F.R.C.S., L.R.C.P. Edin., L.F.P.S. Glasg.; Fredk. K. Marsh, L.R.C.P. Edin., L.F.P.S. Glasg.; Willoughby Furner, F.R.C.S. Eng.

The following were recommended for the degree of M.D.:—

George Berwick, M.B., B.S. Durh.; Henry Luther Ewens, M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond.; Alfred John Gregory, M.B., B.S. Durh., M.R.C.S., L.S.A.; Francis Hy. Mead, M.B., B.S. Durh., M.R.C.S.; George Newstead, M.B., B.S. Durh.; Charles Patrick O'Connor, M.B. Durh., M.R.C.S.; Nathan Raw, M.B., B.S., L.S.Sc. Durh.; Louis Robinson, M.B. Durh., M.R.C.S., L.S.A.; Jas. Scott Tew, M.B., B.S. Durh., M.R.C.S., L.S.A., D.P.H. Camb.

The following were recommended for the degree of Bachelor in Medicine (M.B.):—

Honours (Second Class).—Edward Cecil Willcox, College of Medicine, Newcastle-on-Tyne.

Pass-list.—Walter Reyner Brunton and Wm. Arthur Rudd, London Hospital; John Clay, Alfred Cox, Arthur Jas. Dale, Thomas Hartley, Wm. Cyril Haswell, John Dobson Wardale, Algernon Edwd. Luke Wear, Robt. Anthony Welsh, College of Medicine, Newcastle-on-Tyne; Henry Wm. James Cook, Charing-cross Hospital; Ramsay Lamy Daly, Chas. Forsyth, and Arthur John Gardner, M.R.C.S., L.R.C.P., Yorkshire College, Leeds; Robert Dunmore Hotchkis, M.A., St. Bartholomew's Hospital; Joseph Wood, Owens College, Manchester.

The following were recommended for the degree of Bachelor in Surgery (B.S.):—

Percy Rutherford Adkins, M.B. Durh., St. Thomas's Hospital; Frederick Carden Brodie, M.B. Durh., M.R.C.S., L.R.C.P., L.S.A., Middlesex Hospital; Henry Wm. James Cook, Charing-cross Hospital; John Clay, Alfred Cox, Arthur James Dale, William Cyril Haswell, George Grahamsley Howitt, M.B. Durh., John Dobson Wardale, Algernon Edward Luke Wear, Robt. Anthony Welsh, and Edward Cecil Willcox, College of Medicine, Newcastle-on-Tyne; Ramsay Lamy Daly and Chas. Forsyth, Yorkshire College, Leeds; Harry Fowler, M.B. Durh., Owens College, Manchester; Robt. Dunmore Hotchkis, St. Bartholomew's Hospital; and Joseph Wood, Owens College, Manchester.

ROYAL UNIVERSITY OF IRELAND.—The following have passed the third examination in Medicine of the University:—

Upper Pass Division.—Michael Boyle, Alexander Jamison, George Johnston, Robert Leatham, John McGee, and John C. Rowan. (The above may present themselves for the further examination for Honours.)

Pass Division.—James Aughin, Richard Baile, James F. Barrett, Robert M. Beatty, Eliza G. Bell, Francis H. Clements, Michael J. B. Costelloe, Richard B. Crosbie, Thomas H. Delaney, Hugh J. Dickey, Victor G. Fielden, Hugh Fisher, James Graham, Richard Heard, William H. Heard, Benjamin Hosford, Thomas Howard, John Lane, William Lyle, William T. Meagher, John O'Donnell, Thos. B. Pedlow, Laurence Rowan, James Stevenson, Edwin Topping, Edward T. Vint, and John J. Yorke.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the Third Professional Examination:—

J. Armstrong, E. H. Beaman, H. Flynn, D. H. Foley, F. W. Foott, P. J. Garland, F. J. Greeves, E. W. Guinness, L. A. Jameson, W. S. Kane, G. Q. Lennane, E. A. Malcolmson, J. S. Proctor, G. Russell, and J. A. Thornhill.

The undernamed additional candidates have been allowed the Second Professional Examination—viz.:

C. R. Chichester and T. H. Law Hewitt.

SOCIETY OF APOTHECARIES OF LONDON.—The following passed the first examination in Chemistry, Materia Medica, Botany, and Pharmacy during April:—

R. Hall, University of Durham.

The following passed in the subjects indicated:—

Materia Medica, Botany, and Pharmacy.—H. K. C. Delamotte, Edinburgh; J. Edwards, London Hospital; T. Hopps, Manchester, Owens College; and G. H. Nowell, B.A., Cambridge and Westminster Hospital.

Materia Medica and Botany.—F. R. Rouse, University College.

The following passed the second examination in the subjects indicated:—

Anatomy and Physiology.—D. Berne, Sydney University; P. H. Best, B.A., Cambridge and University College; B. H. Carpenter, St. Bartholomew's Hospital; C. D. Garrett, Westminster Hospital; J. Garrett, St. Mary's Hospital; E. L. Greene, Royal Free Hospital; H. Herbert, London Hospital; E. P. Hewitt, St. Mary's Hospital; F. Kennedy, Edinburgh University; C. A. Marrett, Charing-cross Hospital; H. J. Neatby, Leeds, Yorkshire College; J. H. Nowell, B.A., Cambridge and Westminster Hospital; L. C. L. Raymond, Charing-cross Hospital; W. J. Woods, St. Bartholomew's Hospital; and R. M. Wright, Sheffield.

Anatomy.—G. C. Schultz, St. Mary's Hospital; H. C. Venis, Calcutta and St. Mary's Hospital; and J. F. W. Waters, Middlesex Hospital.

Physiology.—G. E. Douglas, St. Mary's Hospital; W. R. Fisher, London Hospital; J. M. Gleeson, Dublin and London Hospital; J. Joule, London Hospital; S. Langton, St. Mary's Hospital; G. Lowsley, St. Bartholomew's Hospital; T. W. O'Reilly, St. Thomas's Hospital; and C. C. Pratt, St. George's Hospital.

Surgery.—W. Anderson, M.D., California University, San Francisco; F. J. A. Baldwin, London Hospital; J. F. Brown, B.A., M.D., C.M., Toronto; R. J. Colmer, London Hospital; H. B. Falconer, King's College; A. F. Gervis, St. Thomas's Hospital; M. J. Houghton, Birmingham, Queen's College; W. H. Kershaw, London Hospital; G. F. Knipe, Liverpool, University College; L. J. Minter, King's College; W. H. Savery, Sheffield; H. N. A. Taylor, B.A., Cambridge University and Norfolk Hospital; C. F. Warren, St. Mary's Hospital; and E. C. Wimberley, Birmingham, Queen's College.

Medicine, Forensic Medicine, and Midwifery.—C. D. Holmes, Liverpool, University College; H. Knevitt, London Hospital; A. W. Read, St. George's Hospital; E. M. Rooke, Guy's Hospital; A. Richardson, Edinburgh University; H. de V. Stacpoole, St. Mary's Hospital; P. Sharp, King's College; G. R. Stilwell, St. Thomas's Hospital; H. N. A. Taylor, B.A., Cambridge University and Norfolk Hospital; W. A. Williams, L.M.S., Calcutta and Middlesex Hospital; and F. C. Wood, L.S.A., London Hospital.

Medicine and Forensic Medicine.—R. S. Freeland, L.R.C.P., M.R.C.S., Guy's Hospital; and G. F. Knipe, Liverpool, University College.

Medicine and Midwifery.—R. Jackson, London Hospital; C. P. Morgan, Guy's Hospital; B. F. Parish, St. Mary's Hospital; and H. J. Thomas, Bristol Medical School and Guy's Hospital.

Forensic Medicine.—E. A. Humphreys, Manchester, Owens College.

Midwifery.—S. H. R. De Groot, King's College; and A. G. Keeling, St. Thomas's Hospital.

The following were granted the diploma of the Society, qualifying for registration and entitling them to practise Surgery, Medicine, and Midwifery:—

Messrs. Colmer, Holmes, Houghton, Knevitt, Minter, Sharp, Stacpoole, Stilwell, Taylor, Wimberley, and Wood.

DUBLIN HOSPITAL FLOWER MISSION.—Last year 18,580 little bouquets, besides lavender bags, were distributed to inmates of the Dublin Hospitals. The present session will last from April 28th until the end of September.

EVELINA HOSPITAL FOR SICK CHILDREN.—A meeting of the governors and subscribers of this institution was held at the hospital, Southwark Bridge-road, on the 22nd ult. Baron F. de Rothschild, M.P., the president, occupied the chair. The charity is surrounded by a dense population, and no other hospital south of the Thames receives exclusively the children of the poor. No paying patients are admitted. The sixty cots in the wards are nearly always occupied, and the average daily attendance of out-patients is about 100. More accommodation is urgently needed, and the president has generously purchased some adjoining property, the site of which it is intended to utilise for the erection of a new wing. Meantime an appeal is made for additional pecuniary support, since for the past five years the invested capital has been encroached upon to the extent of £1000 per annum to meet current expenses.

UNIVERSITY OF LONDON.—The following gentlemen were on the 29th ult. elected Examiners in Medical subjects:—Practice of Medicine: J. F. Payne, M.D., B.Sc., and Prof. F. T. Roberts, M.D., B.Sc. Surgery: Prof. Marcus Beck, M.S., M.B., and H. G. Howse, M.S., M.B. Anatomy: R. Clement Lucas, M.B., B.S., and Prof. Alexander Macalister, M.D., M.A., F.R.S. Physiology: Prof. W. D. Halliburton, M.D., B.Sc., and J. N. Langley, M.A., F.R.S. Obstetric Medicine: C. J. Cullingworth, M.D., and Alfred L. Galabin, M.D., M.A. Materia Medica and Pharmaceutical Chemistry: Frederick Taylor, M.D., and Prof. N. I. C. Tirard, M.D. Forensic Medicine: J. D. Mann, M.D., and Prof. G. V. Poore, M.D., B.S. Chemistry: Prof. H. E. Armstrong, Ph.D., F.R.S., and Prof. W. A. Tilden, D.Sc., F.R.S. Botany and Vegetable Physiology: Prof. Daniel Oliver, F.R.S., and Prof. H. M. Ward, M.A., F.R.S. Comparative Anatomy and Zoology: Sydney J. Hickson, Esq., D.Sc., M.A., and Adam Sedgwick, Esq., M.A., F.R.S.

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HAMPTON WICK.—Dr. Langdon Down, J.P., has been appointed by the Middlesex County Council one of the two delegates to represent that body at the International Congress on Hygiene.

THE freedom of the Plumbers' Company has been presented to Dr. Farquharson, M.P., for the special services rendered by him for many years past to the cause of sanitation.

BIRMINGHAM WATER-SUPPLY.—The Birmingham City Council has unanimously adopted a scheme for obtaining a new water-supply from the Elan and Claerwin rivers, in Mid-Wales, these rivers being tributaries of the Wye.

YORKSHIRE SANITARY ASSOCIATION.—There is shortly to be opened in Leeds a branch of the Yorkshire Sanitary Association, one of whose chief objects is to secure to householders an easy and inexpensive means of ascertaining the general sanitary condition of their dwellings, and practically of ensuring themselves against the risks of defective sanitation.

FATAL CHLORODYNE DRINKING.—At an inquest held on Monday at Monkwearmouth on the body of a woman aged fifty-three, who died at her residence on the previous day, the evidence was to the effect that the deceased had taken to excessive drinking, and on Saturday she purchased at a chemist's shop a pennyworth of chlorodyne, being at the same time informed that she should not take more than ten drops. She was afterwards discovered lying unconscious in her house, and subsequently died. The medical evidence attributed death to coma, the effect of an overdose of chlorodyne.

UNIVERSITY COLLEGE HOSPITAL.—On Tuesday, the festival dinner in aid of this charity was held at the Hôtel Métropole, Lord Reay presiding. The chairman, in proposing "Prosperity to the Hospital," urged the claims of the institution to liberal public support. A debt existed to the extent of £8000. The Hospital rebuilding fund had remained stationary. It amounted to about £12,000. The annual reliable income was only £6000, while the expenditure approached £20,000. During the evening contributions were announced (including £500 from Mr. J. T. Chance for the rebuilding fund) to just upon £2000.

THE CITY OF LONDON TRUSS SOCIETY.—In the absence of the Lord Mayor, the Rev. Prebendary Whittington occupied the chair, supported by the Sheriffs, at the eighty-fourth annual festival of the members of the Society, held on Tuesday at the Albion Tavern, Aldersgate-street. In proposing the toast, "Prosperity to the City of London Truss Society," the chairman remarked on its long existence (founded in 1807) and the ever-growing augmentation in the annual demands upon it; adding that one at least out of thirteen of the general working population was afflicted with hernia. The subscriptions were only sufficient to discharge the cost of the appliances supplied, and the expenses of management of the charity had to be met by the interest received from the capital invested. Subscriptions were announced amounting to £800.

FOOTBALL CASUALTIES.—During a recent football match (Askam against Rochdale St. Clements) a player sustained a simple fracture of the collar-bone.—Whilst playing football in a park near Blochairn Steel Works, Glasgow, last week, a player slipped and fell, sustaining a fracture of the right leg.—In an Association football match played at Heywood on the 25th ult. between the two principal town clubs, three players were badly injured by kicks.—A young man aged twenty-one, while playing on Saturday in a match at Gravelhole, near Rochdale, received injuries to his spine and head, from which he died the following day.—A youth, during a game at football on Poundbury, Dorchester, fell and badly sprained his ankle.—In a football match at Grona, co. Tipperary, a young man received a kick in the abdomen, and died shortly afterwards.—As the semi-final tie of the Fylde Junior Cup was recently being played between Blackpool Olympic and Marton, at Raikes Hall, a player had his knee badly twisted.—A young man aged twenty-four has died in the Southport Infirmary from injuries lately received in a football match at Southport. He sustained a compound fracture of the left arm; lockjaw supervened, from which he died.

MEDICAL MAGISTRATES.—Arthur Mussen, M.D., of Glenavy, Lisburn, has been placed on the Commission of the Peace for the county of Antrim.—At the adjourned quarter sessions, held at Maidstone on the 15th ult., Charles Lovegrove, M.D., Hythe, qualified as a justice of the peace for the county of Kent.

MRS. HODGSON BURNETT, authoress of "Little Lord Fauntleroy," has recently endowed a cot at the St. Monica Hospital for Children, Brondesbury Park, in memory of her little boy Lionel, who died on the Riviera of consumption during the last winter, and whose pretty little sayings and doings suggested the Lord Fauntleroy which had such marked success.

SALE OF DISEASED MEAT.—An important decision to meat salesmen was given last week in the case of Barlow *v.* Terrett. This was an appeal against a decision by a magistrate who had convicted appellant of exposing bad meat for sale in the Central Meat Market. The court, consisting of Justices Day and Lawrance, unanimously decided that, much to their regret, they were against the conviction, inasmuch as, the meat having been deposited, and not exposed by hanging up, the conviction was bad. The conviction was accordingly set aside without costs.

ILKLEY HOSPITAL AND CONVALESCENT HOME.—The annual report for 1890 states that the hospital was opened last year towards the end of March, and had been closed on the 7th of November, a period of thirty-two weeks, during twenty-eight of which it had been full. The number of admissions, including renewals, was 1122, the largest reached in one year. Since the erection of the hospital in 1861 the total number of admissions and renewals was 20,964. The cash statement showed an adverse balance of £116, to be carried forward to the current year.

MANCHESTER AND SALFORD SANITARY ASSOCIATION.—Dr. Ransome presided at a meeting of the committee recently. The subcommittee appointed to consider the desirability of placing the practice of hypnotism under legislative control reported that they had obtained through the Foreign Office information as to the attitude of various Continental Governments towards the question, and the committee are in communication with the various Colleges of Physicians and Surgeons in the kingdom with the view of securing their coöperation in any action that may be agreed upon. The subcommittee appointed to consider the resuscitation, under an independent organisation, of the work of house inspection, reported favourably on the proposal. In reference to the abatement of noxious vapours, it is intended to convene a public meeting to obtain an expression of opinion by the ratepayers on the proposed reduction of the charges for gas within the city to cost price, the object being to encourage its use instead of coal for heating and other purposes, to obviate the present pollution of the atmosphere.

PRESENTATIONS.—Mr. C. F. M. Althorp, L.R.C.P. Lond., M.R.C.S., lately house surgeon, and recently appointed honorary assistant surgeon to the Bradford Infirmary, and who purposes to commence practice on his own account, has been presented by the nursing staff and servants of the institution with a walnut writing cabinet from the nursing staff, a table gong from the servants, and a china afternoon tea service from the patients in the Jenny Philipp and Macturk wards, as tokens of esteem.—Dr. J. Highet of Workington, Cumberland, has been presented by the members of the Workington Ambulance Class, in connexion with the London and North-Western Railway Ambulance Corps, with a handsome walking stick as a mark of appreciation of his services and instruction in first aid to the injured.—Dr. F. R Russell of Guildford has been presented by the members of the Guildford Ambulance Class, in connexion with the County Police Force, with a silver inkstand for his instruction in ambulance work.—Mr. G. H. Patterson, L.R.C.P. Lond., M.R.C.S., of Dalton-in-Furness, has been presented by the members of the Lindal Ambulance Classes with a timepiece and an aneroid barometer as an acknowledgment of his able lectures to them on ambulance work.—Dr. F. C. MacNalty, of Greenodd, Ulverston, has been presented with a handsome dining-room clock by the members of the Crake Valley St. John Ambulance Classes in appreciation of his instructions to them on first aid.

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DEEP-SEA FISHERMEN.—The Corporation of the City of London has made a grant of 100 guineas to the Mission to Deep-sea Fishermen.

THE SWEATING SYSTEM IN NEW YORK.—Attention is directed in the annual report of the New York State Board of Mediation and Arbitration to the iniquitous hours of labour imposed upon shirt-makers and other cloth-workers in New York City. Certain foreigners, who can speak but little English, are reported to be "labouring like slaves" for twelve and eighteen hours a day. They live and work in wretched crowded tenements, destitute of proper light or ventilation, and live in squalor, forming an exact parallel to the method adopted by the Jew sweaters in England.

SUNDERLAND CORPORATION AND "SWEATING."—The Sunderland Corporation has, on the recommendation of their Watch Committee, decided, after very lengthy discussion, that in future all persons tendering for corporation contracts shall be expected to pay to the workmen whom they may engage in carrying out such contracts the recognised scale of wages current in the district in which the work is done. The recommendation was the result of an agitation by the Sunderland Trades Council, who alleged that the police clothing had been made in London on the "sweating" system.

ROYAL BERKSHIRE HOSPITAL, READING.—The annual report for 1890 is satisfactory in respect to its augmented utility and the large work accomplished during the year. The number of patients treated was 4778, and the resources and accommodation had alike been severely taxed. The proposed enlargement of the hospital by building additional wards had for the present been postponed. The financial result of the year's work was a deficit of £437 13s. 3d. The private nurses' establishment continued to more than pay its expenses. A sum of £300 was added to the invested capital in 1889, and the profits of 1890 will be sufficient to invest about the same amount this year.

BURIAL REFORM.—The Archbishop of York has written as follows to the Dean of York, chairman of the Executive Committee of the Church of England Burial, Funeral, and Mourning Reform Association:—"I have much pleasure in accepting the office of Joint President, with the Archbishop of Canterbury, of the Church of England Funeral Reform Association. I have already on previous occasions expressed my entire sympathy with its objects, and I am glad of this opportunity of doing so again." The Duke of Westminster will preside at the thirteenth annual meeting of this Society in Grosvenor House, on Tuesday, June 2nd.

THE LONDON WATER-SUPPLY.—On Tuesday the Select Committee of the House of Commons appointed to deal with the London Water Bills met for the first time. The London Water Commission Bill, introduced by Sir Robert Fowler, the late Mr. T. C. Baring, and Sir John Ellis, to constitute a public authority to promote Bills in Parliament to improve the water-supply &c., came on for consideration. There are forty-six petitions against the measure. Counsel for the City Corporation and representatives of various companies having been heard, the chairman said the committee had come to the conclusion that no Bill could satisfactorily deal with the questions referred to this committee, which merely constituted a public authority to promote Bills in Parliament, so that the committee could not see their way to pass the preamble of the Bill.

MEDICAL NOTES IN PARLIAMENT.

Methylated Spirits Drinking.

IN the House of Commons, on Tuesday last, in reply to Mr. O'Neill, the Chancellor of the Exchequer said: The Board of Inland Revenue intend to render methylated spirit sold by retail more nauseous in character. They also intend, when there is reason to believe that methylated spirit is being purchased from any retailer for potable purposes, to cause such retailer to keep a stock account, giving the date of sale and quantity sold on each occasion, together with the name and address of the purchaser, and, if any such purchaser be known to be using the methylated spirit as a beverage, the vendor will be warned that proceedings will be taken against him for recovery of the fine of £100 under Section 130 of the Spirits Act, 1880, if he continues to sell methylated spirit to the said purchaser. I can assure the hon. member that every possible precaution will be taken to put a stop to the practice.

Mortality in Lunatic Asylums.

Dr. Farquharson asked the Home Secretary whether it would be practicable for the Commissioners in Lunacy to append to future issues of their reports a table showing the causes of death of all lunatics dying in all lunatic asylums, public and private, in registered lunatic hospitals, and in workhouses in England and Wales.—Mr. Matthews: I am informed by the Lunacy Commissioners that no returns are made to them as to deaths of lunatics in workhouses, and they have no power to call for them. They have considered, and will again consider, whether they can, and how soon, insert tables showing the causes of death in lunatic asylums, registered hospitals, and licensed houses, but this would involve much additional clerical work, and the existing staff is already hard pressed owing to the great increase of work cast upon it by the operation of the Lunacy Act, 1890.

The British Institute of Preventive Medicine.

Major Rasch has given notice that on Thursday next he will ask Sir M. Hicks Beach whether a decision has yet been given by the Board of Trade on the application for a licence for the British Institute of Preventive Medicine, and, if so, whether he will state the form and conditions of the licence.

Tuberculosis.

In the House of Commons on Thursday, Sir Thomas Sutherland addressed a question to the President of the Local Government Board with reference to the Royal Commission appointed to inquire into the subject of tuberculosis in cattle.—Mr. Ritchie in the course of his reply stated that the Commissioners had been sitting since July last, and were now engaged in carrying out an exhaustive series of experiments, the results of which could not be determined for some months.

Quarantine Arrangements at Suez.

Mr. Conybeare asked the Under Secretary of State for India whether his attention had been called to the following statement in the public press, that, "at the sitting of the Committee of Public Health at Paris on April 21st, it was declared that cholera is increasing in Calcutta, the fact being shown by the arrival at Suez of a great number of ships liable to quarantine measures. Conformably, however, to the wishes of the English, who are in the majority upon the sanitary council, these vessels pass without sanitary measures being taken. One English ship from Calcutta was mentioned as having had eleven cases of cholera on board, ten of which had terminated fatally before she reached Colombo. On her arrival at Suez she only remained in the roadstead during the time necessary to make repairs." And, whether, if these matters are as stated, he will take steps to enforce a strict quarrantine at Suez.—Sir James Fergusson made the following reply on behalf of the Government: Any such statement would be inconsistent with fact, for by the last accounts the deaths from cholera at Calcutta were far below the quinquennial average. The case mentioned is evidently that of a ship which had eleven cases of cholera on board between Calcutta and Colombo. She then underwent nine days in quarantine, and was thoroughly disinfected. No further sickness occurred on board, and accordingly when she reached Suez, after a voyage of fourteen days, she was allowed to pass through the Canal in quarantine.

Experiments with Phthisical Sputum.

Mr. Samuel Smith asked the Home Secretary whether his attention had been drawn to the experiments with phthisical sputum reported by Mr. Watson Cheyne in the *British Medical Journal* of the 11th of April, involving the boring of holes into the knee-joints of living rabbits; and whether the Home Office possessed a report of such experiments; if so, did this report show whether Mr. Watson Cheyne held a certificate dispensing him from the use of anæsthetics in the performance of such experiments; whether the holes were bored into the legs of the animals while they were sensitive to pain; and how long their joints were allowed to inflame and swell through the action of the diseased material stated to have been injected.—The Home Secretary said he had seen the report of those experiments; they were made in the years 1887 and 1888, and a summary of them appeared in the Annual Report of the Inspector presented to Parliament for those years. It appeared that they were performed under certificate which authorised experiments without anæsthetics, and which was granted on the supposition that the experiments were simple inoculations. He was informed by the inspector that the great majority of the experiments were simple inoculations; but in any case where the operation was performed on the bone the animal was fully under chloroform.

THE METROPOLITAN HOSPITALS INQUIRY.

The Committee investigating the condition of Metropolitan Hospitals resumed on Monday, 27th inst.

Hospital for Women, Soho-square.

Mr. David Cannon, secretary of the hospital, was examined. He stated that the hospital contained sixty-six beds divided among fifteen wards, an arrangement which explained the apparently excessive expenditure per bed at this hospital. Small wards were much more expensive to work than large ones, and required more nurses proportionately to the number of patients. The balance sheet showed a grand total of expenditure, including the deficit for the previous year, of £8368, but the average annual expenditure amounted to £6800. They had managed to reduce the mortgages on their property from £18,300 to £10,800, and hoped next year to clear off the whole debt by means, of legacies &c., and to occupy their own freehold. The annual subscriptions amounted to £15,000 on an average. They received assistance from railway companies, corporations, and, before the Charity Commissioners interfered, they used to get assistance from the parishes in the City. At present they considered themselves badly off in the matter of legacies. The senior medical officer was the only medical member of the Committee of Management, which meets once a month. The witness did not think that General Booth's scheme had interfered materially with the funds of the hospital. As a matter of fact, the donations had not fallen off.—By Lord Spencer: A large number of patients came from the East-end of London, and were mostly poor people. The hospital was founded because the general hospitals did not make any special provision for such cases at that time. Since the establishment of these special hospitals, the general hospitals had started wards for these special cases. Many qualified men came to the hospital to study, among whom were numbers of American graduates. They were not taught in the wards, but only in the out-patient rooms. The average number of such students was between twenty-five and thirty in the year.—By Lord Monkswell: Some of the beds were paid for, some were partly paid for, and others were free—twenty-six paying

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beds and forty free, but in each case the attendance was precisely the same. The question of throwing two or three of the smaller wards into larger ones had not been considered during his tenure of office.—By Lord Lauderdale: The average number of beds occupied last year was fifty, and the average cost per bed was £2 2s. 6d. per week.—By the Chairman: No plan of the drains was kept in the office. If anything was out of order it would at once be reported to him. He looked upon himself as being responsible to the committee, and there was no special sanitary officer employed to inspect the buildings.

Miss Squier, the matron of the hospital, gave an account of the nursing arrangements of the hospital. They had four sisters, three staff nurses, ten ordinary probationers, and two paying probationers. They occasionally sent out nurses, but only on the recommendation of the doctors.

Mr. Richard T. Smith, M.D. Lond., M.R.C.P., saw no reason why members of the staff of the general hospital should not be on the staff of the special hospital. Special hospitals could with much advantage coöperate with the general hospitals. Notwithstanding the great advance that had been made by the general hospitals, he was of opinion that the necessity for some special hospitals was as great as ever, because there was difficulty in providing accommodation for students in the general hospital, and women objected to be examined by a great many medical students; therefore the number of students who could take a deep and personal interest in the cases was rather limited. His hospital limited the number of students taking an active part to four in one day, to some extent out of consideration to the patient, and also from want of space. Special provision would have to be made even in general hospitals for the performance of special gynecological operations.—In reply to Lord Kimberley, the witness stated that though he had no objection to special operations being performed in general hospitals, he would except cases of abdominal surgery, which, in his opinion, should be done in separate buildings. As regards the study of disease, he thought special hospitals promoted science, and possibly led to new discoveries.—By Lord Thring: The witness personally would not object to women being admitted as students into this hospital.—Lord Thring: Doctors object to these hospitals because they injure the schools, and not because they injure the patient. They say special hospitals are bad because they prevent the acquisition of a knowledge of these particular diseases.—The Witness: Of course it takes away a certain number of patients from the general hospitals. With regard to the education of a medical man, the witness thought that no young man ought to study any speciality until he was thoroughly versed in general medicine.

Gordon Hospital for Fistula.

Captain Hincks, secretary of the hospital, said that the patients were admitted for the most part free, but many of them paid. There were only twenty-five out-patients daily. It was originally called the Western Hospital, and the name was changed by the committee to the Gordon Hospital. The witness could give no particular reason for the existence of such a hospital, except that many patients came there who were unable to pay the surgeons' fees, and who objected to being treated at a general hospital. They did not receive the full grant from the Hospital Sunday Fund, on account of the expenses of management being too great. They raised money through appeals in the ordinary way.—By Lord Lauderdale: The hospital consisted of eight rooms, and was taken on a twenty-one years' lease in the name of two of the surgeons, Mr. Bentham, who was since dead, and Mr. Whitmore.—Lord Sandhurst: Do you think that as a general principle the work of a hospital, with an average of nine working beds, could not be undertaken as well in a general hospital?—The Witness: I should very much like to see the work of the Gordon Hospital extended. It meets the wants of those patients who would not go to a general hospital.

Mr. Whitmore, F.R.C.S. Edin., said he started the hospital in view of the great want of such a hospital in London. In answer to the question whether patients could not be treated as well at the general hospital he read the following letter, dated February, 1891, and addressed to the secretary of the hospital:—"I beg, through you, to bring my case under the notice of the Gordon Hospital Committee, and to bear testimony to the very efficient manner in which I was treated at that hospital. In September, 1889, I became ill. Shortly afterwards I entered a hospital here, and underwent an operation, and remained six weeks. In January, 1890, I went into another hospital, where I was again operated on, and was detained nearly twelve weeks, and without receiving any benefit whatever. In May I obtained admission to the Gordon Hospital, where I was operated on for fistula, and where I was under Providence cured."—By Lord Sandhurst: He was not in a position to contrast or criticise the treatment in the general hospitals as compared with the treatment in this hospital. He maintained that the expenses of the paid officials, as compared with other hospitals, were merely nominal, and the hospital itself was in embryo. He had advanced a sum of money for the promotion of the hospital, which he would never bother the committee to repay unless he saw they had sufficient funds. He considered it money well spent.—Lord Kimberley: I asked you whether it was desirable that hospitals should be established on so small a scale that the expenses are too large for the maintenance of the establishment?—The Witness: It appears to me that it is in proportion to the amount of good that is obtained. He was in favour of special hospitals for all diseases; they would not detract from the educational value of the general hospitals. Students could study a subject much better at the head centre of specialism than at the general hospitals if the theory were carried out fully. The large hospitals, he thought, were at present running to seed.—By Lord Cathcart: The name "Gordon" was not given as a name with which to entice the public, but because it was considered a good name by the committee.

On the Committee resuming on Thursday,

Mr. Frederick Wallace, L.R.C.P., M.R.C.S., a general practitioner in Shoreditch, gave evidence to the effect that the establishment of the provident dispensary department of the Metropolitan Hospital at Shoreditch had damaged the practitioners in that district. He represented a number of general practitioners in that district who considered that it was in no way intended when the hospital was established that there should be attached to it this provident dispensary. It had undoubtedly produced serious consequences among the practitioners in the neighbourhood. He complained of those dispensaries which were conducted by qualified men acting as assistants to another medical man who had perhaps as many as twenty or twenty-five of these establishments. He thought it must pay, as it had gone on now for some years. They were called 1s. a week dispensaries. His objection to them was that the advice was inferior, and that it in many cases led to the offence called "covering." He presented a book in which he had collected various handbills advertising these dispensaries. The advertisements were issued by qualified men, but the cases coming to the dispensary were sometimes left to be attended by unqualified men. He mentioned the name of a medical man who had a large number of these dispensaries, but he believed they were attended by properly qualified medical men. He objected to such establishments, because these medical men were constantly leaving this employment, and frequent changes were bad for the patient, and because they tended to sweat the profession.—Lord Thring: Does not the very number of these dispensaries show that they supply a public want?—The Witness: I think there is a public want of a properly organised provident scheme.—Lord Thring: But supposing that a man has twenty-five dispensaries handled by properly qualified men for the benefit of the public, what more do you want?—The Witness: They cut into the local general practitioner and sweat him.—Lord Thring: In other words, it is competition.—The Witness: It is competition that we consider to be unfair.—Lord Thring: Why can't you set up opposition dispensaries?—The Witness: We could not do that. I should be very sorry to start a shilling dispensary.—Lord Thring: It would be *infra dig*?—The Witness: Certainly. If the patients got the full value for their money I should not have much to say against them.—Lord Thring: Does it not amount to this, that it is a professional objection; that a certain class of men advertise in a way that is not thought consistent with the dignity of the medical profession?—The Witness: Yes.—Lord Lauderdale: Do you suggest that doctors should not be allowed to advertise, or what? Is the present law regarding qualified assistants not properly enforced?—The Witness: That is so. I would like to see it enforced. The General Medical Council had prosecuted only a few of the cases of covering because of the difficulty there was in obtaining sufficient evidence. Personally, he did not think it was worth his while to obtain this evidence.—By Lord Monkswell: The reason why he did not go to the General Medical Council in this matter was simply that it would be extremely difficult to get at the real facts.

Queen Charlotte's Lying-in Hospital.

Mr. G. O. M. Ryan, the secretary of the hospital, gave an account of the arrangements, income, and expenditure of the hospital. The nursing arrangements were also detailed.

William Hope, M.D., M.R.C.P., M.R.C.S.Eng., senior physician to the hospital, said that the evil reputation which the hospital had fifteen years ago was due to its insanitary condition and the want of a knowledge of antiseptics. The mortality in single women was greater than in married ones, probably on account of the very young age of the patients. These patients varied in age from fourteen to twenty-five. They had cases as young as twelve, and to these the shock was very great. Such patients were taken into homes now, where they are very carefully fed and cared for before they come to the hospital. A gentleman named Mr. Bousfield, who had given evidence, had stated that the presence of students was detrimental to lying-in cases. That statement he distinctly repudiated. Since medical students had been in Queen Charlotte's Hospital the mortality had decreased. The patients considered themselves better attended to when medical students were present. He would like to see in all lying-in hospitals a resident medical officer on the regular visiting staff.

London Fever Hospital.

Lord Balfour of Burleigh, the President, said they divided the patients into ward patients and private patients. The ward patients pay three guineas for the whole case, the private patients pay three guineas per week. The families and servants of governors were admitted free. The hospital contracted with large firms for the treatment of their *employés* provided they subscribed to the hospital. His lordship gave an account of the history of the hospital from its foundation in 1802. This hospital at the present time does its work between the two social extremes, and assists those who could pay something. Those who could pay the cost were treated at a less cost to themselves in the hospital than in their own homes. The hospital offered advantages to the sufferer and also to the family in which the case had broken out, as well as to the community by removing a source of danger. All infectious diseases were taken in except small-pox.

Major Christie, the secretary, was examined, and gave particulars of the financial condition of the hospital.

E. O. Hopwood, M.D. Oxon., the resident medical officer, said no nurse had died from infectious disease during his period of office. Day nurses were on duty for thirteen hours and night nurses for eleven hours. The matron was responsible for the conduct of the nurses. She was appointed at a salary of £80, rising to £100 or £120. They could not send out their nurses with advantage to the hospital. The percentage mortality in 1889 from scarlet fever was 1·2, for enteric fever 5·2, diphtheria 17·6. In 1890 the mortality from scarlet fever was 2·3, for enteric fever 9, for diphtheria 4·5, and for measles 5·3. These he considered very low averages, quite 50 per cent. below the average of the Metropolitan Asylums Board hospitals, and he attributed these low averages to the class of patients treated in this hospital.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, JAMES, L.R.C.P., L.R.C.S. Edin., has been appointed Public Vaccinator *pro tem.* for Footscray, Victoria, Australia.

BRETTINGHAM, C. E. SEPPINGS, L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Eastern Division of the Williton Union.

BROWN, WM. H., M.R.C.S., has been appointed Medical Officer for the portion of the Colac Shire south of the boundary of the Counties of Polwarth and South Grenville, Victoria, Australia.

BURTON-FANNING, F. W., M.B. Cantab. (formerly known as F. W. Burton), has been appointed Honorary Physician to the Norfolk and Norwich Hospital, Norwich.

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CARDWELL, THOMAS, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Ropsley District of the Grantham Union, vice Moore.

CLIBBORN, WM., M.D., L.R.C.S. Irel., has been appointed Surgeon to the Police Force, Bridport, vice Evans, deceased.

DOOLAN, DENIS, L.R.C.P., L.R.C.S. Edin., has been appointed Public Vaccinator for North Carlton, Victoria, Australia.

DOWLING, J. E., M.D. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Tuam Workhouse, vice Turner, deceased.

EALES, G. YOUNG, M.R.C.S., L.R.C.P. Edin., has been appointed Honorary Physician to the Western Hospital for Consumption, Torquay, vice Dr. Wills, resigned.

ELAM, W. H., F.R.C.S. Eng., has been appointed Surgeon to the Cancer Hospital, Brompton.

ELLIOTT, E., L.R.C.P. Edin., M.R.C.S., has been appointed Public Vaccinator for the Bromsgrove District and Workhouse of the Bromsgrove Union, vice Kidd.

FOSTER, MICHAEL G., M.A., M.B. Camb., has been appointed Physician to the Kursaal Maloja (Upper Engadine).

FOX, GEORGE MARTIN, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Willenhall District of the Wolverhampton Union.

FULTON, T. J. K., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator for the Surrey Hills and Doncaster, Victoria, Australia, vice Perceval, resigned.

GAMGEE, LEONARD PARKER, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Queen's Hospital, Birmingham.

GUNN, A. L., L.R.C.P. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer for Swinefleet, Whitgift, and Ousefleet Sanitary Districts, vice Bruce.

GUTHRIE, L. G., M.A., M.B. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to the Paddington-green Children's Hospital.

HYDE, G. E., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Martley Rural District.

LEWIS, WM. M., M.D., L.K.Q.C.P. Irel., has been appointed Medical Officer for the Shire of St. Arnaud (Donald District), Victoria, Australia, vice Fleming, resigned.

MARSH, RYDING, M.D. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Brighton, Hove, and Preston Dispensary.

MAY, F. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Aston Manor District of the Aston Union.

MORRIS, COLIN DWIGHT, L.R.C.P., L.S.A. Lond., M.R.C.S., has been appointed Medical Officer for the No. 5 District of the Staines Union.

OWEN, H. F., L.R.C.P. Lond., has been appointed Medical Officer for the Eighth and Ninth Districts of the Kingsbridge Union.

PARKES, LOUIS COLTMAN, M.D. Lond., D.P.H., M.R.C.S., has been appointed Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner for the Parish of Chelsea, vice Dr. Seaton, resigned.

REMFRY, LEONARD, M.A., M.D., B.C. Cantab., has been appointed Obstetric Physician to Out-patients at the Great Northern Central Hospital, vice Dr. W. R. Dakin, resigned.

ROBINSON, A. H., M.R.C.S., has been appointed Medical Officer for Wyke and part of the North Bierley Union.

ROWBOTHAM, A. J., M.R.C.S., has been reappointed Medical Officer for the Dunham District of the East Retford Union.

STONEHOUSE, JOHN, L.F.P.S. Glasg., has been appointed Medical Officer for the Second District of the Whitby Union.

STURDEE, A. H., M.R.C.S., has been appointed Medical Officer for the East Riding of the Shire of Mornington, Victoria, Australia.

WARD, W. F., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Scrosby, Retford.

WATSON, JOHN W., M.D., M.Ch. Irel., has been appointed Medical Officer for the West Riding of the Shire of Mornington, Victoria, Australia.

WILLIAMS, F. M., D.P.H. Camb., has been appointed Medical Officer of Health for the County Borough and Port of Plymouth.

WILSON, J. S., M.D. Glasg., D.P.H. Camb., has been appointed Honorary Surgeon to the Walsall District Hospital, vice Shore.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Board, lodging, &c. No salary.

BIRMINGHAM CITY ASYLUM.—Assistant Medical Officer. Salary £120 per annum, with board &c.

COUNTY OF CAITHNESS.—Medical Officer of Health for the County. Salary £300 sterling, with £50 for travelling and other expenses, except forms and official stationery and postages. (Apply to Mr. Brims, County Clerk, Thurso.)

CAMBERWELL PROVIDENT DISPENSARY, S.E.—Vacancy on the Medical Staff.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S W.—Surgeon.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon, Assistant House Surgeon and Registrar for six months. Salary at the rate of £60 and £50 a year respectively, with board and residence.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant for six months. Board, lodging, washing, and attendance.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn, E.C.—Honorary Physician.

NORWICH CITY ASYLUM, Hellesdon, near Norwich.—Assistant Medical Officer for one year, in-door. Board, lodging, and washing. Salary £100 per annum.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torbay.—Junior House Surgeon and Dispenser.

Births, Marriages, and Deaths.

BIRTHS.

BAUMGARTNER.—On April 23rd, at Saville-place, Newcastle-on-Tyne, the wife of Henry S. Baumgartner, M.B., of a daughter.

GILPIN.—On April 24th, at Bengeworth, Evesham, the wife of R. Harrison Gilpin, L.R.C.P. Lond., M.R.C.S., L.S.A., of a daughter.

LAMBERT.—On April 25th, at Balgowan, Newland, Lincoln, the wife of Frederick Samuel Lambert, M.R.C.S., L.R.C.P. Lond., of a daughter (prematurely).

LANGHORNE.—On February 28th, at Millicent, S. Australia, the wife of T. Grant Langhorne, M.R.C.S., L.R.C.P., of a daughter.

MACDONNELL.—On April 23rd, at Gledhow-gardens, South Kensington, the wife of Mark Antony MacDonnell, M.D., of a son.

NICHOLLS.—On April 23rd, at The Moat, Eastbourne, the wife of Howard Hill John Nicholls, M.R.C.S., of a son.

POPE.—On April 26th, at Broomsgrove Villa, Goldhawk-road, W., the wife of H. Campbell Pope, M.D. Lond., F.R.C.S., of a daughter.

TURNBULL.—On April 26th, at Ladbroke-grove, W., the wife of George Lindsay Turnbull, M.A., M.B., of a daughter.

WALKER.—On April 26th, at Grove House, Lowestoft, the wife of Henry Bournes Walker, Surgeon, of a son (stillborn).

WOOD.—On April 21st, at Lees Lodge, Yalding, Kent, the wife of E. J. Wood, M.B. Cantab. &c., of a daughter.

MARRIAGES.

FAWSSETT—SPRINGETT.—On April 23rd, at the Parish Church, Hawkhurst, Frank Fawssett, M.B., B.S. Lond., of Lewes, Sussex, to Margaret Louisa, eldest daughter of the late Augustus Springett, Esq., of Ashfield, Hawkhurst, Kent.

MURRAY-AYNSLEY—KEY.—On April 27th, at Christchurch, New Zealand, John Henry Murray-Ainsley, M.R.C.S., L.R.C.P. Lond., eldest son of H. P. Murray-Ainsley, Esq., of Christchurch, to Elizabeth Anderson, only daughter of Andrew Key, M.D., of Montrose, N.B. (By cable.)

PARKINSON—PILLMAN.—On April 27th, at Christ Church, Morningside, Edinburgh, by the Rev. C. M. Black, B.D. T.C.D., Thomas Wright Parkinson, M.B., C.M., third son of the late T. H. Parkinson, of Kaituna, Canterbury, New Zealand, to Euphemia Jessie, eldest surviving daughter of Mervyn Pillman, Tossberry, Nile Grove. (Australian and New Zealand papers please copy.)

PILKINGTON—LLOYD.—On March 18th, at St. Clement's Church, Mossman's Bay, Sydney, by the Rev. Ernest Claude Beck, Francis Sergent Pilkington, L.R.C.P. Lond., M.R.C.S. Eng., youngest son of the late F. S. Pilkington, Leyland, Lancashire, to Marie, third and only surviving daughter of the late W. Griffiths Lloyd, of Cerrig-y-Druidion, North Wales.

DEATHS.

BROWNE.—On April 18th, at Wentworth House, Aldbrough, Hull, after a brief illness, William Henry Browne, L.R.C.S., L.R.C.P. Edin., aged 50.

CAWTHORNE.—On April 23rd, at Birkwood, Weston, Bath, Benjamin Cawthorne, M.R.C.S. Eng., aged 70.

HENSLEY.—On April 21st, at Circus, Bath, Henry Hensley, M.D., aged 73.

KAY.—On March 23rd, 1891, at Avoca House, Victoria Coy., Natal, S. Africa, of acute meningitis, in her 16th year, Janet McKinlay Kay, sixth daughter of John McIntyre, M.D., formerly of Rotherfield, Sussex, England.

TRULL.—On April 24th, John Trull, M.D., of New Brighton, Cheshire, aged 85.

TULK.—On April 25th, at Forest Prospect, Tunbridge Wells, Alfred Tulk, M.R.C.S., F.L.S., aged 71.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

A. ALVAREZ Y COMPANIA, Habana.
Premier Congreso Medico-Regional de la Isla de Cuba, celebrado en la Habana en enero de 1890. pp. 600.
Consideraciones Medico-legales acerca de la Muerte por la Electricidad Industrial. Por Eduardo F. Pla. 1891.

BLACK, ADAM & CHARLES, London.
An Introduction to the Study of Mammals, Living and Extinct. By W. H. Flower, C.B., F.R.S., and Richd. Lydekker, F.G.S., F.Z.S. 1891. pp. 763.

BLACKIE & SON, Old Bailey, London.
Blackie's Elementary Text-books: Elementary Chemistry. By Jerome Harrison, F.G.S. 1890. pp. 144.

CHURCHILL, J. & A., New Burlington-street, London.
A Short Dictionary of Medical Terms; being an Abridgment of Mayne's Vocabulary. 1891. pp. 160.
The Proclivity of Women to Cancerous Diseases. By H. Snow, M.D. Lond. 1891. pp. 58.

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DAVIS, F. A., Philadelphia and London.
Fever; its Pathology and Treatment by Antipyretics. By H. A. Hare, M.D., B.Sc. 1891. pp. 166. Price 6s.

GRIFFIN, C., & Co., Exeter-street, Strand, London.
Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Eighth Annual Issue. 1891. pp. 219.

LONGMANS, GREEN, & Co., London.
A Dictionary of Applied Chemistry. By T. E. Thorpe, B.Sc. Vict., Ph.D., F.R.S. In Three Volumes. Vol. II.: Eau—Nux. 1891. pp. 714. Price 2 guineas.
The Watering-places of the Vosges. By H. W. Wolff. With a Map. 1891. pp. 158. Price 4s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
Pulmonary Tuberculosis, Etiological and Therapeutic. By R. W. Philip, M.A., M.D., F.R.S.E. 1891. pp. 55.

SMITH, ELDER, & Co., Waterloo-place, London.
Collected Contributions on Digestion and Diet. By Sir William Roberts, M.D., F.R.S. 1891. pp. 261.

VOGEL, E. D., Easton, Pennsylvania.
The Modern Antipyretics; their Action in Health and Disease. By Isaac Ott, M.D. 1891. pp. 52.

WOOD, WM., & Co., New York.
Text-book of Bacteriology. By C. Fraenkel, M.D. Translated and Edited by J. H. Linsley, M.D. Third Edition. 1891. pp. 376.
Practical Treatise on Electricity in Gynæcology. By E. H. Grandin, M.D., and J. H. Gunning, M.D. Illustrated. 1891. pp. 171.

Über Echinokokkus der Pleura; von Professor Dr. Carl Maydl (Josef Safár, Wien, 1891). — Report on the State of the Blood and the Blood-vessels in Inflammation; by T. Wharton Jones, F.R.S. (Baillière, Tindall, and Cox, London, 1891); price 2s. 6d. — Le Remède de Koch; par H. W. Middendorp (J. B. Baillière et Fils, Paris, 1891).—Handels-Bericht; von Gehe & Co. in Dresden-Neustadt, April, 1891 (C. C. Meinhold & Söhne, Dresden).—De l'Empyème Latent de l'Antre d'Highmore; par le Dr. J. M. Jeanty (Feret et Fils, Bordeaux, 1891).—Die Blennorrhöe der Sexualorgane und ihre Complicationen; dargestellt von Dr. E. Finger (F. Deuticke, Leipzig und Wien, 1891).—Index Medicus, Authors and Subjects, Vol. XIII., No. 3, March, 1891; also Index to Vol. XII. (Trübner & Co., and Lewis, London).—Problems in Cardiac Pathology: Thesis for the Degree of M.D. Oxon.; by F. J. Smith, M.B., M.R.C.P., F.R.C.S. — Archives of Surgery; by Jonathan Hutchinson, LL.D., F.R.S., Vol. II., No. 8, April, 1891 (J. & A. Churchill, London); price 2s. 6d.—Beiträge zur Pathologie und Therapie der Gallenstein Krankheit; von Dr. F. Kraus-Karlsbad (A. Hirschwald, Berlin, 1891).—El Método de Koch en las Tuberculosis Locales; por el Doctor Diogenes Decoud (Jacobo Peuser, Buenos Aires, 1891).—The Cabinet Portrait Gallery, Part XX. (Cassell & Co., Limited, London); price 1s.—Book of Surgical Instruments (Maw, Son, & Thompson, Aldersgate-street).—Proceedings of the Society for Psychical Research, April, 1891 (Kegan Paul, Trench, & Co., London); price 2s. 6d.—Transactions of the Obstetrical Society of London, Vol. XXXII., for the year 1890 (The Obstetrical Society, Hanover-square, London); price 5s.—The Verulam Review, April—June, 1891 (E. Stock, Paternoster-row, London); price 1s.—Magazines for May: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister); Boy's Own Paper, Girl's Own Paper (Religious Tract Society); Scribner's.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on April 28th, 1891.

Hospital.	Beds occupied. Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	Total accommodation.
Eastern Hospital	158	50	..	37	2	247	442
North-Western Hospital	129	39	..	12	1	181	448
Western ,,	145	19	..	14	1	179	224
South-Western ,,	140	33	..	12	1	186	340
South-Eastern ,,	167	17	..	19*	2	205	462
Northern ,,	159	13	..	6	..	178	480
Totals	898	171	..	100	7	1176	2391

SMALL-POX.—*Atlas* hospital ship, 18.

* Infant with mother.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 30th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr. 24	30·17	E.	45	42	94	57	37	..	Bright
,, 25	30·17	E.	44	41	75	51	40	..	Overcast
,, 26	30·05	N.E.	44	40	87	53	37	..	Cloudy
,, 27	29·82	E.	44	43	105	61	37	..	Hazy
,, 28	29 53	S.E.	57	47	103	66	44	..	Hazy
,, 29	29 81	S.W.	51	43	68	56	42	..	Cloudy
,, 30	29 69	S.W.	56	50	112	65	44	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

A POISONOUS SPIDER.

MR. ANDREW ROSS, M.P., practising in New South Wales, writes:—

"It has generally been supposed that spiders are very harmless insects, and totally void of any dangerous or poisonous effects; but the history of the following remarkable case tends to establish quite a contrary opinion. About 6 o'clock in the evening of Jan. 24th, a boy of about five years of age was sitting on the doorstep eating some bread-and-butter, when all of a sudden he cried out and complained to his mother that something had bitten him on the neck behind the lobe of the ear. The boy at once pulled his hat off his head and threw it on the ground, and the mother, on picking it up to see if anything was inside, dislodged a large black spider with a large round belly and red spot on the back, which she instantly killed. The boy said the spider had bitten him, and very shortly after he commenced to scream with pains in his neck and also running down his legs and feet. He was brought to my surgery, and on examining the neck I found a large erythematous circle at the spot where the spider was supposed to have bitten him, which I scarified and bathed with the usual remedies. I administered ammonia and brandy, but the child continued to scream with pain. The case continued under my care for a week, and is one of so singular and remarkable a character, and surrounded with symptoms and sufferings so amazingly violent and peculiar, that I deem it my duty to lay the full history of the case before the public as a warning to beware of such supposed innocuous insects."

THE NURSE-TRAINING SCHOOLS AND THE ROYAL BRITISH NURSES' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—At a meeting of the Royal British Nurses' Association, held on the 16th of this month, the proceedings of which have been reported in several of the daily papers, more than one of the principal speakers, including the chairman and honorary secretary, spoke in strong terms of the persecution which, as they allege, this Association suffered at the hands of the Nurse Training Schools and their representatives, and complain that this opposition aimed, amongst other things, at rendering the presidency of Her Royal Highness the Princess Christian impossible, and at preventing Lady Bloomfield's pension fund for nurses being handed over to it.

It would be making too great a demand on your space to ask the use of your columns, and at the present moment this seems hardly necessary, to discuss at length the grounds of the opposition of the Nurse Training Schools and large hospitals to that which is the main object of the Royal British Nurses' Association—viz., the formation and control of a general register of nurses, having an authoritative character, or to dwell upon the evils both to the public and to nursing which they foresee as the consequence, inasmuch as in all probability the matters in dispute will have to be fought out before the President of the Board of Trade.

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But meanwhile we, the representatives of the leading Nurse Training Schools, feel it our duty to protest against the charge of using "secret means," and the term "persecution" being applied to the actions of the bodies we represent. It is to the Nurse Training Schools that the great advance which has taken place during the past thirty years in the quality of nurses and nursing and in the position of nurses is wholly due, and it is to these that we must look in the future for the maintenance of the high standard of excellence which has been thus attained.

Can it be seriously, then, charged against the authorities of these schools, all of whom have worked in the interests of nurses and of nursing, and many have devoted themselves to the subject for years, and are themselves trained nurses, that they are the persecutors of nurses, or that they are perversely opposing schemes which are "obviously for the advantage of the nursing profession."

They do not oppose, and never have opposed, the formation of any institution established for the purpose of thrift, mutual benefit, or of social intercourse, but believing, as they do for reasons which they have elsewhere fully explained, that the establishment of such a Register and the granting by such a body as the Royal British Nurses' Association of certificates of competency to nurses will be detrimental to the interests of nurses and misleading to the public and medical profession, they certainly have opposed and will continue to oppose the attempt of the Association to obtain from the Board of Trade the privilege which it seeks, and by which a "legal status" would be accorded to it.

With regard to the Lady Bloomfield Fund, not one single word has been said by the nurse training schools or hospitals on the subject. The Lady Bloomfield Fund has a most distinct and valuable object in view, and, with her ladyship as its head and under the guidance of his Grace the Duke of Westminster, will without doubt be most successfully and carefully managed; whether its transference to any other association would be wise or not can only have been brought into the discussion for the purpose of diverting attention from the real question at issue.

While recognising in full the great interest taken by Her Royal Highness the Princess Christian in the welfare of nurses and its value to nurses, they cannot but regard the manner in which Her Royal Highness's name has been introduced into the discussion as wholly uncalled for and unworthy of the spirit of fair discussion.

WESTMINSTER, President of Metropolitan and National Association and Westminster Hospital and Training School.
RUTHERFORD ALCOCK, Vice-President Westminster Hospital and Training School.
HARRY VERNEY, Chairman of the Council of the Nightingale Fund.
J. G. WAINWRIGHT, Treasurer of St. Thomas's Hospital.
E. H. LUSHINGTON, Treasurer of Guy's Hospital.
E. M. IND, Chairman of the London Hospital.
H. WACE, Chairman of Committee of Management, King's College Hospital.
W. RATHBONE, President of the Liverpool Training School and Home for Nurses.

To the Editors of THE LANCET.

SIRS,—We, the undersigned, regret to find it necessary to call the attention of the public to the following facts:—

At the present moment any woman—even if she is destitute of knowledge or of character, or of both—can term herself a trained nurse, and can obtain employment in that capacity. There is, moreover, no means of preventing any certificated nurse who has proved herself unworthy of trust from continuing her occupation. It is unnecessary to point out the danger to the sick involved in this state of affairs. Three years ago the Royal British Nurses' Association was founded "in order to unite nurses for their mutual help and protection, and for the advancement in every way of their professional work." It has been already joined by many influential medical men, by the matrons of 150 important English and colonial hospitals, and by nearly 3000 nurses. Its primary object has been to compile and issue a Register of Trained Nurses, the first annual volume of which has just been published, and can be obtained through any bookseller, or from the offices of the Association. It contains the names of 1700 nurses, their addresses, and the place and length of the hospital training which each has received. These women have voluntarily applied for enrolment, and their certificates of technical knowledge and personal character have been carefully scrutinised by the influential Board appointed by the Association for the purpose. If any one of these nurses hereafter proves to be unworthy of confidence, her name can at once be removed from the Register.

The Association only deals with nurses who have completed their training. It does not therefore in any way interfere with the Nurse Training Schools.

We greatly regret that some hospital authorities and a few private individuals, misapprehending the objects of the Association, have exhibited their opposition to the system of registration by most unusual methods. Many nurses have been prevented from joining the Association, or have been compelled to resign their membership. Its members have been persistently assailed in print. A simple proposal to incorporate the Association under the Companies Acts, in order that it may take over and administer trust funds, has now been seized upon to send broadcast over the country documents marked "Private and Confidential," requesting the committees of provincial hospitals to oppose the Association. Failing any other opportunity of meeting such attacks, we are compelled to call public attention to the matter, and to express our very decided conviction—

(1) That the sick should be protected from ignorant and untrustworthy nurses.

(2) That nurses have a perfect right to demand that their calling shall be cleared, as far as possible, from those who now discredit it and them.

(3) That the registration of nurses as carried out by the Association would accomplish that end, exactly as the registration of members of other callings has proved to be of similar advantages to them.

(4) That the Royal British Nurses' Association, therefore, deserves the most earnest support of the public and the medical profession.

(5) That the nurse training schools, which have no control over those who are not in their service, have no legal or moral right to prevent nurses from enrolling their names upon a register if they choose to do so. Nor have they any possible right to prevent the sick being protected in any measure, however small, from the acknowledged dangers to which they are at present subjected.

We are, Sirs, your obedient servants,

WM. S. SAVORY.
T. SPENCER WELLS.
RICHARD QUAIN.
JAMES CRICHTON BROWNE.
J. FAYRER.
DYCE DUCKWORTH.
EDWARD H. SIEVEKING.
ALFRED GARROD.
EDWIN SAUNDERS.
R. DOUGLAS POWELL.
WM. CAYLEY.
A. PEARCE GOULD.
SIDNEY COUPLAND.
ANDREW CLARK (F.R.C.S.)
OCTAVIUS STURGES.
F. W. PAVY.
N. DAVIES-COLLEY.
ROBERT BARNES.
T. PICKERING PICK.
R. BRUDENELL CARTER.
W. B. CHEADLE.
G. ANDERSON CRITCHETT.
HERBERT W. PAGE.
THOMAS BUZZARD.
ARTHUR E. BARKER.
WM. O. PRIESTLEY.
F. J. GANT.
HARRINGTON SAINSBURY.
CHAS. GAGE-BROWN.
WYNN WESTCOTT.
W. BEZLY THORNE.
SEPTIMUS W. SIBLEY.
ALFRED T. SCHOFIELD.
LOVELL DRAGE.
EDWD. A. FARDON.
EDGAR WILLETT.
BEDFORD FENWICK.

April 28th, 1891.

THE METROPOLITAN HOSPITAL INQUIRY.

To the Editors of THE LANCET.

SIRS,—The evidence given before the Select Committee in the above inquiry has been abundantly interesting, and will doubtless be ably summarised in THE LANCET at the conclusion of the investigation. I wish, however, to draw attention to that part of Mr. Hurry Fenwick's evidence where, after stating he was associated with both St. Peter's and the London Hospitals, he says, "it was his habit to draft patients from the general to the special hospital." Further on the same witness states, with commendable frankness, that "Special hospitals withdrew from consulting members of the profession a great amount of special material useful for their own experience and for *teaching purposes*"; that "they affected other members of the profession in a monetary way."

Now, I think most private practitioners are painfully alive to the truth of the latter paragraph, and I would only add to it by affirming that general practice is rapidly losing its interest by the craze for specialists which the creation of special hospitals has given rise to. I wish, however, to ask how can a general hospital pretend to give a complete education to its students in return for the fees paid, when the authorities allow an important class of cases to be drafted to a special hospital six or seven miles away? It is bad enough for the general practitioner to suffer in income from the present state of things, and in much of the pleasure in his work, by the absorption of cases by "specialists." But to deprive the student of clinical material to feed a distant special hospital would seem to be a distinct breach of contract.

I am, Sirs, yours obediently,

April, 1891. PATERFAMILIAS.

MICROSCOPICAL WORK.

To the Editors of THE LANCET.

SIRS,—No doubt there are many young gentlemen who are better versed in microscopical work than old men, and could kindly give a few instructions, as just now there is a bacteriological "craze" going on in the profession. Having furnished myself with a new microscope, I find that I cannot work satisfactorily the "immersion lens." I went up to London the other day, thinking the maker could give me the necessary information, but was surprised he could not do so. How much oil should be put in? Should the lens be cleaned every day? Should the aperture in the diaphragm be large or small for a 1-12th lens? What distance should the lens be from the top of the mica cover? Any other information I should esteem an obligation, as it is a hard matter for a lad to have a toy and not be able to use it.—Yours truly,

April 27th, 1891. M.B.

DISTRIBUTION OF TESTIMONIALS.

M.B.—It is a most unprofessional practice to send testimonials round a neighbourhood, and it is even worse to send them directly to the known patients of other medical men. We are speaking on an *ex parte* statement of the case, but if the gentleman who does so has no explanation to offer, or apology, it would be justifiable to decline professional relations with him.

Mr. Barling (Hartshill).—Yes, shortly.

MEDICAL WORK ON BOARD SHIP.

To the Editors of THE LANCET.

SIRS,—A French colleague of mine, a *médecin de marine*, wants to know of the best work in English on the *rôle* of the naval surgeon, and especially on the different methods of transport of the wounded on board a man-of-war in action. Any information on this head would greatly oblige,

Your obedient servant,

Paris, April 29th, 1891. J. H. BARNARD, M.D.

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MEDICAL RELIEF ORDERS.

THE *Bury and Norwich Post* of April 21st contains the report of a long discussion at the Thetford Board of Guardians, based on a complaint of Mr. Minns, one of the medical officers, that his orders for relief were not regarded by the relieving officer. Two cases in particular were stated. The reply of the relieving officer was that Mr. Minns ordered much more meat than the other medical officers, that one of the orders came on a Sunday, and that in the course of seventeen years' office he had never been troubled by such orders on a Sunday. The guardians sided with the relieving officer. They pointed out to Mr. Minns that his orders were only recommendations, and that in the long run the responsibility of refusing to give what is ordered rests with the relieving officer. It is very trying to medical men to witness the misery of sickness intensified by want, not less so on Sundays, and to be met by an unsympathetic relieving officer. Meantime, all that Mr. Minns can do he has done.

THE CLERGY AND HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—At the present time, when so much interest is taken in the question of hospital abuse, it may be well to consider whether the clergy are not in a small degree responsible for such abuse. Speaking from my own experience, I am driven to the conclusion that they are, unwittingly perhaps, assisting to pauperise the public. "Why not take your child to Victoria-park?" "If I were in your place, I should go to the Throat Hospital." "Why do you have this operation (for fistula) done at home, when there are special hospitals for such cases?" Such are the remarks made to patients by various reverend gentlemen, followed in too many instances by the offer of the necessary hospital letter. A patient of mine, in comfortable circumstances, told me that she was so urged to go to Brompton that she finally accepted the proffered letter, and went to the hospital once, just to "pacify" the clergyman. The medicine and cod-liver oil were thrown away.

Now, I believe our clerical friends are acting with the very best intentions; but unfortunately, they have not a due appreciation of their responsibility in this matter. I wish something could be done to make quite clear two facts: (1) That the distribution of hospital letters is a most important trust confided to them, and (2) that to give hospital letters to those who are well able to pay for medical attendance is a gross abuse of this important trust. Yours faithfully,

Hatcham, S.E., April, 1891. E. F. BINDLOSS.

DISINFECTION AFTER DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—Will you kindly answer the following inquiry in your next issue? Is it absolutely necessary to thoroughly disinfect a room after being occupied by a diphtheria patient?—Yours faithfully,

April 25th, 1891. APPETITUS RATIONI PARENT.

*** In the present state of our knowledge as to the natural history and tenacity for life of the diphtheria bacillus, it is extremely difficult to declare any process of prevention to be "absolutely necessary" in all circumstances. But we know enough to indicate that the infection clings to premises and to clothing &c., and therefore adequate disinfection ought, in our opinion, not to be omitted as one of the precautions against the further spread of diphtheria.—ED. L.

MANAGEMENT OF METROPOLITAN HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In *The Times* of this date I read as follows:—"Dr. Hurry Fenwick, a member of the staff of St. Peter's Hospital for Stone, advocated the licensing of all hospitals by a board composed of the leading members of the medical profession who had the interests of these institutions at heart." Were this excellent suggestion adopted, I apprehend that St. Peter's Hospital would be one of the first to be closed. The general hospitals would be only too glad to provide accommodation for all these cases, and the students' education would be rendered the more complete by their seeing them under treatment in the clinical wards. I am, Sirs, yours obediently,

April 24th, 1891. MANAGEMENT.

INHALERS FOR USE IN PRODUCING ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—The great advantage claimed by Mr. Duke in your issue of to-day for his chloroform inhaler, that "the respiration causes the valves through which the air must pass to produce a sound audible to the administrator," was the main feature in the inhaler that was devised by my father for ether in 1847, the year before chloroform was introduced. I am, Sirs, yours faithfully,

Harley-street, W., April 25th, 1891. HEYWOOD SMITH.

IODIDE OF GOLD IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Will any brother practitioner who has tried the above be good enough to give the profession the benefit of his experience?

I am, Sirs, yours obediently,

April 27th, 1891. G. P.

Medical Diary for the ensuing Week.

Monday, May 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. W. B. Cheadle: Errors of Feeding and Food Diseases of Childhood.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. M. Gunn: External Examination of the Eye.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. D. E. N. Caush: Exostosis (with microscopic slides and photographs). Casual Communications:—Mr. J. Bland Sutton: Odontome in a Horse.—Mr. Morton Smale: A case of Injury to Temporo-maxillary Articulation at three years and a half causing Closure of the Jaw.—Mr. Stocken: Cases of Absorption of Permanent Teeth.—Mr. David Hepburn: A case of Attrition in the First Dentition.—Mr. C. V. Cotterell: Convertor for Electric Mallet.

SOCIETY OF ARTS.—8 P.M. Mr. Hugh Stannus: The Decorative Treatment of Natural Foliage. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—Annual Conversazione. Oration at 8.30 P.M., by Sir Joseph Lister, on the Coagulation of the Blood in its Practical Aspects.

Tuesday, May 5.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: Hypochondriasis and Melancholia.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: On Raynaud's Disease and Allied Affections.

ROYAL INSTITUTION.—3 P.M. Dr. Edward E. Klein: Bacteria, their Nature and Functions. (Tyndall Lecture.)

SOCIETY OF ARTS.—8 P.M. Capt. Buchan Telfer: Armenia and the Armenians.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. Delépine: Melanomycosis of Skin.—Dr. J. S. Bristowe: Black Tongue.—Dr. Albert Wilson: The Micro-organism of Diphtheria, with Experimental Results in Animals.—Dr. S. Sharkey: Ulcerative Colitis.—Mr. W. H. Battle: Acute Epiphysitis.—Dr. N. Pitt: Gummatous Meningitis; Gumma of Heart.—Dr. A. F. Voelcker: Tuberculosis of Mediastinal Glands invading Lung.—Mr. E. W. Roughton: Lipoma of Spermatic Cord with Hernial Sac.—Mr. H. B. Robinson: Columnar-celled Carcinoma of Jaw.—Dr. H. D. Rolleston: Myocarditis limited to Right Side.—Dr. F. Payne: Syphilitic Caries of Calvaria in an Infant. Card Specimens:—Mr. A. Doran: Hydronephrosis; Nephrectomy. Mr. J. H. Targett: Symmetrical Hemiatrophy of Gastrocnemius.—Dr. H. D. Rolleston: Necrosis of Skull-cap; Fracture of First Rib. Mr. S. G. Shattock: Bilharzia, Bladder.

Wednesday, May 6.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

ROYAL SOCIETY.—Conversazione.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. F. T. Roberts: Clinical cases in relation to Physical Conditions and Symptoms.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Q. Silcock: Glaucoma.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Lewers, Dr. Godson, and others. Dr. Dakin: Tetany in Pregnancy.—Dr. John Phillips: On a case of Death following Vaginal Injection of Acid Nitrate of Mercury.—Mr. Alban Doran: Sequel to the case of Anterior Serous Perimetritis simulating Ovarian Sarcoma.

SOCIETY OF ARTS.—8 P.M. Mr. E. L. Fleming: The Sources and Applications of Borax.

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Thursday, May 7.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. W. B. Cheadle: Common Errors and Fallacies of Medical Treatment in Children's Diseases.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Tooth: The Diagnosis between Functional and Organic Diseases of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 3 P.M., Mr. W. R. H. Stewart: The Examination of Ear Cases.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. J. W. Malcolm: Some Complicated cases of Abdominal Section.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M.—Mr. R. Williams: Arteriovenous Aneurysm of the Orbit.—Mr. George Wherry: Paragensia with Ophthalmoplegia.—Mr. T. Thompson: Emphysema of Conjunctiva.—Mr. Lawford (for Mr. Johnston of Vancouver); Penetration of Eyelash into Anterior Chamber.—Mr. Ernest Clarke: Intrusion of Eyelash into Anterior Chamber.—Dr. P. H. Mules: On Anterior Cerebral and Pyramidal Capsular Cataracts.—Mr. Kenneth Scott: On Perchloride of Mercury in Conjunctival Disease. Card Communications:—Mr. Lawford: Thrombotic Retinitis.—Mr. R. Williams: Dermoid of Cornea.—Mr. Ernest Clarke: Total Absence of Iris.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Adjourned Discussion on Mr. Watson Cheyne's paper on the Value of Tuberculin in the Treatment of Surgical Tubercular Diseases.

Friday, May 8.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. F. T. Roberts: Clinical cases in relation to Physical Conditions and Symptoms.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: The Microscope for Bacteriological Work (Cover-glass Preparations).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Heart-Valvular Lesions, with their consequences (demonstration).

CLINICAL SOCIETY OF LONDON.—Mr. Arbuthnot Lane: Two cases of Resection of Intestine by Senn's Method.—Mr. C. J. Symonds: Two cases in which a Sequestrum was removed from the Neck of the Femur without Injury to the Joint; recovery in both, and in one with a perfect joint.—Dr. T. J. Maclagan: Cases of Neuritis and Spurious Arthritis.—Mr. Stephen Paget: A case of Cerebral Abscess twice trephined; Hernia Cerebri; recovery.—Dr. Sidney Phillips: A case of Typhoid Fever with Occlusion of the Femoral Artery during Convalescence, and with Acute Maniacal Attacks.

ROYAL INSTITUTION.—9 P.M. Prof. W. Ramsay: Liquids and Gases.

Saturday, May 9.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

ROYAL INSTITUTION.—3 P.M. Mr. H. Graham Harris: The Artificial Production of Cold.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. J. W. Ogle; Mr. E. Owen; Mr. W. H. Bennett, London; Dr. Heywood Smith; Dr. Minns, Thetford; Dr. Yule, Guildford; Messrs. Keene and Ashwell; Dr. Bennington, Newcastle-on-Tyne; Messrs. Cooper and Holt; Dr. Dudley, London; Dr. F. Little; Messrs. Richardson and Co., Leicester; Dr. A. Ross, Molong, N.S.W.; Messrs. Hertz and Collingwood; Mr. Kilner, Flimgoe; Rev. Dr. Rigg; Messrs. Oliver and Boyd; Dr. Pocklington, Wimbledon; Messrs. Smith, Elder and Co.; Mr. Heslop, Blackpool; Dr. B. Fenwick; Messrs. Brims and Mackay, Thurso; Mr. Bindloss, Hatcham; Messrs. Kegan Paul and Co.; Mr. Silcock; Dr. Littlejohn, Edinburgh; Mr. Jubb; Mr. Wood White, Birmingham; Mr. Lund, Manchester; Messrs. Oppenheimer and Co.; Mr. Wainwright, London; Dr. Wynter; Messrs. Bryce and Rumpff; Mr. Dobie, Brampton; Mrs. Wallace; Dr. Steeves, Toxteth Park; Dr. J. Adams, Eastbourne; Mr. E. C. Stabb; Messrs. Lane and Co.; Dr. Bond, Gloucester; Dr. Auld, Glasgow; Messrs. Read and Co., Bristol; Dr. L. E. Stevenson, Jedburgh; Dr. Bowden, South Hampstead; Mr. Barling, Hartshill; Dr. Duka; Mr. J. Armstrong, Liverpool; Mr. J. P. Richards; Mr. A. Robottom; Dr. G. M. Gould, Philadelphia; Dr. Zangzer, Zurich; Mr. Jeaffreson, Newcastle-on-Tyne; Dr. Robinson, Huddersfield; Dr. Cooke, London; Mr. Man, Doncaster; Mr. Hornibrook, London; Mr. Mosse, London; Mr. Read, Canterbury; Messrs. Cox, Brighton; Mr. Joy; Dr. A. de Giacoma, Naples; Mr. Bailey, Hampstead; Mr. Murdock, Echuca; Dr. Brewis, Tasmania; Mr. Hemming, Bridgend; Mr. Orr, Dresden; Mr. Beard, Wandsworth; Mr. Sedlmayr; Mr. Webb; Mr. Pennington; Mr. Smith, Brighton; Seniores; G.P.; Paterfamilias; Management; C. Ch.; City Asylum, Norfolk; M.D. Lond., F.R.C.P.; W.; Z.; Omega; Hanover Institute; S. H.; R. L.; L. G. B.; O. F.; Dunelm; M.B.; Bouillon Fleet Co.; An Ex-Priest; Appetitus Rationi Parent.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Nash Dublin; Mr. Earlam, Brewood; Mr. Swain Hitchin; Messrs. Kilner Bros., King's-cross; Dr. Horne, Scarborough; Mr. Langhorne, South Australia; Miss Pratt, Derby; Mr. George, Preston; Messrs. Moat Bros., Belfast; Dr. Warburton, Treherbert; Messrs. Heilgers and Co., London; Mr. Finley, Longford; Mr. H. Waters; Messrs. Cohen and Sons, London; Mr. Lockwood, Huddersfield; Messrs. Drew and Son, Newton-le-Willows; Dr. Harding, Whittlesea; Messrs. Watson and Co., Hull; Dr. Liveing; Miss Lloyd, Hawkhurst; Dr. Appleton; Dr. McLauchlan; Mr. Tyte, Minchinhampton; Messrs. James and Williams, Aberdare; Major Leadbetter, Wrexham; Messrs. Smith and Co., Portsea; Mr. Merck, Darmstadt; Mr. Thompson, South Hampstead; Miss Beadon; Mr. Tully, Hastings; Messrs. Roberts and Jones, North Wales; Mr. McKay, Fortrose; Mr. Humphreys, West Ham; Dr. Foster, Winchester; Mr. Rentoul, Kennoway; Mr. Dobbs, Southgate; Dr. Hoffmann, Swansea; Mr. Davis, Sidcup; Dr. Lyon, Durham; Mr. Lamb, Edinburgh; Dr. Mackay, Durham; Mr. Thin, Edinburgh; Mr. Pilkington, Littlemore; Miss Weeks; Mr. Orgers, London; Mr. Maylott, Uxbridge; Mr. Brockelbank; Mr. Cawthorne, Welshpool; Dr. Hunter, Pontypridd; Mr. Holder, Hull; Mr. Selby, London; Mr. Forjett, Caistor; Mr. Davies, Leicester; Mr. Heywood, Manchester; Miss Mathews; Mr. Cochrane, Wigton; Mr. Sergeant, London; Mr. Odell, Torquay; Mr. Pennington, Hyde; Dr. Wilcox, Woolwich; Dr. Osburne, Hythe; Mr. Gilpin, Evesham; Mr. Griffin, Saltburn; Mr. Stephens, Rangoon; Mr. Ernst; Dr. Crombie, Brentford; Mr. Burgess, Sutton; Mr. Christian, Hammersmith; Dr. Still, Loughborough; Mr. Branthwaite, Erdington; Dr. Hales; Dr. Deane, Ellesmere; Dr. Davies, Glamorgan; Alpha; Secretary, Royal Albert Hospital, Devonport; H.; J. D., London; W., Bayswater; Haydock Lodge Retreat; Sister, Plymouth; Adoption; Senex; Hollingbrook House, Littleborough; W. R., London; Theodora; Wolverhampton Infirmary; Secretary, Jerusalem, Clapham; M. F. A.; Secretary, Ocean Accident and Guarantee Corporation; Matron, Manchester; British Syphon Co.; Alpha, London; A. T. T., Norwich; College of State Medicine; X. Y., Abergavenny; Manager, Great Tower-street Tea Co.; Recipe; J. E., Carnarvon; R. M. S.; Mutual Life Assurance Co.; D. P. C.; Syntax; J. W. P.; Medicus, Liverpool; A. B., South Norwood; F. F. F.; A. O.; F.; Forceps; Secretary, Royal College of Physicians; Spes; M.D., Liverpool; Statim; Denaeyer's Peptone Co.; M. S. A.; Secretary, Royal Infirmary, Manchester.

NEWSPAPERS.—*Dundee Advertiser, Leeds Mercury, Liverpool Daily Post, Methodist Times, Yorkshire Post, Bristol Mercury, Insurance Record, Scottish Leader, Sheffield Independent, Sussex Daily News, Windsor and Eton Gazette, South Wales Weekly News, Liverpool Courier, Glasgow Herald, Worcestershire Echo, Le Temps (Paris), East Anglian Times, Mining Journal, North British Daily Mail, The Newspaper, Scotsman, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Beckenham Journal, Hertfordshire Mercury, Reading Mercury, La Patria (Rio de Janeiro), Labour World, Windsor and Eton Express, National Press (Dublin), Nursing Record, Worthing Gazette, Baker's Record, Spalding Free Press, Courier de Londres, Bury and Norwich Post, Maidenhead Advertiser, Ormskirk Advertiser, New Zealand Herald, Night and Day, West Sussex Gazette, Warrington Guardian, Greenock Telegraph, Melbourne Argus, The Monist, The Optician, &c.*, have been received.

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Clinical Lecture
ON
MALIGNANT DISEASES OF THE BREAST.

Delivered in University College Hospital,

BY CHRISTOPHER HEATH, F.R.C.S.,
HOLME PROFESSOR OF CLINICAL SURGERY.

I HAVE to-day, gentlemen, to speak of malignant diseases of the breast, and of course in malignant disease we nowadays include the sarcomata as well as the carcinomata. Until within the last ten or twelve years it was hardly recognised that the sarcomata formed a group by themselves, almost as malignant in many features as the carcinomata, so that you will find in all but the later books and lectures on diseases of the breast that they are not mentioned as a specific class, but clearly they are almost as malignant as the carcinomata. We do not see them often. I show you a photograph of a case of sarcoma of the breast which we had here a short time ago. Some of you may remember a woman with an enormous growth, a very large mass of disease of a soft character, in which there was no enlargement of the glands of the axilla. That is a point to which I wish to call your attention as distinguishing the sarcomata from the carcinomata—I mean as regards the breast. I do not think that the rule about sarcoma not involving the lymphatics holds good in every case. You probably know that one form of sarcoma particularly, the melanotic, involves the lymphatics rather than the vessels; but as a class the sarcomata do not readily involve the lymphatic glands; certainly in cases of sarcoma of the breast you may be sure that you will not have the lymphatic glands enlarged. Given, then, a rapidly growing soft tumour of the breast, the chances are that if the glands of the axilla are not enlarged it is a sarcoma. It makes no difference with regard to the treatment, but it is important, of course, with regard to the prognosis. You must remove the growth, but the great misfortune is that the tendency to recur locally is very great. In the photograph that I show you you see the fourth growth which the poor woman had had removed. She had certainly been operated upon twice, and, I think, three times by another surgeon, and then he declined to do a further operation. The woman came here in a bad condition, with a very large growth, which had already ulcerated through the skin, and I thought it quite justifiable to operate once more. I think it is a pity to leave an unfortunate woman with a great protruding mass of disease immediately below the face to end her days in misery. Of course, it may be that you will kill the patient by the operation; and I really can hardly say that it is to be regretted. But as a rule they do not die; they do remarkably well. If you clear away the whole of the soft growth, the wound granulates up tolerably easily, and for some weeks, or perhaps months, the patients are relieved from their trouble. This was an example of spindle-cell sarcoma which had ulcerated through the skin, and which must have led to great misery before it terminated the patient's life. I do not know what the end of the case was, but certainly the patient went out of the hospital relieved. That is a comparatively rare form of malignant disease. The common form, which we see so much of in the hospital, is of course the ordinary scirrhus. The cases which come to the hospital as a rule are well-marked cases of scirrhus, and you are sometimes rather surprised that they have not been recognised before, and that the patients have not been treated earlier. But that is too often the case with hospital patients; they go on much longer than they ought to do before they apply for relief; and I want to impress upon you, as practitioners who will see these cases in quite the early stage, to observe the importance of recognising and treating scirrhus early.

Now let us go into the diagnosis of a case of scirrhus before referring to the treatment. A woman varying in age from thirty to fifty (about forty is the most likely age) has a little lump in the breast. It is astonishing how long women will go on with a lump in the breast and not notice it. In performing their ablutions they must necessarily manipulate the breast to a certain extent; still they do not notice that there is a lump in the breast until possibly there is a slight accidental knock, or something of that kind, which calls attention to it, and then they always say, I believe with a perfectly good conscience, that the lump has followed the blow. That is so commonly said that you cannot but suppose that sometimes it must be true. I believe that a patient with a cancerous diathesis will start a cancer upon receiving a blow; but, on the other hand, I am equally sure that there are cancerous tumours of the breast which have been growing for weeks or months without being found out. Sometimes there is a shooting pain in it that calls attention to the part, and then it is found that there is a little lump. If the lump is on the surface of the breast, as it most generally is, immediately beneath the skin, in a very few weeks it will produce an effect upon the skin, which we all recognise as so exceedingly characteristic—namely, the dimpling of the skin when you pinch it up with your finger and thumb. But then you must bear in mind that there are cases where scirrhus is not on the surface of the breast, but in a deep part. I was particularly struck with that lately when holding an examination for the M.B. degrees of the University of London. We had a woman there for the examination who had undoubted scirrhus of the deep portion of the breast. I say undoubted because she had a number of enlarged glands in the axilla, and I was rather surprised that gentlemen, presumably of advanced knowledge, failed entirely to recognise what the case was. They could not believe it was scirrhus because there was no dimpling of the skin, and of course no retraction of the nipple. With regard to the retraction of the nipple, if the growth is on the surface of the breast, and just beneath the nipple, in a few weeks you will find that the nipple is somewhat fixed, and in a few more weeks it is drawn in. But if the disease is not in the central portion of the breast at all, but on the inner or the outer side, then it follows as a matter of course that you have no retraction of the nipple whatever. You have first, then, the hardness, then the tendency to involve the skin, and then the retraction of the nipple. Then, I think, I should put the pain next. Now, pain in a scirrhous breast is very marked, being of a stabbing or lancinating character. You need not ask whether it is a stabbing pain or not; the patients will tell you without prompting that it is just as if a knife were being run into them, and you cannot have a better definition of a lancinating pain.

Given, then, these features, I think you ought not to hesitate about pronouncing the case to be scirrhus. Of course, the lymphatic glands are not always involved, and to wait for the glands of the axilla to become involved is to do your patient a direct injury; and it is to be regretted that medical men are apt to wait for the involvement of the glands before making their diagnosis. Of course the patient is then so much the worse, because not merely have the glands become infiltrated with cancer, but no one can tell how much further beyond the glands the lymphatics may already have become affected. If you have any doubt about a case, make an incision into it, which will at once settle whether it is cancer or not. Do not wait and dally with a case, and apply belladonna and things of that kind, which are all very well for simple tumours, but cannot in any way affect the growth of cancer, which all the time is making progress and doing the worst possible for the patient. We will presume, then, that you have a case which does not involve the glands, and that you are going to operate. Shall you remove the tumour, or shall you remove the breast? and if you remove the breast, shall you remove also the axillary glands? Now I think that where you have a single outlying nodule of disease at the margin of the breast, it is justifiable to cut out that nodule and leave the breast; but in by far the great majority of cases where the mammary gland is involved more or less in the central portion you ought to take out the whole breast. You see here the breast I removed last Wednesday, and you will observe a nodule of scirrhus close by the side of the nipple. You will remember that this was a case of a somewhat unusual character, the nodule being so entirely localised and the skin so firmly bound down to it. You can see here the hard pear-like appearance of scirrhus, and you will see it better if I make a fresh section. In a fresh specimen you may notice that the surface becomes somewhat concave from the contraction of the tissues. In such a case I advise you to remove the entire breast, and let me say it is not such a simple thing to remove the entire breast as some men suppose. I am sure that in many operations

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the margin of the breast is left, and it is a great mistake to leave it. The central mass of the breast with disease in it is easily recognised; but when you get to the margin it is not quite so easy to see it, and the operator, if working boldly with a knife, may readily cut through the margin of the breast, and leave it behind. That is why you will notice in my operations that I always use the fingers a good deal after I have first reflected the skin with the knife. I usually reflect the skin by a double incision, and then with the fingers tear away the skin until I feel that I have got to the margin of the breast. You can with a little practice with your finger recognise the edge of the breast, which is perfectly regular, and pull it up with a nail, and dissect or tear it away from the pectoral muscle. There is also another advantage, because we get less hæmorrhage. You may notice that I have seldom to tie or twist more than one or two vessels after removal of a breast.

Now comes the question, Shall you or shall you not turn all the glands out of the axilla? On this point I may say that there has been a good deal of discussion of late years. Twenty years ago or more, if the glands in the axilla were enlarged, that was considered to negative an operation. You will find that surgeons like Mr. Syme and Sir William Fergusson, if they had a case of cancer of the breast with enlarged glands, declined to operate. We have improved upon that, because whenever the glands are enlarged we do not hesitate to take them away. For the last ten or fifteen years all operating surgeons have come to the conclusion that it is perfectly easy to turn out these glands from the axilla, and clear out as much as may be necessary—in fact, to clear the axilla. But the question that has been discussed a good deal by Mr. Mitchell Banks of Liverpool, and by other surgeons, is whether in all cases it would not be wise to turn out the whole of the glands of the axilla, because it is possible that they may be involved. I am perfectly certain that you may have glands involved and not be aware of it; I mean that it is impossible through the skin to be always sure whether there is enlargement of the glands or not. Therefore I always make a point of putting my finger into the axilla and under the pectoral muscle, and feeling whether there are or are not any perceptible glands. If there are, I take them away. At the same time I do not think it is justifiable in a simple case of scirrhus—a small nodule of scirrhus of the breast with no perceptible enlargement of the glands of the axilla—to turn out the whole contents of the axilla. Mr. Banks thinks that it is. He says it is better to kill a few patients by an operation of that magnitude than to leave a large number of them with possible germs of cancer still in the axilla. But I think you can make out pretty clearly whether there are germs or not, and if there are you ought certainly to remove the glands.

With regard to removing the glands, you have seen me do it many times, because the cases which come to the hospital are generally, I regret to say, cases in which the glands are already involved, and you will have noticed that after making an incision upon the edge of the pectoral muscle, I generally turn out the whole mass of the glands with the finger. I think in that way you run much less risk of doing harm than you would by using the knife. If you use the knife freely, you are apt to cut more vessels and to get considerable hæmorrhage. At the same time, you have to be cautious, because the first thing you come upon is the axillary vein, and if you tear that it is a rather serious matter. I have torn it before now, and had to put two ligatures upon it, which is a thing one would rather not do. Then, of course, immediately behind the vein there is the axillary artery. I do not think you could tear the artery in that position, but it is possible to tear a branch of it, particularly the subscapular artery. You should be careful about the position of it, and avoid tearing it or the corresponding vein, which, as I have said, would give rise to a good deal of hæmorrhage. With these precautions, I think you may turn out the contents of the axilla, as far as they are diseased, with very great advantage to the patient. You may have seen me even put my finger up under the pectoral muscle, and get the glands out from the posterior triangle. There was a case last summer in which I did that. You will bear in mind that those glands are sometimes enlarged as a consequence of axillary disease. Some writers advise that the pectoral muscle should be divided; but I have never found any necessity to do that. I may say, however, that I have removed the greater part of the pectoral muscle before now, where it has been involved in the cancer. Because you must remember that a cancerous breast tends to form adhesions to the pectoral muscle; and not infrequently in lifting up the breast you find that some fibres of the superficial portion of the pectoral muscle are adherent to it, and then you tear or divide them, or pull them away. But I have known cases, particularly cases of soft cancer of the breast, where the whole of the pectoral muscle was involved; and then it is necessary, if you are to do anything at all, to cut the muscle away, which makes it a serious operation, attended with very considerable risk, and it should only be undertaken in extreme circumstances, where there is a large mass of disease which is fungating or tending to fungate, and which you are obliged to remove as a temporary relief for the patient. Those cases are relieved for the time, but I have never known one that lived many months after such a serious operation.

So much, then, for the proceeding with regard to the removal of the breast. I ought perhaps, in speaking of the operation, to have made some remark with regard to the incision. The ordinary incision which I suppose most surgeons make is the double elliptical incision, following pretty closely the fibres of the pectoralis. Mr. Beck, however, has used another incision, which you will find mentioned in Mr. Erichsen's book. Here the elliptical incisions surrounding the nipple are carried across the pectoral to meet another going straight up into the axilla. There is no doubt that this incision gives better drainage, and it is because I have been dissatisfied with the drainage afforded by the elliptical incisions that you may have noticed latterly in my cases I have put the drainage-tube not into the wound at all, but through the posterior flap. I think either way—putting it through the posterior flap or using Mr. Beck's incision—is better than the old elliptical incision. If you have the elliptical incisions, and the drainage-tube is put in the usual way at the top, it is difficult to make the patient lie down sufficiently to cause the fluid to gravitate from that part. Theoretically it is all very well; the patient is supposed to be perfectly flat in bed, and then no doubt the drainage-tube would work; but practically we know that the patient is supported with pillows, and it is difficult to get thorough drainage. If you put the tube through the posterior flap you can have efficient drainage, or if you put it, as Mr. Beck does, at the end of the incision, you have a large amount draining both from the axilla and from that portion of the wound.

Of course there may be other incisions. It is absurd to suppose that you can remove every breast by the same incision. If the skin is involved at any one particular part you must meet that by surrounding it by an incision. Many times before now I have made a vertical incision surrounding the nipple and including the skin which happens to be attached above or below the nipple in the central portion of the breast. A surgeon must be prepared to modify his incisions according to circumstances, so as to make quite sure that he gets rid of the whole of the disease. The great point is that the whole of the breast should be removed, and the whole of the glands, so far as they can possibly be reached; because I may remind you that there are glands which you cannot reach. If you have cases of cancer of the inner side of the breast, the chances are that the glands in the mediastinum are already diseased. You cannot help that; it relieves the patient, and it certainly does good, to remove the breast, but unfortunately in these cases too often recurrence takes place in the lymphatics of the mediastinum and the patient dies from that cause.

With regard to the healing of the wound, we always aim, of course, at immediate union. Everybody is pleased when the parts unite by first intention, and the patient gets well and is out of the hospital in perhaps a fortnight. I am not sure, however, that this is always the best thing ultimately for the patient, and for this reason—one too often finds in these cases which do so well little nodules of disease springing up soon afterwards. I have been much disappointed in some of my cases which have done admirably, the patients leaving in a fortnight quite well, to find within three months little nodules of cancer springing up here and there, not necessarily in the cicatrix, and therefore not showing that anything has been left behind, but springing up in different positions. I am not at all sure, though I do not lay it down, but merely express an idea passing in my mind, whether many of these cases would not do better if we let the wound suppurate, and therefore possibly

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allowed all these little bits of diseased tissue to be thrown off in the discharges. I believe that some of these cases of suppurating wounds after removal do better in the end than the very pretty cases of immediate primary union. Then supposing that the patient recovers from the operation, for the risk is not great, though of course if you have to remove the axillary glands it is increased, what are the prospects in regard to recurrence? Mr. Morrant Baker some years ago collected a number of statistics from Sir James Paget's practice, and those statistics give fourteen months as the average date of return in scirrhus and seven months in medullary disease. It is notorious that medullary cancer of the breast is more rapid than scirrhus, both as regards primary growth and as regards recurrence. This is a point of very great importance, because naturally the patient and her friends before the operation often say to you, "What are the chances for this patient? If we go to the expense, trouble, and anxiety of an operation, what can you promise?" Well, you cannot *promise* anything. Anybody who holds out a prospect to the patient of absolute cure in a case of cancer is behaving very unfairly to her. All that you can say is that you may hope for about two years, on the average, of complete relief. You cannot promise or hope for more. Mr. Baker's statistics give fourteen months, but I think we may take it a little longer for the average run of cases if they are taken pretty early. Then, unfortunately, there may be nodules forming in the cicatrix or in the neighbourhood; there may be a re-development which may admit of further operative interference; there may be enlargement of the glands, if the glands have not been already removed; still it does not follow that the patient cannot be relieved even then. I have operated twice or three times in cases of scirrhus. Only the other day I operated upon a lady for the third time. There was a large nodule which had sprung up in the cicatrix beginning to ulcerate, and I was afraid that if I did not remove it it would give considerable trouble. Every now and then, indeed, you are fortunate enough to find a case which goes on very much longer; the patients live for many years afterwards, and you really seem to have eradicated the disease, but you cannot tell beforehand which those cases will be.

Then let us take the prospects for a patient as regards the whole history of the case. In the first place let me quote Sir Astley Cooper's views with regard to that point. He gave as the result of his experience two years for the full development of cancer of the breast, and from six months to two years more as the limit of a patient's life. I think he is quite right with regard to the two years for the development of cancer in the breast, but I think that the period of from six months to two years is rather low with regard to the limit of the patient's life, because, although you may have recurrence in a cicatrix or elsewhere, those patients do not necessarily die; they live on for some months, although there may be a certain amount of suffering from the disease. Mr. Sibley many years ago investigated the statistics of the cancer wards of the Middlesex Hospital, and let me say that the cancer wards of the Middlesex Hospital differ from ordinary wards in the fact that the patients admitted with cancer are kept there till they die. Mr. Sibley's statistics gave fifty-three months as the average of life when the primary disease is once removed, and only thirty-two months when the case is left to nature. That is a very important point. You are asked by the patient, and particularly by the friends, "Will the operation prolong the woman's life?" I think it will. You may say that, provided the first risk of the operation is got over, the patient's life will certainly be prolonged, and the statistics I have mentioned go to show that that is the case. But those statistics are statistics of cases of cancer taken all together. Mr. Baker's statistics, to which I before alluded, separate scirrhus from medullary cancer, which of course is rather important, because they are different groups of cases, and they show that when a case of scirrhus is left alone the average duration of life is forty-three months, and when it is operated upon fifty-five months, and that in the case of medullary disease when left alone the average life is twenty months, and when operated upon forty-four months, so that the gain is very considerable; and if surgeons would only be impressed very strongly with what I said at the beginning of the lecture, that cases should be taken early and operated upon before the glands are affected, I believe we should have even better results than are here recorded. Patients, too, have not the fear of operation that they used to have, because nowadays, what with anæsthetics and antiseptics, patients have so very little suffering that they hardly seem to appreciate surgery as they ought to do, and when it comes to a question of signing a piece of grey paper they sometimes seem to think that they have not had enough for their money.

Medullary disease, of which we have not had a case lately, is of course the most rapid form of disease in the breast, and it is also the most serious for the patient. It is one in which you find the skin becoming rapidly implicated and the glands in the axilla becoming involved. That is what distinguishes it mainly from cases of sarcoma. Given then a case of medullary disease where the skin becomes rapidly brawny, and where, if you do not interfere, it gives way, you will have a large fumigating mass, which constitutes the *fungus hæmatodes* of the older authors. It is a thing that you hardly ever see now, because both surgeons and patients do not allow cases to go to that extent, but that is what would happen if the case were not soon relieved. It is because of that tendency to fungate that I strongly advise an operation in these cases, although you know that you cannot save the patient's life, but you can get rid of the mass of fungating, offensive, discharging disease, which will make the patient's remaining weeks of life very miserable. In a case of that kind you should operate freely, and clear away the whole of the skin that is involved. There, again, modern surgery allows us to take great liberties, because by the lead plates of Sir Joseph Lister you can draw the skin together and transplant a flap when necessary, or if there is an open wound its granulation can be aided by grafting portions of healthy cuticle. In these cases always take away the glands, because they are certain to be infiltrated. And there is this peculiarity with regard to these medullary cases, that it is not merely isolated glands, as in scirrhus, that are affected. In scirrhus, when you enucleate the glands you can see each gland separately; but in the case of medullary cancer the whole mass of tissue is infiltrated by disease, and you have really to clear out glands, cellular tissue and all, and expose the axillary vessels very freely, and that of course is one of the dangers of the operation.

CONCERNING BLOODLETTING.

By JOHN W. OGLE, M.D., F.R.C.P.,
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THE discussion upon the paper recently read at the Royal Medical and Chirurgical Society by Dr. Pye-Smith upon Venesection, and published in THE LANCET for Jan. 31st, 1891, has induced me to place on record the following case which occurred a few years ago in my private practice, and which shows in a striking manner the immediately beneficent results of a timely adoption of venesection.

The patient, a gentleman aged thirty-three, a total abstainer, of strong build and healthy and ruddy appearance, had always enjoyed good health. After being for some time in a very hot and close room, at the end of a hard day's work in the month of April, he had been exposed, about 10 P.M., to a temperature of 35° or 40°. On returning home, not many minutes after his exposure, he was suddenly seized with intense shivering, for which, as he said, he would have taken some hot alcoholic liquid had he not been a teetotaller. He went to bed and slept, but in about an hour's time he was awakened by sharp vomiting accompanied by extreme chilliness. He had but little rest during the night. On the following day he could not eat any breakfast, but managed to go out and do some work, though feeling very ill; and soon after noon he had to take to his bed again. He stated that, for two or three nights and days subsequently, he could procure no sleep. "After this," he wrote, in alluding to his case, "I was told that I became unconscious; at any rate, I remember nothing further until seeing you at my bedside after the venesection had been performed, and from that time I had an uninterrupted recovery, many thanks to your valuable advice." On the morning that I visited him, in consultation with two medical practitioners who were in attendance, he was extremely drowsy, with a very dusky and anxious countenance, exceedingly rapid breathing,

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slight hacking cough, and expectorating, with much difficulty, glutinous prune-juice-coloured phlegm. All the physical signs of aggravated double pneumonia (which I need not here give in detail) were present, and the urine was exceedingly albuminous. Sundry suitable remedies had been "exhibited," and plentiful hot linseed and mustard poultices applied. After prescribing for my patient I arranged to visit him again on the evening of the day following, which I did. At this visit I found that all his symptoms were intensified. He was struggling for breath, and appeared to be unconscious, and scarcely able to free the lungs from any of the bloody and slimy sputa with which the bronchial tubes were being rapidly choked. As it was obvious that the disease could not be controlled by drugs, and that death was imminent, I proposed that we should take blood from the arm without delay. My colleagues in consultation agreed to the proposal provided that I took the responsibility of the procedure. This I said I would do if the relatives would sanction our action, which, seeing how rapidly the patient was sinking, they did without hesitation.[1] Of my consulting colleagues, one had never performed the operation of phlebotomy; but the other had been accustomed to perform it in tropical climates, and he undertook to bleed the patient. The operation had, however, to be delayed for twenty-five or thirty minutes, as no lancet was at once forthcoming. At last, an instrument having been found and the patient propped up in bed, he was bled to nearly 30 oz. "*pleno rivo*."[2] His condition at once, so to say, answered to the remedy; the pulse quickly improved, becoming fuller and slower, and the breathing became easier, and in the course of the next hour, to my great pleasure, he was considerably relieved. On the following day but one I again went down to see him, and found him sitting up in bed consuming a good-sized basin of strong soup. His recovery proved to be complete, and in due course of time he was able to take a voyage to Gibraltar, and on his return from his cruise appeared, as he said, "to show himself," well and hearty.

It had been my duty on many previous occasions to counsel venesection in various cases of disease, notably in heart and lung affections; but I do not remember to have had experience of any other instance in which so absolute and prompt a *coup de grâce* to diseased action was obtained. This result was the more memorable as the patient's condition was apparently hopeless; and the more gratifying, as the patient was an old and very worthy pupil of mine, Dr. Harrison, now settled at Ealing. Never before had I realised so forcibly the phrase of Sydenham, who quaintly described the operation of venesection in such cases as "doing the work of the windpipe."[3] This it really did, as by its means respiration was satisfactorily restored, and consequently the blood was enabled to become properly aerated.

Not having been present, unfortunately, at the reading of Dr. Pye Smith's paper, above referred to, I do not know more of it than what I have read in the printed discussion; but it was interesting and satisfactory to find that so much stress had been laid by the speakers upon the use of venesection in certain cases, *solely with a view of relieving a congested or overloaded right side of the heart*. The value of the operation performed with this object might well be illustrated by the experiments upon dogs and rabbits of Professor John Reid of Edinburgh, who demonstrated[4] the good results which, in certain cases of poisoning occasioning enfeeblement or suspension of the heart's contraction, were produced by freely opening the external jugular vein, and so disgorging or unloading the right side of the heart, renewing its action and promoting a return of circulation. This result had been shown to be possible by Haller. Professor Reid refers to the long-known practice of bleeding from the external jugular vein in cases of asphyxia and suspended animation, for the purpose of renewing the heart's action.[5] The above experiments were confirmed by Dr. Cormack and Dr. H. Lonsdale. I may allude here, also, to the observation on jugular venesection in asphyxia by Struthers (1836), who showed that one can generally disgorge the right side of the heart by the process, and that the operation will prove useful in resuscitation after drowning. References are made to King's well-known researches on the safety-valve of the human heart. The service done in mechanically relieving an over-distended heart by opening a vein, and still more by cupping over the cardiac region, was pointed out by the late Dr. T. K. Chambers in his Lectures, chiefly Clinical (see p. 588). Again, at p. 223, in describing the treatment of pneumonia, when contrasting the strong action of the heart caused by the unwonted amount of venous blood in its cavities with the weakened force of the pulse at the wrist, he writes: "Take away some of the blood from the veins, and the balance is restored; the pulse becomes, in technical phrase, 'freer,'—that is to say, the heart being relieved of the undue crowd in the right side, is not checked in its contraction, but is able to clench upon its contents, and supply them steadily to the arteries."[6] Dr. Hare, in his little work, "Good Remedies out of Fashion," 1883 (p. 39), lays stress on

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[1] This measure was entirely in conformity with the admonition of Celsus, who, when writing on Bloodletting (see Book II., cap. x.), remarks: "Sed, si nullum tamen appareat aliud auxilium, periturus que sit, qui laborat, nisi temeraria quoque via fuerit adjutus, in hoc statu boni medici est ostendere, quam nulla spes sine sanguinis detractione sit; faterique, quantus in hac ipsa re metus sit; et dum demum, si exigatur, sanguinem mittere."

[2] The famous Dr. Gregory, in his "Theory and Practice of Medicine," states that in cases of pneumonia the orifice ought to be large enough to allow a pound of blood to flow in five, or at furthest six, minutes. Being interested in ascertaining, if possible, what was known to have been the largest quantity of blood taken by venesection at one time, I may say that it is recorded that Galen saw more than three pints abstracted at once in a case of hæmoptysis. (See Syd. Soc. Trans., P. Ægin., ii., p. 321.) Watson (see Lectures, i., p. 217) says that on one occasion at Edinburgh he saw "not without trembling" the vein kept open until 72 oz. (i.e., four pints and a half) of blood had issued from it—"and then, and not till then, did the patient become faint." The patient had general dropsy, which had come on suddenly, and recovered; and Dr. Richardson describes the case of a man suffering from sunstroke, who was bled to nearly four pints, and very quickly recovered. (See Practitioner, vol. i., p. 281.) He also records a case of hæmorrhage from the roof of the mouth from diseased bone, in which six pints of blood were lost at once. The patient entirely recovered. In Tweedie's "System of Practical Medicine," vol. i., p. 103, it is stated, on the authority of Dr. Gregory, that a medical man by his own directions was bled to the extent of 127 oz. in twenty-seven hours (102 oz. of these within five hours) for pneumonia, and recovered. Gregory mentions the case of a man who had 392 oz. of blood taken from the arm in the course of three months. Sydenham said that he had rarely seen a confirmed pleurisy in an adult subject cured with the loss of much less than 40 oz. of blood, that "rich and luxuriant liquor," as he calls it. One of the most remarkable cases on record showing the extent to which bloodletting was carried formerly is, I suppose, that related by Sir Risdon Bennett, in vol. xviii. of the St. Thomas's Hospital Reports, of a young woman with simple hypertrophy of the heart, who, in the course of treatment for twenty-seven years by diverse doctors, was cupped and bled 962 times, had 593 leeches applied, and lost 9506 oz. of blood irrespective of what was abstracted by leeches. She also had 680 blisters applied, and had three setons. In some manuscript notes of lectures by Dr. Gregory, taken by my late friend Dr. Waterfield in 1813, which I possess, he relates one case in which venesection was performed sixteen times in three weeks, at each time 24 oz. being taken, making 444 oz. In another case 103 oz. were lost in twenty-six hours; in another, 123 oz. in twenty-four hours.

[3] See Syd. Soc. Trans., vol. i., p. 248-50. In the original "et orificium a phlebotomo incisum tracheæ vices subire cogatur." In some places the translator of Sydenham renders "venam incidere," "to breathe a vein," meaning thereby venesection. The etymology of this expression is not very obvious. Dryden, who was contemporary with Sydenham, uses it when translating Virgil's prescription for diseases of the feet of sheep, as adopted by the Scythian shepherds:

> "The ready cure to cool the raging pain
> Is underneath the foot to *breathe* a vein."
>
> Georgics, iii., 460.

And Murray, in his new Philological Dictionary, under the sixteenth and last heading of his explanation of the verb "breathe," quotes several authors who use the expression, from 1652 to Marryatt in his "Japhet in Search of a Wife," 1836. Dr. Murray looks on the phrase as archaic, or being now obsolete. He informs me that he considers that "breathing a vein" is equivalent to "taking into it breath or air"; in other words, "giving it vent." If this be so, the phrase is used without regard to physiological facts, as of course no air escapes from the vein, and any entrance of air into the vein is rigidly to be avoided. Dr. Murray does not cite the quotation from Dryden above given. I found the allusion in Johnson, and I see that Dunglison, in his Dictionary of Medicine, has the expression "breathing a vein." Gay, the poet, in his fable "The Goat and his Beard," has the line, "who shaved, drew teeth, and breathed a vein."

[4] See Edinburgh Medical and Surgical Journal, April, 1836.

[5] The opening of the jugular vein, I believe, I have never witnessed. It has been in former times much practised in children in cases of croup and cerebral congestion. In such cases Mr. J. H. James, in a highly interesting volume "On the Distinctive Characteristics of External Inflammations, on Inflammatory Fever, and the Results of Thirty-six years' Experience of the Effects of Bleeding," &c. (p. 73), says that in cases like the above there is no adequate substitute for opening the jugular vein. He gives the cautions required in performing the operation, which are no doubt much needed. Medical historians tell us that the jugular vein was first opened by Trallianus in the sixth century, A.D.

[6] Dr. Chambers wisely points out that much of the sad effects of large bleeding is due to the starvation which is practised at the same time. Botallus, in his work "De Curatione per Sanguinis Missionem," 1583, after saying that not more than five pints of blood should be removed in one day, alludes to the necessity of giving nourishment (eggs and meat broth) along with the bleeding. He says that Galen bled to six pints in the day, presumably; and that he had seen ten pints of blood lost in one day by hæmorrhage, and recovery take place, food having been given. He figures the lancet in use in his time in France, Spain, and Italy as having a sheath identical with what we now use; whilst in Germany and Holland the ordinary lancet was shaped like our gum lancets.

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the importance of venesection in cases wherein the right side of the heart is engorged with blood. I cannot but remember also the timely lessons which my former venerated and venerable master, the late Dr. J. A. Wilson, taught me, when, in the medical session 1848–49, I acted as his clinical clerk at St. George's Hospital, as to the expediency of taking away a few ounces of blood from the arm, or by cupping between the shoulders, in cases of hæmorrhage from the lungs dependent upon cardiac valvular obstruction. Guided by the relief which very often in such instances follows natural hæmoptysis, even if slight, compressing his thin and decisive lips whilst writing on the prescription card, "Fiat venæsectio ad uncias sex vel septem," he would observe, "Yes, yes! Let us say, if you please, 'Fiat hæmoptysis.'" And many is the time that I have seen great relief to pain, dyspnœa, and palpitation of the surcharged heart follow such a procedure, quickening what Dr. Samuel Johnson described as "the slow current lingering at the heart."[7]

Another valuable lesson Dr. Wilson was in the habit of inculcating, as to the value of venesection—namely, the help to be derived from it, in certain cases, in assisting and increasing the action of drugs, *especially of diuretic drugs*. I do not think this specific use of the abstraction of blood is generally, or at any rate sufficiently, attended to by medical practitioners and teachers. Watson, in his Lectures,[8] when describing the treatment of enteritis, mentions the fact that very often purgatives will not act until venesection has been resorted to. He instances the case of himself, who was the subject of this form of disease, and in whom a copious venesection was required before purgatives would act.[9] Professor Alison, in his interesting "Outlines of Pathology and Practical Medicine," p. 83, when discussing the action of remedies and their efficacy, refers to the effect of bloodletting, as promoting the action of those remedies which increase the secretions and excretions, or removing the cause—viz., fulness of the bloodvessels and vigorous circulation through them—which opposes their operation. Dr. Paris, in his "Pharmacologia," after referring to the diuretic effect of remedies consequent on diminished arterial action, observes that venesection may, on the same principle, occasion a discharge of the accumulated fluid, in certain cases of dropsy (see page 220, ninth edition); and he alludes to venesection as accelerating the absorption of mercury. Magendie had written on the same subject (see his "Mémoire sur le Méchanisme de l'Absorption" &c., 1820). Dr. Billing, in his "First Principles of Medicine" (see footnote to p. 199), refers to bleeding as assisting diuretics in producing their effect, and instances cases in which leeching the abdomen in ascites greatly assisted the action of diuretics, rendering the contemplated operation of tapping unnecessary. Dr. T. K. Chambers, in his Lectures above cited (see p. 589), refers to the use of bloodletting in making remedies more efficacious, especially instancing cases of lepra, lichen, and eczema, in which immediate renewal of healthy skin followed its employment, after internal remedies had been duly tried.[10]

What Dr. Broadbent said at the discussion on Dr. Pye-Smith's paper as to the various changes of practice in the adoption of bloodletting by the medical profession, being the result, not of experience, but of theory, was, I think, eminently true. Or rather, might it not be asserted that these revolutions of practice rested on hypothesis or conjecture, oftentimes of the wildest kind.[11] Such conjecture not only determined the use or non-use of venesection, but was a guide as to the parts of the body from which blood should properly be abstracted, in different diseases. In most cases, I suppose, the idea of "derivation" or "revulsion" controlled the advice. This was a very ancient notion, having been entertained by Hippocrates, Galen, and others, and has been also held by many recent writers. Aretæus says that in recent inflammations we must bleed from opposite parts of the body; in chronic forms from the adjoining parts. In diseases of the head we are to open the humeral, in those below the neck, the ular vein. In affections of the spleen we must open the bloodvessel between the small and the middle fingers of the left hand; and in affections of the liver, those of the right hand, as occasioning a more powerful revulsion. Galen adduced the useful results of venesection in the arm in cases of epistaxis as showing that the operation was beneficial by "revulsion."[12] By Aretæus, Galen, and also by the later Arabian authorities, it was considered to be injurious to abstract blood when the stomach or bowels were loaded with impurities, and before they were duly emptied by purging, especially by emollient clysters; as otherwise veins, being emptied of blood, attract and suck up the crude and putrid superfluities.[13]

The great Sydenham, when writing on Nephritic Paroxysm, counsels bleeding on the side of the kidney in certain cases, and from the right arm in hæmoptysis; in bruises from the side affected; in asthma, from the right arm. Again, Hunter, referring to the supposition that venesection on one side, for the relief of inflammation on the opposite one, was serviceable on the supposed principle of derivation, says[14] that the subject "is not determined." In more recent times, Watson[15] speaks of the "revulsive" use of bleeding. After alluding to the action of local bleeding in diverting the flow of blood from an affected part, he describes general bleeding as "incidently" having the same action. And Aitken[16] alludes to the loss of blood generally, as having, among other results, "a derivative influence upon the blood in the part about to become the seat of effusion." "This has been known," he says, "to occur in experiments upon the transparent parts of animals." Heberden was sceptical as to the "revulsive" action of venesection in arresting hæmorrhage (see papers read at the College of Physicians, Dec. 11th, 1771).

In bringing my remarks to a conclusion I would say that I was sorry that Dr. Pye-Smith, by the title of his paper, limited consideration to "venesection," not including cupping and the use of leeches.[17] I feel assured that a more

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[7] In relation to this point, a passage in the writings of Dr. Parry of Bath in his "Elements of Pathology," pp. 31–32, is worth referring to. After asking the question, "Why, for the purpose of carrying on the circulation, venæ cavæ and pulmonary veins are not furnished with valves into the auricles," and commenting on the circumstance, he remarks that "valves at the termination of the cavæ might be injurious by preventing the right auricle from discharging part of its blood in a retrograde direction, as it now usually does, when congestion accidentally occurs in the vessels of the lungs, and consequent resistance to the free evacuation of the right ventricle takes place."

[8] See vol. ii., p. 439.

[9] So it is on record that venesection had given relief also to Drs. Radcliffe, Gregory, and Alison; and Galen had, he said, bled himself to a pint, thus saving his own life. If I may be so egotistical, I may say that I wear a cicatrix of the basilica vein—the royal vein, as Sir Thomas Browne spells it—at my right elbow, the result of the operation performed, when a child, for whooping-cough. Van Helmont is said to have died for the want of venesection.

[10] Abercrombie describes the case (see Case 69) in his "Pathological and Practical Researches of Diseases of the Brain, &c.," of inflammation of the brain, in which all remedies failed to relieve until venesection was resorted to. He remarks: "One bleeding from the arm gave an immediate turn to this case; the headache was relieved; the pulse came down; the vomiting ceased; the bowels were freely acted upon by the medicine which they had formerly resisted."

[11] Medical historians tell us of a very famous quarrel among physicians in France, Spain, and Portugal in the beginning of the sixteenth century, arising out of this doctrine of revulsion leading to the performance of venesection in cases of pleurisy on the side opposite to that in which the disease existed. At that time a French physician, Brissot (who took his degree in Paris in 1514), "not content with custom and tradition," taught that the prevailing practice, gathered from the teaching of the Arabian schools, of bleeding on the side opposite to that which was the seat of disease, was contrary to reason and to the doctrines of Galen and Hippocrates. Brissot "went about to reform physic," and journeyed to Portugal, where he taught his views upon venesection. This led "to a civil war" among the followers of Æsculapius, and the question was brought before the University of Salamanca, where eventually the Faculty determined to accept the teaching of Brissot. Subsequently the secular arm was appealed to on the question. Brissot's views were eventually strengthened by the death of the Duke of Savoy, who had been bled in an attack of pleurisy on the side opposite to the affected one. It appears that the word pleurisy in those days included what we call pneumonia. The above information I have extracted from Bayle's "Dictionnaire Historique et Critique," as transcribed from the Life of Brissot by Renatus Moreau. At the conclusion of the notice, to show how disinterested Brissot was, it is stated that, "Il se soucioit si peu du gain, qu'on dit qu'étant appellé voir des malades, il regardoit dans sa bourse, et s'il y trouvoit deux testons refusoit cette pratique."

[12] This writer thought that the difference in the colour of the blood depended upon its being more or less heated.

[13] See the Commentaries by W. Adams in the Sydenham Society's Transactions. Cf. P. Ægineta, vol. ii., pp. 316–24.

[14] Vol. iii., p. 382, of his works by Palmer. [15] Lectures, vol. i., p. 210.

[16] Vol. i., p. 159, of his Science and Practice of Medicine.

[17] In his work above quoted Dr. Hare gives some very interesting statistics as to the comparative expense incurred at different periods by the various hospitals in the purchase of leeches. I will not quote all his figures, which give rise to much reflection; but confine myself to one or two only. For example, it appears that, taking my own hospital (St. George's) in the several tenth years, from 1842 to 1882, the amount expended in leeches was £141, £38, £5, £2 14s., and £2 13s. 6d.; at the London Hospital in 1839 the leeches cost no less than £495, with a sudden drop in 1842 to £180, finally, in 1882, costing only £2 12s. At St. George's, in 1882, 21,800 leeches were used; in 1883, only 754. In 1890 the number of leeches at St. George's Hospital used was 682, costing £2 19s. 6d., as I am told by our secretary, Mr. Todd. In 1889, 400 leeches were used, costing £1 12s. It seems that whereas one firm of druggists sold 1023 leeches in 1814, they sold only 114 in the year 1864.

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frequent resort in our practice to the "cucurbitulæ cruentæ" than now obtains, would be good, and that in this matter to go "backward" would be to go "forward." In modern days the physician has difficulty in finding one who can cup, and greater difficulty in finding one who can do so rapidly and adroitly, "cito, tute, ac jucunde." As respects the fact of the student of the period not being, as a rule, able to bleed with the lancet, I am bound to say that I know of a house surgeon who a few years ago managed to break his instrument in opening a vein at the arm. So apposite was the remark of Watson, when comparing the relative merits and advantages of cupping and of leeches, he artfully remarks: "But, on the other hand, the leeches seldom bungle in the operation; while the surgeon often does."

Cavendish-square, W.

REPORT OF 104 CASES OF ENTIRE EXCISION OF THE TONGUE FOR CANCER.[1]

BY WALTER WHITEHEAD, F.R.C.S., F.R.S EDIN.,
SENIOR SURGEON TO THE MANCHESTER ROYAL INFIRMARY.

DURING the last twenty years my operations upon the tongue for cancer amount to 139 cases. I find that out of these 139 cases of which I have a record there have been 119 recoveries and 20 deaths, which gives a mortality of 14·3 per cent. As the main object of my communication, however, is to place before the profession an accurate and reliable record of my personal experience in excision of the entire tongue with scissors, I shall discard, in the first place, ten of the successful cases, as they were operated upon with the galvanic écraseur. I shall also exclude twenty-five successful partial excisions, for although the excisions were performed with scissors, I am anxious to adopt a definite standard by which the merits of the operation may be duly estimated, and more easily contrasted with the results of other methods of operating for the same object. Hitherto it has been the custom to place the results of total and partial excision in parallel columns, ignoring the palpable fact that the risks and difficulties in the two instances are certainly not identical. Where the disease has advanced beyond the tissues of the tongue the operation is also much more severe, and attended with much greater danger. By this arrangement I reduce the number of my total excisions to 104, with a mortality of twenty, or a percentage of 19·21, against 14·3 in the gross number of my cases. In estimating these results it has been thought desirable to draw a clear distinction between cases in which the tongue alone was excised, those in which the tongue was removed together with the glands, and those in which division or removal of portions of the jaw was an additional part of the operation. Unquestionably the risks and dangers of these different operations are not the same, and it is misleading and unjust to classify them together. Taking my own cases as an example, in excision of the tongue alone the death-rate is only 4·5 per cent., compared with 77 and 57 per cent. respectively when glands and jaw have been involved.

I cannot better illustrate the misleading influence of grouping together all these different and distinct operations than by referring to the statistics published by Mr. Butlin in his work on Diseases of the Tongue. Mr. Butlin stated, which is perfectly true, that I supplied him with my statistics of tongue excisions in 1884, and they represent forty-eight cases with nine deaths, but although the entire tongue was excised in every case, there was nothing to show or explain how much more than the tongue was removed. On referring to these cases, I find that in only two was the operation confined to excision of the tongue alone; in every other case it was complicated with either the removal of glands, portions of the jaw, or some other addition to simple excision. To show more clearly how valueless statistics compiled on this basis must be, Mr. Butlin contrasted the results of my excisions with those of Mr. Baker, who classifies amongst his returns cases in which a portion only of the tongue had been removed. If we may be guided by the tables I produce, it may be roughly estimated that the mortality from simple excision of the tongue amounts to only a point over 4 per cent.; for they clearly show that sixty-six patients may lose their tongues with a possible loss of three. Now I consider that I am entitled to draw marked attention to the particulars of these three patients who died. In the first place, the youngest was fifty-six and the oldest seventy, and the average age of the three sixty-four. One was a man with advanced phthisis, who died on the second day from the rupture of a pulmonary abscess; another died on the twelfth day from syncope, after the floor of the mouth had completely healed; and the third was a woman seventy years of age, who died on the fourteenth day from inanition. When we take into consideration the ages and causes of death in these cases, I think that these tables very effectually show what a slight risk there is in excising the tongue when the operation is not complicated by the removal of contiguous structures.

Before I proceed further I wish to acknowledge the debt of gratitude I owe to my colleague, Mr. Alexander Wilson, for collecting and arranging my statistics. In order to present my cases in as accurate and trustworthy a form as possible I handed to Mr. Wilson all my notes and memoranda. He communicated with every patient whose address could be traced, and with the representatives, when it was possible to find them, of those patients who had not survived. I am also indebted to Mr. Wilson for the several tables which he has compiled with infinite patience and industry. I think I ought to state, in justice to myself, that throughout my practice I have operated upon cases indiscriminately, and that I have never allowed the extent of the disease or the emaciated condition of the patient to deter me from operating when I have seen any reasonable prospect of prolonging life or giving even the slightest prospect of temporary relief to suffering. Had I selected my cases, and operated only in the more simple and hopeful, to the exclusion of others, I venture to believe that the mortality might have easily been reduced to a very much smaller percentage. I do not know that I have much to amend in the description I gave in 1881 of the operation for excising the tongue with scissors; but I will first of all briefly recapitulate the essential features of the operation, and later I will enter a little more fully into some of the important details.

1. The patient should be completely under the influence of the anæsthetic during the first stage of the operation, but afterwards only partial insensibility should be maintained. 2. The mouth should be securely gagged, and kept fully open throughout the operation. 3. The head should be supported in such a position that, whilst the best light is secured, the blood tends to gravitate out of the mouth rather than backwards into the pharynx. 4. A firm ligature should be passed through the tip of the tongue for the purpose of traction. 5. The first step in the operation consists in dividing the reflection of mucous membrane between the tongue and the jaw and the anterior pillars of the fauces. 6. Rapid separation of the anterior portion of the tongue from the floor of the mouth. 7. Securing, if possible, the lingual arteries with Spencer Wells' forceps prior to division. 8. Passing a ligature through the glosso-epiglottidean fold before finally separating the tongue. 9. The application of a mercurial solution to the floor of the mouth, followed by painting the surface with an iodoform styptic varnish.

When once it has been decided to remove a patient's tongue, the sooner it can be done the better; at the same time it may be occasionally judicious, especially with those who are in a state of feeble health, to sacrifice a few days for the purpose of generous feeding, and more especially to obtain a cleanly condition of the mouth. With such patients digestion is often deranged, the bowels loaded, the skin inactive, the teeth foul and coated, all influences which have a tendency to lessen the chances of recovery. For an anæsthetic I recommend the use of chloroform, although I know of no objection to ether, which I think has an advantage in feeble subjects. The important point is to obtain deep anæsthesia before commencing the operation. The effectual gagging of the mouth is a point of great importance, for on the one hand it is necessary to keep the mouth wide open, whereas on the other we must avoid so pressing back the jaw as to embarrass the respiration. In fact the aim in gagging the mouth should be to place the jaw, as it were, in the position it occupies in semi-luxation forwards. As much depends upon the position of the patient during the operation, I hope I may be excused if I dwell rather fully upon a detail which I have found by

[1] A paper read at the Medical Society of London, April 2nd.

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experience to afford the greatest convenience to the operator. In the first place, the patient's head must be neither too high nor too low; the mouth ought to be, roughly speaking, on a level with the surgeon's axilla. The head should be firmly held erect with a slight inclination forwards, in such a position that the light will fall well into the mouth. It is, of course, always desirable to take advantage of the best obtainable light. Great inconvenience is generally caused by the persistent tendency of the patient to slip down on the operating table, and the best means to prevent this is for the patient to recline on an almost perpendicular back-rest, with the thighs bent at a right angle over the elevated central portion of an ordinary operating table. In private practice any joiner will readily improvise a substitute for this arrangement. A sand-bag makes a very convenient support for the head. The ligature passed through the anterior portion of the tongue is a great aid throughout the operation, and much depends upon the dexterity of the assistant in anticipating the intentions of the operator, and in always making traction in exactly the right direction, his aim being to make tense those tissues which are immediately to be divided.

The first step in the actual operation consists in the separation of the tongue from its attachment to the floor of the mouth and the anterior pillars of the fauces, and I would lay stress upon the way in which this is done, because the ease with which the operation is continued depends largely upon the freedom with which this separation is carried out. The two structures principally responsible for the retention of the tongue within the mouth are the frænum and the anterior pillars of the fauces, and if these are completely divided in the first instance, the tongue may be so freely drawn from the mouth that the operation is practically converted into an extra-oral excision. Extended practice has made me conduct this part of the operation with less deliberation and more rapidity than was my habit in my earlier cases. Instead of the cautious snipping I originally advocated, I now boldly cut until I get close to the vicinity of the main arteries, disregarding all bleeding, unless an artery distinctly spurts, when I twist it and proceed. The more profuse the general oozing the more rapidly I proceed, my object being to get as quickly as possible to the main arteries, as I have confidence that all subsidiary bleeding will cease immediately after their division. There is, in reality, no difficulty in determining the actual position of the lingual arteries, as they are practically invariably found in the same situation, and it requires very little experience to seize them with a pair of forceps before dividing them. If this be done, there need not be the slightest hæmorrhage from this source. When once the vessels are effectually twisted, the rest of the tongue may be removed without any further anxiety about hæmorrhage; but it is desirable, before finally severing the last attachments, to pass a loop of silk through the glosso-epiglottidean fold, as a provisional measure of security, in case it may become necessary to make traction on the posterior floor of the mouth either to assist respiration or to arrest any possible consecutive hæmorrhage. Traction on this ligature of itself arrests hæmorrhage, and makes it an easy matter to secure any bleeding vessel. As the retention of this ligature is a source of some annoyance to the patient, I always remove it at the end of twenty-four hours. As a matter of fact, I cannot recollect its having been required in more than two cases, and but for the certain sense of confidence it gives to those who are left in charge of the patient I should dispense with the precaution altogether, were I influenced solely by the amount of benefit I have derived from its use.

The treatment of the floor of the mouth after the tongue has been removed is a matter of considerable moment. The first object is to make the cut tissues as far as possible aseptic, and for this purpose I am still in the habit of swabbing the parts with a mercurial solution, and, after drying, finally painting the surface with the iodoform styptic varnish which I introduced in 1881. This preparation, in addition to its antiseptic properties, has the advantage of lessening the discomfort which follows when the surface is left unprotected, and it also enables the patient to take food in the ordinary manner almost immediately after the operation. The mercurial solution I prefer is that of the biniodide, and the strength I am in the habit of using is 1 in 1000. I have recently made, and I think with advantage, a slight addition to the iodoform varnish. My original custom was simply to substitute for the spirit ordinarily used in the preparation of Friar's balsam a saturated ethereal solution of iodoform, but now I prefer to mix with the ether one volume in ten of turpentine. This addition has a very marked influence in promptly checking the capillary oozing, which occasionally prevents a dry surface being quickly secured.

I was at one time in favour of suspending all alimentation by the mouth for the first four days, and feeding the patient entirely by nutritive enemata; but for some years I have entirely abandoned this practice, and I now feed the patient with liquids by the mouth as freely and as early as possible, only using enemata when it is necessary to supplement the amount of food the patient is otherwise able to take; and I find that if a coat of the varnish is applied daily, patients rarely have any difficulty in taking an adequate amount of sustenance. It fortunately happens that the patients appreciate rather than object to the application of the varnish, and they will often ask for its use more frequently than once a day. Instead of keeping the patients in bed and recumbent, my aim is to make them sit up from the first, and in fine weather I encourage them to walk out, if there be sunshine, the day after the operation, and I have never seen any ill consequences, but great advantage follows the adoption of this plan. There is certainly no worse practice than keeping the patients lying on their backs in bed, and I am sure that I have seen the evil consequences of doing so in several of my earlier cases. Under the above treatment the average time of convalescence is about seven days, and in uncomplicated cases no patient need be detained in hospital after this time.

It is only reasonable that I should state the grounds upon which I prefer excision of the tongue with scissors to its removal by the galvanic or any other form of écraseur. In the first place, I consider that it is more in conformity with the elementary principles of surgery to make use of a sharp-cutting instrument, it being desirable to leave a clean surface—a surface which, it must be acknowledged, is in the best condition for healing. To employ an instrument whose purpose is effected by bruising leaves a surface in the very condition we are most anxious to avoid in the ordinary practice of aseptic surgery. The wound, in fact, left after the use of the écraseur embodies every condition calculated to engender those putrefactive changes which it should be our primary aim to avoid. I fail to see any special danger in the operation of excising the tongue which can justify such a departure from surgical practice, and I cannot recognise any good reason why we should employ an instrument for excising the tongue which no surgeon would at the present day ever think of making use of in any other region of the body—an instrument which almost every surgeon of eminence in the past has made a point of condemning. With scissors absolute precision can be obtained, whereas the erratic course of the écraseur wire is absolutely beyond the control of the operator. I am fully alive to the dangers which may result from blood gaining access to the lungs, even in small quantities, in patients with bankrupt constitutions; and although I am aware that some surgeons advocate a preliminary laryngotomy or tracheotomy, I believe that it is possible to guard against this danger by measures attended with much less risk than those incidental to either laryngotomy or tracheotomy. At any rate, my own cases conclusively show that better results can be obtained without than with these preliminary measures. It unfortunately happens that it is precisely in those cases in which the danger from blood getting into the air passages is the greatest, the risks incurred in opening the trachea are also at a maximum. In one of my own cases, in which I performed laryngotomy on the day previously to that fixed for excision of the tongue, the patient died during the night in consequence of the first operation. If the head of the patient is properly arranged during the operation, and if the tongue has been thoroughly detached as recommended, when the arteries are divided, the blood, unless the precaution has been taken to secure the vessels beforehand, will spurt directly out of the mouth, without any disposition to flow backwards. We must also bear in mind that the entrance of blood into the air passages is only one, and not the most important, determining factor in the causation of septic lung mischief. Patients suffering from cancer of the tongue with putrid discharges not unfrequently die from septic pneumonia apart from any operation or the entrance of any blood into the air cells, and, further, under an anæsthetic, large quantities of blood frequently finds its way into the trachea during the extrac-

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tion of teeth; but how rarely do we meet with instances of septic pneumonia from such a cause. The skill with which the administration of the anæsthetic is conducted is also largely responsible for the amount of blood which may enter the trachea. For instance, as I have just stated, whilst it is desirable to have the patient thoroughly under the anæsthetic at the commencement of the operation, it is a mistake to give more than will just suffice to restrain his movements during the later stage. If this practice is adhered to, the patient's reflex power of guarding his own air passages is never altogether in abeyance, and no dangerous amount of blood will remain in the lungs at the termination of the operation, as it is practically completely expelled by the act of coughing. Take my sixty-six cases of simple excision of the tongue. In not a single instance were ill effects observed which could be attributed to the entrance of blood into the lungs—a record which tends conclusively to show that the tongue can be safely excised without a preliminary laryngotomy.

When we come to consider what we can fairly and reasonably claim to be gained by excising the tongue, we have two questions to answer, Does excision prolong life? Or, failing this, does it render the remainder of his life more endurable to the patient? From my own experience, I can bear the strongest and most emphatic testimony that in the majority of cases excision gives very great relief; and in support of this I could produce numerous letters I have received from patients and preserved for the purpose of answering this question. As to the prolongation of life, it is only necessary to turn to the statistics I produce, when it will be clearly seen what proportion of patients lived beyond the ordinary tenure of life after the advent of malignant disease of the tongue. It has been shown that twenty-six patients out of the eighty-four successful cases were traced, and found to have lived a year and upwards after excision; and I think that we are reasonably entitled to add to this number a certain percentage of the forty-one of whose fate nothing could be ascertained, and not to take it for granted that in every instance the patients had succumbed. Although cases unsuited for operation, and those where the disease has recurred after removal are not exactly within the scope of my communication, I cannot avoid taking advantage of this opportunity to make a few remarks upon this much-neglected subject. We have it on good authority that in cancer of the tongue death generally takes place before dissemination has extended beyond the limits of the cervical glands—that, in fact, up to the very end the extent of the disease is within the range of eradication. Surgeons not unreasonably feel deterred from operating by the contemplation of the important vessels and nerves occupying the region traversed by the lymphatics, and it is no matter of surprise that so few efforts are ever made when the glands in the neck are invaded. In addition to this, patients have usually been reduced to such a degree of emaciation that by the time the glands are affected the prospects of recovery are very discouraging. If attempts are never made to follow the disease to its utmost limits, the possibilities of surgery can never be ascertained. I have on several occasions in desperate cases, and in response to the wishes of patients, cleared out the anterior triangle of the neck, and in two instances excised a portion of the common carotid artery, with, however, fatal results in both cases. This experience is naturally disappointing; nevertheless I have not altogether abandoned the idea that I may yet meet with more common results. In fact, I have recently operated upon a gentleman brought to me by Dr. Vaudrey of Derby, which has stimulated my hopes. The patient had his tongue excised in May last under most unfavourable circumstances, there being at the time extensive gland infiltration. The operation temporarily fulfilled the purpose for which it was performed, and relieved him from a foul mass of sloughing tissue within the mouth. He received so much benefit that he afterwards consented to have the glands removed, and this was partially carried out by another surgeon. The wound rapidly healed, but his sufferings were not entirely relieved by what had been done. At the request of Dr. Vaudrey I again saw the patient, and proposed as a means of relief that I should attempt to remove the tension which was apparently the origin of the pain. With this object I removed the sterno-mastoid muscle from its origin to its insertion, and cleared out large quantities of diseased glands, and it appeared possible to have removed every visible particle had it not been found that the œsophagus was too extensively implicated to justify any further proceedings. During the course of the operation the external and internal jugular veins had to be sacrificed, and the full extent of the carotid sheath exposed. The patient recovered from the operation, and lived absolutely free from pain for several months. It is an interesting fact, and worth mentioning, that the loss of his sterno-mastoid did not appear to occasion him the slightest inconvenience or in any degree interfere with the movements of his neck.

There is another subject in connexion with cancer of the tongue which is constantly and painfully being brought under our notice, and that is, the singular view held by a large section of the profession, that in cases of cancer the means of relieving pain are limited by the maximum dose of any sedative authorised by the British Pharmacopœia. It is a constant experience to find that a patient suffering incessant and intolerable agony is ordered the paltry dose of a grain of opium at bedtime, and it is the rare exception to find sedatives administered on lines proportionate to the amount of suffering. In contrast to this I may mention one of my own cases. A gentleman suffering from cancer arrived at the stage when he began to suffer pain, and he commenced with a quarter of a grain of morphia, which at first gave relief; by degrees this dose had to be gradually increased until he eventually took as much as *thirty* grains three times daily. This kept him entirely free from pain, without at any time interfering with his intellectual interest in his daily surroundings. The total amount of morphia this patient consumed during the twelve months preceding his death amounted to 3512 grains. He also inhaled during the last four days of his life five pounds weight of chloroform, and my firm belief is that this patient would have died much sooner had not this sedative treatment been adopted from the first.

Tables which I have prepared show that out of 104 cases a history of cancer in the family was only obtained in six cases. A definite history of syphilis was obtained in seven, and a doubtful account in another seven cases. In sixteen patients the origin of the cancer was attributed to an injury. Sixty-one out of the 104 were ascertained to be smokers, and in the majority of these the cancer commenced on that side of the tongue on which the pipe was usually smoked. In thirty-three cases the irritation of teeth is recorded as being the exciting cause of the disease. In marked contrast to these cases one man had never smoked in his life and had not possessed a tooth for twenty years. The difficulties of ascertaining the duration of life after operation are very great. Patients, especially hospital cases, rarely remain for any length of time in the same house or even in the same locality. Mr. Wilson has succeeded in obtaining positive evidence in sixty-one cases; fifteen patients survived the operation one year; four, two years; two, three years; four, five years; and one, six years; and I may incidentally mention that the patient whose case I published in 1880 lived fourteen years, notwithstanding the fact that she was sixty-two years of age at the time of operation. If we believe that cancer of the tongue can be permanently cured by early excision, and that there are no other effectual means of eradicating the disease, we cannot too persistently urge these convictions upon those who have the earliest opportunity of detecting it, with the object of inducing them to adopt prompt measures and give the patients the only possible opportunity of having their lives saved. It cannot be too frequently reiterated that the loss of time in the interval between the discovery of the disease and its removal by operation bears a direct ratio to the death-rate, and, conversely, that the earliest excisions give the most favourable results. The sooner patients can be made to realise how insignificant is the loss of their tongue compared with the loss of life, and that they have to weigh the two in the same balance, the quicker they will be to decide in favour of operation. This resolution will be taken with less reluctance when they are assured that the risks from excision are comparatively slight, and also that the inconveniences of being without a tongue are of small moment, as this organ is neither essential to speech nor to the sense of taste.

Probable predisposing and exciting causes.—A probable family history of cancer was obtained in six cases out of the 104:—1. The patient's brother died from cancer of the tongue. The patient himself smoked cigars to excess, and there were indications of the tongue having been irritated by a tooth. 2. Patient's father died from cancer of the

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œsophagus. The patient himself was a smoker, and had carious teeth. 3. Patient's mother died from cancer. Patient was a moderate smoker. 4. Patient's uncle died from cancer of the lip. In this case there was no apparent exciting irritation—the patient did not smoke—the teeth had disappeared long before the onset of the disease. 5. Patient's mother's uncle had cancer of the lip. Patient smoked a clay pipe. 6. A cousin of patient's mother died from cancer. Patient had irritating teeth.

Syphilis.—Out of the 104 cases of cancer a definite history of syphilis was obtained in seven cases, and a doubtful history in seven. In five cases actual syphilitic disease preceded the epithelioma. In one of these cases the ulcer was first brought on by irritation of decayed teeth, and subsided under treatment with iodide of potassium; three years later an epithelioma developed in the scar.

Exciting causes.—Out of the 104 cases, in sixteen instances the patients distinctly traced the origin of the disease to some injury. 1. In five cases the tongue had been bitten. 2. In three instances the disease originated in dyspeptic ulcers. One of these patients was a glass-blower. 3. The repeated irritation of a simple ulcer with caustic gave rise to the disease in one case, and in another the scar left after the application of creasote was the site of the growth. 4. In five cases a definite history of repeated laceration of the tongue by carious teeth was obtained. This was well marked in the case of the youngest patient, a woman aged twenty-five years. 5. In one case the irritation of a plate of false teeth was the assigned cause.

Smoking.—In the 104 cases a note as to smoking or non-smoking is made in seventy-nine. Of these, sixty-two were smokers, of whom forty-one habitually smoked clay pipes, and thirteen are described as "very heavy smokers." In some cases it was reported that the disease began on that side on which the pipe was usually held. In thirty-three cases the existence of carious teeth is mentioned as well as the habit of smoking, and in the fifteen cases in women two occurred in smokers.

SOME POINTS ON

THE RELATIONSHIP OF THE EYE TO THE CARDIO-VASCULAR SYSTEM.

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(*Concluded from page 981.*)

II. With regard to myopia, I find that it is usually associated with some form of cardiac and vascular change. (*a*) The pulse is a comparatively slow one, and is not readily accelerated by conditions that would naturally quicken it. The artery is large and full, the pulse tension is often raised, and I have frequently noticed a recurrent pulse. (*b*) The heart's second sound is accentuated, and some form of cardiac murmur is not unfrequently found. (*c*) The heart measurements show a slight increase in size, the apex beat being in or outside the nipple line. (*d*) In high and progressive myopia, with an unhealthy fundus, and with vision not greatly improved by glasses, the pulse is sometimes very rapid, and palpitations frequent.

Of elderly myopes, my experience is too limited to warrant my drawing any definite conclusions, but vascular changes are generally found. The action of atropine, locally applied, I at first thought would have been of much help to me, but I have found it most difficult to know which symptoms to attribute to its local and which to its constitutional effect. The rapid hypermetropic pulse atropine generally slows, and sometimes in a very marked degree, a pulse of 120 dropping to 88 under its action. A slow pulse, on the other hand, is sometimes quickened or generally left much as it was. In myopia the slow pulse is but little altered by atropine, and I have not seen the slowing of the rapid myopic pulse under its action.

As regards the treatment of the two conditions by glasses and its after-effects, I regret that I am unable to give you any full information, for the hospital out-patient, having obtained his glasses, generally disappears. I have, however, seen the pulse fall and cardiac irregularity disappear in hypermetropia with their use. But in the reverse cases, by which I mean those in which patients have come under treatment for cardiac symptoms and in which I have found well-marked hypermetropia, which I assigned as the cause of the cardiac symptoms, I was disappointed to find that the correction of the hypermetropia by glasses or the paralysing of the accommodation with atropine did not markedly slow the pulse. This at first appeared to me to be fatal to the theory that hypermetropia was the cause of the heart hurry. But with the view that the cardio-vascular system itself is hypermetropic, it seems reasonable that, although the use of atropine and glasses might remove the source of irritation, it could not alter the structure of the cardio-vascular system.

Mr. Mills, chloroformist at St. Bartholomew's Hospital, kindly answering my letter, writes as follows: "During the operation for the division of the internal rectus in squint cases, I have very often noticed an alteration in the pulse. In some cases one beat was omitted, in others two or more. In some cases the beats became very feeble, and remained so for some seconds; in many cases there was very severe syncope, lasting some minutes. This always came on suddenly; in most cases at the moment of division of the internal rectus; in a few it occurred when the tendon was put on the stretch before division. There have been many deaths under chloroform during operations for strabismus." These cardiac intermissions, then, appear to occur only on division of the internal rectus, and only in internal strabismus cases—i.e., only in cases of hypermetropia, or at all events mainly so. Hence there would appear to be some condition of heart, or nerve connexion with the heart, special to hypermetropes, rendering them liable to this form of cardiac irritation.

Mr. Priestley Smith,[1] speaking on the causes of myopia, compared it to a kind of rickets, but apparently considered it as a local rickets, dependent on local causes. I would also consider myopia a kind of rickets, but, like rickets, having a constitutional cause, and producing its effects on other structures besides the eye; and that the treatment of myopia by glasses alone is much on a par with treating rickets with irons and splints alone. Of course, hygienic defects are often referred to as the cause of myopia; but, as far as I know, no attempt has been made to classify or state what the effects of this faulty hygiene are, what class of concomitant symptoms we are to expect. In fact, the eye, as the main symptom, has completely overshadowed all others, and until we have a more thorough knowledge of the causes and symptoms, other than the eye, of this disease, I do not think much progress can be made towards its treatment or its prevention. Myopia, with its local and general changes, has, like the rickets of bone, its period of activity, runs its course, and produces effects more or less severe, and as the period of its active progression comes to an end, the tissues, more or less damaged and altered in shape, recover their condition, and are more or less capable of carrying on their functions. But, again, in later life, in a few myopes, I have known cardiac and vascular changes to assert themselves, and in one case to progress to a fatal termination, along with increase of the myopia. Of course I do not mean to hold that a general constitutional cause of myopia can be found in all cases, as it is obvious that many must be due to some local cause—e.g., those in which one eye is myopic, whilst the other is emmetropic or hypermetropic. Also the causes which lead to astigmatism would seem of necessity to be local.

I have already expressed my opinion that the hypermetrope reaches his full development later than the myope, and he appears to carry some of his youthful characteristics far into adult life, and as far as my experience goes I should say attains a greater age. All young children are said to be hypermetropic, and I think it is reasonable to consider that when the condition persists into adult life the eyes may be said to retain their youthful characteristics. And if it can be proved that the cardio-vascular system is associated in any way with the eye in its development, it does not seem unreasonable to me that the hypermetropes should be liable to take their illnesses with youthful characteristics, or, at all events, with differences from those in whom the cardio-vascular system is fully developed or over-developed, as in myopes.

And here I would like to ask whether the usually received theory as to the sedentary habits of the myope is wholly correct. The reason commonly given is that he sits still

[1] Cause and Treatment of Myopia: Brit. Med. Jour., Sept. 27th, 1890.

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because he cannot see to take active exercise. But the most obvious is not necessarily the most correct explanation, and I would suggest that he sits still because his vascular system does not enable him to take active exercise with comfort.

Treatment.—I now come to the subject of treatment of the hypermetrope and myope, and by treatment I mean the constitutional treatment as opposed to mere local treatment by glasses. Not that I have at present anything to state on this subject, for I have felt that my theory was not sufficiently proved to warrant my starting a course of treatment either to aid the developmental defects of the hypermetrope or to check the progress of the myope. But I am convinced that the present method of treatment, in the case of myopes at least, is irrational, and lays itself open to severe criticism. In a case of progressive myopia, we order glasses, more or less fully correcting the defect, according to the surgeon's view of their local effect in increasing or preventing increase of the myopia. And then the patient goes away for a time, only to return with weaker vision, requiring a stronger glass. It is true that when the patient's sight declines rapidly, or when no glass will help him to see clearly, we do give other treatment; but, as far as I have seen, it is given empirically, or only with local indications. We blister his temples or leech him, give him coloured glasses, order quinine and iron, and forbid him to use his eyes for near work or to stoop. The treatment may of course be the very best we are capable of, but I must confess I should like to know the reason of my failure, and not to rest content simply to watch it helplessly because it progresses slowly, and there is always a hope that it may become stationary. Correction of refraction by glasses has done much to aid the physician in the diagnosis and treatment of headaches, and will, I trust, in the future help still further in the diagnosis, if not treatment, of some forms of heart disease. It is time that the physician lent his aid to the surgeon in refraction cases, for in this, as in some other diseases, the most obvious symptom is not always the one most requiring treatment. The physical signs should be of use in establishing the diagnosis between arrested and progressing myopia, the quick pulse of the progressive markedly contrasting with the slowish pulse of the stationary myope. As to what may be done to aid the hypermetrope to overcome his defects, I am not yet clear, but I am convinced that he sometimes requires constitutional as well as local treatment.

In this paper I have called attention almost exclusively to the refraction side of the subject. But I have done so purposely, not because I do not realise that there are points of more obvious connexion between the eye and the cardio-vascular system, and perhaps of even greater importance. In conclusion, then, I hold that there is evidence of an intimate association and connexion between the eye in its muscular, nervous, and vascular structure, and the cardio-vascular system. And in this connexion, that as regards hypermetropia there is a hypermetropic form of circulation, partly structural, partly functional. This form of circulation is liable to influence the type of disease in the individual; and thirdly, it gives rise to cardiac irritation and functional disease, leading to mal-nutrition. As regards myopia, that the changes which lead to it produce also a change in the circulation, mainly structural. That the form of circulation so produced appears to render the individual less liable to some, and more liable to other, forms of disease.

Finsbury-circus, E.C.

CESSATION OF CHOLERA IN NORTHERN SYRIA.

BY JOHN WORTABET, M.D.,

CORRESPONDING MEMBER OF THE EPIDEMIOLOGICAL SOCIETY OF LONDON AND OF THE MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

IN a communication on Cholera in Northern Syria, which appeared in THE LANCET of Jan. 10th, 1891, I stated that beginning at Aleppo on Sept. 13th, 1890, where the disease had been imported from Mesopotamia, it had extended to Hamath early in October, and from that town and in the same month first to Antioch and then to Homs. The number of deaths which I gave for these several places was drawn from official reports, but it appears to have been very much understated; for on the authority of well-informed persons there were no less than 3000 fatal cases in Aleppo, perhaps as many, if not more, in Hamath, and 2000 in Homs. The mortality in Antioch is not known, but it was probably in the same proportion. In each of these towns the epidemic seems to have lasted from eight to twelve weeks,—the ordinary period which it has generally lasted in previous visitations. Why it should run this definite time, exhibit the same regular stages of rise, height, and fall which we observe in many acute diseases, and, having ceased in one spot it does not return to it, though it may be raging in its neighbourhood, are interesting questions; but we are still ignorant of their solution. The same difficulty of explaining the germ theory in relation to the natural history of an individual disease—typhoid fever, for example—meets us in the phenomena of a cholera epidemic.

In continuing an account of the epidemic since the date of my first communication, there is fortunately only one other place to which it spread. The last fatal case in Homs is supposed to have occurred on Dec. 26th. On the 6th of that month, during the decadence of the disease, and when it is said that the cordon between Homs and Tripoli was relaxed, a shepherd, who had brought some sheep from Homs, died in Tripoli from cholera. A negro, who lived near the fold where the sheep were kept, died on the following day of the same disease, and two butchers who inspected the cattle were the next victims. The disease soon spread into the town, stayed nine weeks, the last fatal case being on Feb. 15th, and is supposed to have caused the deaths of about 500 out of a population of 25,000. Whether the infection was brought by the shepherd, or in the fleece of the sheep, is uncertain; but it is a remarkable fact, if the report be true, that the weavers of Homs suffered most from the ravages of the epidemic. The drinking-water supply of Tripoli is from a fountain, about five miles distant, at the base of the Lebanon, conveyed in open aqueducts. A medical friend, who was there during the epidemic, told me that in a girls' school, where nineteen pupils lived with their teachers and attendants, whose drinking water was always boiled, there were five cases of diarrhœa, which was promptly stopped by opiates, and that he did not see a single case of recovery after collapse had set in. The only mountain district in the vicinity of Tripoli to which the epidemic spread was that of Dunnyieh, a group of villages inhabited by poor people, but its duration there was short. This accords with our past observation, that the villages of the Lebanon and all mountain heights are unfavourable to the extension of cholera, and that when it was imported to them from the plains the outbreak was very limited, and never lasted more than a few days. This immunity is so well established in Syria that at every visitation of cholera the richer inhabitants of infected towns seek refuge in the villages of the Lebanon; and while they are thus saved the risk of contracting the malady, the poorer population who are left behind are freed from the dangers of overcrowding, and encounter the epidemic in a mitigated degree.

The epidemic seems to have ceased entirely more than a month ago not only in Tripoli, but in the whole of Northern Syria; and the Government has lately abolished the very rigid cordon which it had imposed on the infected district of that town. All communication with Damascus and Beyrout had been effectually stopped, and it is very probable that owing to this means the further extension of the disease was prevented. It yet remains to be seen whether the cholera germs may not be lurking in some unobserved spot, to break again into a renewed epidemic; but as the evidence now stands it appears that the scourge has ceased, and that the interrupted communication between the north and south of Syria was the only means of checking its progress. The escape of the two towns on the coast, Latakyieh and Alexandretta, must be accounted for, however, if possible. The first of these places was protected not only by a cordon, whatever that may have been, but chiefly by a wild mountainous range which made it difficult of access to inland communication, while its water-supply is from numerous spring wells. No attempts were made to protect Alexandretta, which is the seaport of Aleppo and Antioch, and there were a few imported cases—not more than three or four,—but the disease did not spread among the inhabitants, whose number may be about 3000. This remarkable escape is probably due to their water-supply, which has been recently brought to the town by iron pipes from an excellent covered spring not far off; and a gentleman

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who was there while the epidemic was raging in Aleppo told me that the inhabitants believed that they owed the immunity which they had enjoyed to the purity of their drinking water. The same explanation is probably true in regard to the unexpected escape, in 1883, of Beyrout, whose water-supply is from the Dog river, conveyed in iron pipes to a distance of about eight miles. Cholera was then in Egypt, and more than 200 refugees came over and were put into quarantine. There were three cases of death from undoubted cholera among them, and a sentry at the lazaret, and two washerwomen, who washed their clothes, died soon after. Beyrout was pronounced officially to be infected, and was put into quarantine; but, to the amazement of everyone, there was no further extension of the disease.

Beyrout.

PERSONAL OBSERVATIONS OF THE COURSE OF INFLUENZA AND OF CHOLERA IN ASIA DURING THE RECENT EPIDEMICS OF THESE DISEASES.

BY BENJAMIN HOWARD, M.A., M.D., F.R.C.S.E.

THE following contribution to the history of recent epidemics as observed by me in Asia may be deemed worthy of a place in THE LANCET.

On leaving London in the autumn of 1889 for a prolonged detour in India and other parts of Asia, influenza was in the metropolis becoming the prevalent complaint. During November and December I encountered it in Naples and in Florence—the event most conspicuous in my mind in connexion with this epidemic in Italy being the death of Browning, the poet, who from a bronchitis following this disease died in Venice a few days after my arrival in that city. At Brindisi I took a steamer which had come direct from London. On board this steamer was a gentleman who landed with us in Bombay, still suffering from a severe and prolonged attack of influenza. As this was the only case on board, it became quite a subject of speculation whether or no he might not inoculate Bombay with his influenza. In Bombay, within six weeks, and before I left the hotel we were both staying at, influenza was common amongst the many regular residents of that hotel, and soon after appeared among the villa residents on the neighbouring suburban hills. From India there are three passenger steamship lines running to the healthy little port of Kohe, in Japan. After spending the following summer in the Okotsk Sea and Eastern Siberia, I returned in the end of autumn to Kohe, and immediately was myself attacked with influenza, with which about 30 per cent. of the inhabitants were confined to their houses, and many to their beds. From Kohe to Yokohama, the furthest eastern port, is a run of about thirty-six hours. Here nearly every house, European as well as Japanese, has been invaded by influenza, and of so severe a type that during my stay here many Europeans have died from it, many of the victims being men comparatively young, and of such robust habit that, from the ignoring of the disease, they invited the relapse which proved fatal. The only difference between the disease as it appeared in Japan and as I saw it both in London and India, is that in Japan the constitutional depression has been much greater, several weeks' confinement to bed having been not unusual.

Now for the cholera, which we know has been so severe throughout the greater part of the Japanese Empire the past year. In Bombay during the latter part of the winter of last year there was amongst the general public certainly not a thought about cholera. I was the more assiduous, therefore, to test the statement made to me by several medical officers to the effect that in the Bombay Presidency that disease is rarely or never totally absent. I was at last rewarded by finding a case in the city of Bombay. There had been rice-water discharges and cramps, and the identification of the disease had been endorsed by the removal of the patient to the cholera section of the General Hospital where I found it. I have spoken of the direct lines of mail steamers running from India to the various ports of Japan, Nagasaki, Kohe, &c., having their terminus at Yokohama. The July following cholera was reported to be at the first of these ports of call, Nagasaki. To this place I went, where the reputed four or five cases I found by actual inspection to mean forty-five cases. Being myself *en route* for Siberia and a summer cruise in the Okotsk Sea, I took first the mail steamer route, the only line in direct communication with the eastern ports of Corea. Of these ports, Fusan and Jinsan, it was difficult to say which was the filthier, but both of them surpassed in this respect the dirtiest city I had seen even in China. One could not avoid the apprehension that, should cholera break out in either of these places, the whole population must be swept away by it. At Vladivostock, the first Russian port, and the terminus of this only line in direct communication with Japan, there appeared to be at first sight fairly good sanitary conditions. I soon found, however, that, although the situation is particularly good, all the water used is surface water, and this has to be paid for at so much a bucket, as everywhere in Siberia. Sewerage there is none. On the very next trip of this same steamer from Nagasaki, one of the passengers died of cholera, and the fire was lighted all along its route, including Vladivostock. Of Japan alone is it possible to give even proximate statistics; but, strange as it may seem, in Fusan and Jinsan—the Corean ports, where the corner of every street is an open and overflowing privy—the mortality has not been reported as astonishing. At the northerly Siberian port of Vladivostock the mortality was as great as in Japan, but the cases were comparatively few. In Japan, from July to Dec. 31st last, the total of reported cases was 45,034; deaths, 31,484, giving a mortality of over 69 per cent.

These travelling companionships I hope I have been in no way responsible for, but the coincidences mentioned have been interesting, and, as contributions to the history of these epidemics, may be deemed worth recording.

Yokohama, Japan.

HERNIOTOMY, OR ABDOMINAL SECTION?

BY HARRY LUPTON, L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON TO THE STRATFORD-ON-AVON HOSPITAL.

I AM anxious to place on record the following two cases, and shall be only too pleased if their narration leads to the expression of opinions more authoritative than my own. My own bias is, and yet not strongly, to the abdominal method. I must let the cases speak for themselves.

On Sept. 28th, 1890, my friend, Mr. Fenton of Kineton, sent to me Mrs. B——, aged fifty-three, with a history of obstruction; no hernia could be detected at the usual seats; but her symptoms becoming so urgent that he considered abdominal section offered the only chance of recovery, she was admitted to the Stratford-on-Avon Hospital, and at once seen by the staff in general consultation. We could add nothing to Mr. Fenton's history of the case; and, as it was evident if the patient was not relieved she had only a few hours to live, it was agreed that I should at once open the abdomen, and endeavour to relieve the obstruction. This I did, and found a very small piece of small intestine, perhaps a third or a half of its circumference, nipped tightly in the right femoral ring. I withdrew it with very little difficulty, and found it dark but distinctly reducible, and returned it. Every precaution as to cleanliness was adopted, but no spray. The wound was dressed simply with absorbent wool. The operation was just done in time. For a time she looked almost like dying on the table; but the pulse improved with the withdrawal of the intestine from the ring, and half an hour after the completion of the dressings she was able to be removed from the table back to her ward. For the rest there is nothing to write about. Her symptoms were relieved, and she simply went on getting better. She was discharged cured on Oct. 28th, and has since been busy in her dairy. "Look on that picture and," alas! "on this."

Mrs. G——, aged fifty-seven, was admitted to the Stratford-on-Avon Hospital on Dec. 1st, 1890, suffering from strangulated femoral hernia. Her symptoms were urgent, and a consultation of the full staff agreed that immediate operation was necessary. When the patient was under chloroform, one of my colleagues, remembering the excellent result obtained in the case of Mrs. B——, said, "How are you going to operate, Lupton?" The same question was strongly at the moment present in my mind. I had been deeply impressed by the result of the former case, and was

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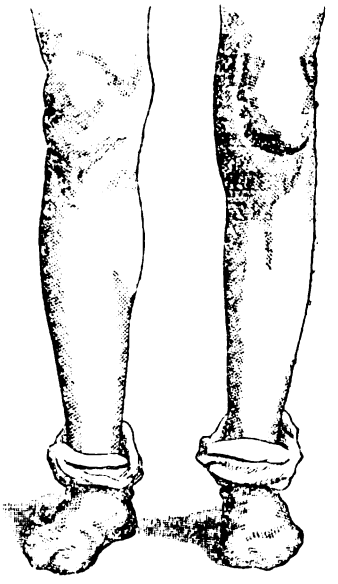
half inclined to operate by the abdomen. But there was an obvious femoral hernia before me, and perhaps I lacked moral courage to depart from the beaten track. I therefore did an ordinary herniotomy, coming first to a piece of omentum, about the size of a walnut, firmly adherent along the margin of the ring. This was raised out of the wound, and under it was a knuckle of intestine, firmly gripped, but in no wise worse than in the case of Mrs. B——. Gimbernat's ligament was rather freely incised with Smith's combined hernia director and knife (to my mind one of the best surgical inventions of modern times), and the intestine returned without much difficulty. The finger following proved the ring to be free, and I had good hopes of the success of the operation. The operation was completed about midnight. On visiting the hospital the following morning, I found her symptoms, to my great disappointment, unrelieved. I was sure that I had freed the ring and returned the intestine; but, as apparently the only thing to be done, I opened the wound, passed my finger in, and found the ring free; no protrusion of intestine. The poor woman was too far gone to admit the question of any further operative means, and she died a few hours later. I obtained permission for a post-mortem examination, but on the following day my engagements were such as to entirely prevent my making it. It was therefore made by my assistant, Mr. Ivatts. He found the protruding omentum adherent along Poupart's and Gimbernat's ligaments anteriorly. Behind and within the abdomen was the returned knuckle of intestine; but behind the adhering omentum was a mass of adventitious tissue, the result, apparently, of an old localised peritonitis. Through an opening in this the intestine had passed, and thence on to and through the femoral ring. The intestine was held, but not firmly, in the upper opening, and was withdrawn without much traction being necessary. Mr. Ivatts stated that the capacity of the mass, in which the intestine lay, was about that of a small hen's egg. I deeply regret the result of this case, for I can but feel that, had I operated by the abdomen, I could easily have withdrawn the intestine from both its constricting rings. No doubt the state of the parts found was very unusual. Can it be of sufficient frequency to justify the abandonment of the old operation for the new? Again I say I shall be glad to hear opinions more authoritative than my own on the subject. I should be wanting in courtesy, no less than in gratitude, did I not refer to the kindly and able assistance rendered me by my colleagues, Messrs. Nason, Norbury, and Greene, in the treatment of the above cases.

Stratford-on-Avon.

NOTES ON TWO CASES OF ERASION OF THE KNEE-JOINT.

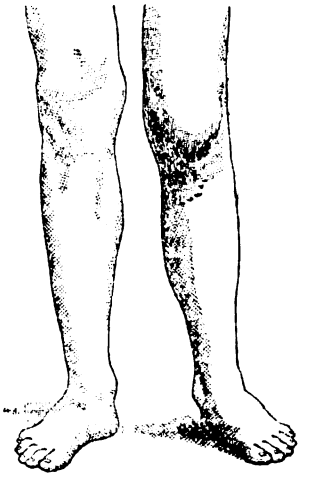
BY T. W. J. ALLEN,
HON. SURGEON TO THE GRIMSBY HOSPITAL.

CASE 1.—E. A. S——, aged nineteen, was admitted into the hospital on Sept. 2nd, 1889. He had had a swollen knee for about twelve months. There was great pain on moving the joint, and nocturnal starting pains. He had been unable to work for the last three months. No history of an injury, and no family history of phthisis. The joint was slightly flexed and much swollen. There was also a sinus running upwards for three or four inches along the outer side of the external condyle of the femur. On Sept. 10th arthrectomy was performed. After applying Esmarch's bandage and tourniquet the usual horseshoe-shaped incision was made, the ligamentum patellæ divided, and the joint widely opened. The synovial membrane was much thickened, had grown partly over the cartilages, and was caseous in places. The whole of this pulpy granulation tissue, together with the infiltrated capsule, was dissected off; the crucial ligaments and cartilages, articular and inter-articular, were carefully scraped. The sinus was thoroughly scraped. The tourniquet was removed and the spurting vessels secured, and the tourniquet was then re-applied. The joint was thoroughly swabbed out with 1 in 40 carbolic. Iodoform crystals were rubbed into the recesses of the joint, the ligamentum patellæ was sutured with catgut, a drainage-tube inserted into the joint on either side and into the sinus, and the external incision was sutured with silver wire. The dressing was composed of carbolic gauze and carbolised wool, and a Gooch's back splint. The limb was elevated at right angles to the body for twenty-four hours, and the tourniquet removed. The temperature remained about normal until the fifteenth day, and on the seventeenth day was 102°. The joint was then dressed for the first time. The external wound looked healthy, and good union had taken place. There was no pus. The drainage-tubes and wire sutures were removed. Temperature remained normal after this. The next dressing was on the fortieth day after the operation. The joint



was then perfectly healed and sound. The patient left the hospital in January, 1890, wearing a simple back splint. His general health has much improved, and now, fourteen months after the operation, he has a sound, useful limb, with movement to the extent of about 45°. He is working in a saw-mill, his duty being to feed a circular saw, and he is standing about ten hours a day. He says his leg feels tired at night, but he has no pain or swelling.

CASE 2.—A. W. S——, aged ten years, was admitted on Sept. 5th, 1889, in a very poor state of health, very thin and anæmic. Swelling and pain commenced in the left knee two years previously. It was first noticed that he limped a little, and complained of pain after exertion. The joint was very much flexed, there was a marked displacement of the head of the tibia backwards, and some



outward rotation of the leg. The lower end of the femur appeared to be much expanded. There was no family history of tubercle and no history of injury. Arthrectomy was performed, as in the preceding case, on Sept. 17th. On freely opening the joint a small amount of pseudo purulent matter escaped. The synovial membrane was caseous in many places and extremely thickened, the fibro-cartilages had entirely disappeared. The articular cartilages were per-

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forated on both surfaces of the tibia, and that on the external condyle of the femur was entirely destroyed and a caseous mass exposed. The peripheral portion of the patellar cartilage was undermined and necrosed. The whole of the diseased synovial tissue was removed, the crucial ligaments carefully cleaned, and the caseous centres in both tibia and femur thoroughly scooped out, so much so that the external condyle was a mere shell. In this case the tourniquet was not slackened, but pressure and elevation were relied upon to prevent hæmorrhage, the tourniquet only being removed on the completion of the dressing, with the limb fixed as before. Drainage-tubes and dressings as in Case 1. The first dressing was removed fourteen days after the operation, when the tubes and sutures were removed. The greater part of the superficial wound had united. The second dressing was on the forty-fifth day after the operation, and the wound was completely healed. The temperature never at any time exceeded 100° F. The boy left the hospital early in February, 1890. His general condition has wonderfully improved, and he is very active on the foot. The knee is slightly flexed, quite stiff and firm, and the leg slightly rotated out. I am greatly indebted to my nephew, Mr. C. B. Turner of University College Hospital, who assisted me with the operations and with the notes of these cases.

Grimsby.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF LEAD COLIC.

By M. M. BOWLAN, M.B.,
ASSISTANT MEDICAL OFFICER TO THE UNION HOSPITAL AND WORKHOUSE, NEWCASTLE-ON-TYNE.

IN this case there existed no gum line, and this absence was due, doubtless, to the use of the tooth-brush and a table salt dentifrice. I append a note on the cause of the "blue line."

Mary T——, aged twenty-eight, white-lead worker, was admitted on October 6th, 1890, under the care of Mr. T. A. Dodd, the visiting surgeon, to whom I am indebted for permission to publish these brief notes. On admission she was suffering from a slight attack of lead colic and constipation, which, after three or four days, became very severe. There was no gingival discolouration, neither "line" nor "dots." No wrist drop or other paralytic symptom; her eyesight was good. No headache or fits. Urine free from albumen. She has worked at lead works for one year, with the exception of being absent "an odd week now and again." This is her second attack of colic, the first seizure having been six months ago, and was not so severe as the present. She worked chiefly at the "white beds"—i.e., carrying white lead to the rollers to be ground. She has never lost power in her hands, &c. While I was searching for the gum line she spontaneously explained that its absence might be due to her using a tooth-brush and thus cleansing her mouth and teeth daily with table-salt after returning from work. This habit she had practised some time previously when engaged in a dusty occupation (at a papermill: dirty dusty rags), as she had been told it would preserve her teeth. She says she had no intention of misleading the surgeon at the lead works. She was discharged quite well on Oct. 20th, 1890, the colic having yielded to an opium and sulphate of magnesium mixture. I was not aware until to-day (Feb. 23rd, 1891) that allusion is made to similar cases in Fagge's Treatise on Medicine. But as our case appears to be unique in having such a very definite cause, perhaps it may be none the less worthy of brief record. The gum sign is admitted to be generally present in chronic plumbism, and also in white-lead workers who have been exposed for any length of time, even though no toxic symptoms have developed. This case has some bearing on the proximate cause of the "blue line;" for if local cleanliness prevent its formation, it must be either by removing or neutralising some factor or factors essential to its production. Now, the generally received opinion appears to be that the lead is excreted by the vessels of the papillæ of the gums (and I presume as a complex albuminate), and that it is here precipitated as a sulphide by the H_2S evolved in the decomposition of animal matters contained in the pores of the tartar on the teeth. And it is reasonable that local cleanliness should, by preventing the accumulation of tartar and the stagnation of the secretions and food detritus, hinder the formation of sulphides in the mouth. There can be no doubt that the saliva itself contains sufficient sulphur-charged proteid matter to generate, by decomposition, the required sulphide. But there is one other possible source, I think, of this sulphur without having to draw upon the disintegration of albuminoid bodies—viz.: that we have always present in the month as a constituent of healthy saliva a compound sulphide—potassium sulpho-cyanide; and some 130 milligrammes of this are secreted daily.[1] This salt "in aqueous solution decomposes with the evolution of ammonia at ordinary temperatures."[2] Watts makes no mention as to what becomes of the sulphur when a watery solution of KCNS thus breaks up, but it seems to me not improbable that it is a contributor, if not the actual source, of the sulphide which precipitates the lead in the gum. Doubtless microbes take part in this process of chemical change. From this standpoint the cleansing of the mouth prevents any discolouration of the gums by preventing the formation of that nidus for stagnant and decomposing animal matters *and sulpho-cyanides*—the tartar of neglected teeth. And these matters gain access to the tartar in two ways: (1) By being carried down with the lime salts when the tartar is being deposited on the teeth; (2) by absorption into the pores of the tartar subsequently.

Newcastle-on-Tyne.

THE EXTRACTION OF BROKEN NEEDLES.

By CHARLES STEELE, M.D., F.R.C.S.

ALL who have had much to do with this minor operation know how frequently a satisfactory result fails to be obtained unless the indications for a safe operative procedure are strictly observed. It is most unpleasant, after cutting and probing with the finger and forceps, to be obliged to tell a patient who has endured some pain and much discomfort that further attempts are useless, and that the fragment is still there; and perhaps suggest as the best consolation that the needle has a more free opening by which to work its way out. I have for many years declined to cut unless I could make out the situation of a point, and that the other end had a firm bearing to rest upon; giving the assurance that patience and watching are the proper treatment for the time being.

Lately I have adopted a very simple, painless, and reliable plan, and have regretted that I had not thought of it in many previous instances. Last autumn, when I was visiting a child, a young lady, his sister, came into the room using her right foot naturally, but resting only on the toes of her left foot, and explained that she had gone about in this way for fully three weeks, as she had broken a needle into her left heel, and the slightest touch gave her great pain. The point of entrance was visible in the middle line in front of the tuberosities of the os calcis; the end of the fragment could be recognised through the skin, but the slightest pressure made it recede. I declined to operate, but directed that two thick felt corn plasters, one on the other, should be applied, with the puncture occupying the central hole, and that she should walk freely and bear well upon the heel. This she did with perfect ease, and after ten days the needle presented, and was withdrawn readily. It was the eyed end, and almost an inch long. Soon after this I saw a little girl, aged three years, who when away from home in the summer had also trodden upon a needle, which broke and entered between the ends of the metatarsal and tarsal bones. A surgeon saw her promptly, cut down, and tried for some time to extract, but failed. She often felt no inconvenience, but at intervals limped suddenly, and complained of pain. She was persuaded to wear a corn plaster, and after three weeks the portion of needle, which had been in more than three months, after producing a little superficial irritation, showed itself, and her nurse drew it out. The wrist and ball of the thumb are not unfrequently punctured, and if the fragment enters obliquely, or lies close to arteries or nerves, and cannot be forced into prominence, attempts at extraction are, to say

[1] Landois and Stirling. [2] Watts' Dictionary of Chemistry.

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the least, undesirable; whereas by adopting this simple method, after the manner of removing a thorn with the pipe of a key, and producing pressure with an elastic wristlet or slight steel spring like a small truss, the fragment will work out, and not give pain from any knocks while under the skin. In that awkward position, the soft parts by the sides of the ligamentum patellæ, this plan can be used. It recommends itself to everyone's common sense, and has the great advantage of not leaving any cicatrix.

Clifton.

A FAMILY OF DWARFS.

BY G. OSCAR JACOBSEN, M.R.C.S., L.R.C.P.

THE following case of a dwarfish family has come under my notice:—

The dwarfs are three children, two girls and one boy, the father being a well-developed man, height 5 ft. 4 in., the mother (his first wife, now dead) having been about 4 ft. 10 in. The ages and heights of the children are as follows:—Chas. T. W——, a boy of fourteen years and a half, height 47 in. He is a very sharp lad, passed a year back the sixth standard of the School Board, but is generally small. Except for his mental powers he is in every way backward in development, there being no sign of hair about the pubes or axillæ, and his ideas are all rather childish. Nellie W——, eleven years old, height 36¼ in. The child is fairly sharp, but very puny and delicate, having to be kept away from school during the winter months. Bertha W——, age thirteen years, height 44½ in. This girl is sharp and has passed the fourth standard, but has no signs of puberty and has never menstruated. I may say that both the girls are knock-kneed, but to no such extent as to make any great difference in height. The boy, the father tells me, when younger, "had something wrong with his ankles," which necessitated his being three years in a hospital. In contrast to these dwarfed children, I give the heights of the children of the same father by a second wife, who is about the same height as his first wife was. Eva W——, four years old, height 40 in., or 3¾ in. taller than the child of eleven years by the first wife. Lucy W——, eight years old, 44½ in. in height, being as tall as the child of thirteen years by the first wife. These last two children are also growing yearly, whereas the two dwarf girls have not grown for the last two years. Ann S——, daughter of the second wife by a first husband, is six months younger than the boy dwarf, but is fifteen inches taller, being 5 ft. 2 in. in height. She, moreover, has development of mammæ, has hair under the axillæ and on the pubes, and has menstruated for the last three months. The height is not alone wherein the children suffer, but their limbs are all small and in proportion to their miniature size, their heads being rather large. There is no other instance of dwarfs in either the father's or mother's families previous to this, and the mother is said to have always been a healthy woman. The mother was between twenty-four and twenty-five when she married, and had three brothers and three sisters, all of whom married and had healthy children, except one sister. All of the mother's children were born at full term, and no comment was made upon their size.

Huntingdon.

CASE OF CONGENITAL PHIMOSIS, LEADING TO DEATH AT THE AGE OF EIGHTY-THREE.

BY ARTHUR S. TAYLOR, M.B. CANTAB., F.R.C.S.

JOHN F——, aged eighty-three, was found dead in a field in which he had been working. I made a post-mortem examination on the coroner's order, and found the following interesting condition:—

Lungs slightly congested with a little old pleurisy on each side. Heart large but healthy. The first part of the aortic arch was dilated, but for a man of eighty-three the artery wall was exceptionally good. Both kidneys were remarkably cystic, with enormously distended pelves and ureters. The bladder was greatly distended by urine, and in two or three places only the peritoneum prevented rupture into the abdominal cavity. There was no stricture of the urethra, though the middle lobe of the prostate was much hypertrophied. There was congenital phimosis, the circumference of the aperture when slit open and stretched being one inch. On opening the skull, I discovered submeningeal hæmorrhage covering the base of the brain, running down the vertebral canal, and spreading over both frontal areas. I could discover no small aneurysm, nor the actual vessel which had given way. The interest of the case lies in the slow but sure progress of the disease. Doubtless, the end was hastened by the hypertrophy of the middle lobe of the prostate. At the inquest, the deceased was said to have enjoyed very good health. He had had an attack of dropsy a year previously, and shortly before his fatal apoplexy suffered from epistaxis. The arteries at the base of the brain were rather rigid, but by no means bad. He had had several children.

Surbiton Hill.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF DISLOCATION OF THE ULNAR NERVE.

THE condition of nerve described in the account of these two cases is one which has not hitherto been recognised in the literature of this country. No mention is made of it in our works on surgery, even when they treat of the subject of nerve injury in a special manner. The only contribution on the subject we can find is one by Dr. F. J. Lutz,[1] who wrote of a case of habitual dislocation of the left ulnar nerve. This account will be read with much interest, more especially the parts which describe the operative measures which were successfully undertaken to secure the nerves in their normal position. For the notes of the cases we are indebted to Mr. E. C. Stabb, surgical registrar.

CASE 1. — E. N——, aged twenty-eight, married, was admitted under the care of Mr. Croft on March 7th, and left the hospital on April 9th, 1891. Six weeks ago the patient fell, grazing her right elbow against the edge of a bucket. This injury was followed by cellulitis, limited to the region of the elbow, and she was admitted to St. Thomas's Hospital twelve days after the injury, and an abscess opened just above the internal condyle of the humerus. She left the hospital well at the end of a week. A few days after this, on commencing to work again, she felt pain on the inner side of the same elbow, shooting down to the hand, whenever she flexed the forearm. On March 7th she was readmitted, and on examination it was found that on slowly flexing the forearm, when this movement reached to about a right angle, what appeared to be the ulnar nerve slipped forwards over the internal condyle, taking up a position in front of it, and causing pain to the patient. On extending the forearm again the nerve resumed its anatomical position. There was no local tenderness or loss of sensation, or wasting of muscles, but the grasp of the right hand was distinctly more feeble than that of the left. On the 16th Mr. Croft exposed the nerve by a semilunar incision. It was slightly thickened, and freely movable over the internal condyle. He then stitched the sheath of the nerve to the inner margin of the triceps tendon, and finally attached the edge of the same to the periosteum covering the internal condyle, leaving the nerve completely embedded. The arm was fixed in plaster-of-Paris splints in the extended position. The day after the operation the patient complained of sensation of pins and needles in the fourth and fifth fingers. Sensation was almost absent from the fifth finger. The wound healed by first intention, and sensation gradually returned.

On discharge from the hospital the nerve was quite fixed in its normal position. There was no pain on flexion of the

[1] St. Louis Medical and Surgical Journal, 1879-80, vol. xxxviii., p. 550.

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elbow, and complete restoration of the functions of the nerve had taken place.

CASE 2.—C. M'G.——, aged thirty, a bookkeeper, was admitted under the care of Sir William Mac Cormac on Feb. 14th, and left the hospital on March 9th, 1891. The patient has always had a great deal of writing to do, and for the last two years has felt his right arm to be getting weaker, preventing him from holding a pen for long without rest. Five months ago while in Egypt his arm suddenly became much worse without any apparent cause, and he could only write with the greatest difficulty. On this account he had to resign his post in the Customs. At this time he first noticed that something slipped forwards on the inner side of his right elbow. There is no history of injury to the elbow.

On admission to St. Thomas's Hospital what appeared to be the ulnar nerve slipped forwards to the front of the internal condyle of the humerus almost as soon as flexion of the forearm was commenced; this caused no pain, but a feeling of uselessness in the hand and inability to hold anything for long with the fingers. On Feb. 17th Sir William Mac Cormac exposed the nerve by means of a longitudinal incision, and having made a species of bed for the nerve by dividing the fibrous structures behind the internal condyle, fixed it in its usual position by means of two kangaroo tendon loops passed through the inner margin of the triceps tendon, and somewhat loosely round the nerve. Several catgut sutures were also used to unite the divided margins of the fascial expansion of the triceps, superficial to the nerve, which was thus firmly supported. The arm was put up in the extended position in plaster-of-Paris splints.

Feb. 19th.—The patient complains of tingling in the fourth and fifth fingers of the right hand. No loss of sensation.

23rd.—Wound nearly healed.

On discharge from the hospital the ulnar nerve was quite fixed in its normal situation, which it maintains in all positions of the limb. The patient can now write fairly well, and the functions of the nerve are entirely restored.

LANCASTER COUNTY LUNATIC ASYLUM.

A CASE OF CARDIAC THROMBOSIS, WITH MULTIPLE EMBOLISM OF THE LUNGS; NECROPSY.

THIS case shows the difficulty which often complicates the diagnosis of disease in the insane. In many instances one has to depend entirely on the physical signs, the patient often being quite unable to give any information, and more frequently than not offering an active or passive resistance to examination. Another point which must be borne in mind is that very often it is late in the progress of the disease when attention is first called to the patient, and the initial lesion may be thus obscured or even masked by complications. He complains of nothing, and apparently suffers nothing. The post-mortem examination frequently reveals the presence of acute disease neither complained of nor suspected during life. One can understand, therefore, how necessary it is to cultivate the senses employed in physical examination, as in many cases it is all we have to depend upon for a diagnosis. However trifling the change in attitude, gait, complexion, respiration, &c., of the patient, examine him, and, though often your suspicion that there is something wrong may prove on investigation to be incorrect, there is the satisfaction of knowing that your physical diagnosis of necessity becomes more delicate and accurate. Nowhere is physical diagnosis of more importance than in asylums, for the reasons already specified.

In the present case effusion of fluid into the left pleural cavity, with displacement of the heart to the right, pericarditis, and a localised dulness in the lower lobe of the right lung were diagnosed. No light, however, could be thrown on the case by the patient either as regards history or symptoms, and hence the diagnosis depended entirely on the physical examination, and even that had to be conducted under disadvantages which do not obtain in the sane. What, therefore, was the primary lesion could only be guessed. Malignant tumour of the lung and aneurysm of the aorta were both considered, and dismissed as untenable. One feature of the case which was rather puzzling was the extreme feebleness of the radial pulse, not in keeping with the patient's general appearance. A possible explanation of this is offered. For the account of the case we are indebted to Mr. Jas. F. Gemmell.

G. H——, a dement, aged forty-three. The attention of Mr. Gemmell was called to this patient on account of the difficulty he seemed to have in breathing. The following were the chief points observed on a general inspection: Extreme dyspnœa; lividity of lips; engorgement and pulsation in the veins at the root of the neck, and œdema of the inferior extremities, especially marked on the right side, where it extended the length of the limb. Expression was anxious and restless; conjunctivæ slightly icteric, and complexion sallow and cachectic. The movements of the left side of the chest were not so free as those of the corresponding part on the right. There was no cough, but very occasional and difficult expectoration of a small quantity of a tenacious mucous material of a black-currant-jelly colour. No difficulty in swallowing, and the body was well nourished. Interrogation of the patient as to what was wrong and how long he had felt ill was futile. Further examination revealed a very complicated condition. The percussion note over the whole of the left side of the chest, with the exception of about three inches of the apical region, was absolutely dull, this line of dulness not being altered by changing the position of the patient. Over the right side of the chest the note was clear, with the exception of a localised dulness a little below and in a line with the angle of the scapula. There was no increase of hepatic dulness upwards, but the inferior border of the left lobe was perhaps a little lower than usual. The right border of cardiac dulness was increased towards that side. The left could not be distinguished from the dulness existing over the left lung, and the upper border was normal. No cardiac impulse could be felt, nor any splenic enlargement detected. The cardiac sounds were only faintly, if at all, audible in the apex region; but approaching the median line they became more distinct, and at the ensiform cartilage, and for some distance up the sternum, were attended by a pericardial friction murmur. Nothing of the nature of a valvular murmur could be detected, but systole was accompanied by a most peculiar flapping sound, which, however, was not always audible. General action of the heart was feeble and distant. The respiratory murmur over the right lung was healthy except over the localised dulness, where it was attended by fine dry crepitant râles, and approached the tubular in quantity. Over the left lung behind, except at the apex, where it was normal, the respiratory murmur was vesicular, but much weaker than over the corresponding lung. It could be heard down to almost the base of the lower lobe, where, however, it was extremely faint. It was accompanied by obscure crepitus. From the posterior axillary fold round to the mammary line, and extending well up into the axillary region, the murmur was inaudible, except over the front of the apex, where it was normal. Vocal fremitus and resonance could scarcely be said to exist over the dull area on this side. No pulse was obtainable at either wrist or temples, but in the groin it numbered 84, respiration 52, and temperature normal. The urine could not be obtained for examination. Pericarditis, effusion of fluid into the left pleural cavity, with a patch of consolidation in the right lung (probably pneumonia) were diagnosed. The left cavity of the chest was aspirated by Allan's pump, and eighty ounces of a serous fluid tinged with bile drawn off. This appeared to give the patient some relief, and resulted also in a return of the vesicular murmur and clear percussion note. The respiratory murmur was attended by coarse and fine crepitant râles.

Dec. 13th.—Breathing not so laborious, respiration 40; pulse 120, felt at both wrists, but very feeble. His general appearance, however, did not betoken cardiac weakness to such an extent as indicated by the feebleness of the radial, brachial, and temporal arteries. The temperature has never been above 100° F. Percussion note over the upper third of the left lung gives a resonant note, but below this it gradually disappears, and at the base is quite dull. The respiratory murmur can be heard all over the lung, though over the dull area it is extremely faint. It is vesicular, and attended by fine crepitant râles at the upper part of the dull area. No change in cardiac condition.

16th.—Rather worse to-day; dyspnœa increased. Respiration 60; pulse 112; temperature normal. Heart still displaced to the right, where the sounds, though feeble, are best heard. There is little alteration detected in the condi-

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tion of the left lung, except that metallic tinkle is heard very distinctly a little below and to the outside of the nipple line. Œdema of the inferior extremities still marked, and in addition the left hand and wrist have become similarly affected. The dyspnœa became steadily worse, and the patient died the same day.

Necropsy.—The following conditions were revealed. Recent embolism of the left vertebral artery at its origin from the arch of the aorta. It was also blocked by an old embolus as it entered the skull through the foramen magnum. Slight pleuritic adhesions at the apices of the lungs, and the anterior margin of the left pleura was adherent to the pericardium and the chest wall. On breaking this down the left lung for about three-fourths perhaps of its extent was found to be shrunken and firm. Both visceral and parietal layers of the pleura were covered by a thick fibrinous deposit which could be easily detached, and about the junction of the upper with the lower three-fourths both layers were adherent, above which the lung was normal. The left pleural cavity contained about fifty ounces of turbid serous fluid, in which floated numerous flakes of lymph. The consolidated and shrunken portion of the lung was found to be the seat of numerous hæmorrhagic infarctions of various sizes and in various stages. They occupied chiefly the lower lobe, but several smaller ones existed at the anterior margin of the upper lobe. There were also two in the lower lobe of the right lung, one about the size of a small orange, evidently corresponding to the dull area delimited by percussion. The rest of the right lung was healthy. The heart was enlarged, weighed twenty-two ounces, and was displaced towards the right. Its right cavities were engorged, the mitral and tricuspid orifices were dilated, and the muscular substance was healthy in appearance. At the apex of the left ventricle was a large white thrombus undergoing softening; right cavities and valves healthy. The sac of the pericardium contained almost three ounces of clear serous fluid, and the two layers were roughened, and on the anterior aspect of the heart were adherent to, though easily separable from, each other. The liver weighed fifty ounces, and was fatty; the spleen (8¼ oz.) was hard and dark coloured, and the right and left kidneys weighed 6¼ oz. and 5½ oz. respectively. The capsules were firmly adherent, kidney substance sclerosed, and the right one exhibited a cicatrix, the result of a former embolism. There was thrombosis of the right internal and common iliac veins. In both arms was a high division of the brachial, and the two radials were unusually small, accounting perhaps for the feebleness of the pulse at the wrist. The ulnars also appeared to be of somewhat smaller calibre than usual. The left vertebral, as stated elsewhere, took its origin from the arch of the aorta between the common carotid and subclavian arteries of that side. An examination of the vessels of the inferior extremities was, for reasons of expediency, not made, nor was the examination of the brain detailed.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Melano-mycosis of Skin.—Micro-organism of Diphtheria.—Acute Epiphysitis.—Gummatous Meningitis.—Gumma of Heart.—Tuberculosis of Mediastinal Glands invading Lung.

AN ordinary meeting of this Society was held on May 5th, Dr. W. H. Dickinson, President, in the chair.

Dr. S. DELÉPINE read a paper on Melano-mycosis of the Skin, with microscopical and macroscopical preparations exhibiting the fungus in the tissues and a number of cultivations showing the influence of temperature on the growth of aspergillus niger. The case from which the original fungus was obtained was a man with a fractured thigh who went to St. George's Hospital, where the limb was fixed in the usual way with strapping. When the strapping was removed the skin beneath it was found in two places to be covered with brownish-black dust; in the centre of each of these patches there was an ulcer, around which the skin was moist and the cuticle peeled off easily. This black dust was found to consist of spore-like bodies somewhat smaller than, but otherwise closely resembling, the red blood-corpuscles. Some of this was sown on glycerine and on agar-agar, with the result of producing typical aspergillus niger growths. After giving the history of pathogenic moulds, he detailed the results of inoculation with the spores obtained in the present case. The experiments were performed by Dr. Woodhead, who inoculated the anterior chamber of the eye and the peritoneal cavity of a rabbit, with the result that in less than forty-eight hours after inoculation there was distinct inflammation of the eye, and there were tubercles of various sizes along the course of the lymphatics in the peritoneal cavity. These tubercles contained nests of spores, some germinating, others simply crenated. He also mentioned that he had grown an aspergillus, the spores of which had been removed from the ear of a woman by Mr. Bull. He had chosen for experiment aspergillus niger, because of its slight pathogenic power, to study the changes, fermentations, &c., which occurred in the nutrient media in which it was grown. He suggested that amylolytic fermentative power and hydrolytic action were inherent properties of all living protoplasm. During his researches he discovered that when the filaments of mycelium came to the surface, they had the power of altering the media in which soluble lime salts were dissolved into fluids from which oxalate of lime was precipitated.

Dr. ALBERT WILSON read a paper on the Micro-organism of Diphtheria, with experimental results in animals. He referred first to the loose way in which the term "diphtheritic" had been used; it been employed to cover cases of sore-throat not of true diphtheritic character. He then reviewed some of the recent researches into the nature of the disease, dealing especially with the investigations of Dr. Klein, which he criticised adversely, as in the inoculations into animals Dr. Klein had failed to produce lesions in the pharynx or larynx, nor did paralysis result. He next dealt with the experiments he had himself performed. He showed that in ordinary cases of diphtheria a thin grey exudation preceded the membrane formation, and this exudation he believed contained the causative micro-organism. He inoculated tubes, and there first appeared a funnel-shaped depression in the gelatine, followed by liquefaction and the formation of an orange-coloured deposit. The germ present proved on examination to be a pure cultivation of a small micrococcus. Pigeons were inoculated from this, and in them true diphtheria was produced, they having both membrane exudation and paralysis. As to the influence of chemicals, the organisms grew best in a neutral or faintly alkaline medium, and acids were injurious to their growth. Growth was prevented by a 2 per cent. solution of boracic acid, a 5 per cent. solution of salicylate of soda, a 2 per cent. solution of peroxide of hydrogen, a 5 per cent. solution of hydrochloric acid, a 2 per cent. solution of liquor ferri perchlor., a 1 per cent. solution of lactic acid, a solution of corrosive sublimate 1 in 5000, and a solution of iodine of 1 in 500. On the other hand, it was found that a 10 per cent. solution of chlorate of potash, a 20 per cent. solution of permanganate of potash, and a similar strength of sulphocarbolate of sodium were useless in preventing growth. A solution of sulphurous acid of 5 per cent. was also useless, probably because of its volatility. He added, in conclusion, that diphtheria was primarily a constitutional disease, of which the local manifestation was the throat affection; hence the importance of internal remedies combined with local treatment. For the latter chlorate and permanganate of potash should be banished in favour of hydrochloric, lactic, and boracic acids, salicylates, and hydrogen peroxide. The administration by injection of pilocarpin in doses of $\frac{1}{75}$ gr. he had found very useful in loosening membrane.—Dr. WILLIAM HUNTER asked where the injections were made. He referred to the recent researches of Roux and Yersin in France, and of Brieger, Fraenkel, and Behring in Germany, with regard to Löffler's bacillus. They had cultivated this micro-organism, filtered the pure cultures, and injected the filtrate which was free from bacilli. In this way they had produced the disease in animals with resulting paralysis. It appeared to him that diphtheria was really the result of a mixed infection.—Dr. WILSON, in reply, said that the inoculation had been made into the skin under the pectoral muscles. He believed that after inoculations with Löffler's bacillus no throat symptoms had been produced.

Mr. W. H. BATTLE showed specimens of Epiphysitis obtained from long bones in infants under one year of age, with disease at one or both articular ends. The accompanying suppuration took place in the contiguous joint but once in the immediately adjacent soft tissues. The

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disease had apparently in every instance started at the end of the diaphysis, the epiphysis was only secondarily affected, and was in no case completely separated from the diaphysis. The superficial opening of the suppuration did not correspond in size with the cavity of the ulcer, the interior of which was filled with pus, and there were granulations on the wall. In one specimen there was also considerable destruction of the cartilage covering the epiphysis, but in this case it was impossible to say definitely if there had been any primary disease of the epiphysis. In only one of the patients was there any evidence of congenital syphilis, and there was no clear history of injury in any of the cases. The author had examined a series of similar specimens at the Hospital for Sick Children, Great Ormond-street, and elsewhere, and he held that the specimens supported the following conclusions with regard to the disease: 1. That it was essentially an osteo-myelitis of the very vascular growing end of the diaphysis, of the long bones of the extremities, the characters of which were simply modified by the conditions of the bones in very young children. 2. Although the disease usually commenced in the growing end of the diaphysis, it might affect the epiphysis primarily, but usually extended towards it from the commoner starting-point in the diaphysis, and caused secondary changes ending in the partial or complete destruction of the epiphysis. As in later life, the whole of the diaphysis might be destroyed; this was, however, rare. 3. That the disease was not a pyæmic condition, properly speaking, for although the lesions might be multiple, they were confined to the bones in the first instance, and the suppuration in the joint was dependent on the bursting of a local abscess into the joint, and was not the result of a pyæmic infection. The patients usually died from exhaustion, and if there was any coexisting internal inflammation, such as a pneumonia, it did not present the characters of inflammation due to pyæmic infarcts. The percentage of recoveries was much higher under appropriate treatment than that obtaining in pyæmia. 4. The bones which are most commonly affected were the femur and humerus; in the former, both articular ends; in the latter, the upper one. 5. The disease might give rise to pyæmia, as osteo-myelitis at a later period of life might do. 6. The acute arthritis of infants was a condition of joint which might result from several causes, of which the form of osteo-myelitis (under consideration) and pyæmia were the most common. Localised osteo-myelitis must not be excluded as a possible cause for an acute arthritis until sections of the articular ends of the bones forming the joint had been made, and its absence thus proved, for the opening by means of which pus escaped into the joint was sometimes very minute, and might escape observation.—Mr. MACNAMARA agreed with the author's conclusions. In very young children the epiphysis was more commonly affected than the diaphysis, while later the diaphysis was first attacked. The great practical lesson to be learnt from these cases was to cut down early in all doubtful instances, so as to save the joint, and prevent death from pyæmia.—Mr. BRODIE had seen a child aged seven weeks, in which the whole of the upper end of the femur had been destroyed in a very short time.—Mr. JONATHAN HUTCHINSON, jun., referred to a case of epiphysitis over the lower end of the tibia in which, after incision, a cure resulted.—Mr. STEPHEN PAGET asked the author where he thought the lesion began in the ordinary syphilitic epiphysitis of children.—Dr. J. J. CLARKE considered that the cases of epiphysitis which ran on to pyæmia resembled cases of general tuberculosis following a local deposit. He did not regard all secondary pyæmic abscesses as infarcts, but thought they might be induced by the irritation of micro-organisms.—Mr. BATTLE, in reply, said that the disease appeared to start, both in syphilitic and non-syphilitic cases, in the growing end of the diaphysis, where the vascular changes were most intense. The osteo-myelitis was not of itself a pyæmia, but it might give rise to that disease.

Dr. NEWTON PITT showed for Dr. Cuff a specimen of Extensive Chronic Gummatous Meningitis of five years' duration. Since 1884 or 1885 the patient had had frequent attacks of intense pain over the left temporal bone culminating in general convulsions without unconsciousness. Their frequency had been variable, but he had never been two months free from attacks. He was first seen by Dr. Cuff in 1887, when he was very emaciated; when he attempted to walk he reeled about; no paresis of the limbs could be detected; he had as many as thirty attacks daily. There were old adhesions from iritis in the left eye, with commencing optic neuritis. He improved greatly upon large doses of iodide of potassium, and six months later he had an average of two fits daily. There was still intense temporal pain, and the optic neuritis was double; his vision was $\frac{6}{6}$. After some time he had left-sided epileptiform convulsions lasting for a minute or so, followed by a hysterical condition; the loss of consciousness was very transient. He was under the care of Dr. Pitt in Guy's Hospital for seven weeks in 1889, during which time he had three attacks of left-sided twitching, followed by a highly hysterical condition. At the necropsy a year later the dura mater adhered over the whole of the right side, there was a fibro-caseous gummatous thickening over the angular, supra-marginal and the central portions of the ascending and frontal convolutions. The cortex of the two former were severely infiltrated and there were a few spots in the lower part of the ascending convolutions. The long duration of the disease and its wide distribution were the features of interest; also the fact that in 1889, with the exception of occasional attacks, there were no physical signs except partial optic atrophy and a unilateral hemiopia.

Dr. PITT also showed a specimen of Gumma of the Heart. The patient, a man aged twenty-eight, fell down at work and died. At the inspection a diffuse gummatous infiltration involved the posterior part of the septum and the musculi papillares of the mitral valve, which were much enlarged. A gummatous mass at the apex of the left ventricle had yielded and formed an aneurysm, which had ruptured into the pericardium. There was another gumma on the surface of the right ventricle. The aorta was atheromatous, and the testicles fibroid. The case was similar to one described by Dr. Goodhart in the Transactions for 1887, but the condition was a very rare one. The patient, till the time of his death, had been able to work hard without inconvenience.—Mr. F. S. EVE had met with a precisely similar specimen.

Dr. ARTHUR VOELCKER read notes of three cases, and showed the specimens illustrating the involvement of the lung by caseous bronchial glands. The cases had all occurred in the Hospital for Sick Children, Great Ormond-street. In the first case, a child aged ten months had a strong tubercular history. At the necropsy a large mass of caseous glands was found above the left bronchus, and a cavity the size of a walnut was found in the left upper lobe, in direct continuity with the caseous gland. In the second case, in a patient aged nineteen months, a cavity in the right lower lobe of the lung was in relation to a caseous chain of glands extending from the roof of the right lung. The third case occurred in a child aged twenty-three months. The middle lobe of the right lung was converted into a caseous mass, as the result of the ulceration of a caseous gland into the bronchus leading to it. Dr. Voelcker remarked that, although caseous glands were frequently found extending far into the lung, these were merely the pulmonary glands which existed normally and which had become caseous. His cases differed from these in the fact that in his cases the lung tissue appeared to be destroyed by the invasion of the caseous glands. He remarked on the frequency of caseous bronchial glands in children, having found them in 110 cases in the last 300 necropsies he had made at the Children's Hospital, and expressed a doubt as to their occurrence apart from some tubercular affection either of the lung or some other part. He also urged that the relation of the glands to the lung lesion, its particular distribution, and the fact that the glands become caseous often without any caseation in the lung, made him regard the destruction of lung lesion as secondary to the gland changes. It was striking that all three cases were under two years of age.—Dr. PAYNE said that these cases showed that tubercular disease was commoner in very young children than was supposed. It would be interesting to search systematically for the disease still earlier, for it had been maintained that the disease might be congenital. Fœtal tuberculosis was not unknown in calves.—Dr. WALTER CARR said that at the Victoria Hospital for Children he had met with ten cases in which it appeared that the disease in the lung started from tubercular glands; of these, seven were under three years of age. He had not met with any cases in very young children in which tubercular lesions existed in the pulmonary apices.—Dr. VOELCKER, in reply, referred to a necropsy he had made on a child only three months old, in whom there was extensive tubercular disease of the lungs and

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bronchial glands. His experience was that cavities were not unusual in children, and caseous masses might be scattered through the lung independently of tubercular masses lying at the root.

The following card specimens were shown:—

Mr. A. DORAN: Hydronephrosis; Nephrectomy.

Mr. J. H. TARGETT: Symmetrical Hemiatrophy of Gastrocnemius.

Dr. H. D. ROLLESTON: Necrosis of Skull Cap; Fracture of First Rib.

Mr. S. G. SHATTOCK: (1) Bilharzia, Bladder; (2) Heart with Bifid Apex.

Mr. L. A. DUNN: (1) Ossifying Epulis of Lower Jaw; (2) Defective Development of Lower Jaw.

Mr. RAYMOND JOHNSON: (1) Vesical Calculi with threads from Catheter as Nuclei; (2) Nasal Calculus; (3) Cystic Horseshoe Kidney in a case of Spina Bifida.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Infectious Diseases Notification Act.

A MEETING of this Society was held on April 10th, H. E. Armstrong, President, in the chair.

The evening was devoted to the discussion of questions connected with the working of the Infectious Diseases Notification Act. The discussion, in which several present and past officers of the Asylums Board took part, brought out clearly that no new powers were conferred by the Notification Act, compulsory removal being possible only under Section 124 of the Public Health Act, 1875, by an order from a magistrate; that admission to such a hospital did not pauperise, even though the Board should remit the payment they were entitled to recover; that no patient was taken in without a medical certificate, except in the case of children brought by their parents, or such as presented themselves at the doors, when the medical officer would certify from his own examination; and that though occasionally patients were admitted in a moribund condition, the medical attendant might certify that a patient was not in a fit condition for removal; while the nurses who came with the ambulance had strict orders to call in a medical man if it appeared to them that removal might endanger the patient's life. The question of including measles among the diseases to be notified gave rise to an animated discussion. Messrs. Bernays, Whitaker, and Lovett opposed it on the grounds of expense, of so many cases not being seen by any medical man, and of the prejudice which they feared such a course would create against the Act in general. Dr. Willoughby supported it, since no disease so seriously affected school attendance. The chief end of notification would be, he urged, attained irrespective of hospital treatment. Diagnosis being so easy and concealment almost impossible, the parents could scarcely fail to notify. If any difficulty were found to arise, it might be solved by devolving the administration on the School Boards and managers, an alternative which Mr. Bernays and other dissentients approved. Several members urged that the grave results of measles among the poor justified the admission of severe cases to the hospitals. The President insisted that in a matter of such importance to the public welfare the question of expense should not be entertained, for the absolute mortality from measles far exceeded that from any other infectious disease. The dual system met the alleged difficulty arising from the general absence of medical attendance, the sole reason why householders did not now notify being that in the diseases at present scheduled medical advice was always sought. On every ground he strongly urged the inclusion of measles. The further consideration of this question was adjourned. Drs. Thresh and Reid, Messrs. Bernays, Milsom, and others, thought that the notification of erysipelas was needless, the cases reported being few, and many of these probably only erythema. Dr. Gibbon, on the other hand, held that it was one of the most dangerous of infectious diseases, allied in its origin to diphtheria and puerperal fever. In this Dr. Willoughby concurred, denying the existence of so-called idiopathic cases, which he believed to arise from the access of the microbes to some slight abrasion unnoticed, but discoverable by careful inquiry. Erysipelas was an infective disease, always traumatic, and mostly, though not invariably connected with insanitary conditions. The majority present were, however, adverse to the retention of erysipelas in the schedule. The expediency of rendering the adoption of the Act compulsory on all sanitary authorities was affirmed unanimously, and almost without discussion. The President insisted on the question of notification and of hospital provision being kept distinct, and that only by notification could the prevalence of a disease and the extent of hospital accommodation required be ascertained; while Dr. Willoughby maintained that since the one belonged to the domain of preventive and the other to that of curative medicine, their aims were not in all respects the same, and that notification alone might in the case of some diseases, as measles, be productive of the greatest good.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on April 1st, Mr. A. Messiter, President, in the chair.

Aphemia of Nine Months' Duration cured by Hypnotism.—Dr. STACEY showed this patient again. When before this Society some weeks ago he was quite unable to speak. Now he was able to do so without difficulty.

Specimens.—Mr. Messiter showed: 1. A Typical Oxalate of Lime Calculus, successfully removed. 2. A specimen of Compound Fracture and Dislocation of Vertebra; the injury had been cut down upon, and several of the processes of the vertebra removed, but the fragments were firmly locked, and could not be reduced. The patient lived for over a week after the operation.—Mr. CHRISTOPHER MARTIN showed a Sarcoma of the Ovary.

Paralysis of the Larynx.—Mr. BARLING showed a case of double abductor paralysis of the larynx in a girl of twenty, apparently a hysterical condition grafted on to a slight catarrhal laryngitis. The respirations had been as rapid as 50, and nearly a year ago tracheotomy was performed for very severe dyspnœa occurring at night. With faradaism and tonics there was subsequent recovery of the abductor function, but this failed again later, and at the present time the patient is nearly as bad as ever. The present treatment is by tonics, faradaism to the neck, and occasional intubation, slow improvement resulting.

Hydatidiform Mole. — Mr. J. ROUND showed this specimen; it consisted of an ovum about two months old, with a hydatidiform mole attached. The patient from whom the specimen was taken was a primipara, who had been under treatment for anæmia, which had existed during nearly the whole of her married life. After the mole was removed the patient had no bad symptom except a most fetid discharge, which yielded readily to injections with a solution of Condy's fluid.

Dr. SHORT read a paper on the Action of Urethan, Sulphonal, and Paraldehyde, clinically illustrated.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Obstetrical Section was held on March 13th.

Subperitoneal Myoma of the Uterus.—Mr. O'CALLAGHAN exhibited a subperitoneal myoma of the uterus, removed from a patient aged thirty-five. Hæmorrhage was easily controlled by deep stitches; the edges of the capsule were turned in and united by an uninterrupted suture, a Kœberlé's drain was introduced, and the patient made a perfect recovery. Mr. O'Callaghan also showed a fibro-cystic tumour of the uterus, which weighed 24 lb. In this case, after progressing favourably for five days, complete obstruction of the bowel took place, owing to constriction of the colon by dragging of the pedicle. He reopened the wound and performed a median colotomy, but the patient sank soon after. Mr. O'Callaghan also exhibited a submucous fibroid of the uterus. After dilating the uterus with Tait's dilators, he made an incision around the base of the fibroid and enucleated it successfully. Good recovery.

New Instruments for Intra-uterine Work.—Dr. MORE MADDEN gave an account of a new roller pessary, and also exhibited a new instrument for intra-uterine work,

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combining the action of the ordinary curette with that of a tenaculum. In this instrument the desired action, either as a curette or as a tenaculum, can be exactly and easily regulated and directed from without by a peculiar form of screw adjustment worked from the handle.

Endo-uterine Therapeutics.—Dr. MORE MADDEN read a paper on this subject. With regard to the methods of modern uterine treatment and the conditions by which this is called for, the author's observations are founded on a clinical experience extending over many years, and embracing upwards of 10,000 gynæcological cases treated in his wards or in the extern department of the Mater Misericordiæ Hospital, Dublin. Of the cases admitted into those wards during the last fifteen years, endo-uterine treatment was found necessary in 35 per cent. The two essential points in all such treatment are, first, that the orifice and cavity of the uterus, if not already sufficiently dilated, should be mechanically expanded; and, secondly, that whatever application is resorted to should be brought into direct contact with the diseased endometrium. For the first purpose the slow, painful, and hazardous methods of dilatation by sponge or laminaria tents have been long abandoned by Dr. More Madden, who employs in their stead the rapid cervical dilator which Messrs. Arnold have brought out in accordance with his suggestion, and which he finds more effective and quicker in its action than Hegar's or other similar dilators. The second object is especially necessary as a preliminary to endo-uterine treatment in cases of congestive hypertrophy and chronic subinvolution, in which the lining membrane of the uterus is commonly overlaid by an impervious pseudo-membranous albuminoid neoplasm evolved from the proliferating cilia of the diseased surface. Or else the endometrium, in many cases, is so thickly bathed in the tenacious morbid secretion therefrom, as effectually to protect the underlining tissues from the action of any remedial agent introduced into the uterine cavity until that pseudo-membrane and secretion are removed by the curette. For these objects Dr. More Madden recommends, first, the use of Duke's cervical curette to cleanse out the entrance to the womb; and, secondly, the employment of his own adjustable uterine curette, by which the endometrium may be thoroughly denuded, and at the same time by the hæmorrhagic discharge thus occasioned the congestion of the hyperæmic and hypertrophied organ may be most effectually relieved. In the treatment of subinvolution the author advocates the introduction, in some instances, of a small tampon saturated in a combination of tannic acid and turpentine, which he terms "tanno-terebinth." This acts as an immediate stimulant and astringent on the uterine structures, and in suitable cases is allowed to remain in the cavity from twelve to twenty-four hours, unless sooner expelled from the then generally much contracted uterus. The vaginal glycerine saturated tampon commonly employed in cases of this kind, although unquestionably serviceable in many instances, is messy and troublesome in its use both to patient and practitioner, and hence for some time past Dr. Madden has generally adopted the boric acid, or "dry treatment," recommended recently by Dr. Duke, and which he has found generally very satisfactory as a substitute for the older method of treatment. He also strongly deprecates the employment of the ordinary syphon syringe for any endo-uterine purpose, and believes that this should be replaced by an irrigator such as the one he suggested many years ago, and which, having been since appropriated by others, without any acknowledgment, is depicted in the paper of which this is an abstract. The foregoing measures must, however, be supplemented by more active agents in those more serious cases of long-standing, fundal, or corporeal endometritis and subinvolution in which the disintegrated and eroded endo-uterine mucous membrane becomes the seat of various pathological changes, extending to the submucous structures and utricular glands, and often associated with those so-called fungosities resembling papillary epithelioma, which if unchecked may ultimately degenerate into that condition. In such cases it is that the cautery, actual or potential—the first in the form of igni-puncture, and the latter in the shape of the stronger caustics, acid, nitrate of mercury, fuming nitric acid, or chromic acid, &c.—may be justifiably resorted to in endo-uterine treatment. In conclusion, Dr. More Madden briefly details the result of his clinical experience of these various applications, the circumstances that indicate their use, the dangers that may attend their abuse, and the methods of their employment.

Notices of Books.

Bacteriological Technology for Physicians, with seventy-two Figures. By Dr. C. J. SALOMONSEN. Translated by WILLIAM TRELEASE from the Second Revised Danish Edition. New York: William Wood & Co. 1890.—It is the fault of most works on bacteria that they are written by men who have worked only in large laboratories, and who have been accustomed to find everything they might require ready to hand. Such authors have followed out the methods in use in the special schools in which they have been trained, and the consequence is that we have elaborate treatises on the special methods adopted by Koch or on the Pasteurian methods, the one being fully expounded, but very little reference being made to the other. In the book before us, however, we have an admirable compendium of most of the methods that are used in bacteriological work. Such a work, based as it is upon personal observation and experience, cannot but be useful to all who are interested in the study of bacteriological technicology, and to those who wish to engage in the examination and cultivation of micro-organisms in their own private laboratories, and with comparatively small outlay, this little book will prove invaluable. The author does not attempt to give elaborate descriptions of the various micro-organisms, nor does he add much extraneous matter in setting forth the methods and apparatus that are used in bacteriological investigation; but in terse and lucid terms he explains the simplest and most easily managed apparatus and methods of cultivating, aerobically and anaerobically, of examining bacteria, of sterilising apparatus, of separating bacteria from their products by filtration, of disinfecting clothing, and of making pure cultivations. All these general methods are treated pretty fully, and simple and inexpensive apparatus by means of which they may be carried out are suggested. The special methods of examination of air, water, and soil are also well described, as are, indeed, most of those operations that come within the range of the bacteriologist. From a careful study of the work, which is apparently based on the author's own experience and observation, we feel that it is undoubtedly the best of its kind (taking size into consideration) that has yet appeared on this subject. Hueppe's work on Bacteria approaches it more nearly than any other, but it is very much larger, and is in some parts so theoretical, though always suggestive, that it sometimes loses its value as a reference book for the practical worker. A little book of this kind, showing the simplicity of most of the methods, and the cheapness of the essential apparatus, will do more to advance the study of bacteria amongst medical men and veterinary surgeons than all the elaborate text-books put together. Dr. Salomonsen has been fortunate in his translator, who has placed before English readers an account of bacteriological methods, and of methods of sterilising bedding, clothing and furniture (to which a special chapter is devoted) which should prove of very great value indeed. This work first appeared in English in Wood's "Medical Library," but is now published in separate form, and should have a much wider circulation than it has hitherto enjoyed. It is well printed, and the illustrations, though not finished in the very highest style, are all of them good.

The Microtomist's Vade Mecum. By ARTHUR BOLLES LEE. Second Edition. London: J. & A. Churchill. 1890. Pp. 413.—Those who wish to acquire a knowledge of the various methods by which sections can be cut, stained, and mounted cannot do better than purchase this work. It gives the most recent information on the best dyes and their manner of application, precise directions as to hardening and em-

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bedding, and the most approved modes of preserving specimens. The author has tried everything, and gives the reader the benefit of his large experience. We give an example of the mode in which he writes by inserting a recapitulation of the paraffin method, as recommended to be practised: "Put into a small test tube enough oil of cedar to cover your object. On to the oil pour carefully the same quantity of absolute alcohol. Take your (already dehydrated) object, and put it carefully into the alcohol. Leave it until it has sunk to the bottom of the cedar oil. Then put it into paraffin, kept at melting point in a watch glass. After a time change the paraffin (i.e., put the object into a fresh watch-glass with clean paraffin) once or twice if the object be at all large. As soon as the object is thoroughly soaked with paraffin, float the watch glass on cold water. When cool cut out a block of paraffin containing the object, and fix it with a heated needle on a cone of paraffin already mounted on the object carrier of the microtome. Pare it square, and as close down to the object on all sides except the one turned towards the knife. This had better have a wall a millimetre or two or more, according to the size of the object, left standing. Set the knife square; set the block square to the knife edge. Cut sections in chains or ribbons, collodionising them if necessary. Mount them in serial order on a slide prepared with Schaellibaum's collodion or Mayer's albumin. Warm, and remove the paraffin with naphtha." Schaellibaum's collodion is on another page explained to be a mixture of one part of collodion and three to four volumes (according to the consistence of the collodion) of clove or lavender oil, and directions are given for using it. In regard to microtomes, Mr. Bolles Lee prefers the Thoma sliding one, the Becker microtome, and the Cambridge rocking microtome. Capital chapters are devoted to cements and varnishes and to injections. He gives the composition and mode of using nearly forty kinds of injection material recommended by Gerlach, Thiersch, Hoyer, Davies, Fol, Robin, Ranvier, Brücke, and others. The book is also especially adapted for the working naturalist, who will find in it the exact account of such methods as those of v. Beneden for the fixation of the tunicates, gasteropods, arthropods, vermes, and protozoa. A valuable feature of the book is the excellent bibliography. Nearly every process has a reference to the original paper. Mr. Bolles Lee has succeeded in producing a very useful book.

Lehrbuch der Physiologischen und Pathologischen Chemie. Von Professor G. BUNGE. Leipzig: F. C. W. Vogel.—The amount of chemistry found in physiological and pathological text books is sufficient for the needs of most students, but for purposes of deeper study and research some larger treatise is necessary. Not many of such books are to be found, and Professor Bunge's work can be heartily recommended to such as wish to make a closer acquaintance with physiological and pathological chemistry. Though not an exhaustive treatise, as the author states in his preface, it contains a vast amount of information, clearly stated and without the superabundance of complicated formulæ which fill so many pages of similar works. This book consists of twenty-one lectures, the physiological and pathological portions being not taken in separate lectures (with the exception of the one on diabetes mellitus), but being considered together—by far the most convenient method. One of the most interesting lectures is that on "ferments" in reference to digestion. The function of the pancreas, of course, leads up to this subject, and we find the whole matter dealt with in a thoroughly practical manner. There is much that is new in this chapter, especially with regard to "unformed ferments," and to the action of ferments at different temperatures. The section on coagulation of the blood hardly comes up to the excellence of the rest of the work, and we are surprised that so little reference is made to Wooldridge's important researches on this subject, although Professor Bunge quotes freely from most of the other authorities. The book concludes with a lecture on diabetes mellitus. The author assumes at once that glycosuria is due to an increase of sugar in the blood, brought about by the wonted destruction of sugar not taking place as usual, and thus gradually producing an accumulation. He brings forward many arguments in support of this view, but disposes of the alternative theory—that this condition may be due to an increased production of sugar—by saying, "This proposition is not maintainable," and in a few lines explains this rather arbitrary statement by showing that the quantity of food taken is inadequate to account for the excess of sugar, and consequently we must seek elsewhere for the cause. The book, as a whole, will well repay perusal, and for the sake of those who have not been able to acquire a sufficient knowledge of German to read in that language with ease, we should like to see the work translated into English.

A Series of Chemical Problems, with Key, for use in Colleges and Schools. By T. E. THORPE, B.Sc. Vict., Ph.D., F.R.S. Revised and enlarged by W. TATE, Assoc. N.S S. (Honours), F.C.S. New Edition. London: Macmillan and Co. 1891.—This is another edition of Professor Thorpe's *brochure*, which might well be called the Barnard Smith or Colenso of chemical arithmetic. The problems are carefully chosen, and the examples which precede them clearly explained. Useful data, including the atomic weights, a table of logarithms, and certain constants are given in the appendix. Sir Henry Roscoe has written that by no method can accuracy in a knowledge of chemistry be more surely secured than by attention to the working of well-selected problems. If this be so, and we do not demur, both teachers and students of the science will do well to secure a copy of the new edition of chemical problems, which has been revised and enlarged by Professor Thorpe's colleague Mr. Tate.

The Comparative Climatology of London and the Chief English Health Resorts. By BERTRAM THORNTON, M.R.C.S., L.R.C.P. London: H. K. Lewis. 1891. Pp. 15 (reprinted from THE LANCET).—The writer has expanded his contribution to our pages, and added some tables of mean temperatures and humidity. The former will cause some surprise at the slight difference between places reputed to be warm or cold. This pamphlet reminds us of Pettenkofer's remark that "we do not go for change of air, but for change of soil;" indeed, it is a study of the comparative geology of health resorts that is really wanted, the soil determining humidity, radiation, evaporation, and a host of factors constituting the "climate" of a place.

New Inventions.

AN IMPROVED IRRIGATOR REGULATOR.

THE instrument illustrated, originally designed by me, and modified by Mr. F. W. Parker, formerly house surgeon at St. George's Hospital, was made by Messrs. C. Wright and Co., 108, New Bond-street. I have employed it constantly for several years at St. George's Hospital and at the Belgrave Hospital for Children. It consists of a conveniently shaped ebony handle, A, through which a length of indiarubber tubing passes. A length of eight or ten feet of tubing, attached to the glass-elbowed tube, E, connects the handle with a cistern irrigator. Simple pressure on the thumb-lever, B, regulates the flow of solution used, and on removal of pressure the flow is automatically checked by the indiarubber bands. The

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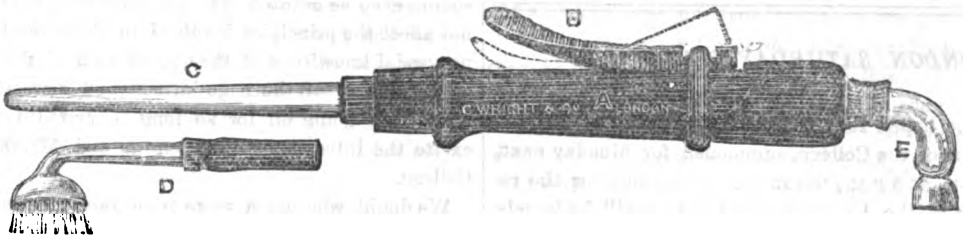
handle is provided with a conical glass nozzle, C, for washing out cavities &c., and a glass rose-head, D, which is connected to it by a short piece of rubber tubing; the nozzles and rose-heads are made in white and ruby coloured glass, one being used in dealing with abscess cavities, whilst the others are used for ordinary wounds. I have always found that the spray (which is now, I suppose, generally discarded), while otherwise harmless, had the great disadvantage of chilling the wound, and for that reason it is my practice, by means of this instrument, to irrigate with hot antiseptic fluids during the whole of an operation, partly to keep the wound aseptic, and partly to keep it warm. The rose-head is used for irrigation, and I have not infrequently performed amputations and such like operations without once touching the wound with a sponge, merely washing away the blood; in the case of children this method is especially valuable. The instrument is cheap, light, easily kept perfectly clean, and not at all liable to get out of order. The cistern or reservoir is made of tin, japanned, covered with thick felt as the means of retaining the necessary heat, and should

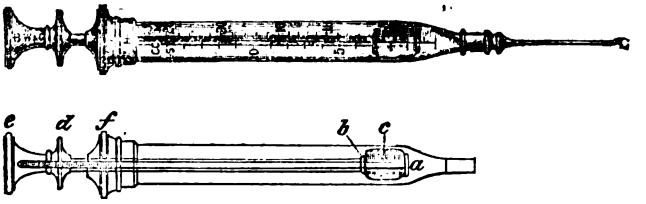


hold about two gallons; glass vessels are liable to crack when filled with solution heated to 102° F., which I have found to be the best temperature; the requisite pressure is obtained by raising the cistern, which at St. George's Hospital is accomplished by a pulley and cord.

Brook-street, W. CLINTON T. DENT, F.R.C.S.

NOTE ON A SIMPLE ASEPTIC HYPODERMIC SYRINGE.

THE principal advantages of Dr. Koch's well-known syringe are that there is no piston plug to become contaminated, and that the syringe can be easily maintained in a perfectly aseptic condition. During a somewhat extensive experience in its use, however, I have found certain drawbacks, of which the chief is the necessity for the operator to use both his hands, one to keep up the pressure on the elastic ball, the other to turn the stopcock, while the needle is meanwhile left to look after itself, and possibly to become wriggled out by a young and restless patient, or loosened from the nozzle of the tube. The apparatus, moreover, is in three distinct parts, and I have more than once seen the whole come to pieces during an operation, and an indefinite amount of injection lost. I may also remark that many of the Koch syringes imported from Germany are not only badly fitted but are inaccurately graduated. Two obtained from a German firm, and marked on the case "Dr. Koch's Official Syringe," were found to be imperfect, and one purchased for me by a friend in Berlin actually has the supposed cubic centimetre divided into eleven instead of ten parts, although the usual numbers "5" and "10" are engraved on the glass. It occurred to me that a simple syringe might be devised which could be easily kept aseptic, and could be worked by one hand, leaving the operator's other hand free to manipulate the needle and the skin in the neighbourhood. I have had such an instrument made by Messrs. Burroughs, Wellcome, and Co., which appears to answer all requirements, and I have now been using one constantly for six weeks. The glass tube is somewhat similar to that of Dr. Koch's syringe, but longer, and carefully graduated to deliver 1·5 cm. In place of the elastic ball there is an asbestos piston, which can be kept



THE SIMPLE ASEPTIC SYRINGE.

aseptic either by heat, or more conveniently by frequent rinsing in absolute alcohol. The asbestos can be tightened up by a screw arrangement in the piston rod. The tube is graduated both metrically into tenths of a cubic centimetre and for "minims," and the figures are engraved *not* upside down. In using the syringe, I always keep a layer of air between the piston and the top of the liquid, and of course wash out, before and after each injection, with absolute alcohol and carbolised water. P. S. ABRAHAM, M.D.

WHAT SHALL BE DONE WITH THE FIFTH YEAR?—A PLEA.

To the Editors of THE LANCET.

SIRS,—For the General Medical Council to decide upon lengthening the curriculum was a simple enough matter, but now that the time is approaching when it becomes necessary to give effect to this decision, enormous differences of opinion are found to exist as to the best means of employing the extra year. In your very excellent article upon the subject (May 2nd) you very rightly insist upon the importance of "a good all-round professional education"; and, further, that "there should be a sufficient guarantee that the candidate is familiar with ophthalmic and aural surgery, with febrile diseases, and the distinctive features of psychological medicine." It would not, of course, be becoming for me to express any opinion as to the relative claims of the subjects thus mentioned by you, but I would venture to ask that at least the "guarantee" suggested should be made to include "anæsthetics." The interest which you have yourselves taken in the subject of anæsthetics emboldens me to put forward this plea, for although the opinions expressed in your columns may differ widely upon theoretical points and matters of detail, yet those who have taken part in the controversy appear to agree in thinking that students should receive greater encouragement to study and practise the various methods of administration employed. As the matter at present stands, ample opportunities, both in the shape of material and teaching power, already exist in the majority of our schools; but, with almost pardonable neglect, the medical student of the present day prefers to devote his energies simply and solely to matters contained in the official curriculum, and does not learn until after he has qualified that "there are more things in heaven and earth than are dreamt of" in the philosophy even of examiners. In putting forward this claim for the systematic study and teaching of anæsthetics, I feel sure that I shall have your powerful support, for it is hardly possible to deny that such study and teaching are very essential elements of "a good all-round professional education."

I am, Sirs, yours faithfully,

Weymouth-street, W., May 8th, 1891. J. FREDK. W. SILK.

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THE LANCET.

LONDON: SATURDAY, MAY 9, 1891.

IT is to be hoped that the general meeting of Fellows and Members of the College, summoned for Monday next, the 11th inst., at 3 P.M., to consider the scheme for the reconstitution of the University of London, will be largely and influentially attended. As this scheme, however, is not submitted for approval or rejection, but is merely placed before the corporate body after ratification by the Council, it is only too probable that many who would have been present if they had had any real control over it will stay away, considering it to be a solemn farce to consider that which they have no power to amend or alter. Under a proper constitution the Fellows and Members would naturally be consulted during the progress of the negotiations, and not after their completion; and a resolution will be moved to the effect "that this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the University of London before finally accepting the scheme in the name of the College." Such a motion ought to be passed unanimously; but at the College of Surgeons, where there are many aspiring Fellows who can only become office-holders through the goodwill of those in power, and many who are directly interested in maintaining the present autocratic *régime*, the most obviously reasonable resolution is liable to have a show of opposition against it. Some therefore may be found holding up their hands against the resolution when put to the meeting; but we doubt whether anyone will be found who will venture to speak against it, if for no other reason than the difficulty of finding any plausible arguments to support the other side of the question. These remarks apply to a second resolution which it had been in contemplation to submit to the meeting. It will be found that the scheme will considerably increase the power and influence of the Council of the College over medical education and examination, and it is felt by the thoughtful portion of the constituency to be in the highest degree objectionable to make a practically irresponsible Council more powerful than it is at present. Hence it was proposed to submit a resolution to the meeting, to the effect "that no increase in the power and influence of the Council over medical education and examination is desirable until the constitution of the College has been so amended as to make it adequately representative of the body corporate." When this resolution was sent to the College it was discovered that it would be out of order, and we believe counsel's opinion was taken on the subject. It will therefore be modified so as to conclude with the words "desirable under existing circumstances." Resolutions of this kind have a far-reaching significance, and go to the very root of the question of the reform of the constitution of the College, and it is for this reason that we urge all Fellows and Members favourable to constitutional progress to attend the meeting. Some may say that the details of the scheme are of a special and technical character which are beyond their range of knowledge, and not of sufficient interest to the constituency at large. No greater mistake could be made. If it should even be granted that the scheme is perfect, it would not affect the principles involved in these resolutions, and no special knowledge of the constitution of the University of London or of the negotiations and discussions which have been going on for so long a period is needed to excite the interest of the Fellows and Members of the College.

We doubt whether a more important meeting has ever been summoned than that which will take place on Monday next, for the consideration of the scheme not only opens out, as we have just pointed out, the fundamental principles contended for by the reforming section of the constituent body, but will raise the question of the rights and position of the extra-metropolitan schools of medicine and the status of the Society of Apothecaries. The relation of the provincial schools to the College of Surgeons is a very old question, and any inequality of privilege between the provincial and metropolitan schools under this scheme would only be a remnant of the ancient monopoly, which reserved all offices of place and profit for the surgeons at the metropolitan hospitals. The scheme does not deal equally with the provincial and metropolitan schools, and therefore it was proposed that a resolution should be moved to the following effect: "That no scheme for the establishment of a degree-granting body in connexion with the Royal College of Surgeons and the metropolitan medical schools can be regarded as satisfactory which does not confer upon all extra-metropolitan schools rights, privileges, and representation which shall be equal in all respects to those conferred on schools within the metropolitan area." We are not certain whether this resolution will come before the meeting or not. The three foregoing resolutions, if moved as intended, will probably receive the support of the Associations of Fellows and Members, and a fourth resolution has been submitted to the authorities of the College by Mr. LAWSON TAIT, and has been accepted as pertinent to the business of the meeting. The resolution runs as follows: "That in the opinion of this meeting no scheme for amalgamation with the University of London for the granting of a medical qualification, and no scheme for a conjoint examination with the College of Physicians for such or a similar purpose, can be satisfactory so long as the Society of Apothecaries is not included in such scheme." The aim of reformers of medical education and examination has always been the reduction of qualifying examining bodies to three, one for each division of the United Kingdom, and to secure uniformity of examinations and equality of fees. This involved the conjunction of existing medical and surgical licensing bodies, and it will be remembered that the Bill introduced into Parliament by Lord DE GREY in 1870 provided for the compulsory formation of Conjoint Examining Boards. The withdrawal of the Bill was followed by the efforts to form conjoint schemes in the three divisions of the kingdom under the auspices of the General Medical Council, including the Universities and the Societies of Apothecaries. Various obstacles, legal and otherwise, had to be surmounted. In

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the case of the English scheme no less than three Acts of Parliament were required—viz., an Enabling Act for the University of London in 1873, an Act to amend the Apothecaries Act in 1874, and a College of Surgeons Enabling Act in 1875. In May, 1877, the scheme received the sanction of the General Medical Council, and would have come into operation on Oct. 1st, 1878, but for the introduction into Parliament of the Duke of RICHMOND'S Bill to amend the Medical Act of 1858. After the failure of the Duke of RICHMOND'S Bill through a change of the Government came a Select Committee of the House of Commons in 1880, a Royal Commission in 1881, the report of the Royal Commission in 1882, and a Bill founded on that report in 1883. When the last Bill was withdrawn the Colleges of Physicians and Surgeons hastened to combine, and the Apothecaries' Society was left out in the cold, only to assume a few years afterwards a higher position by being enabled to grant a complete qualification in Medicine and Surgery through the operation of the Medical Act of 1886. The Society of Apothecaries, strong in the fact that it had been admitted to the conjoint scheme of 1877, applied to the Royal Colleges to be allowed to participate in this last conjoint scheme, and in 1887 the General Medical Council even passed a resolution affirming the desirability of this arrangement, on the ground that it would be contrary to the interest of the public to have two competing examining boards sitting in London, but the Colleges turned a deaf ear to the appeal. The evil of having two separate and complete examining boards in London remains, when it might have been extinguished by the quiet absorption of the Apothecaries' Society without injury to the Colleges, and with great advantage to the public and to the profession. Doubtless, it was thought that the exclusion of the Society would lead to its death by inanition as a medical authority, but the qualification is so cheap and accessible that this policy has failed. We regard now, as previously, the omission of the Society as a grave error, both on public and professional grounds, and we trust that Mr. LAWSON TAIT'S motion will be carried, if not unanimously, by a very large majority, and that the Senate of the University of London will not persevere in ignoring the fair claim of the Society to a representation on the new Conjoint Board proposed in their Supplemental Draft Charter, but will give more attention to such a just demand than the correspondence published on p. 1063 would seem to imply it has so far received.

A NEW candidate for the favour of the reading public in America contains a remarkable article by Dr. GEORGE M. GOULD of Philadelphia upon the subject of the Immortality of the Soul. The writer deprecates the attitude towards this great doctrine which he believes has become very common in modern times — the attitude, namely, not of hearty acceptance or positive rejection, but of indifferentism, "the majority of people slowly settling towards an agnostic non-committalism that is destructive of all intellectual and moral earnestness." Dr. GOULD regards this attitude as culpable and dangerous. He observes that "if we live after death, it is of tremendous importance; if we do not, it is of no less vital import, and the belief, or disbelief, or the evasion is of the most constant influence, unconsciously, subtly, upon every thought and act of every day's living." He proceeds to analyse the popular conceptions upon the subject, and has little difficulty in convicting them of vagueness and self-contradiction. He asks those who hold by the belief that the material body will survive to say what age they would choose as best representing the ideal body of the resurrection—childhood, youth, maturity, or old age, and points out that "unless by the fiat of an extra-mundane deity the only moment possible to fix the bodily form in the mould of eternity would be the death moment;" yet "this would be the most undesirable of all seasons, since at that hour the body is in the weakest, most useless, and most wretched condition of all the hours it has served us." Again, he says the question is virtually decided by the consideration that "all the organic matter of the world has been used over and over for bodies, and the earth has not enough hydro-carbons to fit out again with bodies a small fraction of the souls that have lived upon it." He condemns the old dogma as "the crudest materialism, wholly unworthy of those who pretended to believe that GOD was a spirit, and that they were his children."

Dr. GOULD proceeds to remonstrate with those who would desire to perpetuate for ever either their intellectual or moral nature. He points out the crushing evidence that exists of human folly and imperfection, the illusions and delusions of men, their love of error, their prejudices and blind self-satisfaction, and asks with a touch of scorn whether this is the kind of mental equipment that we should wish to stamp with the seal of eternity. In reply to the obvious retort that most men look for a transformation of their nature in the passage through death, he replies that if we have neglected our opportunities for intellectual and moral progress here, "Why should GOD suddenly endow you with a perfect intellect ready-made? Is it GOD'S way in this world to give excellences unasked and unearned? Rest assured, He will not do it at your dying hour. It is no particular merit in you to die; why should you be rewarded with a new intellect, then?" Dr. GOULD regards the desire to perpetuate our individuality, our peculiarities physical, intellectual, and moral—transformed, it may be, but still essentially the same—as base and contemptible, and, at bottom, materialistic. "As you become freed from the cramping littleness of self-love and the bonds of self-gratification, as you rise into the life of the spirit, you find yourself less individual. One fitted for a true heaven would not care for the old immortality. What is good to carry over into the future life is not so much personal identity as personal non-identity, not so much the imperfections that make us individuals as the perfections that free us from individualism. We must lose our life to find it. We have over-estimated the value of individuality."

We must not conclude from such passages as the above that Dr. GOULD rejects the belief in immortality. He aims not at destroying that belief but at reshaping it, at transforming and revivifying a doctrine which he regards

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as being in danger of sinking beneath the accretions of error and superstition that have gathered round it. It is not easy, however, even for those familiar with the literature of such questions to put his view clearly and briefly. The fundamental conception that governs his hypothesis is that of ever-present all-powerful life, "ever the same, persisting, unchanged through all change, giving unity to diversity, moulding, making, discarding, choosing, healing, working to far away ends with blind and dead and obstinate materials." According to this view materialism is altogether out of court, and the fundamental fact of the universe is that mysterious something which we call Life, which we try to conceive as Force seeking objectification in material forms, whose laws we can to some extent formulate, but of whose inner essence or nature (if we must use question-begging terms) we are profoundly ignorant. "Why, or how, or whence life comes to us we do not know now, but the transcendent miracle is ever before our eyes; infinitely rich and free, life is filling, thrilling, surcharging every molecule of matter to which with wondrous power and ingenuity it can gain access." The writer proceeds: "To matter, then, life first brought and still ever brings the power of organisation, of adaptation, of spontaneous energy, and of movement. But when the death of the organisation takes place, the life that preceded and formed it is not lessened or affected. . . . . Just as matter and force are indestructible, various forms of force being interchangeable, so must it be with life. There must be a conservation of life-energy just as rigid, and this truth must remake and remould the whole conception of immortality. When a mechanical force disappears in one phase, it at once reappears in another aspect. So vegetable, animal, and mental life are but different aspects of life-force, and suffer no loss when transformed one into the other, or when the body disappears altogether. And as it is the inherent nature of force never to rest, so there is no rest for life. Banishment of life to a heaven of inaction is as impossible as it is absurd."

We have endeavoured to state Dr. GOULD'S position as fairly and as lucidly as possible, and so far without comment. To subject to an adequate examination the great problems thus raised would lead us far beyond the limits of an article like the present. We need not inform the well-instructed reader that the ideas put forward with signal ability in Dr. GOULD'S article are not original, but are part of that mass of profound and philosophic thought with which Buddhism has endowed humanity. It is easy to ridicule such doctrines, which have but a slight affinity for the Western mind in its present stage of development, but no one who knows the extraordinary power which they have exercised over "the brooding East" will be disposed to put them brusquely aside as either foolish or unintelligible. They have a very definite meaning, though that meaning is difficult to grasp, and still more difficult to explain. Whatever may be their positive value, they seem likely to make themselves felt in the modern world as a corrective of those mechanical and physico-chemical conceptions of the universe which some eminent thinkers of our own time have so rashly regarded as the last word of philosophy. "The Highest cannot be spoken of in words," said GOETHE, and probably the ultimate secret of the universe is beyond our powers either of conceiving or expressing; but if the present influx into the West of the hoary philosophy of the East does something to discredit those crude mechanical conceptions of the Cosmos which have been too long in vogue amongst us, that influx will be a matter for congratulation, and not of regret. A philosophy which reduces to a minimum the import of mind, which strives to interpret the universe in terms of arithmetic and mechanics, which believes that the microscope and the spectroscope will ultimately explain everything that is worth knowing, such a philosophy is fore-doomed to extinction.

We have regarded this question purely in its philosophical bearings. Its religious side lies beyond our province. Whether a future life divested of individuality, and consisting virtually of a reabsorption into the general life of the universe, can satisfy any of those aspirations which have grown up under the influence of Christianity, or is worthy of the title of immortality at all, must be left to the judgment of our readers. That Dr. GOULD'S views are not inconsistent with a fine ethical glow is evident from his concluding remarks. "Every day you have a hundred opportunities to give, without lessening your own supply, some of your own life, to increase the quantity and to elevate the quality of the general stock of the world's life. Help the young—they inherit the world and will use it well or ill according to your teaching and example. Stop cruelty to animals—they are your brothers, filled with the same life as your own. Fight the political ruin we are preparing for ourselves by partisanship, bribery, and class legislation. Discourage war and intemperance, and lessen the tyranny of the strong and wealthy. Wage a ceaseless war to the death against luxury, the poison that is eating and rotting the hearts of all of us. Love trees, meadows, clear brooks, the mountains, and silences of Nature. Love, not so much your own or another's individual life, as life itself. There is otherwise no immortality."

THE report of the Committee upon British and Foreign Spirits has at length been presented to the House and published in the daily press. It is characterised by extreme care and accuracy, and its conclusions seem to be marked by a conviction that it is easier to disturb and harass trade than to control and regulate public taste. Upon the whole, the report will not prove a surprise to the medical profession, or indeed to those who have followed the course of the evidence submitted. Very many curious things have been disclosed in the course of the inquiry, and many popular fallacies have been corrected, but the report is equally impartial to both sides of the alcohol controversy. Any questions connected with alcohol are usually approached with too much party spirit to allow of fair discussion. The subject is removed from the supposed calm of scientific research and treated with an amount of acrimony which alienates interest. The use of alcohol as a drink is regarded as altogether wicked, or else it is defended in an apologetic spirit, which, while recognising the evils of intemperance, pleads that the use of alcohol may be desirable if it can be obtained of sufficient purity, and if its employment be limited to moderate

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quantities. From this controversy the report intentionally keeps clear. The Committee did not think that it was within the range of the inquiry to collect evidence as to whether total abstinence from the use of spirits is better for the public health than taking them in moderate amount as a stimulant. The Committee was appointed to consider whether, on grounds of public health, it is desirable that certain classes of spirits, British and foreign, should be kept in bond for a definite period, and to inquire into the system of blending British and foreign spirits, into the sale of ether as an intoxicant, and into the propriety of applying certain legislative measures. In the report details are given of the production and consumption of spirits, together with the differences between the whisky obtained from "pot-stills," in which the heat of a fire is applied to a still containing the fermented liquid, and that obtained from "patent" or "coffey" stills, in which a mixture of malt and grain is fermented with the aid of heat derived from steam. The former contains more of the substances which give taste and aroma, as well as more of those compounds which are to be mellowed or removed by ageing. The evidence, however, points to an increased demand for whisky of a milder and cheaper kind, and thus accounts for the blends of pot-still and patent-still whisky which give a mixture containing less fusel oil and other bye-products. With regard to the differences between various forms of spirits, the report speaks in general terms and avoids anything approaching to a legal definition. All spirits contain as their basis water and ethylic alcohol, together with more or less "fusel oil," a term used to include propylic, butylic, amylic, and other alcohols, in addition to small quantities of ethereal bodies and empyreumatic compounds. Although so much has been said of these bye-products and their deleterious influence, it is stated that while a wineglassful of spirit at proof contains about 1000 grains, it is rare to find commercial spirits containing more than one or two grains of bye-products in the glass. Still more gratifying and surprising is it to learn that this proportion held good even when samples were examined which had been procured from public houses, shebeens, and fairs, under conditions which are generally supposed to favour pernicious adulterations. The specimens varied greatly in strength, but the spirit was normal. The argument against the bye-products was further destroyed by the assertion that this small quantity, added to a glass of water and taken as a dose, would have no sensible physiological effect. Upon the whole, the Committee viewed the question of blending in a favourable light, as an attempt to meet the taste and demand, which, even if it reduced the amount of bye-products present, was to be viewed as a dilution rather than as an adulteration. So, too, with regard to bonding; they thought it would harass trade to impose any restrictions, even though it was admitted that whisky would improve in bond. The fact is that no scientific explanation of this improvement was afforded. Various hypotheses were put forward, notably the possible formation of some new bodies, hitherto unrecognised by chemical analysis, but the Committee declined to be drawn into the region of conjecture, and no "established truths" being forthcoming, they very wisely preferred to leave the subject alone.

Far more interesting to medical men is the report on the evidence connected with the effects of spirits on public health. Dr. PAVY and Dr. LAUDER BRUNTON agree that old mellowed spirits are less irritating to the stomach than newly distilled spirits; but Dr. PAVY thinks that silent spirits are innocuous, although they are insipid and disagreeable, and that the bye-products are to be regarded as the condiments of the patent or silent spirits. Although his views are thus stated in the report of the Committee, they must not be construed too literally, otherwise they might lead to very erroneous inferences, when taken in conjunction with some of the earlier statements. It might indeed be imagined, since the small quantity of bye-products, when mixed with water, produces no deleterious effects and the silent spirit is innocuous, that the mixture of the two would also possess no injurious effects—a conclusion which is contrary to the commonest experience of the prolonged and inordinate employment of any form of alcohol.

THE next meeting of Convocation of the University of London will, as we have already announced, be held on the 12th inst., and will prove to be the most critical meeting of the members in the annals of the University. After the formal elections of the Chairman and Clerk of Convocation, to whose re-election no objections have been taken, and a reference to the death of the late Lord Chancellor, Earl GRANVILLE, in succession to whom the Earl of DERBY has now been duly nominated by the Crown, the Draft Supplemental Charter will be laid upon the table, and its approval will then be moved by Lord HERSCHELL and seconded by Sir RICHARD QUAIN. Neither the report of the Annual Committee nor of the Special Committee, which is supplemented by a further report of dissentient members, can be considered until after the acceptance or rejection of the proposed Draft Charter, and by that time their interest will have become simply historical. These documents have recently been forwarded to the members of Convocation, who will thus have had the various bearings of the question so fully put before them, both officially and by the comments of the public journals during the past six years, that there will be no excuse for any hesitation as to their voting. The members present when the division is taken will decide on the question of approval or non-approval. The widely signed protest may be used as an argument before the Privy Council, but has no determining power. The votes which are given in Convocation alone will affect the progress of the scheme for reconstitution. We have again and again pointed out that the provisions of the scheme are quite inadequate for the establishment of a Teaching University for London, and that they are opposed to the lines laid down by the Royal Commissioners, who strongly recommended the formation of such a university; and this contention is allowed both in the memorandum issued by the Senate and in the report of the Special Committee of twenty-five, which latter is signed by ten members only, of whom four are Fellows of the Senate, and either the framers of, or deeply committed to, the scheme. We are now concerned with the discussion of the question, which to us has been always the primary consideration, whether the proposals will remedy the

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grievance of the London medical student of average diligence and intelligence, and give him facilities for obtaining the title and degree of Doctor of Medicine on conditions similar to those on which it is granted by the other great Universities. It was to redress this grievance that the late Drs. MOXON and WILSON FOX, with many other London medical teachers still living, started this agitation, and all other questions are to us quite subsidiary to this main one. We notice with some astonishment that delegates from the various London medical schools, with the exception of King's and University Colleges, have accepted the scheme on behalf of those schools, and more especially when we find, as stated by a teacher in one of those schools in our last issue, that no general meeting of the members of the teaching staff had been summoned for its consideration. Surely signatures should not have been allowed to be appended to such a document without the cognisance of every official teacher in the various medical schools, as an unwarranted appearance of support has thereby been given to the scheme, and is being strongly urged as one, if not the chief, reason for its acceptance on the 12th inst. The interests of the schools—which, when the proper moment arrives, we are prepared jealously to guard—would seem to have taken precedence of the interests of the student. The memorandum issued by the Senate says, "No alteration is now made in the degree of M.D.," and the Calendar of the University explicitly states that Bachelors of Medicine have no right as such to assume the title of Doctor of Medicine. The Doctorate, therefore, remains on its old footing, and Pass M.B. graduates will still remain without the walls, and be unable to enter therein on any different conditions of examination than at present. It is obviously intended that the barrier between the M.B. degree, which does not carry the title of Doctor, and the M.D. degree, which does, shall be kept up as fixedly as at present, if not even more so.

We will now examine the conditions for the M.B. degree. In Honours we presume no change will be made, and we hope no increased expense will fall on the candidate. For the Pass M.B. degree the Senate will "enter into arrangements with the Royal Colleges for a combined examination in those subjects which are common to that examination and the diploma examination of the Royal Colleges." These subjects are anatomy, physiology, organic chemistry, and materia medica in the Intermediate, and medicine, surgery, and obstetric medicine in the Pass Examination. We need hardly point out that therapeutics, general pathology, and forensic medicine are practically ignored by the Royal Colleges. The subjects of organic chemistry and materia medica can be passed at the Conjoint Board before a student enters a medical school, but we suppose a further knowledge will be required for his Pass M.B. degree, and in the other professional subjects it can surely not be contemplated to substitute the existing conjoint examinations for the much more thorough and prolonged tests of the University. We fail to see how the University can carry out these examinations in combination with the Royal Colleges without lowering its standard. Indeed, if the change is merely to prevent a needless repetition in subjects common to the degree and the diploma, the solution is at once found by the Royal Colleges accepting the higher examinations of the University of London in every subject in lieu of their own. But we find no trace of this; the University meets the Colleges; the Colleges remain *in statu quo*, and the increase of expense to the intending Pass M.B. graduate will be the difference between the lesser fees of the University and the greater fees of the Corporations. Moreover, how is a candidate, who has passed only the University examinations and so is a graduate with Honours, to differentiate himself from him who has passed the minor examination in combination with that for his diploma? Is he to ostentatiously write "M.B. Lond. (Honours)" after his name? Nothing more unworkable could be devised than to have two sets of graduates: one wholly examined within the University, and the other partly by an extraneous body. Such a proposal must create inevitable confusion, and when it is explained that the diplomates of the Colleges have undergone a part of the same examination, but have no degree whatever, the confusion becomes even worse confounded. The Preliminary Scientific M.B. Examination remains as before. If this be not modified, the concessions as to the M.B. Examinations will be to the average London student virtually useless. A scientific barrier to his progress in medical study is placed before him, which is infinitely more difficult for him to surmount than any similar examination in the kingdom, or any other examination for the M.D. degree. The Senate of the University, whilst apparently trying to persuade the profession, on the one hand, that it is endeavouring to redress the grievance of London students, is, on the other, practically saying to its graduates, "We will take care that no real checks towards the obtaining of our degrees shall be removed." The proposed Supplemental Draft Charter is based on no definite principle, and satisfies nobody. It endeavours to prevent the formation of a Teaching University; it depreciates the Pass M.B. degree by specially contrasting it with that in Honours; it keeps the M.D. unapproachable by all but the exceptional student; it lessens the severity of the professional and technical subjects of the curriculum, whilst it maintains the highest standard of scientific and literary preliminary requirements. It is antagonistic to the *amour propre* of its own graduates, and confers no real advantage on the London student.

OUR readers were made aware through these columns that in the autumn of last year one of our large life assurance offices—the North British and Mercantile—had entered into an arrangement with a committee of civil servants by which special advantages in connexion with the assurance of their lives were conferred upon members of the service. Among these advantages was that of being admitted to the membership of the office without medical examination, and, indeed, without any inquiry as to health, on the assumption that civil servants in active work would average as first-class lives. This feature of the scheme was much discussed at the time and very generally condemned, for it was felt that the results obtained in actual practice by submitting proposers to medical examination are such as to prove beyond contradiction or cavil

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that this precaution is indispensable to the success of a Life Assurance Society. The directors of the North British thought, however, that the circumstances of the case with which they were dealing were so far exceptional that they might fairly forego the ordinary precaution in this instance, and, on the principle of taking the bad with the good, open their doors to all comers within the compass of their scheme. The step was a bold one, but the persons who took it were people of great experience in the business and were doubtless entitled to their opinion. It is therefore with the greatest interest that we have awaited their report upon the operations of the year 1890, for although it could not be supposed that the short period of time within that year during which the scheme was in operation would afford any sufficient test of its merits, it seemed, nevertheless, possible that some indications would be discernible of what the results of more extended experience are likely in the long run to establish. Such indications we think we can perceive in the annual report which has now been given to the public; and if we appreciate them aright, they are of no good omen from the point of view of those who have made themselves responsible for the success of the experiment. The plan has proved popular, we learn, even beyond the most sanguine expectations. The civil servants have come in their thousands, and the revenues of the Society have been augmented by upwards of £43,000 a year from this quarter. But we also observe that the directors have found it expedient to recede from their original position, and are now insisting upon a declaration and certificate of health from new entrants. It is true that the certificate is not a professional one, and, therefore, probably of little worth; but the declaration will no doubt afford the office some protection, and if the necessity of a declaration is once conceded the importance of a medical examination cannot be brought into question. We also remark that the directors, while discussing the new scheme and its operation at considerable length, abstain from giving any figures as to the mortality, and do not even say in general terms that it has been satisfactory. The aggregate figures of their published accounts afford, of course, no details of this particular department; but even the aggregate figures are remarkable, and, if we mistake not, highly suggestive. We find, for example, that the Company's income from premiums during the year 1890 having been augmented not only by the large accession of civil service premiums, but also by the ordinary growth of business in a very prosperous year, has mounted up to a figure in excess by nearly £132,000 of the preceding year's account under the same head. But on turning to the other side of the account, and comparing the payments made in the two years respectively in respect of claims, we discover that in this item there has been a much more than commensurate growth, for the company has credit for a sum so paid exceeding by above £132,000 the amount correspondingly entered in the previous year's account. So that substantially it comes to this: the growth of loss in respect of claims has been equal to the growth of premium income in a year of extraordinary prosperity in the history of the company.

Such a result is, we should think, without a parallel in the history of life assurance within this realm. That it is wholly due to the ill-omened scheme to which we have above referred we cannot suppose—the misfortune is on so large a scale. But it is very singular that, with a fact like this demanding explanation, the directors should, in their published report, have afforded no information as to the Civil Service mortality, and vouchsafed no comment even upon the extraordinary growth of their claim account. Speaking professionally, we feel placed under some obligation to the North British directors. An inarticulate notion has been gaining ground of late that some advantage might be secured by leaning less upon the medical examiner than the life assurance offices have been accustomed to do heretofore. The experiment now under discussion was a bold one, excellently well devised to test this view, and it looks very like being conclusive, and concluding the argument, moreover, in a sense to which medical practitioners cannot possibly object. Not many rival offices, we imagine, will be eager to share with the North British the advantage of saving a few medical fees at the cost of adding to the annual mortality loss a sum equal to the whole income from new premiums which such *ad captandum* measures may enable the offices to secure.

A COMMITTEE, under the presidency of Lord WANTAGE, is considering the subject of recruiting. The general annual return of the British Army just presented to Parliament will furnish its members with some interesting data to work upon. If we learn, on the one hand, that the total effective strength of the army is much greater than it was, it seems, on the other, that its real effective strength, as represented by its manhood, is less. What is wanted is a larger number of grown men and fewer lads in the ranks.

This question of recruiting is a recurring one, and the problem how to attract a larger class of men physically fit for the army is constantly cropping up. The country-bred recruit, who walks with a slouch and is slow and uncouth in manner, although somewhat phlegmatic in temperament, has a ruddy cheek and a steady equable heart beat. He is always welcomed by the examining medical officer; but he is, unfortunately, becoming rare. In place of him the slim, active, impressionable lad, with a sharp and rapidly acting heart, rendered irritable by strong tobacco and city breeding, is much more common.

If the nation requires a larger number and better quality of recruits, it is quite clear that it will have to give better pay for them, and this is naturally the last thing the Treasury wants to do. It is, however, obvious that if the monetary advantages offered by Government be substantially less than the fair market price the Government will not get the men. There is no doubt that, all things considered, the army does offer several advantages to young men, but then young men commonly weigh or consider only one thing at a time, and they are often induced to join the army thoughtlessly and under the temporary pressure of necessity. As to any prospective advantages in the shape of deferred pay, the majority of recruits probably never regard the future at all; the present is quite enough for them. We strongly suspect that the existing rate of pay will have to be raised. But the most important thing of all probably is the publication of an extremely simple clear

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contract, the terms of which must be absolutely so plain as to admit of no manner of doubt. The recruit has very keen intelligence in respect of his pay and rights, and to his mind the conditions of service, as he practically finds them after enlistment, are not such as they were represented to be, or, at any rate, as he understood them, and he begins his military life with a feeling of distrust. It would, we imagine, be far better to do away with the deferred pay, and add it to the present rate of pay—possibly in yearly increments contingent on good behaviour. A good sum of money in the shape of deferred pay only acts as an inducement to retire from the service, and the system is not beneficial to the men themselves, for it tends to develop the spirit of improvidence.

The character of the army in these modern days has altogether changed from what it was in days gone by. There was a time when the Ishmaelites of society, sturdy, turbulent young fellows, with a hatred of steady, humdrum work, but with a keen relish for adventure and excitement, turned to the army because they could not or would not get employment elsewhere. They had strong combatant tastes; the restraints of military discipline made them good soldiers, and saved them, and society, it may be, from worse things. These have to a great extent disappeared. The men of the present day are far more respectable and intelligent and they are quite as brave, but they are less matured physically and far more sensitive to the loss of liberty, the military restraints, and the petty worries of army life than their predecessors were. And here we touch on a subject which requires the careful consideration of the committee. Of course discipline is discipline, and we cannot have an army worthy of the name without it; but has military life kept pace with the times, and has everything been done that can be done in the way of the curtailment of unnecessary restraints, the exercise of great care and judgment in the infliction of punishment for petty crimes, and—where recruits and very young soldiers are concerned—in the diminution of sentries at night in garrisons in times of peace, and by the cultivation of sympathy of a worthy, manly kind—not of course the hypocritical feeling arising out of love of popularity—between officers and men Be it for better or worse, the world has been greatly advancing in these respects, and the great aim of legislation nowadays should be to find out how much discipline is absolutely needed for safety and efficiency, and to provide that and no more.

Annotations.

"Ne quid nimis."

WITHDRAWAL OF THE MIDWIVES BILL.

THE withdrawal of the Midwives Bill will scarcely be regretted by any person. Even those who are most deeply impressed with the mischief and misery associated with the practice of midwives who have had no training in midwifery will admit that the Bill was inadequately provided with safeguards against the very evils it was intended to remedy. It contained very faulty provisions for securing either the training of midwives or their discipline and supervision when trained. Under these circumstances, and with the pressure of work in Parliament, adequate amendment was impracticable, and the withdrawal of the Bill was wise. There is now breathing time which will enable those who are interested in the matter to formulate a Bill which shall do the greatest amount of good and the least amount of harm. But there is a consensus of opinion that before anything is done a select committee to investigate the matter should be appointed. Meantime, painful incidents are reported from week to week. We have before us the report of an inquest at Nuneaton, where the midwife was said to be guilty of very great negligence, and was, at the request of the jury, severely censured by the coroner.

THE NEWINGTON VESTRY AND THE NOTIFICATION ACT.

LONDONERS are prepared to acknowledge that there is much which needs amendment in the sanitary government of the metropolis, but the conduct of the vestry of Newington and of its officers in respect of their duties under the Notification of Infectious Diseases Act, which has just been brought to light, is calculated to increase the distrust with which some local administrations are now regarded. Sir Vincent Barrington, at the meeting of the Metropolitan Asylums Board which was held on the 2nd inst., announced that the vestry of Newington had instructed its medical officer of health not to forward to the managers copies of any certificates received by him under this Act other than those which relate to cases which were removed to hospital. In other words, the statistical returns, which the managers have compiled respecting the prevalence of infectious disease in London, and particularly in Newington, have been absolutely misleading as the result of the action of the vestry of Newington, which has instructed its medical officer of health not to carry out one of his statutory duties. The feeling of indignation which this conduct has created is fully justified by the circumstances of the case, and it may be hoped that this timely discovery will lead Mr. Ritchie to amend his Public Health Bill, so as to attach some penalty for neglect to comply with an obligation of so much importance to the metropolis. The circumstances of this action of the vestry of Newington demonstrate the wisdom of Mr. Ritchie in determining that an authority having jurisdiction over the whole area shall take cognisance of the proceedings of the several administrative bodies within the county. Mr. Ritchie's proposals are being strongly contested by certain metropolitan members of Parliament. We do not doubt that the best motives are the basis of their objections; but they are evidently ignorant of the fact that, while many districts are well administered, there are others for which the watchfulness of the county authority is necessary, and that neglect in one district may endanger the rest of the county. The vestry of Newington has evidently failed to realise the intentions of the Notification Act, and to understand the use to which the information it gives can be put. The vestry has regarded the operation of the Act in Newington as concerning Newington alone, and not a matter of importance to the whole of London. We would gladly see this lesson taken to heart by those who are opposing certain important clauses in the Public Health (London) Law Amendment Bill. Mr. Ritchie is far better informed as to metropolitan necessities than they are, and it will be a public misfortune if he is not permitted to carry out his intentions.

CHESTER AND OTHER RIVER WATER-SUPPLIES.

DR. BALLARD'S recent report on the prevalence of enteric fever in Chester embodied a warning as to the use of the river water as a supply for the city, the importance of which was emphasised by the lesson of the epidemic in the valley of the Tees, where the water-supply was also drawn

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from a river liable to sewage pollution. Fortunately the Chester warning has not gone unheeded, and the salient points to be borne in mind have been under discussion by the Chester Medical Society, the subject being opened up by a paper from Dr. Dobie. The extent to which varying causes of enteric fever in Chester have been in operation has not been free from doubt, and Dr. Kenyon has all along taken a view as to this which tends to exonerate the river water. Thus in 1888 he set out the view that heavy rains following on great heat and long-continued rain "reacting on surface conditions" had in the main led to the result reported on. But it is evident from Dr. Dobie's paper that Dr. Kenyon, who is regarded as the most prominent "apologist" for the Dee water, in no way sets aside the need for Dr. Ballard's warning as to that water, but only indicates that there are, in addition, conditions of surface filth which take their share in the causation of disease, and so tend to obscure the true relation of this water-service to the maintenance of enteric fever in Chester. Dr. Kenyon's apologies go very far. Thus, as quoted by Dr. Dobie, he says that there is not "one word" in Dr. Ballard's report directed against the Dee as a source of water-supply. If this were so, it would be extraordinary that so much anxiety as to the water-supply has arisen since the issue of the report. But, as a matter of fact, the report teems with argument against the water-supply. Indeed, Dr. Ballard says that the Company themselves are aware of the risk of the water above the weir being more or less polluted, when the "bore forcibly sweeps before it sewage and other foul material." He goes on to refer to certain measures of precaution taken against this; he then expresses his conviction as to their inadequacy, and he concludes by saying that "it is certain that the sewage discharged into the river contains the contagium of enteric fever whenever that fever prevails in the borough, and that at certain seasons this is washed up with the tidal water to above the waterworks intake." Well may Dr. Dobie say that he must doubt Dr. Kenyon's conclusions. But we learn something on the general question from Dr. Dobie's paper. Dr. Ballard has apparently found himself confronted with the fact that London also draws a large portion of its supply from a river that is not free from the risk of sewage pollution, and he has evidently not failed to include the metropolis within the lines of his Chester warning. Though unable to differentiate, whether in Chester or in London, between the several conditions calculated to diffuse and to maintain an excess of enteric fever, he does not hesitate to state, in a communication which was read to the Chester Medical Society, that he is morally sure that in both instances the sources of water-supply are an element in the causation of the disease, and he adds that the water-supply has more to do with the "continued presence" of enteric fever in the metropolis than the public recognise. It is to be hoped that, whether Chester, the Tees Valley, or the metropolis be in question, the time will soon have passed when people, knowing that they are supplied with and have to use a water-supply the sources of which are subject to obvious pollution, will be willing to accept as a valid argument against change the mere fact that chemical analysis has failed to supply any evidence as to the existence in individual samples of those elements of disease which chemistry has never yet discovered under any circumstances.

MUSIC IN THE TREATMENT OF NERVOUS DISEASES.

AMONG the accessories of directly medicinal treatment, and side by side with such health-promoting agencies as rest, exercise, and change of surroundings, a definite place is due by right of its character and history to music. It is true that in later, as well as in early times, the sister art has been associated rather more with what is mythic and visionary in medicine than with its accredited or scientific practice. Miracle workers, mystics, and charlatans have in all ages made much of its influence on the minds of the impressible, whether truly suffering or not. There can be no doubt also that they have, as a class, been indebted in no small degree to their appreciation of this and the like natural aids for an apparent mastery of physical effects too commonly imputed to other personal and mysterious gifts of healing. In this respect they may teach us a lesson. The possession of a refined musical taste or a so-called "ear" may be denied to many persons. Some conception of harmony is probably almost universal. This understanding differs, as it must, with different minds and moods, but it exists in some degree and form, we should say, in every human being. Each temperament knows and could show, if intelligence and language were adequate, the terms of its own simplest musical coefficient, and perhaps even some of its remembered variations. The cheerful rhythm that lightened for him an hour of gloom, the flowing cadence that absorbed his petulant irritation, are as the kindred spirits of a man's family. What wonder, then, if music be found equal to the treatment of some of his diseases—those, namely, which concern his mental and nervous condition. In connexion with this subject Dr. G. H. Lilley sends us a short and interesting paper on the Therapeutics of Music in Mental Diseases. He discusses with considerable force the effect of this ancient remedy on those disorders of nutrition which explain so many departures from the normal health of mind and body. A brief and lucid argument illustrates the close resemblance in physiological action between music and other stimuli which regulate the vaso-motor activity employed in tissue nutrition. Some general observations on the mode of applying the treatment suggested are likewise worth reading, and the paper as a whole forms a useful and practical, if somewhat irregular, contribution to the hygiene of the nervous system.

MULTIPLE NEURITIS FOLLOWING INFLUENZA.

AMONGST the sequelæ of influenza few are more striking and important than those affecting the nervous system. The degree of nervous prostration produced by the poison is often considerable, and insomnia is not an infrequent legacy left by this most searching agent. More grave are the inflammatory lesions—myelitis, meningitis, and neuritis—which have been authenticated in this connexion. A contribution to the last named has lately been made by E. Homén in the *Finska Läkaresällskapets Handlingen*, Bd. xxxii.,[1] in which is mentioned the case of a man aged twenty-nine, previously healthy, except for an attack of typhoid fever when twenty years old, who was attacked with influenza in January, 1890. Whilst convalescing he experienced weakness and numbness of the right arm, and a few weeks later of the right leg. Then muscular wasting set in, and the same series of phenomena developed in the left limbs. The weakness and atrophy continued to progress for a period of from four to six weeks, when they became arrested. When admitted into hospital in August all the limbs were found to be paretic; he could neither walk nor stand without assistance, and could only move his hands and arms to a slight extent. The muscles, especially of the hands, were extremely atrophied, and also those of the shoulder girdle; and though notably diminished in electric reaction quantitatively, there was only slight qualitative change in this respect. Sensation was slightly diminished in the affected parts, and the nerve trunks were tender to pressure. There was no vesical or rectal incontinence. It is noteworthy that the patellar reflexes were present. The patient much improved under

[1] Abstract in Fortschritte der Medicin, No. 9, 1891.

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electricity, massage, and tonics. It is added that he had never had syphilis. A brother of this patient, who was attacked with influenza at the same time, and who had a relapse a few months later, was almost suddenly affected with paralysis of the left arm, followed by atrophy and sensory disorder, attributed to neuritis. He rapidly improved.

"COVERING" IN NORTH LONDON.

MR. ROBERT WILLIAMS HUMPHREYS, M.R.C.S., summoned by the Registrar-General for giving a false certificate of the death of a child named Ruth Thornton for the purposes of registration, has been fined £5 and £1 15*s.* 6*d.* costs. Mr. Humphreys did not see the child till two hours after its death, but gave a certificate. The child was seen by a neighbouring chemist named White, and the mother knew no one but White, whom she called "Dr. White," unqualified. Mr. Humphreys' defence was that he was justified in giving the certificate, he having been ill at the time, and the details of the case and prescriptions having been brought to him for his acquiescence. We are sorry to see another practitioner fall into such an error, after the clear warning given by other prosecutions and the General Medical Council.

MICRO-ORGANISMS OF MALARIA.

THE mode of propagation and other characteristics of malarial fever have long since given rise to the idea that it is caused by a specific organism, but although many have been described by various observers, none of them have been able to stand the test of Koch's postulates. The first discovery of organisms which had any constant connexion with malarial manifestations was made by Laveran in 1880. Klebs and Tommasi-Crudeli obtained a bacillus from the earth and air of malarious districts, which, when inoculated on rabbits, produced an intermittent form of fever, with enlargement of the spleen and formation of pigment in the spleen and liver. What they found was probably a mixed culture, but Schiavuzzi, working on the same lines, but employing Koch's methods of cultivation, isolated an organism from the earth of malarious districts which produced the same effects on animals. Shortly afterwards Cuboni and Marchiafava announced that they had found bacilli morphologically similar to those described by Klebs in the blood of malarial patients. In 1883 Marchiafava and Celli, by examining cover-glass preparations of blood stained with methylene blue, found amœboid bodies (plasmodia) enclosed within the red corpuscles, but they were not able to cultivate them outside the body. From the above investigations it is difficult to arrive at any satisfactory conclusion, but the paper lately read by Surgeon J. Fenton Evans, I.M.S., before the Royal Society, on the "Demonstration by Staining of the Pathogenic Fungus of Malaria, its Artificial Cultivation, and the results of Inoculation of the same," places the matter on a more satisfactory footing. After an enumeration of the various organisms which have been found in the blood during or after attacks of ague, Dr. Evans proceeded to describe his method of staining, the advantage of which lies in the fact that by it the organisms can be permanently stained, all previous methods having afforded a temporary and unsatisfactory staining. The stain used is an anilised alkalised solution of rosaniline hydrochloride after treatment with bichromate of potash, or an anilised alkalised solution of Weigert's acid fuchsin after treatment with dilute sulphuric acid. By these staining methods the organisms have been demonstrated in the blood, and also in the tissues. The existence of the plasmodia within the red corpuscles was negatived; they were shown to be superficial, but closely applied to the corpuscles. The isolation of the organism and its artificial cultivation were successfully carried out, and the author showed that this result depended entirely for its success upon the fact that the nutrient media must be inoculated with living blood—that is, before rigor mortis has set in. Alteration in the chemical composition of the nutrient medium elicited the interesting result that the organism could pass to a more highly developed state, displaying the structure and fructification of a highly organised fungus, appearing to the naked eye very similar to the ordinary mucor, but differing from it very materially under the microscope. Inoculation of animals with the growths produced a frequently fatal disease, which displayed in a number of instances a definitely intermittent character. It was further invariably accompanied by the appearance of the characteristic organisms in the blood drawn after death from the right ventricle. While, naturally, we shall await with considerable interest the corroboration or otherwise of Dr. Evans' researches at the hands of those workers who have already paid attention to this subject, yet there are one or two seemingly contradictory observations that already call for notice. They are specially those which concern the part played by the organism in the production of intermittent fever. That the appearance of the organism in the blood as a general rule coincides with an attack of ague all are agreed. Similarly all observers concur in stating that to its multiplication in the blood malarial cachexia is due. Dr. Vandyke Carter, however, has made the somewhat startling statement that the organisms previously present in the blood may entirely disappear during an attack of ague. Dr. Evans goes even beyond this in affirming the constant presence of the organisms in the blood of the inhabitants of malarious districts, both in the blood of those who are apparently healthy and have never suffered from ague and in the blood of those who have previously been attacked. Further, the intermittency of the disease, which followed the experiments on animals, was accompanied in these animals by reduction of temperature below the normal. This may, however, be due to the circumstance that rodents were used for experimental purposes. But, apart from this, the question now calling for further investigation is, What are the circumstances under which an organism which has gained entry into the body may in one instance induce fever and in another anæmia leading to cachexia, or be present without injury to health? Possibly in the solution of this question lies a remedy for a disease which, except in its acute manifestations of fever, is at present only curable by change of climate.

DOUBLE STAINING.

IN a note in the *Deutsch. Med. Wochenschr.*, No. 15, 1891, Professor B. Fraenkel stirs up a storm in a teacup, and objects to what, though comparatively rare in England, is of very frequent occurrence in Germany. He complains that Dr. Gabbett has made an unimportant modification of his method of double staining, and although complaining that Dr. Gabbett had not seen an account of his work, he apologises for returning to the subject at such a late date by saying that he himself had not seen Dr. Gabbett's account. In the first place, the method was found out entirely independently; in the second, it differs quite as much from any other used as do many of those to which in Germany a special name is given; and in the third place, Professor Fraenkel's note contains internal evidence both of how systematically many German writers ignore English work, and of the very rare occurrence of any work in this country being borrowed, even indirectly, from German authors without full acknowledgment being made. To set matters straight, we would suggest that Professor Fraenkel should receive all the credit for using nitric acid mixed with methylene blue instead of separately where the Weigert-Ehrlich method is used; and that

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Dr. Gabbett, who made perfectly independent observations and experiments, should receive the credit for mixing the sulphuric acid with the methylene blue where the Ziehl-Neelsen method is used. Professor Fraenkel should then be satisfied. In any case the modifications are so evidently necessary for rapid work that if Professor Fraenkel and Dr. Gabbett had not made these modifications, or at any rate had not published them, other observers would, as the method had certainly been used by other observers before it was published by either; and while of course every credit should be given to both of these gentlemen for making generally available such a convenient method, it cannot but be felt that Professor Fraenkel is making a great fuss about a very small matter.

WOMEN AS CHEMISTS.

IT has always, since the claim for equality was first put forward, been a subject for speculation why women should press so eagerly into circles for which their physical characteristics to a large extent unfit them, while they neglect other forms of occupation for which they might be thought to be peculiarly adapted. With certain noteworthy exceptions, they do not take kindly to microscopic work, which, with all its neatness of manipulation and pleasing results, would seem to open a field to those requiring employment. In this country there has hitherto been no decided rush upon chemistry, although many of the terms employed in connexion with "elegant mixtures," and the pleats and folds of the paper wrappers, appear almost intentionally designed to appeal to the artistic sense of the fair sex. It is therefore the more interesting to find that in Germany, where the social status of women is far below that in England, an active move has been made in the form of a petition to the Prussian House of Representatives to demand the admission of women to the practice of the profession of chemist. The petition sets forth their historic right, and makes much of their dexterity and deftness in all manual operations; it also refers to the absence of any demand for severe bodily exertion, and, in terms which might almost be supposed to possess sarcastic significance, it states that in this occupation "an unwomanly entrance into publicity" is by no means a necessity. Provided that women are in earnest in their desire for this work, and that they are ready to fit themselves for this calling by scientific study and faithful application, there is no reason for desiring to limit their aspirations or to confine their sphere of usefulness to Germany.

SERIOUS SYMPTOMS FOLLOWING MORPHIA AND COCAINE.

DR. JULIO SAN MARTIN of Havana describes in the *Crónica Médico-Quirurgica* a somewhat singular case, where very serious effects followed the application of morphia lotions, associated with cocaine ointment, to the vulva, in the case of a stout lady who had for some years been the subject of diabetes. At the time when the above medication was prescribed there was a considerable quantity of sugar in the urine, the amount passed varied from one to four litres in the twenty-four hours, and the pruritus had become unbearable. The treatment was found to give so much relief that the patient began to resort to it five or six times a day. Very soon she began to suffer from sleeplessness, general excitement, and restlessness, and a terrible sense of impending death. There were, too, delusions—as, for example, that the right side was paralysed, which was not the case. She complained of a sensation of pricking in both arms, and of something which she thought was the "bone of the heart" moving about inside the chest. Once these symptoms were so severe that Dr. San Martin was called up at night. He gave some bromide at first, and, after having ascertained that the urine contained a trace of albumen and nearly 8 per cent. of sugar, prescribed chloral and morphia internally. This treatment unfortunately appeared only to produce an exacerbation of the excitement, and it then occurred to him that the symptoms might be due to the previous medication. Drugs were therefore given up and recourse had to hot baths, under which the patient became much calmer and improved in every way, even the sugar in the urine decreasing in a very marked degree. Dr. San Martin has frequently prescribed morphia or cocaine for the severe pruritus vulvæ sometimes observed in diabetic patients, without noticing any toxic effects such as occurred in the present case. He remembers two cases in which neither of the two drugs appeared to be of much use by itself, but where a satisfactory cure was obtained for the itching by combining them. The absorption of a sufficient quantity of cocaine to produce toxic effects from an ointment is certainly rare, and Dr. San Martin is disposed to think that in this case the fact of the kidneys having to excrete a large quantity of sugar may have produced a condition favourable to the absorption of cocaine, or perhaps that the patient had an idiosyncrasy making her peculiarly susceptible to small quantities of this drug.

THE MEDICAL SOCIETY OF LONDON.

THE annual conversazione of this Society took place on Monday evening, May 4th, under the presidency of Dr. Douglas Powell. A large number of Fellows of the Society listened to the oration delivered by Sir Joseph Lister on the Coagulation of the Blood in its Practical Aspects, and this was followed by a reception by the President, the string band of the Royal Horse Guards (Blue) playing a selection of music in the vestibule. The rooms were brilliantly illuminated, and the walls decorated with a number of paintings and drawings kindly lent for the occasion. The phonograph was in use; and Professor Stewart, of the Hunterian Museum, sent a case of insects, showing characters by which the sexes are distinguished in some animals independently of those organs concerned in reproduction.

CANCER OF THE TONSIL.

DR. ONODY showed at a recent meeting of the Buda Pesth Medical Society an old man with a tumour of the right tonsil as large as a small egg, which gave but little trouble, and did not interfere either with respiration or deglutition. It was evidently a scirrhus, but was not operated on on account of the patient's great age and weakness. Subsequently Dr. Josef Neumann mentioned to the Society that he had seen no less than three other cases of primary cancer of the tonsil in the Rochus Hospital.

THE REGISTRATION OF BAKEHOUSES.

WE are glad to note that the Bakers' Federal Union of Scotland are agitating for the compulsory registration of bakehouses. In the midland counties also the bakers' societies have been assisting medical officers of health to discover and to visit insanitary bakehouses. The Birmingham and Midland Bakers' Society adopted the following resolution: "That in order to secure a proper sanitary inspection of bakehouses, it is necessary that any baker, confectioner, or other person using them for the purpose of manufactering bread, biscuits, small goods, pastry, &c., should be compelled to register the same, the local authorities having power to withhold a licence in case of unfitness." This resolution was also approved by the Birmingham Trades' Council, and then forwarded to the Staffordshire County Council, to the Birmingham City Council, and to the chairman of the Health Committee. The bakers of the midland counties now urge that what has been done in Birmingham should be attempted in all

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other parts of the kingdom. A pressure might thus be brought to bear that would be irresistible. Already the Home Secretary and a number of members of Parliament have received letters from bakers urging that a very slight alteration in the wording of the Factory Bill would suffice to ensure the registration of bakehouses. This is very essential. Sanitary inspectors must not be left to find out where bread, biscuits, pastry, &c, are baked. We do not doubt the zeal of such officers, but know they are already overworked. An insanitary bakehouse might exist for some considerable time before it was discovered, and even when the facts are revealed it is always more difficult to remedy than to prevent an evil. The bakers, therefore, are right in demanding that registration should be compulsory. Anyone desiring to bake bread for public sale should send a notice to the sanitary authority, and be licensed to make bread only after the bakery has been carefully inspected and found in good sanitary condition. These are points on which we have always insisted, and now that the attention of Parliament is so largely devoted to questions of this description, the moment has come when the claims of the bakers should be pressed forward. The health of bakers is seriously compromised by the insanitary condition of many bakehouses, and bread made in such places cannot be safely eonsumed.

SUPERNUMERARY MAMMÆ.

MR. W. ROGER WILLIAMS, F.R.C.S., contributes to vol. xxv. of the *Journal of Anatomy and Physiology* a short but interesting paper on supernumerary mammæ,[1] in which he combats the view that has lately been suggested that these structures are "sports." He rightly considers this view opposed to the principle of heredity, and thinks the evidence adduced in its favour quite inadequate to account for the sudden appearance of such highly specialised organs, which have taken long periods of time to attain their present degree of perfection. He holds that the mamma is the representation of a single sebaceous gland, and that the nipple, as shown by its absence in the ornithorhyncus, does not develop until after the glandular elements have been formed. The occurrence of more than one pair of mammæ in the human female has been frequently observed, and a careful examination of these cases has led Mr. Williams to the conclusion that our early progenitors had at least seven pairs of mammæ on the ventral aspect of the trunk, of which only the present pectoral pair have survived. Of the six lost pairs three were situated above and external to the present normal pair, and three below and internal to them. Mr. Williams describes many other remarkable cases which he has exhumed from periodical literature, and discusses the bearing of these abnormalities on neoplastic formations. He shows that of fifty cases of fibro-adenoma of the mammary region, seven (14 per cent.) originated in supernumerary mammary structures, whilst nearly the same proportion of cases of cancer originated in the same parts.

CIGARETTE SMOKING.

IN spite of their popularity, cigarettes have long been regarded with suspicion. The quality of the tobacco employed has often been questioned, and sceptics have even doubted whether any tobacco is to be found in some of the cigarettes ordinarily sold. The irritating effects have been attributed to this cause, or to the practice of "inhaling," or sometimes to the paper; but if the details of a Dalziel telegram from Milwaukee are to be credited, cigarette smoking is fraught with other dangers also. The telegram states that a post-mortem examination of two boys who died from excessive cigarette smoking showed that there was phosphorus in the stomach, and that the symptoms indicated that death was caused by this substance, combined with nicotine and an arsenical solution used in the preparation of the paper wrappers of the cigarettes. The presence of phosphorus is not accounted for, nor are any details given of the mode by which the combined poisoning by phosphorus, nicotine, and arsenic could be determined. These difficulties require elucidation before the charge can be regarded as proven. It will be remembered that THE LANCET Analytical Sanitary Commission on Egyptian Cigarettes found the paper to be free from arsenic.[1]

"TROPHIC CENTRES IN THE CORD."

UNDER this title M. Brissaud has contributed an important and suggestive paper, which appears in a recent number of the *Archives de Neurologie*. The paper deals primarily with the subject of alcoholic neuritis, and the subject discussed is whether associated with the changes, which are acknowledged to be present in the peripheral nerves, there may not coexist in the spinal cord some change in the cells of the anterior horns of the grey matter. It is not denied that the chief force of the poison seems to expend itself on the peripheral nerves in alcoholic paralysis, as in other forms of toxæmia in which weakness and muscular wasting are observed, such as lead palsy; but the author contends that, as in some of those cases, there certainly are changes in the grey matter of the cord; so, it may be, similar or analogous changes may at times be recognisable in cases of multiple neuritis from alcohol. Changes of this nature have actually been described by d'Oettinger and Korsakoff, and by Finlay and Sharkey, and the author points out the probability of such changes occurring especially when the symptoms of muscular weakness and wasting with localised pain are confined to the region of distribution of a certain nerve or plexus of nerves. And even if changes in the cord are not recognised, it does not follow that they are not present, for it may be that changes do exist which by our present methods are still unrecognisable. A curious fact in this connexion is that mentioned by M. Raymond, who produced artificially a slight degree of myelitis in animals, the symptoms of which soon disappeared. When the animals were killed a year or eighteen months later examination could reveal no trace of the original myelitis, but the nerves in connexion with the injured segment of the cord were not unfrequently found to have undergone profound alteration.

THE PREVENTION OF FLOODS IN ITALY.

DENUDING the hillsides of their woods and the torrential rainfall that inundates the plains below is in Italy particularly so much of an "antecedent and consequent" as to have already attained the dignity of "cause and effect." The Italian Legislature has frequently had the subject under consideration, and, with a view to encourage the replanting of those uplands where tree-felling has been most ruthlessly practised, it has announced a series of prizes to be competed for by the local proprietors who shall produce the best examples of restored forest growth and regulated water-flow. The provinces of Lucca, Pisa, Leghorn, Florence, Arezzo, Siena, Grosseto, and Perugia are the first in which the competition is declared open, and the operations proposed to the competitors are divided into two categories, according to the amplitude of the soil in which they are carried out. For the first category the prizes assigned are a first-class diploma with the sum of 1000 fr. (£40), and two second-class diplomas with

[1] Polymastism, with special reference to Mammæ Erraticæ, and the Development of Neoplasms from Supernumerary Mammary Structures.

[1] THE LANCET, vol. ii., 1888, p. 785.

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500 fr. (£20) each, for the replanting of hillsides; a first-class diploma with 2000 fr. (£80), and two second-class diplomas with 1000 fr. (£40) each, for the regulation of the water-flow down the slopes. For the second category the prizes are a first-class diploma with 500 fr. (£20), and two second-class diplomas with 300 fr. (£12) each, for replanting; and a first-class diploma with 800 fr. (£32), and two second-class diplomas and 400 fr. (£16) each, for regulating the water-flow. Less successful competitors will be encouraged with silver and bronze medals to renew their efforts for the higher awards. All this is as it should be, and comes not a moment too soon. In the last Parliamentary field-day on the subject it was demonstrated that the climate of whole provinces had been changed for the worse by the steady destruction of their woods, Umbria being a conspicuous example; while, in the Venetian territory particularly, autumnal inundations are expected with the regularity of Atlantic gales on the shores of Western Europe.

PHYSIOLOGICAL EFFECT OF BATHS IN TYPHOID FEVER.

DR. KURKUTOFF, who has examined the physiological effects of baths administered to typhoid fever patients in Professor Manassein's clinic in St. Petersburg, finds that such baths exert only a slight effect on the assimilation of the fatty constituents of foods, which, as in other fevers, is notably less than in healthy persons, and indeed varies directly with the gravity of the case; but there seems to be a good deal of difference as to the power of assimilation of fatty matter in different cases, probably depending on the functional disturbance in the bowel and on the amount of the individual peculiarities of the patient. In the graver cases the effect of the baths was to improve somewhat the assimilation of fat to the average extent of nearly 4 per cent. In slight cases, however, the effect was, apparently at least, to diminish the assimilation to the average extent of rather more than 6 per cent.

FOREIGN EPIDEMICS.

RUMOURS have been current as to a recrudescence of cholera near Marash in Syria; but though the fatal attacks have been designated under that name, there are reasons for suggesting that the disease in question has been typhoid fever. In the Assyr plague is reported to have broken out, notably at Beni-sheir and at Ebba; but here, again, the symptoms are not very clear. Thus, whilst there are somewhat typical hæmorrhages, the characteristic bubo has not been noticed.

HEMIATROPHY OF THE TONGUE.

A CASE in which this rare condition was present is recorded by Dr. Birkett in the *Montreal Medical Journal*. The patient was a young man of twenty-three, and when his mouth was opened the tongue was seen lying on its floor with the tip pointing to the left, the right half appearing more bulky, and in front of the left half, which appeared retracted. On protruding the tongue quite an opposite condition of parts was present. The tip now deviated to the right side, the right half was much smaller, its surface being in numerous folds, and of a yellow colour, and very flabby to the touch. On phonation the palate deviated to the left, there was abolition of tactile sensibility over the fauces, but the tongue retained both its special sense and ordinary tactile sensibility, and sensibility of the lips and the buccal mucous membrane was retained. The right vocal cord was in the cadaveric position, and on phonation remained almost immobile. Sensibility was diminished as low down as the epiglottis. There was inequality of pupils, the left being the larger. The patient referred the commencement of his illness to an attack of mumps nine years before, after which he had had a swelling on the right side of his neck. A few years later he noticed that pressure over the seat of this swelling produced flushing and sweating of the right side of the face, together with extreme dryness of the throat. On examination a swelling, apparently an enlarged and hardened gland, was found at the anterior border of the right sterno-mastoid, and pressure over this produced redness of the right side of the face with sweating, and at the same time a sensation of dryness in the throat, and the author regards this swelling, which he supposes to exert pressure on the hypoglossal nerve, the pharyngeal plexus, the accessory nerve to the vagus, and the superior cervical ganglion of the sympathetic, as the cause of all the symptoms.

CONGRESS FOR THE STUDY OF TUBERCULOSIS.

THE programme of the Second Congress on Tuberculosis, which will take place in Paris from July 27th to August 2nd, under the presidency of Professor Villemin, comprises the following subjects: (1) On the identity of human tuberculosis with that of bovines, the gallinacea, and other animals; (2) the bacterial and morbid associations of tuberculosis; (3) on hospital treatment of the tuberculous; (4) prophylaxis of tuberculosis in man and animals; (5) agents which are capable of destroying Koch's bacillus without injury to the organism, in regard to the prophylaxis and treatment of human and animal tuberculosis. Dr. L. H. Petit, 11, Rue Monge, is the secretary, and Mr. G. Masson, 120, Boulevard St. Germain, the treasurer, of the Congress.

ARMY MEDICAL SERVICE.

A CONFERENCE was held at the House of Commons on Tuesday, May 5th, between Sir Andrew Clark, Bart. (President of the Royal College of Physicians), Mr. Macnamara, and Dr. Farquharson, M.P., and the Secretary of State for War. The proceedings were of a most cordial and friendly character, and Mr. Stanhope promised to give careful consideration to the points laid before him by Sir Andrew Clark and Mr. Macnamara, and furnish an early reply.

FOREIGN UNIVERSITY INTELLIGENCE.

Nancy.—Dr. Schmitt has been promoted to the Professorship of Therapeutics and Materia Medica, and Dr. Baraban to that of Histology.

St. Petersburg.—Dr. Zamshin has been recognised as *privat-docent* in Obstetrics and Gynæcology, and Dr. Kianovski as *privat-docent* in Medicine, in the Medico-Chirurgical Academy.

Strasburg.—Drs. Minkowski, Pfitzner, and Ulrich have been recognised as *privat-docenten* in Medicine, Anatomy, and Ophthalmology respectively.

Würzburg.—Dr. Oscar Schultze has been promoted to an Extraordinary Professorship of Anatomy.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Joseph Leidy, Professor of Anatomy in the University of Pennsylvania and of Natural History in Swarthmore College. He was also President of the Academy of Natural Sciences of Philadelphia and Director of the Department of Biology in the University.—Dr. Sieber of Berlin.—Dr. Liebert of Charlottenburg.—Dr. F. Biermann of Prague, in his eighty-eighth year.

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THE report of the results of analyses of the metropolitan water-supply during March, 1891, by Dr. E. Frankland, F.R.S., shows that the water abstracted from the Thames by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies, which was so seriously polluted by vegetable organic matter in February, had in every case returned to about its normal condition at this season of the year. It was efficiently filtered before delivery. The bacteriological examination by Dr. Koch's process of gelatine-plate-culture gave the following results: — One cubic centimetre of each water collected in sterilised vacuous tubes on the same days as the samples for chemical analysis developed the following numbers of colonies of microbes: West Middlesex 38, Southwark 56, Kent 116, Lambeth 160, East London (river supply) 214, New River 230, Chelsea 278, and Grand Junction 470.

THE past and present students of the Birmingham Medical School and the professional friends of Sir Walter Foster propose to entertain him at dinner on Wednesday, May 13th, at the Midland Hotel, Birmingham, on the occasion of his retirement from the post of physician to the Birmingham General Hospital, and an address signed by some 300 practitioners will be presented the same evening. Mr. H. R. Leech, Monument-road, Birmingham, is receiving the signatures and applications for dinner tickets.

INSPECTOR-GENERAL OF HOSPITALS ROBERT LAWSON, half-pay, has been appointed Honorary Physician to the Queen, in the place of Surgeon-General T. G. Balfour, M.D., F.R.S., retired pay, deceased.

A PAN-AMERICAN Congress of Physicians and Surgeons has been suggested by Dr. C. A. Reed of Cincinnati, to be held probably in Chicago in 1893.

DR. DA COSTA has resigned the chair of Practice of Medicine at Jefferson College, Philadelphia, a post which he had occupied for twenty-six years.

Pharmacology and Therapeutics.

COMMON THYME IN WHOOPING-COUGH.

COMMON THYME, which was recommended in whooping-cough three or four years ago by Dr. S. B. Johnson, is regarded by Dr. Neovius, who writes a paper on the subject in a Finnish medical journal, as almost worthy of the title of a specific. During an epidemic of whooping-cough he had ample opportunities of observing its effects, and he came to the conclusion that if it is given early and constantly it invariably cuts short the disease in a fortnight, the symptoms generally vanishing in two or three days. They are, he finds, liable to return if the thyme is not regularly taken for at least two weeks. Regarding the dose, he advises that a larger quantity than Dr. Johnson prescribed be taken. He gives from one ounce and a half to six ounces per diem combined with a little marshmallow syrup. He never saw any undesirable effect produced except slight diarrhœa. It is important that the drug should be used quite fresh.

IODINE COMPOUNDS OF ANTIPYRETICS.

Dr. E. Münzer has recently made some observations in Professor von Jaksch's wards in Prague on iodantipyrin or iodopyrine, which was first prepared by Dittmar some five or six years ago. It is a crystalline substance, very slightly soluble in water or alcohol, and, chemically speaking, is simply antipyrin in which one atom of hydrogen is replaced by iodine. It appeared to have much the same antipyretic and analgesic properties as antipyrin itself, but produced no unpleasant effects. In one case where there was very severe frontal headache, probably of syphilitic origin, its action was remarkably prompt, a single dose of fifteen grains sufficing for a permanent cure. In a case of subacute rheumatism, too, a couple of doses entirely cured the patient. Observations with iodacetanilide were also undertaken, but no antipyretic or analgesic effects could be detected.

ARISTOL IN KERATITIS.

Dr. Bourgeois strongly recommends the employment of aristol in ulcerative and suppurative keratitis when no complications exist and when operative procedures are out of the question. He applies the powder directly to the cornea, either with a brush or with the insufflator, and keeps the eyelids closed with an antiseptic dressing. He has never found the patients complain of pain having been caused by the aristol; indeed, they scarcely seem aware that there is any foreign body under the lids. The results obtained are stated to have been remarkably good.

SULPHONAL IN TRISMUS NEONATORUM.

Dr. Berényi mentions a case of trismus neonatorum in a child of a week old, which was completely cured by enemata containing three grains of sulphonal supplemented by the internal use of the same drug. No injurious effects were observed, though the child took in the course of six days more than 150 grains of sulphonal.

HYDROCHLORATE OF PHENOCOLL.

Dr. Hertel, assistant in Professor Gerhardt's clinic, has published an account of some trials of a new antipyretic, hydrochlorate of phenocoll, a white crystalline powder which is readily soluble in water. The dose required is from seven grains and a half to fifteen grains, and this reduces the temperature from 0·9° to 2·7° F. without producing rigors, sweats, or any other disagreeable symptoms. The effect was very marked on some cases of rheumatic fever which had been treated without result by antipyrin, salicylates, phenacetin, and antifebrin. Here seventy-seven grains were given during the twenty-hours, and appeared to reduce the pain in the joints as well as the temperature. In a case of severe gonorrhœal rheumatism, however, no effect was produced. In phthisis seventy-seven grains during the twenty-four hours soon reduced the temperature almost to normal. It was noted that more effect was produced by the drug on the temperature during the day than on the evening rise. There was no injurious effect on the kidneys, but the urine was coloured a deep reddish-brown by seventy-seven grains.

STRYCHNINE INJECTIONS IN DIPHTHERITIC PARALYSIS.

Dr. W. Rozenzweig of Neuwied reports four cases of paralysis of the soft palate after diphtheria, occurring in children of from six to twelve years old, in which a rapid cure was effected by the hypodermic use of strychnine. The doses were from two to three milligrammes, and were injected into the neck. In one case a remarkable improvement was produced by the first injection, and in another a complete cure was obtained by three daily injections. In none of them was treatment required beyond a week.

EFFECT OF QUININE ON THE HEALING OF WOUNDS.

Dr. Sokoloff has published some interesting observations on the effect of quinine administered to a wounded animal on the granulation and cicatrisation of the wound. The experiments were conducted on rabbits. The fur was shaved from a portion of the paw, and an incision made through the skin and into the muscular tissue, the external wound being then sewn up and the whole dressed antiseptically. Subsequently microscopical observations were made on sections including the wound. Twenty-four rabbits which were experimented on in this way were treated with hydrochlorate of quinine, half a grain of which was given per diem for each kilogramme of body weight. A similar number of control rabbits were operated upon in precisely the same manner, but were not given quinine. Dr. Sokoloff gives a detailed description of the microscopical appearances observed each day for eight days in the two sets of cases. The effusion of blood was much the same in both, but there was a marked difference in the condition of the muscular tissue. In the control animals this lost its striped character, the portions in the immediate vicinity of the wound presenting the appearance of an amorphous homogeneous substance containing here and there a few muscular fibres or breaking up into separate pieces as in coagulation necrosis. Besides this, the muscular tissue gradually disappeared, leaving sheaths of sarcolemma either empty or filled with cells. In contrast to this state of things sections taken from the animals treated with quinine presented little or no sign of muscular degenera-

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tion, the fibres preserving their proper structure. With regard to the cellular elements in the control animals, two forms were found in the neighbourhood of the wound—a large number of multi-nuclear leucocytes, and a much smaller number of large round or oval cells with a single large nucleus. The mean diameters of these cells after three days were 19μ and 16μ, after five days 17μ and 13μ, and after eight days 18μ and 15μ. During this period the nuclei presented various karyokinetic figures. In animals treated with quinine there were no multi-nuclear cells, all being oval, with a single nucleus and smaller than the corresponding cells in the control animals, the mean diameters being after three days 13μ and 10·5μ, after five days the same, and after eight days 14μ and 11μ. The cells were, moreover, more numerous than in the control observations. In the quinine-treated animals the karyokinetic process commenced and finished earlier than in the others, the chromatin filaments being also less numerous but thicker. Altogether there was less inflammation with quinine than without; in short, without quinine there was Zenker's degeneration, with quinine none.

THE INFLUENZA EPIDEMIC.

THE outbreak of influenza, which first made its appearance in this country about a month ago, and was for a few weeks confined within a comparatively limited area, has now spread over the whole country. The disease has gained considerable footing in the metropolis, but not to the extent that it did in January of last year. Many prominent men in the State have been attacked with it, and some of the functions of Parliament have been suspended. The illnesses of Lord Derby and Lord Sandhurst have interfered with the work of Committees on which they are engaged; and amongst other members of Parliament who have been incapacitated by it may be mentioned Mr. Henniker Heaton, Mr. Mundella, Mr. Stuart Wortley, Professor Stuart, and Mr. Akers Douglas. The severe loss sustained by the Church and Parliament in the death of the Archbishop of York must, we fear, be attributed to the same insidious disease; whilst the Bar has been deprived of one of its ablest members in the death of Mr. Lindsey M. Aspland, LL.D., Q.C., who was also a member of the Council of University College and a prominent member of Convocation of the University of London.

Dr. Wightwick, the medical officer of health to St. Olave's district, in a report presented to the board, stated that, so far as his experience went, the nervous type of the disease, complicated with severe lung symptoms, was more frequent than last year. This is borne out by the exceptional rise in the mortality from bronchitis and pneumonia in the towns which have been most affected. Sheffield still holds an unenviable pre-eminence in this respect, its mortality rate having last week advanced to the extraordinary figure of 70 per 1000; but we are glad to learn that the virulence of the epidemic is now on the decline in that town. It has now spread to all parts of Yorkshire, but is especially prevalent in the East Riding. There does not appear to be much abatement of it in Leeds and Bradford and the surrounding districts.

It continues to prevail severely in Lincolnshire, and has spread to the midland and eastern centres. Our correspondent at Leicester, writing on the 4th inst., says: "Influenza has appeared here during the past week, and is at present pretty prevalent, with, in many instances, very severe symptoms."

In Liverpool it seems to be much on the increase, and to be interfering with the trade of the port. It has been found necessary to discharge the inmates of the Woolton Convalescent Home and to close the institution.

From all parts of Wales accounts have been received of its extension to country districts as well as in the towns. It is very prevalent in Cardiff, and Mr. Garrett Horder writes that "in several cases there has not been so much gastric disturbance as in the epidemic of last year, and in cases uncomplicated with severe lung affection convalescence has been more rapid."

In the west, cases are recorded from Somersetshire; and in the south-eastern counties Kent seems to be at present the chief centre of the disease.

So far, then, as compared with the epidemic of 1889-90, its spread has not been so rapid, but it has been none the less sure; and there has been considerable variation in the severity of the type of disease, some districts which furnish many sufferers having a much lower mortality than others. On the whole, however, we fear that there can be little doubt as to its virulence being greater than last year's epidemic, which, contrasted with previous outbreaks, was comparatively mild, and was not responsible, either directly or indirectly, for so great a mortality as has occurred in this country during the past few weeks, especially from acute diseases of the respiratory system.

DIRECT AND INDIRECT INFLUENZA MORTALITY IN LONDON.

The last weekly return of the Registrar-General affords undoubted evidence of indirect mortality from influenza in London, in addition to the thirty-seven deaths that were directly referred to that disease in the week ending last Saturday. The Registrar-General's annual summary for London and other great towns in 1890, recently issued, furnishes some important statistics upon the indirect result of the influenza epidemic in London in January of that year. It is pointed out that the temperature in January was high, and exceeded the average for that month by 7·1° F. Notwithstanding this marked excess in the temperature, the mortality in January, more especially from lung diseases, showed "an enormous and sudden increase," and exhibited unusual features which undoubtedly pointed to some exceptional influence. The increase in the mortality from lung diseases, which invariably takes place in winter, is usually far more marked under the heading "Bronchitis" than under the heading "Pneumonia." In January, 1890, however, not only was the excess of lung mortality unusually great, notwithstanding the high temperature, but while the excess of mortality from bronchitis was 64 per cent. above the January average, the excess from pneumonia was 97 per cent. Again, it is pointed out that during this month the increased mortality occurred mainly among persons aged between twenty and sixty years, whereas the ordinary winter excess of mortality from lung diseases occurs mainly among persons aged upwards of sixty years. Thus the mortality from bronchitis in London in January, 1890, was higher than in four selected cold periods of 1874, 1878, 1879, and 1880, while the rate of mortality from pneumonia during the same month was very considerably more than twice as high as in the same four selected cold periods. The connexion between this exceptionally high mortality from bronchitis and pneumonia during the first month of last year (notwithstanding the high temperature) and the influenza epidemic does not seem to admit of a doubt. These facts give increased interest to the Registrar-General's statistics of mortality from lung diseases in London last week. It appears that the deaths referred to diseases of the respiratory organs, which had been 504 and 471 in the preceding two weeks, rose last week to 589, and were 220 above the corrected average. The largest part of this excess was shown in the deaths referred to pneumonia, which numbered 241, and exceeded the average by 112, while the 281 deaths referred to bronchitis exceeded the average by 75. It should be pointed out, however, that while the mortality from all causes last week did not exceed 23·3 per 1000 in London, the rate was 32 in Bradford, 32·9 in Preston, 35·1 in Manchester, 42·1 in Halifax, and 70·5 in Sheffield, the excess in each of these towns appearing to be mainly due to the direct and indirect effect of the influenza epidemic.

The extent to which the influenza epidemic is making itself felt in London may be in some measure gauged by the subjoined figures showing the numbers treated at various metropolitan hospitals during the past week. At Charing-cross Hospital there were 50 cases treated, at St. Mary's

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Hospital 105, at University College Hospital 18, at the London Hospital 154, at King's College Hospital 7 cases have been under treatment, at St. Thomas's Hospital about 68 patients applied for relief, at St. George's 15, at Westminster 16, and at the Middlesex the number of applicants was about 80. At the time of going to press the returns from Guy's and St. Bartholomew's Hospitals had not reached us. The cases have continued to increase in numbers, generally speaking, from April 28th up to the present time.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(*Continued from page 1008.*)

DR. SANDMEYER (Marburg) gave some short reports on recent researches in the Marburg Physiological Institute. 1. Microscopical examination of the organs from a child, aged nine, who had died of diabetes, showed no notable change in the pancreas, but the liver contained glycogen. The fourth ventricle, pons, and medulla were normal, but there was some degeneration in Goll's column of the cervical cord. There was also fatty degeneration of the heart, and some glycogenic degeneration of the renal epithelium. 2. He announced the discovery in the urine, before and during the onset of diabetic coma, of slight amounts of albumen, with numerous casts, hyaline and granular. 3. On the secondary degeneration of the spinal cord after excision of the motor centres.

Professor VON JAKSCH (Prague) described a Method for the Detection of small quantities of Bile in the Blood. From 10 to 15 ccm. of blood are filtered through asbestos by means of a cupping glass, and the serum coagulated in a test tube at 70° to 80° C. In keeping this serum in an incubating chamber at 40°, a bright-green tint will develop from oxidation of biliverdin. Hæmoglobinæmia gives a brown colour.

Professor LITTEN (Berlin) showed an Apparatus for the rapid Separation of the Formed Elements in Urine by centrifugal action.

Professor EICHHORST (Zurich) made a communication upon the Patellar-tendon Reflex in Tabes Dorsalis. According to Westphal this reflex is absent when the cord lesion is seated at the junction of the dorsal and lumbar portions. One might expect that in cases where the disease begins in the cervical region the reflex would be retained; but Eichhorst mentioned one such case where it was lost, although in another it was increased. In a case he had himself observed, where there were typical signs of involvement of the cervical and upper dorsal regions, the absence of the reflex was explained by marked and severe neuritis of both crural nerves.

Professor V. FREY (Leipsic) spoke of the Electrical Resistance of the Human Body, and described a method for its determination devised by himself and Dr. Windscheid.

Dr. LEUBUSCHER (Jena) reported some Clinical Observations on the Excretion of Acids in Mental and Nervous Disease. The amount of hydrochloric acid in the gastric juice was estimated in the subjects of melancholia, mania, and general paralysis, with somewhat variable results, but sufficient to show that there is an undoubted relationship between nervous processes and such secretion.

At the sitting on April 9th Dr. EDELFSEN (Kiel) discussed the question of the Origin of the Vesicular Murmur. The theory of Baas and Penzoldt is that vesicular breathing is due to the transmission of the glottic sound through the spongy lung tissue. But in emphysema the breathing does not become more bronchial, as might be expected from the diminution in the number of alveoli. Edelfsen thinks rather that the sound is produced at the infundibula.

Dr. KRONIG (Berlin) gave a demonstration on Clinical Bacteriology; he also gave the results of an examination of 400 subjects to define by percussion the anterior limits of the lungs.

Dr. WOLFF (Gorbersdorff) propounded the question, What is meant by Cure of Pulmonary Tuberculosis? He said it was difficult or impossible to prove this clinically. Patients are considered to be cured when they yield negative signs and the patients felt quite well. He related a case, however, in which the signs of bilateral infiltration had disappeared; but when, a year after, the patient died from an operation for fibroid tumour, bacilli were found in the pulmonary cicatrices. Latent tuberculosis is remarkably frequent; absolute cure is extremely rare.—Professor V. ZIEMSSEN (Munich) concurred in the views expressed, referring to the liability to recurrence and the detection by Bollinger and Kurloff of bacilli in apparently healed tubercle. He spoke of the importance of prophylaxis, and eulogised the services rendered therein by the late Dr. Brehmer.

Dr. SCHMALTZ (Dresden) described a method for the estimation of the Specific Gravity of the Blood in small amount. In health there is very slight variation, but in anæmic conditions the specific gravity (which seems to be proportional to the amount of hæmoglobin) is greatly diminished.

Dr. MORDHORST (Wiesbaden) spoke of the Diagnosis and Treatment of Gout, pointing out the higher acidity of the urine in gout than in rheumatism and its greater richness in uric acid, and advocating the alkaline waters of Wiesbaden in its treatment.

Dr. POSNER (Berlin) made some observations on Diabetes, especially as to the hourly excretion of sugar, and the influence on this of syzigium jambolanum (it notably decreased the maximal amounts, but did not cause the sugar to entirely disappear).

Dr. FLEINER (Heidelberg) described the Changes of the Sympathetic and Cerebro-spinal Nervous System in Addison's Disease, as observed in two cases. In one case the suprarenals were tubercular, and in the other the left organ was the seat of an angio-sarcoma. In both there was marked inflammation of the sympathetic nerves from the semilunar ganglia to the spinal ganglia, with degeneration of medullated fibres and ganglion cells. The spinal cord was normal.

Dr. MORITZ (Munich) read a paper on Alimentary Glycosuria. Repeating the experiments of Worm-Müller, he found that dextrose and levulose when ingested in excess passed as such into the urine. Cane sugar sometimes passed unchanged; sometimes it appeared as grape sugar. Lactose appeared as grape sugar. Starch does not cause glycosuria—at least, when taken in any practicable quantity. A certain individual disposition is necessary to produce alimentary glycosuria; and lactose is the most ready to cause it, grape sugar the least. Many can take 200 grm. of the latter without having glycosuria, which may follow on the ingestion of only 50 grm. of milk sugar.

[*Note.*—For the preceding account of this interesting Congress we have been mainly indebted to the excellent reports in the *Münchener Medicinische Wochenschrift.*]

THE SANITARY STATISTICS OF THE CUSTOMS' FORCE OF LONDON FOR 1890.

ALTHOUGH the record of the Registrar-General in the recently published summary of the deaths in London last year is very unfavourable, showing the mortality rate (20·3 per 1000) to have been higher than in any of the preceding five years, there is reason to believe that the victims have been chiefly found among those who readily succumb to disease by reason of their extreme youth, old age, or constitutional debility, and that the year 1890 has not been unduly fatal to the adult male working and wage-earning sections of the community. Facts are not wanting that point to this conclusion. For instance, in the Customs establishment of the Port of London, where elaborate statistics of the sanitary condition of the inferior out-door officers have been kept for more than thirty years, the amount of disease in the past year has been unprecedentedly small, and the exemption from mortality has been most remarkable. Of the 600 men composing that force, the average daily number incapacitated by illness was less than 3 per cent.; not one death occurred in the period, and of the five cases of invaliding from physical infirmity, only one was caused by necessarily fatal disease—viz., cancer. This singular immunity from all mortal illness is the more noteworthy, inasmuch as in the beginning of the year these officers underwent an acute visitation of influenza. Sixty-five cases of the epidemic occurred between Dec. 15th, 1889, and March 1st, 1890, its maximum intensity being attained in the second week of January, when forty-five cases were

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simultaneously under treatment. Eleven per cent. of the force were affected, but all recovered satisfactorily, though in a few cases, owing to pulmonary complications, convalescence was protracted, and the mean duration of each case was fourteen days. Customs officers, as a rule, are exempt from zymotic diseases, which rarely exhibit a ratio of more than 5 per cent. on the whole amount of sickness. In 1890, however, in consequence of this epidemic, the annual ratio increased to 20 per cent. No other zymotic disease of importance appeared except one case of diphtheria in November, which an officer contracted from his sick child. He recovered, but the case is worthy of note as the only one of that formidable malady which has come under the notice of the medical inspector during his tenure of office and observation of probably 25,000 cases of disease, a proof of its rarity among the adult male population of the metropolis. A large proportion of these Customs officers are men well advanced in life, and their work is often of a laborious character, involving much exposure to the weather and to great vicissitudes of temperature in examining the lower parts of steamships &c. Diseases of the respiratory organs, rheumatism, and gout, sooner or later involving the heart and lungs, are the most prevalent forms of illness, and in ordinary years account for one-half of the total amount of sickness and mortality of Customs officers. In the past year the Registrar General ascribes the heavy mortality among the general population of London to the exceptional frequency and fatality of bronchitis, and more especially of pneumonia, which caused 50 per cent. more deaths than in the preceding year, chiefly coincident with the epidemic of influenza in the beginning of the year, when the ratio of death from pneumonia was actually doubled. To that zymotic influence rather than to climatic causes he rightly considers the high death-rate to be due, for the mean temperature of January was seven degrees above the average, and the increase of mortality was more marked among persons between twenty and sixty than in those of greater age and less power of resistance to cold.

More singular, therefore, is the immunity which the Customs officers enjoyed from serious pulmonary disease, notwithstanding their having had a fair share of influenza while it lasted. The proportion of all respiratory diseases throughout the year was considerably below the average, and the mortality from these, and indeed all other diseases, was absolutely *nil*. Even phthisis, which normally inflicts 3 or 4 deaths per 1000, was in abeyance. This was doubtless an exceptional year, the usual death-rate ranging from 5 to 12 per 1000, and the invaliding, or premature superannuation rate, being about half as many. Dr. Dickson considers the meteorology of 1890, though trying to persons having a weak point in their armour, to have been on the whole propitious to health. A mild January, a dry February, followed by warmth in March and May, a cold wet summer till September, which was the finest and warmest month of the year, succeeded by a dry autumn with intense cold in the last six weeks of the year, form a combination of weather which in former years has been observed to prove salutary to men of sound constitution, inured to labour and spending much of their lives in the open air, who can procure all the necessaries, and many of the comforts, but none of the luxuries of life. In several such years there has been a high standard of health maintained, but in none so high as in 1890, which has been characterised by the Registrar-General, from his study of the mortality tables, as the most disastrous of recent years to the population of London.

Within the last three weeks twelve cases of influenza have been received at the Custom House, of the same character as in last year, but in some instances accompanied by sore-throat, which was then seldom met with. Now as then there is no precise evidence as to its causation or mode of diffusion.

FINE ARTS.

THE EXHIBITION OF THE ROYAL ACADEMY OF ARTS.

FROM a purely medical point of view there are not many subjects requiring our notice in the present exhibition. It is, indeed, singularly deficient in portraits of contemporary celebrities of the medical profession. There is a striking likeness of Sir George Humphry in gallery No. 8, but with this exception we did not notice the portrait of any member of the profession in whom our readers are likely to take particular interest. But there is a picture by Mr. Luke Fildes, R.A., which is so remarkable in power and truth that we must draw special attention to it. It is hung at the west end of the large room, and is called "The Doctor." The scene represented is the interior of a cottage. A sick child is lying on an improvised bed, made up on a couple of chairs, whilst its parents in the background of the picture await the verdict of the doctor, which will either plunge them into despair or fill them with hope for their little one's recovery. The mother, worn out with watching, has buried her face in her hands, unable to bear the suspense, whilst the father, standing by her side, in an attitude of exquisite tenderness, encourages her with manly fortitude. It is evident that some change has occurred in the condition of the child at the approach of dawn, and the doctor has been summoned. He is seated, and regards the little patient with a face full of the most anxious consideration. Opinions will vary as to the judgment which he is likely to pronounce. The painter does not help us to decide. He pictures the doubt and difficulty which we have all felt in certain conditions, and the intensity of interest in the problem which lies before him. It is a struggle between disease and the healing art. Mr. Fildes has painted a pathetic and singularly truthful picture, and in the person of the doctor has given us the type of man to whose heart suffering and danger appeal with irresistible force. The profession of medicine will be grateful to him for this evidence of sympathy with their arduous calling. In "The Crisis," by Mr. Frank Dicksee, another aspect of the subject which comes home to the experience of most of us is depicted with the painter's accustomed force. In the lecture-room is a group by the President, "An Athlete struggling with a Python," which is very remarkable for its intensity and the truthfulness of its muscular anatomy.

Medical men of artistic taste with half an hour to spare would be gratified by a visit to Mr. L. H Lefevre's Gallery in King-street, St. James's, where there are on view several works of real merit, no less distinguished by character than by fidelity in execution. The "Roman Chariot Race," by the Spanish artist Ulpiano Checa, Rosa Bonheur's "After a Storm in the Highlands," and a very careful picture by W. Dendy Sadler, entitled "For He's a Jolly Good Fellow"—each in their several manners give evidence of skill in arrangement and in the management of light and colour, and of studious treatment of details. We should not omit to mention another, the latest admirable production of Willem Geets, "Anne Ascough preaching in London." The four works form a group which will endure and repay a careful and critical inspection.

RECONSTITUTION OF THE UNIVERSITY OF LONDON.

THE following correspondence has been sent to us for publication :—

Society of Apothecaries, E.C., Blackfriars, Nov. 18th, 1890.

MY LORD,—The attention of the Society of Apothecaries of London has been drawn to the Scheme for a Teaching University for London prepared by the University of London. Such scheme, so far as it excludes the Society from representation on the Senate, and also apparently from taking any part in the teaching or examining functions of the proposed University, appears to be defective for the reasons which I am desired to lay before your Lordship.

If you will refer to p. xxii. of the Appendix to the Report of the Royal Commission made in 1889, you will find a very accurate summary of the petition presented by the Society against the grant of the Charter sought for by the Royal Colleges of Physicians and Surgeons.

The facts therein stated are the main grounds on which, without again repeating them, the Society contends that a very strong case is made in its favour for representation both in the Senate and the other departments of the Teaching University.

The Society is aware that the report of the Commissioners does not specially assign a representative to the Society on the Senate of the proposed University, but it is urged that such report did not profess to lay down any hard or fast lines on which the Senate should be framed, and further that the University of London has itself departed from the suggestions of the Commissioners by increasing the number of proposed members of that body.

The very fact that the University of London feels itself at liberty to alter the scheme of the Commissioners in this respect gives the Society the opportunity of pressing its claim, that the scheme should be still further amended by giving representation to the Society.

The Society feels that it has been placed somewhat at a disadvantage by what occurred before the Royal Commission. The origin of that Commission was mainly the consideration of the petition for a charter for a Medical University presented by the two Royal Colleges of Physicians and Surgeons. The whole weight of the Society's petition

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and evidence was directed against such charter being granted, and in that respect it entirely succeeded.

But it was not specially invited to give its views, and never, in fact, did give its views in any way on the constitution or function of a general teaching university for London. Had it done so it would doubtless have been able to show effectually that a very close analogy exists between the position held by the Incorporated Law Society (to whom the report of the Commissioners has assigned representation) as regards the law, and that of the Society as regards medicine. The solicitor may be termed the "general practitioner" of the law, and if the body which represents him is to be entitled to representation and to all the advantages arising therefrom, there would seem to be the strongest reason for placing the Society of Apothecaries of London in an equally good position.

Lastly, if the Senate or committees formed out of the Senate, as suggested by the report of the Commissioners, are to elect the examining boards for the various faculties, the exclusion of the Society from the Senate of the proposed university seems still more difficult to understand. The Society urges with confidence that a teaching or examining board in the medical faculty, from which any influence of the Society is to be absolutely and altogether excluded, would be imperfect, unpractical, and wanting in that liberal and broad basis which is essential to its efficiency.—I have the honour to be,

Your Lordship's very obedient servant,

To the Lord President of the Council. EDWIN CHABOT (Master).

Society of Apothecaries, London, E.C., Dec. 9th, 1890.

SIR,—At the suggestion of the Lord President of the Council, who states that he has no official knowledge of the scheme referred to in the letter addressed to him by the Master of the Society, of which I enclose a copy, I am instructed to send you such copy, and to ask you to be so good as to lay same before the Senate of the University of London, or other the body delegated by the University of London, to deal with the scheme for a Teaching University for London.

I am further instructed to state that the views of the Society on the subject are so fully embodied in that letter that it seemed the simplest and most convenient course to furnish you with a copy of it, rather than to restate the whole matter, practically in the same words, to the University of London.

I am, Sir, your most obedient servant,

JAMES R. UPTON,

The Registrar of the University of London. Clerk to the Society.

University of London, Burlington-gardens, W., Dec. 10th, 1890.

SIR,—I beg to acknowledge the receipt of your letter of the 9th inst., with copy of a letter addressed by you to Society to the Lord President of the Council, and I will submit these communications to the Senate in due course. I am, yours faithfully,

To the Clerk, Society of Apothecaries. ARTHUR MILMAN.

THE LATE PROFESSOR JOHN MARSHALL, F.R.S.

As already announced, the friends of the late Professor John Marshall wish to establish a memorial of him in connexion with his *alma mater*, University College, London. It is proposed that primarily the memorial should take the form of a bust, to be placed within the College. In the event of the contributions to the fund which is being raised for this purpose being more than enough, the surplus will be set aside for the foundation of a prize in the Medical Faculty of the College, to be called the "Marshall Prize." Those who wish to coöperate in this attempt to perpetuate the memory of Mr. Marshall's labours are requested to send their contributions to the treasurer of the fund, Mr. John Tweedy, 100, Harley-street, W. Subjoined is the first list of subscriptions:—

	£	s.	d.
Mr. W. Anderson	2	2	0
Mr. A. E. Barker	2	2	0
Dr. Barlow	2	2	0
Mr. Samuel Barnett	1	1	0
Mr. H. G. Barron	1	1	0
Dr. Bastian	2	2	0
Mr. Marcus Beck	2	2	0
Dr. J. W. Bond	2	2	0
Mr. Stanley Boyd	1	1	0
Mr. C. Bradley	2	2	0
Dr. C. Bucknill	1	1	0
Mr. G. E. Claxton	0	10	0
Messrs. Collins and Collins	2	2	0
Dr. C. d'A. Collings	1	0	0
Mr. T. W. Dix	0	5	0
Dr. A. Downes	1	1	0
Dr. W. T. Edwards	1	1	0
Mr. J. E. Erichsen	2	2	0
Dr. Fearnside	1	0	0
Dr. S. P. A. Gabb	0	10	6
Dr. J. G. Glover	1	1	0
Mr. J. B. Godlee	2	2	0
Mr. A. P. Gould	1	1	0
Professor Halliburton	1	1	0
Dr. C. J. Hare	3	3	0
Dr. Geo. Harley	1	1	0
Mr. H. Harlock	1	1	0
Rev. S. Haughton, M.D.	1	1	0
Mr. Christopher Heath	2	2	0
Dr. Grally Hewitt	1	1	0
Mr. Berkeley Hill	2	2	0
Mr. F. Hinds	1	1	0
Mr. Victor Horsley	2	2	0
Mr. S. J. Hutchinson	2	2	0
Sir W. Jenner	2	2	
The Proprietors of THE LANCET	21	0	0
Dr. T. W. P. Lawrence	1	1	0
Dr. Louis Parkes	1	1	0
Mr. Awdry Peck	1	1	0
Mr. Bilton Pollard	1	1	0
Dr. G. V. Poore	2	2	0
Dr. Fredk. Roberts	2	2	0
Sir William Roberts	2	2	0
Dr. A. H. Robinson	1	1	0
Mr. Bernard Roth	2	2	0
Sir Wm. S. Savory, Bart.	2	2	0
Mr. J. B. Scriven	1	1	0
Dr. Ed. Seaton	2	2	0
Mr. Buxton Shillitoe	2	2	0
Mr. S. Sibley	2	2	0
Mr. Balmanno Squire	1	1	0
Professor Thane	2	2	0
Mr. T. W. Thompson	2	2	0
Dr. Thorowgood	0	10	6
Mr. Jas. Turle	1	1	0
Mr. J. J. Tweed	1	1	0
Mr. John Tweedy	5	5	0
Dr. A. F. Voelcker	1	1	0
Dr. J. Waggett	1	1	0
Dr. Walshe	2	2	0
Mr. Elwin Williams	2	2	0
Mr. John Williams	2	2	0
Dr. W. Wood	5	5	0

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Saltley Urban District.—On an estimated population of 9200 the death-rate from all causes was 16·1 per 1000 during 1890 and the zymotic rate reached 2·6, although this rate was not in excess of the average. Mr. W. G. Cresswell points out that use is made of the Aston Fever Hospital for isolation purposes, and that the authority have availed themselves of the advantages of the Infectious Disease (Prevention) Act of last year. A somewhat complete account is given of the general sanitary administration of the district and of the action taken under the Sale of Food and Drugs Act, and attention is drawn to the need for the abatement by the Corporation of Birmingham of the nuisance caused to Saltley by reason of the emission of dense fumes and smoke from the gasworks belonging to that borough.

Watford Urban District.—Dr. Brett reports an unusually low zymotic rate, and he gives an account of the means for isolation afforded by the two hospitals vested in the guardians and in the joint sanitary authorities respectively. The state of the market-place, which is often a source of considerable nuisance, is again referred to. After deductions for deaths in the workhouse infirmary &c. of people not belonging to the district, the death-rate for 1890 was 13·2 per 1000 living.

Grantham Urban District.—According to Dr. Poole Berry the death-rate for this borough was 14·8 per 1000 last year, and although there was a prevalence of scarlet fever and certain occurrences of enteric fever, the maintained absence of any prevalence of diphtheria is recorded. Perhaps, however, too much trust is placed on this absence as an indication that the sanitary circumstances are efficient, for where the same has obtained schools have often led to diffusion of imported infection, and places in a bad sanitary state have, on the other hand, escaped for many years. The sewer ventilation evidently needs some amendment, and the circumstances which have brought this into prominence appear to indicate local defects of sewers or of house drains communicating with them. The sewage farm seems a success in Grantham, and good sanitary work is in progress. But the references to isolation point to the absence of any proper provision for infectious diseases or for disinfection of bedding &c.

River Tyne Port District.—Mr. Henry Armstrong's report on this port district during 1890 contains, like his previous ones, a full account of the action taken as regards infectious diseases, their isolation in the port hospital, disinfection, and, where necessary, communication with British consuls abroad. The improvements effected in the sanitary condition of ships are explained, and the record is once again typical of the sort of supervision and administration which is so useful in our ports, both for the prevention of disease and the amelioration of the conditions of those afloat.

St. Alban's Urban District.—Both the general and the zymotic death-rate were somewhat in excess last year, the former being 16·1 and the latter 2·4 per 1000 living, and to a large extent the excess was due to measles and whooping-cough. The near prospect of a hospital for infectious diseases is referred to by Dr. Morison, and reference is made to the prospective value of the two sanitary Acts of last year. The water-supply for the town is stated to be good, and the drainage is reported as satisfactory.

St. Alban's Rural District.—Here the general death-rate is given by Dr. Morison as 12·7, and the zymotic rate as 0·5 per 1000. There is little of public interest in the report, but it is evident that the measures adopted tend to the maintenance of the diminished mortality of 1890.

Tendring Rural District—Some improvement is in progress as to refuse removal, especially at Parkeshore; but filthy refuse holes are referred to at Lawford. Wherever people have not sufficient garden ground on which week by week to deposit excreta and refuse without risk of nuisance, the sanitary authority should themselves undertake the work of scavenging. In the same way, whilst substantial progress is being made as to sewerage in certain localities, much-needed improvements are called for elsewhere. And as regards water-supply the same may be said. But if

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every year a similar record can be given of progress in one or other directions, the ultimate good will be considerable. During 1890 the general rate of mortality is given by Dr. J. W. Cook as 16·7 per 1000 living.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5849 births and 5153 deaths were registered during the week ending May 2nd. The annual rate of mortality in these towns, which had been 22·5 and 24·3 per 1000 in the preceding two weeks, further rose to 26·8 last week. The rate was 23·3 in London and 29·7 in the twenty-seven provincial towns. During the first four weeks of the current quarter the death-rate in the twenty-eight towns averaged 24·1 per 1000, and exceeded by 2·5 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 15·0 in Birkenhead, 16·8 in Norwich, 17·3 in Bristol, and 19·5 in Brighton; the highest rates were 36·1 in Leeds, 38·5 in Blackburn, 42·1 in Halifax, and 70·5 in Leeds. The exceptionally high rates in the last-mentioned towns were due to a severe epidemic of influenza. The deaths referred to the principal zymotic diseases, which had been 420 and 428 in the preceding two weeks, further rose last week to 462; they included 188 from whooping-cough, 127 from measles, 53 from diarrhœa, 37 from diphtheria, 31 from "fever" (principally enteric), and not one from small-pox. These diseases caused the lowest death-rates in Derby, Birkenhead, Norwich, Bristol, and Sunderland, and the highest rates in Leicester, Blackburn, Manchester, and Portsmouth. The greatest mortality from measles occurred in Plymouth, Preston, Huddersfield, Blackburn, Bolton, and Portsmouth; from scarlet fever in Halifax; and from whooping-cough in Halifax, Newcastle-upon-Tyne, Plymouth, Manchester, and Leicester. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 37 deaths from diphtheria included 24 in London, 5 in Manchester, and 3 in Newcastle-upon-Tyne. No fatal case of small-pox was registered last week in any of the twenty-eight towns; 21 small-pox patients were under treatment in the Metropolitan Asylum Hospitals and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 927, and showed a slight further decline from recent weekly numbers; the patients admitted during the week were 100, against 84 and 85 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 504 and 471 in the preceding two weeks, increased last week to 588, and exceeded by 219 the corrected weekly average. The causes of 105, or 2·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Preston, Sunderland, and in three other smaller towns; the largest proportions of uncertified deaths were recorded in Liverpool, Leicester, Sheffield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 26·7 to 22·1 per 1000 in the preceding five weeks, rose again to 23·1 during the week ending May 2nd, but was 3·7 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·3 in Greenock and 16·1 in Leith to 27·7 in Glasgow and 38·8 in Paisley. The 603 deaths in these towns showed an increase of 17 upon the number in the preceding week, and included 30 which were referred to measles, 25 to whooping-cough, 10 to diarrhœa, 9 to scarlet fever, 4 to diphtheria, 2 to "fever," and not one to small-pox. In all, 80 deaths resulted from these principal zymotic diseases, against 81 and 90 in the preceding two weeks. These 80 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·7 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased from 33 to 43 in the previous three weeks, declined to 30 last week, of which 16 occurred in Paisley and 13 in Glasgow. The deaths from whooping-cough, which had been 25 and 32 in the previous two weeks, declined last week to 25, and included 12 in Glasgow, 5 in Dundee, 3 in Edinburgh, and 3 in Leith. The 9 fatal cases of scarlet fever exceeded those recorded in any week since the beginning of March last; 5 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths from diphtheria, which had been 9 and 4 in the preceding two weeks, were again 4 last week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 143 in the preceding two weeks, were 146 last week, but were 13 below the number in the corresponding week of last year. The causes of 76, or nearly 13 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 30·6 to 23·0 per 1000, rose again to 24·4 during the week ending May 2nd. During the first four weeks of the current quarter the death-rate in the city averaged 26·4 per 1000, the rate for the same period being 21·2 in London and 18·9 in Edinburgh. The 165 deaths in Dublin during the week under notice showed an increase of 9 upon the number in the preceding week, and included 2 which were referred to "fever," 2 to diarrhœa, and not one either to small-pox, measles, scarlet fever, diphtheria, or whooping-cough; in all, only 4 deaths resulted from these principal zymotic diseases, against numbers declining from 8 to 6 in the preceding three weeks. These 4 deaths were equal to an annual rate of 0·6 per 1000, the rate from the same diseases being 1·9 in London and 1·3 in Edinburgh. The 2 fatal cases of "fever," and the 2 deaths referred to diarrhœa, exceeded those recorded in either of the preceding two weeks. No fatal case of scarlet fever has been registered in Dublin since the beginning of February last, and not one of measles since the first week in March. The 165 deaths in Dublin last week included 21 of infants under one year of age and 43 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers in recent weeks. Five inquest cases and 3 deaths from violence were registered during the week, and only 15, or 9 per cent., of the deaths occurred in public institutions. The causes of 16, or nearly 10 per cent., of the deaths last week in the city were not certified.

CALCUTTA AND ITS AREA OF SUBURBS.

According to a memorandum published by the health officer's department Dr. W. J. Simpson states that the total number of births registered in January last was 665, giving an annual ratio of 18·4; the total number of deaths (exclusive of stillbirths) was 1264, against 1337 in the preceding month, showing an annual ratio of 35·0 against 37·0 per 1000 of the population. The monthly total exceeds all the corresponding figures of the past decade excepting 1883. There were 134 deaths from cholera, against 157 in the preceding month, which exceeds the corresponding figures in six of the last ten years, and in excess of the decennial mean by 23 In the amalgamated area of the suburbs there were 336 births, giving an annual ratio of 23·9 per 1000. The total number of deaths registered in January was 893, giving an annual ratio of 63·7 per 1000. Of these deaths 126 were from cholera. From the weekly sick return ending March 7th it appears that the general death-rate of the week for the town of Calcutta was 33·0 per 1000; that for the amalgamated area of suburbs was 52·1 per 1000, the general death-rate of the combined area being equal to 38·3. The general death-rate of the week ending March 28th was, for the town of Calcutta, 26·5 per 1000, against 27·9, the mean of the last five years; that of the amalgamated area of suburbs was 50·6 per 1000 per annum, against 44·7, the mean of the last five years. The general death-rate of the combined area was equal to 33·2.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon-Major Thomas John Aubin, M.D., 3rd Regiment, Royal Jersey Militia, to be Surgeon-Major, ranking as Major (dated May 6th, 1891); Surgeon Frederick Vasey Adams, 1st Lanarkshire Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated May 6th, 1891); Acting Surgeon David Thomas Key, 1st London Artillery Volunteers, to be Surgeon, ranking as Captain (dated May 6th, 1891).

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NAVAL MEDICAL SERVICE.—Fleet Surgeon Walter Reid, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet (dated May 1st, 1891).—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Wm. Brown has been placed on the Retired List of his rank at his own request (dated April 25th, 1891).—The following appointments have been made at the Admiralty:—Staff Surgeon James T. W. S. Kellard, to the *Invincible* (dated May 5th, 1891). Surgeons: Geo. A. Dreaper to the *Defiance* (dated May 28th, 1891); George D. Trevor Roper to Haslar Hospital (dated May 7th, 1891); John S Fogerty, M.D., to Plymouth Hospital (dated June 6th, 1891); and Edgar R. Dimsey to the *Vivid* (dated June 6th, 1891).

VOLUNTEER CORPS.—*Royal Engineers:* 1st Lanarkshire: Harry Watt Robinson, M.B., to be Acting Surgeon (dated May 6th, 1891).—1st Sussex: Charles Lenox Cunningham, Gent., late Surgeon, Royal Navy, to be Acting Surgeon (dated May 6th, 1891).—*Rifle:* 2nd (Prince of Wales's) Volunteer Battalion, the Devonshire Regiment: Acting Surgeon W. Square resigns his appointment (dated May 6th, 1891).

Correspondence.

"Audi alteram partem."

THE RECONSTITUTION OF LONDON UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—The attitude you have taken up on this question in your recent leading articles has been so reasonable and just, and is evidently in harmony with the views of some eleven hundred and more of the members of Convocation, that it is not surprising that those who have attacked your position have failed to upset it. Sir Philip Magnus, in the columns of *The Times*, has warned graduates to study well the report of their Special Committee before committing themselves to an opinion upon the new charter. Such a warning is scarcely well timed, when we remember that an *ex parte* memorandum in favour of the scheme was circulated by the Senate more than a month ago. Moreover, by Standing Order 14, Section 3, relating to business of Convocation, the proposal to approve the Draft Supplemental Charter will, unless otherwise determined by special vote, have precedence of the reception and discussion of the report of the Special Committee on May 12th. Indeed, on the agenda paper now to hand the proposal of Lord Herschell and Sir R. Quain to approve the new Charter stands immediately after the formal business, and the Special Committee's report follows that of the Annual Committee, neither of which is likely to come on for discussion at all. Will Sir Philip Magnus move that the reception of the report of his Special Committee have precedence of the motion to approve the Draft Charter, so as to give Convocation "an opportunity of discussing the whole situation" as he has always promised and advised? If not, then the House will be asked to concur in approving a complete resolution of the University without any opportunity of effective discussion or amendment. Such a course might be fair if the Special Committee's report were unanimous, but it is not so. The resolution "generally approving" the last revised scheme on Feb. 9th, 1891, was carried in committee by 6 to 2; the adoption of the report of the Special Committee on April 16th last was carried by 10 to 2, or, deducting senators, 6 to 2, no medical graduate being amongst the six. On the other hand, the memorandum appended by the minority objecting to the adoption of the scheme and the report is signed by six members, of whom three are medical graduates. No doubt Lord Herschell, in proposing the approval of the Charter, will say, and say well, all that there is to be said in favour of the scheme, "admittedly a compromise," in "opposition to the report of the Royal Commission," and not approved by University and King's Colleges.

Sir Richard Quain's support of the reconstitution is less clear; before the Royal Commission he appeared as the apologist for things as they are, and he rebutted the charges of Sir Andrew Clark upon the medical examinations. Then, at any rate, he had scant sympathy for collegiate courses and examinations; "his own experience was that he lost rather than gained by attending lectures;" "he would prefer that students came up, as they do now, to the University of London to show the knowledge they had acquired with very little reference to where they had gained it"; he was not deceived by the phrase "a teaching university." "The London Colleges will be no more of 'a teaching university' than they may be now if they think fit to continue for the purpose," he said (Q. 1985, page 211). He went on to demonstrate that London University examinations, especially the medical, "were as thoroughly practical as they could be made" (2002), and that it turned out as many doctors as it should, and of excellent quality (2001 and 2003). It is true he did not wish to see another licensing body in London, but he pointed out that, if such should be created, the "University of London, which is provided for by the State, is in no fear of failing; it will not have to battle." Many like myself thought the above contentions were sound in 1888, and think that they are still sound to-day, but would hardly consider them consistent with the retrograde policy embodied in the Draft Charter. I am, Sirs, yours faithfully,

W. J. COLLINS, M.S., M.D., B.Sc. Lond.

Albert-terrace, Regent's-park, May 5th, 1891.

To the Editors of THE LANCET.

SIRS,—It may interest you to know that we are issuing to-morrow a second list of members of Convocation who have "expressed their dissent from the proposed reconstitution of the University of London upon the lines of the Senate's scheme." The first list contains 709 and the second 346 names, a total of 1055. The two lists contain the names of about 290 medical graduates, 24 of whom are on the full staff of one or other of the twelve London hospitals with medical schools attached, and two on the consulting staff.—I am, Sirs, yours faithfully,

J. WALTER CARR, M.D., Hon. Sec.

Bloomsbury-square, W.C., May 6th, 1891.

THE "MEDICAL GRIEVANCE" AND ITS REMEDY.

To the Editors of THE LANCET.

SIRS,—Stated briefly, the "medical grievance" is that the degrees of M.D. and M.B. are to the medical student in London relatively less accessible than to the students in other centres of medical education, and that in consequence students who otherwise would come to the London schools go elsewhere. The remedy advocated for this unsatisfactory state of things is the establishment in London of a degree of lower standard than the present M.B. Lond., on the argument that the examinations for the degree of the existing university are too severe for the average student. Particularly, it is argued that the so-called Preliminary Scientific Examination is too difficult. From seven or eight years' experience of teaching biology to students for this examination I claim to be able to speak authoritatively on this point, and I say emphatically that this examination is not too difficult for the average student, *if he is properly taught.* If an academical year is given to the study of elementary science under proper teachers, 80 to 90 per cent. of the students will pass, and this has been the average percentage of passes amongst my students for the past seven years. If, then, as I contend, the scientific parts of the curriculum for the M.B. Lond. are not too severe, what is the cause of the relative inaccessibility of the degree? It is, in my opinion, to be found in the fact that, speaking in general terms and without reference to any particular school, the education in the more scientific portion of the curriculum is at fault, and the remedy is to be found, not in any attempt to lower the existing University degree, but in making proper provision for educating the students up to its requirements. If London, as a centre of medical education, were as efficient in the way of appliances for the more scientific education—i.e., were provided with suitable scientific teachers and properly equipped laboratories—as is the case in Cambridge, Oxford, Edinburgh, Manchester, Durham, and the other provincial centres, the "medical grievance" would gradually vanish. Speaking in general terms, the provincial universities, colleges, and schools are much better equipped for the scientific parts of medical education than London, and *vice versâ.* London has facilities for clinical work which none of the provincial or Scotch centres can possibly possess. The proper policy, then, is clear: the London schools should remedy their

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defective appliances for the more scientific parts of the curriculum. The scheme for reorganising the existing University provides in no way for improving the teaching machinery, and cannot, in my opinion, be a final solution of the University question for London.

I am, Sirs, yours truly,

T. W. SHORE, M.D., B Sc.Lond.,
Lecturer on Comparative Anatomy and Biology at St. Bartholomew's Hospital.

May 4th, 1891.

*** In general we agree with Dr. Shore, but he omits to say that his students have already undergone selection by the Matriculation Examination, which is acknowledged to be the most difficult entrance examination in Arts in the kingdom, and are therefore probably far above the average. Is it not, also, the case that the present standard in Experimental Physics is too high for an average medical student?—ED. L.

SEQUEL TO A CASE OF ABDOMINAL SECTION.

To the Editors of THE LANCET.

SIRS,—The interesting narrative published by Dr. Malins in your columns of Saturday last requires a slight addition and commentary to make the case intelligible. The girl in question was brought to me by her mother with the statement that the left ovary had been removed by Dr. Malins at the General Hospital on account of persistent pain; that after the operation the pain had been relieved, but that it subsequently returned on the other side. After communicating with Dr. Malins and after much discussion of the case, I reopened the abdomen, found the left set of appendages missing, picked a silk knot from off the remainder of the broad ligament, and then removed the right set of appendages. After this second (or it may be, if the full truth were known, third) operation, the girl remained quite well for a considerable time, but after about a year she became as bad as ever. Now as to the sequel. A few weeks ago I heard a surgeon of unimpeachable veracity assert that in his own recent experience a lady had been, beyond all possible or probable shadow of doubt, impregnated by her husband years after the removal of both of his testicles. Concerning one of Dr. Battey's early cases, it is established that removal of both ovaries failed to relieve symptoms which were long afterwards promptly cured by the birth of a child. A second case of this kind has occurred in America. And to this interesting though astonishing list Dr. Malins adds a third; so that, fortunately, the days of miracles do not yet seem to be past.

Dr. Malins seems to have been somewhat ruffled by a correspondence which he himself made necessary upon this case after the second (or as I have said perhaps the third) operation, and he desires those who have a particular letter in their possession, or have seen it, to draw their own conclusions. I wish precisely the same result; but, that they may do so, they ought to know the facts which Dr. Malins seems to forget. So strangely short are the memories of these obstetric physicians, that before I operated upon the patient I did, as I have said, communicate with Dr. Malins, telling him the story she and her mother brought to me, and asking for information concerning it or for its correction. The letter in question failed to obtain any information concerning the case; in fact, the usual rule which obtains in such cases, when one practitioner applies to another for information concerning a patient from a previous attendant, was entirely disregarded. Putting aside the foolish rudeness of such conduct, I have to point out that, whatever subsequent blundering there may have been in the treatment of this case, it is to Dr. Malins, and to him alone, that the responsibility must be accredited; and why he should choose to rake up a question of this kind in his own career, I, for one, am at a loss to imagine.

I am, Sirs, yours faithfully,

May 6th, 1891. LAWSON TAIT.

THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—In Dr. Barney Yeo's lecture he gives the preference to chlorine, after enumerating a variety of other treatments by various authors having the same object—viz., general antisepsis of the body, and of the intestinal canal in particular. As I have used the remedy which he advocates, and prepared precisely as he directs, I can contribute some information as to its composition, for, in answer to a letter twelve years ago, Dr. Alfred Swayne Taylor wrote me as follows: "Strong hydrochloric acid deoxidises by its hydrogen the chloric acid of the chlorate of potash, some chlorine is set free, and, with this, peroxide of chlorine mixed according to temperature with some protoxide of chlorine, or what Davy, who made the discovery, called euchlorine. The gaseous mixture is of a yellowish-green colour, suffocating, and explodes with a flash of light when a red-hot wire is plunged into it. On filling the bottle with water there would be a solution of chlorine, euchlorine, and perhaps some peroxide, with any undecomposed chlorate. The solution would have bleaching properties and, if strong, corrosive properties." The solution should be freshly prepared each time, as it undergoes change under the influence of light, becoming colourless. I have prescribed it for flatulence, foul stomach, and diarrhœa, but have no experience of it in typhoid fever. I desire to add my small mite of testimony to the principle advised by Dr. Yeo as the most rational—that is, the routine adoption of an antiseptic treatment as a general indication. The success recorded after the many various antiseptics named certainly points to this sensible departure, whatever theory of microbicide or germ-destroyer may ultimately be found correct, and we may hope to have this definitely decided in the not far distant future. The list of remedies enumerated by the lecturer is not wanting in length or strength, but I should like to call attention to another, and solicit for it a trial in these cases. I allude to salol. Its merits are not yet sufficiently well known, more especially for the purpose under discussion—viz., general antisepsis of the system, and of the intestinal and urinary tracts in particular.

A case of chronic cystitis in an old man of seventy-two, with enlarged prostate, and requiring catheterism five or six times in the twenty-four hours, who was gradually sinking under ordinary treatment, including daily washing out of the bladder with boric acid solution, with dry tongue, anorexia, and the sickly sweet odour of the breath, characteristic of purulent absorption, and with urine like pease soup with a lot of mucus, got quite well in two or three weeks on fifteen-grain doses of salol three times a day. The tongue at once commenced to clean, appetite returned, and the urine became quite clear; I last saw the old man gardening. Salol we learn passes unaltered through the stomach, and is split up by the pancreatic juice into its phenyl and salicil elements. In addition to its antiseptic, it has antipyretic properties. Its general antiseptic properties are shown by the above case, and its local will be first exhibited in the bowel; if so, is it not theoretically an ideal remedy in typhoid fever, that its energy should first be liberated at the spot where we want it—viz., in the small intestine? It has also the advantage of being a pleasant remedy. It has a slightly aromatic odour and not unpleasant taste. Adults like it in the form of powder placed on the tongue and sucked down or triturated against the palate by the tongue; for children it is better to emulsify it when it is readily taken. The motions are rendered inoffensive, the manufacture of gas ceases, and the local action on the congested or ulcerated Peyer's glands is beneficent and healing. (It is an excellent topical application for ulcers and as a gargle.) We shall find that ulceration, hæmorrhage, and perforation will become things of the past if this treatment be adopted as routine from the beginning. I have met with no toxic effects from its use; the urine may become smoky or cloudy, so that we can easily keep touch of saturation with the remedy, but I have seen no inconvenience arise from this. I use it without the quinine, which I should expect to produce quinism if given in from twenty to thirty grains per diem; it is too potent a remedy to take into partnership in estimating results. Besides, I have not required it, and use other defervescents in the shape of alkaloids—aconitine, veratrine, and digitaline, whilst the vitality is maintained by the exhibition of arseniate of strychnine. The three indications in the treatment of typhoid fever are then: (1) General and local antisepsis by means of salol; (2) the reduction and control of the pyrexia by defervescents; (3) the sustaining of the vitality of the patient.

I am, Sirs, yours truly,

Spondon, Derby, April 13th, 1891. B. WALKER.

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THE NAIL AND CHAIN MAKERS' DEPUTATION.

To the Editors of THE LANCET.

SIRS,—In an article in your issue for April 25th, you express a desire for further information with regard to the deputation of women engaged in the nail and chain trades which recently waited on the Home Secretary, and also curiosity as to how the expenses of the deputation were defrayed. The deputation was the outcome of a largely attended meeting of nail and chain makers (male and female), which was held to consider the proposals affecting their peculiar industry, as contained in the Bills of Lords Dunraven and Thring and that of the Home Secretary. The expenses of the deputation were defrayed by Lady Goldsmith, who was represented at the meeting by a deputation of two ladies. The meeting was attended by the borough member, and was quite in harmony with the suggested sanitary reforms and other proposals affecting the welfare of the workers, and was unanimous in supporting restrictions preventing women taking work beyond their strength. The article goes on to state: First, that nail and chain-making is work physically unsuited to women; secondly, that the work should be checked, because, economically, it is productive of starvation. In support of the first statement, we are informed that the heavier work is destroying the health of the women; that the working of the oliver involves undue physical strain; that spinal disorders ensue; and that labour is frequently difficult and abnormal.

With regard to these assertions, I should like to say that hardly any of the heavier work is now done by women, and that the people of the district are in favour of its total prohibition; that the observations of daily practice show that spinal affections are extremely rare, whilst phthisis and other tubercular diseases are much less frequent than in most other districts. If special difficulties with regard to accouchements exist, I can only say that I have failed to meet with them, and others of very large experience in midwifery in this district confirm me in this statement. If special difficulties in labour do exist, ought they not rather to be attributed to the premature age at which marriages are contracted? I had always considered that difficult and prolonged labours were more frequent amongst those women of the upper classes who lead luxurious and enervating lives than amongst their sisters whose muscular systems are more developed by bodily toil. I have very frequently watched women working the oliver, and have tried it myself on several occasions, and from what I have been told and from personal experience I cannot regard the ordinary use of the oliver as involving any undue strain. We are told by Professor Foster that the strength of a woman is to that of a man as 5 is to 9. The largest chain made by women is barely $\frac{3}{8}$ in., but the usual size is what is known as No. 1 chain—that is, iron of about $\frac{1}{4}$ in. in diameter. If such work is excessive for women, surely the making of a large cable $2\frac{1}{2}$ in. in diameter involves a still more excessive strain upon men, yet we hear nothing of their physical incompetence. The article goes on to draw a highly sensational picture of crowds of stunted, gaunt, chicken- or flat-breasted women, with angular limbs and colourless cheeks, and reports one case of a healthy-looking chain-maker, whose healthy appearance we are asked to attribute (I do not know whether facetiously or not) to the invigorating and recreative influences of the washing-tub, at which she worked when not chain-making. Those acquainted with the district (otherwise than by a flying visit to Cradley Heath) will, I think, be quite unable to endorse this picture. There is an extremely high *infant* mortality, but, considering the bad sanitary conditions prevailing, the general health is remarkably good, and I think that the female nail and chain-makers would compare most favourably in physique with many of their more fortunately situated sisters. I should regard them as a class as more than usually robust. With regard to the economic difficulties, it is certainly undesirable that women should supply cheap labour to the detriment of men; but this industry is of long standing, and its sudden total prohibition would most probably only drive the trade to foreign competition, and without helping the men, by depriving the women of their only available field of labour, produce, at all events, grave temporary distress, and render the last state of the workers worse than the first. Those who have the welfare of the women of this district at heart would surely find better scope for their philanthropic endeavours in the inauguration of strong trades' unions amongst the women, which would enable them, as they have men in the past, to secure better sanitary conditions and more adequate remuneration without crippling a legitimate and only available source of industry.—I am, Sirs, yours faithfully,

THOMAS E. MITCHELL, M.B., B.C.

Netherton, near Dudley, April 29th, 1891.

*** We print the above letter, but must maintain our view that such work as our Commissioner described—and the description is not falsified by being characterised as "sensational"—is unsuitable for women, and must necessarily entail, sooner or later, serious physical—to say nothing of moral—evils on the workers. Bad customs or conditions are not to be let alone because they may happen to be of long standing, nor should the fear of imaginary consequences operate as a bar to prudent and well-devised efforts to alter them.—ED. L.

LEGISLATION FOR MIDWIVES.

To the Editors of THE LANCET.

SIRS,—Taking up the thread of your Liverpool correspondent from THE LANCET of March 14th, I think it must be the wish of the profession "to improve the status of the midwife." From this standpoint it is most desirable for the Legislature to enact such as the following, so as to make a start: 1. That all certificated midwives be registered. 2. That uncertificated midwives in practice be allowed to offer themselves for examination, and, if successful, be registered. 3. That those already in practice and those unable to pass the standard examination be allowed to continue in practice, but not to register. (P.S.—That "registered midwife" be put on the door-plate.) 4. That from the date of legislation no uncertificated midwife be allowed to put up her name or practise as a midwife under a penalty of £50, so that in the course of nature the present handy woman may be stamped out. 5. That the future training, examining, and control of midwives be in the hands of a committee (medical) and five or seven subcommittees (medical). 6. That the committee be formed of three representatives from London and one from each of the respective subcommittees. 7. That a subcommittee exist in every examining centre, of which there shall be five or seven—e.g., in London, Liverpool or Manchester, Newcastle or Durham, Birmingham, &c. 8. That the laws and by-laws be framed by the committee (medical). 9. That a copy of the by-laws relative to midwives be given to every successful candidate along with her certificate.

Immediate legislation for midwives is most pressing, as a large influx of the uncertificated class may be expected now that "they know" deterrent legislation is looming ahead, so as to claim vested rights.—I am, Sirs, yours faithfully,

Liverpool, May 4th, 1891. J. ARMSTRONG.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Property Right of Prescriptions.

A PARAGRAPH in the London letter of a local daily paper alluded to the question as to whether the right to a prescription belonged to the prescriber or patient. A local practitioner gave prominence to the fact that he refers all his patients to a certain number of selected chemists, who are required by the prescriber to keep all the prescriptions, returning them to him periodically. He justifies this position by the improper practice which patients have of lending prescriptions to friends. The question is one of much interest here, since comparatively few practitioners in Liverpool dispense their own medicines, the majority writing prescriptions and allowing patients to please themselves as to where they take them. It may have been, pecuniarily speaking, a mistake for practitioners to give up dispensing, but it is too late in the day to lament this now. Undoubtedly it is hard upon practitioners that patients should make so improper a use of prescriptions as that indicated, and that chemists should prescribe. Still, a prescription belongs to the patient, who has a perfect right to decline any suggestion, still more any dictation, as to where it is to be taken. In this, as in other matters, it is

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well to remember that medicine is a noble profession but a vile trade.

"*Before the Magistrates for the Two Hundred and Eighteenth Time.*"

The following case shows the fearful indifference to which those accustomed to the sight of intemperance may arrive. The recently appointed stipendiary magistrate, Mr. W. J. Stewart, had lately before him a wretched-looking woman charged with having broken eight panes of glass at the Liverpool Workhouse. The prisoner is a cripple, and uses a crutch, which, on a former occasion, she threw at the magistrate; hence on this occasion it was kept from her. The prisoner said it was no use her saying anything, as she was always being brought up, and the magistrate remarked that to his mind she was more fit for a lunatic asylum than for the workhouse or gaol. The police sergeant, who kept the record, informed the court that the doctors could not certify that she was insane, and that she had been 217 times before the court. The magistrate thought this of itself sufficient proof of insanity. He remanded her for a week for examination as to her mental condition, and, as the gaol surgeon could not pronounce her insane, she was sentenced to two months' imprisonment, the utmost the magistrate could give her. It appears that the term of imprisonment is regulated by the amount of damage done.

The Assizes.

A fourth assize is held here annually. It commenced on the 4th inst., Mr. Justice Grantham presiding in the Crown Court and charging the grand jury. In the course of his remarks he alluded to the serious cases of wounding or other violence which almost invariably occur here in the immediate proximity of public-houses where drinking has been carried up to the point when men and women become quarrelsome, violent, and even maniacal. His lordship observed that if the publicans were made to pay the costs of the prosecution such excessive drinking would in all probability soon cease, and with it the crimes of violence also. Justice Grantham also observed that there were several cases of criminal assaults on young children, and expressed his strong opinion that corporal punishment was the only proper sentence for such crimes.

More Wounding.

In confirmation of what was stated in a previous letter as to the experience of Mr. George Hamilton at the Northern Hospital, and in anticipation of the above remarks, another serious case of stabbing occurred on the 2nd inst. It was the result of drink, and occurred not far from the Northern Hospital, to which institution the unfortunate man dragged himself, leaving stains of blood as he walked along. He was found to be suffering from a dangerous wound in the neck and from great loss of blood. An epidemic of stabbing was checked many years ago by the prompt action of the head constable, magistrates, and judges. The former had bills published in various languages cautioning foreign seamen and others from wearing knives in their belts when they came ashore. The magistrates gave severe sentences in those cases where, the wounds being slight, summary jurisdiction was permissible; the more serious cases being sent to trial, and very severely dealt with. It is very desirable that similar measures should be taken now, since nothing is more firmly established by experience than that criminals find imitators, unless the latter are deterred by severe warnings.

erpool, May 5th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Influenza in the North.

THE epidemic of influenza in the north of England has greatly extended since my last letter. I believe it is far more diffused than the outbreak last year, for it has returned to places before attacked, and visited fresh ground. Whitby has been severely visited, and it is curious that so long as the north and north-east winds prevailed it was comparatively free from the complaint, but when the wind changed to the west there was a coincident outbreak. Although large numbers have been prostrated in the Whitby district, fatalities have been few. I believe that, coming more north, Sunderland and Gateshead have suffered more severely than Newcastle, where we have, however, a very large number of cases.

The Population and Health of Newcastle.

The report of the city engineer, Mr. W. G. Laws, for the year ending March 25th last has just been issued, and in it he estimates the population at 185,000, and on this basis he contends that the general death-rate would come out at 22·9 and the zymotic at 1·8 per 1000, the first being 8 per cent. above, and the latter 35 per cent. below, the rates of the large towns. Of course, although we are yet without the official returns of the census, it is understood that there has been a very large increase of population in the city; one district, (Byker) has increased 21,000, and another at the opposite end of the city (Elswick) 25,000, so that there is a probability that the population will reach close upon 200,000; but to decide this and many other questions we must wait for the official returns.

Newcastle Hospital Sunday Fund.

A meeting of the management and distribution of the Hospital Sunday Fund has been held, and the statements given are very satisfactory. The collections at places of worship this year have been over £2000, and at manufactories about £2400, and with special contributions the total amount has reached over £4500, being an increase on the previous year, and making the largest collection in the history of the fund.

Alternative Staircases in Workhouses.

At the last meeting of the Newcastle Guardians a letter was read from the Local Government Board, stating that the Local Government inspector had called the attention of the guardians to the want of alternative means of escape in case of fire from certain of the sick wards, and also from some of the nurses' rooms, and requested to be informed "what steps had been taken in the matter by the guardians." The guardians have taken the matter very coolly, and directed their clerk to reply that they did not think that alternative staircases were required, but that they would give the matter further consideration. The guardians have accepted a heavy responsibility in this matter, for should a fire take place a disaster may occur, and there will be little time for consideration on the part of the unfortunate patients and nurses.

A Savage Intruder.

A curious case occurred at a farmhouse near Durham last week. A pig entered a kitchen where a baby lay in a cradle and attacked it savagely, overturning the cradle, and biting the child's arm and cheek seriously. Mr. McArdle, who dressed the wounds, says that fortunately none are in vital parts.

Sunderland Infirmary.

The physicians and surgeons of the Sunderland Infirmary brought forward many cases of interest on the occasion of the branch meeting of the Association held there last Thursday, and the meeting was thoroughly enjoyed by all who attended. The following were amongst the cases:—Mr. Maling: A very well marked case of Molluscum. Dr. Squance: A case of Lupus treated by Koch's method; also a lantern microscope. Dr. Robertson: A case of Lupus, also under Koch's treatment; an electric lamp, and a case of Disease of the Antrum. Dr. Drummond: Gall-stones discharged through the abdominal walls; Aneurysm of the Arch of the Aorta; Abscess Cavity in Lung of Child. Dr. Murphy: A Complete Series of the Diseases of the Uterine Appendages, which he had removed at the Sunderland Infirmary, including tubal pregnancy, pyo-salpinx of the ovary, parovarium of the broad ligament, and an enormous round-celled sarcoma of the ovary removed from a girl aged sixteen two years ago, the patient still keeping well and at work. Owing to the interest of the specimens and the time taken up in their discussion, the long list of papers to be read was not reached, and the meeting broke up to dine at the Queen's Hotel, Dr. Middlemiss presiding. A word should be said here in recognition of the kindness of the medical staff of the Sunderland Infirmary and the hospitality which they extended to their visitors.

The Silloth Convalescent Institution has received £100 bequeathed by Mrs. Mary Davidson, late of Allonby.

Newcastle-on-Tyne, May 5th.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Summer Session in Edinburgh.

THE Summer Session in the Medical Faculty commenced on Monday, in the usual matter-of-fact style. From the number of men about there would not appear to be any falling off in the attendance at the school.

Bananas as Food and Medicine.

Dr. John Dougall, of St. Mungo's College, Glasgow, has a letter in a recent issue of the *Glasgow Herald* on the banana. He quotes from Stanley's "In Darkest Africa," showing that "for infants, persons of delicate digestion, dyspeptics, and those suffering from temporary derangements of the stomach, the flour, properly prepared, would be of universal demand." During Stanley's two attacks of gastritis a slight gruel of this flour, mixed with milk, was the only material that could be digested. It is odd, also, as pointed out in Stanley's book, that in most banana lands—Cuba, Brazil, West Indies—the valuable properties of the banana as an easily digested and nourishing food have been much overlooked. Dr. Dougall has made some experiments in making banana flour. He concludes that it should be made from the ripe fruit at its place of production. In trying to make it from bananas purchased in Glasgow, he obtained, on drying the pulp, a tough sweet mass like toasted figs, an appearance probably due to the conversion of starch into sugar. Bananas contain only about 50 per cent. of pulp, and of this about 75 per cent. is water; they would yield, therefore, only one-eighth part of flour.

Physiological Action of Carbon monoxide of Nickel $Ni(CO)_4$.

At the last meeting of the Philosophical Society at Glasgow Professor M'Kendrick and Dr. Snodgrass submitted a short paper on the above substance. It is a clear, colourless liquid, which is very volatile, readily decomposing into metallic nickel and carbonic oxide. It is intensely poisonous, and, when present in the atmosphere to the extent of one-half per cent., proves fatal to animal life. Injected subcutaneously, even in minute quantity, it acts as a respiratory poison, giving rise to symptoms similar to those produced by carbonic oxide. The spectrum of the blood of an animal poisoned with it is similar to that of carbonic-oxide hæmoglobin. Uniting with the hæmoglobin of the blood, it apparently prevents the tissues from being supplied with a due amount of oxygen, and oxidation being interfered with, there is a large and prolonged fall of temperature. The extremely poisonous nature of the substance and its proneness to decomposition render it as yet unsuitable as an antipyretic; but means may be devised of diluting it so that it may be of value in the reduction of abnormally high body temperature.

Milk-poisoning from Colostrum.

In connexion with an outbreak of milk-poisoning which took place a few weeks ago in the west-end of Glasgow, an outbreak marked chiefly by great prostration, vomiting, and purging, a report has been issued which traces the affection to the use of milk from newly calved cows. Dr. Russell in his report says: "To send for sale as human food the milk of a newly calved cow is always inadvisable. All well-conducted milk companies have a clause in their contracts with farmers prohibiting this. The usual words are: 'No milk to be sent from a newly calved cow,' but one company prescribes 'four clear days from the date of calving.' Another, in Copenhagen, requires an interval of twelve days. The normal constitution of cow's milk is peculiar for several days; Fleming says 'for five or six.' The physiological purpose is to purge the calf, and it is not surprising that the effect on human children may be violent even when the cow is doing well, especially when by any accident the milk is not freely mixed with other milk."

Convalescent House, Arbroath.

This Convalescent House at Jennyswells, in connexion with the Arbroath Infirmary, was formally opened for the reception of patients on the 1st inst. The infirmary patients are to be admitted free of charge, but it is also open to other patients on payment of a small weekly sum as board. The House is the gift of the late Mr. Alexander Duncan, of Rhode Island, United States, and his brother, Mr. John Duncan, of Park-hill, Arbroath. It has cost about £1500.

Health of Edinburgh.

The mortality last week was 84, making the death-rate 16 per 1000. Diseases of the chest caused 50 deaths, and zymotic diseases 7. The intimations for the week comprised typhoid fever 5, diphtheria 1, scarlatina 19, and measles 83.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal College of Surgeons.

THE annual elections for examiners usually take place on the first Monday in May, but this year they have been postponed to a later date. Mr. John Cranny, M.D. Dub., F.R.C.S.I., has intimated his intention of becoming a candidate for the Vice-Presidency of the College in June next. There is a probability that Mr. William Frazer, ex-member of Council and examiner, may also be induced to become a candidate for the vice-presidency.

Dublin Main Drainage.

At a meeting of the Dublin Corporation the following resolution was unanimously adopted:—"That inasmuch as the present condition of the River Liffey renders it a public nuisance owing to the constant discharge of sewage from the city and some of the townships into it, and as the recent consolidation of the city debt places the Corporation in a favourable condition to deal with the pollution of the river and the main drainage of the city, that a Main Drainage Committee be appointed to make inquiries as to the best scheme of main drainage for the city of Dublin, and report to Council with as little delay as possible." A perfect system of main drainage is absolutely necessary, and must be undertaken sooner or later, the only reason for the delay being the enormous cost of such an undertaking. If the adjoining townships—viz., Clontarf, Kilmainham, Pembroke, Rathmines, &c.—bear their proportion of the cost, the expense to the Dublin ratepayers would be considerably lessened, and the purification of the entire Bay of Dublin be undertaken, while probably assistance might be obtained from Government for so important a local object. At all events, the appointment of a committee to examine into the matter carefully and wisely cannot be underrated, and must prove of great benefit to the citizens of Dublin and the inhabitants of the adjacent townships.

Irish Emigration Returns.

The emigration from Ireland for the past year was considerably less than that for 1889. The decrease amounted to 9365—viz., 4998 males and 4367 females. The total number of emigrants, natives of Ireland, who left Irish ports from May 1st, 1851, when the Registrar-General's returns were first issued, up to the end of last year was 3,407,893.

The Corporation have erected a pillar box close to Carlisle Bridge for the receipt of newspapers and periodicals for the use of patients in the infirmary of the South Dublin Union Workhouse.

Her Excellency Lady Zetland entertained nearly one hundred nurses belonging to the Dublin hospitals at the Viceregal Lodge last week.

Dr. Thomas F. Farrelly died at Bailieboro', County Cavan, on the 28th ult., from fever contracted in the discharge of his professional duties, aged thirty-three years.

Mr. William Greene has been elected medical officer of Howth dispensary district, in the vacancy caused by the death of Mr. Neary.

At a recent meeting of the Royal Hibernian Academy, Mr. Booth Pearsall, F.R.C.S, was elected an honorary member of the Academy. Mr. Pearsall's artistic abilities are well known and appreciated in Dublin, and this year he has two pictures on exhibition in the Academy.

Mr. Robert H. Woods, M.B., who obtained the Surgical Travelling Prize last year at the University of Dublin, is one of three students who have been elected by their fellow-students to attend the *fêtes* at Lausanne on the 17th inst. and four following days.

BELFAST.

The Royal Hospital.

On Wednesday, April 29th, at an "At Home" given in Belfast Castle, the leading citizens of Belfast and district assembled to present an illuminated address and silver

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casket to the Earl of Shaftesbury on his coming of age. The Mayor of Belfast presided, and after the address had been read, the gift presented, and the young Earl had replied, his mother, the Countess of Shaftesbury (daughter of the late Marquis of Donegal), delivered a most eloquent speech in which she announced a very generous gift to the Royal Hospital, as a memorial of the events of that day. She said the Royal Hospital was held under her by a terminable lease made by her grandfather in 1813, and in twenty years that valuable property would again become part of the estate. Knowing how the advantages of the hospital reached all sections of the community, and that its efficient maintenance was most desirable, she and her son (the present Earl) had arranged a new lease to the Corporation of the Royal Hospital for 10,000 years, at the nominal rent of 2*s.* 6*d.* per year, to commence immediately in lieu of the present rent. Further, should it be decided to build a new hospital on another site, as more advantageous, she would consent to a sale of the present building freed from all obligations as to its use for the 10,000 years' term at 2*s.* 6*d.* a year, the sum realised to go to the building of the new hospital. The Countess having handed the lease to the Mayor of Belfast, he thanked her in the warmest terms on behalf of the citizens, and gave the document to Mr. Wakefield Dixon (chairman of the Board of Management of the hospital), who returned thanks to the Countess and the Earl of Shaftesbury for the munificent gift. At the usual meeting of the City Council, held on May 1st, it was unanimously decided to send a vote of thanks to the Countess for her great kindness and generosity to the city of Belfast; and the Board of Management of the Royal Hospital have passed the following resolution:—"The Board of Management of the Belfast Royal Hospital, while anxious to avail themselves of the first opportunity of placing on record their gratitude for the handsome gift to the hospital by the Countess of Shaftesbury and the Earl of Shaftesbury of the hospital property practically free of rent for 10,000 years, defer until a meeting of the Corporation, which will be held on Monday, the 25th inst., the passing of a resolution conveying to Lady Shaftesbury and Lord Shaftesbury their appreciation of the value of the gift which they have made to the inhabitants of Belfast in connexion with an institution which endeavours to alleviate all those suffering from accident or disease, more especially in connexion with the working classes."

Queen's College.

The council of the college has nominated Mr. Benjamin Moore, B.A., a distinguished student of chemistry, for the scholarship lately placed at their disposal by the Commissioners of the 1851 Exhibition. The scholarship is worth £150, and is tenable for two or, in special cases, for three years. Mr. Moore intends to study chemistry at Leipsic during his tenure of the scholarship.

The Summer Session.

The summer session commenced on May 5th, when clinical teaching was resumed at the Belfast Hospital for Sick Children. The gold medal at the close of the session was awarded to Mr. Scott.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Treatment of Wounds of the Abdomen.

THE importance of the above subject in these days of giant armaments and repeating rifles is self-evident, and it is not surprising that deductions gathered from civil practice should provide occasional matter for discussion at our learned societies' meetings. In 1887 Dr. Barnard, at the suggestion of the late Professor Trélat, took this subject as the theme of his inaugural thesis. In that opuscule he pronounced strongly in favour of the formation of an early diagnosis (penetration or non-penetration) by means of a flexible probe, or, if necessary, an exploratory dissection of the wound down to the peritoneum. Penetration being proved, he advised immediate laparotomy through the linea alba for the purpose of suturing any wounds of the stomach, intestines, or bladder that might be discovered, or, what is of equal importance, of tying any wounded bloodvessels, removing clots and foreign bodies, and cleaning the peritoneal cavity. Dr. Barnard's views were at the time attacked by M. Reclus in his *Clinique Chirurgicale de l'Hôtel-Dieu*, and it would appear from a discussion at the Société de Chirurgie, held on the 29th ult., that this surgeon has not changed his opinion. Amongst the speakers, M. Reclus was supported by only one *confrère*, M. Berger, while the opponents of the opium and expectant treatment were MM. Terrier, Pozzi, and Lucas-Championnière. M. Terrier, in citing three cases of abdominal knife wounds (in one of which laparotomy revealed no lesions, and the patient made a rapid recovery), prophesied that the *réactionnaires* would end by coming over to the opposite camp.

An Improved Hypodermic Needle.

How often does it happen that when one wishes to use the hypodermic syringe the needle is found impermeable, and consequently useless. Steel needles are in effect very liable to oxidise and rust, and are, moreover, difficult to disinfect. Many attempts have been made to replace them by needles composed of gold or platinum—metals which have unfortunately the inconvenience of being costly, of becoming blunt, and of easily bending. M. Debove has recently had manufactured for him needles made of an alloy of platinum and iridium—a combination which is very hard, and which does not oxidise. These needles resist the heat evolved by the flame of a spirit lamp (disinfection), and the passing of a wire through the bore in order to maintain its patency is unnecessary. Add to these advantages the fact that they are hardly more costly than the steel article—indeed, being more durable, the ultimate cost is probably less—and practical men will appreciate the advance made in this direction.

A New Antiseptic.

At the Académie de Médecine, on April 28th, M. Polaillon read a paper contributed by Dr. Berlioz of Grenoble on a new antiseptic agent called "microcidine," which is composed of 75 per cent. of naphtholate of sodium and 25 per cent. of naphthol and phenyl compounds. It is a white powder obtained by adding to fused β-naphthol half its weight of caustic soda, and allowing the mixture to cool. It is soluble in three parts of water, and the solution, which is cheap, is said to possess considerable antiseptic powers, without being toxic or caustic or injurious to instruments or linen. The antiseptic properties of microcidine, while inferior to those of corrosive sublimate or naphthol, surpass those of carbolic and boracic acids ten and twenty times respectively. Microcidine is eliminated by the kidneys, and is antipyretic. M. Polaillon has experimented with this new agent largely in his wards as a dressing to recent and other wounds, utilising as a dressing, after a preliminary cleansing of the raw surface, with a 3 per cent. solution, gauze soaked in the same, and covered with a layer of oiled silk and a thick pad of cotton-wool. The results are reported to have been excellent.

A Comparison of the Medical Population of Paris, Vienna, and Russia.

La France Médicale gives in its current number some interesting figures in reference to the above subject. It appears that Vienna, with a population of 800,000 for the town proper, and 400,000 for the suburbs, counts 1315 and 177 doctors for these respective divisions—i.e., 1 per 600 inhabitants of the town, and 1 per 2250 of the suburban population. In Russia, there were in July, 1890, 12,112 male and 700 female practitioners, 2629 of the former being attached to the army and navy. This gives a proportion of one practitioner for 100,000 inhabitants. Paris is poorer in doctors than the Austrian capital, for, with a population of 2,300,000, there are only 2200 medical men, being about 1 per 1000. As might be expected, the rich arrondissements possess more doctors than the poor but more populous districts.

International Courtesies.

The delegates appointed by the General Council of the Faculties to represent France at the *fêtes* to be held at Lausanne next month to celebrate the conversion of the Faculty of that town into a University are MM. Planchon, Director of the École de Pharmacie; Brouardel, Dean of the Paris Faculty of Medicine; Lannelongue, Richet, and Strauss, Professors at the same Faculty; the Dean of the Faculty of Law; and M. Liard, Director of Higher Education. The Seine Sanitary Board has, in its turn, nominated as its representatives at the forthcoming International Congress of Hygiene in London the following gentlemen: MM. Lancereaux, Brouardel, Rochard, Léon Colin, Nocard, Schutzenberger, Bezançon, Léon Faucher, Jungfleisch, and Voisin.

Paris, May 4th.

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NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

AN idea of the present state of development of the medical sciences in this colony may be gained from the following synopsis of the contents of recent issues of its one medical journal.

The *New Zealand Medical Journal* has now reached the middle of its fourth volume, and as it is the organ of the New Zealand Medical Association its value to the medical men practising in the colony unable to attend the various medical meetings is of the first importance. Each volume consists of four numbers issued quarterly. I have before me the last three numbers issued. J. Wilkie and Co., printers of Dunedin, are the publishers, and the editorial chair is occupied by Dr. Colquhoun of Dunedin. Auckland is represented by Dr. E. Roberton, Christchurch by Dr. Thomas, Nelson by Mr. Cressey, Wellington by Dr. Fell, Invercargill by Dr. Closs, Blenheim by Mr. Cleghorn, and Dunedin by Dr. de Zouche and Mr. Davies. These gentlemen communicate the medical news in their respective districts to Dr. Colquhoun quarterly. In this way it is clear that the whole colony, from a medical point of view, is brought together, and that practitioners residing up country are kept in touch with the transactions of the local branches of the Association. The editor is empowered by the Association to use his discretionary power regarding the insertion of contributions forwarded to him for publication. This is a very wise and prudent course to adopt, and one, moreover, which is absolutely necessary. Considering the number of cities in the colony, all much on a par as regards population, and so widely scattered, it is a matter of congratulation to all members of the New Zealand Medical Association that they have been fortunate enough to obtain the services of Dr. Colquhoun as editor of their journal. His heart seems to be in the work, and his tact in the management of the journal generally is highly appreciated. Each volume has about 275 pages. The journal is printed on good paper with excellent type, and the management in this respect leaves little to be desired. The last October number contains a description from the pen of Dr. H. Widenham Maunsell, lecturer on surgery at the Otago University, of a "new method of excising the tongue," which has been read with much interest throughout the colony. The article is copiously illustrated, explaining the context, which makes the various steps of the operation very apparent. During the past two years Dr. Maunsell has performed this operation four times for cancer. All the stumps healed by first intention, and the patients made a rapid convalescence. He claims, first, that the final step of the operation carries out merely one of the first principles of surgery—viz, "the mucous membrane on the floor of the mouth is fixed to the mucous membrane on the dorsum of the base, and covers the entire surface of the stump, which it holds well forwards and downwards towards the floor of the mouth"; secondly, that the patients find no difficulty in swallowing after the operation; and thirdly, that the epiglottis is so controlled by pressure that the operation is rendered almost bloodless. In the same number is an excellent account of the Proceedings of the Canterbury branch of the Association, presided over by Mr. Hacon of Christchurch, who delivered a lengthy and very able address on scientific advance generally at the close of his year of office as President of this branch of the New Zealand Association. Dr. Colquhoun in the July issue describes a case of "Cerebral Tumour in the Rolandic Area," which he successfully removed. The total weight of the tumour was about four ounces and a half; it probably had its origin in the dura mater, and on section showed the cells characteristic of small spindle-celled sarcoma. The case is very well described, starting with the symptoms of Jacksonian epilepsy to the final departure of the patient convalescent six weeks after the operation. A number of books are reviewed in this issue. Especial attention is drawn by the reviewer to "the Transactions of the second session of the Intercolonial Medical Congress," held in Melbourne in the previous January. The *New Zealand Medical Journal* describes this work "as the most valuable book on Colonial medicine that has yet appeared, and one which every medical man practising in the colony will find most useful." The January number, 1891, contains an article read before the general meeting of the New Zealand Association last year by Dr. Frederic King, medical superintendent of the Seacliff Asylum, on the Degree and Distribution of Sensory Paralysis in Lesions of Median and Ulnar Nerves. The subject is well illustrated by cases, and the histology of sensory nerves is minutely inquired into. The New Zealand Cancer Statistics, by Mr. MacDonald, to which I have already referred in a previous contribution, is further discussed. A map of the colony is added to the article, showing the various towns in the colony where cancer is: (1) very commonly found, (2) commonly found, (3) not commonly found. All the large towns in the north island are branded No. 1, while the South Island's chief towns so marked are only Nelson, Hokitika, and Dunedin. Mr. MacDonald adds "that it is commonly asserted that cancer is much more common in the Colonies generally than in the Old World. This is, however, not the case. In 1888 the percentage of deaths from cancer in England was about 1 in 1500, whilst in New Zealand it was about 1 in 2500." The same number contains an article by Dr. G. R. Saunders of Wanganui on Alcoholic Neuritis, giving his clinical experience of these cases. Dr. Guthrie describes two cases of Exostosis and Placenta Prævia; and Mr. A. Osborne Knight of Auckland gives clinical details, very carefully compiled, of a case of Acute Intussusception of the Cæcum and Appendix, followed by Mortification. A *résumé* of the Principles and Treatment of Diabetes Mellitus by Dr. Pavy, as described by him at the late Berlin Congress, is found in this issue of the journal. An article which cannot fail to give satisfaction to every right-thinking person, be he a professional man or otherwise, is that entitled "A Plea for Stringent Legislation in the matter of Corrupt and Immoral Publications," by Dr. King. This is a subject which few men care to tackle. I congratulate the author on his courage in so completely unfolding to the gaze of the colonial public the startling and daring quack advertisements and publications of unprincipled persons who are constantly spreading their nets to catch the unwary. Corrupt publications are circulated freely among the youth of the colony. It is a matter of sincere regret that colonial newspapers exist which allow such corrupt advertisements to appear in their columns, publications which convey false and immoral ideas. Legislation must sooner or later step in and check this growing evil. I shall return to the subject on a future occasion. Meanwhile let me draw attention to the fact that the Auckland Branch of the New Zealand Medical Association has made certain suggestions regarding the conduct of the journal generally. The journal as at present conducted does not seem to give entire satisfaction to the northern members. Various questions have been asked by them, with the object of raising a discussion, to see if anything can be done to augment the value of the journal as a whole. These suggestions have been replied to in an editorial article. One sentence in this seems to me to answer all those suggestions, and it is this: "The journal is entirely the servant of the Association, and it is for the Association to decide as to the fitness of the editor and the lines on which it is to be conducted." This can only be carried out by discussing the lines on which the journal is to be carried on at the annual Congress. This is a matter of the greatest importance, and the subject should be, as I trust it will, thoroughly thrashed out at Nelson on March 31st next. On the whole, the *New Zealand Medical Journal* is a credit to the colony; its value as a professional record is great, and so long as it is as ably edited as it is at present its future is sure to be bright. Let me add one word more; let us all work harmoniously together for its good and our own.

Obituary.

THOMAS HIRON BARTLEET, M.B. LOND., F.R.C.S., BIRMINGHAM.

AS briefly noted in THE LANCET of May 2nd, the death of Mr. Bartleet took place on April 29th, after a short illness. The son of Mr. Edwin Bartleet, a highly esteemed practitioner in Birmingham, he was born in 1837, and from an early age was destined for the medical profession. Educated at the Grammar School in the town, he became afterwards a pupil of Queen's College, and subsequently entered at King's College, London. In 1860 he obtained the degree of M.B. Lond., after a brilliant career, in which he obtained the gold medal in surgery of the University. In 1871 he passed the Fellowship of the Royal College of Surgeons. He was elected surgeon to the Children's Hospital previously,

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and retained this appointment until 1867, when, after a close contest, he obtained the post of surgeon to the General Hospital. He was wont to refer to this appointment with pride mingled with regret at the mode of the election, the expense of which cost him as much as £800. Settling down in practice, Mr. Bartleet took an active interest in his profession. He became lecturer on physiology at Queen's College, later professor of operative surgery, and in 1887 Ingleby lecturer for the year. He was an expert operator, pursuing with confidence the plans he had laid down. Politically he associated himself with the Conservative party, of which he was an ardent exponent, though always just and candid in allowing the arguments of the opposite side As a magistrate for the borough he was equally fair and scrupulously attentive to the duties of his office, in which he allowed nothing to interfere with the exercise of what he considered to be a public duty. Possessing in a marked degree the higher qualities of a noble character, of high principle, and able intellectual power, he gave a tone of honour and probity to the circle in which he moved; while his generous mind and firmness of expression, ever ready to do justice to the opinions of others, rendered his influence a marked one over those with whom he came in contact. His ready sympathy and genial bearing endeared him to his patients, commanded their regard in an exceptional degree, and made him most beloved by those who knew him best. Loyal in his friendships, steadfast in the pursuit of what he believed to be right, frank and open in his dealings, he became honoured as a citizen and regarded as a firm opponent of all things mean and base. He married the daughter of Mr. Samuel Berry, F.R.C.S., and has left a family of two sons and three daughters, who, with his widow, remain to lament their too early loss. His funeral took place on the 6th inst. The first part of the service at St. George's Church, Edgbaston, was attended by a large number of his friends and representatives of public bodies with which he was connected; the concluding part at the family vault at Chipping Campden, in Gloucestershire, where his remains rest.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following degrees have been conferred:—

Doctors of Medicine.—James Kerr, St. John's; Benjamin Bloomfield Connolly, Gonville and Caius; Herbert Timbrell Bulstrode, Emmanuel; and Philip Hicks, Cavendish Hostel.

Bachelors of Medicine and Bachelors of Surgery.—Geoffrey Edward Hale, King's; Charles Percival White, Clare; Ernest Alan Robert Newman, Gonville and Caius; and Edward Surman Peck, Christ's.

Bachelor of Surgery.—Benjamin Bloomfield Connolly, Gonville and Caius.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who have passed the undermentioned examinations:—

First Professional Examination.—W. D. Adams, C. C. Aitken, H. de M. Alexander, James Anderson, R. W. Beesley, William Begg, B.A.; William Bethune, J. L. Bevans, *J. E. Bowes, F. W. Broadbent, R. T. Bruce, Morton Burnet, A. P. Chapman, Joseph Cookson, B. R. Craig-Christie, Edward Crarer, J. M. Dalziel, J. R. Dodds, H. O. Dougall, H. W. Dun, Alexander Edwards, H. P. Elliot, David Evans, Thomas Finlay, John Forbes, J. V. Forrest, J. S. Fraser, Simon Fraser, W. H. Gaunt, Thomas Gibson, Australia; J. D. F. Gilchrist, M.A.; P. E. H. Giuseppi, J. H. Glover, J. E. Good, D. J. Graham, J. H. K. Griffiths, William Haig, Henry Halton, Cooper Hardcastle, John Harris, R. T. Herdman, Arthur Heys, Edward Higinbotham, C. W. Holme, Archer Hosking, John Hume, F. C. M. Hutchinson, T. H. Jameson, Henry Jones, T. H. Jones, J. G. Kay, J. W. Keighley, B. C. Kelly, T. B. Kenny, J. W. Kippen, D. F. Laidlaw, John Laurie, T. G. Lewis, G. R. Livingston, T. G. Lusk, W. C. W. M'Dowell, C. J. R. MacFadden, John Maciver, J. C. Mackenzie, W. H. Mackenzie, Roderick Mackinnon, J. G. Macmillan, Donald Matheson, Sidney Messulam, Joseph Michael, C. H. D. Moore, B. S. Mowat, M. G. Naidu, B.A.; F. B. Oliphant, David Orr, E. L. Owen, J. L. Owen, G. W. S. Paterson, C. W. Peach, Fred. Porter, W. A. Potts, B.A.; F. G. Proudfoot, J. C. Rait, David Rankine, M.A.; A. M. Rattray, William Riach, R. G. Robson, W. C. Rowlands, Robert Samut, James Scott, R. G. Selby, J. H. Seon, T. D. S. Shaw, T. R. S. Sibbald, S. S. Skinner, B.A.; George Smith, M.A.; S. H. Smith, H. W. Somerville, W. L. Stevenson, Thomas Stuart, J. W. Sutcliffe, F. W. Taylor, A. G. P. Thomson, A. S. Trapaga, D. A. Turkhud, W. E. Turnbull, G. D. de Waal, James Watson, W. H. Watson, Daniel Watters, E. C. Watts, J. R. Whait, Alexander Whytt, P. W. Wilkinson, E. D. Williams, J. M. Wishart, J. B. Wood, J. J. H. Wood, Z. M. Zorab.

Second Professional Examination.—G. W. Ancram, G. B. Anderson, W. C. Anderson, M.A.; J. R. Armstrong, R. H. Armstrong, W. D. Barrow, Arthur Beecroft, H. P. D'A. Benson, C. H. Bond, M. R. Bow, D. H. Burn, Geo. Butters, Albert Cameron, Daniel Campbell, W. S. Campbell, Featherston Cargill, J. F. Carruthers, J. G. Christie, M.A.; P. G. Cilliers, G. P. Coldstream, H. D. Coles, A. B. J. Coope, James Cowie, J. W. Craig, S. G. Davidson, M.A.; J. L. Dick, George Dickson, Alex. Douglas, M.A.; R. W. Duncan, G. H. Dupont, *D. C. Edington, C. R. Edmondson, J. J. Evans, J. H. Ewart, *Arthur Fells, J. L. Ferris, William Fitzgerald, W. T. Fox, F. W. Foxcroft David Fraser, J. A. Fullarton, Archibald Gardner, T. G. Goldie-Scot, W. B. Gow, T. A. Granger, H. F. Green, Vincent Green, *G. K. Grimmer, W. B. Harry, J. B. Hawthorn, T. B. Hearder, D. B. Hewat, R. L. Guthrie, J. A. Hamilton, L. E. Hardy, F. J. Hare, B.Sc.; Geo. Hodges, G. H. Hogg, *George Home, *Robert Hutchison, F. H. G. Hutchinson, S. P. Hyam, J. H. Johnston, J. L. Jones, H. W. G. Lander, Thomas Lawson, Frederick Lishman, H. C. Lloyd, G. O. M. Lunt, James M'Clew, James M'Donald, James Maclean, M.A.; A. H. M. Macmorran, *G. W. F. Macnaughton, *P. O. Malabre, J. C. Maxwell, M.A.; Raymond Maxwell, David Melville, J. E. Moorhouse, M.A., B.Sc.; D. G. M. Munro, J. H. Murray, P. W. Nicol, Athelstane Nobbs, A. A. O'Hara, I. J. H. Oldmeadow, John Owen, G. W. Park, Charles Parker, F. R. Patterson, H. J. Pechell, W. H. Pimblett, C. F. Ponder, Robert Proudfoot, M. M. Rattray, G. P. Richards, Alistair Robertson, H. A. Robertson, J. F. Robertson, William Robertson, J. L. Russell, W. A. Rutherford, William Scott, Thomas Sidebottom, A. T. Simpson, J. P. Somerville, A. C. Stamberg, St. John Stanwell, Riccardo Stephens, *A. G. Talbot, M. W. Talbot, G. D. S. Thom, J. L. Thompson, J. B. Thomson, A. C. Turner, C. C. B. Tyrie, A. H. H. Vizard, F. J. Walden, Andrew Walker, M.A.; John Wallace, D. C. Watson, J. K. Watson, W. T. Wearing, Evan Williams, G. J. Williams, Reginald Williams, J. C. Wilson, Meredith Young, William Young.

* With distinction.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following shows the result of the April examinations held in Glasgow:—

First Examination.—Of 41 candidates the following 29 passed:—Kate K. Paton, Glasgow; Robert P. Snodgrass, Montreal; Stanley H. Oulton, Liverpool; Janet R. Wells, Glasgow; Catherine Howie, Glasgow; Wm. E. Blakely, Aughnacloy; John M'Lean, Glasgow; Malcolm Stewart, Kilwinning; Henry Marmion, County Down; Wm. Bond, Lancashire; Thomas B. Whitelaw, Kirkintilloch; Herbert P. Weston, Manchester; Gertrude N. O'Flaherty, Galway; Abraham J. Boulger, Colchester; Jean M. Grant, Banff; James Fenwick, Accrington; John D. Ballantyne, Dundee; Thomas J. Evans, New Quay, Wales; Thomas Heaps, Preston; Thomas French, County Cork; Richard C. Wilson, Birkenhead; Martin P. Corkery, Bombay; William Corkey, County Armagh; Luther T. Myers, Yorkshire; Cuthbert Rutherford, Northumberland; James H. Robinson, Southport; Samuel T. Brooks, Farnworth; Stanley B. Siddall, Stanley, Liverpool; and George Hill, Glasgow.

Second Examination.—Of 50 candidates the following 30 passed:—James P. T. Burke, Ireland; Henry de Courcy O'Neale, Barbadoes; Alexander M'Afee, B.A., Ballymoney; Henry Joseph Cosgrove, Dumfries; William M. Fox, Cork; Robert Martin, County Down; Andrew M. Stewart, Alloa; Andrew J. M'Mickle, County Tyrone; John M. M'Millan, Argyllshire; George M. Wilcockson, Derbyshire; Thomas W. Waddell, Demerara; Janette F. A. Wallace, Inverness-shire; Thomas Dawson, Mid-Lothian; George C. Giles, York; Samuel W. Pitcher, Talbot, Australia; John Lamont, Argyllshire; Reginald H. Wright, Cheshire; Henry L. M'Culloch, Melbourne; William L. Crewdson, Edinburgh; Rees T. Jones, Glamorganshire; John C. Edwards, Denbighshire; Ralph T. Clark, Harrington; William Walker, Aberdeenshire; Jeanie Grant R. Duggan, Edinburgh; John Featherstone, Northumberland; Archibald M'Kellar, Glasgow; Michael Luby, Limerick; Thomas C. Hunter, Glamorganshire; Arthur James Neill, Melbourne; and D. C. Lionel Williams, Breconshire.

Final Examination.—Of 36 candidates the following 15 passed:—Daniel Doherty, Buncrana, Derry; Thos. Marshall, South Shields; Edith Mary Brown, Croydon; John Lane Gurrane, Fermoy; George Billing, Blackpool; Henry Collier, Carbrook; John Hodgson, Burnley; Edmund Hartley, Heywood; Jogendra nath Banerjee, Bengal; Charles N. Macquarie, Kilmuir; C. Blair Lucas, Carmyle; Henry D'Arnim Blumberg, Edinburgh; Joseph E. Joner Pegg, Birmingham; P. Algernon Shore, Walsall; and Simon Martyn, Bombay.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW. — The following candidate was admitted a Diplomate in Public Health at the April examination:—

Arthur P. Luff, M.D. Lond., Weymouth-street, London.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the Final Examination:—

Mark Francis Cahill, Richard Atkinson Crawford, Henry Michael Cullinan, Frederick Francis Mahon, John Coffey Ryan, James Arthur Thompson, and Albert William Lambert Zimmer.

The undernamed were candidates for a portion of the examination, and passed:—

W. M. Meeke, H. Moore, and W. E. Moore.

ROYAL UNIVERSITY OF IRELAND.—The following have passed the second examination in Medicine of the University:—

Upper Pass Division.—*Robert Allen, Patrick Brady, *Joseph A. Corbett, *Emily Winifred Dickson, William Hanna, *William McMath, and John Shine. (Those marked with an asterisk may present themselves for Honours.)

Pass Division.—Michael H. Aicken, Wilberforce Arnold, Charles Birmingham, Charles Blue, James M. Browne, Alfred G. Caldwell, Joseph H. Clements, John G. Clokey, James Colville, Mina L. Dobbie, Albert E. Doroney, Joseph W. Furey, John B. Johnson, Thomas S. Kirk, Thomas J. McKendry, John McMullen, John Mathewson, Martin O'Dea, Patrick J. O'Keeffe, Henry L. Ormerod, Albert A. Peel, Michael J. Ryan, Patrick J. Scannell, John H. Thompson, and John J. Wallace.

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UNIVERSITY OF OXFORD.—Mr. W. T. Brooks, M.A., M.B. Lond., and Mr. A. Winkfield, F.R.C.S., have been nominated Litchfield clinical lecturers in medicine and surgery respectively.

A CENTENARIAN.—A woman named Oberry died last week in Dungannon Workhouse at the advanced age of 110 years. She distinctly remembered the Rebellion of 1798, which occurred when she was a young girl.

ROYAL SOCIETY.—The following members of the medical profession have been nominated by the council to be recommended for election into the Society on the 4th prox.:—Mr. W. Anderson, F.R.C.S., Professor D. J. Cunningham, and Dr. W. D. Halliburton. Professor P. F. Frankland's name is also in the list.

DECIMAL ASSOCIATION.—A joint deputation from the Associated Chambers of Commerce and the Decimal Association will be received by Mr. Goschen and Sir Michael Hicks-Beach to-day (Friday) at one o'clock, to urge the Government to take the necessary steps for rendering compulsory the adoption of the metric system of weights and measures, now generally adopted in other countries, as the first stage in the introduction of a complete decimal system.

UNIVERSITY OF CAMBRIDGE.—The Special Board for Medicine, in accordance with Regulation 10 for the degree of Bachelor of Medicine, publish a schedule defining the range of the examination in pharmaceutical chemistry, and give notice that the schedule will come into force at the beginning of the next academical year (Oct. 1st, 1891). The examination will be practical, and will have reference to the chemical principles involved in the preparations named in the schedule.

BRIGHTON HOME OF REST FOR NURSES.—On Monday Princess Christian visited Brighton for the purpose of opening a home of rest for nurses in Sussex-square, founded by herself, and carried on by a committee of which Mrs. Bedford Fenwick is honorary secretary, the Lord Mayor of London treasurer, and the Duke of Abercorn and Mr. Justice Jeune are trustees. The Princess observed that, being connected, as president, with the Royal British Nurses' Association, one of the largest nursing associations in the kingdom, she had much pleasure in coming to Brighton to open the new home, which will afford accommodation for sixteen visitors.

THE ASSOCIATION OF PUBLIC SANITARY INSPECTORS OF GREAT BRITAIN.—Dr. B. W. Richardson, the president, delivered a lecture at the monthly meeting of the Association held in the Carpenters' Hall, London Wall, on Saturday, on "National Main Drainage." There was a large attendance. Dr. Richardson dealt with the question in considerable detail, observing that national main drainage meant the complete return of temporary dead matter to the living earth over the widest possible area, and the application of temporary dead material for the reproduction of food. The accomplishment of this plan could be effectively carried out by and through a capillary network laid out for another purpose, so that, if starting anew, they could not do better. This scheme would settle the question of a pure water-supply once and for all.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.—A public meeting in aid of the City of London Hospital for Diseases of the Chest, Victoria Park, was held on Monday at the Mansion House. The Lord Mayor, who presided, said that the object of the meeting was to make a special appeal for £10,000 to remove from the interior of the building the lavatories and sanitary offices, and to place them in two towers at each end. This work was absolutely necessary, and would greatly promote the healthy occupation of the various wards. The hospital was founded forty years ago, and since then it had received over 24,000 in-patients, while the number of out-patients amounted to about half a million. A motion by Sir Robert Fowler, M.P., pledging the meeting to use every endeavour to assist the committee of management in obtaining funds to carry out the proposed scheme for improvement in the drainage and sanitary appliances of the hospital, was seconded by the Bishop of Bedford and supported by Sir J. Risdon Bennett, one of the original staff of the hospital, and carried unanimously. Contributions were announced of £50 from Her Majesty the Queen, £25 from the Duke of Connaught, and several other donations, the proceedings closing with a vote of thanks to the Lord Mayor.

WORKHOUSE INFIRMARY NURSING ASSOCIATION.—Princess Mary Adelaide, Duchess of Teck, will distribute the medals and gratuities to the nurses of the Association at their eleventh annual gathering to be held at 9, Conduit-street, Regent-street, on the 14th inst., at eight o'clock.

DISHORNING CATTLE.—The judges of the Queen's Bench Division in Ireland have just given their ruling in a case of appeal against the decision of the magistrates at Kells on the above question. The Lord Chief Justice, in giving judgment, held that the magistrates were right in concluding that the pain inflicted by dishorning was not inflicted without good reason, and were justified in dismissing the complaint. In this ruling the other judges concurred.

DWELLINGS OF THE POOR.—At a meeting of the Mansion House Council on the Dwellings of the Poor, held on Wednesday, a report was read by Mr. John Hamer (hon. sec.) which stated that cases of insanitation had been dealt with in the City, Whitechapel, Old Ford, Strand, Islington, and St. Pancras. The annual report was presented and ordered to be circulated. Letters were read from the Hammersmith Vestry stating that they were most anxious to do all the law permitted to remedy the complaints of the Council.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION AT BRISTOL.—On the 1st inst. a meeting of this Association was held at Brislington House. A conference followed the meetings for the transaction of the purely business part of the Association work, at which Dr. Yellowlees of Glasgow presided. Dr. Hack Tuke read a paper on "Prichard and Symonds in especial relation to Mental Science." Dr. Lionel Weatherley followed with a paper on the "Use and Abuse of Hyoscine," and Dr. Bonville Fox with one on "General Paralysis." Discussions ensued on each paper, and the meeting terminated.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.—The twenty-fifth anniversary of this hospital was celebrated by a festival dinner at the Hôtel Métropole on the 1st inst., Lord Brassey presiding. On proposing the toast of the evening, the chairman asked for support chiefly in aid of the proposed convalescent home at Broadstairs, in connexion with the hospital. Fourteen years ago the committee of management opened such a home at Margate, and 2400 children had been treated there with very satisfactory results. Another similar institution was now found necessary; £6000 was required for the purpose, a large portion of which had yet to be subscribed. The secretary announced donations to the amount of £1820.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—The Earl of Lathom presided at a festival, held at the Hôtel Métropole on Saturday, in support of the building completion fund of this hospital. His lordship briefly traced the history of the hospital, which was started in 1828 by the late Dr. Marsden, on the then entirely new idea of free and unrestricted admission of patients. To that principle it has steadfastly adhered. At the present time there were 160 beds. Since its foundation two millions of patients had been treated. It was proposed to rebuild the front of the hospital at an estimated cost of £20,000. In adverting to the Committee on Hospitals his lordship stated that the institution had come out extremely well. The treasurer announced donations amounting to £8000, of which £3000 was a special bequest towards the rebuilding the front of the hospital.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—In aid of the funds of this institution a festival dinner was held on Monday at the Hôtel Métropole, the Duke of Clarence and Avondale occupying the chair. In proposing "Success to the Royal Hospital for Children and Women," his Royal Highness adverted to the foundation of this hospital seventy-five years ago by his great grandfather, the Duke of Kent. Since its establishment three-quarters of a million of patients had received its gratuitous medical and surgical treatment, there being no paying wards. The ordinary income was under £2000, and the expenditure upwards of £3000 a year. He appealed for a hearty and liberal support to so worthy and excellent a charity. The secretary announced subscriptions amounting to £1165. It was the subject of remark that a recognition of the services of the medical staff—a compliment which is usually paid at such gatherings—was omitted on this occasion.

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ST. BARTHOLOMEW'S HOSPITAL.—At a meeting of the City Commission of Sewers held at the Guildhall on Tuesday, a report of Dr. Sedgwick Saunders, the medical officer of health, on the sanitary condition of St. Bartholomew's Hospital was read and ordered to be printed, but its consideration was adjourned until the next meeting.

PRESENTATION.—On Monday, at a meeting of the Dispensary Committee of the Johnson Hospital, Spalding, Dr. Edwin Morris was presented with a handsome silver salver, on his retirement from the medical staff, after the completion, and in recognition, of fifty years of gratuitous professional services rendered to the institution.

MEATH HOSPITAL, DUBLIN.—The following prizes have been awarded for the winter session, 1890–91:—Medicine: William Scarlett, first prize; Hugh Hunter, second prize. Surgery—Senior: Alfred Power, first; Edward Frazer, second. Junior: William Taylor, first; J. W. Watkins, second. Prize for bandaging and application of surgical appliances: Gordon M. Thompson, first; William Taylor, second.

THE MAGHULL HOME FOR EPILEPTICS. — The Bishop of Liverpool occupied the chair at the second annual meeting of this Home on Saturday last. After a two years' trial the committee concluded that the Home provided a long felt want, and would soon be the centre of a happy colony, where a benefit would be bestowed on a very helpless class of persons. The patients' payments during the year amounted to £719 17*s.*, the subscriptions were £105 4*s.* 6*d.*, and the donations £84 13*s.* There had also been special disbursements, amounting to £146 9*s.* 6*d.* for furniture and alterations. The annual report was adopted.

FOOTBALL CASUALTIES.—During a match between the Everton Athletic and Walton Breck Clubs on the 25th ult., a player of the Athletic team had his leg badly broken below the knee, the bone protruding in two places.—In a match between the Partick Thistle and Linthouse Clubs at Govan on the 30th ult., a member of the former club sustained a fracture of his right leg.—A young man of Newbey, aged twenty-one, died on Sunday morning from injuries received during a match at Gravel Hole on the previous Saturday. He fell with his head under him, another player falling on him.

MEDICAL NOTES IN PARLIAMENT.

Institute of Preventive Medicine.

IN the House of Commons on Thursday Major Rasch asked the President of the Board of Trade whether a decision had yet been given by the department on the application for a licence for the British Institute of Preventive Medicine. Sir M. Hicks Beach replied that, having considered the application and the important objections thereto which he had received, he had not been able to grant the licence.

The Influenza.

Mr. Hobhouse asked the President of the Local Government Board whether, in view of the renewed outbreak of influenza, he will take immediate steps to communicate, in a convenient form, to the medical profession and the public any information as to the causes of that disease and its remedies which may be in the possession of the department and its medical officers.—Mr. Ritchie replied: An extensive inquiry has been made by Dr. Parsons and Dr. Bruce Low, two of the medical inspectors of the Local Government Board, and inquiries from the medical officers of health throughout the country, but no information has been obtained to prove the origin of influenza. The disease would appear to have been introduced from abroad. The phenomena of its distribution may, for the most part, be explained by regarding influenza as an infective disease having a short incubation period, and having an infective quality at its earlier stages (perhaps before destructive symptoms of influenza have appeared), and finding the large majority of persons susceptible to its infection. The question of remedies from a medical point of view is not one within the scope of the department. On the reappearance of influenza last month some further local inquiries were made on behalf of the Board by Dr. Bruce Low, principally in Yorkshire and Lincolnshire. The general belief is that the disease was in some way brought to Hull in the course of the month of February. No new light, however, has by these inquiries been thrown on the conditions of influenza. Careful watch is being kept for anything which may throw any further light upon the subject.

Treatment of Epileptic Prisoners.

Dr. Tanner asked the Chief Secretary to the Lord Lieutenant of Ireland whether prisoners who suffer from epilepsy, and whose condition is known to the prison doctor in Clonmel Gaol, are still confined in ordinary cells in that prison.—Mr. A. J. Balfour replied that the General Prisons Board had made careful inquiry, and had reported that there was no ground for the allegation contained in the question.—Dr. Tanner said the answer was contrary to his own experience.

Certifying Surgeons.

The Standing Committee on Trade, at present engaged in considering Mr. Matthew's Factory and Workshops Bill, on Monday last rejected Mr. Randell's amendment, that the law as to certifying surgeons and certificates of fitness should apply to workshops as well as to factories, by 12 votes to 11.

The Public Health of London.

The House of Commons' Standing Committee on Law, at present considering the Public Health (London) Law Amendment Bill, accepted the following motion, slightly amended so as to provide that the notice should only be affixed in cases where the court was satisfied that the second offence had been knowingly and wilfully committed, was moved by Mr. Bartley:—"Where a person convicted of an offence under the said section has been previously convicted of an offence under that section, the court may, if it think fit order that a notice of the facts be affixed, in such form and for such period not exceeding twenty-one days, as the court may order, to any premises occupied by that person; and that the person do pay the costs of such affixing; and, if any person obstructs the affixing of such notice, or removes, defaces, or conceals the notice while affixed during the said period, he shall for each offence be liable to a fine not exceeding £5."

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 5th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	162	50	4	42	1	259	442
North-Western Hospital	130	41	..	10	1	182	442
Western ,,	144	14	..	16	1	175	224
South-Western ,,	138	24	..	8	1	171	240
South-Eastern ,,	159	18	..	18*	2	197	462
Northern ,,	150	14	..	2	..	166	480
Totals	883	161	4	96	6	1150	2291

SMALL-POX.—*Atlas* hospital ship, 28.

* Infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAILEY, T. RIDLEY, M.D. Edin., has been reappointed Medical Officer of Health for Bilston.

BALDWIN, T. A., M.D., L.R.C.S. Irel., has been appointed Medical Officer for the Cottingham District of the Sculcoates Union, vice Chambers, resigned.

BARTON, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Marston District of the Rugby Union.

BOSWELL, JOHN J., M.D. Lond., L.R.C.P., M.R.C.S., has been reappointed Medical Officer of Health for the Borough and Port of Faversham.

COATS, WM. HENRY, M.A., M.B., M.R.C.S., L.R.C.P., L.S.A., L.S.Sc., F.C.S., has been appointed Medical Officer for the Patrington, Skeffling, Easington, Welwick, and Kilnsea Districts of the Patrington Union; also Public Vaccinator for the same districts.

DAVIES, SIDNEY, M.D. Oxford, D.P.H. Camb., M.R.C.S., has been appointed Medical Officer of Health for Plumstead.

ELAM, W. H., F.R.C.S., has been appointed Medical Officer for the East Barnet Sanitary District.

EUSTACE, J. N., M.B., C.M. Dub., has been appointed Clinical Assistant to the Royal Asylum, Edinburgh

FAUSSET, J. D., M.D. Dub., L.M. & L.S., has been appointed Medical Officer of Health for the Fleetwood Urban Sanitary District of the Fylde Union.

FOWLER, C. H., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the North-west London Hospital, Kentish Town-road, N.W.

GIBSON, J. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Aldershot District of the Farnham Union, vice Young, resigned.

GRAHAM, JOHN T., M.D. Glasg., M.R.C.S., has been appointed Medical Officer to the Perthshire County Council.

GREY, T. CAMPBELL, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Swansea Hospital, vice G. Herbert Hopkins, resigned.

HARRINGTON, HENRY NAZEBY, M.R.C.S., L.R.C.P. Irel., has been appointed Medical Officer to the Birkenhead Post-office.

HICHENS, FRANK, M.D. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Stithians District of the Redruth Union.

HOLMES, T. D. H., M.B., C.M. Edin., has been appointed House Surgeon to the Bridgwater Infirmary.

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HORROCKS, PETER, F.R.C.P., Examiner in Obstetrics at the Royal College of Surgeons, has been appointed Physician to the Royal Maternity Charity, Finsbury-square, for the Eastern Division of London.

JAMESON, A. S., M.B., C.M. Aber., has been reappointed Parochial Medical Officer of Slains, Aberdeenshire.

JOLLYE, F. W., M.R.C.S., L.R.C.P., D.P.H. Lond., has been appointed Medical Officer and Public Vaccinator to the No. 2 District of the Alresford Union, and Medical Officer of Health to the Alresford Union.

KIDD, ARCHIBALD, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Middlesex Hospital.

LAIRD, THOMAS, M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Soothill Upper Urban Sanitary District of the Dewsbury Union, vice Clay.

LANGFORD, P. P., M.R.C.S., has been appointed Medical Officer for the East Finchley Sanitary District.

LITTLE, WILLIAM MAXWELL, M.D., C.M. Edin., late Senior Assistant Medical Officer, Norfolk County Asylum, has been appointed District Surgeon for Selangor, Straits Settlements.

LOWNDS, C. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Farnley Tyas Urban Sanitary District of the Huddersfield Union, vice H. A. Lowndes, resigned.

LUCAS, R. CLEMENT, B.S., M.B. Lond., F.R.C.S., has been appointed Examiner in Anatomy to the University of London.

MURIEL, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Surgeon to the Norfolk and Norwich Eye Infirmary, vice Morse, resigned.

PANTING, JOHN, M.A. Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician to the Middlesex Hospital.

POTTS, W. J., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer at the Manchester Workhouse, and also Assistant Medical Officer at the Crumpsall Workhouse.

PYE-SMITH, R. J., F.R.C.S., L.R.C.P. Lond., has been reappointed Honorary Surgeon to the Sheffield Hospital and Dispensary.

RADFORD, W. J., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer at the St. Marylebone General Dispensary, 77, Welbeck-street, W.

ROBERTSON, J. BEGG, M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Fife and Kinross District Asylum.

ROBERTSON, ROBT., M.B., C.M. Glasg., has been appointed Medical Officer to the Lanarkshire Steel Company's Works, Flemington, Motherwell.

SEVIER, A. H., M.B., C.M. Edin., has been appointed *pro tem.* (pending Dr. Mitchell's absence from ill health) Medical Officer for the Barnard Castle Urban and Rural Sanitary Districts.

STOTT, H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Friern Barnet Sanitary District.

VALLANCE, ERNEST, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse of the West Ham Union.

VICKERY, W. H., M.R.C.S., L.R.C.P., has been appointed Assistant Resident Medical Officer to the North-West London Hospital, Kentish Town-road, N.W.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF PLYMOUTH.—Medical Officer of the Borough Lunatic Asylum. Salary £400 per annum, with furnished house in the Asylum at Blackadon, near Plymouth, where the Medical Officer will be required to reside. Gas, coal, and vegetables.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Surgeon.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Surgeon. Salary £160 per annum (out-door), with additional fees for Midwifery of 5*s.* 3*d.* in each case. Salary to be advanced under certain conditions.

ECCLES AND DISTRICT MEDICAL ASSOCIATION.—Assistant Medical Officer. (Apply to the Secretary, 15, Byron-street, Patricroft.)

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Pathologist.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Dental Surgeon.

HANTS COUNTY ASYLUM, Knowle, Fareham.—Third Assistant Medical Officer. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HARTLEPOOL UNION.—Medical Officer and Public Vaccinator for the District of Greatham. Proposed salary, exclusive of extras, £50 per annum. (Apply to the Clerk, Board-room, Municipal Buildings, West Hartlepool.)

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Fourth Assistant Medical Officer.

PARISH OF ST. LEONARDS, Shoreditch.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary £100 per annum, increasing £10 annually to £120 per annum, with rations, furnished apartments, and washing in the Infirmary. (Apply to the Clerk to the Guardians, 213, Kingsland-road.)

ROYAL BERKS HOSPITAL.—Physician.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner for Part I., and an Examiner for Part II., of the Examination in Public Health.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners in Elementary Anatomy and Elementary Physiology.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—House Surgeon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners in Anatomy and Physiology for the Fellowship.

SKIRLAUGH UNION.—Medical Officer and Public Vaccinator for the District of Aldbrough. Salary £40 per annum, exclusive of the authorised fees for Surgical and Midwifery cases, visiting lunatic paupers, and vaccination. (Apply to the Clerk to the Guardians, Beverley.)

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torbay.—Junior House Surgeon and Dispenser.

WARNEFORD HOSPITAL, Leamington Spa.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

Births, Marriages, and Deaths.

BIRTHS.

ANDREWS.—On April 25th, at Lynton House, 43, Brixton Hill, S.W., the wife of W. Stratford Andrews, M.B. Lond., F.R.C.S. Eng., of a daughter.

CARTER.—On April 14th, at Broadview, N.-W.T. Canada, the wife of Ernest Carter, Surgeon, of a son.

CHETHAM-STRODE.—On April 30th, at Bethune-road, Stamford-hill, N., the wife of R. Chetham-Strode, M.B., of a son.

CROSSFIELD.—On April 29th, at Broadstone House, Dartmouth, the wife of A. Kyffin Crossfield, L.R.C.P., of a son.

DICKINSON.—On May 4th, at Croxteth-road, Liverpool, the wife of Ed. H. Dickinson, M.D., of a son.

HOLT.—On April 6th, at Pietermaritzburg, Natal, the wife of Surgeon M. Percy Holt, Army Medical Staff, of a son.

HOOLE.—On May 3rd, at Chisholm-road, Richmond, the wife of Dr. H. Hoole, of a son.

KEMP.—On April 28th, at Worksop, Notts, the wife of G. Lajus Kemp, M.R.C.S., L.R.C.P. Lond., of a son.

MATHESON.—On May 3rd, at Gibson-square, London, N., the wife of John Matheson, M.A., M.D., of a daughter.

NANKIVELL.—On April 29th, at Langham-street, W., the wife of Herbert Nankivell, M.D., of Penmellyn, Bournemouth, of a son.

SELBY.—On April 30th, at Green-street, Kent, the wife of Prideaux George Selby, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGES.

BONE—SMITH.—On April 30th, at St. Peter's, Lutton-place, Edinburgh, Douglas John Mayhew Bone, M.B., C.M., eldest son of the Rev. John Bone, Vicar of St. Thomas', Lancaster, to Mary Campbell, second daughter of Daniel Smith, Esq., of Lauder-road, Grange, Edinburgh.

CAMERON—HALL.—On April 28th, at St. Baldred's Church, North Berwick, N.B., Robert W. D. Cameron, B.Sc., C.M., M.D. Edin., son of Robert Cameron, Esq., of West Letterfinlay, to Matilda Elizabeth Helena, second daughter of the late Colonel Hall, of Killean, J.P. and D.L., Argyllshire.

GRIFFITHS—AXFORD.—On April 30th, at St. John Baptist's, Bath, Charles Thomas Griffiths, L.R.C.P. Lond., M.R.C.S., of Handsworth, Birmingham, youngest son of the late Thomas Griffiths, Bishop's Castle, to Eliza Kate, eldest daughter of the late Richard Axford, M.R.C.S., J.P., Bridgwater, Somerset.

HILL—BRASS.—On April 29th, at the Chapel Royal, Savoy, William John Hill, M.B. Cantab., D.P.H., of New Broad-street, E.C., and Croydon, younger son of the late Henry Hill, Esq., Solicitor, London, to Mary Anne, younger daughter of the late William Brass, Esq., of Streatham, Surrey.

INGLIS—STEEVENS.—On April 29th, at the Parish Church, St. Mary's, Cheltenham, Alexander Inglis, M.D., of Auchendinny and Redhall, Midlothian, to Ella Shirley, eldest daughter of Lieut.-Colonel Nathaniel Steevens, late 20th and 88th Regiments.

SIMPSON—STORER.—On May 2nd, at St. Giles's, Camberwell, Samuel Simpson, M.B., only son of Alexander J. Simpson, of Dublin, to Ada Jane Caroline (Adèle), younger daughter of Egbert Storer, of Fleurier, Switzerland.

DEATHS.

BARTLEET.—On April 20th, suddenly, of acute pneumonia, Thomas Hiron Bartleet, M.B., F.R.C.S., of Hatfield, Hagley-road, Birmingham.

BURNIE.—On May 1st, at Houghton House, Bradford, Wm. Burnie, M.D., in his 76th year.

HARTLEY.—On April 29th, at his residence, Accrington, Doctor Hartley, M.R.C.S., aged 57.

HENRY.—On March 10th, at Wellington, N. Zealand, Ellen Margaret, wife of Dr. J. Henry, and fourth daughter of the late A. Armstrong, Esq., Southsea, Hants, formerly of H.M. 13th Light Dragoons and 87th (R. I. Fusiliers) Regiment.

JOSEPH.—On April 24th, at Little Bay Mine, Newfoundland, Alice, wife of Louis Joseph, M.B., C.M. (By cablegram.)

MANSON.—On April 30th, at his residence, Old Castlegate, Banff, Alex. J. Manson, M.D. Aberd., M.R.C.S., aged 80.

ROE.—On May 5th, at Kensington-court, W., the residence of his stepson, Athelstan Riley, Esq., Wm. J. G. Hamilton Roe, M.B. Oxon., of Harrington-gardens, S.W., aged 64.

RUSSELL.—On April 24th, at his residence, Roslin-terrace, Aberdeen, Dr. Peter Russell, aged 79.

SELOUS.—On May 5th, at West-hill, Sydenham, Brigade Surgeon Edric Selous, M.D.

SHUTE.—On May 4th, at Croom's Hill, Greenwich, Gay Shute, F.R.C.S., in his 79th year.

STEWART.—On April 28th, at Larkhall, Lanarkshire, Charles Stewart, M.B., L.R.C.S. Edin.

WAINWIGHT.—On April 29th, at Marina, St. Leonards, John Wells Wainwight, M.D., aged 76.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, May 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. E. Owen: Early Stages of Disease of the Spine.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Lacrymal Diseases.

Tuesday, May 12.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyslop: Delirium, Mania.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: Syphilis in relation to Vaccination.
ROYAL INSTITUTION.—3 P.M. Dr. Edward E. Klein: Bacteria, their Nature and Functions. (Tyndall Lecture.)
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Anthony A. Bowlby: Thirteen cases of Paget's Disease of the Nipple, with Special Reference to the Causation of the Malady by Psorosperms.—Mr. J. Hutchinson, jun.: Paget's Disease of the Breast. (The papers will be illustrated by projections on the screen, and by a microscope exhibit.)

Wednesday, May 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. P. Kidd: Indurative Affections of the Lung.—Royal London Ophthalmic Hospital: 8 P.M., Mr. Lawford: Colour Blindness.

Thursday, May 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Spectroscopic Investigations.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. E. Owen: Late Stages of Disease of the Spine. National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Gowers: Symptomatic Signals and How to Use Them.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. E. Law: The Examination of the Throat and Nose.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be shown by Dr. Heywood Smith and Dr. Godson. Dr. Holland: Remarks on a series of Abdominal Sections.

Friday, May 15.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. P. Kidd: Indurative Affections of the Lung.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Anthrax and Malignant Œdema (Sections of Anthrax by Gram's Method).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Lungs—Inflammatory, Tubercular, and other Lesions.
ROYAL INSTITUTION.—9 P.M. Prof. G. D. Liveing: Crystallisation.

Saturday, May 16.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. Hyslop: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. Mr. H. Graham Harris: The Artificial Production of Cold.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 7th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 1	29·63	S.W.	55	52	92	61	46	..	Cloudy
,, 2	29·67	S.W.	58	50	97	58	49	·22	Raining
,, 3	29·96	W.	51	47	108	60	40	·19	Cloudy
,, 4	29·97	S.W.	53	49	97	61	45	..	Cloudy
,, 5	30·17	E.	52	49	101	61	50	..	Overcast
,, 6	30·13	E.	47	43	97	65	41	..	Cloudy
,, 7	29·97	E.	55	49	106	68	46	..	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

COMBATANTS AND NON-COMBATANTS.

The following paragraph is from the *Broad Arrow* of the 2nd instant:—

"*Apropos* of the subject of medical officers and the assumption of a combatant position, perhaps one of the most extraordinary instances on record occurred during the Indian Mutiny, when a medical officer carried the colours of a regiment, the circumstances of which must be familiar to many officers still living. If we mistake not, it was on the occasion of the assault on Lucknow, under Havelock, on 25th September, 1857, when the 78th Highlanders advanced under a heavy fire. Lieutenant Kirby, who carried the Queen's colour of the old Ross-shire Buffs, was shot down; as he fell, the colour was grasped by a bandsman named Glen, from whom it was wrested by Sergeant Reid, of the Grenadier company, who carried it but a short distance. After a few paces he was also struck, when the colour was seized by Assistant-Surgeon Valentine M. McMaster, who continued to carry it until the regiment halted near the Residency gate. Dr. McMaster, who received the V.C. for a subsequent act of gallantry, died in 1872, then surgeon of Havelock's favourite Ross-shire Buffs."

Surgery and P.M.—The qualification is as complete as any other for all legal purposes in medicine, surgery, and midwifery, including, of course, the making of a post mortem.

Dr. Nason (Nuneaton).—The paper is marked for insertion.

PROSECUTION FOR ASSUMPTION OF MAJOR TITLES.

To the Editors of THE LANCET.

SIRS,—Will you allow us to say that the Medical Defence Union (Limited) did not originate or inspire the recent prosecution in Birmingham of a Mr. S. E. L. Smith, and that it had nothing whatever to do with the matter?

This letter has become necessary in order to rectify the impression wrongly conveyed by press notices which have misled your local correspondent. We are, Sirs, yours very truly,

LESLIE PHILLIPS,
A. G. BATEMAN,
Hon. Secs., Medical Defence Union, Limited.

May 5th, 1891.

FEES FOR AMBULANCE LECTURES.

To the Editors of THE LANCET.

SIRS,—May I trouble you, or any one of your readers conversant with the subject, to inform me what becomes of the fees paid by a St. John Ambulance Class after paying expenses of lecture-room, fee to examiner, &c.; whether the lecturer retains the residue; and further, such being the case, if such remuneration should be included and accounted for in the receipts of a partnership?

I am, Sirs, yours faithfully,
JUNIOR PARTNER.

May 6th, 1891.

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TERRIBLE RESULTS OF WHOLESALE QUACKERY.

ALTHOUGH the practice of the healing art is fenced about with many more restrictions abroad than in this country, where it is virtually free, provided there is no false assumption of titles, it is to be hoped that we shall have to wait a long time before we see such widespread and permanent disaster as is now reported from Brussels as having followed the steps of a notorious "quack." It may be remembered that several weeks ago it was mentioned in THE LANCET that an Asiatic eye doctor, who, though he said he had a diploma from Singapore, seems to have been interdicted from following his calling in Italy and France, had commenced practice in Brussels with the concurrence of the municipal authorities and of some medical man who had so far forgotten what was due to the dignity of his profession as to "cover" the Oriental. His method of practice was to daub a brush dipped into an extremely weak boracic acid solution into the eyes of all the patients who presented themselves, no matter whether they were suffering from glaucoma, iritis, purulent ophthalmia, or any other disease, the same brush and the same solution being used for all cases. The result has been that the number of patients recently presenting themselves at the ophthalmic clinic is reported by Dr. Legros, assistant surgeon in Dr. Lebrun's clinic, as being about four times as many as usual during the same part of the year. Most of the patients were found, on looking through the old case registers, to have been formerly treated at the clinic for some comparatively unimportant eye affection, such as myopia, and upon being questioned admitted that they had in the meantime been to the "Singapore doctor." The eyes had doubtless been inoculated with the virus of granular lids, and this after a few weeks had produced the disease; so that by going to the quack a very large number of persons have been unfortunate enough to convert a simple error of refraction or slight inflammatory affection into a most obstinate and painful disease. Let us hope that if this or any other eye "quack" should pay our shores a visit, offering to infect all comers with his concentrated culture of the virus of granular lids or gonorrhœal ophthalmia, the British public, forewarned by the fate of the too confiding Brussels folk, will not permit themselves to be made the subjects of such a terrible experiment.

Dr. Stanley Walker. — The Health Insurance Corporation, Limited, which has its head office at 55, Charing-cross, effects insurances against sickness and accident. Another institution doing business of the same class is the Sickness and Accident Assurance Association, Limited, having its head office at 4, York-place, Edinburgh, and a London office at 1, Arthur-street West, King William-street, E.C.

W. M. M. should consult his usual medical attendant. We do not prescribe.

PROPERTY IN PRESCRIPTIONS.

To the Editors of THE LANCET.

SIRS,—I read in your last issue (p. 999): "The practice in some countries for the prescription to be kept by the chemist clearly shows....that he who dispenses....has a property in it." As far as Geneva is concerned, the reason for the chemist's keeping the prescription is the following. About twenty-five years ago a nurse obtained a prescription for atropia. With that prescription she went from one chemist to another, and got large quantities of this drug, with which she poisoned many of her patients. She was tried and condemned. The authorities deemed it prudent to pass a law obliging the chemist to keep the prescriptions, thinking by it to avoid any crime of the sort in the future, but without any idea of deciding about the property of the prescription. This fact may be interesting to your readers. In my opinion, this law does not prevent the danger it is intended to avert; for the chemists never refuse copies, with which the patients can go to another chemist, and so on till they get any quantity of medicine they want. The fact you mention is no doubt a very exceptional one; for I have seen repeatedly prescriptions or copies from chemists of England, America, Russia, Germany, &c. In Rome the chemist has to give back the prescription, having previously taken a copy of it in a book which he is obliged to keep for fifteen years. The prescriptions in the book must follow each other without space (I do not know the correct expression in English—v. Dowault, "L'Officin," which I quote from memory). The fact you mention, besides, seems to me to favour the view of the prescription being the property of the physician, rather than that of the chemist; for you say, "The chemist declined....without the prescriber's sanction."

I am, Sirs, respectfully yours,

Geneva, May 3rd, 1891. A. CORDES.

*** When a chemist, in declining to give a copy of a prescription, refers the patient to the prescriber, he does so, we imagine, because he very properly does not wish to take the responsibility of assisting the patient to prescribe for himself. The most desirable thing would be a general recognition by the community of the fact that a prescription is written for the treatment of the ailment as it existed at the time of the consultation; and it might often save a great deal of subsequent useless, and often dangerous, self-doctoring were it possible to adapt the simple rules obtaining in hospitals to patients treated by private practitioners.—ED. L.

THE MEDICAL CONTROVERSY AT KEIGHLEY.

DR. ROBERTS continues his very unprofessional position as the advocate of "Count Mattei's remedies." He professes to guarantee more cures with these secret and most suspicious-looking "remedies" than his professional brethren. We trust sincerely that his claim to be readmitted to the honorary medical staff of the Keighley Cottage Hospital will be disregarded. The mere secrecy of the preparations is enough to prejudice a sound professional mind. But the whole system by which they are sold and administered forbids their being regarded seriously.

Senex.—The document handed by the physician to the patient is certainly the latter's property, and we presume it was returned to him by the chemist. Had our correspondent taken care to preserve this, he would not have been compelled from time to time to apply to the chemist for a copy, which was made for the convenience of the patient as well as of the chemist. Of course, if the chemist has a copy of the prescription, he is enabled to supply the medicine to his customer without unnecessary trouble; but it by no means follows that he should be bound to give up his copy on demand in order that the medicine may be dispensed elsewhere. Although in the case of so old a customer as our correspondent the chemist might have waived his rule about referring to the prescriber, we cannot but think that in the welfare of the patient such a rule is a salutary one, and might often be enforced more stringently.

MICROSCOPICAL WORK.—USE OF IMMERSION LENSES.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "M.B.," I beg to make the following observations: 1. It is necessary to use a condenser to focus the light upon the object. I use a strong eyepiece, accurately centred, as close to the glass slide upon which the object is mounted as it is possible to get it, with the largest hole of the diaphragm. I find this method very efficient. 2. The object to be examined, if bacterial, is mounted upon a thin cover glass—not mica—placed upon a glass slip 3 in. by 1 in. This is then put upon the stage, then a drop of water (if a water immersion lens is used, cedar oil if an oil immersion) is put upon the upper side of the cover glass. If you have dropped oil into the objective, you must send it to the maker to be cleaned. 3. By means of the coarse adjustment lower the lens into the drop of water or oil until it nearly touches the cover glass. Then focus the light until all the field is clearly illuminated. Then, with the coarse adjustment withdraw the lens very gradually until the object is clearly defined, and focus for details with the fine adjustment. 4. I found my immersion lens to work best when the distance between the upper lens of the eyepiece and the front lens of the objective is ten inches. This can be done by using the draw tube if there is one, or if not by lifting up the eyepiece until this distance is obtained. 5. When done with wipe the front lens very gently with an old silk handkerchief.

I am, Sirs, yours faithfully,

J. L. KERR, M.D., C.M., F.R.S. Ed.

Crawshawbooth, Manchester, May 4th, 1891.

To the Editors of THE LANCET.

SIRS,—I think the following information will be sufficient to enable "M.B." to use his new $\frac{1}{12}$-inch immersion lens. Let him first take a general survey of his object with a low power—say, $\frac{2}{3}$-inch. Afterwards let him pick out the particular spot in the preparation which he wishes to examine, with a dry lens of about $\frac{1}{4}$-inch focus. Having removed the $\frac{1}{4}$-inch, let him then place on the cover, precisely over the selected area, a single drop of the proper oil, which was, or ought to have been, supplied him with his lens. The best method of applying the drop is with the end of a small glass rod. After applying the drop of oil, let him arm his microscope with the immersion lens, and, taking care not to shift the position of the slide upon the stage, carefully lower the lens into the centre of the drop by means of the coarse adjustment. The focus is very near the cover, nearer than that of the dry $\frac{1}{4}$-in. It should be found by screwing down the fine adjustment very carefully and gradually. Carelessness means a broken cover, a spoiled object, and possibly a scratched lens. After use the lens should be cleaned. For this purpose I use a very fine and soft rag of old silk.

I am, Sirs, yours faithfully,

Kirkby Lonsdale, May 4th, 1891. EX-LECTURER.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "M.B.," seems to be under a misapprehension relative to the use of immersion lenses, by the question he asks as to the quantity of oil to be put into them, and furthermore whether the lens should be cleaned every day. If he has been putting oil into his lens, I do not wonder that it does not work satisfactorily. Let him put a small drop of cedar oil on the front surface of his immersion lens and then focus down till the drop of oil and the cover glass of his slide are in contact, and he will overcome the difficulty.

I am, Sirs, yours faithfully,

Belgrave-road, S.W., May 4th, 1891. T. CHARTERS WHITE.

*** Other letters to the same effect as the above have reached us on this subject. We may here direct attention to Mr. Bolles Lee's book, a notice of which appears in our present issue.—ED. L.

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"THE VALUATION OF MEAT PEPTONES."

THE pamphlet to which we referred in our annotation of last week on the above subject is published by Messrs. Straker and Sons, 124, Fenchurch-street, E.C.

Pauper.—The acceptance of the Poor-law appointment mentioned seems a breach of the rules of the hospital, and unfair to local practitioners. The kindest thing in the first instance would be for our correspondent to remonstrate privately with the gentleman in question. Failing to get satisfaction, he would be justified in directing the attention of the authorities of the hospital to the obvious breach of the rules.

ADVERTISEMENTS OF HOSPITALS AND DISPENSARIES.

To the Editors of THE LANCET.

SIRS,—I venture to send you a cutting from a Sunday paper, comprising twelve advertisements of hospitals and dispensaries. Some of these refer to perfectly respectable institutions so far as I know; others have a strong savour of charlatanism about them, while Nos. 1, 3, 4, and 5 seem to me to be instances of the most barefaced advertising quackery. To take the latter somewhat *seriatim*: No. 1 "dispensary" is, I find, located at the house of a qualified and registered practitioner. You will see that he treats stricture and urinary disease, and specially treats "nervous debility." He supplies medicines at 1*s.* per bottle, and publishes a treatise, price 1*s.* The "hospitals" named in advertisements 3 and 4, though separately advertised, rejoice in one and the same address, and, while posing as special hospitals, they together embrace a pretty wide area of therapeutics, including diseases of the eye, ear, nose, throat, and nervous system. Again, the "hospital" and the "home" advertised in Nos. 5 and 7 are at one address, and are evidently engineered by one proprietor, who I observe is the only "doctor" having the courage to append his name, and this I fail to find in either Register or Medical Directory. He is indeed an all-round man, his specialties embracing stricture and urinary diseases (more of them) with spray treatment; homœopathic home for women; chest, nose, throat, and skin diseases with treatment by inhalation; a book of cases for 1*s.*; a treatise (of course a treatise) for another 1*s.*, and yet one more book at 1*s.*, with fees ranging from 1*s.* to 21*s.* Truly a "large order."

I suppose that until the present law is altered nothing can be done to stop this impudent advertising and irregular practice; but in the meantime the regular practitioner is left wondering which among those of whom I send you samples is the greater enemy to him and to the public—the brazen quack with no qualifications at all, who puffs himself as a specialist and advertises shilling treatises and books of cures, or the qualified man who descends to the same shameful level of wringing a livelihood out of the fears and fancies of the ignorant and gullible ones.

I have no personal knowledge of any of the parties whose advertisements I enclose.

I am, Sirs, your obedient servant,

May, 1891. E. G. Y.

HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—A great deal is being written just now concerning the underselling done by medical practitioners, but I am certain that this cannot be remedied until the abuse which is being daily perpetrated by hospital authorities is prevented. Many people who are perfectly able to pay, and who are being correctly treated by general practitioners, go to hospitals, as they can there get the same treatment free. This applies more particularly to special hospitals. No questions are asked regarding the circumstances of the patient, and though it is obvious that the patient has already undergone treatment, it is never suggested that he should return to his medical adviser. I remember a lady (who kept a carriage) astonish me by stating that she was going to Moorfields Eye Hospital to consult an eminent oculist, and though I informed her that the hospital was intended for the poor, she stated that she was not going to pay for anything when she could receive the same for nothing. During the last few weeks several of my patients have been admitted to hospitals for treatment. In one case (sclrrhus of mamma) the date of operation was fixed and fee arranged, but on a friend's advice she went to the Cancer Hospital; no questions were asked, and she was treated free. Hundreds of such cases could be mentioned by medical men. The special hospitals are the chief delinquents. Many of the patients are dressed in a superior manner, and even clergymen are not ashamed to enter them and receive advice free. Not uncommonly one finds that ladies send their children for treatment under the care of their maids. It is because of this that medical men have to struggle to make a living. Hospitals ought to be restricted to the poor instead of admitting anyone, whatever his or her position, to free treatment. Many people seem to think there is a special healing virtue in the walls of such buildings, as exemplified by the recent letter of an episcopal clergyman to the *Daily Telegraph*. I am quite certain he could have been as well treated at his own home by the same surgeon as he was in the hospital. It is by the loss of hundreds of such fees that medical men find the struggle for existence becoming keener every day.

Hoping that the hospital authorities will take the matter in hand,

I remain, Sirs, yours truly,

May 5th, 1891. A SUFFERER

A BRAN CRADLE FOR INFANTS.

A WRITER in *La Normandie Médicale* strongly recommends that infants should not be enveloped in binders and swathing clothes as at present, but simply be dressed in a little shirt, bodice, and vest, leaving the abdomen and legs free, and then laid in a cradle full of wheaten bran, with a hair pillow and a coverlet of woollen material, or a sheepskin well fastened at the sides to prevent the child kicking it off. A hot-water bottle at the feet is an advantage. It is found that the child, even when it is pretty active, does not bury itself in the bran, as one would be inclined to expect, but remains on the surface, scarcely ever even succeeding in burying a foot. When it is put to the breast it is wrapped in something loose and warm, and when it is taken out in the open air little drawers and woollen socks are worn, and over all a loose warm garment. The advantages of this mode of bringing up infants are that they have plenty of freedom for their limbs and the movements of the body generally, there is always warmth and yet a constant change of air all round the body, and the skin is always dry, the urine and fæces being soaked up by the bran as soon as they are passed. It is found that the infants are very contented, and do not cry, except when they are left too long without being given the breast. The portions of bran contaminated by the excretions are removed by the hand once a day; but there is no unpleasant smell about the cradle or in the room, and there is no need to change the whole of the bran more than about once in a fortnight. The small quantity of bran that adheres to the nates is, of course, washed off every day when the child has its bath. In many houses the saving in the washing expenses is an important consideration; for the cost of the bran is a trifle compared to these. The bran cradle is not, of course, recommended for children of more than about a year old.

Merlin.—The certificate is clearly not explicit enough, for, although the attack of apoplexy may have been the primary cause, it is obviously not the sole factor in the fatal result which ensued twelve months afterwards.

METROPOLITAN HOSPITALS INQUIRY.

To the Editors of THE LANCET.

SIRS,—In your issue of May 2nd, p. 1024, "Paterfamilias" writes as follows: "I wish to draw attention to that part of Mr. Hurry Fenwick's evidence before the Select Committee, where, after stating he was associated with both St. Peter's and the London Hospitals, he says 'it was his habit to draft patients from the general to the special hospital.' I wish to ask how can a general hospital pretend to give a complete education to its students in return for the fees paid when the authorities allow an important class of case to be drafted to a special hospital six or seven miles (*sic*) away? Is not this a distinct breach of contract?"

I am forced to conclude that "Paterfamilias" is neither acquainted with my work at the London Hospital nor with the *verbatim* report of my evidence before the Select Committee. Had he read the *verbatim* report he would have seen that when the chairman asked me if I ever drafted cases from the London Hospital to St. Peter's I answered "Yes," and explained the reason why. The purport of that answer was as follows. A large number of hospital cases of obscure urinary disease are sent to me by practitioners in order to obtain a diagnosis and guidance as to treatment. Those coming from the East-end usually await my arrival on my visiting days at the London Hospital. Those from the West-end apply at St. Peter's Hospital. They are examined and serve for clinical instruction, and return to the medical man with a note from me. If, however, the practitioner requests me to treat the case, I look upon that patient as my personal property for the time being, to hold and to treat to the best of my ability until I return that patient to the medical man who sent him to me. In some cases the pressure on my beds at the London Hospital will not allow me to admit them, and I therefore draft these personal cases on to St. Peter's Hospital. It is, however, quite otherwise with those cases which apply haphazardly at the hospital, and are taken into my wards by my juniors. These are, so to speak, the property of the hospital for the time being. They are invariably treated in the London Hospital, and have *never* been drafted to St. Peter's Hospital for operative work. This is clearly brought out in the *verbatim* report.

I am, Sirs, yours truly,

E. HURRY FENWICK,

May, 1891. Surgeon to the London and St. Peter's Hospitals.

"MEDICAL ADVERTISING."

To the Editors of THE LANCET.

SIRS,—In reference to your paragraph in THE LANCET of April 25th, headed "More Instances of Atrocious Advertising," I beg to state that I have nothing whatever to do with 369, Coldharbour-lane. I practise at the address given below only. As one of the few Partridges in practice in London, I ask you, as an act of justice, to insert this in your next issue.

I am, Sirs, yours faithfully,

WILLIAM T. PARTRIDGE.

97, Albany-road, Camberwell, S.E., May 4th, 1891.

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INHALERS FOR USE IN PRODUCING ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—My attention having been called to a letter from Dr. Heywood Smith in the last number of THE LANCET, I must state, in self-defence, that I never saw the late Dr. Prothero Smith's inhaler, nor did I ever hear of any inhaler having been made with sounding valves. I suppose I must congratulate myself on having conceived a similar idea to that of the late Dr. Prothero Smith, but as his was designed in 1847, *before chloroform was introduced*, it cannot be stated that my chloroform safety inhaler is a copy or infringement of his idea.

I am, Sirs, yours faithfully,

Dublin, May, 1891. ALEXANDER DUKE.

USE OF CORROSIVE SUBLIMATE.

To the Editors of THE LANCET.

SIRS,—I would like to ask if any of your readers know of a case where a medical man has suffered from mercurial poisoning as the result of using solutions of corrosive sublimate as an antiseptic lotion in midwifery. Also, what is the best application to prevent it destroying the skin of the hands, or to restore the smoothness and health of the skin? Would a saturated solution of boric acid with strict cleanliness be as efficient? I am, Sirs, yours truly,

Newcastle-on-Tyne, April 30th, 1891. J. WM. DALGLIESH, M.D.

A MEDICAL HAT.

To the Editors of THE LANCET.

SIRS,—I see that the medical hat is again to the front. May I suggest that this elegant head gear would be rendered more effective at night by the simple addition of a luminous hatband? The name, qualifications, and address of the wearer might be impressed in red thereon, thus proving useful to suffering humanity both by night and day!

I am, Sirs, yours truly,

April, 1891. C. CH.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sharkey, London; Dr. Cordes, Geneva; Dr. Silk, London; Drs. L. Phillips and Bateman, Birmingham; Mr. Erichsen; Messrs. W. H. Smith and Son, London; Dr. Dalgliesh, Newcastle-on-Tyne; Messrs. Hertz and Collingwood; Dr. T. E. Mitchell, Netherton; Messrs. Hopkinson and Co., Nottingham; Mr. J. B. Curvengen; Messrs. Fenwick and Chinery; Dr. Harkin, Belfast; Dr. Lilley, Portland; Messrs. Green and Son, Beverley; Dr. Armstrong, Liverpool; Messrs. Mitchell and Co., London; Mr. F. A. Milton; Mr. J. C. White; Messrs. Lee and Martin, Birmingham; Dr. Garland; Mr. Tay, Bristol; Mr. D'Arcy Power; Rev. H. A. Soames; Dr. Nason, Nuneaton; Messrs. Haigh and Co., Liverpool; Brigade-Surgeon Hector, Anerley; Messrs. Keith and Co., Edinburgh; Dr. Coghill, Ventnor; Mr. Bezly Thorne, South Kensington; Dr. G. S. Walker, Woolwich; Dr. Shore; Messrs. Riddle and Co.; Mr. H. Dutch; Dr. Roughton, London; Messrs. Christy and Co.; Dr. Dobrashain, Constantinople; Messrs. W. H. Smith and Co., Birmingham; Dr. J. W. Collins; Dr. Page, Redditch; Dr. Carlo Gangitano, Naples; Mr. Meadows, Hastings; Messrs. G. Street and Co.; Dr. Arthur, Dover; Mr. Currie, Columbia; Messrs. Orridge and Co.; Dr. Steele, Florence; Mr. Warner, London; Messrs. Richardson and Co., Leicester; Mr. Cornish, Manchester; Messrs. Kegan Paul and Co.; Mr. Green, London; Mr. Outram, Liverpool; Messrs. Richardson Bros. and Co., Liverpool; Dr. J. L. Kerr, Manchester; Dr. Lindsay, Belfast; Dr. Johnstone, Canada; Dr. Stewart, Bristol; Mr. Reade, Canterbury; Mr. Blackwood; Mr. Gordon, Woodford; Dr. Webb, Waterford; Dr. Cormick, Tabriz; Mr. White, Sheffield; Mr. Maggs, Chelsea; Messrs. Stern; Messrs. Churchill; Mr. Wand; Mr. Jones, Abergavenny; Mr. Lamb; Mr. Wade, Somerset; Mr. Pentland, Edinburgh; Mrs. Harvey; Mr. Bullivant, Derby; Mr. Colman, Walham Green; Mr. Green, Bournemouth; Mr. Sell; Mr. Warren, Leamington Spa; Dr. Hassall, Lucerne; Mr. Warde; Dr. Philipps, Virginia Water; Mr. Coleman, Cardiff; Mr. F. R. Humphreys; Mr. Lawson Tait, Birmingham; Dr. Pearse; Dr. W. Carr; Messrs. Paine and Co., St. Neots; Mr. Leech, Birmingham; Dr. P. Abraham; Dr. G. Horder, Cardiff; Mr. Cheesewright; Mr. Burridge; Dr. Taylor, Surbiton; Mr. H. Prynne; Mr. Partridge, Camberwell; Mr. Whitehead Manchester; Dr. Coombs, Somerset; Dr. Bird; Mr. Tate; Mr. T. G. Brodie; Mr. Neech, Tylderaley; Mr. Collum; Mr. Boswell; *Reading Mercury*; M.B. & C.M.; Senex; Pharmacien; E. G. Y.; Surgery and P.M.; H. D.; Orient; J. D.; Conjoint; Matron, Norfolk and Norwich Hospital; L. S. and Son; M.D., London; Secretary, Hants County Asylum; Clerk, Hartlepool Union; Spes; J. L. A.; *Western Daily Mercury* Co., Plymouth; York, London; A Sufferer; Merlin; Malted Milk Co., London; Pauper; Ex-Lecturer; Reuter Agency; K. A. D.

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ON THE COAGULATION OF THE BLOOD IN ITS PRACTICAL ASPECTS.

The Annual Oration delivered before the Medical Society of London, May 4th, 1891,

BY SIR JOSEPH LISTER, BART., F.R.S.,
PROFESSOR OF CLINICAL SURGERY IN KING'S COLLEGE, LONDON.

MR. PRESIDENT AND GENTLEMEN,—Thirty years ago Dr. Alexander Schmidt of Dorpat enunciated a totally new view of the coagulation of the blood. Having rediscovered the fact observed many years before by Dr. Andrew Buchanan of Glasgow,[1] that hydrocele fluid, uncoagulable in itself, is made to coagulate by the addition to it of the serum of blood already coagulated, and pursuing extended researches in the line thus indicated, he came to the conclusion that fibrin does not exist as such in solution in the plasma, but is composed of two albuminoid substances: one present in the liquor sanguinis, to which he gave the name of "fibrinogen"; and the other a constituent of the blood corpuscles, and this he termed the "fibrino-plastic substance."[2]

It might be objected to Professor Schmidt that the hydrocele fluid and the various dropsical effusions with which he had worked were not fairly comparable to liquor sanguinis; that they were transudations through the walls of vessels, and that the liquor sanguinis might have become in one way or another altered in the process of transudation. This objection was, as I believe, removed by an observation made by myself about the same period.[3] It had fallen to my lot to observe that in mammalia, whereas the blood usually coagulates soon after death in the heart and the main vascular trunks, in the secondary vessels it remains fluid for an indefinite period, and that, not only in those of small calibre, but, if the animal be large, in large vessels also. This being understood, I proceeded as follows. Having removed a portion of the jugular vein of a horse with the blood contained in it, between two ligatures, I suspended this segment of the vein in a vertical position. In the blood of the horse the red corpuscles behave in a totally different manner as regards their aggregation from those of a healthy man or of the ox. In the horse, instead of the red corpuscles assuming the condition of a delicate network of rouleaux, they become aggregated into dense spherical masses, often visible to the naked eye, like coarse grains of sand. And these densely aggregated corpuscles, falling more quickly than the rouleaux in the liquor sanguinis, as hailstones fall more rapidly than snowflakes, soon leave the upper part of the fluid comparatively free from corpuscles, so that within about half an hour the upper third, or it may be half, of the blood is a transparent liquid.[4] When I had ascertained through the translucent walls of the vein that this state of things had occurred, I punctured the upper part of the vessel, so as to let out some of the clear fluid, and found that it was very slow in coagulating. In about three-quarters of an hour it had only begun to coagulate, whereas a little of this same clear fluid, to which a small portion of coagulated blood was added, clotted in a very short period. That the clear fluid did coagulate at all was sufficiently explained by microscopical examination, which showed that there were present in it some red corpuscles and numerous white corpuscles. It was obvious that if we could have separated the corpuscles absolutely from the liquor sanguinis, there would have been no coagulation at all; and as the separation of the corpuscles from the plasma had occurred, not by transudation through vascular walls, but simply as the result of gravity, it could be no longer doubted that Schmidt's conclusions were essentially right.

During the time that has since elapsed various endeavours have been made to ascertain the precise nature and mutual relations of the constituents of the liquor sanguinis and the corpuscles thus concerned in the formation of the fibrin. This inquiry cannot be said to be yet terminated, and it is at the present time uncertain whether Schmidt's simple original view may not be correct—that there are two albuminoid substances, one in the plasma and one in the corpuscles, which combine to constitute fibrin. These investigations, most valuable as they are, have, as it seems to me, somewhat overshadowed the question which is, after all, the most interesting to us as practitioners—namely, What are the circumstances that determine the mutual reaction of these two constituents? What are the conditions under which the corpuscles are induced to give up their element of the fibrin to combine with the element in the liquor sanguinis? This subject engaged a large share of my attention many years ago, and though I am afraid I have not much of novelty to communicate regarding it, yet, in consequence of its very great importance, I have thought that it might perhaps be not unworthy of the circumstances in which the kindness of your Council has placed me this evening.

Shortly before my investigations began, Professor Brücke of Vienna had conducted an inquiry into the conditions which determine coagulation, and had arrived at conclusions which, to a certain extent, resembled those to which I was led.[5] He found, as I also did, that there is a world-wide difference, in their relations towards the blood, between the walls of the living vessels and ordinary solid matter; and Brücke concluded, as Sir Astley Cooper and others had done before him, that this difference consisted in an active state of the living vessels; that the bloodvessels, by an action which they exerted upon the blood, prevented it from coagulating. My investigations, on the other hand, led me to conclude that healthy blood has no spontaneous tendency to coagulate; and that the walls of the bloodvessels are not active, as Brücke supposed, but passive in their relation to coagulation; that ordinary solids induce coagulation by an attractive influence—comparable perhaps to that which a thread exerts in causing the deposition of sugar-candy from a solution of sugar,—while the healthy living tissues differ from ordinary solids in being destitute of this attractive influence.

Out of many experiments tending to this inference, published long ago,[6] I may be permitted again to describe one which not only appears to me conclusive on the point at issue, but is also of interest otherwise. A portion of the jugular vein of an ox with the blood in it being held vertically, I cut off the upper end, taking scrupulous care that the wounded part of the vessel did not come in contact with the blood, and then passed down into the vein a tube composed of very thin glass of a calibre rather less than that of the jugular vein, its upper end being stopped by a perforated cork, in which was inserted a narrow glass tube, which again was continued with a short piece of vulcanised indiarubber tubing. The tube was pressed with the utmost steadiness down into the vein, so as to disturb the blood as little as possible. In the course of time, the vein being a little squeezed, blood made its appearance in the narrow glass tube and then at the end of the indiarubber tube. When this was the case, the indiarubber tube was secured by a clamp, and the whole apparatus was rapidly inverted and the piece of vein withdrawn. Waterproof tissue was then tied over the open end of the large tube, to prevent evaporation and exclude dust, and the tube was securely fixed and left undisturbed. Thus we had blood present in a vessel consisting entirely of ordinary solid matter, but having been subjected in a minimum degree to the influence of the ordinary solid: and the result was, that when I came to examine the blood after the lapse of ten hours, I found it still fluid, with the exception of a crust of clot lining the wall of the vessel. This, gentlemen, seemed to me of itself to afford sufficient evidence that healthy blood has no spontaneous tendency to coagulate, requiring to be kept in check by an action on the part of the walls of the living vessels. This blood had been entirely withdrawn from the vein, and yet it remained fluid except where in contact with the ordinary solid.

This conclusion has been comparatively lately strikingly confirmed by the experiments of more than one observer. I would especially allude to one performed by Professor

[1] Proceedings of the Glasgow Philosophical Society, Feb. 19th, 1845.

[2] See Archiv für Anat. Phys. &c., 1861 and 1862.

[3] See the Croonian Lecture by the author, on the Coagulation of the Blood, proceedings of the Royal Society, June 11th, 1863, p. 606.

[4] The same thing is seen in the mixture of serum and corpuscles obtained by stirring the blood during coagulation. In that from the horse the red corpuscles subside from about the upper third of the liquid within half an hour; whereas that from the ox shows only a thin layer of serum after the lapse of twenty-four hours. I am surprised to see that in some text-books the buffy coat is attributed to slowness of coagulation, with which it has nothing whatever to do.

[5] See British and Foreign Medical Review, 1857.

[6] See the Croonian Lecture, Proceedings of the Royal Society, loc. cit.

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Berry Haycraft.[7] He has found that if a drop of blood is introduced under suitable precautions into a deep narrow jar of castor oil, and before the drop, which falls slowly through this oil, has reached the bottom of the vessel, the jar is inverted and the drop made to retrace its steps without having touched the glass, this process being repeated again and again, the drop of blood, having never come in contact with an ordinary solid, remains fluid for an indefinite period. This experiment may perhaps appear to some of you even more conclusive than mine, inasmuch as no coagulation whatsoever occurs in the drop of blood under these circumstances. Certainly it seems to me that it confirms in an absolutely unmistakable manner the view to which I had been previously led.

But there is also this interesting circumstance in Professor Haycraft's observation. It had been shown amply by myself that the gases of the atmosphere are incapable of inducing coagulation of the blood; but experiments like those of Professor Haycraft show that the same is the case with neutral or chemically indifferent liquids. This seems to me to be an exceedingly interesting fact—viz., that the active living tissue, such as lines the wall of a healthy vessel, in its relation to the coagulation of the blood, resembles the mobile particles of a liquid.[8] I say the *active* living tissue, for when the living tissue becomes impaired in vital energy it behaves towards the blood like an ordinary solid. That is the case not only when a vessel is wounded, but also when it is subjected to some influence which, without actually wounding it, is calculated to suspend or impair its vital activity. A good illustration of this is afforded by a fact which I have never before referred to, but which I have often noticed. A very valuable field for simple and instructive observations regarding the conditions that determine the coagulation of the blood was afforded by the feet of sheep, removed after the animals have been killed, the blood being retained in the vessels by a bandage applied below the part where the foot is removed by the butcher. The blood remains fluid for days in the veins of such feet; while, at the same time, the persistent vitality of the vessels is shown by the fact that they contract when exposed by reflection of the skin.[9] Now it happened that the butcher, in order to keep the sheep from struggling, always tied the feet together with a firm cord, applied below the part where my bandage for retaining the blood was passed round; and I invariably found the blood coagulated in the superficial veins at the part where they had been pinched between the cord and the bone. There is no reason to suppose that the temporary application of the cord had deprived the veins of their vitality at the part subjected to its pressure. If the sheep had been released I have no doubt whatever that the veins would have remained alive. But though the vessels had not been wounded, but only squeezed, only had their vital energies temporarily impaired, nevertheless the blood had coagulated in them at the parts so treated. Just as by pinching a portion of the web of a frog's foot with the padded ends of a pair of dressing forceps you can induce, if you press hard enough, a degree of intense inflammatory congestion by which the pigment cells for the time being have their vital functions of diffusion and concentration of the pigment perfectly suspended, and yet are in a condition which is recoverable,[10] so had these veins been subjected to an agency—the pinching by the cord—which did not actually wound them, but merely impaired or suspended for the time being their vital power. Thus it appears that the living tissues which, while in a healthy active state, differ from ordinary solids in not occasioning the coagulation of the blood, when lowered in their vital power, themselves act like ordinary solids and induce coagulation.

Another point to which my investigations were at that time directed was the behaviour of the blood-clot in relation to coagulation. I came to the conclusion that an undisturbed coagulum resembles living tissue in its behaviour with regard to coagulation; that an undisturbed clot does not induce coagulation in its vicinity—a most important truth, if it be such. This is well illustrated by the fact with regard to the sheep's foot to which I have already referred. We have seen that, on the one hand, where the tight cord had pressed the veins, coagulation occurred in those veins; but, on the other hand, that the blood remained permanently fluid in other parts of the same vessels. In other words, the clot induced by the action of the cord upon the veins had not been able to spread, although the blood in the veins was perfectly at rest; the clot could not propagate itself. The same thing is seen in any amputated limb in which the bloodvessels are sound. If such a limb is examined, say, twenty-four hours after amputation, you will find that there exist clots in the vessels where they were wounded by the knife in the operation, but that elsewhere the blood remains fluid and coagulable. I came therefore to the conclusion that an undisturbed blood-clot is unable to induce coagulation in its vicinity; and I think that the instances I have given demonstrate that such is really the case.

Yet in the experiment which I have described, where a glass tube was slipped down into the jugular vein, the coagulum did propagate itself. I found on examining such a tube, ten hours after it had been charged with blood, that the crust of clot which lined the tube was only a thin one; but in another experiment, nearly two days having been allowed to pass before examination, the clot was thick, and there remained only a small channel in the middle of it, with the blood still fluid and coagulable. How is this difference of behaviour between the clot within the vessels and the clot outside them to be explained? At the time when I performed the experiment I was disposed to think that it must be due to some imperfection in the mode of performing it; that in spite of all the care that I had taken in very steadily pressing down the very thin glass tube, nevertheless the blood must have been influenced by the glass for some considerable distance.

I am now inclined to believe that another explanation must be given. It was ascertained by Schmidt that (to adopt provisionally his original nomenclature) the fibrinoplastic substance emitted by the corpuscles is greatly in excess of what is required in order to combine with the fibrinogen of the liquor sanguinis. This, in fact, is obvious from the fundamental truth that serum expressed from a shrinking clot, when added to hydrocele fluid, induces coagulation. The blood is coagulated already, the fibrin is already formed in it, and yet the serum contains fibrinoplastic substance in solution free to combine with the fibrinogen of the hydrocele fluid. Such being the case, we can readily understand that, in the experiment with the glass tube, the clot first formed, shrinking, squeezes out a little of its serum containing fibrino-plastic substance, and this combining with the fibrinogen of the adjacent liquor sanguinis, fresh fibrin is formed, and the clot goes on perpetuating itself indefinitely, however slowly.

But how are we to explain the non-extension of the clot within the vessels in the cases referred to? How are we to explain the fact that it did not spread from the vicinity of the tight cord in the sheep's foot, and does not extend beyond the vicinity of the wound in the amputated limb? Again, why is it that the coagulum never propagates itself from the wound in the vein after phlebotomy? That wound, intentionally made somewhat gaping, is certainly in the first instance occupied by blood-clot. The equable flow of the venous blood does not disturb it. It is an undisturbed coagulum. But it must often happen that the clot projects more or less into the calibre of the vessel, in which case the blood at its lee side will lie at rest in contact with it. Yet the indefinite extension of the coagulum, which the analogy of the blood in the glass tube would lead us to anticipate, never occurs, and we reckon with confidence on the wound in the vein simply healing without interference with its calibre.

These remarkable differences between the behaviour of a coagulum in a glass tube and within the living vessels may perhaps have light thrown upon them by a fact which I have on a previous occasion brought before the attention of this Society.[11] I first observed it eighteen years ago, in an attempt that I made to obtain pure blood serum from a horse, letting blood, with antiseptic precautions, from the carotid artery into a flask that had been purified by heating it to a very high temperature. To my great astonishment I found that, although the blood of the horse coagulated as usual in the flask, the clot did not shrink in the least.

[7] See Journal of Anatomy and Physiology, vol. xxii., p. 582.

[8] Dr. Freund of Vienna almost simultaneously and independently observed this relation of inert liquids to coagulation. See Jahresberichte für Anatomie und Physiologie, 1886.

[9] The blood in the amputated limb becomes gradually impaired in its coagulating property. A few hours after amputation it is found to clot more slowly than at first when exposed to the influence of ordinary solids, and after some days fails to coagulate at all.

[10] See a paper by the author on the Early Stages of Inflammation Phil. Trans. for 1858, Part II., p. 682.

[11] See THE LANCET, Oct. 25th, 1884 p. 725.

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Though I kept it for many days, yet there was not a drop of serum to be seen upon its surface, and the sides of the clot remained in contact with the wall of the flask. This was made particularly striking by the circumstance that masses of aggregated red corpuscles, resembling grains of sand, as before described, were to be seen touching the glass in the lower part of the buffy coat. This, I need hardly say, astonished me immensely, and I imagine it was the first time that a blood-clot was ever seen not to shrink and press out serum.

It seemed scarcely credible that this result could be due to the destruction of micro-organisms in the flask, although the heat had been applied for that purpose. It was suggested to me that perhaps it might arise from some physical change in the glass due to the very high temperature to which I had subjected it. It had been observed by Liebig that, whereas a super-saturated solution of sulphate of soda is, under ordinary circumstances, made to start into a crystalline mass by contact with a glass stirring-rod, no such effect is produced by the rod if it is heated in the flame of a spirit lamp and allowed to cool—a result attributed by Liebig to some temporary physical change produced in the glass by the heat. Might it be, then, that the fibrin of the clot failed to shrink in consequence of a different molecular arrangement assumed under the influence of the glass altered by heat? That view, however, has been exploded, because it has been proved—as illustrated by some striking experiments shown at a conversazione of the Royal Society some years ago by my colleague, Professor Thomson—that the cause of the crystallisation of the super-saturated solution of sulphate of soda is not the contact with the glass as such, but the accidental presence on the glass of minute quantities of sulphates isomorphous with the sulphate of soda; and that the effect of the heat is to drive off the water of crystallisation of those salts and make them no longer isomorphous with it, and therefore no longer able to induce the crystallisation. And so a mystery in physics was cleared away and made a very simple matter. Thus the suggested explanation fell to the ground.

The same absence of shrinking of the clot had been brought about by different means in the example which I exhibited to this Society five years ago. A glass jar, not especially clean, had been purified by means of a solution of corrosive sublimate in 500 parts of water. Blood had been let into this jar from the jugular vein of a horse, under antiseptic precautions, forty-one days before; and the members of the Society had the opportunity of seeing that, just as in the case of the flask subjected to a high temperature, the clot had not shrunk; the serum had not been squeezed out of it. And although it seems unlikely that in the short time that elapses between the shedding of the blood and the commencement of shrinking of the clot, under ordinary circumstances, the micro-organisms present could have had such an influence on the blood, yet when we see that two agencies so different in their nature as a high temperature and a solution of corrosive sublimate, but both powerfully germicidal, led to the same result, one is almost inclined to think that surely it must be so. No other explanation has been offered, although I know that physiologists have been much interested in the subject. If we admit that micro-organisms are the cause of the shrinking of the clot, it follows that a coagulum formed within the body under healthy conditions otherwise, being free from micro-organisms, will not shrink; and, therefore, that the clot, not squeezing out the serum, will not induce coagulation in its vicinity. Fibrino-plastic substance exists no doubt in the serum in the substance of the clot. But the experiments of the late Mr. Graham showed that diffusion of liquids is an exceedingly slow process, even between a strong saline solution and water; and it must be a very slow process indeed between two liquids so nearly allied as liquor sanguinis and serum. I do not say that this is really the true explanation; but it seems to harmonise with the facts.

While an undisturbed clot resembles healthy and active living tissue with respect to coagulation, an injured clot acts in this relation like wounded tissue. And as a coagulum is an exceedingly lacerable and very easily injured substance, we often see coagulation induced by a blood-clot that has been disturbed. This is perhaps most strikingly seen in aneurysm. Let us take, for instance, a traumatic aneurysm. The blood escapes from the wounded artery into the surrounding tissues, and these having been injured, the blood coagulates in contact with them. Every successive portion of blood driven in by the force of the ventricle stretches and lacerates the clot so formed. It is an injured clot, and induces coagulation in its vicinity; and the result comes to be that while, on the one hand, the force of the heart tends perpetually to distend the sac, inferior as it is in elasticity to the walls of the bloodvessels, there is, on the other hand, a constant tendency to deposition of fibrin upon the interior of the sac, as if the blood were whipped, and thus the wall of the sac is perpetually strengthened, exhibiting a counteracting agency tending to recovery.

A beautiful converse of this state of things is presented, as it seems to me, by some cases of varicose aneurysm, such as used to be a not uncommon result of careless venesection. Here the communication with the vein was sometimes so free that the blood driven in by the heart distended the sac comparatively little, so that the aneurysm had no tendency to increase, but was merely a source of annoyance from the purring sensation caused by the arterial blood driven into the vein. And if an operation was performed on such a case, the remarkable fact was disclosed that, instead of the aneurysmal sac being lined with layers of fibrin, it resembled in its interior an artery or a vein.[12] The force of the blood not being able to tell upon the clot and injure it, the clot ceased to induce further coagulation, and became organised and invested with endothelium.

We see the same thing illustrated in the different behaviour of the blood-clot above and below a ligature applied upon an artery in its continuity. When such a ligature was applied in the old-fashioned way in the shape of a silk thread, used without any antiseptic precautions, with the ends left long, it had to come away by suppuration, and there was serious danger of secondary hæmorrhage. But if this did occur, it was commonly not, as might have been expected, from the cardiac side, where the seat of ligature was subjected to the full force of the ventricular contractions, but from the distal side, where the pressure was comparatively feeble. The ligature having been applied sufficiently tightly to rupture the internal and middle coats, there necessarily occurred as an immediate result a certain limited amount of coagulation upon the injured tissues. On the cardiac side, where the force of the blood driven by the heart against the obstruction told powerfully at every stroke, the clot was perpetually disturbed, and infallibly coagulation occurred up to the first considerable branch, that carried the stream away and made further coagulation impossible. But at the distal side, if the circumstances of the anastomosing circulation were such that there was no pulsation, there might be no extension whatever of the undisturbed primary coagulum, so that a mere trace of clot was found on pathological examination.

I have hitherto referred to the view first advanced by myself, and now, I believe, generally accepted, that the fluidity of the blood is not due to an active operation of the living vessels. But I am far from holding the opinion that there is no part of the vascular system that actively opposes coagulation. If transfusion is practised in the ordinary manner, say, by filling a syringe with blood and injecting it into the vessels of the patient, the blood is subjected to the influence of an ordinary solid, which would inevitably induce coagulation within the vessels, unless there were some counteracting influence at work. It is astonishing how very short a period of contact with an ordinary solid determines the mutual reaction of the corpuscles and the liquor sanguinis. Yet no coagulation occurs as the result of such an operation. It is, I presume, in the capillary system that the correcting influence is exerted.

Again, when intense inflammatory congestion is produced by the application of some irritant substance to the web of a frog's foot, we see that the corpuscles, both red and white, adhere to one another and to the walls of the vessels, and block the capillaries. Mechanical violence is one of the many irritating agencies which produce such congestion; and from what we know of the effects of the pressure of the cord upon the vessels of a sheep's foot, we cannot doubt that the blood must be coagulated in the congested vessels; that between the corpuscles there must be cementing fibrin. The distinguishing characteristic of acute inflammatory exudation is of itself pretty

[12] See Syme's Principles of Surgery, fifth edition, p. 140.

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clear evidence of this effect. The exudations in intense inflammation differ from those of dropsy by being coagulable. Hence the brawniness of tissues that are intensely inflamed, or the lymph in acute pericarditis. How can this coagulable character of the effused liquor sanguinis be explained except by supposing that the walls of the capillaries have acted for the time being like ordinary solid matter, and that, as a consequence of this behaviour of the capillaries, the corpuscles have given up to the liquor sanguinis (to use Schmidt's language) the necessary fibrino-plastic substance? And if the exuded liquor sanguinis coagulates, we cannot doubt that the plasma which remains in the capillaries is also coagulated. Nevertheless, if the irritant has not been pushed so far as to cause the death of the part on which it has acted, the tissues in due time recover, and we see the corpuscles gradually detaching themselves from each other to pass on into the circulation. And we may surely say that, not only do the corpuscles recover their original non-adhesive character, but the fibrin which binds them together is redissolved.

I believe, therefore, that although in the larger vessels the vascular walls are negative as regards the coagulation of the blood, in the capillary system there must be potent agencies counteracting any tendency to clotting induced by abnormal conditions, and capable even of redissolving fibrin.

THE

DIFFERENTIAL DIAGNOSIS AND PROGNOSIS OF TINNITUS AURIUM (NOISES IN THE HEAD AND EARS).

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IN a communication made by me last year on the etiology of tinnitus, based on a classification of 260 cases, I endeavoured to support the following etiological classification on anatomical and physiological grounds.

Class 1.—Impulses originating in the temporal lobe, or superior temporal gyrus, the cerebellum, or the auditory nuclei (in the medulla or pons), and referred as impressions to various situations, as the labyrinth or certain parts of the head. Such acoustic impressions may or may not be attended by deafness. These impulses may be associated with lesions in these areas—as tumours, apoplexies, effusions, thrombi, or possibly lesions in the adjacent portions of the occipital or parietal lobes. Such impulses may result also from reflected irritations of any of these parts.

Class 2.—Impulses due to irritation direct or reflected in any portion of the auditory nerve. This latter would include hyperæsthesia, atrophy, sclerosis, traumatism, vaso-motor (dilator or constrictor) effects, morbid blood-supply to the nerve, as in uræmia, anæmia, or the circulatory changes which occur during pregnancy. These latter causes may also operate under Class 1.

Class 3.—Impulses originating in the peripheral ends of the auditory nerve, due to: (*a*) Increase or diminution of labyrinthine pressure, increase or diminution of, or encroachment upon, the perilymph or endolymph from abnormal pressure on either of the fenestræ. This latter cause would include rigidity of the membrane of the round opening and fixation of the stapes against the oval opening. (*b*) Vascular changes—increase or diminution of blood-pressure, frequently associated with cardiac disease—hyperæmic, anæmic, or toxæmic states of the blood circulating in the labyrinth; apoplexy and extravasations. (*c*) Morbid nerve conditions—hyperæsthesia, paresis (organic or functional), atrophy, sclerosis, traumatisms. (*d*) Rheumatic, gouty, or syphilitic states of the walls and vessels of the labyrinth. (*e*) Reflected disturbance through the spinal cord or cerebro-spinal nerves, as occurs in uterine disorders, pregnancy, gastric derangements, gout, disorders of the liver, flatulence, spinal neuroses, dental, nasal, and ocular irritations involving the fifth and facial nerves.

Class 4.—Irritations arising from interferences with the intra-tympanic muscles—tensor tympani and stapedius. Such interferences would include any spasm of these muscles—abnormal changes in the membrana tympani or the mucous membrane of tympanum—reflex irritation transmitted from the facial or trigeminal nerves.

Class 5.—Irritations transmitted by altered conditions of equilibration of the air in the tympanic cavity. This would include enervation of the tubal muscles of the Eustachian tube, and altered relations between the air in the tympanic cavity and the blood in its vessels or those of its membrane; also pathological states of the membrane.

Class 6.—Irritations due to disease in the middle ear and labyrinth. This would embrace atheromatous changes in the arteries, aneurysmal dilatations, blood extravasations, venous congestion within the lateral sinuses, disease of the mastoid cells, and disease of the petrous portion of the temporal bone, exudations, and tumours.

Class 7.—Irritations arising in the external ear, including inflammation and abscess, ceruminous collections, eczematous inflammation, exostosis and hyperostosis, othæmatoma, foreign bodies. Some of these causes act by direct irritation of the nerves supplying the external auditory meatus or tympanic membrane, as in inflammatory attacks and exostosis, others, as cerumen or foreign bodies, by the influence they exert on the sound waves, or by the pressure due to their presence on the membrana tympani, and thus conveyed to the ossicles and labyrinth.

Class 8. — True aural hallucinations — subjective impressions arising in the psycho-sensorial brain centres and having no objective cerebral or aural source of origin. Such hallucinations may become insane hallucinations. The latter may be divided into two distinct forms. (*a*) Hallucinations which arise subjectively in the brain when the aural apparatus and auditory nerves are healthy. (*b*) Hallucinations which are scondary to objective changes in the aural apparatus and in which a tinnitus is developed that leads up gradually to a fixed illusion.

Class 9.—Therapeutical causes of tinnitus aurium. The action of such drugs as ergot, nitro-glycerine, alcohol, ether, quinine, salicine, caffeine, apomorphine, nitrite of amyl, tobacco, iodine, iodoform, chloride of barium, digitalis, convallaria, atropin, veratrin, duboisin, gelsemin, jaborandi, pilocarpine, monobromide of camphor, hydrobromic acid. Some of these drugs may act by direct stimulation of the auditory nuclei in the medulla, as caffeine, gelsemin, iodoform, salicin, and quinine; others, as digitalis, jaborandi, nitrite of amyl, chloral hydrate, by their action on the vaso-mortor centre; others, as quinine and digitalis, convallaria, by their secondary effects on the auditory circulation through their action on the heart.

I desire to supplement this classification by adding a few observations on a differential diagnosis on the lines above laid down. It is difficult in many cases to do this accurately and with confidence, but in a very large number of patients we can come sufficiently near the reference of the individual case before us to a special class, or it may be the borderland of two distinct classes of tinnitus, to enable us to give a correct prognosis of the chances for or against recovery, and to indicate the correct line of treatment to be pursued. To return to the etiological classification I have tentatively laid down, we may summarise the clinical evidence on which, after a careful examination, we are enabled to include a particular case under any of these heads.

Class 1.—Most of those who would come under this class are likely to have some evidence of the implication of the other nerves of sense in reflex disturbances, in muscular paresis, cutaneous anæsthesia or hyperæsthesia, or in oculo-motor symptoms and pupillary changes. Such causes as apoplexies, effusions, thrombi, or cerebral lesions, acting by inhibition, are most likely to reveal themselves in objective signs in the parts in correspondence or associated with these cerebral centres. It is probable that in such reflected excitations we have an explanation of a tinnitus without deafness, as in cases of dental caries, dental periostitis with neuralgia, spinal tabes, uterine disorders, as versions and flexions, and in the functional sexual disorders of the menopause or pregnancy (though in the latter it is more often to be attributed to arterial tension and hæmic changes).

Class 2.—We may expect to find similar symptoms to those referred to in Class 1 with more direct evidence of a lesion or excitation in the auditory nerve itself. In hyperæsthesia, the hyper-sensitiveness and pain attendant upon certain sounds, though there may be normal acuteness of hearing; in traumatism, the history of some injury, as a blow on the ear, a railway collision, a nasal fracture; in sclerosis and atrophy, the absolute deafness and the negative response to the watch or tuning fork, even by conduction, added to the history of pre-existing aural symptoms and

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progressive deafness or possibly vertigo; in irritation of the vaso-motor centre, vaso-motor disturbances of the labyrinth due to reflected excitations arising in the spinal cord or in the nuclei or branches of the fifth nerve, with all such evidences as spinal neurosis, spinal and ganglionic irritation, oculo-motor symptoms, visual disturbances, gastric crises, headache, possibly thyroid changes, flushings of the face, dental neuralgia and associated dental affections, as in eruption of the wisdom teeth, eruption of ocular and laryngeal migraine.

Urine of low specific gravity, with a radial pulse of high tension, albuminous urine or that charged with excess of uric acid, the characteristic uræmic complications with the associated altered blood of pregnancy, require only to be remembered as coming under this class to secure their detection on examination.

In Class 3 we confront more clearly local causes of the tinnitus. Such peripheral auditory nerve excitations are usually associated with some abnormal states of the middle ear or the membrana tympani. These, in a case of diminution of labyrinthine pressure from changes in the perilymph or endolymph, with accompanying rigidity of the round membrane or fixation of the stapes, have most frequently as their consequences tinnitus, deafness with vertigo, and often nausea. The ossicula frequently are involved, the joints are ankylosed, the membrane is fixed, its pockets are altered in shape; the malleus is sharply defined, or if the case be an old one its head alone is visible, the normal division of the membrane into pockets is absent, the pyramid of light is either blurred or imperceptible, and the membrane may have lost its translucent look. But at other times this is not so, and though there is clear evidence from the tuning fork, watch, and acoumeter that the auditory nerve is affected, the membrane preserves its translucency, and there is but little deviation from the natural appearances. Then there are the cases in which the hearing distance is normal or a fair degree of hearing is preserved, and still we have tinnitus, and possibly vertigo superadded. There may or may not be local evidences of gross middle ear changes. We at once suspect vascular tension, increase or diminution of blood pressure, and we search for evidence of organic cardiac changes or altered states of the circulatory fluid in anæmic or hyperæmic conditions. This suspicion may be verified by the discovery of a feeble systole, the presence of a cardiac murmur, or valvular disease. The urine requires to be carefully tested, and such toxic states as are likely to influence vascular tension may be detected. Such toxic or hæmic sources of tinnitus are frequently the forerunners of deafness, and the occurrence of Ménière's symptoms, following on extravasations and apoplexies. Aural vertigo rarely occurs without the associated "noise in the ears." The first attack may occur suddenly and without previous warning, but generally there has been some pre-existing tinnitus with impairment of hearing.

Class 3.—Peripheral lesions in the labyrinth are often attended with loud noises, and not infrequently the patient will describe two or three different kinds of noise, one of which is a musical tone or note. But we look in vain in these cases, as distinguished from those in Classes 1 and 2, for any evidence of serious cerebral complications or such causes as uræmia, anæmia, or pregnancy. Gout and rheumatism occasionally may cause tinnitus; but this symptom is associated with evidence of gouty changes in the meatus or on the membrane, and the uric-acid diathesis is manifested by the evidences of gout elsewhere in the body, and the presence of free uric acid in the urine. A pasty meatus, shedding of epithelium, and possibly a slight discharge, are often seen in such gouty cases. Also, we may find on inspection that some cretaceous deposits have occurred, which are seen as irregular white coatings on the membrane. Such cretaceous masses I have frequently observed in gouty patients.[1] I must say that in my experience I have rarely found tinnitus and deafness arising from changes in the middle ear as a result of acquired syphilis. This is not so true in the case of the labyrinth. If they are caused by specific disease there are other signs of syphilis present, most probably in the skin or palate and pharynx, or the nose, and there is the history of a past syphilitic attack. Mere reflected disturbances of the labyrinth, which arise in uterine disorders, during pregnancy, in various forms of dyspepsia, hepatic congestion, flatulent distension of the bowel, or in various visceral neuroses, obviously form but one of the groups of symptoms which are met with in such conditions. More particularly has it to be remembered that tinnitus has its possible origin in dental irritation, in astigmatism and associated asthenopia,[2] in nasal turbinate abnormalities, since such starting points of excitation are specially apt to be overlooked. This remark applies more particularly to the nose. In every case of tinnitus the septum and turbinate bones have to be carefully explored. In many instances it will furnish an explanation of the aural condition.

Class 4.—Here we realise a source of tinnitus which has its direct origin rather in a muscle than in a nerve. Obviously any abnormal action of the tensor tympani or stapedius, causing increase or diminution of pressure and alteration in the equilibration of the labyrinthine fluid, may start a tinnitus. Remembering this, we must not omit to seek for the starting point of the mischief in some direct or reflected irritation in the facial or fifth nerve. It is not necessary in such cases that we should find any indication of an affection of the middle ear or the labyrinth. Thus the hearing may be but slightly affected, or, on the other hand, the influence on the muscles may be caused by gradual changes in the mucous membrane of the tympanic cavity and the ossicular ligaments, with accompanying changes in the mobility, position, shape, and consistency of the membrane. If these latter are present they will be visible with the speculum.

Class 5.—In this class we find the commonest causes of tinnitus, both with and without deafness. Both in this and in the last group we may have, in the tympanic membrane, in displacement and obliteration of its segments, rigidity and immobility, or in varying degrees of collapse (the consequences of chronic catarrhal attacks), evidence of gross changes in the middle ear, which are associated with ankyloses of the ossicles and fixation of the stapes. The patient will often complain of inability to join in general conversation in society, may hear better in a railway train, or omnibus (Paracousis Willisii) and cannot synchronously distinguish two distinct tones, as, for instance, the ticking of two clocks in the same room. On watching the membrane when Valsalva's method is practised, it may not in the least, or but very slightly, yield on inflation. The cone of light is but little altered, or we may detect but the slightest movement of either pocket with Siegle's speculum. On the other hand, the membrane may appear thinner than normal, the malleus may be altogether displaced, so as to give the appearance of one large pocket which is blown bladder-like out on inflation. But it by no means follows that such pathological signs must be present, even though there be considerable impediment in the Eustachian tube from imprisoned secretion, collapsed walls, stenosis, or obstruction from other cause. Slight deviation from the normal position and translucency of the membrane may be detected, but it is only on listening with the otoscope (auscultation tube) to the inflation of the tympanum, and by careful observation of the membrane through Siegle's speculum, that we are enabled to discover obstruction or collapse of the Eustachian tube. Examination of the nose and throat may give the clue to the interference with the tympanic ventilation. In the nose, spurs or deviation of the septum, enlarged turbinates, hypertrophic mucous membrane, polypus, rhinolith (both the latter rarely); in the throat, relaxed and feeble palatal muscles, congestion of the palato-pharyngeal mucous membrane (with probably elongated uvula), tonsillar hypertrophy, adenoid growths, are among the more frequently occurring and accompanying conditions which explain the Eustachian interferences and account for the altered relations of the air in the tympanum to the blood in its vessels, as well as the pathological conditions of the vessels themselves.

Class 6.—I have included under this head those more serious middle ear complications which follow upon disease of the arterial tissues—local apoplexies, extravasations of blood, lymph exudations, congestion of the venous sinuses, arising from pressure or in cardiac diseases. To it also we refer those noises arising from obstructed pulmonic circulation and deficient oxygenation. There are those more serious inflammations of the mastoid and petrous portions of the temporal bone which lead to both exudations and suppuration. The recognition of such states is not generally

[1] Atlas of Diseases of the Membrana Tympani. J. & A. Churchill, London.

[2] Paper by the author on Dental Reflexes: Dental Record, August, 1890.

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difficult. A careful examination of the tympanum with the speculum, showing possibly intra-tympanic growths, granulations, or polypi, and the presence of a fetid discharge will at once arouse suspicion of a deeper-seated cause for the pain, giddiness, or tinnitus than that recognisable with the speculum. Pain, tenderness, and fulness over the mastoid, with projection of the auricle, will generally be present when there is threatening of mastoid abscess; pain more violent and diffused over the head, possibly pupillary changes, optic neuritis, tendency to delirium and secondary lung complications, if the disease has extended deeper and has involved the petrous portion of the temporal bone, or has possibly implicated the lateral sinews.

Class 7.—The causes of tinnitus included in Class 7 are easily discovered, and hence the greater need for their being the first sought for and not overlooked. It may not be amiss to say a few words on each of these outer ear sources of tinnitus. Inflammation and abscess are easily recognised by the local symptoms of pain, severe heat, throbbing, swelling, and occlusion of the meatus, tinnitus and deafness. Such inflammation and abscess may lead to inflammation of the membrana tympani and perforation of it. These acute perforations are frequently attended by severe pain and loud tinnitus. They may occasionally be seen, if viewed through the speculum, to pulsate. Dead débris of purulent collections, epithelium, or cerumen, is apt to be left behind and cause chronic irritation in the ear passage, and may possibly lead to the occurrence of aspergillus or perforation of the membrane. A persistent tinnitus may be the consequence, which a little local attention will remove. Eczema of the meatus, especially of the gouty type, which is started by irritation of its walls, may be the sole cause of the tinnitus, and is frequently incurred by the entanglement of the desquamated particles of cuticle in cerumen and discharge which clog the lumen of the meatus and impinge on the membrane. Both exostosis and hyperostosis may set up a tinnitus by the irritation they cause. But it is rare to find these as a sole cause of tinnitus, and they are frequently present without it. More often we can trace the occurrence of the noise to associated middle-ear catarrhal conditions, a gouty diathesis, or some Eustachian obstruction. In gouty patients there is at times a distinct neurotic exaggeration of symptoms, which includes a dwelling on, and morbid apprehension of, any tinnitus that may be present. Over-indulgence in alcoholic drink, and, possibly, excess of tobacco-smoking, contribute to increase the loudness and intensification of such noises. It is necessary to refer to othræmatoma (insane ear) as a cause of tinnitus, inasmuch as its etiology and pathology demand separate treatment.

Class 8.—Of the therapeutical sources of tinnitus, the only one I propose to delay over is quinine. That a temporary tinnitus, deafness, and giddiness follow on the prolonged use, or larger doses, of quinine is well known. At times this amounts to that condition known as "quinine intoxication." Burnet insists, and with this view I quite agree, that in most of the cases in which any permanent effects have been noticed as following the use of quinine there have been other causes present quite sufficient to account for the tinnitus or deafness independent of the quinine. Still, the fact that quinine can produce aural disturbances of function, and that many of those who have taken quinine in large quantities complain of tinnitus and deafness, added to the possibility of its producing a congestive state of the vessels of the labyrinth, independently of its irritating effect on the hearing centre, is sufficient to point to quinine as a probable and predisposing cause of tinnitus.

PROGNOSIS.

It has to be confessed that in the present state of our knowledge it is difficult, in defining the grounds on which we arrive at a prognosis in cases of tinnitus aurium, to follow the lines of the classification that has been suggested. Yet that attempt at a differentiation of the causes of tinnitus may be of use in confining the proposed therapeutical steps to certain clinical and pathological conditions which may justify us in hoping for relief, if not cure, following on their treatment. 1. We may, in the first place, fairly exclude from the category of curable cases those noises which attend on cerebral tumours, lesions, apoplexies, and degenerations which are secondary to the occurrence of thrombi. It is, however, conceivable that certain cerebral effusions may yield to time and such special remedies, as, for instance, iodide of potassium and mercury. 2. Atrophy, sclerosis, and traumatic lesions of the auditory nerves. 3. Rigidity of the membrane of the round opening, and fixation of the stapes against the ovali opening. 4. Extravasations in the labyrinth. 5. Organised effusions in the labyrinth. 6. Traumatism of the labyrinth. 7. Rheumatic, gouty, and syphilitic degeneration of the walls and vessels of the labyrinth. 8. Organic changes in the periphery of the auditory nerve. 9. Certain chronic and irremediable conditions of the intra-tympanic muscles, leading to atrophy, rigidity, or spastic contractions. 10. Many cases of chronic catarrhal inflammation, with corresponding and evident changes in the tympanum, in which a considerable degree of deafness attends on the tinnitus, and in which there is a history of progressive deafness extending over a considerable time, with possibly hereditary deafness in the patient's family. 11. Permanent closure, on occlusion of the Eustachian tube, may be included under this head. 12. Many cases of chronic Ménière's affection (true labyrinthine vertigo) in which, after the more acute symptoms have subsided, there still persists deafness, occasional attacks of migraine and tinnitus. 13. Tinnitus consequent upon aneurysmal conditions of the auditory arteries on atheromatous changes in their tissues. 14. Exudations and tumours of the mastoid cells—say, of a syphilitic and gummatous nature,—or disease of the petrous portion of the temporal bone consequent upon chronic suppurative catarrh of the tympanum. 15. Distinct aural hallucinations attendant upon or following gross changes in the middle ear and labyrinth.

Turning now to those cases in which we may hope for amelioration, if not complete cure of the tinnitus, we may thus classify them:—1. Tinnitus arising out of any reflected local or systemic irritations of the auditory centre or auditory nerve, which are due to deficient morbid blood-supply, or vaso-motor disturbances in the auditory areas. 2. Tinnitus arising out of simple primary hyperæmia of the labyrinth or a hyperæmia which is secondary to certain fevers as intermittent fever, puerperal sepsis, so-called "cerebral" fever, and the continued fevers. 3. Tinnitus consequent upon temporary alterations of the labyrinthine equilibration, whether due to altered conditions of tension of the fenestræ or increase or diminution of blood pressure, and frequently associated with cardiac functional disorders; simple hyperæsthesia acoustica. 4. Tinnitus which has its origin in rheumatic, gouty, and syphilitic conditions, whether in the labyrinth or middle ear; in the uræmia of pregnancy or Bright's disease. 5. Tinnitus due to abnormal states of the intra-tympanic muscles, as enervation, spasms, altered muscular tension (from defective middle ear ventilation and equilibration), producing conditions and positions of the membrana tympani and accompanying deviations in the normal relations of the ossicles, which have their consequent effects on the labyrinth through the fenestræ. 6. Tinnitus arising out of enervation of the tubal muscles of the Eustachian tube, collapse and closure of the walls of the tubes, temporary obstruction of the tubes from catarrhal conditions of the mucous membrane, or accumulation of mucus in the tube. 7. Tinnitus arising from irritations in the external ear. 8. Tinnitus arising from therapeutical causes. 9. Aural hallucinations which occur independently of any acoustic or cerebral trouble, and which may be associated with visceral or pelvic neuroses. Such hallucinations, if they become insane hallucinations, disappear with the mental alienation.

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KOCH'S TREATMENT AT THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

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FOR some time past, unfortunately, the very justifiable enthusiasm, or, as others put it, "the outburst of feeling uncontrolled by reason," with which Koch's great discovery was received, has been followed by a reaction as unwise as it is regrettable. The principal contributory causes of this change are not difficult to recognise, although it must be conceded that this therapeutic method has not realised all

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that was anticipated of it, even by Koch himself. It is, however, both unscientific and unreasonable, because success does not come up to first expectations, to decline to accept any portion of what value remains. Neither the profession nor the public, in the wave of excited expectation by which both were carried away, halted to distinguish between the precise and cautiously guarded statements of Koch and those hazarded by irresponsible enthusiasts in his name. Koch, however, evidently realised his position, for he expressly stated in his well-known "Weitere Mittheilungen" that from the premature publication of his method many important questions must be left open; and he also says, "I would earnestly warn people against a conventional and indiscriminate use of the remedy in all cases of tuberculosis"; and further on, "In all forms of tuberculosis medical art must have full sway by careful individualisation, and making use of all other auxiliary methods to assist the action of the remedy." Nothing can be more cautious than his statement of the comparatively limited scope of his remedy in pulmonary tuberculosis. From the necessarily incomplete state of his investigations at the date of their announcement, it happened that the potency of the remedy itself was under-estimated, and that the therapeutic significance of the so-called reaction was erroneously appraised. We have learned that the dose of the now called tuberculin has been much too large, too rapidly increased, and too frequently repeated, and that the intensity of the reaction should not be regarded as the measure of benefit derived from the inoculation.

I was painfully struck with the physical suffering exhibited during and the extreme prostration following the excessive reactions I saw in Berlin. The heavy draft on the constitutional powers involved in the repeated production of these high temperatures must necessarily tend to lower still further that already deficient vitality of the tissues, which has in the beginning permitted the inception of tubercular degeneration. My own experience in the accompanying, as also in a larger number of private cases, has convinced me that the best results have been attained when the temperature of reaction is not allowed to exceed 100°F. The pathological significance of the so-called secondary reactions claims brief attention. Should they not be regarded as the expression of a secondary infective process, resulting from the absorption of a larger amount of septic material liberated at the seat of disease under action of the tuberculin than the system can tolerate? They would seem to indicate that the dose of tuberculin in the first place was too large, and that a greater time should elapse between each inoculation. In this connexion the necessity of anticipating or reducing this secondary infective process suggests itself, if only we could sterilise the blood and the tissues through it, by introducing into the system, either by the mouth or by inoculation, a sufficient quantity of some otherwise innocuous material for this purpose. This subject has long engaged my attention, and I have found in guaiacol, especially when used hypodermically, as first suggested to me by my friend Dr. Shetilig of Nervi and Homburg, results of the most encouraging character. In some cases of pulmonary tuberculosis in my private practice, more advanced than I felt justified in treating among my earlier hospital patients, I have prefaced Koch's treatment with daily inoculations of pure guaiacol, in doses, according to tolerance, of from 5 to 15 minims, until the system was saturated, as shown by the taste of the remedy being recognised by the patient, and I have also been able to reduce the secondary reactions, even when they assumed the regular hectic range, by intermediate inoculations of the same material, and this in some instances with most encouraging results. These cases I hope shortly to publish.

In submitting the following report of ten cases of pulmonary tuberculosis treated by Koch's method in the Royal National Hospital, Ventnor, I beg to express my indebtedness to Dr. Hawkes and Dr. Wood, the resident and assistant resident medical officers, for the assiduous and sustained attention with which the cases were observed by them, and for the full and accurate records they kept during the whole period of treatment. My colleagues, Drs. Robertson and Whitehead, assisted me in the selection of the cases, and we kept in view the desirability of choosing such as would be fairly representative of the different stages of phthisis, but as much as possible uncomplicated by other grave diathetic lesions. Observations of temperature, pulse, and respiration, and other details, were taken every three hours, and recorded carefully at the time. Sphygmographic tracings of the pulse were also regularly taken before, during the height of, and after the reactions. Careful instructions as to regimen &c. were carried out, so that the patients were placed under the most favourable conditions for treatment as well as for observation. All the patients had already been a sufficient time in the hospital, not only to allow of their idiosyncrasies, physiological and pathological, being ascertained, but to admit of fixed points of departure being determined for comparison between the effects of the general treatment, to which they had been previously subjected, and the new method to which they were now submitted, for the direction of which I am solely responsible. In carrying out this treatment, I scrupulously endeavoured to follow in every detail the instructions laid down by Professor Koch in his "Weitere Mittheilungen" of November, 1890, aided by such valuable lessons as I was able, through the generous courtesy of my distinguished professional friends in Berlin, to learn, during my too brief visit to the hospitals and private clinics of that city in December of last year, when experience of the method had attained some maturity, and a calmer and more rational judgment was being brought to bear on its study. It is to be hoped that still later experiences, which may now be brought forward, will help further to determine the true therapeutic value of Professor Koch's remedy. The statistics published in the "Official Report on the Results of Koch's Treatment in Prussia" cannot be otherwise than fallacious for this purpose. It refers for the most part only to cases treated down to the end of 1890, during a period when the properties of tuberculin and the method of employing it were comparatively unknown, and both therefore were passing through the precarious process of experiment. These cases of course include a very large number, complicated with other grave diseases, which should never under any circumstances have been submitted to this, or indeed to any other active treatment with any prospect of success; others in which tuberculosis was far too extensive or too advanced, and the constitutional powers too reduced, to be suitable for inoculation; and, thirdly, many in which the excessive doses employed exercised an unfavourable, or even a disastrous, effect. The treatment of the following cases was undertaken just at the time when the safety of the tuberculin inoculations had been so gravely impugned by the alarming statements of Professor Virchow, and were not intended to determine the full therapeutic scope of the remedy. I would refer with due respect to any opinion expressed by the greatest pathologist of the age; but I cannot understand how such disastrous results attributed by him to the lethal energy of the lymph should have been observed in so comparatively small a number of instances among the many hundreds of patients who were subjected to the same treatment under similar circumstances concurrently in the Berlin hospitals.

CASE 1.—Marion H——, aged thirty-six, single; admitted on Dec. 1st, 1890. Father and one sister died of phthisis. In the autumn of 1888 her health began to fail, feeling weak and languid. Cough, which had been troublesome previously, became persistent in August, 1889, with much frothy expectoration. In February, 1890, she had what she calls "bronchitis," with dyspnœa, pain in left shoulder and back, with blood-stained sputum. She lost flesh, but there were no night sweats. These symptoms continued. Condition before inoculation: Height 5 ft. ¾ in.; weight 7 st. 3 lb. 8 oz. Anæmic; flatulence and pain after food; appetite good. Menstruation regular. Urine: sp. gr. 1016; phosphatic deposit; trace of albumen. Pulse 92 (regular and soft). Heart sounds normal. Breath-rate 28. Physical signs in lungs: Right, anteriorly percussion note impaired at right apex to third rib, and posteriorly to angle of scapula. Left lung: Expansion defective anteriorly; impaired percussion note, with scattered crepitations to margin of third rib. Amphoric breathing above clavicle. Posteriorly corresponding indications, with large coarse crepitations to base. The patient was inoculated with 0·001 grm. of tuberculin at 10.35 A.M. on Dec. 27th, 1890. Reaction commenced at 3 P.M., with headache, pains in back and thighs. Rigors at 8 P.M.; hands and feet cold; vomiting of frothy mucus at 9 P.M., when highest temperature (102·8°) was reached. The pulse rose to 120, and the breath-rate to 30. Next morning (28th) "felt comfortable." Urine contained no albumen. Crepitations were detected in dull area of right lung both in front and behind. In the left lung crepitations were present from apex to base.

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Expectoration greatly increased. On the 30th the chest sounds were much drier, and cleared up over both lungs posteriorly. On Jan. 5th, 1891, large patch of herpes appeared round the right angle of the mouth. Another patch appeared on the 22nd. The patient appears to have been suffering from catarrh, now developing. The expectoration has varied from an ounce and a half to two ounces in twenty-four hours. The chest, back and front, was rubbed with equal parts of lin. crotonis co. and lin. acet. terebinth., until a large pustular rash was produced, which greatly relieved the symptoms. The highest temperature reached was 104·3°, on Jan. 19th, from an inoculation while menstruating of 0·005 grm. There was great dyspnœa, the expectoration was 2½ oz, smelling offensively. To April 3rd there were eighteen injections, the largest 0·08 grm. The total amount of tuberculin injected was 0·442 grm. The subsequent reactions were much milder in character with very little distress, and since the inoculation of 0·03 grm. on Feb. 14th there have been no reactions, although the dose has been increased to 0·08 grm. Present condition, April 14th, 1891: Weight, 7 st. 9 lb., a gain of 5 lb. 8 oz. Right lung, anteriorly, note not impaired at apex, the breath sounds are rough, with occasional dry sibilant rhonchi; posteriorly the same conditions to angle of scapula. Left lung: Anteriorly movement impaired, with slight flattening over upper half, note impaired from apex to cardiac dulness. Cavernous breathing and whispering pectoriloquy above the clavicle, with rough inspirating murmur and frequent sonorous rhonchi below. Posteriorly percussion note slightly higher in pitch than over the right side, the respiratory murmurs exaggerated with occasional rhonchi. The second cardiac sound is accentuated in all areas, and very slightly reduplicated. The expectoration has much lessened in quantity, and seems to consist of frothy bronchial mucus. The patient's condition is greatly improved, and she is no longer anæmic. She feels stronger and much better. The case seems to have been one of chronic catarrhal pneumonia in which secondary tubercular changes progressed to cavitation at the left apex above the clavicle. Whether the tubercular character of the case has been effectually and permanently altered time alone can decide. There can be no question of the improvement, both in subjective and objective symptoms, effected under Koch's method.

CASE 2.—Ellen S. J——, aged twenty-four; married two years, one child; florid complexion, dark hair; teeth very defective and decayed; height 5 ft. 3⅞ in.; weight 8 st. 5½ lb. Admitted Oct. 27th, 1890. Mother (still alive) has had hæmoptysis. Subject to colds; discharge from ears since measles in childhood. Four years ago her health began to fail, during which time she has lost 2 st. 11 lb. Had cough, which became worse after her confinement, with thick yellow expectoration. Three or four months ago had profuse night sweats. Condition before inoculations: Appetite not good, cough very troublesome, and the expectoration (yellow and nummulated and blood-streaked) amounts to two ounces a day. Menstruation scanty; she suffers from leucorrhœa; urine, sp. gr. 1012, acid, no albumen. Pulse 84, regular, full, and compressible; respiration 18 per minute. Physical signs in lungs: Right, anteriorly flattening at apex; note impaired; expiration prolonged, and vocal resonance exaggerated to second interspace; cavernous breathing and pectoriloquy below clavicle; corresponding conditions posteriorly, with sonorous rhonchi at base. Left lung: Anteriorly movement deficient at the base; expiration prolonged and vocal resonance increased above the clavicle. Posteriorly note impaired below angle of scapula; scattered crepitations at base, with feeble breath sounds; vocal fremitus diminished. The patient was inoculated with 0·001 grm. of tuberculin about 10.30 A.M. on Dec. 27th, 1890. Maximum temperature only 99·2° at 6 P.M. Cough and expectoration much increased. Next day the urine was alkaline and contained phosphates. Moist crepitations heard at right apex anteriorly and in interscapular region. Crepitations heard over the whole of the left lung behind, more numerous towards the base, also a few rhonchi at the apex and base in front. These conditions repeated themselves in a less degree after each subsequent inoculation. This patient was usually very drowsy after injection, and slept better the same night. The expectoration showed the effect of the inoculations, often amounting to a drachm and a half during the subsequent twenty-four hours, and then dropping to *nil* within the next two days. Twenty inoculations were given to March 24th, gradually increased to 0·08 grm., equal to 0·4235 grm. of tuberculin. The highest reaction the eighth. Temperature 104·2° was recorded on Jan. 17th. The previous inoculation on the 12th was 103·6°. On two subsequent occasions only, even with increasing doses of lymph, did the temperature of reaction reach 100°. Condition on leaving: Weight 9 st. 4 lb. This gain was continuous, and amounts to 21 lb. since the first inoculation. She looks and says she is exceedingly well; she has no cough and hardly any expectoration; only one somewhat doubtful bacillus could be found in the last sputum examined. There is no dyspnœa or night sweats; appetite good; no dyspepsia; sleeps well. Menstruation has become normal. Pulse 70 to 80. First cardiac sound reduplicated in mitral area. Right lung: Depression in supra-clavicular region, but expansion fairly good at apex. The vocal fremitus is slightly exaggerated under the clavicle; the note is impaired to the second rib. Breath sounds somewhat muffled. Resonance increased and pectoriloquy. At the extreme base in the anterior axillary line the breath sounds are indistinct, and a few scattered crepitations are heard along the inferior margin of lung. Left lung: At the apex the note is markedly affected, but there is prolonged expiration and increased vocal resonance to the second rib. The chest movement is defective, and there is dulness on percussion, and at the end of the deep expiration crepitations are heard at the base. Posteriorly crepitations are audible below the spine of scapula, increased by coughing.

CASE 3.—Annie W——, aged twenty seven; married at twenty-four, and has one child. Tubercular diathesis; anæmic, and inclined to low spirits; height 5 ft. 5¼ in.; weight 8 st. 8 lb. 12 oz. Admitted 17th Dec. 1890. Always delicate, and had slight cough from childhood. Was in bed three weeks with an attack of hæmoptysis ten years ago. Fourteen months ago cough became worse, with yellowish expectoration, occasionally blood-streaked. Had pain in both apices, especially the right, and also dyspnœa. Has no night sweats now, but has lost weight. Menstruation normal. Thyroid enlarged. Urine, sp. gr. 1010, neutral reaction, phosphates on boiling, no albumen. Pulse 104, regular but small; first sound in mitral area reduplicated and accentuated, and systolic bruit in pulmonary area. Respiration 24 per minute. Chest boat-shaped. Physical signs in right lung: Anteriorly flattening with cavernous breathing under clavicle. Note impaired to nipple; no moist crepitations were now present. Posteriorly note impaired to lower angle of scapula, with prolonged expiration and increased vocal fremitus. Left lung: Flattening under clavicle, note impaired to cardiac dulness; exaggerated expiration over the whole lung but no moist crepitations; expectoration. The patient was inoculated with 0·001 grm. of tuberculin about 10 A.M., Dec. 27th, 1890, the maximum temperature being 99·2° at 9 P.M. To March 16th, 1891, seventeen inoculations were given, gradually increasing to 0·07 grm., equal in all to 0·3315 grm. of tuberculin. The highest temperature of reaction was 104·2° on Jan. 17th from 0·005 grm. of the lymph. The maximum temperature was reached at 6 P.M. on thirteen, and at 9 P.M. on four, occasions. On Feb. 15th the sputum showed numerous leucocytes, in some of which apparently bacilli were being absorbed. In the course of the treatment moist crepitations with increased expectoration of frothy character followed some of the reactions, and pain in the joints, especially of the lower extremities, with headaches were developed. Condition on leaving, March 23rd: Weight 9 st. 4 lb. 2 oz, a gain since commencing treatment of 10 lb. 9 oz, and a total gain of 12 lb. 10 oz. on lowest weight recorded (Jan. 11th). Patient says she never felt better in her life, and has very greatly improved in appearance and condition. Physical signs: Heart first sound reduplicated in pulmonary area with second, short, flappy, and accentuated. Right lung: anteriorly movement deficient at right apex. Note slightly dull to second rib; expiration prolonged, and vocal resonance increased to third rib. Amphoric breathing under clavicle. Posteriorly dulness to spine of scapula, with amphoric breathing in supra-spinous fossa. Left lung: Anteriorly note slightly impaired under clavicle. A few superficial dry crepitations can be heard at extreme right base; removed by coughing. No cough; expectoration very scanty, containing a few stunted bacilli. This patient was examined in London on April 7th by a distinguished physician, who had reported on her case on Nov. 11th, 1890. He states that there was "a wonderful change" in the condition of her lungs.

(To be continued.

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ABNORMAL ANUS AND INTESTINAL FISTULÆ.

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I FIND that students and many qualified men have hazy notions as to the precise meaning of the term most commonly used in our text-books—viz., "fæcal fistula"; and in looking over most of the larger and smaller works on surgery and on rectal and intestinal surgery this want of clearness on their part is easily explained, for the subject, important though it be, has not been thought, apparently, of sufficient interest to necessitate clear definition and discriminating exposition. I propose, as briefly as possible, to endeavour to methodise our ideas, and to arrange and define these maladies on the basis of pathological anatomy and clinical experience. I admit that the difference between an intestinal fistula and an abnormal anus is frequently but one of degree, yet it will be found that for the practical purposes of the surgeon it is highly important to differentiate them according to the various conditions which have been met with during operations or at post-mortem examinations. The subject is becoming one of the surgical questions of the day, as the success of modern methods of operating on the intestines will embolden surgeons to deal much more successfully with these conditions than has hitherto been the vogue. In fact, these infirmities have been regarded to a large extent as a sort of *noli me tangere;* but I think there can be little doubt that the resources of modern intestinal surgery will be equal to the task of dealing radically with them, especially if the various proceedings to be described be undertaken early. For the purposes of this paper I leave out of view fistulæ connected with all that portion of the alimentary canal above the stomach, and I use the word "intestinal" in a strictly limited sense, confining it to the hollow viscera vulgarly known as the "bowels."

These fistulæ may be classified according to their position into gastric and intestinal (those of the small gut), colic, appendicular, and rectal; and these may be complete or incomplete. To the latter perhaps the term "sinus," used by Mr. Ball in his excellent Manual on Diseases of the Rectum, may well be applied, and it will serve to prevent confusion. The terms "complete" and "incomplete" refer to pathological conditions, and each may be converted into the other as an incomplete fistula or sinus may open into the peritoneal cavity, or into another hollow viscus forming what is known as fistula bimucosa, or it may open into the peri-peritoneal tissue when connected with a portion of bowel uncovered by peritoneum, or it may open through the skin; and a complete fistula may, by natural or artificial processes, such as closing of the external orifice, be converted temporarily and, under certain conditions, permanently into an incomplete one. The majority of intestinal fistulæ are *intra-peritoneal*, but the rare form just mentioned, where the fistula occurs at a spot uncovered by peritoneum, is *extra-peritoneal;* and if these latter forms were common their anatomical relations would have an important bearing on any operation for their cure. Among the complete forms are those in which one portion of bowel communicates with another, or with another hollow viscus such as the vagina or urinary or gall-bladder, and even with the uterus or with a cyst or abscess of a solid organ as of the kidney or ovary. Of this last rare form there was a very interesting example some years ago at the Hospital for Women, under Dr. H. Smith and myself. In this instance the small gut had become adherent to an ovarian abscess, and both were attached to the abdominal wall. The abscess pointed externally to the left, about two inches below and outside the umbilicus, and on opening it there came a free gush of air and foul-smelling pus. Of course, an abnormal or unnatural anus belongs to the complete form. A good definition of this variety of fistula, and an important one in view of operative measures, is that abnormal anus signifies a condition in which the whole or nearly the whole of the intestinal contents passes through the preternatural opening, whereas in ordinary fistulæ only a small, sometimes only a minute, quantity gets exit through the fistula. There are certain complex forms in which various complications have arisen which will be dealt with presently; but I will now relate a case which is, I believe, the only instance of permanent success following one of the modern plans of operating on the bowel, the chief object of which is to continue the circulation of intestinal contents, and of course to avoid the formation of an artificial anus, and also to shorten the time occupied by operation. I may just mention that the causes of abnormal anus are traumatic, pathological, developmental, and surgical. These terms sufficiently explain themselves.

CASE 1. *Cyst of broad ligament, extensive adhesions, partial removal of cyst, recovery; formation of fæcal fistula about six weeks after. Second operation, for closure of fistula, artificial anus made of opening in sigmoid. Third operation about three months after to cure artificial anus, ileo-rectostotomy, recovery.*—L. S——, aged sixteen, was admitted into my ward at the Hospital for Women on June 25th, 1890, for an abdominal tumour which she first noticed twelve months ago, but which has since increased in size slowly. It caused her a good deal of pain of a more or less paroxysmal character and used to prevent her getting about. The tumour extended above the umbilicus on the left side, and there was a free, thin wave on percussion. Catamenia regular, began at fourteen, but for the past year she has lost less, her periods lasting from six to seven days instead of eight. No trouble with bladder or rectum. On vaginal examination the left fornix bulged downwards by the tumour. The diagnosis was cyst of broad ligament or unilocular ovarian tumour. On July 3rd a median incision below the umbilicus was made, the cyst tapped, and a clear, greenish fluid, with some flakes of lymph, evacuated. There were extensive adhesions posteriorly, and coils of intestine and one of the sigmoid had to be cautiously separated. In spite of great care the peritoneal coat of the sigmoid, which was firmly adherent to the posterior layer of the broad ligament, which latter was closely incorporated with the cyst wall, was separated for about two inches, and the oozing from the muscular walls was stopped by light touches with Paquelin's cautery. Anteriorly the bladder was stripped off the tumour in the endeavour to remove the latter entire, and as this was firmly adherent to the pelvic floor, I determined to remove as much as possible of the cyst wall, and to drain the cavity. As there was considerable oozing in the position whence the bladder was separated, a smaller glass-tube was introduced here, and the wound closed, after cleansing the peritoneum with salt solution. At night there was no pain. Pulse 130, temperature 100°, and a good deal of oozing from the dressings. Next day the pulse was 134, temperature 101°; neither pain nor sickness; took milk-and-water well. At 5 P.M. I was sent for by Mr. C. E. May, the house-surgeon, because the patient was faint, and all her dressings soaked with blood. I reopened the lower part of the wound, removed some clots, washed her with salt solution (1 per cent.), stuffed the bleeding cavity in front with boracic lint, and closed the part of the wound above the plug. Morphia subcutaneously for the first two nights. On the early morning of the fifth she had not been sick, and had had a good night without pain. Tongue moist; temperature 103·4°, but pulse too rapid to count. Gauze removed and cavity irrigated, and some sloughs removed. On the 6th the abdomen was rather distended; tongue dry and brown; pulse less frequent; temperature 101°. The patient had neither pain nor sickness, and took nourishment well. Late on the 7th one ounce of white mixture was given and it acted five times on the 8th. On the 10th she had solid food. The cavity was irrigated every four hours on account of the free discharge. On the 14th all symptoms much improved. No more sloughs, cavity closing, tubes removed; sent into general ward. On Aug. 6th fæcal discharge was first noticed to come through the unclosed fistula, but from the 15th to the 19th no fæcal matter passed through it. At this date the cough became troublesome. No dulness; a few râles at both bases. On the 20th a great quantity of fæcal discharge again appeared; and, in the hope that the opening in the bowel was small, the fistula was kept clean, pressure maintained, and the bowels regulated. The patient improved locally and generally for a time; but as the discharge of pus and fæces increased, and as she had high temperatures and pulse with much pain and some albuminuria, and as her general health was beginning to give way, I gave up attempts to heal the fæcal fistula without operation, and on Oct. 16th, after previously cleaning the fistulous track and dieting her for two days previously to operation, I reopened the wound, and after a search of half an hour, occasioned by many adhesions and matting together of neighbouring bowel

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coils, and of the sigmoid to the cyst wall, I succeeded in finding the opening and isolating enough of the sigmoid, in which the opening was, to bring it just to the surface. There was free oozing. On inspecting the bowel, it soon became evident that the loss of serous coat which occurred at the first operation, added to the inflammatory condition subsequent to it, had rendered it impossible to close the opening by lateral enterorraphy; because to get sound serous membrane would have necessitated entering the needles at a distance apart of full three inches, and it is obvious that in drawing the sutures together a great kink and stricture would have been produced. Excision of the affected part and circular enterorraphy was also prohibited because of adhesions preventing approximation of the divided ends, so I had to content myself with stitching the opening in the sigmoid to the lower part of the abdominal incision, and forming an artificial anus for a time. A drainage-tube was passed into the remains of the original cyst, the peritoneal cavity cleansed, and the wound closed. One-third of a grain of morphia was given twice a day. On the 18th, much offensive pus passed through and around the tube; cavity well irrigated; very little pain. — 23rd: Bowels acted; abdominal wound almost healed; sinus much contracted. All fæces pass through artificial anus —Jan. 17th, 1891: Since last note patient has progressed most favourably; now, fully formed dark-coloured motions pass entirely through abnormal anus and none *viâ* the rectum, as a good spur has formed. Patient being much depressed at her condition and anxious for closure of the artificial anus, I fully explained to her and to her father and mother the very grave risks she would run, and as all were anxious to have an attempt made to relieve her of her unenviable condition, I set thinking of some milder measure than ileo-colostomy, which might answer the purpose. Plastic cutaneous operations with so large an opening seemed quite out of court, and I could not endeavour to clamp and destroy the valve like spur because of the very close proximity, and possible actual contact, of adherent small intestine—as seen at the second operation—at the bend of the posterior wall of the attached sigmoid, and as lateral enterorrhaphy could not be done for reasons already explained, I determined to try if I could separate enough of the large bowel to enable me to excise and suture the divided ends, and if this could not be done to adopt one of Senn's methods for short-circuiting of the intestinal canal. With these views I kept the patient on slop diet for a week before operation, administered a powder composed of naphthol, salicylate of bismuth, and magnesia carbonate (equal parts), in wafer paper, four times a day for a week prior to operation, and had both upper and lower openings of the artificial anus thoroughly syringed out for three days before operation. After thoroughly mastering Mr. Jessett's papers, I practised the various operations on the fingers of old gloves and on rubber tubing, and then took counsel with him. He agreed that the best thing would be to try to do the minor operation just mentioned if possible, but from my account of the case he was not sanguine that it could be done, and thought that I had best be fully prepared for ileo-sigmoidostomy or rectostotomy. Accordingly, on Jan. 29th I made an elliptical incision around the artifical anus rather more than one-eighth of an inch from the junction of skin and mucous coat, and dissected carefully down until I came to the union of parietal peritoneum with the bowel, then the peritoneal cavity was carefully opened upwards and the gut freed all round. On attempting to still further separate the sigmoid it soon became clear that its adhesions to the cyst wall and neighbouring small intestine were so intimate that injury would probably be done to the latter in persevering, so I gave up the attempt, and at once proceeded to do the major operation. The ileum being traced to the cæcum, a pair of pressure forceps was passed through the mesentery about three inches on either side of the place of division of the gut, and a piece of solid rubber cord, about one-eighth of an inch in diameter, carried through. These were gently knotted and a pressure forceps applied to keep the knot from slipping. If the intestines have been kept empty and well disinfected there will not be need even of an assistant's fingers, as any slight secretion from the divided gut can be sponged away. A flat sponge being passed beneath the gut, it and its mesentery were divided about four inches from the cæcum, and all bleeding points ligatured with fine catgut. The incision in the mesentery was continuous with that in the gut—not wedge-shaped—and a good inch in length. The cæcal portion of the ileum was then invaginated and sutured with a continuous catgut suture. A rubber ring about $\frac{1}{12}$ in. thick and about $\frac{3}{4}$ in. in depth, was cut from a piece of rubber of sufficient length, when its ends were united to fit the lumen of the gastric end of the divided ileum, and this was stitched to the lower end of the bowel by means of a continuous catgut suture. Through its upper end, and from within outwards, a long piece of catgut, with a needle at each, was passed, using each needle separately, about a quarter of an inch from the upper end of the ring, through it and the bowel coats at the free or convex side of the gut, and also on either side of its mesenteric attachment. A longitudinal opening of sufficient extent, just to allow the ileum to be implanted, was made on the right side of the upper part of the rectum. The four long sutures were held by the fingers while the ileum was being invaginated, and

FIG. 1.

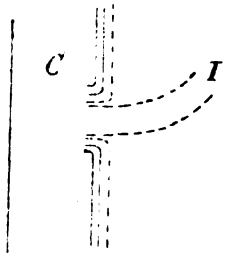

Diagram of the proper mode of implanting small into large intestine. C is colon, I is ileum. The dotted line represents peritoneal coat. For clearness' sake the other coats of the ileum and the rubber ring are omitted.

Mr. Jessett's finger being introduced into the lower opening of the artificial anus was able to make out that the implanted gut was in proper position. As the opening made in the rectum was slightly smaller than the calibre of the ileum with the rubber ring inside, a small part of the serous coat of the rectum became turned in, and apposed to that of the ileum, as represented in *Fig.* 1. *I* discussed the propriety and probable advantage of *this* before operation with Mr. Jessett, and it appears to be an additional security against leakage, and a modification of some practical importance. The sutures through the ring in the ileum were passed through the serous and muscular coats of the rectum before invagination, and gradually tightened as the ileum was getting into place, and when *in situ* they were secured and two additional stitches were, for further security, passed laterally, and all were cut short. On introducing my finger through the abnormal anus, to

FIG. 2.

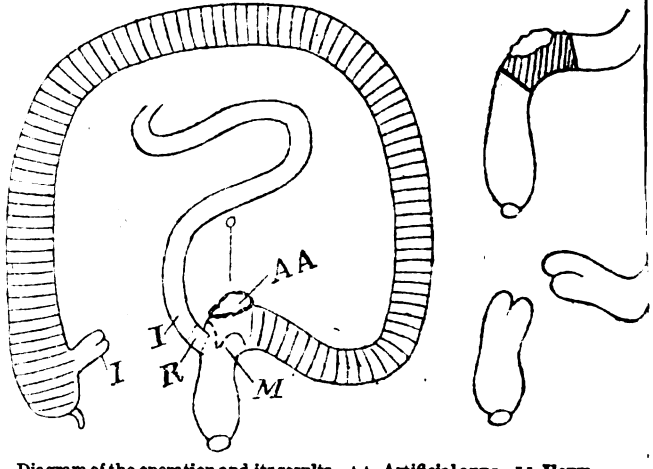

Diagram of the operation and its results. A A, Artificial anus. I I, Ileum. The cæcal end invaginated and sutured, the proximal end with R; a rubber ring implanted into the upper part of the rectum. M indicates the inverted and sutured mucous coat of the rectum. The figures to the right show the complete operation as intended. The upper one represents the abnormal anus excised, the lower one the sigmoid and rectum invaginated and sutured. The abdominal incision is wrongly represented as extending to the umbilicus. The shading shows that the whole of the large intestine is abolished by the operation.

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ascertain the condition of parts, I thought the aperture in the implanted ileum was too small, as it would only admit the little finger. Evidently tightening of the sutures had caused puckering; but a second's reflection consoled me, for the contents of the small gut are usually semi-solid or liquid and the opening would suffice. Now I should have liked to have excised the abnormal anus and invaginate both ends of the sigmoid as in Fig. 2; but, as already explained, there was not enough peritoneal coat on the bowel, and the adhesions prevented this; so that I had to content myself with cutting circularly through the mucous coat of the sigmoid below the artificial anus, and after stopping bleeding to turn it in, as in the diagram, and suture. The artificial anus was then stitched to the lower end of the abdominal wound, the peritoneal cavity washed with salt solution, the wound closed, and dressings and a many tailed bandage applied. The object of invaginating and suturing the mucous membrane was to shut off and prevent any reflux in case the rectum did not act well. The operation lasted an hour and three-quarters. It is important to mention that in closing the abdominal wound I could scarcely get hold of any parietal peritoneum, only a slender bit here and there, and had to trust to union of the musculo-cutaneous structures. Small intestine was adherent to and flattened out against the parietes, and only the greatest care prevented my puncturing it when applying sutures to the abdominal incision. It will be observed that the serous and muscular coats of the posterior wall of the sigmoid are still continuous, and that only the mucous lining of the upper part of the rectum has been invaginated. The patient bore the operation pretty well, was put into a warm bed with hot bottles to the feet, and had one-third of a grain of morphia subcutaneously. At night she had rallied well, but had been slightly sick from the ether. The next day, however, she became very ill, the pulse running up to 152 and the temperature 102°. On Feb. 1st the pulse was 120; temperature 98·6°. She was frequently slightly sick, and took very little nourishment. There was a good deal of discharge from the wound. The stitches at the upper part of the wound had given way, but the peritoneal cavity was shut off by granulations. Has had one hypodermic injection of morphia daily. On Feb. 2nd the lower part of the incision, above the sigmoid, had given way, and a large granulating surface was left. Intestinal contents escaped from the lower part of the wound, showing that the inverted mucous lining of the rectum had not united. On Feb. 5th a small solid fæcal mass passed per rectum, which contained a fair amount of light-coloured intestinal contents, as ascertained by rectal examination. A small soap-and-water enema was given, and much of it came through the lower part of the abdominal wound. On the twelfth or thirteenth day after operation she was sent into the general ward. The rubber ring had not yet come away, but she had passed per rectum on two or three occasions small masses of fæces. She was cheerful, and ate and slept well.—Feb. 24th: Wound filling up well; general health excellent; rectum acts slightly, but until the ring has passed it is unlikely to assume its full functions.

Anyone reading the above account will notice that I had an unusually difficult and complicated case to deal with, and will see that my hand was forced to the adoption of an operation of which I had no personal experience. There were extensive adhesions at the first operation, and these were aggravated and increased at the second and third operations; so that, as already pointed out, no milder proceeding was open to me. So far what I did has proved successful; I do not, however, forget that my patient is young, and that until the rectum acts properly and the ring is passed I cannot claim a complete success; but it must be recollected that her health was not of the best after two serious operations and some months' residence in hospital. Though this is the first successful case of intestinal implantation, yet the fæcal fistula above the implantation must close or be closed before I am entirely satisfied with the result. Had I been permitted by the pathological conditions to do what I intended—i.e., to excise the artificial anus and invert and suture the divided ends of the sigmoid,—I can have no doubt that a rapid practical cure would have resulted. My success shows surgeons that with better pathological conditions better results may be obtained, and this case demonstrates that even with unpromising circumstances as much as could be endeavoured to be done completely succeeded. A glance at Fig. 2 will show that the result of the operation is to shut off four inches of the ileum and the whole of the large intestine, except the rectum, from the intestinal circulation. In process of time this will atrophy, and should she live for years will probably be converted into a fibrous cord. The opening at the proximal end of the sigmoid is now inactive, and I expect that its swollen mucous membrane will ulcerate and ultimately unite. As soon as the rectum acts well, and the fistula at the lower part of the wound left in the track of one of the drainage-tubes ceases to be soiled by intestinal contents, it will close, and the patient will be much in the state I wished, had I been able, to leave her in at the close of the operation—i.e., with the sigmoid completely shut off. I may point out that the fistulous communication with the remains of the broad ligament cyst complicated very much the second and third operations. No antiseptics were used inside the peritoneal cavity in either of these three long and serious operations, unless the weak salt solution be called an antiseptic. I have been puzzled by the curious-mindedness of believers in antiseptics, as on the one hand they claim everything, even simple cleanliness or hot water, as antiseptics if successes follow their use; and on the other, if failure follow the use of the most vaunted antiseptics in the hands of thorough believers, they say there was some flaw in the process. I fear too much credit is given to chemical means and too little to the much more important matter of experience in dealing with difficult and complicated abdominal cases.

In my next paper I will take up the subject of intestinal fistulæ and illustrate their various forms, as well as the operations most suited for their abolition.

RUPTURE OF GALL-BLADDER.

RETENTION OF A CONSIDERABLE QUANTITY OF BILE IN THE PERITONEAL CAVITY FOR FIVE WEEKS; OPERATION; RECOVERY.

BY W. ARBUTHNOT LANE, M.S., F.R.C.S.,
ASSISTANT SURGEON, GUY'S HOSPITAL, AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THIS case illustrates so well the influence that bile exerts upon the peritoneum when retained in a free state in a considerable quantity in that cavity for a period of five weeks that I will offer no apology for putting it on record. It is certainly quite unique in my experience, and but a very few similar cases have been described by others.

A. B——, a lad aged eighteen, was admitted into Guy's Hospital under my care on May 10th, 1890. I saw him a few minutes after his admission, and found him apparently in a moribund condition. His face was cold, and his cheeks and lips of that livid colour which indicates a rapidly approaching dissolution. His pulse was hardly perceptible at the wrist. The abdomen was very distended, and obviously contained much fluid. The lad was practically unconscious and was quite unable to give us any information. We gathered from a woman who came with him that five weeks ago he had received a blow on the abdomen, that he had been in a hospital for four weeks, and that during the week following his discharge he had got very rapidly worse. Though I felt and said that I did not think the boy would survive any operative interference, and would die on the table, on the ground that one should give the patient any chance, however small, an operation was determined on. He was anæsthetised without delay, and during this process ether and brandy had to be given frequently subcutaneously. On making an incision into the abdomen below the umbilicus, about three gallons of fluid, very deeply stained with bile, were removed. On examining the margin of the liver with the finger, no irregularity or adhesion could be felt along its outline. The gall-bladder was empty, as were all the intestines. A Keith's tube was inserted, and its extremity connected with a vessel containing carbolic lotion. During and after the removal of the fluid the boy's condition improved rapidly, and by the time the dressings were applied his appearance was such as to make us hopeful of his recovery. About a pint of the same deeply stained liquid came away through

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the tube, and within twenty-four hours, as the discharge had quite ceased, the glass-tube was removed. After this the boy made rapid progress to recovery. He gave us the following details of his history. On April 8th, at 5 P.M., he was struck in the upper part of the abdomen, just above the umbilicus, by the pole of a van. He fell down and became unconscious, remembering nothing till he was taken into a hospital, where he remained for four weeks. He suffered great pain in the abdomen for a day or two. He was kept in bed for upwards of a fortnight. After this he was up and performing small duties in the ward for the twelve days preceding his discharge on May 2nd. The patient stated that ever since the injury his abdomen had steadily increased in size, and that it was very tense and uncomfortable when he left the hospital, so much so that he was unable to eat except in small quantities. When washing him on his return home his mother noticed the great distension of the abdomen. The discomfort which it caused him was so great that he was unable to lie on his back, but was obliged to recline on either side. The distension increased even more rapidly after his return from the hospital, and he found himself unable to take any food. He was sick several times, vomiting a dark-brown liquid. He became very much worse on the 9th, and was admitted into Guy's Hospital on the following day in the condition already described. No fluid re-collected in the general peritoneal cavity, but there appeared a gradually increasing area of dulness in the position of the liver. This on May 31st extended for a considerable distance into the right chest and downwards towards the umbilicus. It was aspirated, and about six pints of bile and fluid removed.

On June 8th, as the abnormal area of dulness had again returned, though to a less extent, I made an incision into it below the margin of the thorax, and introduced my finger into what was obviously an adherent and distended gall-bladder. At the time it was first tapped, owing to the position of the dulness, I suspected that I was dealing with a collection of bile localised in a portion of the peritoneal cavity, that cavity being possibly in communication with a bile-duct in the liver by a fistulous opening. This supposition the more complete subsequent operation negatived. Why the distension of the gall-bladder should have produced a tumour in the thorax rather than in the abdomen was not quite obvious, except on the ground that its lower portion had become fixed to the anterior abdominal wall at an early date. The liver was displaced backwards, its anterior margin not reaching forwards beyond the centre of the diaphragm. During the whole period of his stay in the hospital his motions were normal. The drainage-tube, which was placed in the gall-bladder, soon ceased to discharge any bile, and it was removed on June 16th. The boy is strong, gets up, and has gained a great deal of flesh since his admission. The explanation I would suggest is that the gall-bladder was ruptured at the original injury, that bile continued to escape through the tear in its wall till the peritoneal cavity was drained, that the wound in the gall-bladder was then closed by its adhesion to the abdominal wall or adjacent viscera, and that this adhesion exerted traction upon its orifice in such a manner as to interfere with the escape of its contents from it without obviating the passage of bile into it. By what means the bile got into the peritoneal cavity is, however, of little importance as compared to the fact that a very considerable quantity of it may remain free in the abdomen for a period of five weeks and produce no other symptom than a serous effusion, whose deleterious influence upon the organism was apparently simply mechanical, all discomfort disappearing at once, and permanently, with the removal of the mixture of bile and serum. This fact alone will give one much more courage in interfering with abnormal conditions of the gall-bladder and bile-ducts than formerly, and will completely remove the dread experienced of the imaginary risks which were involved by the escape of a considerable quantity of bile from the gall-bladder, or even from the common bile-duct. In the latter case it is of especial importance in the removal of gall-stones.

I am informed by Dr. Pavy that when making experiments on the secretion of bile in dogs and rabbits he found no harm result from the escape of even a considerable quantity into the peritoneal cavity, and he had concluded that, as far as these animals were concerned, bile exercised no irritant action upon the peritoneum.

St. Thomas's street, S.E.

SUGGESTIONS WITH REGARD TO THE AMENDMENTS OF THE MIDWIFERY CONTRACT.[1]

BY G. ELDER, M.D.,

SURGEON TO THE SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

SOME few weeks ago I saw in consultation a primipara, the subject of puerperal eclampsia, with the following history. Seven years previously she had a severe attack of post-scarlatinal nephritis, from which a seemingly perfect recovery had been made, and, as a matter of fact, no professional assistance had been required until the night prior to my visit, when the onset of the convulsions caused the family doctor to be sent for. He ascertained that pregnancy had advanced to the eighth month, that up to the seizure her health had appeared to be as good as usual, and that the renal function was all but suppressed. Despite every possible effort, consciousness never returned, and the case had a fatal issue shortly after my arrival. I believe that had this woman's health been supervised during her pregnancy, a catastrophe might have been averted by the induction of premature labour as soon as the kidneys threatened to cease their function, and thus, in all probability, the maternal life at least would have been saved.

Shortly following the above case I saw an example of puerperal peritonitis, also in a primipara, where the labour had been natural, and every needful precaution taken by the medical attendant to prevent septic infection, and yet, despite what might seem in the eyes of some needless precautions, sepsis declared itself, and rapidly destroyed her life. It afterwards transpired that on the evening of the day of her confinement the patient's mother came from attending upon her husband, who was suffering from a severe attack of facial erysipelas, to look after the daughter, so that what had seemed an inexplicable case was made clear by the knowledge of this fact.

These two cases, taken at random from my own practice, and which no doubt might be supplemented by others, illustrate grave defects in the interpretation which is now put by the laity, and also by the medical profession, on the obligations of the midwifery contract, an interpretation which is so limited in its application that in the vast majority of cases it leaves the nearly eleven months, ranging from the beginning of pregnancy to the termination of normal uterine involution, absolutely unprotected, with the exception of the week or ten days dating from labour onwards—a system which is responsible for not only a large amount of preventable disease, but also waste of life, and which leaves the door open for the popular voice to lay to the charge of the medical profession blame which, in many cases, is undeserved and unjust.

Let us for a moment consider the mode of making and fulfilling an ordinary midwifery engagement. Personally or by proxy, a pregnant woman requests a doctor to attend her, and beyond noting her name, residence, and date of expected confinement, few, if any, other inquiries are made; none at least with the view of carefully estimating the woman's power to carry a child to the end of gestation safely, or, if she is a nullipara, of gauging her pelvic capacity, so that the woman is allowed to go her way, stumbling through the weary months in front of her as best she can until labour sets in, when the second interview with the doctor takes place. Now it seems to me that if at the first visit, and as a matter of routine, a careful examination into the previous life-history of the patient and her existing state of health was made, as well as a pelvic examination in the case of a woman who had not borne a child, or where she had had one and there had been obstructive difficulty, an infinity of needless anxiety would be spared the medical attendant, and, what is more, a substantial benefit would be derived by the patient. Doubtless, the major number of women so examined would, beyond general hygienic directions such as ought to be common knowledge to every woman, require no further attention during utero-gestation; but there would still re-

[1] A paper read before the Nottingham Medico-Chirurgical Society on March 11th.

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main a considerable residuum suffering from cardiac, renal, or lung troubles, acquired or inherited blood taints, &c., requiring almost continuous observation and treatment during the whole period. This broad and, as I venture to submit, proper view as to one's relation with one's patients at this crisis of their lives would be fruitful in the prevention of an incalculable amount not only of maternal, but also of infantile ill-health and mortality.

Secondary only in importance to the satisfying oneself as to the possession of needful strength on the part of one's patient to undergo the ordeal of gestation and parturition is the control of the selection of the nurse, upon whose obedience and intelligence the issue of a labour case largely depends—the necessity for this control being greater in first cases than in others, inasmuch as the young and inexperienced mother is as a rule plastic in the hands of those who are about her; and that she very frequently suffers from this trustfulness is attested by the very large proportion of pelvic troubles which date from first confinements. The custom which now largely prevails of the patients choosing their own nurses is mainly responsible for a great deal of puerperal disease and death, and that this is so my second case illustrates very markedly. A very large number of women, more especially in country districts, take to monthly nursing without any special qualification or training for the task, and without the most elementary notions of the hygienic requirements either of the lying-in chamber or the lying-in patient; and, unfortunately for the medical profession at large, the harm which these women often do is never found out till it is too late, whilst the blame is frequently wrongly laid at the doctor's door. Did medical men only make it an essential part of the contract that they should have the selection of the nurse, and satisfy themselves not only of her capability, but also of her freedom from the danger of infection, puerperal accidents would undergo a very substantial diminution. Closely connected with the matter of the nurse is also, when the social position of the patient will allow it, the choice of the lying-in chamber. This ought clearly to be as carefully chosen as if a surgical operation had to be undergone. Especially should a badly lit, ill-ventilated room be avoided, or one where, by reason of proximity to a watercloset or bath-room with suspicious sanitary arrangements, danger to the patient is likely to follow. The satisfactory recovery of the patient after parturition, it must never be forgotten, depends largely upon her environment.

Finally, instead of the visits terminating at the eighth or tenth day after labour, they ought to be spread over the whole period of normal uterine involution—that is to say, from four to six weeks; in fact, the patient ought not to be left until local examination has proved that a satisfactory recovery has been made. The present mode of limiting the after-visits to four or five, or it may be six, leaving the patient's future actions to be regulated by her feelings or the advice—good or otherwise—of those who are about her, is largely responsible for much ill health. No uterine trouble is more common in our hospitals than subinvolution, nor one which so clearly has for its cause premature getting up of the parturient woman, and with which there are others, though less common, which might be equally well avoided by the medical attendant insisting upon the needful time being given to the parts to recover from the damage necessary by the birth of the child. In opposition to what has thus been somewhat imperfectly sketched out, the medical profession may with justice say that the remuneration which now is occasionally grudgingly paid by the public, and is in a large number of instances, to my mind, totally inadequate to the responsibility and the time spent, renders the scheme impracticable; but to this I may be allowed to answer that, although I have carefully refrained from touching upon the matter of the monetary equivalent for such services, they have not been forgotten by me, and that the time has now arrived when such a scheme, or some modification of it, should be adopted by the medical profession at large. My own feeling is that instead of the present system a fee, according to the position of the patient, should be charged for attendance upon the confinement itself, and that attendances before and after this date should be charged as ordinary visits. In conclusion, I hope that at least this paper will draw the attention of the profession to a question which is of grave and every-day importance.

Nottingham.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A SERIES OF CASES OF INFLUENZA.

BY WILLIAM STANWELL, M.R.C.S.

IN the belief that small contributions, even if premature, may be of some service, I forward the notes of fifty-three cases of influenza that I have had under treatment from the 8th of April to the 11th of May (fifteen in April, thirty-eight in May). The incubation period seems to be from three to seven days. This conclusion is derived from a study of the following facts:—1. Cases on the following dates all had opportunities of transmitting to one another, April 8th, 11th, 15th, 23rd, 24th, 29th, May 2nd, 2nd, 5th. 2. Where more cases than one have occurred in one house on different days, the following are dates of occurrence:—

House A.—April 15th, 23rd, 27th, 27th, May 8th.
" B.—May 1st, 1st, 7th.
" C.—May 2nd, 5th, 5th, 9th.
" D.—May 3rd, 3rd, 3rd, 11th.
" E.—May 4th, 11th.
" F.—May 5th, 10th.
" G.—May 8th, 11th, 11th, 11th.

In B. case on May 7th and in F. case on May 10th had no opportunity of contracting elsewhere, an incubation of five days in one, six days in the other. In C. there is very little chance of a second contagion from without.

The invasion is marked by chilliness, shivering, feeling of cold water down the back, occasionally rigor, followed by a rapid rise of temperature to 102·5° or 103·5° (highest I have taken 105·1°), with intense headache, aching in back and limbs of more or less severity, suffused eyes, varying degree of sneezing and coryza, sometimes none; laryngeal sore-throat with hoarseness and cough, secretion as a rule very scanty; in some cases vomiting; natural emesis seems beneficial. In the majority of cases the temperature falls in from twenty-four to thirty-six hours to normal, the fall being accompanied as a rule by profuse perspiration; with this fall of temperature the various aches very rapidly disappear, and a varying amount of prostration and debility remains for a short time. The appetite for food, which has been at zero, rapidly rises, and in from six to ten days in uncomplicated cases the patient is well. In fifty-three cases I have had two cases of pneumonia, one very severe; and one case in which twelve days after the first attack a relapse or second attack supervened, in every way identical with the first. As yet I have had no fatal cases. In several cases I have seen during convalescence a tendency to vertigo, and in a large number of cases slow pulse (40 to 50) occurs, and lasts for some days after the fall of temperature.

Treatment.—Bed, with abundance of covering, to encourage free perspiration, which appears to be desirable. Five grains of sulphate of quinine in powder in the fever stage brings down the temperature more quickly than is the case where no antipyretic is given; this seems to be of importance, as the intense pains disappear with the lowering of the temperature, and the curtailing of the pains is the consummation most devoutly wished for by the sufferer. Afterwards I prescribe tincture of Indian hemp, with or without iodide of potassium, and the tinctures of bark and rhubarb, or the tincture of bark with acids. In the present epidemic, as in that of last year, I have found the tincture of Indian hemp of the greatest value in almost all cases, but more particularly in the more debilitated cases, with slow pulse, and very little, if any, inclination for food or energy. Diet: Alcohol and beef-tea I forbid, as they seem to aggravate; milk and soda-water, tea and toast, and light gruel are all that is desired for the first twenty-four hours, nor does it seem necessary to press food; afterwards, under judicious treatment, the appetite soon returns, food is relished, and convalescence complete.

Rochdale.

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AN UNUSUAL SYMPTOM IN MIDDLE EAR DISEASE.

By R. LAKE, F.R.C.S.

THAT sound caused by air entering the middle ear on inflation can usually only be heard by means of the diagnostic tube, induces me to put the following case on record. Grüber says, speaking on this point, "for the more distinct perception of which [sound] the otoscopic tube is employed."[1] Politzer, "which [sound] can be perceived either by placing the auricle immediately to the concha of the person," and also "this blowing sound has various degrees of strength and distinctness."[2]

The patient, a young lady of twenty-one, was under treatment with middle ear catarrh due to Eustachian obstruction; air would not enter the cavities of the tympani either by Valsalva's or Politzer's method, and could only be driven in through a very fine catheter; the finest Eustachian bougie failed to enter the tube at all. Hearing (watch) left normal, and right four inches; after inflation eighteen inches. On Feb. 20th, 1891, I examined the nasopharynx under ether, and, finding some adenoids, they were removed with Daly's scraper, and a week afterwards the nose was irrigated with an alkaline solution. After this had been employed daily for some days, my patient informed me, that when she blew her nose her left ear made a noise which her sister heard "across the room." I examined the ear, and found the drum apparently normal; the hearing of the right ear was now five feet. On April 6th I was sent for and told the noise was again present. On my arrival the patient used her saline solution and inflated her tympanum. I then heard the sound, and though I stood twenty feet away, I still heard it distinctly. It resembled the sudden inflation of a small bladder. Testing the Eustachian tubes, a large-sized bougie entered freely.

Barnes, S.W.

CASES OF CONCURRENT SCARLATINA AND MEASLES.

By N. MORRISON MACFARLANE, M.D.

THESE diseases, though sometimes epidemic together, are rarely found concurrent in the same person. Such a condition occurred in three cases in children of the same family under my care, and, as the coexistence of specific fevers is always interesting, I have been induced to record them.

J. S——, aged four years and a half, was suddenly seized with sickness at school on Dec. 5th, and sent home. When seen the next day the sickness had abated, but his temperature was 104°, pulse 130, skin dry and pungent, tongue covered with a white fur, and he complained of headache and a sore-throat; no rash visible. Next day the characteristic rash of scarlet fever made its appearance, and increased in intensity till the following day, when the skin presented an almost uniform blush. On the evening of the 8th he commenced to cough, and there was coryza and suffusion of the eyes. On the 10th the rash began to fade, but on the following day the skin presented an unusual appearance. The red points of the scarlatinal rash were still visible, but there was likewise a purple papular eruption which presented all the characters of that of measles. On the 15th the scarlatinal rash had vanished, but that of the measles persisted for several days after desquamation had commenced. Beyond a slight swelling of the glands of the neck and suppuration of the right middle ear, which retarded convalescence for a short time, he made a good recovery. A younger brother aged three years was taken ill on the 23rd with sickness, sore-throat, and pain in the head; and on the 25th there was a well-marked scarlatinal rash, which was followed in three days by that of measles. He progressed favourably till the 31st, when the glands of the neck and under the jaw became much swollen. The throat and mucous membrane of the nose became greatly inflamed, and showed patches of false membrane. He gradually got worse, convulsions supervened, and he died on Jan. 4th. A younger brother aged one year and a half was seized in the same way as the other two on Dec. 27th. The scarlatina came first, followed in four days by the measles. Both ran their course without any untoward symptom, and he was progressing favourably until Jan. 12th, when his neck became much swollen and inflamed. Suppuration and sloughing ensued, and he died exhausted on Jan. 19th.

Preston.

[1] Grüber, English edition, p. 177.
[2] Politzer, English edition, pp. 110 and 132.

A CASE OF POISONING BY CAMPHOR.

By SIDNEY E. ATKINS, L.S.A.

I WAS called one day last week to see C. A——, aged five, who, I was informed, had swallowed some spirit of camphor. On arrival, I found the child lying on the sofa deeply convulsed, pupils widely dilated, pulse 120, very weak and small, extremities very cold and face livid. From what I could gather, about two and a half or three drachms of spirit of camphor had been taken, which would represent about fifteen or eighteen grains of the pure drug. I immediately gave an emetic of mustard-and-water, followed by, as soon as I could obtain it, half an ounce of ipecacuanha wine. This produced vomiting of lightish brown fluid, having a strong smell of camphor. Hot flannels were applied to the feet, and as soon as the vomiting ceased two teaspoonfuls of castor oil were administered. The patient made a rapid recovery, with the exception that for the next two or three days she complained of nausea and pain in the epigastrium, and was unable to retain anything in the stomach but a little beef-tea or soda-and-milk. This I attribute to a slight attack of gastritis.

Sumner-street, S.E.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF BILATERAL APOPLECTIFORM DEAFNESS; REMARKS.

(Under the care of Dr. FERRIER.)

WITH regard to the exact nature of these cases of idiopathic disease of the internal ear, Rossa writes (*loc. infra cit.*): "It is perhaps not so clear as that of the traumatic variety; but judging from those which I have seen, we may fairly adopt the following heads, hæmorrhagic and inflammatory. The hæmorrhagic or apoplectiform are those that occur very suddenly, and, so far as we at present know, hæmorrhage may occur into the cochlea and semicircular canals in persons who have previously been in good health and in whose bloodvessels there are no other evidences of breaking down. *A priori* we should conclude that patients suffering from Bright's disease might have hæmorrhage into the labyrinth, but as a clinical fact, in the few cases that have been observed of hæmorrhage into the ear in Bright's disease the bleeding occurred in the middle and not in the internal ear." The case to which Dr. Ferrier alludes was that of a woman aged forty-seven, and there was an interval of three years between the attacks. Lucae has published the case of a boy aged three years and a half, who became suddenly deaf on both sides. The attack was preceded by tinnitus, but unaccompanied with dizziness. At the necropsy a hæmorrhage in each labyrinth and in the canals was found. The following case is worthy of record as an example of an affection of which few are to be found in the records of aural disease.

Douglas C——, aged thirty-six, a railway guard, was admitted into the Todd ward on Feb. 2nd, 1891. Apart from venereal disease, which he contracted thirteen years previously, he had always enjoyed excellent health. He had never had any affection of hearing until eighteen months ago, when, without any warning, something, he said,

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suddenly "went pop" in his head, and he found that he had all at once become totally deaf in the right ear. He has remained so up to the present time. On Jan. 16th of this year, whilst scrubbing a floor, he was seized with dizziness, and a tendency to fall, he thinks, towards the right side. This soon passed off, but on Feb. 1st he had another similar attack, and all at once something "seemed to go crash" in his head, and he became unconscious. On coming to, at the end of six hours, he found himself absolutely deaf on the left side as well as on the right side. The attack of unconsciousness was not accompanied by any convulsive phenomena, or by any other symptoms except the deafness. The patient, a healthy-looking, well-nourished, florid-complexioned man, complained of total deafness and slight giddiness on movement, but otherwise he felt perfectly well. He was examined carefully by Dr. Pritchard, who reported: "The external meatus is normal, the membrana tympani slightly retracted, but otherwise normal. A tuning fork sounded loudly on the left mastoid is very faintly perceived, on the right not at all. Both Eustachian tubes are patent." The patient could only be communicated with by signs and writing, which he read and replied to in a high-pitched voice, clearly and intelligently. He complained of a constant slight roaring sound in his head. He walked cautiously, with the feet rather widely separated, but all his movements were coördinated with precision. There was no paralysis of motion or sensation anywhere. The tendon reactions and superficial reflexes were normal. Sight was unimpaired; the optic discs normal, and the pupils reacted to light and on accommodation. The thoracic and abdominal viscera were normal. The urine had a specific gravity of 1010, and contained neither sugar nor albumen. The treatment consisted mainly of blistering behind the ears and the administration of large doses of iodide of potassium. No improvement of the hearing resulted, however, though the patient's gait became more secure. He left the hospital on April 10th, and was just able to recognise a shrill sound made in close proximity to his left ear, but could not distinguish words.

Remarks by Dr. FERRIER.—This case is in all probability one of hæmorrhagic effusion into the labyrinth, first on the one side and then, at an interval of eighteen months, on the other. Several cases are on record of hæmorrhagic effusion into the labyrinth, proved post mortem, as well as many others presumably of a similar character. Some of these have been associated with vertiginous symptoms (Ménière), others not. The rarity of this case consists in the bilateral nature of the affection (a similar one has been reported by Roosa, *American Journal of the Medical Sciences*, Oct. 1874, p. 386, Case 14), preceded and accompanied by vertiginous symptoms and followed by disorder of equilibration lasting at least several weeks. That the pathology of this case was an effusion into the internal ear is indicated by the practically total loss of hearing, tympanic and perosseous, and the absence of symptoms which would have been caused by intra-cranial effusion; for though there appears to have been a period of unconsciousness, this was probably indirect rather than due to effusion into or on the brain itself. There was no Bright's disease or constitutional condition predisposing to hæmorrhage, and there was no indication that the syphilitic infection had led to any local affection of the auditory apparatus antecedent to the onset of deafness.

SUSSEX COUNTY HOSPITAL.

A CASE OF RIGHT DIAPHRAGMATIC HERNIA; DEATH; NECROPSY.

(Under the care of Dr. W. A. HOLLIS.)

PHRENIC or diaphragmatic hernia may take place (1) as a consequence of weakening of the diaphragm in some part, permitting of the protrusion of some of the abdominal contents into the chest; (2) through a congenital defect in the muscle; (3) through one of the natural apertures; (4) through an opening which has formed as the immediate or remote result of a wound or laceration of the muscle. By far the largest number of recorded cases of this form of hernia have been through a congenital defect on the left side of the diaphragm. In fact, it is extremely rare to meet with this condition on the right side, and the anatomical arrangement of the viscera of the abdomen readily accounts for this. Dr. E. Cornell[1] and Dr. Hillier[2] have described cases in which from congenital defect the protrusion took place into the right chest. The patient of the former was a female aged ten months; all the intestines had escaped into the right pleura through a hole two inches and a half in circumference, situated on the posterior right side, and an inch and a half from the spine; the stomach and rectum alone remained in the abdomen. Dr. Hillier's patient was also a female, aged seven months. Nearly all the small and two-thirds of the large bowel had escaped through an opening one inch in diameter. This opening, which had a sharp tendinous margin, was placed in the right half of the diaphragm, but its exact situation is not given. Dr. Murchison[3] had a man, aged fifty-five, under his care in 1865, who died in the London Fever Hospital. He was admitted in a state of collapse, with signs of pneumonia at the right base. He lived eight days. At the necropsy a circular opening about six inches in diameter was found in the right side of the diaphragm, through which almost the whole of the right lobe of the liver and the gall-bladder were protruded into the cavity of the right pleura. The margin of the opening was well-defined. The local condition, with presence of deep cicatrices in the liver, suggested to Dr. Murchison that the hernia was probably due to an old rupture of the parts. Death was from pleuro-pneumonia on the right side, the cause for which could not be ascertained. For the notes of the following case we are indebted to Mr. E. F. Maynard, assistant house surgeon.

J. H——, a boy aged sixteen, was admitted on March 10th, 1891, at 12.30 P.M., complaining of severe abdominal pain. Three hours before admission he was found lying in the street doubled up with pain. When attacked he was sweeping snow from the pavements, but, according to his own account, was working easily. He was perfectly well up to the time of the seizure, and had had nothing but bread-and-butter and tea within the last twenty-four hours. He was described as having always been a "hearty" boy. On admission he was in a state of collapse; his face was blanched; pupils dilated; pulse 56 and weak; temperature 95·8°; tongue furred, white, and he complained of pain in the abdomen. He said his bowels were opened in the morning, previously to the onset of pain; that the pain was of a dull, aching character; that he had retched several times since, but had not vomited. His heart's apex was two inches outside the nipple line in the sixth interspace; and there was retraction of the fifth and sixth spaces with the systole. There was no bruit. Harsh puerile breathing was heard all over the left chest. There was a subtympanitic percussion note all over the right chest, suggesting pneumothorax. The breath sounds were distant and cavernous. There was absolute loss of vocal fremitus, and vocal resonance as high as the angle of the scapula. The abdomen was retracted and boardy, and the percussion note almost dull. In bed he lay on his left side with his knees curled up on his abdomen. Urine acid, sp. gr. 1035; no albumen or sugar, but a thick deposit of urates. He was put on milk and broth diet. At 6 P.M. he was still in a good deal of pain; twenty minims of tincture of opium were given; he had retched frequently since admission but had not vomited. At 11 P.M. pain was still more severe in the abdomen, and he complained of pain in his right chest and asked that it might be rubbed; his breathing was rapid and shallow, his countenance bluish, and pulse very weak. His condition being grave it was decided to aspirate, the symptoms pointing to air, and possibly fluid, in the right pleura. Accordingly a large aspirating needle was introduced between the sixth and seventh ribs about the posterior axillary fold; the needle being withdrawn, there was no outflow through the cannula. A probe-pointed stylet was then thrust down the cannula, and on its withdrawal air and a brownish fluid with abundant flakes were drawn off to the amount of five ounces and a half. The fluid had a grumous smell, like that of stomach washings, was strongly acid, and on microscopic examination was found to contain oil globules, starch granules, muscular fibre, and numerous bacilli. The patient was much relieved, the pulse improved, and he was free from pain for about one hour. Nothing was given by the mouth, but nutrient enemata were ordered every four hours. At 1 A.M the pain had returned. Morphia was given hypodermically along with a morphia suppository and hot fomentations were applied. Half an hour after the first enema he vomited, the vomit consisting

[1] American Med. Rec., Phila., vol. viii. 1825, p. 236.
[2] THE LANCET, vol. i. 1861, p. 391.
[3] Trans. Path. Soc., 1865-66, vol. xvii., p. 164.

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of a brown material similar to that drawn off with the aspirator. He steadily became worse, breathing growing more difficult, irregular, and at last gasping; cyanosis increased, and he died at 6 A.M.

Necropsy, thirty hours after death.—Post-mortem discolouration most marked. Body fairly well nourished. On opening the thorax the right pleura was seen to contain a brownish sour-smelling fluid. The right lung was collapsed, but easily dilatable with the air-pump. It was found lying above, and internal to bowel and mesentery in the upper part of the right chest, immediately to the right side of the middle line. The right chest was also seen to contain omentum, mesentery, and both large and small bowel; these were traced from the abdomen through an aperture between the external arched ligament and the central tendon of the diaphragm. The opening had a well-defined, rounded, smooth edge to the touch, and there was no evidence of any recent rupture of the parts. The bowel contained in the chest was of a dark-slate colour, and both viscera and mesentery were in places mottled and green. The whole length of the intestines, excepting the first part of the duodenum, the descending colon, sigmoid flexure, and rectum, was in the right thorax. The large bowel contained scybala, the small bowel was empty, and both were deeply congested. The large intestine was found lying along the whole length of the chest, with the mesentery anteriorly, the small intestine being posterior to them. On opening the abdomen the peritoneum was found to contain a few ounces of clear, dark-greenish fluid. The stomach was much congested and ecchymosed, with a punctiform hæmorrhage on its anterior wall. The viscus contained brown semi-digested food, similar to that drawn off by the aspirator. There can be little doubt that at the time of aspiration the stomach was in the thorax, and that it was from this organ that the fluid was withdrawn. The nature of the fluid and the presence of the above-mentioned punctiform hæmorrhage go far to confirm this supposition. All the other organs were healthy.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

STRANGULATED EPIDIDYMIS OF INCOMPLETELY DESCENDED TESTIS PRODUCING SYMPTOMS LIKE THOSE OF STRANGULATED HERNIA; CASTRATION; CURE.

(Under the care of Mr. WHIPPLE.)

A SURGEON is not uncommonly asked to see a patient with supposed hernia, which on examination is found to be an epididymitis, possibly of a retained testis, but has usually no difficulty in distinguishing one from the other. Cases in which the resemblance is as close as in the cases under Mr. Whipple here recorded are, however, very rare. Dr. H. H. Johnson[1] reports a general inflammation of the spermatic cord mistaken for hernia, and treated at first with a truss. He found a hard swelling extending from midway between the anterior superior spinous process of the ilium to the pubes down to the testis. He removed the testis and cord. The latter measured seven inches in circumference, and was well advanced towards suppuration. Recovery was uninterrupted. Dr. Ségond[2] has also published a case in which a suppurating cyst of the epididymis was mistaken for hernia. Other examples are referred to in the remarks appended to the case. For the notes we are indebted to Mr. W. Gifford Nash, house surgeon.

A. H——, aged sixteen, was admitted to hospital on Jan. 21st, 1891, at 4.45 P.M. He stated that for seven or eight years he had noticed a lump in his left groin which occasionally disappeared within his abdomen. This he believed to be his left testicle. On the previous day at 4 P.M. he strained himself and felt something give way in the left groin. At 2 A.M. on the morning of admission he noticed a lump in the groin, and at 8 A.M. began to vomit. He consulted a medical man, who diagnosed a strangulated hernia, and sent him to the hospital with a note to say he had had stercoraceous vomiting. Bowels acted slightly at 2 P.M., before that two days ago. In the left groin there was an hour-glass-shaped swelling. The lower half of this was the left testicle lying in the upper part of the scrotum. The upper, lying over the external abdominal ring, about the size of a hen's egg, was very tense, quite dull on percussion, and gave no impulse on coughing. The pubes was shaved and washed, and at 5.15 P.M. methylene was given, and Mr. Whipple made an incision over the upper swelling, and a dark-coloured tense sac was exposed. This was opened and some blood-stained fluid gushed out. A dark, claret-coloured coiled mass presented, and after careful examination this was made out to be a much-enlarged strangulated epididymis. Lying in the lower half of the sac was the body of the testis, about normal size, and attached to it and forming a circle round its hilum was a band of omentum. This tag was torn through. The epididymis appeared to be twisted twice on its own axis. This was pulled down and untwisted; the proximal part of the omentum, which was unaltered in appearance, was returned within the abdomen through a large inguinal canal. The epididymis was ligatured as high up as possible, and it and the testis were removed. The pedicle was dropped back into the abdomen. The sac was ligatured in two halves and cut away, and the pillars of the external abdominal ring sutured. A small tube was inserted and the wound sutured. On the 24th the tube was omitted, on the 27th sutures were removed. The patient got up on Feb. 2nd, and was discharged on the 7th. The specimen removed was sent to the Museum of the Royal College of Surgeons of England, where Mr. J. H. Targett very kindly examined it, and reported as follows: "On re-examining the specimen, I can see no other explanation than that you have offered—viz., that the epididymis, or, to speak more accurately, the mesorchium, has become twisted rather like an ovarian pedicle may do, and so the circulation has become obstructed, for there is a well-marked groove at the base of the epididymis, where, I presume, the twisting has taken place. I have not met with a similar complicated strangulated undescended testicle, nor do I know of any case recorded in the ordinary text-books."

Remarks by Mr. W. G. NASH.—There seems to be no doubt that this was a case of strangulation of the epididymis, and not traumatic or gonorrhœal inflammation. The strangulation was caused by swelling, due to twisting of the epididymis (mesorchium). The seat of strangulation was the external abdominal ring. The epididymis, as is usually the case in these misplaced testes, did not assume the usual canoe shape or bear its usual relations to the testis. The body of the testis itself was not altered in appearance. The cause of the incomplete descent of the testis, no doubt, was the band of omentum which surrounded the hilum of the testis. I have looked through the surgeries of Gross, Ashhurst, Holmes and Hulke, Erichsen, Bryant, and Heath, and cannot find any similar case, but several instances of inflammation of misplaced testes are found, one or two of which gave rise to very similar symptoms. Curling[3] mentions a case in which a testis in the groin became inflamed, was mistaken for a strangulated hernia, and operated on. When the nature of the case was discovered castration was performed. Jacobson[4] relates two cases of inflamed testes in groin, one of which proved fatal from peritonitis. With regard to the diagnosis of hernia in our case, the existence of an hour-glass-shaped swelling in the groin, the lower half of which was the testis and the upper a tense elastic swelling, giving no impulse on coughing, lying over the external abdominal ring and extending along the inguinal canal, taken with the general symptoms of strangulated hernia, pointed very strongly to this being the nature of the case.

[1] Sajous, vol. iii., c. 27, 1889. Boston Med. and Surg. Journal, May 2nd, 1888. [2] La France Médicale, Jan. 14th, 1888.

[3] Diseases of Testis, p. 8

[4] Holmes and Hulke: System of Surgery, vol. iii., p. 479

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Paget's Disease of the Nipple and Breast.

AN ordinary meeting of this Society was held on May 12th, the President, Mr. Timothy Holmes, in the chair.

Mr. BOWLBY read a paper on Thirteen Cases of Paget's Disease of the Nipple, with special reference to the causation of the malady by psorosperms. He gave a short account of thirteen cases of Paget's disease of the nipple, and, after a brief review of cases already recorded, analysed those described by himself. A more complete description of the special clinical characters of the disease as demonstrated by the cases detailed was then given. The histology of the

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morbid tissues was described, and the observations of Messrs. Wickham and Darier as to the presence of bodies resembling psorosperms were commented on. The author remarked that bodies of the same nature as those described by the French observers were to be found in all the cases which formed the subject of the paper, and expressed the opinion that these bodies were probably psorosperms. The pathology of Paget's disease was then discussed; and after giving reasons for believing that all changes in the breast were secondary to those in the nipple, and were not in any way causative of the so-called eczema, the author expressed the opinion that the disease was parasitic in its origin, and then discussed the influence of the psorosperms in causing cancer. He concluded by expressing the opinion that there was no evidence that the cancerous growths in the cases under consideration were directly due to any specific action of the psorosperms, and gave various reasons for such a conclusion.

Mr. JONATHAN HUTCHINSON, jun., likewise contributed a paper on Paget's Disease of the Breast. He reported the results of examination of five cases of chronic eczema of the breast with reference to the occurrence of parasitic bodies in that disease (coccidia or psorosperms). Specimens were shown illustrating various appearances in the surface epithelium, which the writer believed confirmed M. Darier's statement that coccidia were to be found, and sometimes in great numbers. These appearances had not been found in cases of eczema other than the chronic disease known as Paget's disease; neither were they found in all supposed examples of the latter. The writer had observed them in three out of the five cases examined. Brief reports of each were given, and the subject was illustrated by lantern demonstrations of micro-photographs, &c.

Mr. D'ARCY POWER said that he had been working at the origin of cancer by inoculating portions of malignant growth into animals. He had taken a piece of affected tissue from the last case Mr. Bowlby had described; and had inoculated it into a rat. On the fourth day a thin puriform discharge appeared containing epithelial cells and many bodies like those described in the paper. The discharge had since disappeared and reappeared at the inoculation wound on two or three occasions. He had inoculated other varieties of cancer into animals without producing any result. He remarked that in the rabbit, if psorosperms were inoculated, a similar puriform discharge would result.

Dr. THIN remarked on the increased knowledge we had of this disease since the publication of the papers by Mr. Butlin and himself ten years ago. At that time it was the generally received doctrine that the disease was a true eczema, which eventually led to cancer of the breast. The view which he had advocated that the disease was not an eczema nor any form of recognised skin disease was soon afterwards confirmed, and was now universally accepted. The hypothesis which he had suggested that the destructive dermatitis was due to a change at the mouths of the ducts, essentially cancerous in its nature, although a long time might elapse before it led to proliferation of cancerous epithelium was, he held, although not proved by anatomical investigation, still one that had much to recommend it. The destructive agent, of whatever nature it was, was sufficiently powerful to destroy the epidermis and break up the connective tissue in the papillary layer of the skin—effects which were reconcilable with the hypothesis that the poison was cancerous. He considered the continued use of the term "eczema" objectionable, as possibly leading to delay in operative interference. He had recently examined the tissues in a patient of his own with the special object of detecting the appearances described as characteristic of psorosperms. He had found them absent. On examination of the preparations from his early cases, he had found all the characteristic appearances recently described, but saw no reason to consider that they were due to the presence of parasites, as he was able to trace them in an unbroken series of changes which took place in the cells of the epidermis, the first set of changes being unmistakably in true epidermic cells, and the sequence up to the most developed appearances being continuous. Similar changes were found in other conditions, and he specially referred to drawings of cells in epithelioma in his paper in the fifty-ninth volume of the Medical and Chirurgical Transactions, which resembled in every respect the so-called typical psorosperms recently described.

Mr. JONATHAN HUTCHINSON, jun., admitted the difficulty of deciding whether these bodies were really coccidia or not. In the next case in the living subject that he met with he would take a scraping and examine it on a warm stage, to see whether amœboid movements could be observed such as could be demonstrated in the coccidia from the rabbit's liver. The difference in their reaction to dyes might be due to the fact that they were different varieties of organisms. Though he preserved an open mind with regard to them, he thought they fitted in very well with the pathology of the disease.

Adjourned Debate on the Treatment of Surgical Tubercular Diseases by Tuberculin.

An extraordinary meeting of this Society was held on May 7th, the President, Mr. Timothy Holmes, in the chair.

The debate was resumed by Mr. BARWELL, who could not help contrasting the tone of the paper with the results which had been proclaimed elsewhere, and he animadverted on the facts that a fluid the nature of which was kept quite secret was vaunted as a certain cure for one of the most formidable complaints, that trivial improvements in the condition of tuberculous patients were freely circulated as indications that the cure of deeper mischief might be obtained, and that hundreds and thousands of people were induced to undertake a long and perilous journey to undergo a treatment which could at the best only be beneficial in as many months as they could stay weeks. Mr. Cheyne's paper took a very different tone, but it was the more incumbent that his conclusions should be carefully examined. Beginning with the action of the drug, the pyrexia induced by the first two or three injections, which was sometimes so intense as to prove fatal, was frequently alarming. He was unable to make out any essential difference between these febrile attacks and those which followed the absorption or injection of septic matter. He alluded to the case of wounds in the course of which signs of pyæmia came on, which could be at once stopped if the wound could be thoroughly washed out and cleansed so as to prevent the formation of any fresh sepsis, and consequently of any fresh absorption. In fact, these attacks were very like, if not identical with, those which followed injections of Koch's fluid. These febrile attacks (induced by Koch's lymph) were usually accompanied by albuminuria; frequently, nay generally, by enlargements of the spleen and liver, together with purpuric and other forms of skin eruption, and sometimes by an icteroid or earthy discolouration of the skin. He did not wish to be understood to say more than he really meant. He did not say that Koch's lymph was only sepsin, for that was evidently not the case. It consisted of glycerine, a certain or rather an uncertain amount of peptone, some extractives, with its essential principle, an alkaloid, which Koch estimated to be present to the extent of 1 per cent. This alkaloid was extremely poisonous, and was, he thought, closely related to sepsin. He did not gather what means there were of regulating or standardising the strength, nor did he know of any means by which this could be accomplished. He urged that under these circumstances the product must necessarily be of uncertain composition; they might measure with the utmost care the bulk of the fluid which they injected, and yet have a very vague idea as to the amount of poisonous alkaloid they were about to administer. This explained many of the alarming and some of the fatal symptoms which followed the first and second injections. To make matters still more difficult, they were told that if the operator began with a small dose he was apt to produce that tolerance of which Mr. Cheyne had spoken as frustrating any further hopes from subsequent treatment. He observed that this particular alkaloid had never, like that of anthrax, been isolated or crystallised out. Going back to the transient septicæmia to which he had alluded as a complication of wounds, he pointed out that during such an attack the granulations underwent certain changes, sometimes becoming dry and shrivelled, but usually increasing in size and undergoing gelatinisation. If the fever were high the granulations probably shrivelled or sloughed away. Mr. Cheyne had shown them some very beautiful photographs of tubercular granulations undergoing inflammation as a consequence of the injections, but he confessed to an inability to detect any signs of a peculiar or specific action. It was true that in most of these specimens the tubercle was undergoing infiltration by leucocytes, and was possibly in the way of dying or being destroyed thereby. He did not admit, however, that this was the result of such injections. They would want a control experiment where the effects of other sorts of inflammation were observed. He might be told that

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these other forms of inflammation did not attack tubercular tissue in particular, while it was asserted that tuberculin did so with such certainty as to prove a valuable means of diagnosis; but there had been too many cases reported in which precisely the opposite effects had been noted. It was not claimed that the injections deprived the bacilli of their infectious qualities, nor did it confer upon tissues any additional powers of resistance, and this might account for the widespread tuberculous dissemination testified to by Virchow and confirmed by Volkmann. After all, however, it was by the clinical and practical results of the injections that the method would stand or fall. Without going abroad for statistics, it was significant that Mr. Hutchinson, with his vast opportunities, had not seen a single case of cured lupus, and Dr. Heron's cases of phthisis afforded no instance of cure. As to Mr. Cheyne's ten cases of lupus, one had been sent out of the hospital in December last, but came back in two months for treatment; moreover, eight out of the ten cases had been subjected concurrently to pretty severe surgical treatment. As to his joint cases, in these, too, surgical measures were resorted to, and he could not see that the fluid had in any way assisted. There were two cases of dactylitis, presumably strumous, neither of which was benefited. He concluded with the remark that the promises made in respect of this fluid had been unfulfilled.

Dr. DOUGLAS POWELL observed that the paper was full of details and observations of the highest merit, and it seemed to raise the subject upon a platform, and to place the matter in such a position as to authorise the hope of their being able to build up further observations. His own experience of this treatment had been but small compared with that of the author, and comprised cases which from their very nature were much less adapted for combined clinical and pathological observation than those which the author had placed before them. He did not think that one could speak at present from any mature conviction in respect to the results to be obtained by this method of treatment, but one was obliged to express a certain measure of disappointment at the results obtained so far. Yet he was bound to say, and it was his reason for speaking, that his own feelings with regard to the treatment were not in accordance with those which had just been expressed. His own cases of tubercular lung diseases were thirteen in number, and they were cases which had been thought suitable for treatment when it was first introduced into this country in the beginning of December. He alluded briefly to these cases, merely giving his impressions with regard thereto. One was a case of double tubercular pleurisy with effusion, associated with a hectic temperature and signs of tubercular mischief at one apex. This patient did not improve under treatment; the hectic temperature remained the same, and after twelve inoculations he appeared exhausted by the treatment, which was discontinued. He was unable to say that the patient's condition was materially altered by the treatment. He died five weeks after its cessation, death being due to acute general tuberculosis, which declared itself three days before his death. Then there were two cases of active double second-stage tubercular pulmonary phthisis; in one the disease went on unchecked, while in the other there was some temporary improvement, which might or might not have been due to the treatment. This patient was now, three months after the commencement of the treatment and three weeks after its cessation, presenting some slight but decided advance in her physical signs. There was one case of active third-stage phthisis, marked by the rapid formation of cavities, high temperature, night sweats, &c. This patient was injected a few times, but there were no results, and so the treatment was not persisted in. There was one case of old tubercular excavation in the right lung, with commencing tubercular deposit in the left, the patient being the subject of syphilis. The old lung disease did not in any way react to treatment so far as one could judge, but the other lung with recent disease seemed to be improved. After some fifty or sixty inoculations, extending over a period of several weeks, they came to the conclusion that no benefit was likely to attend continuance of the treatment. They were influenced also by the view that by continuing the treatment, which apparently gave no hope of benefit, they might enfeeble the patient, and leave him to his old enemy, the syphilis. After a while they put him on tonics, and he left the hospital in fairly good condition. In one case there was a history of tubercular phthisis of two years' intermittent duration; this patient decidedly improved in general health, and was under treatment for two months; she then became pregnant, and it was thought advisable to discontinue the treatment. Another case was one of dense tubercular consolidation of the middle portion of the right lung without necrotic foci, but there were bacilli in the sputum and the usual collateral symptoms. After continuing the treatment for some six weeks, the softening process in the right lung seemed to be accelerated; at one time this case caused them very considerable anxiety on account of the rapid softening of the lung and of the increased septic symptoms that arose. She had rheumatic pains in her joints, a temperature which became hectic, and there was slight albuminuria with profuse sweating and obstinate vomiting; although these symptoms came on twelve or fifteen days after the injections had been discontinued, he thought they were due to contamination from the rapid process of softening. Then he began treatment; expectoration diminished, the hectic diminished, and she picked up appetite, health, and strength, and was now in a better condition than when first taken in hand. One case was of scattered caseous phthisis, most marked about the right upper scapular region, and with a hectic temperature; the cough was not very troublesome and was scanty, but bacilli were present in the sputum. This patient improved in general health, the cough diminished, the phthisical signs which were scattered through the lungs gradually cleared up, and the physical signs in the right scapular region were represented by a small cavity. She had been more or less under treatment since Dec. 15th, and they had recently made out that during that time she had lost three pounds in weight. There were four cases of ancient one-sided phthisis, all of which did extremely well; his only difficulty in regard to these cases was whether they had done well in spite of the treatment, or whether that had assisted them on the road to recovery. He then alluded to three cases of lupus, in two of which marked improvement resulted at first; on ceasing the treatment, however, they had relapsed considerably; they were now adopting other measures. In the third the lupus was limited to the eyelid; there was a history of blindness consecutive to illness attended by acute headache, and each time they injected her she had very severe headache. They were afraid of lighting up an abscess in the brain, so they desisted. He had kept no account of the much more numerous cases in which he had declined to adopt this method for sufficient reasons. He did not pretend that this was a very brilliant series of cases, but throughout all the inoculations he had never experienced any of those terrible catastrophes which one heard of in connexion with this treatment. In only one case, of lupus, was he at all anxious in consequence of reaction after a dose of seven milligrammes; the reaction was very severe, but the patient recovered perfectly after three or four hours, and the symptoms did not recur subsequently. The only case in which he felt any anxiety in regard to the treatment was one in which the results seemed to be excessive, and to have involved the danger of pyæmia. He observed that the chief incident in the second stage of phthisis was sepsis. He did not know of any symptoms in the second stage which could not be explained by the absorption of retained material. If they could clean them out they would have none of the second-stage hectic symptoms. These were, then, a necessary condition of the eliminatory period of phthisis, and their whole treatment of this period was to sustain the patient by those measures flippantly alluded to by the author under the head of "expectant" treatment. These were the only measures which were attended with any amount of success. The question was, could they hasten this process of elimination? Personally, he was convinced they could. The question was, in what particular cases could they do so? In some cases the elimination appeared to him to be too stormy and rapid; but he believed there was a certain number of cases in which one might employ tuberculin without danger. That was a question purely for experience to decide. He raised the question as to whether the employment of the frequent and repeated doses advocated by the author was adapted to the treatment of internal tuberculosis. It must be borne in mind that they were unable to follow these cases like the surgeon could follow his, and therefore repeated and too frequent employment of inoculations would probably be found unsuitable for many of these cases. What was their object in using tuberculin in these cases? It seemed to him to be to stimulate the diseased tissues, and to enable the tubercular tissue to get the better of the enemy. The

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author had shown them some most interesting pictures of the battlefields in which the phagocytes were engaged in dealing with the tubercular cells. The only upshot of this stimulation of the tissue surrounding the tubercle was to bring about a fibroid change, which they knew was the natural safeguard against the further spread of the infection. He was afraid that this formation of fibroid tissue was seriously imperilled by the continuance of the treatment for too long a time or by too frequent repetitions. He referred to a very interesting observation of Dr. Dreschfeld, in which it was pointed out that extending tubercle was frequently led up to or preceded by a catarrh which provided the material on which the bacilli could feed. In early cases of tubercle, in which there were small scattered tubercles over restricted areas surrounded by lobular catarrh, the natural process was a multiple necrosis; here he thought tuberculin might successfully be used to hasten the process and to stimulate the secondary occurrence of fibroid changes. He thought that when they had obtained a certain measure of success it was better to hold their hand and to trust to hygienic and general measures to complete the obsolescence of the tubercle. The author suggested that the standstill might be maintained for a considerable period of time by the occasional repetition of the inoculation; he doubted, however, whether this standstill was really to be attributed to the treatment. They all knew that this tendency to arrest and recurrence was part of the natural history of the disease. The author's observation as to the action of tuberculin in bringing about the healing of wounds was most interesting and instructive, and at first sight rather told against what he (the speaker) had been saying. He was still hopeful that tuberculin might in some cases of internal tuberculosis aid in rendering the disease quiescent.

Mr. HOWARD MARSH said it was one of the best papers he had ever listened to, being at once judicial and temperate; but they were all anxious to know what were the author's conclusions as to the practical value of this method of treatment. They were anxious to know whether it was a plenary remedy, able to deal single-handed with the disease—to be regarded in the light of an antidote, like mercury for syphilis, or, failing that, whether it was a useful accessory to other forms of treatment. With regard to the first question, he feared that it was necessary to come to the conclusion that it was not. He observed that the author discouraged recourse to this treatment in the early stages of disease. That was disappointing, and seemed to him an abandonment of the position altogether; because if a remedy was powerless against incipient disease, there was little likelihood of its being of service at a later stage.

As to the second question, he observed there were two methods by which surgical tuberculosis was treated. In the first place, there was the treatment by rest and change of air &c. Many of them were convinced nowadays that this method could be thoroughly relied upon, and a very satisfactory result could be obtained. He was prepared to produce a considerable number of children who had been suffering from tuberculous disease, who after a time had quite recovered with freely movable joints. These, too, were cases which would be five, ten, or fifteen years old, so that ample time had elapsed to see whether they were really cures or not. The treatment by rest must be carried through, the cases passing through several well-defined stages; indeed, the great objection to that treatment was the time over which it extended, taking as it did from six months to a year. It would have been very satisfactory if the author could have assured them that by the use of tuberculin, associated with this treatment, the months could be reduced to weeks. That, however, was evidently not the case, because he disadvised the remedy in the early stage. The second plan was the operative method of treatment of surgical tuberculosis; the principle of this method was to cut away the diseased tissues, rather than to preserve them by killing the disease; this method was certainly open to serious objections. The deposit of tubercle in the joint of a child was not limited to the synovial membrane, but involved the articular ends of the bones. Cases in which this treatment by free excision has been carried out had not been freely recorded, but they would be full of interest. It was clear that if a joint was treated in this way the epiphyses must be sacrificed and the ultimate issue of the case unsatisfactory. It would, indeed, be happy if this sacrifice of necessary structures could be avoided. There was no evidence that the extent of these operations could be circumscribed. Then there was the radical objection to this method that it did not cure the disease, but simply cut away the parts which were diseased. He instanced the case of a patient with a tuberculous testicle; the surgeon said to him, "I must remove it, and then I will expedite the healing of the wound with injections of tuberculin." If the disease recurred in the other testicle, the procedure would have to be repeated. That looked very much like locking the stable door after the horse had been stolen, and if he were the surgeon he would feel disposed to say, with the general, "One more such victory as this and I am undone." He believed that the rapid way in which these wounds healed had had a very misleading effect on their estimate of the cases. Surgeons were so pleased with the rapidity of cure after excision that they did not study sufficiently what the ultimate condition of the limb was likely to be. If Koch's treatment did nothing more than help in the healing up of an aseptic wound, then it did not amount to much, for they were accustomed to seeing the wound after aseptic excisions heal by primary union.

Dr. DELÉPINE showed various microscopical sections bearing on the changes which took place in tubercles after inoculation. When he saw the photographs on the screen it occurred to him that he had specimens showing the same kind of thing of his own, and he had looked out specimens among diseases of synovial membranes in which decaying epithelioid cells were found which closely resembled the micro-photographs shown by the author. These were taken from cases operated on six years ago, before Koch's treatment was known. They were therefore interesting in view of the possible use that might be made of the pathological facts that had been brought forward to show that the changes were simply those of an ordinary inflammatory process. He observed that there was a tendency to attribute to tubercle a number of properties unknown to pathologists before. When Koch published his first communication he ventured to show that such changes as he proposed to give as characteristic of the action of this fluid on tubercle were rather against than in favour of his method. These specimens seemed to show that there was nothing specific in the action of the fluid, and the author held the same opinion. The action of the injections was therefore neither specific nor selective.

Dr. HIME of Bradford said he had not heard the original paper, but on reading the abstracts he had been struck by the caution displayed by the author. It seemed as if Mr. Cheyne was sitting on the rail and was keeping himself ready to drop on either side. That position he thought was highly meritorious. He thought it would be exceedingly unwise of anyone to express a definite opinion on such an important matter at the present juncture. He need not tell them that cases of phthisis were not to be pronounced cured in a day, and the same remark applied to lupus. He commented upon the very different views expressed, and the exceeding laudation on the one hand and the exceedingly depressing views on the other. He thought they might congratulate themselves upon not having rushed to conclusions; the public might have been misled by extravagant claims in the daily press, but the profession had taken some time to make up their minds. He ventured to differ chiefly upon matters of fact with the gentleman who led off the discussion. He (Mr. Barwell) said that the reaction which resulted from the injection of the tuberculin was indistinguishable from that of septicæmia; that was a remarkable statement, and one of gravity. [Mr. Barwell protested that he said "very like," but not "indistinguishable."] The actual words were "very little difference," but with all respect he submitted that there was a very great difference. First of all, the blood did not become septic, there were never any metastatic abscesses, the temperature was not similar, and the whole picture was not that of septic infection. Moreover, it was not characteristic of septic infection that the larger the dose and the oftener it was given the less was the result. Again, Mr. Barwell had said that albuminuria was a frequent result. [Mr. Barwell remarked that he said it sometimes occurred.] He accepted the correction, but he had taken the words down. In any case it was not his experience, or that of the majority of observers who had tried the method. He hoped, too, that they would not accept Mr. Barwell's assertion that the tubercle bacillus was an animal that sometimes died infected by its own poisons. The nature of the reaction and its specific character was what they had

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before them. To curative results, both here and abroad, he could not then refer; but he himself had seen results which he thought were very gratifying. It was impossible to say at this stage that the cases were definitely cured, but when a patient came, having lost from one to one and a half pound a week for months, with night sweats, anorexia, and bacilli in sputum, and when at the end of some six or eight weeks these symptoms had disappeared, the patient having gained in weight and the general condition being satisfactory, he was inclined to call this result gratifying. Had he obtained the same result from cod-liver oil, steel, &c., he would have felt very grateful. It was enough for him that the patient got better. Every day that he continued in this improved condition of health the greater were his powers of resistance and the better able was he to resist the inroads of the "animals," as Mr. Barwell called them—the bacilli. He had seen one or two cases in which anomalous effects had occurred, but he had seen none of the alarming results reported by other observers. He could quite understand that they should occur with doses such as he had seen administered at Berlin. He referred to a patient of his own to whom he had administered one milligramme for lupus; that produced very severe general and local symptoms, the temperature running up to 105° F., with stupor &c. He asked what would have been the result if, instead of a milligramme, he had given a centigramme. He insisted on the importance of smaller doses.

Dr. THEODORE WILLIAMS said he would not have spoken had the author not introduced the element of internal tuberculosis in the form of phthisis. He observed that the moderate tone of the paper contrasted strikingly with Koch's original contribution. They were told that incipient phthisis could be cured in from four to six weeks, and that any recurrence could be treated in the same way. There was nothing of this kind in the paper presented by the author, which was expressive less of satisfaction at the results obtained than of those which it was hoped might be obtained in the future. He thought the author's modified treatment was an improvement on the original, but he observed that his difficulty was to get the temperature down and to arrive at a state of tolerance. None of his own cases had been of this character. He mentioned a typical case of initial phthisis with slight physical signs at the apex of one lung, so slight as to be almost a matter of doubt were it not that he had found bacilli in the sputum. There was at first no pyrexia, but the second time he saw her the temperature was up to about 100° F. They commenced the treatment with this slight consolidation at one apex, the dose being a milligramme, subsequently increased to 1·5 mgr. There was always a reaction, and he was sorry to say the case did very badly; after from ten to fourteen injections a considerable cavity formed in the lung, and then, to his horror, after the fifteenth injection phthisical signs appeared on the other side. This might, it was true, have occurred anyhow, but it was not in accordance with his experience of such cases. Treatment was carried out on the precise lines laid down, and the lymph had been procured from Berlin. He inclined to the view that the patient under ordinary treatment would not have been in that state. They heard nothing in the paper about curing the disease, only about keeping it at a standstill. They all knew that phthisis was not to be cured in a hurry. He was unable to congratulate the author upon his cases; two of them, described as hopeless at the beginning, died. This was scarcely the *status quo*. He had read the cases very carefully, and thought they were a very melancholy series. He had submitted four cases to the treatment, most of them being typical cases of incipient phthisis. There was no sign of a cavity, they all had a few bacilli in the sputum, and there was a certain amount of pyrexia, and in one or two the physical signs were doubtful. In each, within three or four weeks, distinct cavities formed. The bacilli did not decrease in numbers, the great feature being that the sputum contained great quantities of lung tissue. It might be said that this was the natural way of curing the disease—namely, by setting up a necrosis and getting rid of the dead products. But he urged that the formation of cavities distinctly lessened the patient's chance of recovery. In every one of the cases in which there was a pre-existing cavity or cavities, it either extended or there was evidence of extension of the tuberculous process to other parts of the lung. These cases had been carefully examined, more so probably than any other series of cases. He pointed out that these first-stage cases as a rule did well under any treatment, and mentioned a case in which a residence at St. Moritz since January had brought about a cessation of all symptoms. That was the class of case which Koch said could be cured by his method; on the contrary, while they might be arrested in a number of ways, his way was the way to kill them. He thought that the treatment might possibly become of use, but it would have to be modified.

Dr. ABRAHAM said he felt the same disappointment as many others at the results, which had not fulfilled their expectations. He thought, however, in spite of what he had heard, that most of those who had tried tuberculin in a systematic way would have to admit that some benefit had accrued. In the cases he himself had to deal with they had not been uninfluenced for good by the treatment, but one or two had been decidedly worse. The large majority, however, had distinctly improved temporarily, if not permanently. He used small doses at intervals of several days. He said that if tuberculin had a specific effect upon tissues produced by the presence of bacilli, they would expect some relation to exist between the amount of such tissue and the intensity of the reaction. No such ratio, however, was observed. In some cases with a small amount of tuberculous tissue he had seen severe local and constitutional symptoms, and *vice versâ*. In other cases, although there had been abundance of bacilli in the sputum and physical signs in the lungs, there had been scarcely any reaction. He thought that the primary action of tuberculin was upon the nervous centres, and considered that the microscopical specimens shown favoured the view that the changes produced might be obtained by any method which set the leucocytes free. In fact they were purely inflammatory. He thought the author's plan of treatment by multiple injections was likely to prove irksome, and could not be employed unless it could be shown that the game was worth the candle. He agreed that there was small danger of the disease being disseminated. In only one case had he observed any increase of the tubercular disease. He mentioned that of the two guinea-pigs brought before the Pathological Society by Dr. Crookshank, one died shortly afterwards with its organs full of tubercle, while the other one, treated in exactly the same way, was still living. Mr. Cheyne had said little as to the diagnostic value of the remedy, which indeed did not seem to amount to much. Two cases of lupus which he was treating by a combination of Koch's treatment and resorcin were doing remarkably well.

Dr. DRYSDALE alluded to the rush to Berlin, but thought that a little enthusiasm was pardonable when it was a question of curing a disease which killed one-fifth of our population. He had been allowed to visit the London clinics, but the impression left upon his mind was most unfavourable. He expected from what he had read to see a remedy which would be as safe and as certain as iodide of potassium in tertiary syphilis, the patient getting well and not being injured in any way. He was quite unable to say that he had seen anything like a cure in any of the cases. As to the patients reported as benefited, he observed that it was a common experience for such patients to improve for a time with or without treatment. Of the cases of lupus he had seen, only two were benefited at all, and even these were not cured. He had been anxious to employ the method, but after what he had seen he would not feel justified in doing so. He mentioned that a gentleman who had examined a thousand specimens of sputa at Davos had been unable to detect any change in number or behaviour of bacilli consequent on the treatment.

Dr. WETHERED said one could not form an adequate idea of the treatment by casual visits to hospitals. He had followed out carefully fifty cases, thirty-five of them being of phthisis—seventeen of the first stage, nine of the second, and nine of the third. In not a single case did any harm result. Though his numbers were small, they justified the conclusion that in the first and second stages of phthisis some improvement might be expected. He had seen no instance of the formation of a cavity. He insisted upon the great amelioration of symptoms which occurred during treatment, more especially in respect of the cough, of which he gave two remarkable examples. The breathing also improved, the night sweats disappeared, and the appetite improved. He did not anticipate any good effects from large doses, doses of from two to three milligrammes every two or three days, so long as there was a reaction, being sufficient. He never carried the dose beyond twenty milligrammes, and he thought it was a mistake to exceed

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these doses. He thought this treatment had been prematurely cried down.

Dr. SQUIRE said he had used this remedy continuously since the first week in December. His results were not very satisfactory in his surgical cases, and he could not pretend to be able to judge whether the cases had got better under this than under ordinary treatment. In any case, the surgeons had taken the first opportunity of discontinuing the treatment. He admitted that perhaps with larger doses or by some other method more satisfactory results might have been obtained. He pointed out that the question of doses was one of very great importance; if increasing doses were required in surgical cases, they would not do in medical cases. They did not want in phthisis to produce rapid destruction and elimination of tubercle, but a slow process which would allow the fibroid changes to hem in the infective tissues. This result, he thought, was more likely to be obtained by small than by large doses. He remarked that the non-ulcerative lupus was apparently not affected in all. In ulcerative cases there was some considerable improvement, but not of a permanent kind.

Mr. HURRY FENWICK said that after an experience of about ninety cases of genito-urinary tuberculosis he started using Koch's treatment, and described his result under three heads: (1) dangers; (2) ocular appearances of mucous membrane; and (3) therapeutic value. The dangers were certainly real. In his first case there was septic pyelitis, and the man died in a fortnight. There was also danger of swelling taking place in the urethra or neck of the bladder, leading to retention or suppression of urine. Lastly, there was the danger of rapid sloughing out of material from the bladder followed by profuse hæmorrhage, an instance of which he mentioned. With regard to the ocular appearances, he had noticed the formation of small mulberry phlyctennulæ, and, what was more extraordinary, the formation of deposits which had not been previously seen. In regard to its therapeutic value, he thought it might be of use in a very early stage of tuberculosis of the bladder, kidney, or prostate, and its effect might be accurately watched by means of the cystoscope.

Mr. CHEYNE, in reply, admitted that he was still sitting on a rail, and did not propose to get down for the time being. He would have liked to have asked Mr. Barwell where his extraordinary investigations took place. By sepsis he only meant the process due to the specific organism. He pointed out that his own method bore on the frequency rather than the amount of the dose. He would be quite content to go on with half a milligramme for several weeks. He would like to see physicians try that plan before abandoning the method. They were under no obligation to give all the injections themselves. He said that in his own cases when he left off the treatment the disease recurred, and that was what he meant by a standstill. He did not argue against the remedy in incipient disease, but he would not advise its use. In reference to Dr. Delépine's remarks, he pointed out that the specific nature of the remedy was in the selection rather than in any special changes. He himself had plenty of specimens showing the same thing. He did not agree that cases of phthisis naturally inclined to recovery. If phthisis were such a curable disease, it was surprising that physicians should have made such a rush to Berlin to learn something about its treatment. It was the physicians, and not the surgeons, who had led the way there.

CLINICAL SOCIETY OF LONDON.

Resection of Intestine by Senn's Method.—Sequestrotomy. Trephining for Cerebral Abscess.

AN ordinary meeting of this Society took place on May 8th, Mr. Berkeley Hill, Vice-President, in the chair.

Mr. ARBUTHNOT LANE read a paper on two cases of Resection of Intestine by Senn's Method. The first was a case of Littre's hernia occurring in a woman aged fifty-three. It was femoral, and situated on the right side. On exposing the sac it was found to be much inflamed, its contents stinking and pultaceous, and the knuckle of bowel in an obviously irrecoverable condition. Having thoroughly cleansed the bowel and sac, the abdomen was opened in the middle line, and the loop of intestine, whose segment had been strangulated, was drawn out from the abdomen, the constriction at the femoral ring having been previously divided. It was then seen that only a portion of the calibre of the bowel had been included in the sac, and that its condition was irrecoverable. Subsequent examination of the strangulated portion showed that, though there was no obvious perforation, nothing remained in many parts of its wall but the peritoneal coat. About three inches of the bowel, including the strangulated area, were excised, and the mesentery belonging to it ligatured. The divided ends of the proximal and distal segments of the intestine were closed by inverting their coats and by running along them a continuous Lembert's suture. Incisions were made in the convexities of the segments about three inches from their closed ends, and into these Senn's plates were introduced. The apertures were then brought accurately together by means of the silk ligatures. After this two continuous Lembert's sutures were applied to render the apposition of the plates more perfect, and a broad graft of omentum was placed around and fixed by means of several fine silk sutures. For a few days the patient was nourished by enemata, and later by peptonised milk. Twelve days after the operation she was enjoying a fish dinner. She experienced no pain or discomfort worth mentioning, and her abdomen remained soft and comfortable throughout. It was necessary to give her some opium for a few days after the operation to restrain a tendency to diarrhœa. She left the hospital three weeks and four days after the operation. The second case was in a woman aged fifty-five, who had suffered from a strangulated femoral hernia for five days before her admission. She was very collapsed, and her abdomen was much distended. It was at once apparent that she could not stand any very prolonged operation. The sac was much inflamed, and contained a quantity of pus and fæces and a perforated loop of small intestine. This was ligatured and carefully cleansed, the constriction being then divided. The abdomen was opened and the damaged loop drawn out. About four inches of bowel were excised, and the ends closed and the plates inserted. It was then found that the proximal gut was very rotten, and the sutures attached to the plates tore through the softened bowel frequently. Finally, the plates were brought together in much haste, as the patient had become moribund, and a graft of omentum was attached. Mr. Lane regretted very much that he had not time to remove a further portion of the proximal bowel, but the patient's condition rendered any further delay impossible. She lived five days and two hours, the bowel yielding two hours before her death, which resulted from the escape of the intestinal contents into the peritoneal cavity through a small slough in the proximal bowel. Mr. Lane urged that the following treatment should be adopted in future:—1. That in cases where strangulated loop of intestine was gangrenous or ulcerated, the proximal and distal portions of the intestine should be short-circuited by means of Senn's plates, the proximal portion being at the same time relieved of much of its contents. If the condition of the patient were such as to permit of further operative interference, and provided the adhesion of the intestine to the neck of the sac and its vicinity were not too extensive, the damaged loop should be resected at the same time, otherwise it should only be incised and freely drained. 2. That, as a very large proportion of cases of strangulated hernia died from obstruction after herniotomy, owing to the strangulated loop not recovering itself sufficiently to allow of the passage of the contents of the bowel through it, in any case in which the condition of the strangulated bowel aroused suspicion in the mind of the operator as to the possibility of its not recovering, the abdomen should be opened in the middle line, and the condition of the damaged intestine, as to its transmissibility, fully explored. That if there were any doubt about it the intestine should be short-circuited; and if the condition of the damaged loop were such as to suggest ulceration and subsequent perforation, it should be excised also. He considered the present mortality after herniotomy a disgrace to the surgery of the present day, and only to be obviated by more efficient and thorough treatment than that at present adopted.—Mr. JESSETT said that it appeared to him that the second case was seen too late, when the chance of successful operation was remote. It was a matter for regret that a larger portion of intestine was not removed. He had operated successfully on two cases—one of communication of the small intestine with the roof of the vagina, and one of intestinal obstruction. In a third case of ulceration of intestine following the pressure of an ovarian cyst, a fatal result ensued twenty minutes after the completion of the

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operation. He thought that when these cases were seen very late, the stomach should be first washed out and the operation postponed for a few hours until the patient was revived by brandy and nutrient enemata. He referred to the difficulty in approximating the intestine in cases of obstruction where the proximal gut was much dilated and the distal very contracted.—Dr. MOROTTI showed a specimen of the intestine of an animal which had been operated on according to a method described by Dr. Halsted of the Johns Hopkins Hospital, Baltimore. He held that for simplicity and rapidity of performance, combined with safety, it had no rival. He had performed different operations for intestinal anastomosis ten times, and in each case the animal had made a good recovery.—Mr. LOCKWOOD said that at St. Bartholomew's Hospital the taxis was always tried before a strangulated hernia was operated on, and the mortality in the total number of cases was 25 per cent; but the mortality in the cases in which the gut was gangrenous came nearer 90 than 80 per cent. The cause of death among these when analysed showed that the old treatment was unscientific, for the patient usually died unrelieved, or, if relieved, the gut had given way or gangrene had spread along it. Peritonitis had not been so frequent a cause of death as might have been imagined. Another great objection to the old method was that one could never be sure where the gut was opened. He asked what had been the experience of surgeons as to the other method, which Senn had proposed, that of lining the upper end of the gut with indiarubber and then intussuscepting it with four sutures; he had found it possible to do this on the cadaver in under ten minutes. Whatever operation were done, he preferred to do it through the original wound. It was a great question what would be the ultimate result in these cases of anastomosis; in at least one it was known that the opening made had closed up again.—Mr. H. H. CLUTTON spoke in favour of Mr. Lane's proposal, as he was convinced that the treatment of the gut by the old method was hopeless. He advocated a median abdominal incision, and attributed Mr. Lane's success to this procedure.—Mr. PARKIN had been over the statistics of Guy's Hospital for ten years, and found that there had been 272 operations for strangulated hernia with seventy-nine deaths. The mortality, taking all the cases, including those not operated on, was 22 per cent., while taking only those operated on it was 34 per cent. In twenty-two cases there was gangrene of the gut, and of these, twenty-one or 94 per cent. died: sixteen of peritonitis and five of exhaustion. In eleven of the cases an artificial anus had been formed, and these lived on the average seven days.—Mr. SYMONDS thought that the new operation described as Dr. Halsted's was very much like that which had been described before by Mr. Barker.—Mr. HARRISON CRIPPS had had two or three of these cases in his practice, and with one exception they had proved fatal. The case which recovered was that of an elderly woman, and he cut the gangrenous loop entirely away, and with a catheter passed into the proximal end let out quarts of feculent material. She died five or six weeks later from bedsores. He protested against the older methods being stigmatised as barbarous, and he thought that, if a patient were moribund, to do such a proceeding as Mr. Lane had described would destroy the last spark of life left. He held, on the contrary, that under these circumstances as little as possible should be done.—Mr. LANE, in reply, still held that the old treatment was barbarous. Mr. Cripps' only successful case died in a few weeks, probably because the gut had been opened very high up, and everyone admitted that the mortality under the old method was enormous. He held that in any case the bowel should be connected above and below, and, if the patient's strength allowed it, the gangrenous part should be cut away. The advantage of the median incision was that the bowel could be taken well out of the abdomen and thus risk of soiling the peritoneum was greatly diminished.

Mr. CHARTERS SYMONDS related two cases in which a sequestrum was removed from the neck of the femur without injury to the joint, and in which recovery with a perfect joint resulted in both. Both cases were children, one aged three and the other five. In both there was a large chronic abscess on the front and outer aspect of the thigh, without any joint pain. Both children could run about without pain, and with only a very slight limp. The movements of the joint in each case were only slightly impaired, and not more than could be attributed to the mechanical presence of the abscess. In the first case the presence and situation of the sequestrum were suspected, in the second it was searched for after the abscess was opened. In both a minute sinus was found leading through the front of the neck into a cavity in the neck. The channel was enlarged by gouging away a little bone from the outer side, and the sequestrum removed. In both the capsule was seen lifted up by the abscess; in the first, it was accidentally opened by a slip of the knife; in the second, it was intentionally pricked, and in both cases a few drops of clear fluid escaped. Both sequestra involved the epiphysial aspect of the neck, and in the first case was of considerable size. In the first case, operated on in 1887, the wound was stuffed and drained, and the child was not well for more than a year. In the second, operated on in May, 1889, according to the method introduced by Mr. Barker, the large abscess, after being scraped out, was sewn up and was followed by primary union. Both children were shown. The elder, a boy of seven, had a perfectly useful joint, possessing all the normal movements, and, moreover, there was no shortening and no irregular growth. The other, the first operated on, had a limb of the full length, but the joint was fixed. Mr. Symonds attributed the superiority of the result in the second case to the method of operating employed, and thought the ankylosis in the first case due either to the result of chronic synovitis extending from the cavity, or to the fixation caused by the splint.—Mr. BARKER said that the advantage of attacking the disease at this stage was that it could be dealt with by a comparatively small operation, whereas if it were left till later an extensive resection would probably be required. He referred to the case of a girl aged six whom he saw last September, with distinct symptoms of hip-disease. He had seen her again recently, and six weeks ago she had begun without leave to go about without the double Thomas's splint with which she had been provided. A large abscess now existed in front of the trochanter, and from the absence of pain when gently jarring the heel or knee, and the freedom of movement without grating in the joint, he was inclined to regard it as a case like that the author had described. He made an anterior incision, opened the abscess, and a probe entered the bone, the joint not being in the least degree involved The trochanter was not *swollen*, nor was the limb shortened.—Mr. WATSON CHEYNE thought that these cases must be comparatively rare. So far as he had examined the pathology of the affection, in most cases the sequestrum extended to the surface of the bone near the epiphysial line, and the joint was then necessarily involved. He had in six cases removed sequestra without excision, and in one he had attacked it through the trochanter without opening the joint. He suspected that in the case the author had described the sequestra were in the substance of the neck rather than in the usual position.—Mr. SYMONDS, in reply, said that in the case of the boy nothing but a thin shell of bone remained, and the sequestrum contained no compact tissue. The larger sequestrum shown undoubtedly did involve the anterior surface of the neck. He thought that a good many of the chronic abscesses of the thigh were of this nature, the sinus leading to the bone being overlooked. It should be searched for at the extreme upper limit of the abscess.

Mr. STEPHEN PAGET described a successful case of Cerebral Abscess in which he had twice trephined. A boy aged twelve, after a discharge from the left ear, had for some weeks intense headache, with giddiness and strangeness of manner; there were also points of exquisite sensitiveness in the left temporal, malar, and occipital regions. A week after admission to the West London Hospital sudden vomiting supervened, then right facial paralysis, weakness of right arm, partial aphasia, and left optic neuritis. Mr. Paget trephined over the left fissure of Rolando, and let out an ounce of pus. Eleven days after, the abscess having refilled, he trephined again lower down, on a level with the lower opening. Two days later an offensive blood clot was found in the discharge, probably from the meningeal hæmorrhage which had occurred five days after the first trephining. The abscess cavity was now syringed through daily with perchloride. There was for some time after this a small hernia cerebri at the upper wound, but this was cured by elastic pressure. The wounds healed soundly, and the boy made a good recovery, save for some paralysis of the right side of the face. Mr. Paget called attention to the chief surgical features of the case, and to the curious sort of aphasia from which the boy had suffered, being unable to give the right names to objects, though he

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recognised the names when he heard them. It was also to be observed that all through his illness, even at its height, the boy had a voracious appetite, eating and drinking enormous quantities of food. Mr. Paget quoted five published cases in which the same voracity for food and drink had occurred after severe injuries of the front part of the brain. He thanked Mr. Eccles, the house surgeon, for his devotion and skill in the management of the case.—Mr. BARKER congratulated the author on the result he had obtained, but hoped that he would indicate more exactly the situation of the abscess. He asked why the first trephine hole was made so high up. In a child the usual position to trephine was about an inch and a quarter above and behind the external auditory meatus.—Mr. DUNN referred to a case of old ear disease in which the mastoid had been trephined. The patient returned later with a discharge from the ear and a high temperature. An abscess was opened and the middle ear cleaned out. The temperature did not go down, and as paralysis of the arm supervened, he trephined over the fissure of Rolando, but with a negative result; he then trephined lower down and let out fœtid pus. The boy died ten days later of meningitis, and it was found that the abscess in the right hemisphere had opened posteriorly.—Mr. SYMONDS asked whether in cases of high temperature, accompanied by paralysis, it was wise to operate.—Mr. BRUCE CLARKE referred to a case in which the temperature was 104° F., and he cut down and found an abscess in the bone, and under the dura. The patient made an excellent recovery, but the brain was not involved.—Mr. PAGET, in reply, recurring to the voracious appetite in these cases, wondered if there were any centre for hunger and thirst which had been affected. The patient at the present time had deafness on the opposite side. The rise of temperature he attributed to an attack of pleurisy.

OBSTETRICAL SOCIETY OF LONDON.

AN adjourned meeting of this Society was held on May 6th, Dr. J. Watt Black, President, in the chair.

Tetany in Pregnancy.—Dr. DAKIN read a paper on this subject. The author gave a brief definition of tetany or tetanilla, and then narrated a case. In addition to the fact that it was an instance of a very rare disorder of pregnancy, the case had the peculiarity that the spasms never completely relaxed during the three days of the disease. The contractions were accompanied by, and were probably due to, very severe vomiting, and the two diseases combined led to a fatal issue, in which the tetany dealt the final blow by involving the muscles of respiration. The author then, from the few recorded instances of the disease during pregnancy, constructed a typical case, with which he compared the case detailed in the paper. The differential diagnosis between this disease and other spasmodic affections which might be confounded with it (tetanus, hysteria, spinal meningitis, uræmia, one form of epilepsy, and ergotism) was discussed, the treatment briefly referred to, and general conclusions drawn. A table of all accessible recorded cases was appended and references given to authors who had treated the subject generally and in special aspects.

Death following Injection of Acid Nitrate of Mercury.—Dr. JOHN PHILLIPS read a paper on this subject. The patient was a married multipara, aged twenty-five, when first under observation, her complaint being sterility and dysmenorrhœa. Three years later whilst separated from her husband she became pregnant, and with the object of ridding herself of the nine or ten weeks' conception about a tablespoonful of acid nitrate of mercury was injected into the vagina. The same evening vomiting set in and intense pain, for which morphia and cocaine were given. The face was pinched and of a markedly abdominal type. Temperature 102° F., and the pulse 112, wiry but irregular. The stools became frequent and blood-stained; the urine was scanty, and was passed involuntarily. The vagina was in a sloughy condition. The vaginal douche brought away some blood-stained flakes. The uterus was enlarged and the os soft and patient. Carbonate of ammonia was administered, but she sank and died. A post-mortem examination was made by Mr. Pepper. The bladder contained bloody urine, the blood evidently derived from the kidneys. The folds of the vaginal mucous membrane were covered by a hardened slough. The cervix was untouched, but there was some slight detachment of the decidual membrane. The uterus contained a ten-weeks' fœtus, with its membranes intact. The mucous membrane of the whole of the large intestine and the lower part of the small intestine was blackened and in a state of superficial slough. Peritonitis had commenced. The mucous membrane of the stomach was healthy. Dr. Phillips remarked that the peritonitis was due probably to absorption from the sloughy mucous membrane of the vagina. He pointed out that there was no fetor of breath, no sponginess of gums, and no enlargement of the cervical glands.—Dr. BOXALL thought it hardly fair to say in the present case that no wound existed, as an eschar was produced. In mercurialism from vaginal douches the symptoms were generally abdominal pain, diarrhœa, and tenesmus, and only rarely salivation or spongy gums.

Sequel to a Case of Serous Perimetritis.—Mr. ALBAN DORAN read a paper on this subject. The first paper on this case was published in the twenty-first volume of the Obstetrical Transactions. The patient died in August, 1890, about three years after the exploratory incision. The girl grew tall, but became ill and weak and emaciated. Dr. Ilott of Bromley watched the case to its termination. She showed tubercular disease of chest as well as abdomen, pyrexia, cough, sweats, hectic. Tubercle was found in the abdomen and chest. Both ovaries were much enlarged and converted into cysts filled with dirty, yellow, pultaceous material. The Fallopian tubes were swollen into two oval fluctuating cysts. Mr. Targett had examined the specimens microscopically, and could find no bacilli. He thought the condition was due to chronic inflammatory disease of gonorrhœal origin. The girl, although unmarried, admitted coitus, and so there was a possibility of gonorrhœa. She never menstruated again after the operation. If she had had gonorrhœa it is possible that the parts were thereby prepared for the easy invasion of tubercle. The probability of primary tubercular disease of the tubes is far greater. There was a family history of tubercle. Reference was made to the writings of Pozzi, Kelterborn, and others. In all probability the disease began as tubercular salpingitis, which set up tubercular peritonitis. This was relieved by the abdominal incision. The patient finally succumbed to pulmonary phthisis. The dull yellow spongy tissue cut into at the operation was not found at the necropsy.—Dr. HORROCKS remarked that the case was of great interest, as it had been so well and so patiently followed to its termination. He did not think that when bacilli were not found in a specimen one could say that the case was not tuberculous.—Dr. GRIFFITH referred to cases recorded by Bernutz and Goupil in which pelvic inflammation was apparently connected with tubercular disease, and remarked on the apparent infrequency of this connexion in England.—Mr. DORAN replied.

The following specimens were shown.

Dr. WM. DUNCAN: (1) Extirpation of the Uterus for Cancer; (2) Broad Ligament Cyst.

Dr. GRIFFITH: Double Hydro-salpinx.

EPIDEMIOLOGICAL SOCIETY.

The Relation of Modification of Function of Micro-organism to the Virulence and Spread of Specific Infective Diseases.

A MEETING of this Society was held on April 15th, Joseph Ewart, M.D., President, in the chair.

Dr. SIMS WOODHEAD read a paper on the above subject. After referring to the relations between saprophytes and parasites indicated in the paper read by Dr. Louis Parkes at the meeting in February, he said that the modification of habit consequent on the acquired adaptation of a micro-organism to changed conditions of pabulum, temperature, access of air or of light, &c., exerted considerable influence on its biological and pathogenetic functions, and that aerobism or anaerobism depended greatly on the nature of the food supplied. The constituents of culture fluids were the several forms of albumen and gelatine, ammonia, sugar vegetable acids, &c., and the addition of glycerine had often a remarkable influence. Microbes long accustomed to one set of conditions might be unable to resist a sudden transition, but if the change were gradual might grow luxuriantly under the new conditions, though perhaps exhibiting great modifications of function, virulence, and so on. These facts lay at the foundation of all prophylactic inoculations, the

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first of which, since the discovery of vaccination by Jenner, was the attenuation of the bacillus anthracis effected by Professor Greenfield in 1880, who cultivated it in the aqueous humour of the ox, and which was soon utilised by Toussaint for conferring on cattle immunity against this disease. Such enfeeblement might show itself in the production of weaker toxines, or, as in the case of the cholera bacillus, when cultivated anaerobically in lessened resistance to germicides, including the digestive secretions. The alteration of functions in the cholera group of bacilli was extremely complex and interesting, especially the intensification of their virulence by deprivation of oxygen, which was attended *pari passu* with increased susceptibility to germicidal agents. Dr. Woodhead discussed the bearing of these phenomena on Pettenkofer's theory of the influence of the ground water on the prevalence of cholera and enteric fever, on the greater infectiveness of the soiled clothing after the lapse of some days, as well as on the various degrees of persistency of the infection in different localities. Long before the dawn of bacteriology Sir J. Simpson had suggested the communicability of tetanus, which he compared to septicæmia. Nicolaier identified its bacillus in 1883, but the earlier experiments were unsatisfactory; and it was only within the last year that MM. Vaillard and Vincent, following up the work of Kitasato and others, had elucidated most of the phenomena of this disease. They had shown that the symptoms were due to the formation of a substance closely associated with a peptonising enzyme produced by the bacillus, only under certain conditions of anaerobism, pabulum, and temperature, and that the spores themselves were inert, though if injected along with certain organic substances, as lactic acid or the culture fluids of some other bacilli, tetanus followed within a few days. Any doubts that might be entertained as to the reality of these alleged modifications of pathogenetic functions must be dispelled by an appeal to the visible phenomena exhibited by the colour-forming micro-organisms. Thus the bacillus pyocyaneus under normal conditions gave rise to a blue pigment and to a green fluorescence in the culture fluid; the addition of glycerine prevented the formation of pyocyanin, in peptone-gelatine the fluorescence was lost, and in the presence of glucose the appearance of both was checked. These phenomena of chromogenism, though more palpable, were not more real than the modifications of pathogenism effected by analogous means. The observations of Löffler, Roux, and Yersin on the diphtheritic and pseudo-diphtheritic bacilli seemed to throw light on the marked changes of type seen in the course of epidemics of that disease. It was probable that certain conditions and surroundings, among which might be the presence of some other bacilli and their products, were necessary to evolve the malignant out of the comparatively harmless, though morphologically indistinguishable, forms, and that these conditions might operate out of as well as in or on the living body. The power of emitting light possessed by some bacteria was evidently dependent rather on the presence of certain pabula than on that of oxygen; while, on the other hand, the influence of light on the colour-forming function of some bacteria and on the development of others was very striking, as was that of temperature, alike on their growth and on their functional activity, as seen in the transformation of the micrococcus prodigiosus from a pigment-forming organism into a lactic acid ferment. On several putrefactive and pathogenic bacteria light alone, wholly irrespective of the pabulum or of the supply of oxygen, exerted an injurious action. This was conspicuously seen in the case of the bacillus of enteric fever, which was killed by a few hours exposure to direct sunshine and grew but feebly in diffused daylight—these effects being produced, as the experiments of Janowski showed, by the chemical rays of the spectrum.—Dr. WILLOUGHBY expressed his conviction that the modification of the functions of micro-organisms affected by their surroundings, so ably treated by Dr. Woodhead, presented the only satisfactory and complete solution of the phenomena of epidemics of diphtheria, the progressive virulence of successive cases, and the concurrent prevalence of sore-throats of every degree of severity, which had long been the puzzle of clinicians and pathologists, as well as of those of the "recurrence and recrudescence" of the disease described some time since by Dr. Gresswell. The photophobia, as he might call it, of the enteric bacillus went far to explain the general association of that disease with sewers and cesspools, and of diphtheria rather with surface deposits of filth, as shown by Soyka at Munich, and confirmed by common experience enteric fever being emphatically a thing of darkness. He would suggest that we might thus reconcile the frequency of outbreaks of enteric fever from *recent* specific contamination of reservoirs with the rare occurrence of such results from the use of rivers undoubtedly polluted in like manner as sources of the public water-supply of towns, thus contrasting strongly with cholera, otherwise so like in its etiology, by supposing that the bacilli perished rapidly through exposure to the light of day. He then gave a summary of the researches of MM. Vaillard and Vincent, alluded to by Dr. Woodhead, on tetanus, its bacillus and its toxine, one practical lesson from which was the necessity for the strictest asepsis in the treatment of all suspicious wounds—viz., those to which earth or dirt had gained access, since the spores, which alone were accidentally introduced, were incapable of germinating in the healthy tissues, requiring the presence of pus and unhealthy discharges for their development, and the production of tetanin, the immediate cause of the disease.—Mr. SHIRLEY MURPHY said that there were a few recorded instances of enteric fever consequent on river pollution, one of the clearest being that of the outbreak at Gloucester following one at Kidderminster, twenty miles higher up the Severn.—Dr. PRINGLE quoted a remarkable instance in a Scottish town where an outbreak followed the discharge of the excreta of a single case some little way *below* the intake, but under peculiar circumstances, such that the contaminated water was drawn back into the pumps, having been held back by a weir.

Dr. THRESH read a paper, illustrated by maps and tables, on the Distribution of Enteric Fever in the County of Essex.

HUNTERIAN SOCIETY.

A CLINICAL MEETING of this Society was held on April 8th, Dr. Stephen Mackenzie, President, in the chair.

Ringed Eruption.—Dr. GEORGE CARPENTER showed a boy aged sixteen months with an eruption on the buttocks and adjacent parts, composed of rings one to two inches in diameter, with raised striated edges, and of the colour of raw ham. The enclosed surfaces were quite healthy, and the rings nearly a quarter of an inch broad. He had snuffles and a rash on the buttocks at six weeks. The ringed rash was of about four months' duration, and had improved greatly under mercury. The trichophyton had been well searched for, but in vain. There were no other signs of syphilis.—Dr. COLCOTT FOX agreed in believing the eruption syphilitic. The resemblance to ringworm was great, but the broad margin with a fine retiform structure was unlike. Ringed syphilides were in rare cases met with both in the congenital and acquired disease.—The PRESIDENT differed as to the diagnosis. Failure to find the fungus was no proof of its absence. There were no confirmatory signs of syphilis, and he thought it probably a case of tinea circinata.

Cranio-tabes and Parrot's Nodes.—Dr. CARPENTER also showed two infants with congenital syphilis to illustrate cranial conditions. The first was a boy aged eleven months with snuffles since birth and an eruption at fourteen weeks. When seen six months ago there were enlarged liver and spleen and some thickening of the spermatic cords. Cranio-tabes affected not only the occipital but the parietal and squamo-temporal bones. This condition was, however, no longer demonstrable. The boy's sister, aged two years, was also shown. She had snuffles since birth, and was decidedly rachitic, with enlarged liver and spleen and cranio-tabes at the parietal bones. Parrot's nodes were well marked. Dr. Carpenter considered that both cranio-tabes and Parrot's nodes were usually syphilitic manifestations, although some authors class them under rickets; 74 per cent. of cases of cranio-tabes were syphilitic.

Fibrous Growths on the Hands.—Dr. FRED. J. SMITH showed a case of unusual growths on the hands in a young woman, also exhibited several months ago. The nodules were now more distinct and isolated, with less erythema around. He had excised one and found it consisted of fibrous tissue.—Dr. COLCOTT FOX regarded the case as very singular; a similar one was published by Dr. Bury of Manchester. He thought it an indolent inflammatory eruption which had become fibrous in course of time.—The PRESIDENT still inclined to the diagnosis of rheumatic nodules.

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Congenital Heart Disease.—Dr. SMITH also exhibited a boy aged twelve years with marked cyanosis of face and lips, the latter nearly black, and finger-ends much clubbed. There was no bruit, and the particular defect of heart present, which was discussed by Drs. F. Hawkins, G. Carpenter, and Dundas Grant, and Mr. Tatham and the President, must remain uncertain.

Paralysis Agitans.—Dr. A. T. DAVIES showed a man aged forty-nine years, exhibited before the Society three years ago. The symptoms were then confined to the right arm and leg, and some doubt was raised as to the diagnosis. Within the last two years similar symptoms had developed on the left side, and the case now presented a typical appearance.

Multiple Lipomata.—Dr. A. H. ROBINSON brought forward a man aged thirty-three years with numerous small fatty growths scattered over the trunk and limbs of ten years' duration. His father had some similar tumours.

Cervical Tumour.—Dr. ROBINSON also showed a man aged seventy-one years with an old tumour close below the occiput, supposed to be a lipoma. There was an irritable condition of the upper fibres of the trapezius, amounting almost to spasmodic torticollis.

A meeting of this Society was held on Wednesday, April 22nd, Dr. Stephen Mackenzie, President, in the chair.

Graves' Disease.—Dr. A. T. DAVIES showed a patient aged twenty-six years who had been under his observation for three years and a half. She was originally frightened by burglars. Cough, palpitation, and prominent eyes came on gradually, with anæmia, and some fulness of thyroid. Von Graefe's sign was present. Pulse 140. General marked pigmentation of the skin then appeared, such as to suggest Addison's disease, and in illustration of this a portrait from St. Bartholomew's Hospital museum was now shown, labelled "Exophthalmic goitre, with Addison's disease." In course of time the pigmentation had to a great extent faded, the eyes had become less prominent, the heart rate was now only 80, and there was very slight fulness of the thyroid gland. The disease had thus become quiescent.—Mr. DENTON CARDEW had found there was abnormal increase of pigment in 70 per cent. of cases of Graves' disease, occurring both in the axillæ and in parts liable to pressure, as by a garter. He had found vitiligo and alopecia areata also common. Until a lesion of the suprarenal bodies is proved post mortem, he would doubt the coexistence of Addison's disease in such cases.

Fixation of Thorax and Head.—Dr. APPLEFORD exhibited a man aged thirty-seven years, in whom stiffening of the chest, head, neck, and right arm had been coming on for two years. He had suffered from rheumatism often, not rheumatic fever. A brother died of phthisis, and he had had much cough himself, and had wasted. The thorax was rigid, respiration being diaphragmatic; the head could be turned only slightly to either side; the right arm could not be raised to a right angle with the trunk. Increased knee-jerks and clonus were present, but no spinal tenderness.—Mr. POLAND attributed the fixation to osteo-arthritic disease, and pointed out that there was marked creaking in various joints.—Dr. F. J. SMITH hesitated between rheumatoid arthritis and a local pachymeningitis of the cord.

Acute Necrosis.—Mr. A. H. TUBBY read a paper on the Pathology and Treatment of Acute Necrosis of Growing Bone. After some remarks on the structure of the epiphysial line and the neighbouring parts, he said that, in view of the mode of onset, of the concurrence of periostitis and endostitis, and of the early separation of the shaft, with necrosis of its whole thickness, some region other than the periosteum or the medulla must be the site of the earliest inflammation. This region he believed to be the vascular layer of young growing bone, the juxta-epiphysial junction. Inflammation commencing here spread upwards and downwards to the medulla, and outwards to the periosteum, being assisted by the peculiar disposition of the periosteum at the epiphysial line. The following three points were advanced: 1. The disease variously known by many synonyms, but for convenience here called "acute necrosis," is due to the irritation and suppuration occasioned in growing bone by the entrance and development of micro-organisms, the staphylococcus and streptococcus pyogenes aureus. 2. In cases of total death of the diaphysis the destructive process is most marked at the extremities, and further, there is a loss of tissue here, so that the dead shaft no longer fits accurately into the periosteal and epiphysial cap. This point was supported by record of cases, notably those of Mr. Macnamara. 3. If the origin of the disease as a juxta-epiphysitis be conceded, then the method of treatment should be more thorough and radical. Mere incision of the periosteum is not sufficient, but tunneling the bone near the end of the shaft is necessary, to give exit to the products of the inflamed medulla, and to relieve the tension in the juxta-epiphysial region. With particular reference to the relative liability of the periosteum, medulla, and growing bone to inflammation, Mr. Tubby gave an account of some experiments, in which pure cultures of the micro-organisms placed in contact with these structures gave rise to inflammatory and suppurative changes, first of all near the growing line, before the periosteum became at all affected.—In the discussion which followed, Mr. J. POLAND and Dr. F. C. TURNER referred to a different class of cases, in which necrosis followed specific fevers. Here the process was much less acute, was localised, and was probably due to thrombi in veins.

Migratory Pneumonia.—Mr. F. R. HUMPHREYS read notes of two cases of Pneumonia with complications, in which the congestive process affected one lobe after another in both lungs. The first case died on the fifteenth day with lung softening and heart failure; the second recovered after a long course, including some cerebral mischief.

Notices of Books.

Manual of Bacteriology. By EDGAR M. CROOKSHANK, M.B. Third Edition. London: H. K. Lewis. 1890.—The call for a third edition of Crookshank's "Manual of Bacteriology" in less than four years after the appearance of the second proves that this work has supplied a felt want in bacteriological literature. In bringing out a third edition Professor Crookshank has seized the opportunity of slightly enlarging the scope of his work, of correcting some errors that appear in the old edition, and of generally bringing it well up to date. He has added a short historical account (based apparently on that given by Löffler) of the germ theory of fermentation and disease, has taken up the subject of special fermentations, and has described all the recent modifications of staining and cultivation, especially those adopted by the German school of bacteriologists. The French bacteriologists and their methods are not so fully represented, so that the impression is encouraged that the author has received the greater part of his technical training in the German schools. The literature in this edition is much better arranged than in the previous volumes, as, in addition to classifying the works of writers under different headings, such as "methods," "morphology," "immunity," "bacteria associated with disease in man and animals," &c., the works under each heading are arranged in chronological order. This, however, would be more useful still had the author given an alphabetical index of authors' names. The index is brought up to 1886, after which time the amount of literature is something enormous, and Professor Crookshank has very wisely not attempted to increase the bulk of his book by adding such a mass of literature. As in previous editions, the book is well printed, and the illustrations are numerous.

Comment on fait Parler les Sourds-muets. Par L. GOGUILLOT, Professeur à l'Institution Nationale des Sourds-muets de Paris. Paris: G. Masson, Boulevard St. Germain. 1889.—In this book we find explained in full detail the oral process of educating deaf-mutes as carried out in the National Institution of Paris. A preface by Dr. Ladreit de la Charrière contains a short but instructive

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account of the prevalence, causes, and socio-legal relations of the deaf-mute condition. Historical details and general information as to schools &c., with a chapter on the Physics of Sound and the Physiology of the Voice, introduce the reader to a more practical subject—the preparation of the vocal apparatus and the senses of sight and touch for the actual course of instruction. The total disuse of signs is wisely insisted on. The method of teaching the accurate use of sight and touch, and of training and observing the breathing power as here explained, clearly illustrates the author's belief in the essential value of tact in a teacher. In Part III., the means of evoking the voice, its faults, and their remedies, are discussed at length. Part IV. contains some of the most interesting chapters in the whole book—namely, those which treat of the elements of speech and the methods employed in teaching them. This section is illustrated by a series of excellent diagrams representing the impressions left by the tongue in the movements of articulation upon an artificial vulcanite palate coated with a preparation of chalk, the invention of Messrs. Oakley-Coles and Kingsley. With the help of these, the mechanism, faults, and linguistic variations of speech are fully considered. We may notice as particularly noteworthy the passages which deal with the sounds *ch*, *j*, *k*, and *gu*. Further useful hints will be found in the last chapter of this part, the whole of which is characterised by practical thoroughness. Later, in Part V., the grouping of simple sounds to form syllables is described. In this connexion we would specially notice the composite sounds of *ill* and *gn* and the mute final *e*, which have been treated with careful and scientific appreciation. The remarks on graphic equivalents of sounds, on orthography for deaf-mutes, on the grouping of words, punctuation, and accentuation, are also worth reading, and a well-written treatise, at once full in its theoretical and clear in its practical details, is fittingly closed by a concise but careful summary of its method. The English reader must of course make due allowance for the peculiarities of French pronunciation, but he cannot fail in any case to profit much by the perusal of this little work.

The pages of the April number of the *Veterinarian* are occupied by a few remarks on the "Recent Outbreak of Equine Influenza," by W. F. Barrett, M.R.C.V.S.; a number of reports on the "Action of Tuberculin, and its use in the Early Diagnosis of Bovine Tuberculosis," collected from different sources; a leading article devoted to the same subject; extracts from British and foreign journals; and reports of meetings of the Royal Agricultural Society of England, of the Royal College of Veterinary Surgeons, and of the various veterinary medical societies and associations. The most interesting reports are those of the discussions on Professor Walley's paper on "Penetrating Wounds in the Foot of the Horse," and on Mr. C. Stevenson's paper on "Endocarditis in the Pig," to which Mr. Arup makes a most interesting contribution. He gives a description of the various forms of swine fever met with in Denmark and in Germany, and points out some of the distinctive characteristics of the acute and chronic forms of *Rothlauf* and of *Schweinseuche*, mentioning the special pathological conditions and the bacteria associated with these diseases. The May number of the same journal, with the exception of the first six pages, is also made up entirely of reports of the Royal Agricultural Society and of the Veterinary Medical Associations. Mr. William Littlewood gives an interesting note that the temperature of camels in health is apparently about 37·5°C., ranging from 36·4° to 37·8°C. It is stated by the editor that the Compulsory Slaughter Act, allowing of post-mortem examination in the case of a large number of cattle, has revealed two very important facts: first, that many animals suffer from pleuro-pneumonia, even when there are no indications of the presence of this disease during life; and, second, that tubercle exists to a very much greater extent than had previously been suspected. Professor Walley's paper on the Recent Outbreak of Equine Influenza is one of the most interesting items in the number. The author looks upon this disease as a periodic epizoötic, and considers that the virus is received into the system most largely by inspiration, that rise of temperature and nerve depression are the most marked features; but that in addition there are local manifestations of the disease, such as conjunctival œdema, cellular œdema of the limbs, acute dropsy of the joint capsules, and inflammatory lesions of the respiratory organs, the feet, and the bowels; he gives a very full account of the clinical characters, complications, and treatment. Mr. R. Reid contributes a paper on a similar subject. From the reports of the meeting of the Royal College of Veterinary Surgeons it may be gathered that some of the discussions are of a pretty lively nature, and that veterinary surgeons, like other people, do not always see eye to eye where questions of education and examination are under discussion.

Journal of the Royal Agricultural Society of England. Vol. II. London: John Murray, Albemarle-street.—This part has a far wider interest than its title might indicate. The first article, "Jethro Tull: his Life, Times, and Teaching," by Earl Cathcart, though of special interest to the scientific farmer, also has much to commend it to those whose tasks are biographical. "Indian Agriculture in its Physical Aspects," by Professor Voelcker, is the result of careful observation and inquiry in the regions of which he treats. The paper on "Acidity in Milk," by Dr. F. T. Bond, is apparently the outcome of the offer of a prize by the Society for the ready determination of the degree of acidity in milk which plays such an important part in the processes concerned in cheese-making. Dr. Bond uses a neutraliser of caustic potash equal to one-eighth the strength of the normal oxalic solution. As an indicator he uses phenol phthallein; he finds that the results obtained are sufficiently accurate. By using, in addition to this, alazarin he is able to indicate not only the total acidity, but also the proportion of volatile acid, and, by subtracting one from the other, to determine the fixed acidity caused by lactic acid and the acid phosphates. Professor Crookshank contributes a well illustrated paper on the tubercle bacillus, its chemical products, and the action of tuberculin. Other articles on "Farm and Poultry," on "Technical Agriculture," on "Modern Bee-keeping," and a very interesting article on "Agriculture and the House of Russell" by the editor, make up a most readable general part of the volume. The official reports to the Society and meetings of the monthly council for February form the remainder of this part.

BRISTOL GENERAL HOSPITAL.—The special appeal made by Mr. Proctor on behalf of this institution is receiving a very satisfactory response. The amount already promised has reached between £19,000 and £20,000. This sum will enable the committee to relieve the hospital of debt, although it will be inadequate to free the future work of the institution from embarrassment.

GERMAN HOSPITAL, DALSTON.—Baron von Schröder (the treasurer) presided at the forty-sixth anniversary dinner of this institution, held on Monday at the Hôtel Métropole. On proposing the toast, "Prosperity to the German Hospital," the chairman earnestly appealed to the sympathy and liberality of the meeting, stating that the charity possessed no endowment. The past year's expenditure had exceeded the income, which was due to a large increase in the number of patients. Nearly £10,000 had been expended, and the receipts amounted to about £9000. Subscriptions were announced to upwards of £3500, including £200 from the Emperor of Germany, £50 from the Emperor of Austria, and £100 from the chairman.

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THE LANCET.

LONDON: SATURDAY, MAY 16, 1891.

OUR forecast of the general meeting of the Fellows and Members at the Royal College of Surgeons of England on Monday last was fully verified. The extraordinary course pursued by the Council in accepting the doomed scheme for the reconstitution of the University of London in the name of the Fellows and Members, and summoning them to consider it *after* instead of before its final acceptance, thinned the attendance of the Fellows and Members. By some this action was regarded, erroneously, as we think, as a studied insult; by others as a mischievous farce; whilst a large number even of those who were actually present were at a loss to understand the exact object of the meeting. The President's opening address made it perfectly clear that it was in accordance with a resolution passed at a general meeting some years ago that the Council had been making efforts to facilitate the acquisition of medical degrees by London medical students, and in this respect the President and Council were fully entitled to the recognition which was accorded to them by Mr. NELSON HARDY, whose blessing was not less unexpected than that of the son of BEOR. The address did not, however, offer any explanation or throw any light on the peculiar period selected for the general meeting, nor even explain clearly the precise end which the general meeting would serve; and, overpowered by the sense of its aimless character, Dr. DANFORD THOMAS felt compelled to appeal to the President to explain the purpose of the assemblage and to thank him in advance for the expected information. Throughout the proceedings the President and the Council seemed to feel themselves to be in a false position. The resolution which stood second on the agenda paper, and which was moved by Mr. HOLMES, to the effect that it was not desirable under present circumstances to increase the power and influence of the Council as was proposed under the scheme, was evidently distasteful to the President and Council, who are not only the actual possessors of power, but regard it as very improper for anyone to say or move that it is desirable that this autocracy should come to an end by the amendment of the constitution of the College. No motion could have been more pertinent to the object of the meeting as announced by the President himself—viz., to consider the relations of the College to the scheme—or more germane to the discussion of that scheme. The President, however, for a considerable time appeared to be dubious as to whether it was in order, although he ultimately agreed that it should be discussed if the meeting wished it. The usual result followed. The resolution was adopted by an overwhelming majority, and none of its few hesitating opponents had the courage to explain the reasons which led them to hold up their hands against it. The skilful fencing of Mr. HOLMES with the President was not the least amusing part of the afternoon's proceedings.

Through some private communications not under the cognisance of the officials connected with the Association of Fellows, the order of the resolutions on the agenda paper had been altered, and Mr. LAWSON TAIT opened the discussion by moving a resolution condemnatory of the exclusion of the Apothecaries' Society from the metropolitan conjoint scheme for granting medical qualifications. The majority in this instance was very narrow, the meeting being almost equally divided on a question which is not thoroughly understood. Some of those who have approved of the exclusion of the Apothecaries' Society, and even one of the speakers on Monday in favour of this course, have been under the mistaken belief that the Society would continue to grant its separate licence even if it were a participator in the Conjoint Examinations. Nothing can be more erroneous than this. The object of including the Apothecaries' Society is to extinguish it as a separate medical authority, and there is no other method by which this virtual extinction can be accomplished. The Society would probably be satisfied with a very humble *rôle*, and the evils which result from the present competition and the existence of two qualifying licensing bodies in London would be removed. The Apothecaries' Society was called into existence as a qualifying medical authority by the Colleges of Physicians and Surgeons in 1815; it was accepted as a participator in the conjoint scheme of 1870–1876, and obtained an Act of Parliament for the purpose of taking part in it. It is specially protected by the Act of 1886; and how it can be removed from its independent position, except by friendly absorption, it is beyond our power to conceive. According to its means and lights the Society has done its work well, and the last body in the world to deny its just claims and to treat it with disdain should be the Royal College of Physicians, which wilfully handed over the general practitioner to the Society of Apothecaries in 1815, abandoned its great position as the head of the medical profession, and devoted all its energies to the narrow end of jealously conserving the interests of a small body of consulting physicians. Its late repentance and entrance on a better and higher course of existence should render it all the more tolerant and tender towards a body which has done its best to promote the general and professional education of medical students, and whose examinations were conscientious and creditable when those of other licensing bodies were extremely lax and defective.

Fortunately, the narrow margin by which Mr. LAWSON TAIT'S resolution was carried did not affect the voting on the two other resolutions, which were mildly condemnatory of the proceedings and policy of the Council. Indeed, it could only have been by an entire abandonment of common sense, and a spirit of blind acquiescence in the course pursued by the majority of the Council, that the resolution proposed by Mr. RIVINGTON and seconded by Dr. DANFORD THOMAS—"That this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the London University before formally accepting this scheme in the name of the College"—could have

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been defeated. This resolution and that proposed by Mr. HOLMES were drafted by the Committee of the Fellows' Association in the knowledge that all discussion on the details of a scheme which had been accepted by the Council in the name of the Corporation, before being submitted to the Corporation for approval, would be entirely misplaced. The assertion of just, right, and reasonable principles of action and policy, and the continued iteration and reiteration of those principles, is the only course by which the reform of the constitution of the College can be secured. The Council as a body must feel sufficiently uncomfortable when they find that in general meeting after general meeting, whether the number present be large or small, their policy is condemned by overwhelming majorities, and reasonable opinions, calmly and temperately expressed, as they were at the general meeting on Monday, have weight and gain adherents even in the ranks of the Council itself. The main danger to the cause of progress is that those who have advocated and those who have rallied round the advocates of constitutional development may grow weary on the march when the goal is not yet in sight. It is a dreary and desert region which has to be traversed, and one after another, some by the hand of death, some by sheer exhaustion, drop out of the ranks. Even the leaders may sometimes be discouraged, for in a profession like that of medicine, where there are daily and urgent claims of duty and occupation and practice to be satisfied, it is not possible always to bring all into the field who are in sympathy with the movement. But we are greatly mistaken if those who have been in the van will be discouraged or fail when success lies within measurable reach, and satisfactory indications exist that there are younger men who will come to the front and take the lead when the older men have ceased from their labours.

ALTHOUGH the discussion on Mr. WATSON CHEYNE'S paper at the special meeting of the Medical and Chirurgical Society on the 7th inst. was extended beyond the usual time, we cannot say that the speakers added materially to our knowledge of this subject or threw much light upon the questions which gather round the proper estimation of the value of KOCH'S tuberculin. Mr. CHEYNE, like all other observers, is impressed with the desirability of securing the local benefits of the remedy with a minimum of constitutional disturbance, and he has sought for a means of obtaining this result. He believes that it is possible to procure general tolerance of the remedy long before local tolerance occurs, and he repeats the inoculations as rapidly as safety will allow, with a view of arriving at a condition in which further injections of tuberculin cause no general disturbance of the system, and yet produce a local reaction. He lays stress upon the frequency of the inoculation rather than upon its strength, and also upon the long continuance of the remedy. Mr. CHEYNE states that he has not found any difficulty in establishing this partial tolerance of tuberculin, but Dr. C. T. WILLIAMS spoke of his inability to obtain it in patients suffering from phthisis, and other observers have expressed their doubts on this point. It may be that the septic complications in so many cases of phthisis have interfered with the action of the remedy. At any rate, Mr. CHEYNE has established a claim to have his method well and carefully tried, especially by surgeons, and in cases where there is no septic complication. As to the effects of, or need for, a long continuance of the use of tuberculin, it is of course much too soon to speak, and only patient observation can clear up that matter. If it is found to be necessary to repeat the inoculations for many months, or even a year or two, after apparent cure of the local tubercular disease, this fact will afford an argument against the use of the drug. The drawbacks of such a remedy are too apparent to need comment here and now.

In one way it is a hopeful fact that it is a debateable question which is the best mode of administering the new remedy, for it is possible we have not yet found the way to obtain the best results from it. It is clear that the method recommended at first by KOCH has not satisfied the expectations his statements led us to entertain, and it may be that Mr. CHEYNE'S mode of using tuberculin, or even some further modification still, may ensure its good effects and minimise its ill results. This, however, is a matter to be worked out. On the supposed and alleged dangers of tuberculin Mr. CHEYNE had much to say. His own cases furnish no evidence in support of the view that this treatment involves a risk of the general dissemination of tubercular disease; and he thinks this risk is a very small one, even if it exists at all, and that it depends upon its causing the disintegration of a tubercular deposit involving a vessel wall. He holds that there is no evidence to show that the tubercle bacilli multiply more rapidly under KOCH'S treatment. On the other hand, he believes that the changes attending the local reaction may favour the local dissemination of tubercle, and this in more than one way. Thus a tubercular deposit may be opened into the synovial cavity, or the tubercle bacilli may float away from a primary centre in the abundant exudation of serum that attends the local inflammation set up by the remedy. As an example of this result a case of tubercular laryngitis was cited, in which, during the treatment, fresh ulceration on the epiglottis and also near the original ulcer appeared. It is in cases of phthisis, however, that this risk of local dissemination of the disease is greatest. But Mr. CHEYNE'S best point in reference to the dangers of the KOCH treatment was that in nearly all cases it is contraindicated by the complication of sepsis along with tubercle. He believes that tuberculin increases the symptoms produced by sepsis, and that the local reaction it excites must be regarded as attended with the effusion of a large amount of serum, which acts as pabulum for the septic organisms, and so promotes their life, while this inflammatory change weakens the resisting power of the tissues, and so favours the penetration of the septic organisms. It is clear that if septic cases of tubercle are to be excluded as unfit for this treatment, it will limit very materially its field of usefulness, and particularly in those forms of disease which usually come under the notice of the physician, such as pulmonary and renal tubercle. The actual results obtained can only be appreciated by those who have carefully watched the cases; but thus far in his experiments Mr. CHEYNE has found that the treatment usually produces some local improvement, perhaps from the arrest of the surrounding inflammation. The tubercular disease may

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then remain at a standstill or undergo a slight and gradual improvement.

Coming now to the results obtained in the treatment of particular forms of tubercular disease, Mr. CHEYNE thinks it very rarely cures in lupus, and that its action is more beneficial upon isolated nodules than upon wider infiltrations. As a sequel to a careful scraping operation tuberculin will probably be of some use; but if relied upon as a sole treatment for lupus disappointment will ensue, either because it altogether fails to produce a true local recovery, or from the liability of the disease to recur in the same parts. On tubercular glands but slight effects have been observed. The diseased glands themselves do not appear to undergo any decided changes, but the periadenitis clears up, and this greatly facilitates any subsequent operation for removal of the glands. In diseases of bones and joints a probability of a cure from tuberculin alone, even if used quite early in the disease, is but small; and later on, if sepsis complicates the case, tuberculin should certainly not be employed. After an operation has been performed, however, it may be of use, especially to obtain the rapid and sound healing of a wound or sinus. In such a case the treatment should be employed for a long time.

It is only fair to point out that Mr. CHEYNE'S paper must be regarded only as an *interim* report on his cases. Sufficient time has not yet elapsed to allow him to speak confidently of the later results of the treatment; and, again, his total number of cases is too small to draw final conclusion from. Allowing for this, however, we are compelled to admit that experience has by no means verified the hopes which this remedy at first held out to the profession. The most we can now see our way to say of tuberculin is that it may prove a useful adjunct to the surgical treatment of tubercle in aseptic cases. How to best employ it, and how long the treatment is to be continued, are questions the answers to which are still in the womb of the future.

THE records of epidemics of influenza reach back to comparatively remote periods. Professor HIRSCH, in his invaluable work on Historical and Geographical Pathology, has given us a tabular statement of such epidemics extending over seven hundred years. With every allowance for incompleteness and inaccuracy of observation, it may still be allowed that so remarkable an affection, which exhibits the epidemic character to the fullest extent, has varied but little during the progress of the centuries, and that directly or indirectly it has contributed very largely to shorten the average duration of human life. In spite of its having been so often observed, it is unquestionable that the nature and origin of the disease still remain veiled in obscurity, whilst now, as of yore, the profession is still quite undecided as to the mode of its diffusion over the world. The fact is that its occurrence seems to have been independent of known meteorological and climatic conditions; for when all the authentic records are compared, it is found to have arisen under the most varied circumstances in these respects. As yet it has not been possible to formulate any "law" of its occurrence; and although to a certain extent this may be true of many other acute febrile disorders, the origin of which may hypothetically be relegated to some few common sources, it is impossible to explain on any evolutionary hypothesis the apparently capricious character of the morbid influence that has such striking features, both as to its mode of spread and as to the symptoms it produces and the morbid associations it possesses. Of the latter we have during the past two years had ample experience, and the clinical history of influenza has become familiar to every practitioner. In what follows we shall attempt to see whether any light as to its nature can be gained from the study of this aspect as distinct from that of its epidemiology.

The present outbreak may be regarded rather as a fresh manifestation of the pandemic of 1889–90 than as a totally new invasion; and it will be well to guard against the fallacies that beset the theory of a purely contagious mode of propagation in the case of a disease which seems to be in some unexplained manner linked with atmospheric influences. It is the old question of miasm *versus* contagion, and one rendered all the more difficult of solution by the complex conditions of modern civilisation and the vastly increased facilities for human intercourse. Regarding, however, its clinical manifestations and morbid associations, we have in influenza, in the first place, an acute febrile disorder which differs from other known acute specifics in the brevity (or, perhaps, even absence) of a stage of incubation, and in not affording protection from subsequent attacks. The duration of the fever is, in uncomplicated cases, limited to within three or four days; but there is a great tendency to relapse, and so marked a tendency to complications that it is not easy to separate these from the essential manifestations. Yet when we consider the multifarious nature of these complications, it seems more scientific to detach them from the elemental disturbance as not strictly belonging to it, but being remarkably prone to develop in its course. The vast majority of these manifestations are of an inflammatory nature. Predominant among them is respiratory catarrh and pneumonia, to the prevalence of which during epidemics of influenza so much of the heightened mortality is due. We shall allude presently more especially to its association with pneumonia, but we would point out that the term "epidemic catarrh" is not strictly conterminous with "influenza," and that it will conduce to clearness if we banish the notion that catarrh is an essential feature of the disease. The confusion has, we fear, become too deeply rooted to be easily dispelled, for it has been fostered by the popular phraseology adopted in reference to any severe form of coryza.

The catarrhal manifestations are not limited to the respiratory tract; they may appear from the outset as markedly in connexion with the gastro-intestinal mucous membrane, and such disorder may concur with the former or be independent of it. On the other hand, every practitioner must have seen cases in which neither of these kinds of catarrhal inflammation has occurred. Indeed, if we were to seek for one clinical feature which more than any other seems to form an essential part of influenza, we should find it in the nervous system. The characteristic pains—out of proportion to the pyrexial state—experienced in various parts of the body, the frequently marked nervous depression and

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prostration, and the powerful impress so often left by the disease upon the nervous system, as illustrated in a variety of conditions, seem to show that the poison acts with especial proclivity thereon. And through the nervous system the organs of circulation may be seriously implicated. The late Dr. STRANGE of Worcester, in the graphic account of his first attack of angina pectoris (the affection which ended his life a few months later), which he gave at the Medical section of the Birmingham meeting last year, showed clearly that in him the influenza was the *fons et origo* of his fatal malady; and his inference that possibly a stronger dose of the poison might carry off multitudes of victims, and reproduce the features of the Black Death and other fatal epidemics of the Middle Ages, may have had some truth in it. We are persuaded that the fatality of influenza amongst the feeble and the aged is not solely to be ascribed to bronchitis and pneumonia, but quite as often to cardiac asthenia, to which the pulmonary congestion may sometimes itself be due. Finally, of those who recover from the attack itself, several are more or less affected in one way or another. For months they may experience a lassitude and lack of energy previously foreign to them, or in other cases the influenza may have formed the initial factor in disturbing the balance of health, and its victims become invalided and prone to ailments on the slightest provocation. As to the numberless conditions which are more directly related to an attack of influenza, we may simply note here the liability to inflammations of nerve centres and nerves, or of more obscure affections, involving perhaps the sensory organs; the liability to inflammations of the ear and eye, and the rarer occurrence of nephritis. Indeed, there are few organs of the body which may not become the seat of inflammatory lesions, either as direct complications or even indirect sequelæ, a singular exception perhaps being the endocardium and pericardium—singular, that is, because of the undoubted probability of the blood being the medium for the diffusion of the poison.

We consider, then, that influenza depends upon the entrance into the body of a specific poison, and that its place is with the acute specific disorders. But when we contrast its manifestations with those of others of this group we are struck with their greater variety and extent. Its relationship to croupous pneumonia (for although broncho-pneumonia is quite as frequent, there is no doubt that croupous pneumonia is a very common concomitant), and the growing evidence in support of the latter being of the nature of a specific fever, invite a comparison between the two affections. In acuteness of onset, in brevity of duration, and in the liability to inflammatory complications, the two affections fairly coincide, but with a far greater tendency to such complications, on the part of influenza than of pneumonia. Pneumonia affords no protection from a second attack; neither does influenza. Pneumonia, although never pandemic, is certainly more frequently epidemic than is usually admitted. And the commingling of the two affections during the prevalence of influenza epidemics is a fact which admits of but little explanation except in some hitherto unknown dependence on similar conditions We lay no stress on the results of bacteriological inquiry, which are too discordant to be of much avail in the argument, and we merely hazard the suggestion that there may be more in common between these two diseases than is ordinarily suspected.

THE meeting of the members of Convocation of the University of London this week was the largest in the history of the University, and the majority which rejected the scheme placed before the House by the Senate was a decisive one. Members to the number of 197 supported the motion "that the scheme be approved," whilst 461 voted against it. Lord HERSCHELL'S speech in its favour was purely apologetic, and he must have felt how little could be urged for the cumbrous scheme when he pressed its acceptance on the graduates, not on account of the principles embodied therein, if there were any, but seeing that it must have some good in it because it satisfied nobody. The Senate has not fully grasped the significance of the fact that the University of London has been allowed by its founders and supporters to become a free and open examining board for the empire; indeed, it has done its work in this direction most thoroughly and admirably, but it is too late now to endeavour to engraft on it teaching institutions. Such a course would hinder their development and injure its own peculiar functions. Centralisation of University teaching in arts, science, and medicine, even at Burlington-gardens, is out of joint with the times, and local centres of education, if not too numerous, must have their chance. "A fair field and no favour" is a wise policy in higher education as in other matters. The Lord President of the Council must be consulted on the formation of a new University, or on any serious change in an old one, and we need not yet fear such a multiplication of degree-giving universities as to unduly lower the prestige of degrees. Sir RICHARD QUAIN'S arguments about the matriculation examination principally told against the course he was endeavouring to persuade the House to agree to, and Dr. PYE-SMITH'S contention that the scheme would bring into harmonious working all the medical schools, and that it would make the medical degrees more accessible without lowering the standard, was not seriously received by his audience. It is somewhat surprising that the supporters of the scheme did not make a better case for it, and Mr. HUTTON'S witty description, "that it had an enormous number of ganglia and no cerebrum," so happily hit off its complex arrangements in standing committees and methods of graduation that its rejection was at once assured.

Two stages have now been passed. The report of the Royal Commission marks the end of the first stage. It asserted the necessity of the formation of a University intended to have, as to teaching, a proper metropolitan character, and stated that the existing University is not a *London* University in any practical sense. It also put on record the conclusions of the Royal Commissioners that the so-called "London medical grievance" not only existed, but that it demanded a remedy. "A man who can call himself a Doctor of Medicine possesses certain practical advantages over a man, however distinguished, who cannot." "The great majority of

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London medical students, if they take a degree at all, take it elsewhere than in London. ..... It is injurious not to the men themselves only, but to the public." A reasonable time for the University of London to adapt itself to these conditions has been granted, and after two years (for the report is dated April 29th, 1889) the authorities have signally failed to reach this end. We look upon the vote of Tuesday as decisive, for although Sir JAMES PAGET said on Presentation day that the voting lists would be considered by the Senate, and it is now rumoured that a new scheme on the lines suggested by the Royal Commissioners is contemplated, we cannot believe that any further attempt will be made to transform the character of so important an institution. We have always held that the Senate was trying to perform an impossible task by undertaking the duties and functions of a Teaching University as well as its own special work, in which belief we had the support of the practical educationists on the Royal Commission; now it is time that all other bodies interested should put forth their proposals, and a path be cleared for them. This marks the end of the second stage. In any real Teaching University for the metropolis, we must have a degree for London medical students on fair and equitable terms, and we trust that this difficulty will be met fairly, and not in the half-hearted manner which had so much to do with the failure of the Senate's scheme.

Annotations.

"Ne quid nimis."

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE first annual dinner of the Association of Fellows of the Royal College of Surgeons was held on Monday at the Criterion, Piccadilly-circus. Mr. Pollock, the President, occupied the chair. After the loyal toasts, the Chairman proposed, "Success to the Association of Fellows," coupling the toast with the name of Mr. Holmes, as representative of the Metropolitan Fellows, and with that of Mr. Lawson Tait as representative of the provincial Fellows. Mr. Holmes believed that the Association was gradually gaining ground, and would succeed in its objects if it followed the example of Abraham Lincoln, and kept pegging away; and Mr. Tait urged the importance of the Association formulating a definite policy, and using every effort to support those candidates for seats on the Council whose views were in harmony with their own. Mr. Pollock's health was proposed by Mr. Macnamara in highly eulogistic terms, and was very warmly received. The services of Mr. Dunn, who has recently succeeded Mr. H. W. Allingham as secretary, were duly acknowledged. The committee of the Association will meet shortly to take into consideration the course of action that should be adopted in view of the approaching election at the College.

THE DISPOSAL OF THE DEAD.

AT the instigation of Mr. William Holder, M.R.C.S., the Burials Committee of the Hull Corporation has been induced to petition the President of the Local Government Board to bring in a Bill to allow corporations, as burial authorities, to provide for the erection of crematoria for the better sanitary disposal of the bodies of such persons as may have expressed a desire to be so resolved to their ultimate elements. Corporations under the present Burials Act are unable thus to use their funds. Although, as a method of disposing of the dead, we give the preference over consumption by fire to the "earth-to-earth" system, as being apparently more in accord with the indications of nature, yet we cannot but congratulate Mr. Holder on the success of his appeal, and the corporation on its public-spirited action. Far better cremation than the senseless and injurious mode heretofore adopted of confining bodies within lead and oak, and thus retarding as long as possible a process which the demands of both health and expediency require to be consummated without let or hindrance.

THE INFLUENZA EPIDEMIC.

WHETHER in consequence of the exceptionally warm weather or for some other reason, it is noteworthy that the spread of the influenza in the metropolis this year has been by no means so rapid or extensive as in the early weeks of January, 1890. This is illustrated by the returns furnished from the various general hospitals, which are given below. Nevertheless, the epidemic is sufficiently marked to attract considerable attention, and it is certainly a remarkable fact that so many members of the Legislature should have been attacked, including Mr. Gladstone. His Royal Highness the Prince of Wales was prevented attending the drawing-room and levée this week owing to a mild attack of the disease. Lord George Hamilton, Sir John Lubbock, Mr. T. W. Russell, Sir F. Mappin, Dr. Tanner, and Mr. Gully are among the members of the House of Commons who have also been suffering from it. The large proportion of members of the House who have been thus prevented from performing their duties has given rise to doubts as to the condition of the House itself, and in reply to a question put to him on Tuesday Mr. Plunket said that it was intended to fumigate the building with sulphur. The deaths attributable to influenza this week comprise those of Mr. W. M. Barbour, M.P., Mr. H. A. Brassey, and Mr. W. G. T. Preston, high sheriff for Lancashire. The Registrar-General's mortality returns for the week ending May 9th show an increase of 433 deaths in London above the average number in the corresponding week of the last ten years. The deaths primarily attributed to influenza, which had been 10 and 37 in the preceding two weeks, rose to 148, or 21 in excess of the highest weekly number during the 1890 outbreak. The deaths from diseases of the respiratory organs were 584, or 240 in excess of the average; of them 230 were attributed to pneumonia and 302 to bronchitis. The death-rate for the metropolis during last week amounted to 24·0 per 1000, and the following very exceptional rates in certain towns may be noted:—

	Weeks ending April 25th.	May 2nd.	May 9th.
Bradford	25·6	32·0	40·0
Halifax	33·0	42·1	35·8
Huddersfield	24·8	25·3	32·7
Leeds	27·9	36·1	48·3
Manchester	29·8	35·1	43·6
Oldham	25·9	30·4	38·3
Preston	30·0	32·9	37·3
Sheffield	57·8	70·5	59·3

Sheffield heads the list, but the epidemic is now subsiding there, although the disease continues to spread with much virulence in other parts of Yorkshire, especially in the vicinity of Leeds, Bradford, and Skipton. In Chesterfield it has been very marked, and as severe in its effects as in the neighbouring town of Sheffield, the death-rate for the past fortnight being 63 per 1000. In Liverpool and other towns in Lancashire the cases are still very numerous, whilst in North Wales, and especially in Carnarvonshire, it is extremely prevalent. The type of the disease in the midlands an eastern counties does not

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seem to be so severe as that in Yorkshire, and the same seems probably true of London itself. It is to be remembered, however, that fatalities are largely favoured by surrounding insanitary conditions, and by exposure or exhaustion.

The number of patients suffering from influenza who have been treated at the hospitals in London during the past week has steadily increased. At Charing-cross Hospital 120 patients were treated, at Westminster Hospital 118, at University College Hospital 100, at the London Hospital 364, at Guy's Hospital 90, at King's College Hospital 92, at Middlesex Hospital 130, at St. George's Hospital 24, at St. Thomas's Hospital 227, whilst at St. Bartholomew's Hospital the number has not exceeded 20 daily.

OXYGEN IN SUSPENDED ANIMATION.

OUR contemporary the *Nineteenth Century* has published, from the pen of Lieutenant-Colonel Elsdale, R.E., a paper on the Application of Oxygen Gas as a Remedy in a case of Suspended Animation induced by the Inhalation of Coal Gas. In the year 1884 it was reported to Colonel Elsdale at Chatham that a sapper engaged under his command, in emptying a war balloon inflated with coal gas, had been overpowered by the gas. The Colonel ran to the spot, and found that the man was lying under many folds of the half empty balloon quite insensible, having "been breathing an atmosphere of coal gas for an unknown time" before his position was discovered. The man was rescued from his position, and, the day being warm, "was placed where he got full benefit of a fresh breeze." "The man," says the Colonel, "was to all appearance dead." There was "no action of the heart that could be felt and no perceptible breathing." In this emergency Colonel Elsdale sent for a tube of compressed oxygen, placed the nozzle of the valve of the tube in the sapper's mouth, and gently turned on the valve "as little as he could manage." "That little, however, was quite enough to inflate every corner of the patient's lungs with oxygen in the briefest possible time." The effect was to cause the patient instantly to revive and clutch the nozzle of the valve convulsively with his teeth. Some difficulty now occurred in getting the man's mouth open and drawing away the tube, and, as the gas was still rushing out, the lungs would have given way from the pressure had it not been for the escape provided by the open corners of his mouth. To a layman a phenomenon of rallying from deep insensibility like that described is naturally strange, and, as the sapper made a good recovery, Colonel Elsdale may well be pardoned for the enthusiasm he displays in the record of his achievement. Unfortunately, layman like, he goes into too warm an ecstasy in his comments on the medical side of the question—assuming, in fact, that he has observed something which we of medicine have overlooked. In sober truth, he was observing one of those curious phenomena of reanimation from deep anæsthesia which are being seen, perhaps daily, in the administration of anæsthetics, if all the experience of such administration over the wide world could be day by day recorded. The sapper was anæsthetised by a comparatively insoluble and light gaseous compound, and the day was warm. He was not dead; his heart, although it could not be felt, was still beating at low tension—the tension of hibernation, catalepsy, syncope. There was still some circulation through the pulmonic circuit; the vitality of the muscles, which is always well sustained under coal-gas anæsthesia, was present. The conditions for the escape of the gas contained in the lungs were good so soon as the liberation of the body and its exposure to the warm open air was secured; and the very rapidity with which the recovery took place is proof that the suspension of the vitality altogether was very slight. The oxygen gas emptied the lungs of the coal gas, and, taking the place of the coal gas, the recovery was expedited; but it would in all possibility have followed spontaneously, and it would certainly have followed gentle efforts of artificial respiration. In the lower warm-blooded animals we have seen many times spontaneous recovery from apparent death after inhalation of coal gas, and by artificial respiration with warm air we have resuscitated from the narcotism of this gas eleven minutes after all the indications of life had ceased. To our practical minds, then, the phenomena recorded by Colonel Elsdale are not remarkable; neither are the phenomena of recovery, the struggling and the quick return to power, to which he refers. The fact on which he lingers, that the man was able to walk calmly to his barracks after he had regained consciousness, is precisely what would be expected, and is no more wonderful than the spectacle of a man walking out of the dentist's operating chair after a deep insensibility attended by convulsive struggles, induced by nitrous oxide gas. At the same time there are one or two hints afforded by the narrative which should not be thrown away. The livid appearance of the sapper suggests that he was suffering partly from suffocation as well as from coal gas, since coal gas, owing to the carbonic oxide which it contains, causes redness of the tissues and of the vessels of the skin rather than lividity; but the suggestion should not be lost for repeating some of the old and now almost forgotten experiments with the gases which make up coal gas in order to determine, more conclusively than has yet been determined, their anæsthetic value. Another question is revived—namely, whether the violent administration of oxygen or air into the lung in suspended animation is good or bad practice. In the case named, as the man's *nostrils* and mouth were open, there was no undue *pressure* on the pulmonary surface, and his lungs were *rather flooded* than compressed with oxygen. But if they had been compressed, what would have been the result? We know by experiment. We know that the lung tissue would have given way under the pressure, and that universal emphysema would have been a cause of inevitable death. While, therefore, we entirely coincide with the advice that it is useful to extend the practice which has for some time past been instituted, of keeping pure condensed oxygen in hospitals, ready for immediate use, we could not commend the practice of using the gas under pressure for purposes of reanimation until all the tests necessary for such an application have been reduced to rule and order. Even then we doubt if such remarkable results of resuscitation would ensue as have already been obtained by the action of gentle, efficient, and long-continued artificial respiration.

THE EXCLUSION OF WOMEN FROM COURT DURING TRIALS FOR CRIMINAL ASSAULTS.

MR. JUSTICE WRIGHT, the newly appointed judge, took a course during the recent assizes in Liverpool which has occasioned some comment. As junior judge, he sat in the Nisi Prius Court, but during a break in the civil business he relieved Justice Grantham, who presided in the Crown Court, by trying some prisoners charged with criminal assaults on females. In accordance with the usual custom, women and boys were excluded from the court by the police officials stationed at the door, and when this came to the knowledge of the judge he rebuked the officers, severely, and not only ordered the doors to be opened for females, but more than hinted that they might gather instructive information from the trials. He approved of the exclusion of boys. But on the following day Mr. Justice Grantham, dealing with precisely similar cases, ordered all females to leave the Court. The decision of the senior judge is certainly more in keeping with that of most learned

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judges, nor is this exclusion of females limited to the cases in question. When the brothers Wainwright were tried at the Central Criminal Court for the murder of Harriet Lane, the late Lord Chief Justice Cockburn plainly intimated that he should expect females to retire when the medical witnesses were called, and when, in spite of this warning, several females remained, the High Sheriff went up to them and persuaded them to retire. In a more recent case, known as the Ince murder, where the evidence was of a peculiarly horrifying character, involving sexual details of a most disgusting character, all females—and it is needless to add children—were rigidly excluded, with the perfect approval of the presiding judge, the late Baron Huddleston. Of the propriety of such exclusion there can be no question, the only modification which perhaps might be justified being that each female witness should be accompanied by one female relative or friend, so as to be spared the trial of being the only female present. It is extremely unpleasant for medical witnesses to have to give evidence in such cases before a mixed audience of members of both sexes, and we must confess our surprise that Justice Wright should have inaugurated his accession to the judicial bench by giving so extraordinary a direction. It must be remembered that the proceedings in the inferior courts are modelled upon those in the superior, and it is well known that a magistrate can, and not unfrequently does, hear cases in his private room. Moreover, there are other cases tried at most assizes which can only be hinted at even in a medical paper, where it would simply be an outrage to admit women. Indeed it is to be lamented that they cannot be heard in private. It is not likely that Justice Wright's example will be followed by other judges; the rule, even if an unwritten one, is too wholesome to be abrogated. And there are many other cases tried where ladies are permitted to be present, and in which Justice Maule's scathing rebuke might be fittingly applied, "All respectable females have left the court long ago."

ETHERISATION IN CROUP.

DR. F. BETZ contributes an article to the current issue of *Memorabilien*, which, though founded on only one case where etherisation was tried as a treatment for croup, is yet of sufficient interest to merit notice. He commences by pointing out that in croup the tendency towards death is by no means commensurate always with the morbid condition of the larynx anatomically considered, the nervous system often playing a considerable *rôle*. The case he describes was that of a child thirteen months old, to whom he was called by another practitioner in order to assist in the performance of tracheotomy. The child was breathing with the greatest difficulty, expiration and inspiration being equally noisy; the hypochondriac regions were strongly drawn in at each inspiration, also the lower intercostal spaces anteriorly; the alæ nasi were working strongly, and the child kept clutching at its throat, where the larynx was very prominent, and at its ears, and twisting its head round as if there were both pain and a sense of obstruction. It would not drink or stay in bed, the face wore an anxious expression, and the head was retracted. No membrane could be detected in the throat, and there was no sound of air entering the lungs when auscultated from behind. On the left side percussion was dull from want of expansion of the lung. Altogether the case was apparently hopeless. Notwithstanding the dangerous character of tracheotomy in children so young, preparations were made for its performance, when the writer suggested that ether inhalations should first be tried. A mixture was ordered of three parts sulphuric ether, one part acetic ether, and one-tenth part menthol, of which three drops were given as an inhalation on a folded handkerchief every quarter of an hour. The idea was by means of the vapour of ether and menthol to act on the mucous membrane of the larynx, which, as is well known, lies somewhat higher than usual in croup, and thus to contract the bloodvessels, to lower the temperature of the part, to decrease the œdema, to lessen secretion, and to allay the irritation in the larynx by the production of some amount of local anæsthesia. In addition to these, Dr. Betz had the further object in view of inducing partial general anæsthesia so as to give the child rest, and to allay the spasmodic contractions of the muscles connected with respiration. In a couple of hours a decided change for the better had taken place, the child being quieter, and some air evidently entering the lungs. The inhalations were continued therefore, but at intervals of half an hour. Six hours later the respiration had become much less noisy, the contractions less, and the dyspnœa far less urgent, enabling the child to drink. The face had regained its proper colour, and the child was apparently pretty comfortable, so that there was no longer any need to think of tracheotomy. The regular administration of the inhalation was stopped, but another mixture of a somewhat similar character, containing three-tenths of a part of menthol, was ordered, in case of any recurrence of the alarming symptoms. Fortunately the subsequent progress was so uniform that no recourse to this was required. The object of increasing the menthol was to obtain greater refrigeration and to enable it to penetrate further into the air passages. The writer remarks that Trousseau used to prescribe chloroform inhalations in croup, but he is disposed to prefer his own mixture of ether and menthol. Whether such etherisation has any power to loosen false membranes further experiments must show; but when tracheotomy or intubation is for any reason inadmissible in undoubtedly membranous croup, this treatment may, he thinks, very fairly be tried. The inhalations ought not to be continuous, but intermittent, and the medical man should for the first hour or two administer them himself.

THE ADMINISTRATION OF QUININE TO CHILDREN.

THE difficulty of giving quinine to children, especially when it is desired to administer somewhat large quantities, has of course frequently been remarked. In order to obviate this it has been proposed by various physicians accustomed to practise among children to order external applications either in the form of ointments or lotions, with the view of getting the quinine absorbed by the skin, and several continental writers have reported that this system has given good results in their hands. The amount of quinine absorbed under these circumstances, however, was not known, contradictory views on the subject being entertained, whilst many of the best works on children's diseases omitted all mention of the external form of administration. Dr. Troitski recently undertook a long series of observations in the children's department of a poor-house with the object of ascertaining what was the best form of external application and how far absorption is possible under these circumstances. His experiments, which were conducted on healthy children, about fifty in number, are published in the current number of the *Vrach*. He made some trials with ointments of which the bases were vaseline, lard, or lanoline, but very soon discarded this form of application, as he found that in order to get any appreciable quantity of the drug absorbed it was necessary to spend a long time rubbing in the preparation, which was not only tedious to the operator but very fatiguing to the child. Contrary to what most of the writers on the subject have advised, the region of the body selected for the application was the back of the thorax. Solutions of quinine were then tried, with rather more

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success, 1 part of the hydrochlorate of quinine being dissolved in 30 of rectified spirit, or in 20 of spirit and 10 of glycerine. Of this a teaspoonful or a teaspoonful and a half was rubbed in twice a day until the skin became quite dry, the precaution having been previously taken of washing the child well. The urine was examined both by the chlorine water and by the iodine tests, and observations made of the comparative results in the same children. The conclusion come to was that, though the drug is undoubtedly absorbed by the skin from such solutions as were used, the amount was so small and uncertain as to render it impossible to administer the dose that may be desired by the external method. The good effects that are said to have been produced in fever by the lotions Dr. Troitski would ascribe, mainly at least, to the refrigerating action of the spirit on the skin.

HEALTH OF THE PRINCE OF WALES.

WE understand that H.R.H. the Prince of Wales has been suffering for about ten days from a slight attack of influenza, which has naturally left him somewhat weak and exhausted. We are glad to be in a position to add that he is benefiting from the rest from public and other duties which he is now permitting himself.

THE BOARDING-OUT OF WORKHOUSE CHILDREN.

THE Lord Mayor could not have given the sanction of the Mansion House to a better cause than that of promoting public interest in the Association for Advancing the Boarding-out of Workhouse Children, by which they are extricated from pauperising associations and placed in family conditions, at a less cost than that of keeping them in workhouses or in pauper schools. It is lamentable to think that we are behind Scotland and our own colonies in such a matter. Only 4549 children out of 41,296 children—orphan, or deserted, or relieved apart from their parents—are so boarded out. Only 2¾ per cent. of the children so treated turn out badly. The Lord Mayor was supported by H.R.H. the Duchess of Albany, Viscount Cranbrook, the Earl of Meath, Lord Brassey, Lord Norton, the Hon. S. J. Way, Chief Justice of South Australia, and others. We wish the association every success.

THE NEW BABY FARMING METHOD.

WE take this opportunity of directing attention to a phase in the widespread system of baby trading, of which the case of Joseph and Annie Roodhouse, recently tried before the Recorder, furnishes a gigantic illustration. The method pursued by this exemplary couple must be familiar to many of our readers. It will be remembered that they were not mere farmers of infant life, but stood in the position of ordinary middlemen. The novelty of their practice in this respect indeed is due rather to the extent than to the character of their operations. The children received under pretext of adoption were soon conveniently lost sight of in a third home, but the clothes and payments for maintenance were somehow absorbed in the transfer. In this way the accused are said to have obtained at least thirty-five children, representing actual money receipts to the amount of £219, and £35 worth of jewellery, besides clothing. Advertisement as usual played a prominent part in each transaction, and it is to fraudulent representations made in this way that the prisoners owe their past success in crime and their conviction. The utter badness of their case may be judged from the absence of even an attempt at defence against the charge preferred against them. The nearest approach to resistance was a poor excuse in favour of the male prisoner, that he had failed in other efforts to gain an honest living. It is the old story that one must live by hook or crook, and the end, if successful, will justify the means. The fallacy of the argument, and its hard and selfish injustice, in this case permit of no defence. The additional fact that of the thirty-five children ten have died is in itself suggestive, and should materially qualify any movement of pity originated by an illogical effort at exculpation. As regards the prevention of the disgraceful traffic in its various forms, we may take some encouragement from the very evidence of its prevalence, for this bears testimony to the vigilance employed in its detection. We have suggested in THE LANCET of March 21st a method of organising such effort by instituting a system of registration, with inspection of attendant circumstances in each case where the public press is employed to assist in the transfer of young children. We take it that no pretence of liberty could well be alleged in opposition to such a scheme, which at least bids fair to check the growth of a rank and luxuriant iniquity.

BLACK VOMIT FEVER.

THE nature of black vomit fever, or *fiebre de borras*, is by no means well ascertained, and different writers do not agree altogether in their descriptions of the clinical history of the cases they have met with. Dr. Bellot, writing in 1859, stated that there was never albuminuria, and that all the individuals attacked were children under nine years of age. He did not consider the affection as identical with yellow fever. Dr. Reyes, writing in 1881, contested the belief that the fever in question was of a contagious origin, and adduced several facts in support of his view. He described nearly the same clinical history as Dr. Bellot, but did not deny the existence of albuminuria, though he said that it was always much less in amount than in yellow fever. Dr. Albuerne more recently has suggested that the *fiebre de borras* is a hæmorrhagic form of bilious malarial fever. Dr. F. Suarez Garro has just published in the *Crónica Médico-Quirurgica* of Havana nine cases, all occurring in members of the same family, most of them being children. In these cases there was a great deal of albuminuria, especially in the two which proved fatal. Dr. Garro believes that the affection is a modified form of yellow fever which occurs in creoles. He supports this view by referring to the sudden invasion and the similarity of the symptoms during the first period, the coexistence of persistent vomiting with pain in the epigastrium and in the back, also by the coffee-ground vomit, which of course is not pathognomonic of yellow fever, but is, nevertheless, highly characteristic of it. The albuminuria, which in some cases amounted to eight-tenths, is also, when taken together with the other symptoms, an important element in the case. Lastly, the two children who died presented perfectly clear signs of uræmia, just as it only too often appears in yellow fever. The Havana Society of Clinical Studies is anxious to obtain as much information on the subject of this disease as possible, and, as we have before mentioned,[1] has issued a series of questions, to which it invites replies before the end of September.

PRIVATE SLAUGHTER-HOUSES.

ACCORDING to the Vegetarian Federal Union extensive reform is called for in our present system of replenishing the meat market. They condemn strongly the existence of private slaughter-houses on the ground that in them, owing to the difficulty of efficient supervision, many cruelties are perpetrated on the animals killed, while from the same cause diseased meat readily passes into the hands of consumers. They have therefore presented to Parliament a

[1] THE LANCET, Sept. 27th, 1890, p. 703.

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petition advocating the exclusive employment of public abattoirs which would be subject to regular inspection. Assertions by a society of this kind on such a subject will naturally be accepted with a modicum of reserve, but this fact does not disprove their substantial accuracy. The idea contained in the above proposal is not a new one. It is already embodied in all its details in the customs observed in this particular by the Jewish community. There is much to be said in its favour and little in opposition if a guarantee be also provided that meat once killed shall be removed forthwith to its intended place of sale. Little, if any, inconvenience need be incurred by butchers if the change proposed were carried out. On the contrary, there would be in their case a considerable saving of trouble. The question as to how far the statements made by the Union are capable of accurate proof can only be settled by an official inquiry, and this appears to be on every ground advisable. Without it the Legislature would hardly be justified in moving, and we can readily understand that, whatever its ultimate result, the public interest would be served by such investigation. It would be too much to regard the butcher's poleaxe as the wholly blameless instrument of humanity and of health.

HEALTH OF MR. GLADSTONE.

WE are glad to be able to state that the Right Hon. W. E. Gladstone is progressing favourably in all respects, with the exception that the temperature still remains somewhat higher than normal.

THE GENERAL MEDICAL COUNCIL.

THE General Medical Council is summoned to meet on Tuesday, May 26th, in accordance with the standing orders. One of the first duties of the Council will be to appoint a President in place of the late Mr. John Marshall.

THE SANITARY STATE OF BORSTALL.

FOR some time past the neighbourhood of the Borstall Convict Prison, Rochester, has been regarded as unsatisfactory, and various endeavours have been made to induce the local sanitary authority to deal with the matter. Apparently at the initiative of the War Office, definite complaint was a short time since made to the Local Government Board on the subject, and as the result a local inquiry was held. The Local Government Board have now informed the Corporation that they find the complaints to have been well founded, and they therefore call upon them to take the necessary remedial measures. This, doubtless, amounts to an order under Section 299 of the Public Health Act, 1875, disobedience of which is commonly followed by application for a *mandamus*.

THE GERMAN EXHIBITION.

THE German Exhibition, the opening of which took place on Saturday last, promises to be no less interesting and successful than its predecessors which were arranged by the same director, Mr. J. R. Whitley. The Lord Mayor performed the opening ceremony, which in itself was marked by an enthusiasm which bodes well for the success of the undertaking. In future issues we hope to be able to give a description of some of the recent improvements in those departments which come more immediately within our province. The grounds promise to be admirably laid out, and even a cursory glance will show how carefully every detail in which the comfort of the public is involved has been considered and attended to.

FOREIGN UNIVERSITY INTELLIGENCE.

Breslau.—The new surgical clinic has just been pronounced by the Professor of Surgery, Privy Councillor Mikulicz, to be the best arranged clinic of the kind in Germany.

Turin.—Dr. Secondi has qualified as *privat docent* in ophthalmology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Othon Saunier, chief medical officer of the Greek Navy.—Dr. V. Dattilo, formerly Professor of Operative Surgery in Naples.—Dr. Hugo Tansig, one of the medical officers of the Prague General Hospital, of typhus fever, contracted by attendance on patients suffering from it.—Dr. Thatcher, Professor of Physiology in Yale.

AN important series of eight practical lessons on the Use of the Ophthalmoscope and on the Estimation of Refraction will be given by Dr. Hill Griffith in the post-graduate class at the Royal Eye Hospital, Manchester, on Wednesdays, at 4.30 P.M., commencing May 20th.

THREE lectures on the Physiology of the Vaso-motor System will be given at the Royal College of Surgeons during the present month, by Dr. J. R. Bradford (Arris and Gale Lecturer), on Monday, Wednesday, and Friday, May 25th, 27th, and 29th, at 5 P.M. each day.

AT the meeting of the London School Board on the 7th inst., the recommendation of the Salaries Committee that the minimum salary of their medical officer should be £400 per annum, and that it should increase by £50 a year until £600 was reached, was carried by 19 votes to 12.

THE Croonian Lectures will be delivered at the Examination Hall on June 2nd, 9th, 16th, and 23rd, by Dr. Burdon Sanderson, who will take for his subject, "The Progress of Discovery relating to the Origin and Nature of Infectious Diseases during the last twenty-five years."

DR. C. THEODORE WILLIAMS' period of office as physician to the Brompton Hospital for Consumption having expired, the Committee of Management have unanimously re-elected him for a further term of five years.

DR. THEODORE THOMSON, medical officer of health for Sheffield, has been appointed to an inspectorship in the Medical Department of the Local Government Board, rendered vacant by the death of Mr. Spear.

IN consequence of the rapid extension of leprosy in Russia, the Town Council of Riga has voted a sum of 60,000 roubles to establish a Hospital for Lepers, which is to be inaugurated in July.

THE DEVONSHIRE HOSPITAL, BUXTON. — Dr. Robertson presided at the annual meeting held at the hospital on the 2nd inst. The annual report stated that on April 30th, 1890, there were 151 patients in the hospital, and since May 1st, 1890, 2363 patients had been admitted, 2263 of which were discharged as improved. Of the 2514 received from May 1st, 1890, to April 30th, 1891, 517 suffered from heart complications and rheumatism. The cases of a rheumatic or gouty character were equal to six out of every seven in the hospital, which testified to the value of the Buxton mineral water in the relief of such cases. Six cases only of accident were received during the year, of whom two died. Two annual life subscribers had been recently received, and the total subscriptions exceeded those of the previous year.

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THE UNIVERSITY OF LONDON.

CONVOCATION AND THE REVISED SCHEME.

AT a crowded meeting of Convocation of the London University, held on Tuesday evening, the Right Hon. Lord Herschell, B.A., moved that the Draft Supplemental Charter embodying the proposed scheme be approved. He said that whatever might be the merits or defects of the Charter which they had to consider that night, he could assert, without fear of contradiction, that it had been the result of as much patient and careful thought, of as much anxious desire to arrive at a just and sound conclusion, as had ever been bestowed on any similar document. It had been considered and reconsidered not only by the committee appointed by the Senate itself, but the committee had conferred again and again with all those whose interests were affected, or supposed to be affected, and they sought light from every quarter from which they thought it possible that it might come. They were assisted by a committee appointed by Convocation, with whom they conferred on several occasions; and therefore, without for a moment suggesting that the pains that had been bestowed upon it were a ground for its acceptance, it was at least entitled to respectful and careful consideration; and he could but express some regret that, before the views of the Senate had been really placed before the members of Convocation, an attempt should have been made to pledge members of Convocation beforehand to dissent from it on what would seem to him an *ex parte* view of the subject. He did not say this by way of blame. Those who took this course no doubt thought it a desirable course, but none the less he thought that on a matter so important as this, in which the future of the University was so vitally concerned, it would have been well that, before the members of Convocation pledged themselves to any particular view, they should at least have had an opportunity of fully hearing and considering both sides of the case. He appealed to some perhaps who had signed that document to listen, notwithstanding, with open mind to the arguments that would be used. Of course there was a widespread opposition to this scheme. He had only one consolation, and that was that its opponents were at least as much opposed to one another as they were to the scheme. To the adherents of the London Colleges it had been pointed out that they had good ground for being aggrieved that the provincial colleges should find any representation on the Senate; whilst, on the other hand, the provincial colleges were excited by the statement that they did not get representation enough, and that the large body of graduates who did not belong to the colleges, either provincial or London, had their interests to look to, because if the London or provincial colleges obtained too much representation they were in a worse position. These objections were of a kind which, if left to their own instincts, would devour one another, but they had been dexterously caged and united in an offensive alliance. Unless the antecedent history of the University was carefully considered, it would be impossible to form any just appreciation of the action of the Senate. In 1884 an association had been formed, including many eminent men and some very energetic men, who advocated the formation of a Teaching University for London. They were convinced that the non-existence of such a university was not creditable to this city. Various resolutions had been collected in the documents which had been circulated in connexion with this meeting. One of these, which appeared to have been overlooked as passed by Convocation on Feb. 24th, 1885, was in these terms: "The objects of the Association—that is, the Association for the Teaching University—would, if carried into effect by this University, add to its usefulness and importance." Before matters had merged into a more critical position, that was the view adopted by the Convocation of the University. A petition was then presented from King's College and University College praying for incorporation in a new University. The Royal Colleges petitioned that they should have a University power to confer degrees. Upon this a Royal Commission was appointed to guide the Government, who had to determine what course had to be taken in regard to these petitions. The main recommendation of the report of this Committee undoubtedly was that the aims of those who desire a Teaching University would be better effected, more in the interests of the public and education, by a modification of the constitution of the London University, which would enable the work to be done by and through it, than could be done by a competing university in London; and then those members of the Commission who had doubts as to the practicability of this plan expressed their objections, a summary of which is to be found in the 16th paragraph of the report. It appeared to him that this question of the creation of a new University in London which should be a teaching and examining University, and give its degrees alongside of this University, was the real *crux* of the whole problem with which they were concerned. They had not to consider the question as it might have come to be considered if no such proposal had been made, or if they were to make a *tabula rasa*, and sweep out of existence all existing institutions. They had to deal with things as they are. The founding of such a University was properly viewed in two aspects—its effect on their University and its effect on education generally. He regarded the latter as by far the more important question of the two. If there were any conflict between the public interests and those of the graduates, he admitted at once that any privileges that may have been enjoyed or acquired by members of their University must give way before the interests of education. He believed the creation of such a new University would be mischievous in its effects on the existing University, and nobody could question that it would be a disadvantage to have another university, which would be claimed to be the Teaching University of London. (A voice—"Why of London?") Because whatever you call it and however much you attempt to prevent its being connected with the name London, that is what it would be sure to be called. (Cries of "No, no.") Well, it was a matter of opinion, and the fact that there had recently been bitter complaints from the University of Dublin and Trinity College that their degrees were being confounded with the degrees of the Royal University of Ireland indicated that a similar thing was likely to happen in London. If the establishment of a new University in London would improve the education of London or the country they ought not to hesitate for a moment if the degree were twenty times confounded with that of the London University; but his belief was that the foundation of such a University would inevitably tend to lower the standard of degrees and of education, however much those who promoted it might really and truly desire the contrary. There was the danger of multiplying, and especially of creating, small universities; and although there might be some who could resist the attractions of competition, yet not see that considerable danger of competition, the effect would be to lower the standard of degrees and react upon the standard of education. If the teaching bodies were to be gathered up into small universities in that way, the tendency would be that this University would become a mere examining body, more detached than now from the teaching institutions of the country, and that would be extremely deleterious to the work and usefulness of the University. When the report of the Royal Commission was issued, it was found that the two Colleges, University and King's, were by no means satisfied with it. Surely no member of Convocation would have desired the Senate simply to have held its hands and sheltered itself behind the report of the Royal Commission. On the contrary, the Senate thought they ought to consider how the wishes of the two Colleges could be consulted. There was a difficulty with respect to the conduct of the intermediate examinations by the colleges. That difficulty was met by the appointment of joint examiners—by the Colleges and the University. Then, again, the provincial colleges objected to the proposals of the Royal Commission, which would have given exclusive representation on the Senate to the London Colleges; and deputations from the provincial colleges had come to protest against their exclusion. Accordingly, on Jan. 21st last year, Convocation passed a resolution expressing a sense of the injustice of the exclusion of provincial colleges. The Senate thought that by the proposed Royal Charter they had reconciled conflicting interests. They did not claim that it would create an ideal or perfect system; but they thought it was the best attainable, that it was a just and equitable solution. Opposition had come from many different quarters. But that was inevitable. The scheme was of necessity a com-

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promise. It met the legitimate desire of the London Colleges, and would bring the examining and teaching elements into closer intercommunication. No doubt many objections might be raised. Some said the standing committees would deprive the Senate of all control; others contended that these committees would become the mere creatures of the Senate. Both objections could not be realised, and he thought the truth, as usual, would be between the two extremes. He did not believe either that the influence of Convocation on the Senate would be diminished. Upon the subject of the medical part of the scheme he thought it had been the subject of a good deal of misapprehension. He could not understand anyone entertaining a doubt that the most important part of the scheme would be of the highest value by bringing the great medical schools of London into close touch and connexion with the University of London, between which hitherto there had existed a pretty wide chasm. He was quite certain the closer connexion would be to the advantage of both University and schools. There had been ungrounded fears with regard to the examinations being left in the hands too much of the Colleges of Physicians and Surgeons. The scheme could not have been understood by those who so regard it. This part of the scheme only gave the power to begin with. It depends upon an agreement to be come to between the Senate and the colleges, and it cannot have any effect until the subject has been weighed thoroughly and the exact form of the agreement determined upon. And unless the Senate and the colleges come to see a practical and beneficial course, the Senate would not give it their sanction. If they could not trust the Senate to look after the interest of medical education, and if it was thought that they were likely to surrender the cause of medical education to the Royal Colleges or to anybody else, of course the Senate would have to submit to be distrusted. Would it not be an advantage if an arrangement could be come to by which the number of examinations could be diminished? For his part he did not think the multiplication of the examinations was not a great evil. If a joint examination could be arranged for qualifying a student, whilst the University should give a degree only to the most distinguished licentiates after further examination, he did not see how it would lower the degree. He thought the effect would be to raise the standard, because men would strive to pass as well as they could in the hope that they might obtain the degree as well. It was said that the scheme was complicated and would not work, but nothing but experience could determine that matter. Everything had been proved to be impossible in its time, and when he was told that a thing was impossible, he desired to wait and see. The matter was not in their hands to dictate what was to be done if the scheme was approved by the meeting. They were not masters of the situation, though he wished they were. The scheme might be materially modified when it came before the Lord President of the Council. If Convocation refused to pass the scheme, the problem would remain unsolved, and this University would undoubtedly have lost very much of its power. (Cries of "No, no.") If the "noes" only represented facts, he should rejoice at it. He was as much behind the scenes as anybody is likely to be, and he could guess what was likely to happen. If they voted against the scheme on the supposition that the matter would then be in their hands to frame a new one, they would be grievously disappointed. There was obviously no alternative scheme on which any considerable number were agreed. The time for conferences was past. A single university in London in close connexion with the teaching bodies enabled them better to fulfil their functions and to promote the cause of higher education in the metropolis. It would be none the less able to discharge its old functions in relation to the provincial colleges, and would even bring them into closer relationship with the University, and it would still be able to discharge the important work in relation to the non-collegiate students from all parts of the British Empire, possibly more efficiently on account of the change, than was done before. He saw, on the other hand, the possibility of a creation of another University, resulting in a diminution in the influence of this University, and mischievous effects upon the higher education of the country.

Sir RICHARD QUAIN seconded the proposal as a graduate of this University for fifty years, who had watched its progress and seen how the Senate had conducted the University through all its difficulties to its present position. With respect to medical degrees, those who were not in the profession could not realise the grievance which the medical students of London felt themselves to be sustaining by the present state of things. Hundreds of capable men were driven to seek in Scotland, at Newcastle, and elsewhere the medical degrees which they ought to have obtained in London. Men who wished to graduate in medicine in the University of London had to get through the *chevaux de frise* of a matriculation examination. There was no desire to diminish the excellence of the medical degrees of London, but it was desirable to bring the Senate into touch with the Colleges of Physicians and Surgeons and the other examining and educational bodies. The two Royal Colleges had accepted the draft scheme, and he warned them that if it was not accepted, steps might be taken under the Medical Act, 1858, to compel union between the University of London and other colleges. He hoped the scheme would be accepted as the most satisfactory settlement attainable under present conditions.

Mr. BOMPAS, Q.C., as an old member of Convocation, wished to give a few reasons why the House should refuse assent to the motion. The scheme had to be considered on its merits, and not on the merits of its mover and seconder. The scheme would endanger the higher education of the country. What had the Royal Commission—which consisted of six members, three of whom were lawyers, and therefore not practically acquainted with the working of a University, and three practical men—said? The three men who were practically acquainted with educational matters were Sir W. Thomson, Professor Sir Gabriel Stokes, and Mr. Welldon. These three had emphatically pronounced against any charter and against the possibility of combining the functions which the University had hitherto so admirably performed with those of a local London Teaching University. These three gentlemen had also said that any such University must be in one place, and that its degrees should be granted by the University solely upon its own examination. Lord Herschell's idea, in fact, of an Imperial degree-granting University for the Empire, with its system of London and provincial colleges, was a chimera. He was an M.A. of Cambridge, but that was no evidence that he knew more than a third or fourth-form boy in a school. He was also an M.A. of London, and that did show that he had some knowledge. An Oxford or Cambridge degree was evidence that a man had for some years been subjected to the humanising influence of contact with cultivated and refined minds by residence in the University. The University of London had discharged the function of granting a degree which was real evidence of knowledge. It had done much, too, to raise the standards of the older Universities. But the new scheme would give the country graduates who would not gain either the peculiar advantages of the older universities or the evidence hitherto afforded by the University of London of the possession of real knowledge. The scheme would divide responsibility, and all experience showed that divided responsibility meant failure. It was absurd to suppose that two bodies who were hostile or suspicious towards each other could unite to conduct examinations together satisfactorily. He would appeal to Convocation to reject the scheme, and thereby finally save their University. But if it was not accepted, the whole matter would be left to the arbitrament of alien bodies. Their desire was that there should be one university, and not two or three miserable bodies contending for the name—that there should not be a Dutch auction for degrees. With regard to the medical question, it was in the power of Convocation to do irreparable harm to the cause of medical education in London. He would ask the graduates who were not medical graduates not hastily to thwart the attainment by the medical profession of the end which they had been aiming at for the last twelve or fifteen years. Their desire was to bring into harmonious working all the medical schools, and, secondly, to make the medical degrees more accessible without lowering the standard. The standard need not be lowered if there were an economy of examinations, and no needless going over the same ground more than once. The University had, at all events, brought into joint action the two Colleges of Physicians and Surgeons, each of which was anxious not to lower, but to raise the medical standard.

Mr. R. H. HUTTON said the one point which was the real flaw was that the charter would give the degree-giving power to a body which did not believe in the present degree, and wished to establish a different and purely col-

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legiate standard of degree. The new Senate would consist of people most of whom wanted an altogether new kind of degree. They were inventing a scheme which had an enormous number of ganglia and no cerebrum at all. It was of importance to retain the confidence of the non-collegiate candidates, and this the scheme would not do. It was a mere hybrid which would not maintain the reputation of the University.

Dr. SANSOM said the scheme was calculated to impart a delusive hope rather than to remedy any medical grievance. It had in it elements of exceedingly great inequality and injustice. It reminded him of the words of Virgil—Monstrum ingens informe cui lumen ademptum.

Mrs. SCHARLIEB, M.D., said that the women members of Convocation, and especially those in the medical profession, were unanimous in wishing to reject the scheme proposed. It satisfied but a very small minority of them.

Dr. W. J. COLLINS, on behalf of those who opposed the scheme, recalled almost the last words Lord Granville had addressed to them—first, that they should retain the Imperial character of the University, and secondly, that they should maintain the standard of the degree. He opposed the scheme because he firmly believed, and fully agreed with Lord Herschell, that the higher interests of education must be put before the interests of this University. These two points were frustrated by this scheme, and he hoped they would reject it.

Lord HERSCHELL having replied, a division was taken, and the scheme was rejected, 461 members voting against it, and 197 voting in its favour.

PRESENTATION DAY.

Although the increasing numbers of new graduates and of the recipients of honours at the University of London were evident from the well-filled benches of the large theatre, and the consequent curtailment of the space allotted to visitors, nevertheless the proceedings of Presentation Day (the 13th inst.) were briefer than usual. The ceremony had unfortunately been deprived by the prevailing epidemic of the presence of the newly appointed Chancellor of the University, the Earl of Derby, and also of that of the representative of the University in Parliament, Sir John Lubbock, who is usually called upon for a speech on this occasion. The Vice-Chancellor, Sir James Paget, performed the duty of conferring the degrees, and in the too brief speech with which he closed the proceedings spoke in graceful and befitting terms of the services rendered to the University by the late Chancellor, Earl Granville, whose presence on these occasions was always so welcome. For thirty-five years Earl Granville had presided over the Senate, and in that space of time the University had progressed so much that the number of candidates for matriculation had increased ninefold, and of graduates tenfold. Sir James Paget spoke of the admirable qualities of the late Chancellor and of the manner in which he devoted himself to the interests of the University, pointing out that to his efforts was largely due the admission of the graduates to a share in the government of the University, and ten years ago the admission of women to degrees. In expressing regret at the cause of Lord Derby's absence, Sir James Paget read a letter from the Chancellor intimating his intention to found a scholarship to perpetuate the memory of Earl Granville in the University. Sir James Paget excused himself from discussing the vote passed by Convocation on the previous day, since the Senate had yet had no opportunity of considering it, and he passed on to congratulate those who had gained honours and degrees, after, as he trusted, having obtained them by surmounting difficulties. For, as he said, that only is worth having which is secured with difficulty.

MEETING OF FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

A WELL-ATTENDED meeting of the Fellows and Members of the Royal College of Surgeons was held in the theatre of the College, Lincoln's-inn-fields, on Monday last, at 3 P.M., by invitation of the Council, to consider the University of London Scheme.

Mr. BRYANT, the President, on the part of the Council, greeted the Fellows and Members with all good feeling and with some hope that they would as a body support the Council in its prolonged efforts to help the rising generation of medical students to obtain a degree. He reminded the meeting that the action of the Council was in harmony with a resolution passed at a meeting of Fellows and Members of this College on March 24th, 1884: "That this meeting of the Fellows and Members of the Royal College of Surgeons of England begs most respectfully to recommend that the Council of the College do obtain a charter to enable the College to combine with the Royal College of Physicians of London, with a view to the amalgamation of the two Colleges into one great College of Medicine, to be endowed with authority to examine and grant licences to practise in all branches of medicine and surgery, and to confer on its licentiates the degrees and titles of Doctor of Medicine and Master of Surgery." He simply recorded the fact that application had been made to the Government in the usual way, and the powers asked for had been very definitely refused, but not before a Government Commission, called the University of London Commission, had been appointed by the Crown, under the presidency of Lord Selborne, and a thorough investigation of the whole question of degrees had been considered and some important conclusions reached. The conclusions were the following. The Commissioners were satisfied that a great demand existed for medical degrees attainable in London, and that it was right that the demand should be met, and that, whatever difficulties there might be in supplying the demand, "those difficulties might be more easily overcome if the ground were occupied by one University only, and not by two"; and lastly, that the constitution of the existing university might be adopted for that purpose. "On these lines, therefore," continued the President, "our College, in conjunction with the Royal College of Physicians, has been steadily working with the University of London to formulate and perfect the scheme which is now in your hands. We believe it to be entirely consistent with the views of the University of London Commission, and we ask you, therefore, carefully to consider it on its own merits; indeed it is for such a purpose, and such alone, that we have called you together. To tell you that this is the very best scheme which could be devised by the ingenuity of man would be absurd. To say that it has not some weak points in its constitution, would also be untrue. To believe that many before me conscientiously think that they could, in their own armchairs, sketch out a far better arrangement than the one now presented to you would not be very wild. But we submit that by the scheme before us the objects we had in view at starting will be satisfactorily attained, and our London students will be materially assisted to attain a high degree, and the standard of the examination of the two Colleges be raised and not lowered; whilst at the same time the influence of the teachers will be increased, and none of the interests of any of the institutions which have been brought under the scheme have been made to suffer materially if at all. By the scheme the two Royal Colleges simply help the University of London to give a degree. The formation of a second and rival University was a consideration which influenced the Council in their exertions; for there could be no question that should this scheme break down, or fail to satisfy the requirements of the Commissioners and the Government, a second University would be erected by the side of the older institution, when, as a result, a competition for giving degrees will of necessity arise, which must act in an injurious way, for we cannot fail to recognise the fact that whilst competition in teaching tends to improve all who are engaged in it, a competition in giving degrees can but act downwards, to the detriment of the profession, and consequently to the public interest. On the present occasion we ask you to consider the scheme more particularly in relation to our own College, to weigh its advantages and disadvantages with respect to the interest of the College and its members, and to give the scheme your approval, if you believe with us that by it the position of our College will be maintained, and the future aspirants will be helped towards the attainment of a degree which in itself will be a mark of honour and an indication of a liberal education.

Mr. LAWSON TAIT moved "That in the opinion of this meeting no scheme for amalgamation with the University of London for the granting of a medical qualification, no scheme for a conjoint examination with the College of Physicians for such or a similar purpose, can be satisfactory so long as the Society of Apothecaries is not included in such scheme." He said, while personally thanking

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the Council very sincerely for the new policy of consulting the body corporate in a matter of this kind, he only regretted that the consultation had been deferred until the patient was *in articulo mortis*. He felt, whether his prognosis was correct or not, that he must regard the scheme from a totally different standpoint from the President, and that therefore the conclusions regarding it were diametrically opposite. How the scheme before the meeting was ever to grant a degree of M.D. to anybody in London which was not obtainable now he failed to understand. His view was confirmed by an able article in *The Times*, which pointed out that "the University would not be a London university, it would not be a provincial university, it would not, like the present institution, be a mere examining University. It would be an attempt to combine all three, and it would do effectually the work of neither." Concerning the medical relations of the scheme, he pointed out that the Senate carefully explained that in the arrangement proposed no alteration is now made in the degree of M.D. If that were the case, and if students were merely to get a cheap M.B., and not to be allowed facilities to obtain the M.D, what on earth was the use of the scheme to anybody? Matters stood exactly where they were. He had followed very closely the changing development of this question of medical reform, and it seemed that the initial mistake was made at the very beginning, the evil results of which were growing daily, and that was the mistake of not including the Society of Apothecaries in the scheme. He had been informed that the exclusion of the Apothecaries' Company was not due to the action of the Royal College of Surgeons, but to that of the Royal College of Physicians. They could easily understand that line of action, as the College of Physicians was a sort of successor of the Apothecaries' Company. He described the history of the Company, and pointed out that at one time the diploma of that body was even superior in public estimation to the diploma from the College, and that even now certain Government appointments were open to those holding the diploma of the Company, which were not open to those holding only the diploma of the Royal College of Physicians. He quoted the section of the Medical Act of 1886, which empowered the Society of Apothecaries to grant a statutory diploma in Medicine, Surgery, and Midwifery, and read the diploma granted by the Company at the present time, which certifies the candidate, after deliberate and careful examination, to possess the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery. He had been actively engaged in endeavouring to repress the practice of those who assumed titles to which they had no legal right, and after a good deal of trouble means had been devised for effecting this. But it was found that in this diploma the Licenciate of the Apothecaries' Company is entitled to call himself physician and surgeon, and they were not quite sure that he was not entitled to call himself "doctor." He said the exclusion of the Apothecaries' Society would act in the direction so clearly expressed by the President of "a competition downwards," which of all things they deprecated, and if they wished to prevent this they must stop the legitimate growth of the Apothecaries' Company. It had been said that exclusion from the scheme would kill the Apothecaries' Company; but it was difficult to kill a corporation in London that dated its Charter from the time of James I., and instead of killing the Company they were granting it a new lease of life, and making it more powerful than ever. If reform in the method of education, training, and qualification was aimed at, either in London or elsewhere, they would have to begin again, and include the Apothecaries' Company in whatever scheme might be devised.

Mr. JOSEPH SMITH seconded the motion, and wished to know what the result would be if the meeting did not confirm the scheme, and why the invitation to the meeting had not been circulated among the Members as well as the Fellows.

The PRESIDENT: Seeing that 15,000 men are Members of this College, it was a serious matter to circulate so many prospectuses. At the same time there was no difficulty in obtaining them. With reference to the first part of the question, the decision of the meeting would be referred back to the Council for their further consideration.

Surgeon-Major INCE opposed the motion, and said nothing surprised him more than to find one of the ablest provincial surgeons advocating the interests of a commercial company. He should have expected that he would have taken steps to elevate the profession, and not to degrade it to the standard of a trade.

Mr. NELSON HARDY, as the seconder of the original resolution, passed seven years ago, alluded to by the President, said he hoped that in the end they had produced some influence on the minds of the Council, and although, like all great bodies, they moved slowly, he thought they might be encouraged in the hope that some good would ultimately come from their efforts. He entirely objected to Mr. Lawson Tait's proposal. Notwithstanding the L.S.A. being a double qualification and being registrable under the Acts of 1886, it nevertheless was one which the best of its holders had not been content with in the past, and he ventured to prophesy they would not be content with it in the future. If they passed this resolution to-day they would certainly delay the matter for another seven years. Before it was finally decided he thought it would be advantageous to have an impartial opinion upon this matter. He hoped the motion would be negatived by a large majority.

Mr. LAWSON TAIT, in reply, maintained that the Apothecaries' Society was a qualifying body, and the more it was degraded by the Council the more it would qualify in a downward direction, and that therefore there was more need to include it in this scheme.

On the vote being taken, twenty-three members voted for the motion and twenty-one against it. As is evident from the numbers, many of those present abstained from voting.

Mr. WALTER RIVINGTON moved: "That this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the London University before formally accepting this scheme in the name of the College." After relating the various steps by which the necessity for calling meetings of the Fellows and Members had been impressed upon the Council, he described what had occurred at a recent deputation of the Fellows' Association who were received on this question, and who had had an opportunity of discussing various points. They recommended that the Council should at least call the Fellows together to consider the scheme of the University of London before it was finally accepted, a proposal, however, which was not adopted by the Council. The reason was given by one of the chief speakers, who said that it was a very intricate question, and that few of the Council understood it at all. And since that was the condition of affairs on the Council, it would be useless to place a scheme of this kind before the Fellows and Members, who would be worse off as regards enlightenment than the Fellows themselves. It was a case of the blind leading the blind, and both might fall into the ditch. The scheme would not remedy the medical grievance, for the obstacle of the two preliminary examinations was left untouched. If 200 medical students were to go up to the matriculation examination, 100 of them would fail, and of these fifty would fail to pass the preliminary examination; but in the later examinations, on purely medical subjects, the percentage of failures would be very much less. It was too late to make any suggestions now for the improvement of the scheme. He thought the conduct of the Council had placed them in a most injurious position in the eyes of the public. The proper course would have been to call the Fellows and Members together and ask them to appoint a committee to make suggestions, and to confer with the Council in the name of the Fellows, and then they would have been quite sure that no effort would have been spared to solve this very difficult and intricate question. It was not a question which should excite any party feeling at all, and it would have been a graceful act on the part of the Council to consult the Fellows and Members while there was yet time to consider the scheme. The scheme resembled the island of Laputa, the people of which lived in the air, and had their attention called to what was going on in the earth by flappers. He himself held no other position except to act as a humble flapper. His motion commended itself to all whether they were for or against the scheme.

Mr. DANFORD THOMAS, in seconding, thought the Council had, by calling them together under such circumstances, hardly acted in a polite manner, and had placed them in a very anomalous position.

Dr. W. J. COLLINS, in supporting, said he had never at any former meeting of this kind presumed to address those present, but on this occasion he felt bound, both as a graduate of the London University and as a Fellow of the College, to express his regret that there had

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not been any opportunity given of making effectual suggestions before the Council had accepted the scheme in the name of the College. The late Lord Granville, in one of his happiest moods, compared the London University, subsisting upon Government grants and threatened with a Royal Commission, to an old lady who was so blind that she could not see, so deaf that she could not hear, and so lame that she could not walk, but who still thanked God that she had two teeth, one exactly opposite to the other. He did not know to what special matter Lord Granville was alluding, but at any rate there was one advantage which the graduates of the University possessed over and above the Fellows of that College, and that was the opportunity of discussing resolutions before they were carried and of making amendments before final action had been taken. At present they were called together for an absolutely useless purpose, when the matter had been decided over their heads. If an opportunity had been given, some profitable suggestions might have been made. They had heard that there had not been claimed for the Council a monopoly of knowledge and wisdom with regard to this question, and that was a reason for giving the rest of the Fellows an opportunity of discussing it. He had every reason to expect the vote of Convocation would not be favourable to the scheme. He did not know who had asked for it. It was utterly destructive of higher education, and would tend to destroy the unity and value of the past degrees of the University of London. Lord Justice Fry, in his letter to the newspapers, said that if the University were to go wrong to-morrow—which means if it did not agree with him—it would be a veritable Esau, and find no room for repentance. It was dangerous to indulge in Old Testament analogies; but if it was desired to find an analogue which would represent the action of the Senate in tampering with past degrees, he would say that they resembled Potiphar's wife, by endeavouring to rob them of their only decent garment.

Mr. GEORGE BROWN and Dr. ROBERT BARNES having addressed the meeting, the resolution was carried by a large majority.

Mr. TIMOTHY HOLMES moved: "That no increase of the power or influence of the Council of the College over medical education and examination is desirable under present circumstances." He recapitulated the circumstances which rendered it undesirable that the Council should have any larger influence upon medical examination and education which they sought to have through this scheme, and he trusted that if the Members of the College thought with him they would vote to that effect. The late history of medical education had been rather that of a curriculum in which fresh obstacles were continually being placed in the way of learners. That was a state of things which ought to be put a stop to, and if the Council consulted the Fellows and Members of their College before devising fresh regulations in this very important matter it would be put a stop to.

Mr. CABLE having seconded the motion, thirty voted for and six against it.

Mr. TIMOTHY HOLMES moved, and Mr. JOSEPH SMITH seconded, a vote of thanks to the President, which was cordially agreed to.

THE ROYAL SOCIETY.

PROFESSOR CROOKES' RESEARCHES.

THE *soirées* held from time to time by the Royal Society always prove of interest from the fact that the exhibits are generally illustrative of the more recent advances that have been made in the various departments of science. In view of the possible importance that the future application of any new discovery may have in its relation to the arts &c., the principal exhibits at least may be accredited as worthy of more than mere passing notice. Although at the *soirée* held at Burlington House on the 6th inst. the number of exhibits was smaller than on previous occasions, they were no less interesting in character; and it was scarcely surprising to find that electrical science has of late proved the more attractive field of investigation. Electricity and high vacua, radiant matter spectroscopy, and the genesis of the elements are subjects which have been, and probably will ever be, associated with the name of the distinguished physicist, Professor Crookes. On the present occasion he showed the remarkably brilliant phosphorescent display exhibited by the diamond; the colours varying, it was explained, according to the origin of the gems. Thus under the influence of the induction spark in high vacua, Cape diamonds are seen in the glass vacuum tubes to phosphoresce blue; Brazilian diamonds phosphoresce red, orange, blue, and yellow; and Australian diamonds yellow, blue, and green. The ruby phosphoresces of a strikingly brilliant red colour, but the most brilliantly phosphorescent body yet met with is sulphide of zinc, the hexagonal blende of Sidot. The specimen shown by Professor Crookes gave splendid effects. In the stream of electrified molecules it begins to phosphoresce at an exhaustion of several inches below a vacuum. At first only a green glow can be seen; but as the exhaustion gets better, a blue phosphorescence appears on the edges. On passing the current at a high exhaustion, the green and blue are about equal in brightness; but the blue glow vanishes immediately the current stops, while the green glow lasts for an hour or more. Apparatus was also exhibited showing how the phenomena of radiant matter, such as the projection of molecular shadows, mechanical energy, production of heat and phosphorescence, can be produced in tubes without inside electrodes; also experiments were shown illustrating that the resistance of vacuum tubes is dependent on the material surrounding the poles. In demonstrating this a double vacuum tube was shown, one side containing carbon and the other yttria. The fact of whether the vacuum tube contains yttria or carbon is found to make a difference of 21,160 volts in the electro-motive force required to cause a discharge between the terminals. But of still greater interest, perhaps, was the apparatus showing the return of exhausted molecules after having been shot off from the negative pole. The free path of the molecules—that is, the distance they traverse before colliding with others, as enunciated in the kinetic theory of gases, which assumes that collision of molecules in every direction is constantly taking place—must needs be longer in a space approaching vacuity, and they are consequently freer to move. *In this* condition, and under the influence of the induction spark, they are made to pass through a small hole in a glass diaphragm, and to actually turn a mill by their impact, and in returning, passing through another hole, the molecules are seen to turn a second mill. This was the subject that formed the beautiful theme of Professor Crookes' intensely interesting address delivered early this year before the Institution of Electrical Engineers. "Electricity *in transitu* from Vacuum to Plenum" was the curious title. The genesis of the elements was illustrated by the well-known model of the lemniscate curve, a subject upon which was founded Professor Crookes' remarkable address as President to the Chemical Society in 1888. Specimens of minerals containing the rare earths were also shown. Professor Crookes has, it is generally known, considerably expanded our modern ideas of the nature of the atoms, and he has found the induction spark of immense service in discriminating one element from another, and in indicating the presence of hitherto unknown elements in other bodies, in quantity far too minute to be recognisable by other means. So the discovery of the rarer elements and their behaviour under the influence of the induction spark in high vacua led him to the famous conception that there are several ranks existing in the elemental hierarchy, and that besides the well-defined groups of chemical elements there are underlying subgroups to which have been given the name of meta-elements.

A very interesting application of electricity was exhibited by Mr. Shelford Bidwell. It has been known for some time that the resistance of selenium to a current of electricity in the dark is diminished to one-half or less by the action of diffused daylight or by the light of a gas flame. Taking advantage of this curious fact, Mr. Bidwell has constructed a selenium lamplighter, which will light an incandescent lamp automatically when darkness comes on, and a selenium alarm bell for calling attention to the accidental extinction of a ship's light or railway signal-lamp. The electric current passing through the selenium cell is varied by the action of light sufficiently to make it work a delicate relay, by means of which a bell may be rung or an incandescent lamp turned on. A very beautiful series of the alkaloidal products, the so-called ptomaines, formed by bacteria from animal tissue, was shown by Dr. W. Hunter. There were the platinum salts of most of the series, and others were

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seen to consist of crystals of a very definite character. Mr. J. Howard Mummery, M.R.C.S., showed specimens illustrating some points in the structure and development of dentine. They appeared to indicate that dentine is formed on a connective tissue foundation, calcification taking place in the meshes of a connective tissue stroma; the bundles of fibres are seen springing from the dentine substance with which they appear to be incorporated by calcification in or around them. The specimens showed these bundles of fibres in human dentine, in ivory, rodent dentine, and in the vaso-dentine of the hake. The much-speculated-upon subject of colour photography found illustration in the first colour effect obtained by M. Lippmann, who showed the photograph of the spectrum. The red and green were very marked, but the blue where the actinism is greatest was not so satisfactory. Professor Emerson Reynolds exhibited some beautiful specimens of compound ammonia-sulphur-urea preparations. One of them, tetra-thio-carbamide ammonium bromide $(H_5N_2CS)_4NBr$, is found to effect a very remarkable change in the photographic image. Thus in the development of the negative in a solution containing but $\frac{1}{100}$ gr. per ounce of the compound urea a positive is produced. A series of six small photographs were shown, in which the process of reversal was interrupted at different stages, so that the transition from a negative to positive can be traced. At the meeting of the Chemical Society last week, Professor Reynolds suggested the phenomenon to be due to sulphurisation of the more or less changed silver. Amongst other things exhibited of a less technical but very interesting character were the iron tools and utensils of the Roman period, recently found together in a pit in the Roman British city at Silchester, Hants, and bronze objects of the Roman period found in the same place. These were exhibited by the executive committee of the Silchester Excavation Fund, by permission of the Duke of Wellington. Professor Carrington Bolton showed specimens of musical sand, so called as on sudden pressure it yielded a musical sound. The specimens were from Arabia, the United States, and the Hawaian Islands. Remains of anomodont reptiles from the Trias of Karoo, Cape Colony, were exhibited by Professor H. G. Seeley. This splendid fossil has been very cleverly chiselled from the matrix by Mr. Richard Hull, by permission of the trustees of the British Museum. Lastly, during the evening Mr. Arthur W. Clayden entertained the company with a demonstration, by means of the electric lantern, of some very fine meteorological photographs. The photographs of clouds were taken by reflection from a mirror of black glass, placed in front of the camera, so that the plane of its surface made the polarising angle with the axis of the lens.

MEDICAL DEFENCE UNION.

AN adjourned meeting of the East Anglian and Midland Divisional Executive Committee of the Union was held at the council chamber of the urban sanitary authority, Alexandra-street, Cambridge, on Friday, May 8th. Dr. Barnes, divisional president; Mr. Beckett, president for Cambridgeshire; Dr. Grove, for Huntingdonshire; Mr. Balding, for Hertfordshire; and others were present.

On the motion of Dr. Barnes, who was unavoidably prevented presiding at the last meeting, Mr. Balding reoccupied the chair. The honorary secretary, Dr. Mead, read a copy of the letter which had been addressed to Mr. Joy, in accordance with the resolution at the last meeting, requesting information as to the grounds upon which Mr. Joy appeared to question the accuracy of certificates of death given in four fatal cases; also Mr. Joy's letter, in which he repudiated any intention to cast any reflection on the accuracy or *bona fides* of Mr. Fegen's action in cases undoubtedly of great difficulty and obscurity in their origin, and expressed his regret that any interpretation had been placed upon the wording of his report in any way hostile to Mr. Fegen, especially as at the time they were on very friendly terms. A letter was also read from the Central Council of the Union advising on the matter. The Chairman and other gentlemen expressed their satisfaction at Mr. Joy's letter, and also at the thorough retractation of any statements likely to be injurious to Mr. Fegen, published by the editor of the *Thetford Times*. Dr. Barnes proposed, and Dr. Grove seconded, the following resolution: "That this meeting is of opinion that the explanations are satisfactory, and they hope that medical officers of health will be careful so to word their reports as to avoid a meaning being attached to them prejudicial to their medical *confrères*; and they are of opinion it is not advisable that the names of sufferers from infectious diseases should be incorporated in a report intended for publication." This was carried unanimously.

Dr. Mead mentioned the case of a medical officer of health in Essex who was threatened with proceedings by an owner of property for having spoken of the insanitary condition of certain properties to intending occupiers, stating that in such cases, for the medical officer to secure complete immunity, it would be advisable for him to mention the facts in his report, and direct any inquirer to the paragraphs of such report relating to the properties rather than make any statement. In the case mentioned, the committee were of opinion, if any proceedings were taken against the medical officer, he should be defended by the Union. The committee unanimously resolved to thank Messrs. Barnes, Beckett, Balding, Beverly, and Mead for the great trouble and lengthened correspondence they had incurred in getting this matter amicably settled; also the Mayor of Cambridge and Dr. Anningson for the use of the Council Chamber. The honorary secretary, Dr. Mead, was requested to confer with Dr. Anningson, the honorary secretary of the district branch of the British Medical Association, and arrange for the holding of a meeting of the division during the June meeting at Cambridge. Dr. Barnes proposed, and Mr. Beckett seconded, that copies of these resolutions be forwarded to the medical journals.

In reference to the recent prosecution of Mr. S. E. L. Smith of Aston, Birmingham, which resulted in his being convicted, under Section 40 of the Medical Act, 1858, in a penalty of £20 for "unlawfully, wilfully, and falsely using the title of M.D.," and in two further penalties of £2 each for illegally assuming the titles of "physician" and "surgeon," Dr. Leslie Phillips writes to us as follows: "I trust you will again allow me to state that the Medical Defence Union had nothing whatever to do with the prosecution in any shape or form. The only connexion of the Union with the matter is that, the Council having from time to time received several complaints of the illegal use of medical titles as above by Mr. Smith, in consequence the solicitors of the Union were in October, 1890, instructed to write to him pointing out that the course he was pursuing 'might place him in an undesirable position.' Mr. Smith replied, 'I do not assume anything which I do not possess, or which I have not honourably and legally obtained.' The Council of the Union, having given this warning in consequence of the complaints they had received, decided to take no further steps in the matter either by prosecution or otherwise ..... It was not until some five months after the termination of the correspondence above referred to that the magisterial proceedings which resulted as above mentioned were taken, at the instance of someone else. I desire to state most explicitly that neither the Union, nor the Council, nor any officer of the Union had anything whatever to do with the prosecution, and that not a farthing of the funds of the Union, had been or will be applied, directly or indirectly, for the purposes of that prosecution. Several questions, however, of considerable interest to the profession have arisen out of the proceedings. Thus it has been contended that the penal provisions of Section 40 of the Medical Act, 1858, cannot be brought into operation against any duly registered medical practitioner. No doubt the section was primarily intended to meet the case of unregistered quacks, for whose suppression it is as a rule employed; and it is obvious that cases where a duly qualified and registered medical practitioner assumes medical titles which he does not possess must necessarily be of happily rare occurrence. I may say that the legal advisers of the Union are clearly of opinion that Section 40 is wide enough to include in its net all offenders in this respect, whether registered or unregistered. That this view is correct seems clear from the remarks of Baron Bramwell in 1860, in the well-known case of Ellis *v.* Kelly, 30 L. J. M. C. 35, where that learned judge said: 'It appears to me that, on the true construction of Section 40, if any person wilfully and falsely call himself a Doctor of Medicine he would be liable to a penalty, although he was in

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reality a member of the College of Surgeons or of the Apothecaries' Company, and was so registered.' The only question, therefore, is what constitutes 'wilfully and falsely.' The same learned judge, in a later case, decided in 1872, Andrews *v.* Styrap, 26 L. T. N. S. 704, expressed his entire agreement with the following exposition of these words by Baron Martin in his judgment in the same case—viz., '*wilfully* (for he did it on purpose) and *falsely* (because he pretended thereby to be on an equal footing with any regularly bred physician or M.D.).' The *law*, therefore, is clear, and the rule of *practice* approved by some of the leading medical corporations is in accordance with it. By way of a single illustration, I may refer to the following resolution passed by a general meeting of the Royal College of Physicians of London, held on April 10th, 1876:—'No Fellow, Member, Extra Licentiate, or Licentiate of the College is authorised or entitled by virtue of any diploma or licence granted by the College to assume the title of doctor or to append to his name the title of Doctor of Medicine or the initial letters M.D., or any other letters indicating that he is a graduate in medicine of a university, unless he has obtained a degree in medicine from a university recognised by the College, and legally entitled to confer such degree.' There is no doubt that medical, like public, opinion changes rapidly, and of late years it has become common, in some parts of the country, at any rate, for medical men who would not for a moment think of using the title 'M.D.,' to style themselves 'Dr.' on their brass plates, visiting cards, &c., although they do not possess any—or any legally recognised—degree of M.D., or even M.B. It may be urged that nine persons out of ten address their medical man as 'Dr.,' but that of itself seems to afford no sufficient reason for the medical man so styling *himself*, if he be not legally entitled to do so. Speaking generally, it may be said that no diploma, and indeed nothing short of a registrable M.D degree, can confer the right to use the title of 'Dr.' Whether fresh legislation is necessary or desirable is a moot point on which considerable difference of professional opinion will no doubt be found to prevail."

CERTIFICATES OF STILLBIRTH.

ALLUSION was made some months ago to the want of printed forms of certificates of stillbirth for the use of those medical practitioners who, having large obstetric practices, or holding appointments to lying-in and maternity charities, are frequently called upon to give such certificates. It appears that for some time past books of forms, each containing twenty certificates with counterfoil for the use of the certifying practitioner, have been printed for the Registrar-General. These forms are in every way different from those for certificates of death, for which they cannot be mistaken. The outer cover is blue instead of light brown, the paper of the certificate is blue instead of white, while the shape more nearly approaches a square, being 3 in. shorter but 2½ in. wider. The wording, moreover, is of course totally different, and each form consists of two portions numbered respectively 1 and 2. The first is for use when the certifying medical practitioner was in attendance at the birth, and commences in the usual way, "I hereby certify that;" then follow the words "on the" and a blank space for the date of the birth. Another blank space follows for the name of the mother, and after the word "of" a third blank space for the residence. After this come the words "was delivered of a child, that I was in attendance at the birth of such child, and that such child was *not born alive*." The second portion of the form, which comes next, is for the use of any practitioner who has examined the body of the child, but who was not in attendance at the birth. This is worded as follows: "I have examined the body of a child of which I am informed, and believe that —— of —— was delivered on ——, 189–, and I hereby certify that such child was *not born alive*." Below this are the usual spaces for the date, signature, qualifications, and residence of the certifying practitioner; and at the foot this notice: "This certificate must be delivered to the superintendent of the cemetery, sexton, or other person having control over or burying in the burial ground to which the body of the stillborn child is taken for interment." On the back of each form is a notice to superintendents of cemeteries, burial board officers, sextons, and others, giving the whole of Section 18 of the Births and Deaths Registration Act, 1874. This provides that the officials in charge of burial grounds shall not permit the burial of any deceased child as if stillborn, or that of any stillborn child without (1) a written certificate that the child was stillborn, signed by a registered medical practitioner who was in attendance at the birth, or who has examined the body; (2) a declaration signed by a person qualified according to the statute to give information of a birth, stating that no registered medical practitioner was present at the birth, or that his certificate cannot be obtained, and that the child was not born alive; or (3), if there has been an inquest, an order of the coroner. Any person acting in contravention of these provisions is liable to a penalty of £10. Another notice on the outside cover informs registered practitioners that these forms are supplied gratis upon application to the registrar of births and deaths for the subdistrict in which they reside. But registrars cannot be expected to be very enthusiastic about a subject which does not concern them and from which they will not benefit either directly or indirectly. This probably explains why these certificates are so little known. They constitute a step in the right direction, and every registered practitioner who wishes to have them will know how they may be procured. There is one great omission which should be rectified in any future issues. No space is left for the sex of the child, a most important detail which ought not to have been overlooked. It would be interesting to know whether the certificates given by midwives, under which many bodies of infants are buried, come under the second subsection of Section 18, and constitute a declaration. Upon these and other details we shall no doubt have at least some light thrown by the returns recently called for by Dr. Cameron, M.P. The registration of stillbirths has for many years been urged by those most competent to judge of its necessity, and cannot be delayed much longer. The present Registrar-General, Sir Brydges P. Henniker, is said to be willing to listen to suggestions; and when his labours in connexion with the recent census are over, he would be well advised to take this matter vigorously in hand. It will not require any new department or any marked departmental changes, the present machinery amply sufficing for this purpose. A very large proportion of the total number of stillborn infants will be both delivered and certified to by registered practitioners; a large additional number will be medically certified after an external examination, though it will be well for young and inexperienced practitioners to observe great caution, otherwise they may certify that a child which has lived some time was not born alive. A third, and we fear a large proportion, will be delivered by midwives more or less competent, or by "handy women," and declared to. The difficulty hitherto urged has been as to the fœtal age which is to determine registration, but this need cause no difficulty at all. People are only too glad to bury the bodies of infants, whether stillborn or deceased, and whatever requires burial requires registration. As for the coroner's order, it must not be forgotten that many, if not most coroners, are chary of holding inquests on bodies which are palpably those of stillbirths, and for which inquests they may have no remuneration, and be surcharged with the expense.

VIRCHOW TESTIMONIAL FUND.

THE following additional subscriptions have been received:—

	£	s.	d.
A. C. E. Harris, F.R.C.S.	1	1	0
Frank Shearer, M.B., C.M.	1	1	0
James Ross, M.D., LL.D.	1	1	0
A. H. Young, M.D.	1	1	0
F. Chance, M.B., F.R.C.P.	2	2	0
C. E. Beevor, M.D.	1	1	0
Sir George Porter, M.D., LL.D.	2	2	0
Surgeon-Major David Wilkie, I.M.S.	1	1	0
George F. Crooke, M.D. ..	1	1	0
Sir Dyce Duckworth, M.D.	2	2	0
Samuel West, M.D.	1	1	0
P. H. Pye Smith, M.D. ..	2	2	0
John Chiene, M.D., F.R.C.S.E.	1	1	0
Byrom Bramwell, M.D. ..	1	1	0
Sir William Aitken, M.D., LL.D.	1	1	0
Sir Spencer Wells, Bart. ..	2	2	0
S. G. Shattock	1	1	0
Walter Bernard, F.R.C.P.	1	1	0
G. Sims Woodhead, M.D.	2	2	0
T. Pridgin Teale, F.R.C.S.	2	2	0
E. A. Schäfer, F.R.S. ..	1	1	0
Pathological Society of Manchester, per H. R. Hutton, Hon. Treasurer	2	2	0
Sir William Turner, F.R.S.	1	1	0
W. Mitchell Banks, M.D., F.R.C.S.	2	2	0
E. Markham Skerritt, M.D.	1	1	0

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THE CASE OF WILLIAM KERR.

THE following correspondence has been forwarded to us for publication :—

41, Lowther-street, Carlisle, April 28th, 1891.

SIRS,—When on February 9th you declined to wait for a reply to your letter dated the 4th, I came to the conclusion that you did not desire to receive my answer. I have now had an opportunity of seeing the independent testimony you mention, and desire to deal with the parts of paragraph 6 of the memorandum to which you have objected. "That no tear was discovered before the removal of the womb and vagina" was an inference drawn from the wording of your own report, together with the fact that there was no evidence of bleeding, which, to my mind, there would have been had the tears been inflicted during life. The "marks" which showed "recent effusion of blood" I take to be submucous extravasations of blood. The tears are described as having been met with "on further examination," and not a word indicates that they had bled. Small effusions of blood are mentioned as occurring in the mucous membrane beyond the tear, but no mention of abrasion of the mucous membrane is found. Surely abrasions should have been met with. It is true that report speaks of smearing of blood over the genitals, and that the chemise was stained apparently with fæcal matter and blood, but I gather from your letter to THE LANCET that you recognise the absence of bleeding from the vagina, and explain it by saying that the woman died so quickly after the assault. The memorandum does not say that you removed the womb and vagina in any special way, and I refer you back to paragraph 6, as you will then see that "was" and "is" are two different words. In whatever way pelvic organs are removed, I take it that strain and liability to rupture would be an accompanying circumstance. These are the main considerations which induced me to believe that the statements and inferences complained of in the sixth paragraph were correct, but of course I accept the statement made by yourselves and Dr. Walcot, that you saw what appeared to be tears in the mucous membrane, and on further examination—i.e., after removal of the parts—your surmise proved to be correct, and the tears were discovered in the places you had indicated. That soft parts may show traces of laceration and ruptures in the course of post-mortem examinations is hardly open to doubt, whatever part of the body is concerned, and in making the suggestion that is found in the memorandum no imputation of carelessness was implied or even thought of, and I regret that I should have suggested anything which bore to you that meaning.

I am, Sirs, yours faithfully,
Drs. Barnes and Maclaren, Carlisle. H. A. LEDIARD.

Carlisle, May 6th, 1891.

SIR,—We are in receipt of your letter of the 28th ult., which has received our careful consideration. When we wrote to you on Feb. 9th it seemed to us that five days was sufficient time for the retractation of the allegations which we specified in our letter of Feb. 4th, and which we informed you were entirely unfounded. Having recently had the opportunity of perusing the independent evidence referred to by us in our first letter, you now forward what appears to us a retractation, and we of course accept both your statement that "in making the suggestion which is found in the memorandum no imputation of carelessness was implied or even thought of," and also your expression of regret that you should have suggested anything which bore to us that meaning. We are sorry, however, that in dealing with the statements in Paragraph 6 in the earlier portion of your letter we are unable to accept as correct either your facts or your inferences. Our effort was to make as thorough an investigation as possible, and to state all the facts and appearances that came under our notice, whether they told for or against Kerr; and we should have had pleasure in placing at your service, at any stage of your efforts on behalf of the convict, correct information on any point which seemed to you to need further elucidation.

As you seem to have forwarded copies of the memorandum to the press, and as a different interpretation has been put upon your words in leading articles, and by many of our friends, we intend to send this letter for publication, and if you wish it, and inform us of the wish before to-morrow night, we shall be glad to forward a copy of your letter also.—Yours faithfully, HENRY BARNES,
To Dr. Lediard. RODERICK MACLAREN.

41, Lowther-street, Carlisle, May 7th, 1891.

SIRS,—There can be no objection to the entire correspondence being published in the medical papers in full, and in the local papers in as full a manner as is consistent with public decency. You must not misunderstand me, however. At no time did I say, nor did I wish to imply, that there had been negligent or incapable conduct on your part. If any words would seem to bear that construction, I repudiate them. But I have not modified my belief that you were mistaken in the conclusions you arrived at; and in the interests of public justice I intend to adopt the suggestion made to me—i.e., to petition the Colleges of Physicians and Surgeons of England to consider the case of William Kerr.—I am, Sirs, yours faithfully, H. A. LEDIARD.
Drs. Barnes and Maclaren, Carlisle.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6155 births and 5555 deaths were registered during the week ending May 9th. The annual rate of mortality in these towns, which had increased from 22·5 to 26·8 per 1000 in the preceding three weeks, further rose to 28·9 last week, which, with three exceptions, was higher than that recorded in any week since 1882. The rate was 24·0 in London and 32·9 in the twenty-seven provincial towns. During the first five weeks of the current quarter the death-rate in the twenty-eight towns averaged 25·1 per 1000, and exceeded by 3·7 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 18·0 in Bristol, 19·2 in Brighton, 19·2 in Bolton, and 23·3 in Sunderland; the highest rates were 40·0 in Bradford, 43·6 in Manchester, 48·3 in Leeds, and 59·3 in Sheffield. The very high rates in the last-mentioned towns were due to the severe epidemic of influenza. The deaths referred to the principal zymotic diseases, which had increased from 420 to 462 in the preceding three weeks, declined last week to 442; they included 189 from whooping-cough, 112 from measles, 43 from diarrhœa, 34 from "fever" (principally enteric), 32 from scarlet fever, 31 from diphtheria, and one from small-pox. These diseases caused the lowest death-rates in Brighton, Cardiff, Norwich, and Derby, and the highest in Huddersfield, Leicester, Manchester, and Portsmouth. The greatest mortality from measles occurred in Bradford, Preston, Bristol, Huddersfield, and Portsmouth; from scarlet fever in Bradford; from whooping-cough in Liverpool, Oldham, Plymouth, Leicester, and Manchester; and from "fever" in Leicester. The 31 deaths from diphtheria included 24 in London and 2 in Manchester. Small-pox caused one death in Liverpool, but not one in any of the other twenty-eight large towns; 33 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 911, and showed a slight further decline from recent weekly numbers; the patients admitted during the week were 79, against 85 and 100 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 471 and 588 in the preceding two weeks, were 584 last week, and exceeded by 240 the corrected weekly average. The causes of 95, or 1·7 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Wolverhampton, and in four other smaller towns; the largest proportions of uncertified deaths were recorded in Liverpool, Oldham, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·1 and 23·1 per 1000 in the preceding two weeks, further rose to 23·9 during the week ending May 9th, but was 5·0 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 12·3 in Perth and 13·0 in Greenock to 29·3 in Glasgow and 31·5 in Paisley. The 625 deaths in these towns showed an increase of 22 upon the number in the preceding week, and included 25 which were referred to whooping-cough, 22 to measles, 11 to scarlet fever, 6 to diarrhœa, 5 to "fever," 3 to diphtheria, and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against 90 and 80 in the preceding two weeks. These 72 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·5 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 32 and 25 in the previous two weeks, were again 25 last week, of which 11 occurred in Glasgow, 5 in Edinburgh, and 5 in Dundee. The deaths referred to measles, which had been 43 and 30 in the preceding two weeks, further declined last week to 22, and included 10 in Glasgow, 8 in Paisley, and 4 in Edinburgh. The 11 fatal cases of scarlet fever showed a further increase upon recent weekly numbers; 7 occurred in Glasgow and 2 in Aberdeen. Of the five deaths referred to "fever," 2 were recorded in Aberdeen. The 3 fatal cases of diphtheria were fewer than the number in any recent week, and were all recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 143 and 146 in the preceding two weeks, further rose to 157 last week, and exceeded by 28 the number in the corresponding week of last year. The causes of 53, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·0 and 24·4 per 1000 in the preceding two weeks, further rose to 26·4

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during the week ending May 9th. During the first five weeks of the current quarter the death-rate in the city averaged 26·4 per 1000, the rate for the same period being 21·8 in London and 19·7 in Edinburgh. The 179 deaths in Dublin during the week under notice showed an increase of 14 upon the number in the preceding week, and included 4 which were referred to whooping-cough, 1 to "fever," 1 to diarrhœa, and not one either to small-pox, measles, scarlet fever, or diphtheria; in all, 6 deaths resulted from these principal zymotic diseases, against numbers declining from 8 to 4 in the preceding four weeks. These 6 deaths were equal to an annual rate of 0·9 per 1000, the rate from the same diseases being 2 in London and 2·3 in Edinburgh. The fatal cases of whooping-cough, which had declined from 7 to 0 in the previous two weeks, were 4 last week. The mortality from "fever" and from diarrhœa showed a decline from that recorded in the preceding week. The 179 deaths in Dublin last week included 29 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon the numbers in the previous week. Two inquest cases and 2 deaths from violence were registered during the week, and 55, or nearly a third, of the deaths occurred in public institutions. The causes of 19, or more than 10 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major Poole Robert Gabbett is seconded for service on the Staff (dated Jan. 23rd, 1891).

NAVAL MEDICAL SERVICE.—The following appointment has been made at the Admiralty:—Surgeon Percy W. Bassett-Smith to the *Penguin* (dated April 17th, 1891).

VOLUNTEER CORPS.—*Rifle:* 1st Cadet Battalion, the Manchester Regiment: Acting Surgeon A. Hopkinson resigns his appointment (dated May 9th, 1891).—1st Volunteer Battalion, the Royal Scots Fusiliers: Surgeon W. Frew, M.D., is granted the rank of Surgeon-Major, ranking as Major (dated May 9th, 1891).

Correspondence.

"Audi alteram partem."

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

To the Editors of THE LANCET.

SIRS,—At a meeting held at the Mansion House on Dec. 5th, 1889, an Executive Committee was formed to take measures for the purpose of establishing in England a British Institute of Preventive Medicine. The work to be undertaken in the Institute was to be similar to that carried out in the Pasteur Institute in Paris and in the Hygienic Institute in Berlin. The Executive Committee comprises Sir Spencer Wells, Sir James Paget, Sir James Crichton Browne, Sir George Humphry, Sir Henry Roscoe, Sir James Wilson, Professors Brown, Huxley, Horsley, Ray Lankester, and Pemberthy, Dr. Bridgwater, Dr. Holman, Mr. Jonathan Hutchinson, Mr. Watson Cheyne, Dr. Donald Mc Alister, Dr. Withers Moore, Mr. E. Hart, Mr. Sidney Turner, and myself, with Professor C. S. Roy and Dr. Armand Ruffer as secretaries.

On Feb. 13th, 1891, Messrs. Hunter and Haynes, the solicitors to the Executive Committee, made an application to the Board of Trade, praying that the Institute might be registered as a limited liability company with the omission of the word "limited," in order that the public, who are to be asked for subscriptions, should be impressed with the fact that the objects of the Institute were of a purely charitable and scientific nature. Shortly afterwards our solicitors were informed by Mr. Courtenay Boyle, Secretary to the Board of Trade, that a number of petitions had been sent in praying the Board to withhold its licence on the ground that experiments on living animals would necessarily be performed in the Institute. The Executive Committee then requested me to write a letter—a copy of which I enclose—to the President of the Board of Trade, pointing out why, in their opinion, their opponents should not gain their point. This letter was posted by our secretary, Dr. Armand Ruffer, on Wednesday evening, May 13th, 1891; but, on the same day, the solicitors to the Committee received a communication from the President of the Board of Trade to the effect that the Board, without giving any reason whatsoever, had decided to withhold its licence from the Institute.

As chairman of the Committee, I now write to you, Sirs, asking you for some space in your columns to point out these facts to the medical profession, and to ask their support in this struggle against prejudice and ignorance. The Committee have asked the President of the Board of Trade to receive a deputation in order to lay the matter fully before him, and, should he agree to do so, they hope that the medical profession will help them in rendering the deputation as influential and representative as possible. In any case, they hope their medical brethren will assist them in bringing this matter before Parliament and the public if necessary. I am, Sirs, your obedient servant,

JOSEPH LISTER.

P.S.—The Executive Committee of the British Institute of Preventive Medicine would be glad to receive suggestions &c. from gentlemen willing to help them. All letters, communications, &c., should be addressed to Dr. Armand Ruffer, 19, Iddesleigh Mansions, Westminster, London, S.W.

12, Park-crescent, Portland-place, London, W.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

To the Right Honourable Sir Michael Hicks-Beach, Bart., President of the Board of Trade.

SIR,—On the 13th of February of the present year Messrs. Hunter and Haynes, Solicitors to the Executive Committee of the British Institute of Preventive Medicine, applied to the Board of Trade for permission to have the Institute registered as a limited liability company with the omission of the word "limited." The objects for which the Committee are anxious to establish the Institute are sufficiently explained in the "Memorandum of Association," and in making the application they wish to impress the public, who are to be asked for subscriptions, with the fact that the objects of the Institute are of a purely charitable and scientific nature.

Shortly stated, the work to be undertaken by the British Institute of Preventive Medicine would be the same as is carried out in similar Institutions in France, Germany, Italy, Roumania, Austria, Turkey, and Brazil. In all these countries bacteriological institutes have been founded by the State. The advantages to the community at large from scientific work in hygiene has led to the endowment of such institutes with land and capital in order that bacteriological investigations may be carried out by skilled workers under the best possible conditions. The Committee do not expect that the English Government will do the same for them, but they may reasonably expect that it will not impede a charitable and scientific scheme. The Committee has been informed by Mr. Courtenay Boyle, Secretary to the Board of Trade, that a number of petitions have been sent in, praying that the Board of Trade may be moved to withhold its licence from the proposed association; and, thanks to the courtesy of the same gentleman, they have been able to obtain a copy of these petitions, which copy was considered by the members. To their great astonishment, they found that the only objection brought forward was the fact that it is proposed to perform experiments on living animals in the Institute. It is not their intention to discuss here the ethics of vivisection, but to point out why, in their opinion, the petitioners should not be allowed successfully to oppose the application of the Committee. The Committee do not ask the Board of Trade to grant them a licence to perform such experiments. It would be absolutely useless for them to do so, for the granting of vivisection licences is, and always has been, under the control of the Secretary of State for the Home Department, who, should they wish to perform experiments on animals, may or may not allow them to do so. The Board of Trade has not the power of giving a vivisection licence. What the Committee do ask from the Board of Trade is that it shall permit the Institute to be registered under Section 23 of the Companies Act, 1867, so that they may ask the public for subscriptions to an undertaking of national importance. The case of the Marine Biological Association is parallel; no difficulty or question was raised about the Board of Trade granting their permission to that body to register in the way above noted, but should the members wish to perform experiments on living animals, they have to get the permission of the Home Office. The Committee beg therefore to submit that the granting by the Board of Trade of the licence asked for would not in any way encroach upon the province of the Home Office, as the question of vivisection will come before the Home Secretary if ever a licence to perform experiments on living animals is applied for.

One of the reasons which make the Committee anxious to obtain the licence of the Board of Trade is that it appears that the Institute cannot be registered under the Companies Act, 1862, as a limited liability company without serious interference with its prospects. They enclose counsel's written opinion, wherein it is evident that, should the Institute be so registered under the Act, it would at any time be possible for the members to wind up the company and divide the money. No one would endow the Institute with funds under such conditions; whereas the Board might make it a condition of granting their licence that all the property of the Institute should be applied to the advancement of science and kindred subjects only, and not be distributed among the members. In this way a security would be given that the funds would be applied for the purposes intended.

The question is one of great public interest and importance, and the Committee trust that, if you hesitate to comply with their request to

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permit the Institute to be registered as a limited liability company with the omission of the word "limited," you will do them the honour to receive a deputation in order that the facts may be more fully placed before you. Requesting the favour of an early reply,

I have the honour to be, your obedient servant,

JOSEPH LISTER,

May 13th, 1891. Chairman of the Executive Committee.

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—The recent return of influenza in the epidemic form marks the present time as appropriate for recording the impressions which have been gathered since the disease began to spread over the country towards the close of the year 1889; and it seems to be the more desirable to do so as the catarrhal symptoms which occasionally coincide with an access, and the grave complications which too often follow in its train, have a tendency to withdraw attention from the essential nature of the malady and from those precautions which are so much needed in that stage which is too often assumed to be one of recovery, but which is, in fact, an integral and perilous phase of this insidious disease. In order to make my meaning clear, I would call attention to the theory which was broached in the columns of THE LANCET, though not for the first time presented to medical opinion, rather more than a year ago. I allude to the view that influenza is essentially an affection of the cerebro-spinal nerve centres, and that the various catarrhs and local inflammations which are apt to accompany or to follow primary attacks, and may precede as well as follow subsequent accesses, are of the nature of complications and the natural outcome of a condition which is pregnant with grave, although it may be unexpected, possibilities. In support of that theory, I will do no more than briefly review the symptoms which disclose the true nature of influenza in both its stages, although it must be conceded that in some of the milder cases, especially among the very young, they may be so faintly marked and so transient as to elude observation. The more conspicuous may be summarised as follows. In the first stage, pain in the post-orbital and frontal regions, extending to the vertex and occiput and thence to the back, loins, and extremities, and rapidly followed in a considerable proportion of instances by tenderness evoked by percussion of the spinal region, more particularly of the situation of one or more of the medullary enlargements; in the second, altered cerebration and abeyance or perversion of the functions of the spinal centres as indicated by impaired power of mental concentration, loss of memory, depression of spirits, irritability, difficulty of verbal expression, vertigo, night terrors and illusions, polyuria, loss of ocular accommodation, rapid wasting and anæmia, difficulties of respiration, cardiac debility and irregularity, general vaso-motor paralysis, causeless sweating, general loss of muscular tone and energy, and even of correlation, peripheral neuroses too numerous to be specified, and lastly, but not least important, loss of body heat, either continuous or induced, by even slight exertion of either mind or body, and ranging from one to four or more degrees below normal. Leaving aside the consideration of the catarrhal affections of the respiratory and digestive tracts, induced mainly, as I believe, by the direct contagion of fluids which travel along their channels, I ask, Can it be matter for surprise that the organism so gravely attacked in the very centre of its life should fall an easy prey to influences which under other circumstances would be harmless or insignificant, or that a condition, which is too often regarded as one of recovery, should need the protection of such nurturing care, as many have not the patience to endure, unless seriously warned of the dangers which carelessness may entail? It would appear to be sufficiently obvious that the loss of flesh and depression of body heat indicate that the second and really perilous stage of influenza is one in which power of repair is not competent to make good the daily waste, and the diminution of healthy tissue change (due possibly to damage inflicted on the trophic centre) reduces the body heat to a point which, even if those two conditions stood alone, might easily involve danger to health and to life. Such I hold to be the case, and, further, I believe that this period of vital depression may be indefinitely prolonged by efforts to resume habits of mental or bodily activity before the temperature ceases to be liable to subnormal depression, and a progressive increase of body weight affords indication that the balance of waste and repair has been duly adjusted. In fine, influenza bears the stamp which is common to diseases which involve damage to important nerve centres, and demands, as a condition of stable convalescence, a longer period of functional repose than do those in which less delicately organised structures are primarily involved; and, as might be expected from the universality of the mischief it inflicts on the nervous system, it exhibits an exceptional tendency to visit impatience and imprudence with the penalty of relapse, or even of death.

I am, Sirs, yours faithfully,

May 9th, 1891. W. BEZLY THORNE.

To the Editors of THE LANCET.

SIRS,—We hear that authorised inquiry is being, very properly, made into the causation &c. of this malady. But, meanwhile, cannot someone competent to speak on the subject of isolation and disinfection generally advise us as to the probable utility or otherwise of subjecting our bodies, clothes, and houses to processes usual after invasions of other diseases of an infectious character? I am bold, perhaps, in thinking that no one who has persistently and consistently applied heat or sulphurous acid fumigations after such outbreaks can doubt a very pronounced efficacy. But hitherto we have relegated influenza to the limbo of diseases impossible to be dealt with by isolation, and with no attempt to minimise the quantity of poison diffused. Even while not attempting to isolate measles and whooping-cough on a large scale, we still often succeed in preventing their spread within the very narrow limits of a not very large dwelling, and by so much limit the outside spread.

The present Attorney-General once said to me "that he had come to the conclusion that any place as large as London must be so filled with infectious germs of all kinds that any person presenting an appropriate nidus could hardly ever escape." But why do we hear recommendations of immense expenditure on isolation and disinfection, in almost every large community, if there be no more virtue in them than sometimes appears in the scamping builder or the perfunctory clerk of the works? I do very earnestly hope that some discussion of this matter in respect of influenza may kindle some better hope in the breast of the anxious, who now are partially comforted only by prophylactic doses of ammoniated tincture of quinine and assurances that "really, after all, the *mortality* is not so very great *relatively*." I am, Sirs, yours truly,

Wolverhampton, May 10th, 1891. FREDERIC E. MANBY.

THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Dr. Dudley Buxton cannot be allowed to depart from his original statement. He described his method of giving chloroform in the following precise terms (the italics are mine): "*My plan* is to use Lister's open method or Krohne and Sesemann's useful modification of Junker's inhaler. I also make it a rule to test the vigour of respiration by placing my hand on the mouth, and to keep a finger upon an artery." It is this plan which I ridiculed. Dr. Buxton now dexterously tries to make it appear that my criticism was directed against Junker's inhaler, and that he gives chloroform on Syme's principles, though Syme never took the pulse as a guide. Dr. Dudley Buxton's plan is impracticable, and its absurdity is only surpassed by the absurdity of the method of another specialist, Mr. Rickard W. Lloyd. Mr. Lloyd proceeds to give chloroform[1] "with the sprinkled lint lying on the separated fingers of my right hand in front of the mouth, which enables me to feel the force of expiration, with my left middle finger on the left temporal pulse, and my left thumb holding up the left upper lid of the patient and testing the corneal reflex when necessary." Mr. Lloyd thus endeavours to obtain information as to the state of the patient from three if not four distinct tactile impressions at the same time, which is just as dangerous as it would be for one of my students to administer chloroform to three or four patients all at once. Dr. Dudley Buxton further states that I must have had many cases of heart failure under chloroform which I have overlooked, because "Surgeon-Major Lawrie has never felt the pulse during chloroformisation." The

[1] Vide THE LANCET, April 4th, 1891.

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whole of this statement is a gratuitous invention. All my operations are performed in public; I have never had a case of heart failure, and I frequently take the opportunity of demonstrating that the action of the heart and the pulse are invariably regular when chloroform is properly administered. I do not allow the pulse to be taken as a guide as to the effect of chloroform, because I know it is no less useless than dangerous.

Finally, Dr. Dudley Buxton asserts that the Hyderabad Commission has not proved that there is no such thing as chloroform syncope, because "its conclusions are based upon purely negative evidence." If Dr. Buxton were as familiar with the A B C of logic as he would have us believe he is with the A B C of the chloroformist's duties, he would know that proof of the absence of anything must always be negative proof. The rest of Dr. Dudley Buxton's letter consists of a bald statement of creed, unsupported by any explanatory reasons, and does not call for further notice.

I am, Sirs, your obedient servant,

May 11th, 1891. EDWARD LAWRIE, Surgeon-Major.

THE COMMITTEE ON BRITISH AND FOREIGN SPIRITS.

To the Editors of THE LANCET.

SIRS,—I quite agree with the remarks contained in a leading article in your last week's issue on the report of the British and Foreign Spirits Committee. As yet no authorised report of the committee has been published, but the one which has appeared in the newspapers contains the passage: "Dr. Pavy considers that the silent spirits are innocuous as regards health, although they are insipid and disagreeable." As you rightly observe, under the line of argument taken, such a statement brings the spirits of common use into the position of producing no injurious effects. I am not, however, responsible for the wording of the report in question, and the word "innocuous" was not used by me, and nowhere appears in the shorthand writer's notes of my evidence; nor did I speak of an "insipid" article as being "disagreeable." What I did say was that plain or silent spirit is more innocent than spirit with the by-products, and that the insipid plain spirit is rendered agreeable through the presence of the by-products in the same way as insipid food is rendered agreeable by condiments.

I am, Sirs, your obedient servant,

Grosvenor-street, May 13th, 1891. F. W. PAVY.

PRIVATE DRAIN VENTILATION.

To the Editors of THE LANCET.

SIRS,—The statement of Dr. E. Duncan, as quoted in your issue of May 2nd, to the effect that "there is, in fact, no gas in a sewer that you may not find outside of it," and that "the air of a sewer, when it is properly ventilated, is much better from the chemical point of view than the air of crowded churches and schools, or even than the air of the houses in which one-half of the population of Glasgow lives," is worthy of a far more extended practical application than is given it by sanitary authorities in Europe. The writer, as a sometime sanitary inspector in a large American city, has been often surprised at the opposition made here and on the Continent to a plan of ventilation most commonly in use in the United States, and, so far as he knows, almost uniformly successful. Its principle involves the use of conduits and conductors arranged in the shape of an inverted syphon, the long arm of which is the "standpipe," into which all closets and baths discharge, which passes directly into the open above the roof in equal calibre as below, and which ascends always in the immediate proximity of a chimney flue in constant use. So far, continental and insular engineers agree with us, but the *crux* of the whole matter lies in the position of the shorter syphonic arm, which opens at the ground level through a grating, and communicates of course outside the house with the main drain, the latter being trapped between such communication and the street sewer. I have often tested these adaptations both in winter and summer, the flame of burning paper being uniformly sucked down through the gratings and blown upward from the roof pipes, thus proving the existence of perfect ventilation, with all the security it affords. The fact that I have, in many years' inquiry, never seen such effective arrangements in England must be my excuse for calling attention to the important and undoubtedly true assertions of Dr. Duncan.

I am, Sirs, yours very truly,

H. WEBSTER JONES, M.D. Yale, U.S.A.

Cavendish Mansions, May 9th, 1891.

"THE BREATHING OF A VEIN."

To the Editors of THE LANCET.

SIRS,—In an interesting and learned article "Concerning Bloodletting" published in to-day's issue of THE LANCET, Dr. John W. Ogle recalls Sydenham's description of the operation of venesection in certain cases, as "doing the work of the windpipe"; and in a footnote states that the translator of Sydenham sometimes renders "venam incidere" "to breathe a vein." Dr. Ogle further remarks that the etymology of this expression is not very obvious, but quotes the opinion of Dr. Murray, editor of the New Philological Dictionary, to the effect that the words "breathing a vein" are equivalent to "taking into it breath or air." But, as Dr. Ogle shrewdly observes, "if this be so, the phrase is used without regard to physiological facts."

Some years ago I endeavoured to make out the meaning and origin of this expression which occurs in Dryden's Poem on the death of Oliver Cromwell.

> "War, our consumption, was their gainful trade;
> We inward bled, whilst they prolonged our pain;
> He fought to end our fighting, and assayed
> To stanch the blood by breathing of the vein."

I arrived at the conclusion that the word "breathing" in this connexion was related to the Welsh word *brathu* (pronounced "brăth'e"), "to pierce," "brathu gwythen," meaning to pierce or open a vein. The Welsh word "to breathe" in the sense of respiring is "anadlu."

I am, Sirs, yours truly,

Harley-street, W., May 9th, 1891. JOHN TWEEDY.

RARITY OF PHTHISIS IN THE MEXICAN PLATEAUX.

To the Editors of THE LANCET.

SIRS,—I read in THE LANCET of the 18th inst. your notice of the "Causes and Prevention of Phthisis," by Dr. Ransome. Your reviewer wishes for some authoritative information regarding the extreme rarity of phthisis in the Andes and Mexican plateaux. Having practised many years (twenty-four) at Bogotá, United States of Colombia, my experience there is that phthisis is almost unknown, only one case in a native resident coming under my observation during that time. There can be no doubt as to the comparative immunity of its inhabitants from this disease in the elevated regions mentioned. English visitors have much improved in health, the progress of the disease apparently being arrested.

I am, Sirs, yours faithfully,

South Kensington, S.W., April 27th, 1891. W. L. DUDLEY.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Complimentary Dinner to Sir Walter Foster, M.P.

ON the 13th inst., at the Midland Hotel, Birmingham, a large number of students and practitioners gave a dinner to Sir Walter Foster, M.P., on his retirement from the acting staff of the General Hospital. The chair was taken by Mr. Jordan Lloyd of the Queen's Hospital, and he was supported by Dr. Rickards, Dr. Simon, and Dr. Malins of the General Hospital, with Dr. Suckling, Dr. Carter, and Dr. Purslow of the Queen's Hospital. The chairman referred in eulogistic terms to Sir Walter Foster's long and eminently successful career in Birmingham. Mr. Leonard Gamgee then read the following address, which was signed by over three hundred names:—

TO SIR WALTER FOSTER, K.B., M.P., M.D., F.R.C.P.

(Consulting Physician to the General Hospital, Senior Professor of Medicine in Queen's College, Birmingham, Member of the General Medical Council.)

We, the undersigned Past and Present Students of the Birmingham School of Medicine, and other members of the medical profession, feel that we cannot let pass the occasion of your resignation of the post of

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honorary physician to the General Hospital without expressing our appreciation of the benefits we have received at your hands, and of the valuable services you have rendered to the Birmingham Medical School. Your connexion with the Queen's and General Hospitals—extending over a period of twenty-five years,—the value and originality of your clinical lectures, the soundness of your teaching, and your never-failing kindness and courtesy, have been such as to merit the highest esteem of the successive generations of students who have profited by your instruction. We trust that you may be spared for many years to enjoy health and prosperity, and may continue an active member of that profession which you have served so faithfully and so well.

In reply, Sir Walter Foster alluded in feeling terms to the friendships he had formed and the universal consideration he had always met with from the students of the Birmingham School of Medicine. He still hoped to spend many more years of active service among them, and to continue his duties as Professor of Medicine in the College.

Hospital Saturday in Birmingham.

Strenuous efforts have been made this year to bring the total amount of this collection to £10,000. There is every reason to believe that this will be more than realised when the returns are finally made up. If so, it will be a splendid commentary upon the energy and activity of those who have organised and conducted such a laudable enterprise.

Birmingham, May 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Opening of Dame Margaret's Home at Washington.

SOME few years ago, as noted in this correspondence, Sir Lowthian Bell made an offer of his seat, Washington Hall, near Durham, to the Corporation of Newcastle, to be used as a Convalescent Home. Some legal difficulties, I understand, prevented the Corporation from accepting the generous offer. Meantime, Sir L. Bell's intentions as regards the purposes of the hall in the future have not been allowed to drop. On Saturday last it was opened by the Mayor as a Home for Waifs and Strays, under the title of "Dame Margaret's Home." The work of this charity has been carried on at Gosforth, a suburb of Newcastle, by Miss Watson, the philanthropic lady who originated it; and now Sir Lowthian Bell's desire is fulfilled, and the name of his departed wife, as he feelingly expressed it, will in the future be associated with this beneficent work. As well as the poor children received under the wide term of waifs and strays, it is also intended to receive nearly 100 children in the year from the Royal Infirmary, Newcastle, and other medical institutions of the five northern counties in the year as convalescents. American tourists will still visit Washington, county Durham, from its associations with the family of their great general and patriot, for from the the family of Wessington, who held this manor (*temp.* Richard III.), John Washington was descended, from whom the ninth in descent was the famous George Washington, first President of the United States.

Cumberland.

At the last meeting of the Carlisle Microscopical Society, the President, Mr. C. S. Hall, M.R.C.S., gave an interesting lecture on the Leech and its Work, and he mentioned incidentally that formerly, when leeching was more prescribed than at present, their gathering used to be regularly carried on in ponds in Cumberland. The treasurer of the Cumberland Infirmary, Carlisle, has received £200 from the executor of the late Thomas Nelson, Esq. Sunday last was Hospital Sunday in Cumberland and Westmoreland, and collections were made on behalf of the medical charities of the two counties—namely, Cumberland Infirmary, Carlisle Dispensary and Fever Hospital, Cumberland and Westmoreland Convalescent Institution at Silloth, and the Workington Infirmary. This last institution has received the offer of £500 from Mrs. Curwen towards building a new wing, the present accommodation being inadequate. The offer is made as a memorial of Mrs. Curwen's eldest son, Mr. E. D'Arcy Curwen, and has come when the committee has been much straitened for means to undertake the extension. The population of Carlisle is said to be 39,176, as compared with 35,865 in 1881. The increase in the population in the last decade has therefore been 3311.

South Shields.

At the late meeting of the South Shields Town Council, Dr. T. Eustace Hill, the medical officer of health, reported that the death-rate for the month corresponded to an annual death-rate of 25·9 per 1000, and the zymotic rate was 2·7 per 1000; but the births, Dr. Hill said, of 335 in five weeks, seemed to indicate that the population of South Shields (72,000) was considerably under-estimated. It is contemplated at South Shields to take an important sanitary step by using salt water for the streets and flushing the sewers. The Shields people, too, are about to bring the advantages of their town as a watering place before the public this season by systematic advertising. Certainly the place has been immensely improved and developed during the past few years, and possesses very fine baths, a park, and a pier hardly to be surpassed, but the public require reminding of these things.

A Broad-minded Board of Guardians.

The Sunderland Board of Guardians have sent a cheque for £100 to the Infirmary of their town, and also one for £25 to the Monkwearmouth and Southwick Hospital. This they justify by saying that the support of these hospitals is true economy, as these institutions are the means of ultimately saving the pockets of the ratepayers by preventing the sick poor from becoming public burdens.

Newcastle-upon-Tyne, May 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Edinburgh Medico-Chirurgical Society.

AT the meeting of this Society last week the principal paper was by Dr. Alexander James on Putrid Pleural Effusions." He divided these into three groups: (1) Gangrenous effusion, with gangrenous tissue present in the effusion from separation of the gangrenous tissue; (2) cases in which gangrene was diagnosed as accompanying the putrid effusion from the fetid expectoration; and (3) cases in which there was neither fetid expectoration nor discharge of gangrenous lung through the opening in the chest-wall. After enumerating the antecedent causes which are recognised as sometimes leading to putrid effusion, he dealt more especially with those in which there was no evidence of gangrene discoverable during life or perhaps after death. He was disposed, however, to regard these as really due to a localised area of pulmonary gangrene, as he considered an organism could not be carried through the normal lung and pleura to the seat of the inflammation. He gave details of a number of cases he had seen, and referred to cases recorded by other observers. As regards treatment, he advocated immediate operation. Among the speakers, Mr. Caird thought washing out the pleura was unnecessary; Dr. W. Russell discussed the etiology of the condition with reference to suggestions he had made in a paper written a number of years ago; and Mr. A. G. Miller contended that there was evidence which favoured the view that the putrefactive organism might pass through the lung tissue to the seat of the pleurisy and determine its putridity.

The Water-supply.

Some months ago it was intimated here that engineers were appointed by the Edinburgh and District Water Trustees to examine the Edinburgh water-supply, and to report whether they considered it necessary to augment the supply, or if additional supply might not be obtained by taking efficient means to check waste. The report has reached the trustees, and it is said the engineers are unanimous in their opinion that an additional water-supply should be arranged for without delay. The text of the report will not be made public until it is printed and in the hands of the trustees.

Health of the City.

The mortality last week was 115, making the death-rate 22 per 1000. Diseases of the chest accounted for 44 deaths, and zymotic diseases for 10, of which 5 were due to whooping-cough. The intimations for the week comprised: typhoid fever 5, diphtheria 3, scarlatina 10, and measles 118. In Leith the number of deaths was 24, making the mortality 18·35 per 1000.

GLASGOW.

Population and Death-rate of Glasgow.

In his last report to the Health Committee, Dr. J. B. Russell makes special reference to the recent census. He

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notes that the census figures do not include the population of the harbour, the schedules for which were collected by the officers of H.M. Customs and transmitted direct to the Registrar-General, with this explanation: the uncorrected summation of the population of (municipal) Glasgow on April 5th was 564,975; on April 4th, 1881, the population, including shipping, was 511,415, so that as they stand the figures show an increase of over 10 per cent. Between 1871 and 1881 the rate of increase was only 4 per cent. The census is taken at the beginning of the second quarter in the year. For statistical purposes it is the population at the middle of the year (June 30th) that is required, and in order to get this a quarter's increase at the inter-census rate must be added. At present also we must add something for the shipping, and shall assume that it remains at the same figure as in 1881. We thus have the following:—

Population April 5th	564,975
Increase to June 30th	1,339
Add for shipping	700
Population June 30th, 1891	567,014

Dr. Russell's estimate of the population at midsummer, 1890, was 567,656. During the ten years 1881-90 there were 131,406 deaths registered, an average of 13,140 per annum. The mean population is 538,000, so that the mean death-rate in the decade was 24·4 per 1000. The following shows the mean death-rate in successive periods since the commencement of registration in 1855:—

		Increase.	Decrease.
6 years, 1855-60	29·9	—	—
10 years, 1861-70	30·4	0·5	—
10 years, 1871-80	28·6	—	1·8
10 years, 1881-90	24·4	—	4·2

A decrease of 4·2 per 1000 per annum means 22,596 lives saved in the ten years. The death-rates will in future be calculated on a population of 567,000. The results of sanitation shown in the above statement are most satisfactory, and encourage the hope that, as the steady application of the somewhat limited powers hitherto exercised by the local authority has produced such effects, so in the next decade the additional power conferred by the Glasgow Police (Amendment) Act and the Housing of the Working Classes Act, which come into operation this year, may lead to still further progress in the same direction.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons in Ireland.

A MEETING of the Fellows will be held on Friday, the 15th inst., to witness the election of examiners for the ensuing year. For the Letters Testimonial and Fellowship there will be four examiners in anatomy and surgery, two examiners in physiology, histology, and pathology, and one each in midwifery, chemistry and physics, and ophthalmology. For the diploma in midwifery three examiners, five for the diploma in public health, six for the diploma in dentistry, and two in general education. A meeting also of the Fellows will be held on May 30th to receive the annual report of the Council. For the examinerships in anatomy and surgery a large number of candidates may be expected, and the contest will be a close and exciting one. The President, Vice-President, and Council have named Dr. Henry Fitzgibbon, J.P., and Sir Charles Cameron as representatives of the College at the International Hygienic Congress.

Mercer's Hospital.

It is a subject of regret that this institution, which is doing good work, expended last year £1220 16*s.* 4*d.* beyond its income. Some of this expenditure, however, was due to the rebuilding of portions of the old fabric not immediately connected with the new wing, at a cost of £529 19*s.* 1*d.* There was a falling off last year in the amount received from bequests and donations.

Outbreak of Fever in Tullamore Prison.

In consequence of the occurrence of typhoid fever among the prisoners confined in this gaol, those with a short sentence to run have been released, and the rest distributed among other prisons in adjoining counties. The only serious case was that of Mr. Cullinane, who at the outset was suspected to be suffering from influenza, but his illness turned out to be typhoid fever. Complaints have been made against the medical officer of the prison of carelessness or incapacity for not recognising the disease in the commencement, but surely this is most unfair and unjust. To make a positive diagnosis in the very early stage of typhoid fever is difficult, if not often impossible; and, in corroboration, it may be mentioned that two other medical practitioners, both friends of Mr. Cullinane, also concurred in the treatment and diagnosis.

Lady Combermere's Bequest of £25,000 to the North Infirmary, Cork.

The petition of the trustees of this hospital is before the courts in Dublin, and it is anticipated that it will be permitted to allocate the greater portion of the bequest for building a new hospital, while the residue will be invested and the yearly dividends applied to the maintenance of the inmates of the infirmary.

Outbreak of Rabies.

The outbreak of rabies which commenced about six weeks ago near New Ross, co. Wexford, still continues. The guardians of the Union have adopted a resolution requesting the Lord-Lieutenant to issue a proclamation embracing the whole of Ireland to restrain dogs either by muzzle or confinement for the length of time necessary to effectually stamp out the disease.

Limerick Union.

By the death of Mr. O'Connor, F.R.C.S.I., a vacancy had arisen for a dispensary medical officer, and for the past few weeks active canvassing has taken place, by the five candidates who competed for the appointment. Two members of the committee travelled from London to record their votes. Ultimately Dr. P. F. Graham was elected.

Mr. Louis A. Byrne, F.R.C.S.I., has been elected surgeon to Jervis-street Hospital.

The medical faculty of the Catholic University have nominated Dr. C. Nixon and Mr. Antony Roche, M.R.C.P.I., delegates to the International Sanitary Congress.

The annual meeting of the Dublin Ladies' Sanitary Association takes place to-day at the Royal College of Physicians.

Dublin, May 12th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Experimental Enterica.

THE exact etiology of typhoid fever may be said to be still a moot question. The consensus of opinion amongst physicians of the British school would appear to be that it yet remains to be proved what *rôle*—whether as cause or effect—the micro-organism known as the bacillus of Eberth plays in the pathology of this common disease. That its presence may be generally demonstrated by the methods of modern bacteriology seems to be admitted on all sides. It is in the estimation of its value as a pathological factor that opinions diverge. On the Continent, where what may be termed applied bacteriology—in contradistinction to the earlier but more theoretical views of our great Jenner and Lister, &c., in England—saw the light, and where its teachings are more readily and perhaps universally embraced, the bacillus of Eberth has assigned to it a place of the first importance. To this view the experiments lately carried out by MM. Gilbert and Girode lend further weight. Briefly, they succeeded in producing what they term experimental typhoid fever, by inoculating guinea-pigs with the bacillus of Eberth. The resemblance between the enteric disease set up in the animals and enterica as observed in the human being was very marked. Of two guinea-pigs experimented upon one died in fourteen and the other in thirty-two days. Both displayed the usual clinical history of typhoid fever—diarrhœa, fever, &c. Post mortem the small intestine was found red and inflamed. Peyer's patches were injected and tumefied, while many presented well-marked ulcers. The liver, spleen, and mesenteric glands were likewise swollen. Histologically the ulcers involved the whole thickness of the mucous membrane. The muscular coat was œdematous and numerous thrombi were observed in the neighbourhood of the ulcers and in the mesenteric glands. The bacillus of Eberth was found in abundance in the ulcerations and

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thrombosed vessels. In brief, the evolution, duration, seat, lesions, and clinical history of the communicated disease were typical of ordinary typhoid fever in the human subject, and in the opinion of MM. Gilbert and Girode they were identical. In judging the value of these experiments to sustain the premises taken up—viz., that the microbe in question is the *raison d'être* of typhoid fever—one may be permitted to ask whether, in the process of inoculating animals with this virus, it is chemically and physically possible to be absolutely certain that the fluid injected does not contain a something *plus* the bacillus, and that this something may not, after all, turn out to be the real *materies morbi*. However this may be, it is interesting to note that the foregoing observations go to show that it is by no means essential to the evolution of enterica that the poison be conveyed to its seat of development by way of the mouth (through the air breathed or the aliments ingested), and which may be termed the *viæ naturales* of typhoid fever. In the experiments under consideration the inoculations were made under the skin of the back of the animal, but the poison, as we have seen, soon found its way to its usual seat of evolution.

An Ungrateful Patient.

Dr. Lassalle, physician to the hospital of Villefranche and member of the General Council of the Department of the Rhone, was recently the victim of a cowardly attack on his life by a hospital patient. It appears that the individual in question, whose disease was successfully treated under the care of Dr. Lassalle, was discharged from the hospital as perfectly cured. Having made himself comfortable at home in the institution, he was furious at being obliged to leave, and vowed vengeance, which he quickly carried into effect. He waylaid the man who had re-established his health, and deliberately fired a revolver at him. Luckily the bullet missed its mark, and before he could fire again he was disarmed and handed over to the police. Dr. Lassalle is charitable enough to believe that his would-be assassin may be insane, although no signs of mental affection were observed while he was under treatment.

The New Governor-General of Tonkin.

M. Lanessan, the recently appointed Governor-General of Tonkin, is, like many more of the public men of France, a member of the medical profession. He was Member of Parliament for one of the constituencies of Paris in the present Chamber of Deputies, resigning this distinction on his new appointment. He was formerly a surgeon in the French Navy, and a diligent student of natural science, in which section he was a past Assistant-Professor in the Paris Faculty of Medicine. His new post will be by no means a sinecure, for it is admittedly one of the most important and difficult in the French Colonial service. He goes out to it armed with the fullest powers, and accompanied by a numerous civil and military staff. It will be recollected that French medical science has already been similarly represented in the Far East, for the distinguished and regretted physiologist, Paul Bert, was also Governor-General of French Indo-China.

Paris, May 12th.

Obituary.

GAY SHUTE, F.R.C.S.

FEW members of the medical profession had a wider circle of acquaintances or were better known to the senior metropolitan consultants than Mr. Gay Shute of Greenwich. He had one of the largest practices in the district, and was also the father of the profession there, having been in practice at Greenwich for forty-eight years. Gay Shute was an old University College man, having entered as a student so long ago as 1829. He was admitted a Member of the Royal College of Surgeons in 1834, and a Member and Licentiate of the Society of Apothecaries in 1836. In 1860 he obtained a Fellowship of the Royal College of Surgeons. He was also consulting surgeon to the Miller Hospital at Greenwich. On gaining his qualifications he went as house surgeon to the Chichester Infirmary, where he remained for five years. This experience gave him a taste for surgery, and in the early days of his practice especially he used to perform many operations of various kinds. Throughout his career he was looked upon by his professional brethren as an obstetrician of special skill and capacity, a circumstance which brought him a great deal of the consulting midwifery practice in the district where he resided. He was much respected and widely esteemed in Greenwich and Blackheath, and at his funeral on Saturday the Church of St. Alphege was crowded, many hundreds of people being present in order to testify their respect. His partner and friend, Mr. Hartt, received the sympathetic condolences of the very numerous patients who called in order to express their esteem for his late partner.

ROYAL COLLEGE OF PHYSICIANS.

AT a Comitia of the College on the 14th inst., the President, Sir Andrew Clark, Bart., in the chair, Drs. A. H. Carter, R. G. Hebb, Sydney Phillips, J. J. Pringle, W. Pasteur, S. Martin, A. Garrod, and Habershon were admitted to the Fellowship.

A communication from the Public Health Medical Society with reference to a proposed amendment of Clause 35 of the Public Health (London) Law Amendment Bill was received. Dr. Farquharson, M.P., explained that an amendment with respect to the place of residence of the medical officer had been rejected by the Standing Committee on Law, and stated that Mr. G. Bruce's amendment, requiring that medical officers should not engage in private practice as general practitioners during their term of office, had been withdrawn.

Sir Dyce Duckworth was re-elected the Representative of the College in the General Medical Council.

A report was received from the Committee of Management on the alterations in the curriculum and examinations necessary for an extension of the period of study to five years. The report contained the draft of three schemes, which differed mainly in respect of the number and form of the examinations. There was general agreement as to the curriculum and the provision for more clinical study; but whereas the first scheme signed by the three medical members of the committee retained three examinations, as at present, with, however, an interval of three years between the second and final examination, Scheme No. 2, signed by two of the surgical members, suggested a practical and clinical final examination in all subjects, and the intervention of a third examination at the close of the fourth year. The Registrar, in moving that the report be referred to the Council, read communications from the Royal College of Surgeons, to the effect that Scheme No. 2, with some modifications, had been accepted by the Council of that College. A letter from the Physiological Society, urging the College to utilise the fifth year in increasing the preliminary studies in biology and chemistry, was also read. In the discussion, Drs. Priestley and Playfair urged the extension of class instruction in obstetric medicine to six months, and Sir H. Pitman expressed general preference for Scheme No. 2. The motion was then carried, the Council being empowered to confer with Fellows not members of the Council upon the question.

The quarterly report of the examiners for the licence was received.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council, held on Thursday, the 14th inst., the minutes of the quarterly meeting of the 9th April, and of the Extraordinary Meeting of the Council of the 10th April, were read and confirmed.

Mr. Thomas Thorburn was introduced, and the President handed to him the Jacksonian Prize for the past year.

In making their Quarterly Report to the two Colleges, which was approved and adopted, the Laboratories Committee stated that five new applications for permission to work in the laboratories had been received, and that of those who had been at work since the Committee made their last Quarterly Report, all but three had applied for permission to continue their researches.

The President reported the result of the meeting of the

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Fellows and Members held on the 11th inst., and read the resolutions proposed at the meeting, which will be found reported on page 1118.

The Secretary called the attention of the Council to the fact that in the Calendar of the College are to be found the names of 176 Members of the College who, according to the dates of their membership, up to the year 1822 inclusive, would be at least ninety years of age, and of whom he could trace only six as still living, and he was authorised to remove from the list in the Calendar the names of the remaining 170 Members.

The annual meeting of Fellows of the College for the election of members of the Council to be held at the College was fixed for Thursday, July 2nd next, at two o'clock P.M., and the usual resolutions were passed as to the sending of notices and the publication of advertisements of the meeting. A letter was read from Dr. Liveing reporting the adoption by the Royal College of Physicians of certain resolutions with regard to the employment of the fifth year of medical study.

A letter was read from the chairman, honorary secretaries, and secretary of the Manchester and Salford Sanitary Association, inquiring whether the Council consider that the practice of hypnotism ought to be placed under control similar to that of vivisection, and, if so, whether they are prepared to support an effort to secure such control. To this question the reply was returned that the Council did not consider it expedient to take any action in the matter.

The President reported, on behalf of the Conversazione Committee, that they had arranged for the conversazione to be held at the College on Monday, August 10th, the date which they found would be the most convenient to the International Congress of Hygiene and Demography.

A letter was read from Dr. Francis J. Allan, Honorary Secretary to the Public Health Medical Society, requesting the Council, on behalf of that Society, to assist Mr. Gainsford Bruce, Q.C., M.P., by petition, and by securing the support of Members of Parliament, in introducing the following words into "The Public Health (London) Law Amendment Bill," viz.:—"Shall not be engaged during the time he shall hold office as such medical officer in the practice of his profession as a general practitioner, and." It was not considered advisable that the Council as a body should petition.

A letter from Dr. J. Holmes, Honorary Secretary of the Association of Certifying Surgeons, was read, thanking the Council for the action they had taken in reference to Clause 19 of the Factories and Workshops Bill, and expressing the hope that the Council would continue their assistance in the event of any attempt being made to reintroduce the clause. The President stated on behalf of himself and the Vice-Presidents that they would still continue to watch the progress of the Bill.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, were at the ordinary meeting of the Council on the 14th inst. admitted Members of the College:—

Abram, Geo. Stewart, L.R.C.P.Lond., University College Hospital.
Allan, Alexander William, L.R.C.P.Lond., Thornton Heath.
Allott, John Ernest Cecil, L.R.C.P.Lond., Old Kent-road.
Ashworth, William Rushton, L.R.C.P.Lond., Stoke-on-Trent.
Atkey, Percy James, L.R.C.P.Lond., Putney.
Barber, George Walter, L.R.C.P.Lond., Thornton Heath.
Bartlett, Frank Whinfield, L.R.C.P.Lond., Brixham, Devon.
Baskett, Bertram Geo. Mortimer, L.R.C.P.Lond., Cottam, Bristol.
Boake, Basil, L.R.C.P.Lond., Dublin.
Box, Charles Richard, L.R.C.P.Lond., Holmwood, Surrey.
Brett, William George, L.R.C.P.Lond., Shepherd's-bush-road.
Brown, Reginald, L.R.C.P.Lond., St. Bartholomew's Hospital.
Busfield, James, L.R.C.P.Lond., Clapham Junction.
Carling, Albert, L.R.C.P.Lond., Wandsworth-road.
Clegg, Richard, L.R.C.P.Lond., Accrington, Lancs.
Collings, Edward Beresford, L.R.C.P.Lond., Barnsley, Yorks.
Collins, Richard Hawtrey, L.R.C.P.Lond., Brixton.
Colyer, Arthur Reginald, L.R.C.P.Lond., Streatham Hill.
Constant, Thomas Edward, L.R.C.P.Lond., Gravesend.
Corner, Albert, L.R.C.P.Lond., Poplar.
Cornish, Edward, L.R.C.P.Lond., Devonport-road.
Cory, Ernest Richard Haines, L.R.C.P.Lond., Buckhurst Hill.
Dale, Cuthbert Bracey, L.R.C.P.Lond., Percy-circus.
Dalzell, Anthony, L.R.C.P.Lond., Workington, Cumberland.
Davies, David Livingstone, L.R.C.P.Lond., Manchester.
Dawson, Cecil Lacey, L.R.C.P.Lond., Regent's-park-road.
De Renzi, Henry Carter Castriot, L.R.C.P.Lond., Wandsworth.
De Segundo, Chas. Sempill, L.R.C.P.Lond., Aldridge-road Villas.
De Silva, Appu Hennedige C., L.R.C.P.Lond., Newcastle-on-Tyne.
De Wet, Peter Christian, L.S.A., Vincent-square.
Dudgeon, Robert Henry Beauchamp, L.R.C.P.Lond., Liverpool.
Ellis, John Constable, L.R.C.P.Lond., Llanfairfechan.
Featherstone, Geo. Wm. Beaumont, L.R.C.P.Lond., Wandsworth.
Finch, Ernest James, L.R.C.P.Lond., Notting-hill.
Ford, Frank Chubb, L.R.C.P.Lond., Woburn-square.
Fox, Arthur Claude, L.R.C.P.Lond., Hampstead.
Francis, John, L.R.C.P.Lond., Grimsby.
Francis, Louis Arthur, L.R.C.P.Lond., Paddington.
Freeman, John, L.R.C.P.Lond., Bristol.
Gardener, Wm. Frederick, L.R.C.P.Lond., South Lambeth-road.
Gornall, John Guest, L.R.C.P.Lond., Lambeth Palace-road.
Hale, Geoffrey Edwd., L.R.C.P.Lond., St. George's Hospital.
Hall, John Moore, M.B. R.U.I., Old Ford-road.
Halsted, Denis Gratwicke, L.R.C.P.Lond., Arundel.
Harden, Edwd. Hy. Thornborough, L.R.C.P.Lond., Camden-road.
Hawke, Edwd. Drummond Hay, L.R.C.P.Lond., King Henry's-rd.
Hawley, Arthur, L.R.C.P.Lond., Coventry.
Hebblethwaite, Alfred George, L.R.C.P.Lond., Yorkshire.
Hey, Charles Edward Milnes, L.R.C.P.Lond., Streatham.
Hoffman, A. Wm. Wistinghausen, L.R.C.P.Lond., Hammersmith.
Holton, Geo. Waddington, L.R.C.P.Lond., Staffs.
Home, John Armistead, L.R.C.P.Lond., Kew.
Ilott, Arthur Talman, L.R.C.P.Lond., Covent-garden.
James, Leo Edward, L.R.C.P.Lond., Stockwell.
Jeffreys, Alfred, L.R.C.P.Lond., South Wales.
Johnson, Frederick, L.R.C.P.Lond., Sevenoaks.
Jones, Henry Thomas, L.R.C.P.Lond., South Wales.
Jordan, John Furneaux, L.R.C.P.Lond., Birmingham.
Keyworth, Arthur Foster, L.K.Q.C.P.I., Marple.
Kirton, Charles Stanley, L.R.C.P.Lond., Forest-gate.
Knevitt, Herbert, L.R.C.P.Lond., Surrey.
Lander, Francis Joseph, L.R.C.P.Lond., Nottingham General Dispensary.
Lansdown, Chas. Ewbank, L.R.C.P.Lond., Bromfield-road.
Lawson, Arnold, L.R.C.P.Lond., Cavendish-square.
M'Connell, James, M.B. R.U.I., Peterborough.
Marshall, Francis Edward, L.R.C.P.Lond., Kingston.
Milton, Wm. Fredk. Edward, L.R.C.P.Lond., Fentiman-road.
Olivey, Wm. James, L.R.C.P.Lond., Stormont-road.
Patterson, Charles Sumner, L.R.C.P.Lond., City-road.
Powell, Charles Marten, L.R.C.P.Lond., Furnival's-inn.
Porter, Charles, M.D. R.U.I., Co. Cork.
Price, Arthur Edward, L.R.C.P.Lond., Folkestone.
Rake, Alfred Theodore, L.R.C.P.Lond., Herne-hill.
Rannie, James, L.R.C.P.Lond., Aberdeen.
Rawes, Charles Kinsmaur, L.R.C.P.Lond., Penge.
Richardson, Horace, L.R.C.P.Lond., Highbury New-park.
Rider, Alonzo George, L.R.C.P.Lond., Highbury-hill.
Rodd, Montague Louis Bouchier, L.R.C.P.Lond., Stonehouse.
Rogers, William Gusterson, L.R.C.P.Lond., Borough.
Rowland, Frank Mortimer, L.R.C.P.Lond., Wolverhampton.
Rudd, Arthur, L.R.C.P.Lond., Charlton.
Saunders, John Harry, M.B. Melb., Maida Vale.
Scudamore, Leonard George, L.R.C.P.Lond., Blackheath.
Seton, Bruce Gordon, L.R.C.P.Lond., Anerley.
Smith, Ernest Newlyn, L.R.C.P.Lond., Huntingdon.
Spensley, James Richardson, L.R.C.P.Lond., Stoke Newington.
Spurr, James, L.S.A., Wood Green.
Spurrell, William Dewing, L.R.C.P.Lond., Falmouth-road.
Stilwell, Geo. Robt. Fabris, L.R.C.P.Lond., St. Thomas's Hospital.
Swinton, Francis Edward, L.R.C.P.Lond., Blackheath.
Syrett, Ernest Frank, L.R.C.P.Lond., Victoria.
Tebbs, William Henry Alisoun, L.R.C.P.Lond., New Cross-road.
Thomas, Abraham, L.R.C.P.Lond., St. Paul-street.
Thorpe, Reginald, L.R.C.P.Lond., Highbury-hill.
Thurston, Hugh Stanley, L.R.C.P.Lond., Chelsea.
Watts, Thomas, L.R.C.P.Lond., Bolton.
Wellington, Richard Henslowe, L.R.C.P.Lond., Fellows-road.
West, Lionel Frederick, L.R.C.P.Lond., Leeds.
Wilks, Herbert Lorraine Earle, L.R.C.P.Lond., Arbuthnot-road.
Williams, Harry Bowen, L.R.C.P.Lond., Tyrwhitt-road.

The following gentleman having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was admitted a Fellow of the College:—

Thompson, Walter, L.R.C.P.Lond., The Grange, Tadcaster, Yorks. Diploma of Member dated Nov. 10th, 1887.

ROYAL UNIVERSITY OF IRELAND.—The following candidates have passed the undermentioned examinations:—

Doctor in Medicine.—Edmond J. McWeeney.

Bachelors in Medicine, Surgery, and Obstetrics: Upper Pass Division.—Anna L. Church, *Thomas Jones, James B. McLaren, Charles G. McVicker, *Hester D. Russell, and *Edward J. Walker. (Those marked with an asterisk may present themselves for Honours.)

Pass Division.—Hugh L. Atkinson, Robert Boyd, Christopher Bunton, Robert Carse, Francis L. Dick, John Dodd, Patrick Goold, Samuel Hamilton, Wm. Hartland, Joseph F. Kelly, Nathaniel O. McConnell, John McLeish, Thomas S. McSwiney, Stephen E. Moxley, Henry O'Reilly, Joseph A. O'Sullivan, Alexander G. Robb, Richard G. Thornton, Robert B. Wagner, and John T. Wallace.

UNIVERSITY OF DUBLIN. — At the Trinity Term commencements last week the following gentleman obtained the degree of Doctor in Medicine:—

John Hugh Robert Glenn.

SUPERANNUATION ALLOWANCE. — Mr. W. T. Hudson, M.R.C.S., lately medical officer, South District, Clerkenwell, has been awarded by the Holborn guardians a superannuation allowance of £61 5*s*.

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A HOSPITAL, containing accommodation, it is said, for from 1000 to 1500 patients, has been opened at Constantinople.

THE ROYAL VACCINATION COMMISSION.—Another sitting of this Commission was held on Wednesday, Lord Herschell occupying the chair. Mr. Maskell, vaccination officer of the Leicester Union, and Mr. Hopwood, Q.C., Recorder of Liverpool, were under examination. The Commission is now adjourned for the Whitsuntide recess.

METROPOLITAN OPEN SPACES.—The Commons Preservation Society, the Kyrle Society, the Metropolitan Public Gardens Association, and the London Playing Fields Committee recently held a conference at the rooms of the Society of Arts, to consider the future provision of open spaces for London. The attendance was large and influential. A paper was read on the "Taxation of New Ground Rents to provide Open Spaces for London." It was urged that a fund appropriated specially to the supply of additional spaces was required, and the taxation of new ground rents was suggested for raising the necessary means.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—On Monday the Marquis of Lorne occupied the chair at the festival dinner, held at the Freemasons' Tavern, Great Queen-street, in support of this institution, which was founded at Margate in 1791 for the treatment of scrofula. The insufficiency of the ordinary income had necessitated the absorption of a large portion of the small invested capital, which now amounted to only £6791. The directors were anxious to establish a special centenary endowment fund of £50,000, in view of the growing demands from the continual increase in the number of patients. Lord Lorne earnestly supported the claims of the charity for additional public generosity. Donations were announced amounting to £2152, an anonymous friend contributing £1000, Mr. C. A. Swinburne £250, and Mr. Thomas Dunn 100 guineas.

NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.—The Lord Mayor presided at the annual meeting of this Society, held at the Mansion House on Tuesday. The Princess Louise and a large influential company attended. The annual report showed that the past year had been one of considerable progress financially, and the sphere of the Society's work had been extended. The income had risen from £8871 to £19,421, albeit there was a deficiency of £992. It had sixty aid committees in England, two in Wales, and three in Ireland. During the two years of its existence the Society had dealt with 10,169 cases of alleged cruelty, of which 8810 were not doubtful. It had given warning in 5054 cases, while 963 were taken into the magisterial courts, 92 per cent. convictions being the result. The report was adopted.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Robert Thomas, solicitor, Sunderland, bequeathed £500 to the Sunderland Infirmary.—The Duke of Rutland has given £300 towards the rebuilding fund of the Derbyshire Infirmary.—Mrs. Benyon of Reading has sent a donation of 500 guineas towards the expenses of the Royal Berks Hospital.—The late Mr. William Cramond of Derby left by his will £500 each to the Derby Infirmary and Derbyshire Children's Hospital.—Mrs. M. F. Burgess, late of Birkenhead, bequeathed £100 each to the Eye and Ear Institution and the Sick Children's Hospital, Birkenhead, and £200 to the Birkenhead Borough Hospital.—Mrs. Rogers, of Woodfields, Weston-under-Penyard, has given £100 to the capital fund of the Cottage Hospital, Ross.—The Corporation of London has granted 50 guineas to the City Orthopædic Hospital and 100 guineas each to Queen Charlotte's Lying-in-Hospital and the Royal Hospital for Children and Women.—The late Miss Jarman of Slough bequeathed £1000 to the Windsor Infirmary.—The Clothworkers' Livery Company has given £50 to the Great Northern Central Hospital Building Completion Fund.—The committee of the Worcester Infirmary has received a donation of £50 from Mr. Greswolde Williams for the benefit of convalescent patients.—The workmen of Sir W. G. Armstrong, Mitchell, and Co., at Elswick, Newcastle, have contributed for the quarter ending March 31st the sum of £344 17*s.* 3*d.* to the medical charities.—The workmen of Messrs. Hawthorn, Leslie, and Co., St. Peter's and Forth Banks, Newcastle, have contributed for the quarter ending April 18th the sum of £72 6*s.* to the medical charities.

MEDICAL MAGISTRATE.—Dr. Hughes of Bethesda has been placed on the Commission of the Peace for the county of Carnarvon.

FOOTBALL CASUALTY.—During a match at Govan, on the 6th inst., between the Mayfield and Claremont Clubs, a youth had his collar-bone fractured.

ADULTERATING MEDICINE.—A chemist of St. John's Hill, Shrewsbury, has been fined in each of two cases for selling two quantities of Friar's balsam, as medicine for internal use, in the manufacture of which methylated spirit had been used, instead of spirits of wine.

NOTTINGHAM AND MIDLAND EYE INFIRMARY.—This institution maintains its career of usefulness. Year by year it bestows its benefits to a steadily increasing number of patients. During the past year the number of new cases was 3354, thirty over the previous year, and the largest number treated since the establishment of the infirmary. There were 291 in-patients, 698 operations of a serious nature were performed, and 319 were supplied with spectacles. The building fund now amounts to about £1600. The institution is in a sound financial condition.

THE NEW DUFFERIN HOSPITAL, CALCUTTA.—Her Excellency the Marchioness of Lansdowne performed the ceremony of opening this new hospital for women and children on March 4th in the presence of a large and distinguished assemblage of both Europeans and natives. The present structure is a two-storeyed building, with two wards each, containing nine beds on each floor. The lower floor will be reserved for Hindoo patients and the upper floor for Mahommedans and others. The arrangements of each floor are complete in themselves. The total cost of the land and building amounts to about 107,000 rupees.

INCREASED HOSPITAL ACCOMMODATION IN MANCHESTER.—The board of management of the Manchester Royal Infirmary have rejected the offer of the Council of Owens College of a site for an extension of the hospital on the Stanley Grove estate, chiefly on the ground that the proposed new hospital would be much more costly than the provision of an equal number of beds in connexion with the present infirmary site; that it would not be more, but less, convenient for advanced students than an extension of the present building; and that it would not be so convenient to the poor and those requiring the infirmary as an enlarged building on the present site. The board consider it an essential thing that a hospital in a place like Manchester shall be accessible to those employed in factories and workshops or brought in from neighbouring parts by railway, and think that the present site answers much more to this requirement than the proposed one. The Medical Board of the infirmary have issued a statement, signed by Dr. James Hardie (chairman) and Dr. James Ross (vice-chairman), strongly approving the action of the Board of Management, and emphasising the great facilities for clinical instruction afforded at the present time, which, with the proposed extension, would meet any demands likely to be made even by a large augmentation of the medical school. They declare that the infirmary is as free from septic disease as any hospital in England, and they quote the opinion of the late Mr. John Netten Radcliffe, that the disadvantages attaching to the present site are not of a nature to outweigh the more serious consideration which attaches to readiness of access to a surgical hospital for the population it is intended to serve.

MEDICAL NOTES IN PARLIAMENT.

Vaccination.

IN the House of Lords, on Monday last, Lord Stanley of Alderley called the attention of the House to portions of the second report of the Royal Commission on Vaccination, and asked the Government whether they would provide debtor's treatment instead of criminal treatment for persons convicted under the Vaccination Acts. He did not wish to raise any medical discussion on the subject, but merely to urge that from the evidence parents who refused obedience to the vaccination laws had, in many cases, good grounds for their refusal. Of twenty-eight witnesses examined, sixteen had refused to allow their children to be vaccinated because they knew of twenty-four cases of children dead or injured by vaccination. These twenty-eight witnesses had been subjected to 418 prosecutions.—Lord de Ramsey said that in all cases but one the proceedings were strictly legal. Prisoners who were convicted, not of an offence, but with a non-compliance with an order of the court, were now treated under the rules of the Secretary of State, and were subject to the special rules applying to debtor prisoners.

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Royal Commission on Tuberculosis.

In the House of Commons, on Monday last, Mr. Rowntree asked that the medical officers of health who had furnished contributory information towards the preparation of the report on the Royal Commission on Tuberculosis should each be furnished with a copy of the report.—Mr. Ritchie replied that the Local Government Board were in the habit of forwarding copies of such reports on local inquiries to local officers who had given assistance to the Board's inspectors in the inquiries. It is also the practice of the Board to distribute a certain number of copies of the annual report of the medical officer of the Board. Any application that the Board may receive for such reports would be considered with the desire to meet them, as far as is practicable, with the limits which may be fixed by the Treasury.

Influenza.

In reply to questions by Mr. Caldwell and Mr. Vincent, Mr. Plunket, the First Commissioner of Works, stated that he was well aware of the ravages which the prevailing epidemic had made amongst the members of this House, and he had given directions that the committee rooms should forthwith be fumigated with sulphur. He would adopt at once the same process in such other parts of the House as it may seem possible at once, and would avail himself of the recess for completing the operation.—The Chancellor of the Exchequer: With regard to the question put to me, I have seen the report to which the hon. member for Sheffield refers, and the House will, I am sure, feel sympathy with the sufferings of the population from this disease. But I am glad to see in the very paper to which the hon. gentleman has called attention that there is universal testimony to the fact that the number of cases is declining, and that in most of the works and places of business the pressure is passing away. I see that one medical man who had been overworked has now only two cases on his hands, so I trust that the hon. member will find that the disease is declining among his constituents.

THE LONDON WATER-SUPPLY.

The Select Committee on this Bill resumed on Wednesday under the presidency of Sir Matthew White Ridley. The Bill of the Southwark and Vauxhall Water Company was proceeded with. Mr. Balfour Browne, Q.C., complained that in the question put at the previous sitting by Mr. Freeman there was an allegation that, because the intakes were below Staines, the water was not fit for consumption in London. No one had ever dreamed that the question of the purity of the river would be brought up under this Bill. Mr. Freeman, for the London County Council, said that the Bill proposed to raise money for filtration purposes, and it was to that point that his questions were directed. Mr. Stoneham, assistant secretary to the Board of Trade, was examined by the chairman. General Scott, water examiner of the Local Government Board, in reply to the chairman, considered that the water supplied by this company stood very high as regards quality.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 12th, 1891.

Hospital.	Beds occupied. Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	Total accommodation.
Eastern Hospital	177	56	3	45	..	281	442
North-Western Hospital	138	34	..	11	1	184	443
Western ,,	135	13	..	14	1	163	224
South-Western ,,	139	27	..	9	1	176	340
South-Eastern ,,	139	19	..	20*	..	178	462
Northern ,,	155	10	..	..	..	165	480
Totals	883	159	3	99	3	1147	2891

SMALL-POX.—*Atlas* hospital ship, 35.

* Infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABRAHAM, P. S., M.A., M.D., B.Sc., has been appointed Honorary Physician to the Western Skin Hospital, Great Portland-street.

ALLAN, F. J., M.D., has been appointed Clinical Assistant to the Western Skin Hospital, Great Portland-street.

ALLDEN, SIDNEY, M.D. Durh., has been appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton.

BENSON, ANNETTE M., M.B., B.Sc. Lond., has been appointed Resident Clinical Assistant to the Paddington Infirmary, Harrow-road.

BIERNACKI, JOHN, M.B. Glasg., L.R.C.P. & S. Edin., &c., has been appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Throat, Manchester.

BRODIE, THOMAS S., M.R.C.S., L.R.C.P., has been appointed Demonstrator of Physiology to King's College, London.

BURTON-FANNING, F. W., M.B. Camb., &c., has been appointed Physician to the Jenny Lind Infirmary for Sick Children, Norwich.

CROUCH, E. T., M.R.C.S., L.S.A., has been appointed an Honorary Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

DICK, JAMES, M.D. Glasg., L.R.C.S. Edin., has been appointed Medical Officer for the Harrington District of the Whitehaven Union.

DODSON, ARTHUR E., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Royal Victoria Patriotic Asylum for Girls, Wandsworth Common.

EYTON-JONES, J. A., L.S.A., has been appointed Medical Officer for the Gringley District, Yorks.

GIBSON, E. V., M.B., C.M., has been appointed House Surgeon to the Devonshire Hospital, Buxton.

GILES, O., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Sleaford Rural and Urban Sanitary Districts, Lincolnshire.

GILPIN, FRANK, M.R.C.S., has been appointed Medical Officer, Stratford-on-Avon.

GRAY, M. D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Drumlish Dispensary, co. Longford.

GRIFFITHS, GILBERT H., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Wallasey Dispensary, vice Dr. Whiteley.

HENDERSON, JANE B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Third Assistant Medical Officer to the Holloway Sanatorium, Virginia Water.

KER, ALICE J. S., L.K.Q.C.P. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Surgeon to the Birkenhead Lying-in Hospital, vice Lamb, deceased.

LAING, CHARLES F., M.B., C.M. Glasg., has been appointed Assistant Medical Officer to the Greenock Parochial Asylum and Poorhouse at Smithston, vice G. A. Bannetyne, resigned.

LOGAN, THOS., M.D. Aberd., L.F.P.S. Glasg., has been appointed Medical Officer, North Brierley Union.

LUMLEY, B., M.R.C.S., has been reappointed Medical Officer for the Northallerton District of the Northallerton Union.

MONTEAGLE, H. W. B., M.D., Glasg., has been appointed Medical Officer to the Manchester and Salford Provident Dispensaries Association.

O'GORMAN, R. P., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer to the Manchester and Salford Provident Dispensaries Association.

OLDHAM, MONTAGUE W., M.R.C.S., L.R.C.P., L.S.A., has been appointed Surgeon to the Coventry Provident Dispensary.

POWELL, G. W., M.B., C.M. Dubl., has been appointed Physician to the Birmingham Children's Hospital, vice Suckling, resigned.

ROBINSON, JAMES, M.D. Brussels, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Turton Urban Sanitary District.

RUTHERFORD, THOS., M.B., C.M. Glasg., has been appointed Medical Officer for the County of Bute.

SALTER, F. J., L.R.C.P., L.R.C.S. Edin., has been appointed Assistant House Surgeon to the Devonshire Hospital, Buxton.

SMITH, HENRY, M.B., C.M. Durh., has been appointed Medical Officer for the St. Nicholas District of the Durham Union.

TIPLADY, WM., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.M., has been appointed Acting Surgeon to the 5th V.B. Royal Highlanders.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF PLYMOUTH.—Medical Officer of the Borough Lunatic Asylum. Salary £400 per annum, with furnished house in the Asylum at Blackadon, near Plymouth. Gas, coal, and vegetables.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, washing, and lodging.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician. No salary. Board and residence and an allowance for washing. (Apply to the Secretary, at the Office, 24, Finsbury-circus, E.C.)

COUNTY ASYLUM, Whittingham, Preston, Lancs.—Assistant Medical Officer and Pathologist. Salary £200 a year, with board, lodgings, washing, and attendance.

COUNTY BOROUGH OF SHEFFIELD.—Medical Officer of Health for the Borough. Salary £500 per annum. (Apply to Dr. J. W. Pye Smith, Town Clerk, Sheffield.)

COUNTY OF CAITHNESS.—Medical Officer of Health for the County. Salary £300 sterling, with £50 for travelling and other expenses, except forms and official stationery and postages. (Apply to Mr. Brims, County Clerk, Thurso.)

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Surgeon. Salary £160 per annum (out-door), with additional fees for Midwifery of 5s. 3d. in each case. Salary to be advanced under certain conditions.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, Dunstable, Beds.—Dispenser. Salary £50 per annum.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Commencing salary £180, rising £10 per annum to £220, with residence, garden, and conservatory (rates and taxes free). Conveyance provided. (Apply to the Hon. Secretary, Princes-street, Dunstable, Beds.)

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium £100 per annum.

GENERAL HOSPITAL, Birmingham.—Honorary Surgeon.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

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HANTS COUNTY ASYLUM, Knowle, Fareham.—Third Assistant Medical Officer. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HARTLEPOOL UNION.—Medical Officer and Public Vaccinator for the District of Greatham. Proposed salary, exclusive of extras, £50 per annum. (Apply to the Clerk, Board-room, Municipal Buildings, West Hartlepool.)

KIDDERMINSTER INFIRMARY.—House Surgeon. Salary £140, increasing by £10 per annum to £170, with rooms in the Infirmary and attendance.

LIVERPOOL ROYAL INFIRMARY.—Honorary Assistant Surgeon.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200, £50 allowed for cab fare, or towards horse and trap, midwifery fees, &c., with residence, coachhouse and stable, rent and taxes free. (Apply to the Secretary, 91, Queen-street, Leamington.)

M.D., care of P. Dixon, Esq., 13, Gray's-inn-square, W.C.—Assistant Medical Officer in a large Metropolitan Lunatic Asylum. Salary to commence at £100 a year, with board, lodging, washing, &c.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon. Board, apartments, and washing. No salary.

NOTTINGHAM BOROUGH ASYLUM.—Locum Tenens for a month. Remuneration £2 2s. per week, with apartments, board, and washing.

NOTTINGHAM BOROUGH ASYLUM.—Assistant Medical Officer Salary £125 per annum, with apartments, board, and washing.

ROYAL BERKS HOSPITAL.—Physician.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—House Surgeon.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. The annual fee for the Examinership is £30. (Apply to Mr. Clapperton, 91, West Regent-street, Glasgow.)

VESTRY OF FULHAM.—Medical Officer of Health for the parish of Fulham for one year. Salary £400 per annum. No fees allowed for travelling in the parish. (Apply to the Clerk of the Vestry, Town Hall, Walham-green.)

WARNEFORD HOSPITAL, Leamington Spa.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

Births, Marriages, and Deaths.

BIRTHS.

HOFFMEISTER.—On May 4th, at High-street, Gosport, the wife of Dr. John B. Hoffmeister of a daughter.

HUNT.—On May 7th, at Crouched Friars, Colchester, the wife of Edgar A. Hunt, M.R.C.S., of a son.

JOHNSON.—On May 8th, at Cortina, Netherhall-gardens, N.W., the wife of George Lindsay Johnson, M.D., F.R.C.S., of a son.

MARRIAGES.

BARTLETT—SIBLEY.—On May 6th, at All Souls' Church, Langham-place, Hedley C. Bartlett, M.R.C.S., L.R.C.P., of Saffron Walden, to Flora Alice, third daughter of Septimus W. Sibley, Esq., of Harley-street.

FRAZER—FOTHERGILL.—On May 9th, at Jesmond Church, Newcastle-on-Tyne, Peter Thomas Frazer, Army Medical Staff, Retired, to Mary, widow of Joseph Fothergill, and youngest daughter of the late William Ritson Dryden, of Cottingham, East Yorkshire.

POULTER—VORLEY.—On May 6th, at St. Alban's Cathedral, Arthur Reginald Poulter, M.R.C.S., L.R.C.P. Lond., fourth son of F. Driffel Poulter, of The Hawthorns, Shortlands, Kent, to May, eldest daughter of William Vorley, of Norton House, Camden-road.

STIRLING—BROMLEY.—On May 6th at St. George's Church, Bloomsbury, by the Rev. A. B. Boyd Carpenter, M.A., Rector of the Parish, Alexander Williamson Stirling, M.D., C.M. Edin., D.P.H. Lond., of Shaftesbury House, Grays, Essex, eldest son of the late Robert Stirling, Tweed Green, Peebles, N.B., to Nora, only daughter of Charles Bromley, Belle Vue House, Goole, Yorks.

DEATHS.

BRINTON.—On May 7th, at 7, College-terrace, Belsize Park, N.W., Mary, widow of the late William Brinton, M.D., F.R.S., Physician to St. Mary's Hospital, in her 62nd year.

BURNIE.—On May 1st, at his residence, Haughton House, Bradford, William Burnie, M.D. Edin., L.R.C.P. Edin., in the 76th year of his age.

BURTON.—On May 6th, at Kelso, John Burton, M.D. Edin.

DAVIES.—On May 9th, at his residence, West-street, Rye, Robert Coker Nash Davies, M.R.C.S.E., in his 62nd year.

DAVIES.—On April 16th, at Remson-street, New York, Bartholomew Watson Davies, M.D. Edin., of Kingston, Jamaica.

FRAZER.—On May 10th, at Armagh, Henry Frazer, M.D. Glasg., L.K.Q.C.P., L.R.C.S. Irel., Medical Officer of the Ormagh Workhouse

MORTON.—On May 3rd, at 14, Hill-lane, Southampton, of influenza and congestion of the lungs, to the inexpressible grief of his family, John Henry Morton, Surgeon, of New Brompton, Kent, aged 54 years.

ROE.—On May 8th, at West-hill, Wandsworth, Richard Roe, Surgeon, late of Eccles, Lancashire, in his 82nd year.

WALKER.—On May 7th, at The Paragon, Bath, Wm. Searle Walker, M.R.C.S.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, May 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Voelcker: The Pathology of Tuberculosis in Children (Demonstration).—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: Affections of the Cornea.

Tuesday, May 19.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: Mental Stupor, Dementia.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: Pruriginous Affections of the Skin.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H. B. Robinson: Cystic Tumours of Jaw.—Mr. C. A. Ballance: Large Aural Exostosis. Mr. E. Roughton: Lipoma of Spermatic Cord with Hernia.—Dr. S. Sharkey: Ulcerative Colitis.—Dr. J. F. Payne: Syphilitic Caries of Calvaria in an Infant.—Dr. F. Semon: Anomalous Tumour from Aryepiglottidean Fold.—Dr. H. D. Rolleston: Myocarditis limited to the Right Side.—Dr. S. Delépine: Cultures of Psorospermia.—Mr. C. A. Ballance and Mr. S. G. Shattock: Negative Results of Psorospermial Inoculation in Animals. Card Specimens:—Dr. S. West: Secondary Sarcoma of Lung.—Dr. A. F. Voelcker: Tuberculosis of Thyroid.—Dr. Rolleston: Lung invaded with Colloid Carcinoma.—Mr. H. B. Robinson: Ulcerative Colitis.

Wednesday, May 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 2.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Arrest of Pulmonary Tuberculosis (with cases).—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Quarry Silcock: Glaucoma.

ROYAL METEOROLOGICAL SOCIETY.—7 P.M. Mr. W. H. Dines: On the Vertical Circulation of the Atmosphere in relation to the Formation of Storms.—Mr. A. W. Clayden: On Brocken Spectres in a London Fog.—Mr. H. Coupland Taylor: An Account of the "Leste," or Hot Wind of Madeira.—Mr. Shelford Bidwell will exhibit an Experiment showing the effect of an Electrical Discharge upon the Condensation of Steam.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Mr. A. Campbell Munro: Measles, an Epidemiological Study.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. E. M. Nelson: Illuminating Apparatus.—Mr. T. B. Rossiter: On a new Cysticercus and the Tænia produced from it.

Thursday, May 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Barlow: Rheumatism in Children.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Charlton Bastian: Selected cases of Disease of the Brain.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. Stoker: Syphilis and Phthisis of the Larynx.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Cases will be shown by Messrs. Squire, Hill, Juler, Pepper, Spicer, and others.

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Friday, May 22.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Arrest of Pulmonary Tuberculosis (with cases).—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Cultivation of Bacteria (examination of various cultivations).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Liver and Spleen.

CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M.:—Mr. Bruce Clarke: Case showing a New Method of Amputation just below the Knee-joint.—Mr. W. H. Bennett: Symmetrical Enlargement of Parotid Glands.—Dr. Calvert: (1) Case of Congenital Cranial Synostosis; (2) Case of Hysterical Hiccough.—Mr. W. H. Battle: Case of Fæcal Abscess after Operation.—Mr. E. H. Fenwick: Case of Congenital Scrofula.—Dr. Herringham: Case of Hereditary Chorea in an Elderly Man.—Dr. Bolton Tomson (introduced by Dr. Savill): Two cases of Hereditary Muscular Spasm.—Mr. Brodhurst: Case of Scoliosis with Rotation.—Dr. Savill: Case of Hysterical Rachialgia. Papers at 9 P.M.:—Dr. Sidney Phillips: A case of Typhoid Fever with Occlusion of the Femoral Artery during Convalescence, and with Acute Maniacal Attacks.—Dr. Ord and Dr. Copeman: A case of Leucocythæmia under observation nearly three years.—Dr. Maclagan: Cases of Neuritis and Spurious Arthritis.—Dr. Remfry: A case of Pulmonary Embolism.

Saturday, May 23.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 14th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 8	29·63	S.W.	53	50	92	62	48	·02	Overcast
„ 9	29·74	N.E.	54	49	95	59	48	..	Bright
„ 10	29·80	N.E.	50	49	67	55	49	·02	Overcast
„ 11	30·00	N.E.	55	52	114	70	49	..	Cloudy
„ 12	30·28	N.E.	54	51	112	80	49	..	Hazy
„ 13	30·17	N.E.	63	58	117	81	53	..	Hazy
„ 14	30·09	N.E.	58	54	97	65	55	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"CHARITY BEGINS AT HOME."

To the Editors of THE LANCET.

SIRS,—On May 28th the annual meetings of the Governors of the Royal Medical Benevolent College (Epsom) and of the Society for Relief of Widows and Orphans of Medical Men will be held at the same hour, but under somewhat different circumstances. The Epsom Council will declare the poll for the election of three pensioners out of a list of nineteen deserving candidates, and of eleven scholars out of a list of forty-four needy orphans of medical men. The Council of the Widows and Orphans will simply transact routine business connected with the relief *(with no canvassing)* of sixty-four widows of deceased members and fifteen orphans. The extraordinary thing is that the number of the members paying two guineas annually to this valuable society has diminished from 182 to 170 during the last year, and yet the Epsom list gives the names of nineteen *first applications* on behalf of the sons of medical men who have died leaving their families more or less unprovided for, notwithstanding the fact that for two guineas a year many of them might have insured £50 per annum to his widow and £15 to each child. *Verbum sap.*

I am, Sirs, yours obediently,

May, 1891. C. H.

THE WRONG USE OF MEDICAL TITLES.

An Indignant Apothecary is very angry at the Medical Defence Union for prosecuting Mr. S. E. L. Smith, who, on the basis of possessing the L.S.A. Eng., constructed the following row of titles after his name—M.D., L.R.C.P., L.M., & L.S.A., as described in our Birmingham Correspondent's letter of May 2nd. "An Indignant Apothecary" will have noticed in our columns a disclaimer from the honorary secretaries of the Medical Defence Union pointing out that the Union had neither originated nor inspired the recent prosecution. Our correspondent admits that Mr. Smith ought to have indicated the American source of the degree, and considers the examination for the Apothecaries' licence as difficult as that for the Conjoint Bodies of Scotland or England, and that Mr. Smith was right in regarding the title of L.S.A. as obsolete. Our correspondent is an entire stranger to Mr. Smith, but has sent a subscription towards his expenses. It should be noted that Mr. Smith's licence dates from 1885, before the time when the examination was made to qualify in all three branches of the profession. Those who pass the examination now in its enlarged and improved form may very well resent the limitation of the title acquired, and they may fairly urge their Society to demand of Parliament to create a title more expressive of the full qualification it gives. A title conferred by Act of Parliament must be altered by the same authority, and by that only. Licentiates will not advance their good cause by defending such title-making as Mr. Smith indulged in, including a most questionable M.D. of Indianapolis, about which and the terms on which it was granted we should like to have certain information.

Mr. W. B. Grifith.—We would recommend our correspondent to apply to the Secretary of the St. John Ambulance Association, St. John's Gate, Clerkenwell.

IF *W.* will enclose his card we will answer his question.

BLOODLETTING.

To the Editors of THE LANCET.

SIRS,—In a footnote to Dr. Ogle's interesting and valuable article in your paper of May 9th, he refers to the "Civil war" in medicine during the sixteenth century on the question of bloodletting. In connexion with this subject I send you the following quotation from Freind's letter to Dr. Mead (Part II., p. 215, 1726 Edition):—

"That absurd and extravagant controversy, which in the beginning of the fifteenth Centuary distracted the judgements of all the Physicians in Europe, about bleeding in the direct or opposite side in a Pleurisy. They (the Arabians) follow'd it, it seems, the opinion *of Archigenes and* Aretæus, and inclin'd to the latter Practice; and for that reason were rail'd at as Revolters from the doctrine of Hippocrates and Galen, tho' neither of these lays down any constant unvariable rule in this point. The University of Salamanca indeed took part with the Arabians, and made a decree, that no one in this case should dare to let blood in the contrary arm; and to add authority to their decree, they endeavour'd to procure an edict from Charles the Fifth to second it, alledging the other method to be of no less ill consequence, than that of Luther's heresy. Experience indeed has shewn, that the Arabians had as good reason for their opinion, as their adversaries had for theirs: and M. Curtius, who was one of the most zealous writers against them, found his heart fall, when he fell ill himself of this distemper, and chose to act counter to his own notions and writings, rather than not save his life by the Arabian Practice."

In Bullein's work, reprint of the 1578 edition, p. 40, Medicus detailing his method of treatment to Antonius, says, "Note this: that what side be infected let blood on that side."

Might I suggest to Dr. Ogle that the humoral pathology and the mediæval ideas as to the composition of the blood may, perhaps, explain the phrase "to breathe a vein." Bullein considers "melancholie" to be caused by "twoo aboundaunce of euill humours," and recommends bleeding to liberate the evil humour. "Blood must be letten in the beginnyng of the sickenesse; example, like as a pot is clensed of the scumme or fome in the beginning when it plaieth on the fire." Vicary, reprint, 1577, p. 21, gives very fully the existing theory of his day, telling us of the artery, from which patients were often purposely bled, "a vessel of blood spiritual or vytal."—I am, Sirs, yours truly,

Dublin, May 9th, 1891. GEORGE FOY.

HÆMORRHAGE IN NEW-BORN CHILDREN.

DR. ERÖSS publishes in the *Gyógydszat* an account of six cases of hæmorrhage from the genitals in new-born female infants occurring recently in the First Obstetrical Clinic in Buda Pesth. One only of the children died, and she was promature, cyanotic, and unable to suck. Hæmorrhage commenced on the third day, and she died on the fourth. The uterus was small, and the mucous membrane as well as the peritoneal covering were deeply injected, small extravasations of blood existing in places. The Fallopian tubes were very tortuous. In the right parovarium there were a few cysts containing serum. The other five children were well-developed, and in all these the hæmorrhage ceased after a very few days.

Anglicanus.—Will our correspondent say from what point of view he wishes the word "hazardous" to be regarded

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THE MIDWIVES BILL.

Dr. Rentoul calls our attention to an error which, he states, appeared in one of our contemporaries on May 2nd—namely, that the Lord President of the Privy Council has given a virtual pledge to grant a Select Committee for the consideration of the whole subject. Dr. Rentoul wrote to the Lord President and asked him if it were true. His lordship replied that the statement was unauthorised, and that neither he nor the Government had given any pledge.

Dr. Lewins.—In drawing attention to Dr. Gould's paper, we did not propose to open a discussion on the subject dealt with therein. Such a discussion, while, to satisfy disputants, it must occupy unlimited space, would, it seems to us, inevitably leave the question pretty much where it is now.

SAWTELL FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us to acknowledge in your columns the following subscriptions, which have been already paid in or promised in answer to the appeal which was sent out on behalf of the widow and children of the late T. H. Sawtell, M.D.Lond., M.R.C.P., M.R.C.S., who died in February last of pulmonary consumption, after several years' illness, leaving very inadequate provision for his family.

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As it is proposed to close the list of subscriptions at the end of this month, we should be much obliged if all subscriptions not already sent in be forwarded as soon as possible.—Yours truly,

V. D. HARRIS, Wimpole-street, W.,
G. T. PENNY, Oakfield-road, N.,
May, 1891. H. TAYLOR, Kennington-park-road, S.E.

PROFESSOR BUNGE'S "LEHRBUCH DER PHYSIOLOGISCHEN UND PATHOLOGISCHEN CHEMIE."

IN our notice of the above-named book last week our reviewer, by inadvertence, expressed a wish that the work might appear in an English dress. Our readers, however, will recall that a translation has already appeared, and was, in fact, reviewed in our columns a few months ago.

Mr. S. T. H. Parkes.—The extra-transparent optical glass referred to in our last issue is not apparently as yet in the market. It is a Swedish invention, and our announcement was made on the authority of a publication issued in Northern Europe.

Dr. Towers-Smith.—The article entitled "Rewards of the Profession," published in a recent number of THE LANCET, was based on a paper in the *London Quarterly Review*.

Dr. Joynt.—The paper is marked for insertion.

Paradox has forgotten to enclose his card.

"SAVE ME FROM MY FRIENDS."

DR. ROBERTS of Chester owes but little thanks to his so-called friend, Mr. O. O. Williams, who writes in the *Chester Chronicle* a fulsome account of his visit to the skin dispensary over which Dr. Roberts presides. As Mr. Williams lets us know that he is himself a B.Sc. and a medical student, we may candidly tell him that we hope, unless he is going to abstain from advertising himself and his friends in the lay press, that he will never get beyond the student stage. Dr. Roberts is the president of the Medical Society at Chester; so he doubtless has the respect of his professional brethren, and we would not put such a slight upon him as to suppose that he is in any way a party to such offensive flattering. But he owes it to himself to let his friend understand that the old proverb is still true—"He that blesseth his friend with a loud voice, it shall be accounted a curse unto him." It will probably also make him careful not to invite men outside the profession to his clinic.

L.R.C.S.I.—A disclaimer from the hon. secretaries of the Medical Defence Union was inserted in our last number, page 1077.

HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—In your issue for last week you publish a letter from "A Sufferer" bringing grave and sweeping charges against special hospitals. I hope that some of the older members of the profession will take up the cudgels on their behalf, but meanwhile I trust you will allow me to most emphatically deny his sweeping generalities on behalf of myself and colleagues at the Royal Chest Hospital, City-road. If I see there patients who strike me as not being suitable cases (pecuniarily, I mean), I invariably inquire as to whether they have had previous medical attendance; if their reply be affirmative, I next write to their family doctor and ask him whether they really cannot afford to pay for further advice. If the practitioner thinks I ought to do so, I allow them to continue in attendance; if, on the other hand, I am told that the patients can still afford to pay a fair price for advice and medicine, I tell them that they need not renew their letter (each letter lasts six weeks only), and advise them to return to their previous doctor, writing him my views on the case. This is, I think, the fairest way to act in the interests of everybody, and I have already received several letters from practitioners thanking me for the procedure. If the staffs of all special hospitals would act thus, I feel sure that all friction would soon cease.

I am, Sirs, yours truly,
Finsbury-square, May, 1891. FRED. J. SMITH.

AN EXPLOSIVE MIXTURE.

To the Editors of THE LANCET.

SIRS,—The following note may be worthy of publication in your journal:—

Having occasion to make a disinfectant fluid to apply to an offensive surface on a body awaiting post mortem examination I chanced to select permanganate of potash. Thinking the solution might dry too quickly and inefficiently deodorise the part, it occurred to me to add glycerine on account of its hygroscopic powers. Putting a drachm of the crystals into a three-ounce bottle I added two ounces of water and one of glycerine, and agitated the mixture. To my great surprise the cork and part of the contents were violently ejected, and the remaining portion developed great heat. Everyone is familiar with the danger of mixing glycerine and nitric acid; I have not, however, seen any mention of a combination of it and permanganate of potash. I observed the mixture became brown, losing its purple colour like a deoxidised solution of the salt; and as no effervescence took place, it is probable that the glycerine combined with the oxygen liberated by decomposition of the salt, and that, further, it possesses by some affinity of its own the power of producing rapid decomposition of the permanganate. Perhaps some chemist will kindly explain.

I am, Sirs, yours obediently,
May 11th, 1891. JOHN GRANT, M.B., C.M.Edin.

FEES FOR AMBULANCE LECTURES.

To the Editors of THE LANCET.

SIRS,—A lecturer only receives one guinea for each lecture delivered to a St. John Ambulance class, and his travelling expenses. Any balance that remains after the payment of expenses goes to the Order of St. John of Jerusalem, to help to defray the expenses of those classes which are unable to pay anything towards their cost, such as those given to the working classes and poor lads attending night schools.

I am, Sirs, yours faithfully,
May, 1891. F.R.C.S.

ENGLISH MEDICAL SERVICE IN THE LATE RUSSO-TURKISH WAR.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your readers may be able to supply me with an answer to the following question, Did the English surgeons who served with the Turkish Army during the Russo-Turkish war receive any reward in the shape of medals? If so, what were they, and are they allowed to be worn here in uniform?

I am, Sirs, yours faithfully,
Stockport, May 11th, 1891. JUVENAL.

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CIVIL MEDICAL SERVICE IN INDIA.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged by your publishing the following:—For some time past private agencies have been in the habit of procuring medical men from England, Scotland, and Ireland to fill the posts of civilian surgeons and physicians in various districts in India. Splendid promises are made, and some senior man is usually asked whilst in the old countries to do the part of procuring the services of the poor unfortunate. On arrival in India the victim finds the people here in no way responsible by document for the words of the gentleman seen at home, and by degrees the whole venture turns out a huge fraud. Only lately it was remarked in a case where a medical man was to be got out on a small salary with a maximum amount of work, "If a man is fool enough to come out and work for so little, why should we offer more inducements." My advice is to every man intending practising in India or the colonies to accept no post whatever unless all agreements are previously signed "at home," and duly vouched as to honesty and so on. As matters are conducted now, the medico is a lamb to be ill-treated by 'an unsympathetic" public. I beg to enclose my card.

I am, Sirs, your obedient servant,

India, April 22nd, 1891. VICTIM.

ERRATA.—In Dr. Collins' letter, published in our last issue, p. 1066, line 25 from bottom of first column, for "resolution," read *revolution;* and in line 6 of next column, for "continue," read *combins.*—In Dr. A. Cordes' letter, published last week, p. 1078, for "Rome," read *France;* and for "v. Dorwault L'Officin," read *v. Dorvault L'Officine.*

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Wilks, London; Dr. Towers-Smith; Dr. Steele, London; Dr. Macnaughton Jones; Dr. Handford, Nottingham; Dr. Harkin, Belfast; Mr. D'Arcy Power; Dr. Thin, London; Mr. Tweedy; Dr. Horrocks; Mr. Lawson Tait; Sir Morell Mackenzie; Dr. Delépine; Mr. Duke; Dr. Hingston Fox; Mr. More Madden; Dr. Leslie Phillips, Birmingham; Mr. John Poland; Dr. Theodore Williams; Dr. Pavy, London; Mr. W. H. Clark, Plymouth; Mr. Hartt, Greenwich; Mr. Michelli, London; Dr. Baines; Dr. Halliburton, London; Miss Yates, London; Messrs. Margrave Bros., Llanelly; Surgeon-Major Lawrie, Hyderabad; Messrs. Thorp and Co.; Dr. Grant, Ringwood; Mr. Bridgman; Messrs. Oliver and Boyd; Mr. Feeny, Walsall; Dr. Roberts, Chester; Messrs. Pearson and Co., Stepney; Brigade-Surgeon Amesbury, Brighton; Mr. Pagan Lowe, Bath; Dr. Anderson, Spennymoor; Messrs. Crossley, Moir, and Co.; Mr. Todd, London; Dr. Spiller, London; Messrs. Kegan Paul and Co.; Dr. Boteman, London; Dr. Joll; Rev. N. Bromley; Dr. Gordon Hill, Brighton; Mr. J. W. Taylor, Birmingham; Messrs. Evans and Walter, Chippenham; Mr. Mackenzie, London; Messrs. Battle and Co.; Dr. Barnes, Carlisle; Dr. Malcolm, London; Messrs. Griffin and Co.; Mr. E. Morgan; Messrs. Constable, Edinburgh; Messrs. Salter Bros., London; Dr. W. J. Collins; Mr. G. Foy, Dublin; Dr. Albert Wilson, Leytonstone; Mr. Lionel Stretton, Kidderminster; Mr. John Gay, Putney; Dr. H. W. Jones, London; Dr. Burdon-Sanderson, Oxford; Dr. Bampton, Ilkley; Mr. Paul, Liverpool; Dr. F. J. Smith, London; Mr. Page, Redditch; Dr. Bannatyne, Greenock; Dr. Auld, Glasgow; Dr. Lewins; Mr. Manby, Wolverhampton; Mr. Martindale, London; Mr. Milhado, London; Mr. Stainwell, Rochdale; Dr. Malins, Birmingham; Dr. Maclaren, Carlisle; Mr. Collum, London; Mr. J. Smith, Stafford; Mr. Whitfield, London; Mr. Boswell; Mr. Elsdale, London; Dr. Rentoul, Liverpool; Dr. Strehz, Chicago; Messrs. Lee and Martin, Birmingham; Mr. Grün, London; Messrs. Keene and Ashwell, London; Mr. G. Fullerton, Hanwell; Messrs. Barker and Son, London; Mr. Lupton, Stratford-on-Avon; Messrs. Anderson and Co., London; Dr. Austen, London; Mr. Holder, Hull; Messrs. Keith and Co., Edinburgh; Mr. Hordley, Stoke-upon-Trent; Messrs. Allden and Johnson, Southampton; Mr. Tasker, London; Messrs. Thomas and Co., Bristol; Dr. Prout, Edinburgh; Mr. Griffith; Mr. Clarke, Hastings; Dr. J. Gordon, Aberdeen; Mr. Stirling, Essex; Mr. Little, London; Mr. Storrer; Mr. Pentland, Edinburgh; Mr. Hargreaves, London; Dr. Zangger, Russell-square; Mr. Ormond, Newcastle-on-Tyne; Mr. Hornibrook, London; Mr. Hagan, Plymouth; Mr. Adams, Rye; Dr. Moorhead, Nottingham; Mr. Coleman, Cardiff; Mr. Orr, Dresden; Mr. Gwynn, Brighton; Mr. O'Dell, Torquay; Mr. Coghill, Birmingham; Mr. Richardson, Leamington; Mr. Branthwaite, Rickmansworth; Messrs. Richardson, Liverpool; Dr. White, Sheffield; Mr. Oliver, Manchester; Mr. Eastwood, Blackburn; Mr. Scott, Manchester; Mr. Sell, London; Mr. T. A. Jones, Aberavon; Clerk, Borough of Sheffield; Victim; R. B.; F.R.C.S.; L.R.C.S.I.; Liverpool Lock Hospital; Anglicanus; Jet, London; Medical Superintendent, County Asylum, Preston; Matron, Nurses' Home, Cornwall; Bank Brewery Co., Sowerby Bridge; J. R. F., London; Matron, London; Bouillon Fleet Co.; S. H., Manchester; Z. O.; Triplex; Bachelor; *Western Daily Mercury*, Plymouth; L.R.C.P.; M.D., London; C. H.; Devon.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Diver Derby; Mr. Wood, Skibbereen; Dr. M. Jones; Messrs. W. H. Smith and Son, Birmingham; Mr. Morgan, Harborne; Mr. Morton, New Brompton; Mr. Tully, Hastings; Mr. Primrose, Durham; Messrs. Lee and Nightingale, Liverpool; Mr. Forjitt, Lincoln; Messrs. Woollams and Co., London; Mr. Mendelsohn; Messrs. Burroughs, Wellcome and Co., London; Mr. Tyte, Minchinhampton; Mr. Lockwood, Huddersfield; Mr. Bayley, Tipton; Dr. Evans, Llanerchymedd; Mr. O'Meara, Loughborough; Mr. Craig, Wick; Mr. Greville, Brixham; Dr. Polson, Sutherland; Mr. McCullen, co. Antrim; Mr. Godfrey, Northampton; Dr. Cunningham, Bristol; Mr. Moore, Camberwell; Mr. Graham, Carnforth; Mr. Banford, Uttoxeter; Mr. Butlin; Mr. Rhodes, Nottingham; Miss Gallaher; Mr. Baily, Bond-street; Messrs. Grace, Bristol; Dr. Croke, Yorks; Mr. Branthwaite, Erdington; Dr. Ferrar, Cheshire; Dr. Hilliard, Aylesbury; Mr. Gosport; Dr. Taylor, Nottingham; Mr. Smith, Brighton; Mr. Guthrie, London; Dr. McCallen, co. Derry; Miss Debenham, St. Albans; Mr. Bray, St. Leonards-on-Sea; Mr. Maclehose; Dr. Couldrey, Doncaster; Mr. Edwards, Pontypridd; Mr. Bryden, Shipley; Dr. Buck, Clapton; Messrs. Powneeby and Co.; Mr. Baily, Tipton; Mr. Green, Devon; Messrs. Porteous and Co., Glasgow; Mr. Christian, Hammersmith; Mr. Henderson, Dumfries; Mr. Westbrook, Reading; Mr. Bell, Leytonstone; Mr. Gorst, Liverpool; Mr. Thompson, Hampstead; Mr. Cochrane, Wigtownshire; Mr. Mooney, Margare; Mr. White, Dunstable; Mr. Edwards, Birmingham; Mr. Thin, Edinburgh; Mr. Brinton; Dr. Cooke, Sheffield; Dr. Atkinson, Lurgan; County of Lanark; Delta, London; Secretary, General Hospital, Birmingham; L. S.; Secretary, College of Preceptors; V. A.; J. L. A.; Exchange; M.R.C.S., Clifton; North Staffs Infirmary; Cantab., London; Surgeon, Manchester; Kur und Bade Verwaltung, Homburg; J. W. P.; Sic Vos; Secretary, Union Association, Cornhill; Phosphates; M.R.C.S., London; Harpenden Hall, Herts; Medicus, Manchester; S. G.; Birkenhead; Hallfield Cottage, Hanley; Medicus, A.O.; Skilbeck; E. M.; *Reading Mercury* Office; Class Rooms, Edinburgh; York, London; Hackney Furnishing Co.; Beta, London; W., Manchester; Fides; Medicus, Deal; Beech Hurst, Hanley; Statim, Liverpool; Beta, Sheffield; A. E.; Borough of Devizes; Os Frontis; M.O.H.; County Asylum, Preston; Hamilton Association.

NEWSPAPERS.—*Scotsman, Birmingham Daily Post, Cape Times, Irish Times, News, Western Times, Liverpool Daily Post, Leeds Mercury, Sunday Times, Scottish Leader, Yorkshire Post, Reading Mercury, Bristol Mercury, Labour World, Mining Journal, Windsor and Eton Gazette, Weekly Free Press, Surrey Advertiser, Hull Daily News, The Christian, Hertfordshire Mercury, Windsor and Eton Express, New Zealand Herald, Echo (Sydney), Elgin Courant, Tiverton Gazette, Melbourne Daily Telegraph, West Middlesex Standard, Leicester Daily Post, Northern Whig, Eastern Press, St. Stephen's Review, Dundee Advertiser, Ashton Standard, Shields Daily Gazette, Admiralty Gazette, Londonderry Sentinel, Royal Cornwall Gazette, Darwen Post, Durham Chronicle, Essex County Chronicle, Derby Reporter, Teesdale Mercury, Cambridge Chronicle, Devizes Gazette, Belfast News Letter, Le Temps (Paris), Nursing Record, Stamford Guardian, Worthing Gazette, Hereford Times, Chester Chronicle, &c.*, have been received.

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Clinical Lecture
ON A
CASE OF PRIMARY HÆMORRHAGE INTO THE SPINAL CORD.

Delivered at St. Thomas's Hospital, May 6th, 1891,

BY SEYMOUR J. SHARKEY, M.D. OXON.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—In the first of a short course of clinical lectures which I propose to give during this summer session, I shall bring before your notice an instance of a very rare disease—primary hæmorrhage into the spinal cord. How infrequent it is you may judge from the following extracts:—"Sanguineous apoplexy of the spinal cord. The older writers spoke of this in order to account for the occurrence of sudden paraplegia; but the event must be excessively rare, as I have never seen a well-marked fatal case of it" (Lectures on Diseases of the Nervous System, by Dr. Wilks). "Primary hæmorrhage into the spinal cord, sufficient to produce symptoms, is a very rare disease, and it is even more rare than is suggested by the cases now and then recorded as such.....It is certain that the history of primary hæmorrhage has been largely written from uncertain data, and will need extensive revision when a sufficient number of exact observations have been accumulated" (Gowers). "As a primary lesion this is very rare, so rare indeed that Charcot and Hayem have recently expressed doubts as to whether it has ever been observed, and have endeavoured to show that in all the cases which have been recorded as examples of it there was an acute central softening, the result of myelitis" (Fagge). "In the large hæmorrhages it seems at present quite doubtful whether the affection is a primary idiopathic hæmorrhage, and not rather a hæmorrhagic myelitis. We are decidedly of opinion, particularly on the ground of clinical symptoms, that primary hæmorrhage of the cord also occurs" (Ziemssen's Cyclopædia). The less frequent a disease the less opportunity we have of studying it, and the less ready we are to diagnose it. I think there were other reasons, which I shall presently put before you, why we failed to recognise the disease in the present case; and it is largely because we did fail that I bring it before you; for it has often been said with great truth that we learn more by our failures than by our successes, always provided that we have done our best, so that the circumstances attending the failure may make a striking impression upon our minds.

J. S——, a schoolboy aged thirteen, was admitted into Arthur ward under my care on Jan. 10th and died on Jan. 15th, 1891. His family history was particularly good, and his own showed him to be a healthy member of a healthy stock. The account of the illness which brought him to the hospital was not as clear as one could have desired, but what the boy told me was that he had been skating and had had a good many falls, of which he thought very little. The last one he had was a heavier one, and occurred three days before admission; but he did not at the time of it feel hurt, though he left the ice, thinking he had had enough skating. He walked home, and it was only on getting there that he felt pain in his left shoulder, abdomen, and legs. This was succeeded by gradual loss of power in his lower extremities, so that after an interval of two hours he could not walk and had to be carried to bed. There he remained for two days, and was then brought to the hospital. On admission, he was found to be a somewhat delicate-looking lad, complaining of pain in the abdomen and legs, inability to move the latter, of great thirst, and retention of urine. The pulse was 144 in the minute and weak, but there was no evidence of cardiac disease. Bronchitic sounds were heard pretty generally over the lungs. The bladder was found to be distended, reaching very nearly as high as the umbilicus. The abdominal viscera were healthy, but the bowels had not been opened for four days. The urine was acid, sp. gr. 1012, and contained no albumen. The temperature was 101·8° F. On examination of the spine, no tenderness on percussion or deformity was found. The legs were completely paralysed, and sensation was impaired in them, and, indeed, upwards as far as the fourth or fifth dorsal spines. The upper limit of anæsthesia on the right passed from this point, sloping forwards in the direction of the ribs, and reaching the level of the sixth rib in front; on the left it reached the level of the fifth; there was just above the line of anæsthesia a small zone of hyperæsthesia. Some numbness was likewise complained of in the left hand. The knee-jerk on the right was completely absent; on the left it was present, but not well marked. No ankle or patella clonus. Abdominal and cremasteric reflexes were absent; plantar fairly brisk. Pupils were both small, and did not contract to light. During the rest of his life, which terminated on the 15th after an illness of eight days, the bronchitic sounds increased in number; pneumonia of the left lung supervened on the 13th, and the right became affected a little later; respiration was rapid, reaching 36 in the minute. The pulse to the end was greatly accelerated, being never less than 140 in the minute, and reaching 160 before death. He had persistent retention of urine, and his bowels were very confined. His temperature was persistently high, reaching 104°, and nearly 105° F. The pain in the left arm and shoulder continued, and definite loss of power in that arm subsequently supervened. He was also much troubled with bad pain in the head. The paralysis of the legs remained complete, but the anæsthesia became less, and was finally only patchy. No optic neuritis was present. The right patellar reflex remained in abeyance and the left varied, being sometimes absent and sometimes present. From time to time he was troubled with painful twitchings and spasms in the affected limbs. He died on the eighth day of his illness.

Necropsy (performed by Dr. Hadden): Body fairly nourished; no sign of external injury to back. Brain much congested all over the surface: puncta cruenta unusually prominent. Grey matter congested. A little stickiness over the chiasma was evident on removing the brain, but no other sign of meningitis. Medulla oblongata normal. No hæmorrhage and no apparent degeneration. Spinal cord: No bruising, laceration, or hæmorrhage found affecting the spine or its membranes. The pia mater, front and back, was much congested, but free from lymph. At the level of the third dorsal pair a hard localised swelling was felt, and the cord here was bulged. Above and below the cord felt soft, and the surface had a slightly yellow tinge. On making a section an extravasation of blood was found occupying nearly all the transverse extent of the cord. A little of the white and grey matter on the right side only could be made out. The blood was coagulated and slightly decolourised at one spot. Above the hæmorrhage as far as the upper cervical region and below as far down as the mid-dorsal region the anterior and posterior cornua of the grey matter on the left side were converted into a cavity containing liquid black blood. The white matter was unaffected. The lumbar and sacral regions of the cord were normal. The heart was free from disease. Lungs: The left lower lobe was solid, dull red in colour, and nodular on section, being in the red stage of broncho-pneumonia. Along the posterior border of the right upper and lower lobes there was also some broncho-pneumonia in a similar stage of development. Liver, spleen, and kidneys were natural. Microscopic examination showed that the hæmorrhage was the only pathological condition present in the cord. There was not the slightest evidence of inflammation or any other disease.

In giving the history of the onset of the attack in the present case I have, perhaps, strained a point somewhat, owing to the light which the post-mortem examination shed upon it. I refer to the rapidity with which the symptoms followed the fall on the ice. The history was particularly difficult to elicit, because the friends tended to exaggerate the falls which the boy had, as they attributed his illness to them, whereas the patient thought nothing of them, as he considered they were no worse than he expected to get, or than he saw his comrades getting. We did not know whose account to believe before death, but naturally after the post-mortem revelations I have rather accentuated the friends' view. In any case the disease, though it showed itself by its symptoms rapidly, did not do so instantaneously. Accepting the falls on the ice as the probable cause, the effect did not supervene for an hour or so, and did not reach its maximum for two or three hours. But the symptoms were, from any point of view, acute, and clearly pointed to one of the acute diseases which affect the spinal cord. First came pain in the abdomen and legs, then rapid and com-

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plete paralysis of legs, and retention of urine. On his admission on the fourth day of the disease these symptoms were present, together with constipation, anæsthesia as high as the fourth or fifth dorsal spine, absence of the right knee-jerk, very rapid pulse and respiration, contracted and inactive pupils, a high temperature, and some painful twitching and spasms of the affected limbs. Later paresis of his left arm supervened, and the bronchitic sounds, which were present from the first, gave way to the physical signs of pneumonia. Now let us consider the meaning of these symptoms separately. First of all, there was no evidence, such as local tenderness on percussion or distortion of the spinal column, to suggest any injury to bone; but the fact that the anæsthesia reached as high as the fourth or fifth dorsal vertebra showed that the lesion, whatever it was, was a little above that level. The absolute paralysis of legs and bladder showed that the cord was pretty completely disorganised by the disease. The contracted and inactive pupils would point to the same region as the seat of disease, for this phenomenon pointed to paralysis of the sympathetic nerves supplying the pupil-dilating muscles. Landois and Stirling say: "The cilio-spinal centre connected with the dilatation of the pupil lies in the lower cervical part of the cord, and extends downwards to the region of the first to the third dorsal vertebræ." It is also not at all improbable that the very rapid pulse which the patient had may have been in some way connected with an affection of the accelerator nerves which issue from the upper dorsal region of the cord. Landois and Stirling say that the accelerated fibres of the heart "pass from the medulla oblongata through the spinal cord, and leave the cord through the rami communicantes of the lower cervical and upper six dorsal nerves, to pass into the sympathetic nerve." The rapidity of the heart's action would only be explained by irritation, and not by paralysis of the accelerators. But we must remember that the hæmorrhage was only large enough to completely disorganise the cord about the level of the third dorsal vertebra, and that above and below this level it only occupied a part of the grey matter, and the effect of it in those regions might easily have been irritation rather than paralysis.

It was clear, then, from an analysis of all the symptoms, that one had to deal with an acute destructive disease of cord in the upper dorsal region. The presence of anæsthesia and paralysis of the bladder proved that it could not be limited to the grey matter—could not, in fact, be an anterior poliomyelitis; but must be a lesion which disorganised the whole, or nearly the whole, transverse area of the cord. The only acute diseases likely to do this were a complete rupture of the cord, hæmorrhage into it, or acute myelitis. Now, the only means of diagnosis in such cases, or, at any rate, the important factor in the diagnosis, is the suddenness of the attack. In the case of rupture, of course, it would be absolutely sudden. Speaking of hæmorrhage as opposed to myelitis, Gowers says: "The actual onset is always sudden; the symptoms attain a considerable height in the course of a few minutes. The suddenness of onset is characteristic of the disease. ..... We are not justified in regarding as primary hæmorrhage any case in which premonitory symptoms existed for more than a few minutes, unless those symptoms were so pronounced and sudden in onset that they might have been due to a small extravasation. Initial fever in any case makes myelitis probable." One finds, again, in Ziemssen's Cyclopædia of Medicine: "One specially characteristic feature of spinal apoplexy is the way in which a complete and severe paraplegia will develop in the course of a few minutes or an hour. ..... In diagnosis, the main difficulty is with central myelitis. The only point of distinction consists in the rapidity with which the symptoms develop. The paraplegia requires hours or days in simple myelitis, in hæmato-myelia minutes or quarter-hours." Dr. Frederick Taylor says the onset is sometimes quite sudden; in other cases the symptoms may be more gradually developed in the course of a few hours. Symptoms are subsequently those of acute local myelitis. The diagnosis depends on the sudden onset of the symptoms. Prodromal symptoms of even very short duration and fever make myelitis probable.

In the case with which we had to deal the symptoms appeared to take hours, and not minutes, and in addition fever was present. Consequently the conclusion arrived at was that the case was probably one of acute myelitis. The fever, however, was misleading; for it probably depended upon a commencing pneumonia, and it increased as the latter became more extensive. What was the cause of the pneumonia? I think it probably depended directly upon the nerve lesion. In Quain's Anatomy you will find it stated that "behind the root of the lung the pneumogastric nerve becomes flattened, and gives several branches of much larger size than the anterior branches, which, with the filaments derived from the second, third, and fourth thoracic ganglia of the sympathetic, form the posterior pulmonary plexus." Trophic lesions, as they are generally called, occur not infrequently in the case of injury or inflammation of the peripheral or central nervous system. In the case of acute myelitis affecting the lower parts of the spinal cord the alteration in the capabilities of tissues to resist the most ordinary pressure is shown in the acute central bedsores which form over the sacral region, on the heels, and other parts which are subjected to pressure as the patient lies in bed. With the retention or incontinence of urine one often sees acute cystitis and suppurative nephritis making their appearance, and adding greatly to the perils of the myelitis; and yet in cases in which there is a similar affection of bladder without cord disease these inflammations do not ordinarily occur. Hence acute bedsores and acute cystitis are looked upon as effects of altered nutrition owing to the nerve lesion. Again, in the disease called herpes zoster, a superficial inflammation of skin occurs in the course of the affected nerve; or it may sometimes happen that the inflammation affects the tissues much more deeply placed. Speaking of this subject, Sir James Paget says in his "Studies of Old Case-books": "Ordinarily, with considerable preceding or associated pain, there is only so much local necrosis as is expressed in the death and separation of the epidermis of the minute vesicles and the shallow ulceration indicated by the little scars; but this ulceration may be deep, and I have seen one case in which, with herpes in the range of the second division of the right fifth nerve, there was necrosis of the portion of the alveolar border of the upper jaw, and of all the teeth receiving branches from that nerve." The rapid atrophy and nutritive changes which occur in infantile paralysis, alcoholic paralysis, and other nerve diseases, belong to the same class. Considering how rapidly the patient under consideration developed broncho-pneumonia, having apparently no predisposition to chest disease, I cannot but think that this inflammatory affection may be put down to the injury to nerves proceeding from the site of the hæmorrhage to the lungs. It is interesting to note with reference to this point that the grey matter of the cord was far more extensively disorganised on the left than on the right side, and the left lung was the seat of a much more complete and widespread inflammation than the right. The fact that the left arm was partly paralysed while the right remained free, finds its explanation in the extension of the hæmorrhage in the grey matter upwards and downwards on the left and not on the right. Another interesting point in this case is the total and permanent disappearance of the right knee-jerk. You often have the increase in the tendon reflexes pointed out to you in the wards as occurring when a lesion involves the lateral columns of the cord above the lumbar enlargement, so that the lumbar centres and fibres remain intact. This alteration of the knee and other reflexes in the way of excess is looked upon as being due to the interruption of the communication between the intracranial centres and those in the anterior cornua of the cord, the connecting fibres which run in the antero-lateral columns of the cord being disorganised. This condition of affairs is certainly the rule even in very severe destructive lesions high up in the cord, and I think I have myself met with increased reflexes, and finally tonic spasm of the limbs, where there was no clinical evidence of the passage of either sensory or motor stimuli through the cord. Lately, however, very strong evidence has been adduced (by Bastian, Bowlby, and others) to show that in complete transverse lesions, such as occur from accidents or softening of the cord, reflexes, both deep and superficial, are completely abolished so soon as all nerve conduction between the brain and lumbar centres comes to an end. The disappearance of one knee-jerk in the present instance may therefore be supposed to depend on conditions similar to those existing in other sudden lesions of the cord. In curious contrast to cerebral hæmorrhage, spinal hæmorrhage occurs mostly between the ages of ten and forty. Why this should be so it is at present impossible to say; for its occurrence one at least of three conditions

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seems to be necessary: disease of vessels, sudden hyperæmia, or violence. In scurvy and small-pox, for instance, disease of vessels probably plays the most important part, as it does also in myelitis when complicated by hæmorrhage. Sudden hyperæmia appears to be the effective cause in those cases which arise in connexion with exposure to cold, extreme physical exertion, and sudden alterations of atmospheric pressure, such as occur in the case of divers. Finally, in cases such as the one I have taken for the subject of this lecture a strain or injury seems to produce the accident without causing any tangible alteration in the bones or spinal membranes, but in what manner it gives rise to hæmorrhage is not very clear. The case which I have now brought before your notice is the first I have met with in which simple primary hæmorrhage of the cord has been shown by post-mortem examination to have the lesion which has proved fatal.

ON BLOODLETTING.

BY SAMUEL WILKS, M.D., F.R.S.

DR. OGLE having given you in an interesting communication his opinion on the value of bloodletting, I should in like manner be pleased to offer you my own experience, which is highly confirmatory both of his and that of Dr. Pye-Smith, Dr. Broadbent, and other eminent medical men. During the whole of my professional life I have occasionally used bloodletting as a remedial measure, and have probably adopted venesection in about thirty cases. In some lectures on Chest Diseases, published many years ago, for the use of students, I said, "As regards bleeding, there cannot be a doubt that in former times, from the truthful character of the records, its use was often attended with a strikingly good result. We read of persons sitting up in bed with great oppression of breathing, their faces gorged with blood, and the surgeon coming in with his lancet, bleeding in a full stream, and immediately quieting the respiratory process and relieving the circulation. In such cases there may have been pneumonia, bronchitis, or heart disease, but the results were nevertheless the same. This seems to show that in cases of great engorgement of the lungs or of the right side of the heart bleeding will afford relief, and therefore in similar circumstances I should advise you to have recourse to the measure. When you find the venous system gorged in primary affections of the lungs, or in secondary congestions, as in heart disease, or from paralytic conditions, as in apoplexy, you cannot be wrong in bleeding; you relieve the venous system as well as the heart, and allow the circulating apparatus to right itself. The objection sometimes made that the patient is too weak, as indicated by the pulse, is futile, since, owing to the small amount of blood which reaches the left ventricle to be propelled onwards, the pulse is naturally small." Again, in my lectures on "Diseases of the Nervous System," I devote several pages to the consideration of bloodletting and its use when the lungs are gorged from paralysis of the chest or other cause. I may make the following quotation:—"Many of you saw the case of epilepsy which one of my clerks bled a few months ago. The man was a strong agricultural labourer, and came here suffering from severe epileptic fits. One afternoon, on going round, we were informed that he had never been out of a fit for four hours. We found him lying in bed with constant convulsive movements, but the most striking and alarming condition was the engorgement of the lungs and increasing lividity of the surface of the body. I requested that he should be bled, and one of you, wishing to distinguish himself at his first attempt, or from the lancet being over-sharp from disuse, fulfilled my object to the utmost; the blood poured out in a torrent, the face rapidly became pale, the man opened his eyes and spoke for the first time since the morning, the interval having been a blank to him. The effect was the most striking I have ever witnessed, and it is worthy of note also that he had no fit for a long time afterwards."

It was very early in my student days that I was impressed with the value of bloodletting. I accompanied a general practitioner to see a little boy suffering from bronchitis after whooping-cough. He was lying half raised on a pillow gasping for breath, his face livid, eyes starting out of his head, and the superficial jugular making itself most apparent. The doctor, after gazing at this vein and feeling it, pulled out a lancet, and in spite of the protestations of the father opened it and let out several ounces of blood. The lividity passed away, the child sank back on the pillow in a tranquil sleep, and from that time speedily recovered. I have no records by me of the cases in which bleeding was adopted, but certain instances are deeply rooted in my memory. For example, a young woman was brought into the hospital in a dying state, gasping for breath, and livid; there was a mitral bruit, engorgement of the lung with hæmoptysis, albuminous scanty urine, and dropsy. We bled her from the arm, and the effect was immediate, the breathing became tranquil, lividity passed from the face, and improvement continued from that time. In cases of uræmic convulsions the effects of bleeding are very striking; the right heart is relieved, and poisoned blood is removed from the system. One case of this kind, indelibly fixed in my memory, is that of a neighbouring dressmaker, who, I believe, is still alive. I was asked a few years ago to see this patient early one morning by her medical attendant as a satisfaction to him and her friends; she had been in convulsions all night, but he did not wish to disturb me before daybreak, believing the case to be hopeless. I found a middle-aged woman in constant convulsive movements, froth issuing from her mouth, quite comatose, and almost pulseless. The whole body was livid and the extremities cold. The doctor said she was dying, and allowed me therefore to bleed her. I took away a small wash-hand basin of blood, and while flowing the lividity passed off, the convulsions ceased, the body gradually became warmer, and when I saw her in the middle of the day she was calm, and conversed with me. Her life was as clearly saved by the bleeding as if I had dragged her drowning out of the water; and this is more than I can say from the use of drugs. Dr. Ogle writes that little was said at the discussion about the use of leeches and cupping. I can remember a good example of treatment by each method. I was once asked to see a well-grown child a year old suffering from inflammation of the lungs. He was lying on his mother's lap, respiration being from 50 to 60 a minute, with deep episternal and hypogastric depression, inflated nostrils, lips blue, &c. The medical man said he formerly should have leeched, but now waited for my sanction. I assented, and two leeches were applied. Believing that the child was too far gone to be relieved by any measures whatever, I was much surprised to be requested to see him again on the following day. I then found him breathing tranquilly, and comparatively well. The leeches had taken, and the bleeding had continued some time afterwards—in fact, much more than the medical man desired. It was, however, effectual.

As regards cupping, I have seen it so often done in former years in hospital practice with advantage that I cannot recall any individual cases, but the last case in private in which I saw cupping performed was in consultation with Mr. Parrott of Clapham shortly before his death. The patient was a middle-aged, stout woman, the subject of chronic bronchitis. She was sitting up in bed with great dyspnœa, no expansion of lower part of lung, and considerable blueness of the face. Mr. Parrott said in former years he should have cupped her, and informed me that he had paid special fees to Mr. Hills of Guy's Hospital to learn the art, and he considered himself an adept. I willingly consented. He hastened home, brought his glasses, and applied them *secundum artem* (four in number) between the shoulders. He commented on his dexterity, and how he had removed the cups without leaving a drop of blood on the skin or the linen. We all stood in admiration at his adroitness, and gazed alternately at the relieved countenance of the patient and the satisfied expression of the doctor. Although she was not *in extremis* I believed the cupping saved her life, as she was daily growing worse.

I wish we had a more simple means of relieving the gorged portal system than incising the liver, as recommended by Dr. George Harley. Everyone must have seen the relief to the patient with cirrhosis after hæmorrhage from the bowels. One case I shall never forget. A middle-aged woman, an inebriate, was when I was asked to see her in an apparently dying condition. She had a very large liver, was covered with purpura spots, and was bleeding from the gums and mouth. The consultation was a mere formal one, and therefore I was much surprised to hear that she was still alive two days afterwards, and that I was requested to see her again. I did not recognise her, so altered was her appearance; her blotchy face had become pale, and while

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regarding her I was asked to look at a row of four chamber vessels arranged along the wall of the room. They were all full of dark blood. The melæna saved her life, and she lived, I was told, some time afterwards. Besides the mere question of the value of bleeding in the mind of a medical man, there are two other considerations which influence him in his procedure. There is first his own personal reputation to be thought of, for just as the fashion of our forefathers was to "knock down" disease by every lowering measure, so the modern fashion is to "support" the patient. Consequently, if the latter died after bleeding, the doctor knew he would be blamed; but if he killed his patient by over-feeding, alcohol, or drugs, he would be thanked as having done his best. The other objection to bleeding which many men have is that they do not know how to do it; much less can they cup. I am sorry to say that I have usually had to perform the simple operation of venesection myself.

Grosvenor-street, W.

A CASE OF GASTRO-ENTEROSTOMY FOR PYLORIC CANCER.

By A. W. MAYO ROBSON, F.R.C.S.,

HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY; PROFESSOR OF SURGERY IN THE YORKSHIRE COLLEGE; AND EXAMINER IN THE VICTORIA UNIVERSITY.

THE case is of interest as showing how safely and easily gastro-enterostomy can be performed, and how it is capable of prolonging life in cases unsuitable for the more radical operation of pylorectomy. In this instance the malignant disease had involved not only the pylorus, but the first and second parts of the duodenum, it being therefore far too extensive for removal. The case also illustrates the advantage of performing gastro-enterostomy by means of decalcified bone plates, since the operation can be performed very quickly. If this patient had had to submit to the old operation of gastro-enterostomy by means of a double row of sutures, I feel sure she would not have survived, as she was in an extremely exhausted state before being operated on. I would draw special attention also to the method employed in clamping the bowel, which I have found of great service in many operations of a similar nature, and which I first mentioned in connexion with my case of cholecysto-enterostomy. I refer to the use of a simple elastic tourniquet in the shape of a piece of drainage-tube which is wound once round the isolated and emptied bowel, one knot being tied, and the two ends being seized with pressure forceps. So long as the tourniquet is on, the bowel is rendered bloodless, and there is not the slightest danger of the escape of gas or fæces. As soon as the necessary manipulations are effected, the pressure forceps are released and the single knot at once unties itself. By this means much time is saved. The case is also of interest from the age of the patient, which was only twenty-seven; this led me to hope that the stricture might be of a simple nature.

Miss G——, aged twenty-seven, consulted my brother, Mr. Herbert J. Robson, on March 20th, 1890, on account of a tumour in the epigastrium, accompanied by pain, sickness, and vomiting, the pain and sickness being usually worse after food, but coming on at times quite independently of diet. She stated that she had been well up to the middle of February, when she began to have shooting pains in the region of the stomach, lasting usually about half an hour, and coming on at intervals of two or three hours. This continued for three weeks, when the tumour was noticed in the epigastrium, and on the appearance of the tumour the pain became somewhat relieved, but at that time the nausea and vomiting began. Exertion caused an aggravation of the symptoms. From the commencement of her illness up to the time of being seen she had gradually lost flesh. The tumour was situated in the middle line, midway between the umbilicus and ensiform cartilage; it was about the size of a small orange, tender on pressure, hard, nodular, and freely movable; it rose and fell with respiration, and had communicated to it the pulsation of the aorta. On April 3rd she had further lost flesh, and complained of persistent vomiting, with occasional offensive eructations. On the 10th I saw her for the first time with my brother, and we advised her to go into the infirmary for operation. On admission to the infirmary on April 17th her symptoms still continued, but it was noticed that the epigastric swelling became at times hard and prominent and afterwards flattened out, then being less distinct. On some occasions the hardness extended to the whole of the stomach, the shape of which could then be clearly seen through the abdominal walls. The following report was given by Dr. Light, resident medical officer:—"Vomited matter, reaction acid, free hydrochloric acid present; no sarcinæ found. Signs of consolidation in the right apex of the lung." On April 29th a note was made, to the effect that the patient was vomiting several times each day. On several occasions splashing sounds were heard on percussing the abdomen from side to side. On April 30th, under the influence of ether, the abdomen having been thoroughly cleansed and asepticised, and the stomach previously washed out with a solution of boro-glyceride, an incision was made in the middle line from about two inches below the sternum to the umbilicus. The peritoneum having been opened, the stomach at once came into view. It was then found that the swelling occupied the pyloric end of the stomach and the first and second parts of the duodenum, so that pylorectomy was quite out of the question. It was therefore determined to perform gastro-enterostomy. The omentum was raised and the attached part of the jejunum easily found and traced downwards for a few inches; a loop of the bowel was then brought forward by the right finger and thumb and emptied of its contents by the pressure of the left finger and thumb, and then encircled by a thin piece of elastic tubing, which was tied once and then seized with pressure forceps. The bowel was not only emptied of its contents, but was rendered bloodless, so that when it was opened at a convenient spot of its anterior surface, by an incision in its long axis sufficiently large to admit the decalcified bone plate, there was neither fear of extravasation nor of bleeding. A similar plate was introduced into the stomach. The upper and lower stitches of the two plates were made to pierce the walls of the stomach and bowel respectively, the right and left stitches being brought out through the openings in the stomach and bowel. On tying the plates together the jejunum and stomach seemed to be closely applied; but in order to render the parts more secure, six Lembert's sutures of thin silk were used to stitch the viscera together, just external to the bone plates. In order to prevent the bowel kinking, an extra suture fixed it to the stomach wall about an inch from the edge of the plate. No soiling of the peritoneum occurred throughout the operation, and the external wound was closed in the usual way with silk sutures. After the operation the patient complained of a little pain, and vomited a quantity of dark-coloured fluid which contained blood. On May 3rd the patient vomited twice, but there was no blood in the vomit, which, however, smelt slightly offensive, as if there might be some regurgitation of bowel contents through the artificial opening. The patient had no pain. On the 4th she still felt sick, but vomiting was controlled by half a grain of morphia given in the morning. She had nutrient injections thrice daily, and was able to take a little champagne and milk and soda-water by the mouth. On the 7th a note was made that the patient was improving every day. On the 8th there was no sickness; the wound was dressed and found to be healed by first intention. All the sutures were removed. The temperature had never been above the normal. She could then take a cup of tea and milk and soda-water by the mouth. On the 15th she could take oysters, bread-and-butter, and tea. On the 17th there was a little vomiting; but on the 19th she was able to take solid food and did not vomit. The patient was allowed to get up on the 26th. On the 29th her weight was only 5st. 4lb., although she was taking more food and only vomited occasionally, not more than once in the twenty-four hours. On June 5th she had gained a pound in weight during the week, and on the 10th a note was made that the general condition was improving, although there was a little vomiting. She was sent to the Ida Convalescent Home. On July 8th the following note was made by Mr. Hudson, the resident medical officer of that institution:—"Since the patient's admission to the Ida Home she has made no progress. Has vomited once or twice daily, and has lost weight. She has got up every day and has been able to take light diet, chiefly of a liquid character, but also solid food, such as bread-and-butter, fish, &c. Besides the nourishment of which she has

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taken and retained a fair quantity by the mouth, she has been having nutrient enemata thrice daily. The tumour can be plainly felt, has increased in size, and now extends well under the costal margin on both sides." She returned to her home on July 9th, and in August I received a note from her medical man in London to say that she had died from exhaustion on Aug. 3rd; but unfortunately a post-mortem examination had not been obtained.

Remarks.—So far as the operation is concerned, it effected what was required of it, and food was able to pass on into the bowel during the three to four months between the operation and the death of the patient from exhaustion due to the cancer, which had extended considerably before she left the Convalescent Home. Had the case been one of simple stenosis, unsuitable for Loreta's operation, the ultimate result would probably have been complete restoration to health.

Leeds.

KOCH'S TREATMENT AT THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

BY J. G. SINCLAIR COGHILL, M.D., F.R.C.P. EDIN.,
SENIOR PHYSICIAN TO THE HOSPITAL.

(*Continued from page 1088.*)

CASE 4.—Lily E. W——, shop assistant, unmarried. Strumous diathesis; anæmic; sallow complexion. Admitted Nov. 5th, 1890. Height 5 ft. 5 in.; weight before inoculation 8 st. 10 lb. 8 oz. Menstruation regular. Thyroid enlarged; had pleurisy in right side seven years ago; has had "severe colds" latterly. In the summer of 1890 she began to feel weak and languid, with slight cough. Early in September she had hæmoptysis to ten ounces, and repeatedly to end of month, but not to such an amount. Since then always had cough, with "greenish" expectoration, and increasing dyspnœa. There were until last week heavy night sweats. Condition before inoculation: Slight cough and expectoration (two drachms), containing sparsely scattered bacilli, with dyspnœa, palpitation, and severe pain at times in the right apex. Sleepless; appetite poor; no pyrexia; urine, sp. gr. 1014, pale and turbid (leucorrhœal), with faint haze of albumen. Pulse 80, and regular. First sound reduplicated in mitral and pulmonary areas. Systolic bruit replaces first sound, and the second sound is accentuated. Respiration 26 per minute. Physical signs: Right lung, anteriorly, impaired percussion note to third rib, with prolonged expiratory murmur and increased vocal resonance; amphoric breathing and pectoriloquy immediately above scapula; posteriorly, note impaired to middle of scapular region, with loud bronchial breathing in supra-spinous fossa. There are no moist sounds. Left lung: Anteriorly movement deficient at apex, percussion note good, respiration prolonged and vocal resonance increased above clavicle and posteriorly in supra-spinous fossa. Patient was inoculated with 0·001 grm. of lymph about 10 A.M. on Dec. 27th, 1890. Reaction very marked; at midnight temperature 102·4°, respiration 32, and pulse 120. Pains in knees and ankles. Expectoration slightly increased. Pain at right apex. To March 24th the patient had twenty inoculations, increased gradually to 0·08 grm., equal to 0·4224 grm. of tuberculin. The highest temperature recorded was 103°, after the third injection of 0·002 grm. Although there was characteristic evidence of reaction in the subjective and objective conditions, the highest temperature recorded after the eighth inoculation was 99·4°. The highest temperature was observed at 6 P.M., on thirteen of the twenty injections. After the inoculation of 0·005 grm. on Jan. 12th the expectoration amounted to one ounce, and contained a few bacilli, and a large number of segmented bacteria which took the methyl blue stain. Within thirty-six hours the expectoration was reduced to one drachm. Very frequently the expectoration increased to one ounce in the twenty-four hours after inoculation. Menstruation was fourteen days late in January, not appearing until the 21st. Condition on leaving, April 7th, 1891: Weight, 9 st. 2 lb., a gain of 5 lb. 8 oz. since inoculation, or of 8 lb. 14 oz. on lowest weight on Jan. 11th. There has been a loss of 2 lb. 2 oz. since March 9th, owing to neuralgic toothache involving confinement in-doors. The patient says she is feeling very much better in herself, "and as strong as ever." No cough and very little expectoration. No sweating. No dyspnœa except on going quickly uphill. Appetite good, tongue clean, and all functions regular. Complains of a creaking in left knee on going upstairs. On examining the heart, there is reduplication of the first sound and slight accentuation of the second in all areas. There is a systolic bruit with the first sound in the mitral area. The right lung: movement and expansion very good. At apex vocal resonance still exaggerated, also the vocal fremitus. The note is impaired to the second rib. A very occasional click may be heard at the extreme apex. The inspiration is harsh to second interspace, and amphoric in character; and this condition, in a modified degree, may be heard at the left apex also.

CASE 5.—Ellen N——, aged twenty-seven, unmarried. Dark, sallow complexion, and stout, flabby build; very anæmic and markedly neurotic. Height 5 ft. 2 in.; weight 8 st. 9 lb. 6 oz. Father died of pneumonia, mother of asthma and bronchitis. Ellen N—— had pleurisy and pneumonia of left lung six years ago, and influenza in 1890. Ever since the pneumonia she has had attacks of hæmoptysis, expectoration only after these, with slight cough. Patient came to the hospital as a probationer nurse in October, 1890. About a month after, she complained of pain in the left base, and had considerable hæmoptysis. When examined for the first time she was reported to have "chronic phthisis" at right apex and commencing changes at left apex. She had had night sweats for the last three months; more severe after this last attack in the hospital. Menstruation regular, but painful and scanty. Complains of dyspnœa, dry cough morning and evening, occasional darting pains in lungs, occasional perspiration, and frequent headaches. Condition before inoculation: Pulse 108, fairly good; heart sounds audible at left base posteriorly, first sound reduplicated in mitral area, second pulmonary sound accentuated; urine, sp. gr. 1025, mucous deposit and haze of albumen; respiration 27 per minute. Physical signs in lungs: Right, in front slight flattening at apex; vocal fremitus increased under clavicle; percussion note impaired from apex to second rib; expiration prolonged, and vocal resonance exaggerated to third rib; breathing cavernous with pectoriloquy immediately below clavicle; posteriorly corresponding signs, with occasional clicks on inspiration in scapular region. In left lung percussion note fairly good over upper half, but expiration prolonged and vocal resonance increased above clavicle; similar signs in supra-spinous fossa; movement diminished at base and breath sounds muffled, with slight dulness at extreme base posteriorly. The patient was inoculated with 0·001 grm. of tuberculin at 10 45 A.M. on Dec. 27th. The temperature rose to only 100·4° at 9 P.M., but there were very well marked indications of local reaction. On examination all the physical signs were more accentuated and painful, moist crepitations were detected in the excavation at right apex; pleurisy of right base was set up, which soon subsided. There was throughout the treatment of this case much headache, pain in limbs, joints, abdomen, and in the chest. The highest rise of temperature (103 4°) was on Jan. 8th, from 0·003 grm. of lymph. The thermometric ranges were very irregular in this case all through the treatment. To March 24th seventeen inoculations were given, rising from 0·001 grm. to 0·007 grm., equal to 0·3185 grm. of tuberculin. This patient lost weight steadily to Jan. 31st, when she weighed only 8 st. 11 lb. 7 oz. Condition on leaving, April 1st, 1891: Weight 8 st. 8 lb. 2 oz. This shows a loss of 1 lb. 4 oz. on her original weight, but a gain of 6 lb. 9 oz. on the lowest weight on Jan. 31st. The patient was gaining rapidly before leaving, and will probably continue to do so. Her general condition has very much improved in every respect; expresses herself as feeling "vastly better." There is no anæmia, and the puffy look is gone, but she still complains of occasional pains here and there. Very little cough and expectoration, and only a few doubtful bacilli seen. Physical signs in lungs: Right, anteriorly, flattening at apex, with increased local fremitus. Percussion note impaired to second rib. Expiration prolonged, and vocal resonance increased to first interspace. Marked bronchophony and pectoriloquy under middle third of clavicle. Corresponding signs posteriorly to spine of scapula are present. Left lung: Note impaired to first rib and below sixth rib at anterior of axilla. Breath sounds at base distant, and a faint crepitation heard at the end of deep inspiration. Posteriorly there are dulness and increased

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vocal resonance in supra-spinous fossa and below the angle of the scapula. Urine contains not a trace of albumen. The patient has gone to resume her occupation as a private nurse. She has quite recently reported most favourably of her health.

CASE 6.—John C. H——, clerk, fair complexion, curly hair, aged twenty-two. Height 5 ft. 6¼ in.; weight 10 st. 1 lb Admitted Nov. 27th, 1890. Previous to June, 1890, had not been feeling well, had a cough, and poor appetite. In June, while camping out with Rifle Volunteers, contracted typhoid fever, complicated with basic pneumonia. Ever since has had much cough, with expectoration, more abundant at times, and occasionally blood-streaked. He has no pain anywhere, and there have been no night sweats. There has been much loss of flesh, but latterly improvement has been going on, though slowly. Condition before inoculation: Pulse 84, and is regular in character; first cardiac sound reduplicated in mitral area, and faint bruit heard in pulmonary area; urine, sp. gr. 1030, acid, with no albumen. Physical signs in right lung: Anteriorly percussion note impaired to second rib, with expiratory murmur prolonged, and vocal resonance increased to third rib. Vocal fremitus is slightly increased at apex. Posteriorly percussion note impaired to middle of scapula, with expiration prolonged, and vocal resonance increased to angle of scapula. Left lung: Movement at apex is deficient. Posteriorly fine crepitations below angle of scapula. Expectoration one drachm, tenacious and pigmented. Presence of bacilli doubtful. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th, 1890 There was no rise of temperature, and the respiration was unaffected. The pulse became larger and softer, and more empty between the beats. The sphygmograph showed a lengthening of the diastolic element, most pronounced at 6 P.M, when the height of the wave had markedly diminished, but the rate increased. The hands sweated on the palmar surface profusely, and this was noticeable in nine of the ten patients after the first inoculation, and occasionally after subsequent ones. To April 7th twenty-two inoculations, gradually increasing to 0·1 grm., were given, equal to 0·6635 grm. of the lymph. The highest temperature (103·4°) from 0·003 grm. was on Jan. 5th, being the fourth inoculation. The temperature never reached 100° after the eighth inoculation, although inoculations were given once a week, the three last of 0·1 grm. each. This patient showed a tendency to slight reaction, on the day following inoculation the temperature not exceeding 99·2°. Friction sounds and small superficial crepitations, extending especially towards the base of the lungs posteriorly, were noted after injections. When the temperature did not rise, it seemed as if the reaction was expressed by the heart and vascular system, for the first cardiac sound seemed feeble and prolonged, both sounds tending to reduplication, and the pulse, at first dicrotic, became soft, dilated, and slow. Drowsiness was also noticeable under the same condition. Patient weighed 10st. 5lb. 6oz. on April 3rd, but subsequently caught a severe catarrh from exposing himself to the inclement weather while out walking. Condition on leaving, April 10th: Weight 10 st. 3 lb. 2 oz., a gain of 2 lb. 2 oz since first inoculation, and a gain of 5 lb 2 oz. on lowest weight recorded, as this patient also lost weight in the earlier period of the treatment. Functions regular, appetite good, no dyspepsia. No sweating or dyspnœa. Hardly any cough or expectoration. No pain anywhere. Pulse quite regular and stronger than before treatment. Chest movement fairly good, but slightly deficient at left apex and right base. Vocal fremitus slightly exaggerated under left clavicle. Right lung: Note good, but rather high pitched above clavicle. Respiratory sounds clear all over lung, except posteriorly, where a few fine superficial crepitations are heard on forced expiration at extreme base. Left lung: Note impaired, and vocal resonance increased to second rib, with prolonged expiration. A few sibilant râles are heard at apex. Posteriorly the percussion note is impaired to middle of scapular region, but the vocal sounds are normal. At the extreme base a few fine crepitations are heard, but less numerous than formerly. Examined April 21st, and physical signs in chest found much improved; no moist sounds heard. Has had no night sweats for some time. Expectoration varying, but, on the whole, very much less than before inoculation.

CASE 7.—Henry C——, aged twenty, schoolmaster, dark complexion, tubercular diathesis. Height 5 ft. 4¼ in.; weight 8 st. 1 lb. 8 oz. Admitted Nov. 21st, 1890. Father and paternal uncle died of phthisis. General health tolerably good. Had inflammation of lungs as a child, and also scarlet fever, which left discharge from right ear, with deafness. Twelve months ago had cough with blood-stained spit. In March was ill for three weeks with influenza. Cough and expectoration continued. There was pain at both apices and night sweats. Has been losing weight since March. Improved after admission, but pain still at left apex, and troubled with dyspeptic pains. Condition before inoculation: Pulse 92, regular; first cardiac sound in mitral area reduplicated, the second sound in pulmonary accentuated; urine, sp. gr. 1032, contains phosphates, but no albumen. Physical signs in right lung: Anteriorly percussion note impaired, with prolonged expiration and increased vocal resonance to third rib. Breathing cavernous to second rib, with bronchophony and pectoriloquy, and a few crepitations on coughing. Posteriorly percussion note impaired to angle of scapula, with prolonged expirations and increased vocal resonance to middle of scapula. Left lung: Anteriorly percussion note impaired, with expiration prolonged and vocal resonance increased to second rib, with crepitation on coughing. At fourth rib, near axilla, breathing cavernous and scattered, crepitations thence to base. Posteriorly percussion note fair from apex to base, but numerous crepitations from angle of scapula downwards. Expectoration one ounce and a half in twenty-four hours, nummulated. Bacilli small and abundant. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th. Temperature 101° at 9 P.M. From this date to March 31st had nineteen inoculations, increasing to 0·06 grm., equal to 0·343 grm. of tuberculin. The highest temperature, 104·2°, was observed on Jan. 17th, after an injection of 0·005 grm., but this was due to an extraneous cause, to be afterwards explained. No subsequent reaction exceeded 99·7° except the last, on March 31st, after an interval of twenty-two days, when it reached 100·6°. The expectoration was offensive after the first and almost each subsequent inoculation, becoming each time more catarrhal in character. Urine also occasionally showed haze of albumen. The pulse likewise became small, feeble, and intermittent. Crepitations likewise with friction appeared at various parts, especially the base of both lungs. Pains were complained of in epigastrium and in knees and ankles. This patient, although his symptoms never amounted to distress, yet seemed to demonstrate in a mildly characteristic manner nearly all the subjective and objective phenomena associated with reaction, and this with comparatively small doses, and yet not with acute, advanced, or extensive pulmonary lesions. By Jan. 12th there was no cough and hardly any sputum. On March 13th the patient weighed 8 st. 12 lb. 8 oz., or a gain of 11 lb. since commencing the treatment. On the morning of the 15th he complained of sickness and severe abdominal pain, chiefly localised in descending colon and cæcum. Although the bowels were reported to have been moved regularly, a large fæcal accumulation was found, which gave considerable trouble to reduce, and kept the temperature up for four days. After free evacuation the patient again improved, but the inoculations were suspended from March 9th to the 31st. For the last six weeks of the treatment the inoculations were only given at intervals of a week.

CASE 8.—George S——, footman, aged eighteen, slightly built, nervous temperament. Height 5 ft. 5¼ in.; weight 8 st. 13 lb. 8 oz. Admitted in November, 1890. General health good, and no illness previous to September, 1890, when he took cold. This was followed by severe pain in the left side and in the back. This lasted for a month, though he kept at work. There was cough, with a quantity of yellow expectoration. Night sweats were heavy during October, but decreased slightly during November. Has been losing weight. There is great dyspnœa, and complains of pain in left side still. Condition before inoculation: Pulse 112, regular, but short rapid stroke when full; cardiac pulsation noticeable in fourth and fifth interspace; first sound in mitral area reduplicated with short bruit in pulmonary area; the second sound also reduplicated. Urine: sp. gr. 1010, acid, no albumen. Expectoration scanty, muco-purulent; examination for bacilli was inconclusive, but numerous pneumococci were found. Respiration 22; spirometer 110 in. Flattening of left chest with diminished movement. Measurement in nipple line: right side, 17¼ in.; left side, 16⅝ in. Physical signs

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in right lung: Anteriorly note impaired to first rib. In supra-clavicular region vocal resonance increased, but expiration inaudible. Posteriorly note impaired from above to below spine of scapula, and vocal resonance increased in supra-spinous fossa. Left lung: Anteriorly note impaired and movement of whole lung restricted. Dulness is absolute, with friction from fifth rib to base. Respiratory murmur feeble at apex and hardly audible at base. Vocal resonance increased to second rib, and diminished from fifth rib to base. Posteriorly note dull from apex to base, absolute below angle of scapula. Respiration generally feeble, especially at base. A line of ægophonic resonance is detected at point where absolute dulness begins, and friction sounds are audible. Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th, 1890. At 9 P.M., highest temperature of reaction 102·6°; patient from this date to March 31st, 1891, had twenty-one inoculations, increasing gradually from 0·001 to 0·1 grm., equal to 0·5635 grm. of tuberculin. The highest reaction, temperature 103·2°, was registered on the third inoculation of 0·002 grm. on Jan. 2nd. Condition on leaving: Height 5 ft. 5⅛ in., being a growth of ⅛ in. The weight is 9st. 11lb. 8oz., a gain of 2 lb. since the treatment began, but a recovery of 8 lb. 4oz. on the lowest weight recorded on Jan. 11th, up to which date the loss of weight had gone on steadily. The skin, which was covered with acne, is now almost clear, and the whole appearance decidedly more healthy. Appetite good, tongue clean, and bowels regular. Pulse between 70 and 80; much less irritable. The cardiac sounds healthier and strong, only a short slight roughness is heard with the first pulmonary, and the second sound is slightly accentuated. Very slight cough, and expectoration to the extent of one drachm on an average daily. Still suffers from dyspnœa on exertion, and occasional pain in left base. Right lung: Movement excellent. There is a full resonant note on percussion, and there is normal vocal resonance over the whole lung. At the extreme apex the expiratory murmur is quite audible, but it is slightly prolonged. Left lung: Movement is freer than before the treatment, but is still deficient from apex to nipple, and in that region vocal fremitus is slightly increased. The note over the front of the lung to the sixth rib is resonant, but higher pitch than on right side. Behind, the dulness begins an inch below the angle of the scapula, and is absolute.

(To be concluded.)

THE TREATMENT OF CHRONIC DISEASES OF THE HEART BY MEANS OF BATHS AND GYMNASTICS.[1]

BY THEODOR SCHOTT, M.D., BAD NAUHEIM.

A REVIEW of the history of the treatment of chronic diseases of the heart reveals the fact that until comparatively recent times but little progress had been made, and it appears to have been generally agreed that, even when recognised in its earlier stages, "heart disease" must be regarded as a more or less hopeless ailment. The patient was practically condemned to exercise the virtues of self-restraint and resignation until such time as want of compensation came to seal his fate. In digitalis the physician possessed an admirable therapeutic agent, but its good results were rarely of a lasting nature, and, in most instances, the remedy sooner or later ceased to be effectual, even when its nauseating or other toxic effects were escaped. Yet, in spite of its drawbacks, and having due regard to the virtues of strophanthus, caffeine, sparteine, and calomel in cases of hydrops, it must be admitted that among drugs digitalis still holds the first place in the treatment of cardiac disease. But a new era opened when in 1872 the late Professor Beneke showed that by the use of the Nauheim baths relapses of acute articular rheumatism could be long averted or altogether escaped, and that it is possible to have recourse to balneological treatment in cases of cardiac disease, not only without danger, but with curative effect, ensuring even such effectual removal of recent endocardial exudation as to secure immunity from permanent organic valvular damage. By more extended observations and experience, and pursuing the lines laid down by Beneke, my late brother, August Schott, and I have endeavoured to formulate a system of treatment of chronic cardiac diseases of which I now propose to give an outline. It was not long before our observations showed that a surprising measure of alleviation, and even complete cure, of affections of the heart could be secured by the combined influences of a medically directed course of baths and an equally scientifically regulated course of gymnastic exercises, followed by graduated mountain pedestrianism, as suggested by that distinguished physician, Stokes. Later, we were able to publish evidence that the benefit to be derived from each of these measures accrues from one common cause—namely, the periodical and regulated stimulation of the heart to increased action, the muscles of that organ obeying the natural law of the relation between exercise on the one hand, and nutrition and growth on the other, as surely as do other muscles in which such changes as necessarily follow are apparent to the eye. A rapidly ensuing contraction of the dilated heart and distinct gain in the force of the pulse, as well as relief of dyspnœa and the other consequences of impaired circulation, were clearly observed to follow recourse both to baths and to gymnastic exercises; and it became no less apparent that, in the various forms of cardiac incapacity, the relative or actual inefficiency of the heart muscles is the morbid condition, to correct which attention should be mainly directed, and that the therapeutic agents alluded to had established their claim to hold the foremost place. Our experience further showed that it would be difficult to insist too strongly on the important influence which early recognition and treatment of the cardiac condition exercises on the certainty, rapidity, and permanence of the curative process.

I will now proceed to describe somewhat in detail the methods which we were led to adopt as the result of observations based on some 4700 cases, and extending over a course of nearly twenty years.

Balneological treatment.—Under this head I would desire at the outset to state that, if the physician have mastered the principles of treatment by baths and acquired the knowledge necessary for adapting their application to the actual condition of the patient from time to time, results almost as favourable as those obtained from the use of natural springs may be secured by recourse to artificially prepared waters. But it must be borne in mind that balneological treatment is an agent of great power as regards its influence on the heart; and that, unless it be applied with due caution and under uninterrupted medical supervision, combined with frequent observation of that organ, results the reverse of favourable may ensue. The treatment of cardiac incapacity should commence with baths containing chloride of sodium in the proportion of 1·5 per cent., with the addition of chloride of calcium to the extent of from 1 to 1·5 per 1000, and, in the early stages of the treatment, the duration of a bath should never exceed ten minutes. As regards temperature, one varying from 91° to 93° F. is suitable to conditions of anæmia and rheumatism, but for cardiac cases the proper temperature is 95° F. However useful higher temperatures may be in diverting the blood to the surface in cases of renal congestion, deficient secretion of urine, and engorgement of the more deeply seated vessels generally, their influence on the heart is to diminish its power, and therefore calculated to defeat the end in view—namely, the development of the heart muscles under the influence of more powerful action. On the other hand, if a sense of cold endure more than half a minute after immersion and the maintenance of a perfectly quiet attitude, or if it recur, it must be concluded that the temperature of the bath should in some degree be immediately raised. The mineral strength of the baths should be increased in proportion as they agree with the patient, up to from 2 to 3 per cent. of chloride of sodium, and from 0·5 to 1 per cent. of chloride of calcium, and, lastly, by the addition of carbonic acid. At Nauheim the proportional increase of the calcium salt is obtained by adding to the water of spring No. 7 the stronger water of No. 12, and, finally, by dissolving in the blended waters the still necessary quantity of the mineral in question. Our waters contain carbonic acid in proportions varying over the widest range, and the effervescing current bath presents as much as 1340 cubic centimetres to the

[1] Being an abstract of lectures delivered before the Balneological Society of Berlin.

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litre of water in addition to mineral ingredients, and a natural temperature which brings it to the level of the strongest iron baths of Schwalbach, Pyrmont, and Spa. The desired effervescence of carbonic acid could be artificially produced by a very simple process, which we have described elsewhere. The duration of the bath must be increased simultaneously with its concentration, without, however, ever exceeding twenty minutes, especially in serious cases. As the course proceeds, the temperature of the water is to be reduced by cautious steps, with due observance of the objective symptoms already specified, and attentive observation of the heart, pulse, respiratory organs, and of the general health. Further, it must be laid down that intervals of repose should interrupt every course. At first the bath should be omitted every second or third day, until in fact it become apparent that the system has accommodated itself to the treatment and is ready to bear stronger and more frequently administered baths. By such means the patient may be brought to bear with advantage one of the most powerful balneological agents in existence—the Nauheim effervescent "current" bath, in which the patient lies in a stream forcibly propelled by the gas which it naturally contains. Unfortunately not a few are found to be unwilling or unable to devote sufficient time to admit of their being brought to a condition to bear with advantage this potent therapeutic agent. In some instances a graduated course extending over several months is needed for this purpose—in some, indeed, a succession of summer seasons.

Treatment by gymnastic exercises.—A suitably adapted system of gymnastic exercises of itself presents a sufficient means of treating chronic disease of the heart. It must provide a certain measure of resistance to be overcome by the muscles which are brought into action, and it must be of two kinds: that offered by a second person properly trained for the purpose, and that which is brought into play by the spontaneous action of antagonising muscles. The object in view is successively to bring into activity different groups of muscles, such as those of the arms, the trunk, and the lower extremities. If the patient retain sufficient endurance, the exercises may be repeated in the order indicated, or in any other which may be suggested by special circumstances. Consideration of the special action of individual muscles and of the joints with which they are connected will suffice to direct the physician in the management of the course. With a little training an attendant of even moderate mental capacity will soon learn to modify the resistance which he should oppose in such a manner as to avoid inducing any, or more than passing, acceleration of the patient's pulse. For that purpose it is desirable that the exercise of individual limbs should be interrupted by short intervals, during which the limb should lie in a state of repose, supported by the attendant's hands. Attentive observation of the state of the respiration, as indicated by the mouth, alæ nasi, and chest movements, will afford useful and necessary guiding indications. Each movement must be performed evenly and steadily, and without jerking, lest dyspnœa be induced, and the patient should be instructed to exercise a certain discrimination to which the attendant must be obedient. The latter must bear upon, but never grasp or constrict, the patient's limbs, lest the movement of groups of muscles be impeded or arbitrarily promoted. These precautions duly attended to, the resistance, always slight at the beginning, may be gradually increased, and, in the case of self-imposed exercises, the patient can attain the same end by calling into play antagonising muscles. The gymnastic course concluded, there must follow a graduated system of hill climbing, as recommended by Stokes. It must, however, be carefully borne in mind that the gymnastic is a necessary preliminary to the climbing course, in order that the muscles of the heart may be prepared to endure without harm the greater exertion involved in the latter. I have elsewhere drawn attention to the fact that climbing exercise practised at too early a stage of improvement must involve serious risk, and may even become a cause of death, especially if practised under the rules laid down by Oertel, which involve a considerable reduction in the supply of liquids. On the other hand, experience proves that valvular disease offers no barrier to the performance of even such difficult ascents as those of Mont Blanc and Monte Rosa when they form the crowning effort of a slowly and carefully graduated course.

(To be concluded.)

ON THE TREATMENT OF INTUSSUSCEPTION BY INJECTION OR INFLATION; AND ITS DANGERS.

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LATE SURGICAL REGISTRAR TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

IN the cases of intussusception which commonly occur in infants and young children, treatment by injection or inflation has certain obvious advantages, to which only brief allusion need be made. Relief may thus be afforded to a condition, almost invariably fatal if left alone, by an operation which is not likely to arouse much parental opposition, and can be easily performed under almost any circumstances. Many successful cases have been recorded—e.g., in the Hospital for Sick Children, under the care of Drs. Cheadle and Barlow,[1]—and from time to time accounts of others appear in medical journals. The treatment, in fact, seems to be so generally adopted that I have thought it desirable to bring forward further evidence of those dangers which have already led to its condemnation by several authorities, and which should at least induce the utmost caution in its performance.

It may be remarked that some of the accounts of "successful cases" are, from want of detail or otherwise, of no value at all, and that in others the diagnosis is fairly open to question. I need hardly point out, besides, that there are few inducements to publish an "unsuccessful case" which has been dealt with in a way generally considered orthodox. It may also be difficult to tell without post-mortem examination whether the invagination was reduced or not, and, still more, whether any damage was caused which contributed to the fatal result.

Before beginning the operation it is evident that one should know as far as possible (1) the best way to do it; (2) what force may be used without danger. I must own to some surprise at the vagueness of the directions given in most text-books, and even in special treatises, in regard to both these points, especially the latter. I have even seen it frankly stated that "no rule can be given, but the force must be considerable." As I hope to show, the force which ought to be used is much less than is generally supposed to be safe. It should be even, not intermittent, there being in the latter case increased danger of exciting peristalsis and of rupture, and should be capable of exact estimation at any moment. Most authorities agree that any method (such as the use of the bellows of Higginson's syringe, of syphons of aerated water, &c.) not fulfilling these conditions, is very dangerous, and ought to be altogether abandoned. The plans which have been suggested of plugging the rectum to cause accumulation of intestinal gas, and that of generating carbonic acid gas within the bowel, are open to the same objections, apart from other considerations.

It has been urged that air or gas has the advantage of being compressible and is not so likely to cause diarrhœa as fluid, or to rupture the intestine by its weight acting laterally.[2] Considering how the bowel is supported within the abdomen, and that water enough to fill the colon of an infant only weighs about 1 to 2 lb., it seems evident that a bowel which cannot bear injection of water is equally unfit for insufflation at a similar pressure. The elasticity of a gas certainly would to some extent neutralise the evils of irregular pumping, but otherwise this property is not obviously of much value. Insufflation cannot, moreover, be carried out at a regulated pressure without a special apparatus, not likely to be always available when wanted. Water, on the other hand, can be allowed to flow in from an ordinary funnel or irrigator with tubing, the height to which the vessel is raised indicating the exact force of the stream. The rate at which the water is passing and the amount injected may also be observed. Leaking may be avoided by Lund's instrument,[3] which is readily improvised by coiling a piece of distended rubber-tubing on a bung through which the rectal tube is passed; or lint, or a bandage, may be rolled round the tube to form a slightly conical shoulder. Pressing the nates together is unreliable.

[1] THE LANCET, Jan. 26th, 1889.
[2] Lucas, THE LANCET, Jan. 16th, 1886, and others.
[3] Treves: Intestinal Obstruction, 1884.

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It has been shown that there is no advantage in inversion.[4] Massage and manipulation will be referred to later.

The effect of an injection as regards distension of the lower bowel depends on the obstruction and on the external support. The greater the general intra-abdominal tension, the more is the *distending* effect neutralised, the intestinal wall being then *compressed* between opposing forces. In a case of irreducible intussusception, if the abdominal walls are lax (as in most infants, especially under chloroform), and there is not much tympanites above the obstruction, the large intestine is distended by almost the whole force of the stream. Kinking may in the same way cause distension, and may even prevent the injection from acting on the intussusception at all. The pressure may also be suddenly varied by peristaltic contraction. During the last year I have tried to find, as far as can be done in the post-mortem room, the amount of distension an apparently normal colon will bear without rupture. The experiments were made chiefly in cases of children under two years of age. Except where stated, a ligature was tied round the ileum near the valve, and the abdominal opening closed before turning on the stream. After a given time, generally ten minutes, the water was let out per anum before opening the abdomen. The results were as follows:—

Height of irrigator.	No. of cases.	Age.	Hours since death.	Results of experiments.
Feet.		Yrs. Mths.		
11	1	0 8	60	Rupture of peritoneum (1½ in.) and smaller complete rupture.
8	4	1 9*	33*	Cracks in peritoneum, chiefly longitudinal, in three cases multiple and extensive.
	1	5 0	35	Nil. Peritoneum ruptured after raising to 11 ft.
	1	0 1	32	Nil, even with abdomen open.
	1	7 0	30	Transverse colon only, nil. Raised to 11 ft., nil.
	1	4 2	46	Ditto. Rupture of muscular bands.
6	1	8 6	52†	Transverse colon and flexures only, removed with mesentery. Almost immediate rupture of longitudinal muscular band and of peritoneum, the latter peeling off in two places for some inches. After five minutes complete rupture. Several cracks in mucous membrane seen on opening.
5	2	0 9*	30*	Cracks in peritoneum.
	4	2 4*	35*	Nil. In two cases irrigator raised to 8 ft., with resulting rupture of peritoneum.
	1	2 5	25	Abdomen open. Rupture of peritoneum.
4	2	0 6*	25*	Abdomen open. Nil. On raising to 6 ft., complete rupture in four and five minutes.
	1	1 8	38	Abdomen open. Ligature at splenic flexure. Raised to 6 ft. and 8 ft., nil; at 11 ft., large crack in peritoneum.
		1 11	24	Ditto. 6 ft., nil; 8 ft., peritoneum ruptured.
2	1	0 3	38	Abdomen open. Nil.

* Average. † Cold weather.

It seems therefore that when the resultant pressure distending the colon is about 2½ lb. to the square inch (irrigator raised 5 ft.), there is apt to be cracking of peritoneum, which usually occurs on raising to 8 ft.; and that under a pressure corresponding to an elevation of only 6 ft. there may in some cases be complete rupture of the bowel. After some of my own experiments had been made, I found it had been stated by Dr. W. E. Forest of New York[5] that in adults a pressure of 15 lb. to the square inch may be employed; in infants "6 lb. to the square inch is a safe force to use in any acute case during the first three days," and that this may be increased to 10 lb., the funnel being raised from 12 to 20 ft. by laying the child "in the hallway and mounting the stairs." On referring to his original paper,[6] I found an account of ten experiments, many of which do not apply to a case of irreducible intussusception, whilst of others various important details are not given. The recommendation to go to 6 lb seems based on two experiments only, and that to exceed this on only one; in the latter, rupture occurred before a pressure of 10 lb. was reached. The whole tone of Dr. Forest's papers also suggests that he hardly realises that we have to deal, not with an intestine of normal toughness and elasticity, but one which is, almost from the onset, altered by congestion, and may even have become gangrenous within the first twenty-four hours. I have had only one opportunity of experimenting post mortem with an invagination which occurred during life, but here the results were instructive.

An infant aged three months was admitted 3 P.M. It had been sick since the morning, and passed blood. There were the usual signs of an intussusception, which was felt per anum. Inflation was performed with a Higginson's syringe, the tumour "gradually disappearing." Opium was given, and there was no return of the symptoms for some hours. Vomiting recurred at midnight, then increasing abdominal distension and collapse, death occurring in the afternoon. Post-mortem examination (twenty-four hours later): No general peritonitis. Stomach and small intestines much distended, hiding the intussusception, the apex of which was below the splenic flexure. Some injection of sheath, gradually increasing to reflection, where there was a little soft lymph. A tube was tied in the rectum and connected with an irrigator raised two feet. The intussusception in a few minutes was reduced, except about an inch, the end of the ileum, the cæcum, and part of the vermiform appendix remaining tightly ensheathed by the colon. Intestine last unrolled deep red, but without signs of decomposition. After fifteen minutes the irrigator was raised to three feet. A slight further reduction took place; but this speedily stopped, and in four minutes the colon ruptured in three places just below the intussusception. Although firmly gripped, complete reduction was in a few minutes effected without obvious damage by manipulating from below. There was a little lymph on the peritoneal surface of the cæcum, and the mucous membrane was infiltrated and slightly shreddy. The valve was much swollen, and by its obstruction would probably have caused rupture at the moment of complete reduction, had this been effected by the injection.

Senn[7] found in experiments on two cats with intussusceptions of three days' duration that in one case insufflation succeeded; but in the other the force required to effect reduction ruptured the peritoneum in three places. Death occurred next day, with symptoms of diffuse peritonitis. He remarks that probably when the peritoneum is ruptured "the gravest consequences may follow; there is danger of giving way of the softened coats, of infective and septic peritonitis, and of subsequent adhesions," &c. In a post-mortem experiment he ruptured an inflamed bowel (in an adult) at a pressure of two pounds and a half. The possibility of a weak spot from some antecedent or independent disease must not be forgotten.

The following case also shows the risks of the practice.

An infant aged eight months, symptoms four days. Under chloroform a tumour was found in the left side of the abdomen. Some collapse occurred during examination, and stimulants were administered. On revival two injections, each about ten ounces, were given with Higginson's syringe. The first was only retained a short time, and allowed to escape before the second was given. The tumour could no longer be felt, but there was still a sense of resistance in the epigastrium and of emptiness in the right iliac fossa. The infant was kept under the influence of opium, and for over two days there was only some expression of pain, with increasing distension of the abdomen. Vomiting then began again, and the tumour was found on examination under chloroform. About ten ounces of water were injected from an irrigator held up about three feet, and allowed to escape after a few minutes. This was done three times; the tumour could not then be distinctly felt. An injection of about a pint of water was made in the same way at a lower pressure next day, and again on the day following. Death occurred a few hours later. All the time the motions had been natural, except for occasional looseness. Temperature very irregular (98·4° to 104·6°). Post mortem three ruptures were found in the descending colon. The lowest was transverse, and extended through peritoneum and muscle. The next was similar, with its edges rounded off, and looked as if it had been caused some days before death. The highest was

[4] Treves, op. cit.

[5] New York Med. Record, Oct. 5th, 1889; quoted in Brit. Med. Jour., Dec. 28th, 1889 (Retrospect of Medicine).

[6] Amer. Jour. Obstet., July, 1886.

[7] Intestinal Surgery, Chicago, 1889.

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a small one, completely through all coats, and situated a few inches below the apex of an unreduced intussusception. There was commencing general peritonitis.[8]

Mr. Bryant in referring to similar cases states his opinion that "under all circumstances the treatment by inflation is hazardous and dangerous, although success in exceptional cases may be recorded[9]"; and that it is only justifiable within the first three days and in cases not presenting symptoms of acute strangulation. In another instance the bowel was gangrenous when reduction by injection was attempted[10] (on the fifth day). A serious objection to the operation, however performed, is that the conditions under which it is done can only be roughly guessed at. An invagination of fairly healthy intestine may at one time remain unreduced when a little more pressure would have completely unfolded it; whilst at another time a very slight force may be enough to cause rupture. The surgeon is always warned that in using taxis for relief of hernia he should take the greatest care lest a congested bowel be burst or a gangrenous coil returned[11]; yet it has been advised that as the intussuscepted part unrolls, it is to be distended "with considerable force"!

It may here be remarked that manipulation through the abdominal wall is not only difficult, but during injection also dangerous, as pressure on a softened part may be thereby suddenly increased. So far as I know there is nothing to at once indicate the occurrence of partial rupture; and although a sudden escape of gas or fluid due to a large tear may be diagnosed by physical signs from that due to a successful reduction, it is probable that these signs would fail when the perforation is small, or when there is much tympanites above. Another objection is the difficulty of telling when reduction has been complete. Although it is often easy to feel the tumour in some regions, this is by no means the case when it is overlaid by distended stomach and intestines, or tucked away under the liver and costal cartilages. The capacity of the large intestine is so variable that it is no guide to the extent of reduction, especially as only the last inch or so usually remains invaginated.[12] After complete reduction a tumour formed by the thickened bowel may be felt through the abdominal wall almost as distinctly as before. This was noted in a case[13] in which successful reduction had been effected after abdominal section. There is also afterwards a deceptive lull, lasting some hours, due to the effects of shock, anæsthetic, and cessation of feeding, as well as the opium usually given. Such delay may so alter the general and local conditions as to render hopeless any further proceedings.

The operation of opening the abdomen and dealing with the intussusception according to the state in which it is found is one which I should not venture to discuss but for the fact that even those who argue in its favour advise (with few exceptions) that it should only be performed after injection has been tried and has failed. It becomes therefore necessary to inquire whether an unsuccessful injection affects the prognosis as regards subsequent abdominal section, and whether (as as seems to be assumed) the one proceeding is on the whole less likely to do harm than the other. I suppose few surgeons would give an undecided reply to the first question, even when no gross damage has been done; and still fewer would agree with Dr. Forest that it is justifiable to deliberately risk a rupture rather than open the abdomen; or with Professor Senn, that such rupture "does not add to the danger of laparotomy, whilst rendering it imperative." The last statement is the more remarkable, as he writes elsewhere (in his article on Volvulus): "Why this method of reduction should not be tried after the twisted loop has become softened and greatly distended by intestinal contents requires no explanation"; and (in regard to constrictions) "no attempt should be made to liberate the bowel until measures have been taken to guard against fæcal extravasation in case the gut should be ruptured."[14] As already remarked, injection has an advantage in being less dependent for success on personal skill, with suitable appliances and surroundings. But is it not equally true that an experienced practitioner may blindly do as much mischief as the merest tyro? If the bowel is in a condition to be reduced at all, it may be compressed and pushed out as evenly and safely by the fingers as by an injection; whilst the distension of the sheath which occurs during the latter proceeding, so far from being an advantage, is, except perhaps within the first few hours, a great source of danger. I need not dwell on the obvious value of being able to feel and see what one has to deal with, both as regards the intussusception and the various complications which may exist. The distension is also apt to cause or increase collapse, and may greatly interfere with the breathing and the heart's action, these being already disturbed by the anæsthetic. Death has thus occurred in at least one recorded case.[15] Even the administration of an ordinary enema for constipation has been followed by fatal collapse.[16] It can hardly be alleged that, with proper precautions, abdominal section is in this respect the more dangerous; or that by its performance there is appreciably increased risk of either simple or septic peritonitis, such being frequently the direct consequence of the invagination. Most of the arguments which have been brought forward in favour of early injection apply equally to early abdominal section; and it has been shown both by experiment and otherwise that the latter may succeed when the former fails. When an acute case has been allowed to go on for some time, it is generally agreed that injection should not be attempted. Even then, considering how extremely rare is spontaneous cure in children by sloughing or otherwise, it is a question whether abdominal section may not in many cases be justifiable. In certain urgent conditions the probable result of action has not to be considered so much as the inevitable result of doing nothing. There is seldom hesitation in performing an operation, perhaps a serious one, in the most unfavourable case, say, of ruptured aneurysm or obstructed labour; or in ascribing a fatal ending less to the operation than to the condition which necessitated it. I venture to submit that it is in this class that operations in late stages of acute intussusceptions ought properly to be included.

Kensington, W.

[8] H. S. C. Museum, 843.
[9] Harveian Lectures, 1884. For other cases see THE LANCET, June 4th, 1887; British Medical Journal, June 2nd, 1888.
[10] H. S. C. Museum, 341.
[11] See Holmes' System of Surgery, 1838, vol. ii., pp. 776-7.
[12] See also Lawford Knaggs in THE LANCET of June 11th, 1887.
[13] THE LANCET, Nov. 29th, 1890.
[14] Senn, op. cit., pp. 89, 103, 114
[15] Bryant, op. cit. [16] Westminster Hosp. Reps., vol. v.

A CASE OF PEMPHIGUS VEGETANS (NEUMANN).[1]

BY T. PAGAN LOWE, M.R.C.S.,
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IN vol. lxxii. of the Medical and Chirurgical Transactions Dr. Radcliffe Crocker[2] reports a case of this disease, together with fourteen other similar cases from different quarters. These fourteen cases were all that he was able to find, and only three of them were procured from home sources, the others having been reported on the Continent. Those three were seen by Mr. Jonathan Hutchinson, and were described by him as a new disease characterised by "chronic inflammation of the lips and mouth." They were seen before the disease had made much progress, and they all recovered under treatment by the internal administration of opium. With these three exceptions the remaining cases—including Dr. Crocker's and my own—died. In both these cases the opium treatment was given a fair trial, but they did not come under observation until the disease was far advanced. My patient was a married woman, aged forty-seven, who had always enjoyed excellent health until she was attacked in November, 1889. The throat and mouth were first affected, the disease appearing soon afterwards in the eyelids, axillæ, groins, as well as in other situations. There was nothing of any importance in the family history, and neither she nor her husband had suffered from syphilis. When her case came under my notice in February, 1890, the disease was of three months' standing, and her condition was briefly as follows: Both lips were swollen, everted, and covered with black crusts, which, when detached, exposed a raw bleeding surface beneath. The mucous membrane of the mouth and pharynx

[1] A paper read before the Bristol Medico-Chirurgical Society on March 11th, 1891.
[2] I am much indebted to Dr. Crocker for having kindly supplied me with a copy of his paper which was read before the Royal Medical and Chirurgical Society of London on March 12th, 1889.

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was dry and brown, and covered with numerous excoriations. The eyelids were dotted with small black crusts, especially towards the outer canthi, and there was slight suffusion of the conjunctivæ. The scalp was thickly studded with crusts. Both axillæ, with the adjacent portions of the chest and back, presented an appearance as if the skin had been severely scalded and the epidermis of the blisters had been peeled off; moreover, the same condition was present over the lower portion of the abdomen, extending downwards to the groins and upper portion of the thighs, and over the entire gluteal regions on both sides. The groins presented a very peculiar appearance, the epidermis being raised in thick, moist, irregular masses of leathery consistence, which were firmly adherent to the parts beneath. On the right flank, continuous with the denuded surface already described, was a large inflammatory area extending outwards for several inches, presenting the appearance of cutaneous erysipelas (this subsequently broke down, leaving a raw surface continuous with that already described). Between the toes the skin was thick and leathery, closely resembling that in the groins. Between the fingers the integument was denuded of its epithelium. On the contiguous inner surfaces of both knees were two large raw patches, but only in one or two situations were any typical pemphigoid spots discovered; of these, one was on the middle of the extensor surface of the right forearm, another on the left side of the chest, and a third on the outer side of the left leg about the midde third. The patient's general condition was deplorable. She was unable to turn in bed without suffering severely. Deglutition was difficult and painful, and defecation and micturition produced severe torture. She had not slept for more than two hours altogether during the week preceding my first visit, and had taken very little nourishment; nevertheless, curiously enough, there was little or no emaciation. The treatment adopted was that recommended by Mr. Hutchinson—namely, opium, together with a liberal supply of stimulants and liquid nourishment. Local applications of eucalyptus ointment were freely applied, and constantly changed, but these did not appear to retard the spread of the disease. Dr. Unna's preparation of zinco-gelatine was also used in places. Dr. Goodridge very kindly saw this case with me, and added the weight of his opinion to mine that the disease had no connexion whatever with syphilis.[3] Together with many valuable suggestions as to the conduct of the case he proposed that arsenic should be given in addition to the opium, in view of the probable connexion of the disease with common pemphigus. The case terminated fatally on March 5th, 1890, about three months and a half from its commencement. A necropsy was not obtained.

Bath.

ON THE

ACTION OF METHYL VIOLET (PYOKTANIN), WITH ESPECIAL REFERENCE TO ITS USE IN GONORRHŒA AND IN THE TREATMENT OF ULCERS.

BY FRÉDÉRIC F. BURGHARD, M.S.LOND., F.R.C.S.E.,

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PROFESSOR STILLING, in his article upon the Aniline Dyes as Antiseptics, an abstract of which appeared in THE LANCET of April 18th, remarks that he has never seen irritation follow the application of a 1 in 1000 solution of this drug, either in man or animals. It is in order to show that such a solution is not by any means devoid of irritating properties in a not inconsiderable number of cases that I bring forward some of the results that I have obtained during a six weeks' trial of the drug. The number of cases in which I have used it is forty-five up to the present time; of these, thirty were cases of gonorrhœa in various stages of the disease, thirteen were cases of ulcers, wounds, and boils, and the remaining two were cases of malignant disease too advanced for operation. Of the last two cases I desire to say nothing at present; they will be dealt with, I hope, in a subsequent communication. On the first occasion on which I used the drug it was ordered for seven patients with gonorrhœa, two having had the discharge for three weeks or longer, the others having noticed it for the first time a few days previously. It was prescribed as a 1 in 1000 watery solution, and the men were instructed to retain the fluid in the urethra for a few minutes before allowing it to escape. Three cases in the acute stage were treated in a similar manner on a second occasion. The results were as follows. In the two cases of three weeks' standing the discharge was markedly decreased; but there was much smarting on micturition—a symptom that had not been present previous to the use of the remedy, and which in one of the men amounted to severe pain. In the remaining eight cases the results were all the same. The discharge was increased in amount; there was intense scalding, with much induration and tenderness of the corpus spongiosum. In all the cases these symptoms had come on before the third injection was used. In one out of the eight cases there supervened much œdema of the prepuce, with acute retention of urine, and the dorsal vein of the penis became thrombosed. In the remaining cases treated by this drug the strength of the solution was diminished. At first a 1 in 2000 solution was used. But in several cases that was found to cause much scalding on micturition; it appeared, however, invariably to rapidly diminish the amount of discharge. It has recently been my practice to commence with a 1 in 3000 solution, and cautiously increase the strength of it. And my principal object in writing this has been to advise those who are about to make a trial of pyoktanin in gonorrhœa to begin with a weak solution such as I have indicated, rather than the strong ones recommended by Professor Stilling and others.

With regard to its use in ulcers, it seems to me to be at once very efficacious and peculiarly applicable in out-patient practice. Foul ulcers lose their fetor, and sloughing sores clean up rapidly under its application. If it is used as a powder, either pure (as I prefer to use it) or in combination with another drug, it may be dusted thickly over the ulcer, and thick wool dressings applied outside. Under these circumstances the dressing does not require changing for several days, and that additional aid to sepsis—i.e., dressings performed by the patient—is avoided. The powder should be dusted thickly on at each dressing, and each subsequent dressing should merely consist of dusting more powder over the crusted mass already there. This, in my hands, has given excellent results. I have also found it a valuable aid in cutting short suppuration when dusted into cavities made by opening abscesses. It is far superior to iodoform. In some cases it appears to have a decided local anæsthetic effect, which is very useful when dealing with painful ulcers. With regard to the irritation caused by its injection into the urethra, the explanation given by Professor Stilling can hardly hold good in my cases. The substance was proved by chemical analysis to be quite free from impurities, and when injected subcutaneously in quantities of 1 cc. at a time it caused no irritation, although such a strong solution as 1 in 300 was used. Moreover, the minute traces only that could ever be found in such dilute solutions as 1 in 1000 of such impurities as arsenic, copper, or zinc, would hardly give rise to that great amount of urethral irritation. Indeed, in some of the cases a zinc or copper injection was substituted for the pyoktanin with great advantage. When first injected beneath the skin, I have usually found that the drug causes some little pain, especially if the injection be made into a brawny cancerous spot, but this generally passes off in about half an hour. There is often a slight local induration at the seat of injection for a day or two, but this is not tender. I have, however, lately met with a case where very tender, rapidly growing swellings developed at the seat of puncture. The case was one of very advanced malignant disease of the uterus. The patient had been in the habit of taking large doses of morphia subcutaneously for the relief of extreme pain, but no swellings had developed about the injection punctures. Two pyoktanin injections were given, each containing only a few drops. At each of these two spots swellings developed, and have been steadily increasing up to the present time. They are very tender, but there is no fluctuation to be detected. I have noticed practically no constitutional disturbance even after the injection of large doses. Injections of from 80 to 100 mins. of a 1 in 300 solution may be given without raising the temperature more than a degree, and without any bad results otherwise. This is quite in accordance with the observations of Professors Stilling and Mosetig-Moorhof.

Since the above was written I have obtained a quantity

[3] Before I saw this case the patient had been treated for syphilis without benefit.

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of the drug prepared by Merck of Darmstadt, and recommended by Professor Stilling as being free from impurity. With it, however, I have had much the same experience as I have described above. Solutions as strong as 1 in 1500 almost invariably gave rise to great increase in the scalding on micturition, and some amount of retention of urine was not uncommon. I, therefore, never begin now with a solution stronger than 1 in 3000, and gradually increase it up to 1 in 1500. Used in this way, the drug appears to me to be a useful addition to our list of urethral injections, though by no means unfailing or devoid of irritation in its action.

Weymouth-street, W.

A CASE OF ECTOPIC GESTATION.

By E. H. HOWLETT, F.R.C.S.

SEVERAL cases of successful operation for ectopic gestation have been published in the different medical journals of recent date. To these I beg to be allowed to add one which was under my care last year. On August 17th, 1890, Mr. Davy of Hull requested me to see a case that was under his care. The patient on the previous day had been seen in consultation with Dr. E. O. Daly, who suggested the probability of its being one of tubal pregnancy. The previous history of the case was as follows:—The patient had had four children, the youngest being seven. Four years ago, and again two years since, she suffered from "trouble with the womb," with a purulent discharge from the vagina. The present illness began four weeks ago, when, after lifting some heavy furniture, she felt something in her left side give way. This was followed by severe abdominal pain and bearing-down. As this pain continued, Mr. Davy was called in. He reports that at that time there was a fluctuating mass to be felt behind and to the left of the cervix uteri, displacing it to the right. As the temperature was 101°, he considered it as inflammatory, and treated her by rest. At the end of a fortnight she was allowed to go downstairs, and shortly afterwards was seized with a return of the previous symptoms. As the case did not progress favourably, Dr. E. O. Daly saw her in consultation, and suggested the probable nature of the case. On my first seeing the patient her condition was as follows: Very anæmic, countenance anxious, evidently in considerable pain; pulse rapid and feeble; a slight purulent vaginal discharge; temperature 101°. Thorough examination of the abdomen was impracticable, but a rigid condition of the abdominal muscles in the left iliac region, with dulness on percussion, could be detected; whilst per vaginam the uterus was found pushed over to the right side, with a hard mass in Douglas's pouch and fulness in the site of the left broad ligament. The patient stated her own impression that she was three months pregnant, and in support of this view the breasts contained a slight trace of milk; she also was conscious of a swelling in the left iliac region prior to her first attack. It was decided to give ether and make a more complete examination. This was done, the previous impressions being confirmed; and as the mass behind and to the left of the uterus seemed to contain fluid an aspirator was employed, half a pint of fluid blood being withdrawn. The diagnosis of ectopic gestation with secondary rupture into abdominal cavity having been made, it was arranged that if there were any return of the bleeding, as shown by syncope, the abdomen should be opened. The same evening, about 10 P.M., a summons arrived to proceed at once to the house to operate; therefore, assisted by Dr. Pigeon, I performed the usual operation. The left tube was found to be ruptured in its outer third, and the broad ligament of that side torn into shreds. The ovary was discovered detached, but affixed by adhesions behind the uterus, Douglas's pouch being occupied with two large masses, one probably the placenta, the other partially organised blood-clot. The abdominal cavity contained a large amount of fluid blood. In washing out, the fœtal head was discovered (which, from its size, showed that the pregnancy must have been between the third and fourth months), the rest of the body probably escaping, and being lost amongst the clots of blood scooped out with the hand, or washed out. The patient being now in a desperate condition, the abdomen was closed, with the exception of a drainage-tube, at the lower angle of the wound, she was placed in bed, and the usual restorative methods employed. Had her condition permitted, I would have removed the right tube and ovary, for there was evidence of considerable damage from old inflammation. Recovery was gradual but steady, the tube being removed on the fourth day. At the end of a week the temperature began to rise, and gave some cause for uneasiness till, on the fourteenth day, a small discharge of pus came from the site of the drainage-tube, which relieved her completely. Recovery from this date was rapid, the patient at the present time being in sound health. On looking back, one can only express regret that as soon as the aspirator revealed the nature of the contents of the tumour, the operation was not proceeded with, for I feel that the delay very nearly caused the death of the patient. This being the first case of ruptured tubal pregnancy that I have had under my own care must serve as a slight apology for my hesitancy. The rupture in the first instance was probably into the broad ligament, and, had rest been persevered in, might have resulted in a cure. The second attack of pain (after coming downstairs) points to the date of the rupture into the abdominal cavity. The wonder is that the patient did not then bleed to death. Should it ever be my lot to operate on a case of a similar nature, I would certainly remove the second tube, for I hold that this patient stands a fair chance of repeating the offence, an opinion in which most other operators would concur.

Hull.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF BLOODLETTING IN A PATIENT OF SEVENTY-TWO FOR CEREBRAL CONGESTION.

By JOHN GAY, M.R.C.S. Eng., L.R.C.P. Lond.

DR. OGLE'S article on the use of Bloodletting in suitable cases emboldens me to put forward the following case, which is, I think, of some interest, also, apart from the treatment:—

I was called a short time since to see a lady of seventy-two years of age who had suddenly fallen down in a "fit" a quarter of an hour previously. I found her lying on a bed, the face flushed, almost purple, the left side of the face, left arm and leg twitching strongly, suggestive of intra-ventricular hæmorrhage; but the pupils were equal, and she was not unconscious, but complained of severe headache. Her articulation was difficult, the tongue partaking of the clonic spasms, and rapidly becoming more so. She could not swallow, any attempt causing cough. The pulse was full and irregular. She had passed urine unconsciously. The twitching was rapidly increasing, the articulation becoming more difficult, it being, within a few minutes of my arrival, almost impossible to distinguish any word she tried to say, and she appeared to be gradually lapsing into a comatose condition. I was told that she had suffered from chronic bronchitis, had a "weak" heart, and six months ago had a distinct apoplectic attack, which left her for a time paralysed in the left arm and leg. This had passed off. Feeling that the usual remedies, which were at once applied, were quite inadequate, I decided, with the ready consent of her relatives, to cautiously bleed from the arm. This I did, watching the pulse and general effect, to an ounce and a half or two ounces. Within an hour there was decided lessening of the convulsions, and within four hours she was able to sit up, the headache having almost gone. She made an excellent recovery, with no paralysis. I have ventured to bring forward this case as an eminently "suitable" one for a treatment which is very infrequent, believing that but for it cranial hæmorrhage would have occurred—the congestion being clearly acute and considerable, and hæmorrhage having occurred previously.

Putney, S.W.

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A RARE CASE OF HEPATIC ABSCESS.

BY DR. JOSEPH GABRIEL, C.M.S.,
MEDICAL MISSION, CAIRO, EGYPT.

ON Aug. 29th, 1890, I was called to see Sheik Khalee, aged thirty-two, a native of Hayoum, in Upper Egypt. He was suffering from pain in the right side; his face was pale; tongue coated white; pulse 100; temperature 102°, with irregular fits of chill; respiration short and rapid. According to the patient's statement his illness was of one month's duration, during which he was getting worse every day. On inquiry regarding his habits and his previous illnesses, he said that he had been in the habit of drinking intoxicating liquors, which he stopped five years ago; a year before this date he suffered from intermittent fever, and he did not have dysentery. Physical examination showed that on percussion the pain was increased, and the area of liver dulness was larger than usual, but I could not detect any fluctuation; urine of natural colour. I had no doubt that my patient was suffering from inflammation of the liver, and probably commencing abscess. I gave him a solution of diluted nitro-muriatic acid, sulphate of quinine, and tincture of rhubarb, and applied a blister on his right side. On Sept. 3rd I again visited the patient, and found him very little better. He complained of pain in the right shoulder; his bowels were irregular. I told him to continue the medicine, and prescribed in addition alkaline mineral waters. On the 10th his temperature was almost normal; pain considerably less, but he looked very weak still, and had no appetite. I told him to continue taking the mineral waters, and applied a second blister on his side. On the 20th I visited him again, and found him walking in the garden. Upon examination I found everything normal; he was apparently cured, and enjoyed good health during two months, at the end of which he was suddenly attacked by dyspnœa and a severe cough, and expectorated a material like chocolate in colour. I examined the expectoration, and found it composed of pus cells and broken-down liver tissue. I ordered him a stimulant, tonic medicine, nourishing food, and left the case to nature. He still expectorates, and up to the present time has expectorated about 400 ounces, but has strength sufficient to go about and fulfil his ordinary duties.

Cairo.

THE VALUE OF THE TONGUE AS A RESPIRATOR.

BY J. M. ELBOROUGH SCATLIFF, M.D., M.R.C.S.,
HON. SURGEON BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.

IT is not generally known that nature has provided each of us with the best respirator always at hand in the tongue. For years I have personally relied on this alone, and have recommended this proceeding to many patients. When facing a cold east wind, or breathing quickly the night air, I never quite close my mouth, but purposely keep the lips a trifle parted, and at the same time curl up my tongue towards the roof of my mouth until the tip reaches as far back as the soft palate, and I gently press the arched under surface of the tongue in some degree against the hard palate (a little practice soon makes this easy to do). The cold air then, as it enters the mouth, strikes against the under surface of the tongue, as well as the floor and sides of the mouth, and is made to pass in a somewhat circuitous manner between the sides of the tongue and the buccal mucous membrane to the pharynx, being thereby warmed in its course, so that by the time it reaches the larynx it is nicely rid of chill, and does not excite cough and catarrh. At the same time a certain quantity of air, of course, finds its way through the nasal passages to the chest, and it is obvious that a larger quantity of cold air can be effectually warmed by this method of procedure than by relying on either the nose or mouth alone. That the large blood-supply of the tongue renders this organ an excellent air warmer must be obvious to all.

Brighton.

A Mirror.
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

CASES OF CHOLECYSTOTOMY; REMARKS.

(Under the care of Mr. WILLIAM H. BENNETT.)

THERE are many points of interest in the following cases independently of the development of malignant disease in the first two from which the patients died. This is, however, of considerable importance as regards the relationship of the gall-stones to its causation. Dr. Hilton Fagge[1] wrote: "But the way in which death is most frequently brought about in persons who have gall stones is by the development of cancer of the gall-bladder or the bile-ducts." He mentions twelve cases out of twenty-one of patients suffering from gall-stones who died from cancer, and concludes: "However, if some deeper relation than has yet been found should be proved to exist between the formation of biliary calculi and the development of cancer in the body generally, this would not do away with the clinical significance of the facts stated; it would still remain true that when a patient who has had attacks of biliary colic dies of protracted jaundice the ducts are invariably found to be affected with cancer." This opinion is in favour of earlier operation.

CASE 1. *Painful distension of the gall-bladder; cholecystotomy; removal of impacted stone; complete temporary relief; subsequent death from malignant disease.* (From notes by Mr. C. Cotes, surgical registrar.)—S. W——, a married woman aged forty-nine years, was admitted on Aug. 5th, 1890. She had always been healthy till about three years before, when an attack of jaundice occurred and laid her up for several weeks. A year prior to admission she had suffered from acute pain in the left side of the abdomen. This pain suddenly disappeared, leaving great general weakness. Since that time she had suffered much from constipation, the motions being frequently "almost white." For six months there had been loss of flesh and continual discomfort below the region of the liver. Three weeks before admission she noticed a round lump to the right of the umbilicus. On admission the patient was a spare but not unhealthy-looking woman, complaining of pain in the right hypochondriac region. Urine acid, sp. gr. 1020, trace of albumen; motions clay-coloured and infrequent. On palpation there could be easily felt just below the line of liver dulness, which was not abnormal, a rounded swelling, movable, elastic, rather tender to the touch, and presenting all the characteristics of a distended gall-bladder. On Aug. 14th, medical measures having failed to give relief, Mr. Bennett exposed the tumour by a vertical incision over its most prominent part, stitching the parietal peritoneum to the skin at the edges of the incision. The tumour, which presented freely at the wound, and was obviously the gall-bladder, was emptied by means of a cannula, the parts around having been carefully protected with carbolised sponges. The first part of the contents consisted of a quantity of putty-like material, which was followed by about six ounces of altered bile. The gall-bladder was then freely laid open, drawn well up into the wound, and two gall-stones removed, the second of these being firmly impacted in the duct. After the removal of the impacted stone another hard roundish mass of small size could be felt further on, but after careful examination it was determined not to interfere with this, partly on account of its inaccessible position and partly because the fibrous consistence which it presented to the touch was rather suggestive of its possibly being a malignant nodule. The edges of the wound in the gall-bladder were sutured to the margin of the abdominal incision, a glass drain introduced, and the antiseptic dressings

[1] System of Medicine, vol. ii., p. 504.

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applied as usual. The operation was tedious, the patient being consequently rather collapsed at its termination; she, however, rallied rapidly. During the first forty-eight hours the discharge of bile from the tube was profuse and then rapidly diminished, becoming mucoid in character. The relief of the symptoms was immediate and complete. The patient began to gain flesh, and improved in all respects. By Aug. 22nd the stitches had been removed and the use of the glass tube dispensed with. On August 19th the motions began to assume a more healthy colour, and by the 25th were fairly natural; after this date they again by degrees resumed their clay-like appearance. By Sept. 1st the wound had healed, with the exception of a small sinus at the lower end, which discharged very little and gave no discomfort, being sometimes quite dry and at other times moist. The patient remained *in statu quo* during the greater part of September, suffering no pain or inconvenience.

Early in October she began to lose flesh, and rapidly increasing jaundice set in. She still complained of no pain, but on examination a well-defined lump was felt behind the scar of the incision, the lower part of which was beginning to open up again. This mass slowly increased in size, the patient becoming weaker and more emaciated. She ultimately died about the middle of November from exhaustion and jaundice, the result of a large malignant growth, occupying the upper part of the right side of the abdomen, which, although no post-mortem examination was obtainable, it is fair to assume had its commencement in the fibrous nodule felt deep down at the time of operation.

CASE 2. *Biliary colic; distended gall-bladder; cholecystotomy; malignant disease; temporary improvement.* (From notes by Mr. Cotes.)—A. T——, a married woman aged fifty-five, was admitted on Nov. 20th, 1890. With the exception of rheumatic fever twenty-three years previously she had never suffered from any illness, having been remarkably strong and well till three months before her admission into the hospital. At that time she began to be troubled greatly by constipation, the motions being hard and very light in colour. Shortly after this several slight attacks of pain occurred about the right side of the umbilicus. On Nov. 8th she was suddenly seized with very acute pain just below the liver region, which soon became unbearable, resembling "bad labour pain." After violent vomiting the pain disappeared suddenly, leaving her much exhausted, and, she thought, slightly jaundiced. For two months there had been loss of flesh. Fourteen days before her admission a hard lump was noticed in the abdomen on the right side, and had gradually been increasing in size. The family history was good. On admission the patient was emaciated, rather anxious-looking, and her complexion inclined to sallowness. She complained of pain over the upper part of the abdomen, with occasional nausea. Temperature 100·2°; pulse rather quick; tongue coated and dryish. To the right of the middle line, two inches below the liver margin, but apparently separated from it by a subresonant area, a hard rounded mass could be felt. This was irregular in outline on its inner side, movable, elastic, semi-fluctuating, and tender upon slight pressure. By Nov. 27th the tumour was distinctly larger and the patient's condition less satisfactory. It was therefore decided to explore the tumour, which, although its nature was doubtful, appeared to be probably a distended gall-bladder, associated with malignant disease, and it was thought that the pain might at all events be relieved by emptying the distended gall-bladder, whilst if by chance malignant disease were not the cause of the condition a permanent cure might be effected. The mass was exposed by a vertical incision over its most prominent part, the parietal peritoneum being, in accordance with Mr. Bennett's custom, stitched to the skin. As, when exposed, the tumour presented the appearance of a distended gall-bladder, it was emptied by means of an aspirator, a quantity of oily, semi-opaque material, not in any way like bile, coming away. It was also noticed that the cyst did not collapse whilst being emptied, as usually happens with a gall-bladder not adherent to surrounding structures. The tumour was then incised, with the ordinary precautions, and found to consist of a large cavity with walls about half an inch in thickness, from the inner surface of which projected a number of pedunculated bodies not unlike masses of lymph. No gall-stones were detected and no bile was seen. The edges of the incision in the cyst were attached to the margin of the abdominal wound, a drainage-tube inserted, and dressings applied in the usual way.

The patient was not much depressed by the operation, and progressed perfectly, being free from all pain till Dec. 7th, when, the stitches having been removed, the drainage-tube was about to be dispensed with, as there had been nothing but a little serous discharge since the operation. Upon this date, after a slight feeling of discomfort, a sudden profuse discharge of odourless watery fluid occurred which saturated the dressings. This continued, causing some irritation of the skin till Dec. 23rd, when the watery discharge gave place to reddened material, which Dr. Delépine reported upon as follows:—"Composed of serum and pus containing a pretty large number of bacteria; in the midst of the fluid there are small masses of cancerous epithelium. The tumour is evidently an epithelioma of the intestine or of one of the ducts of some gland." The patient still improved up to Dec. 30th, the wound having nearly closed and the discharge greatly diminished. From this date all improvement ceased, the wound showed no further inclination to heal, a large mass appeared below and to the inner side, and slowly increased in size.

On Jan 20th, 1891, the discharge became very offensive, and was partly composed of intestinal contents. The patient gradually wasted, the mass continued to increase, and the discharge from the sinus became more feculent. She left the hospital in February, but returned again in March, and died in April.

At the post-mortem examination the fistula in the abdominal parietes was found to pass into a large cavity, the walls of which were composed of new growth (large-celled sarcoma). Between this cavity and the hepatic flexure of the colon was a free communication. The new growth forming the walls of the cavity passed into the depression on the liver for the gall-bladder, and entirely replaced the latter structure. The common bile-duct could be detected surrounded by the disease which passed down to the biliary papilla in the duodenum. No gall-stones were found either in the growth cavity or bile-duct. Scattered about the peritoneum and mesentery were numerous secondary growths.

CASE 3 (under the care of Dr. Ewart and Mr. Bennett). *Acute biliary colic; cholecystotomy on apparently moribund patient; recovery.* (From notes by Dr. Lee Dickinson, medical registrar.)—H. R——, a man aged forty-two, was admitted under the care of Dr. Ewart on Feb. 16th, 1891, with the following history. Fourteen years previously he was in another hospital on account of jaundice and hepatic colic. After this he suffered occasionally from slight colic, but had no severe attack. Eight weeks before his admission into St. George's Hospital there was some jaundice and great constipation. Five weeks later a very severe attack of colic occurred, and the jaundice became more marked. On Feb. 3rd there was a rigor, and the same evening a tender swelling was found by his medical attendant in connexion with the right lobe of the liver. This swelling rapidly increased in size during the succeeding two days. Severe rigors followed on Feb. 13th, 14th, and 15th. On admission the patient was emaciated and anxious looking. Tongue furred; temperature normal; pulse small. On the right side of the abdomen there was dulness, with solidity and tenderness continuous with liver, and extending down to the umbilicus. No fluctuation was detected. On Feb. 19th the patient suffered from a severe attack of biliary colic.

Feb. 20th.—The colic continued and was much more severe. The patient lay with legs flexed on abdomen. There was occasional vomiting.

23rd.—More colic; frequent vomiting. Pulse very small; temperature 101°. A well-defined swelling was now easily felt, elastic and extremely tender, extending from the liver to a point about two inches to the right and below the umbilicus. Mr. Bennett saw the case in consultation with Dr. Ewart, and it was decided to lay open the swelling, which was thought to be the distended gall-bladder, although the condition of the patient seemed too desperate to offer much prospect of effectual relief.

24th.—Mr. Bennett performed cholecystotomy in the usual manner. The operation was simplified by the existence of recent adhesions between the gall-bladder and abdominal wall. A large quantity of greenish bile was evacuated; several small concretions and one gall-stone were removed. The patient almost died on the table, and the operation had to be terminated as rapidly as possible, a large drainage-tube being left in the wound.

25th.—Great prostration, but no vomiting and no pain. The legs, which had been continually flexed on the abdomen, were now extended. Very profuse discharge of

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bile from the tube. Distinct jaundice. After this date the patient rapidly rallied, the temperature fell to normal, the jaundice disappeared, and the vomiting did not recur. Obstinate constipation, however, ensued, no action of the bowels taking place till March 4th, when two putty-like motions were passed.

The discharge of bile from the wound was profuse for four days after the operation, then rapidly diminished, being entirely replaced by a little clear fluid by March 3rd. On March 11th there was a slight attack of colic, and a small gall-stone about the size of a coffee berry was expelled from the wound. For the next two days there was occasional pain, and two more small stones came from the wound, being followed by a free discharge of bile. These attacks of pain recurred from time to time with diminishing severity till March 25th, after which they entirely ceased. No further symptoms occurred, and the man left the hospital on April 18th, fat and well-looking. All jaundice had disappeared. There was still rather troublesome constipation, but the motions were healthy in aspect. The wound had healed, with the exception of a small sinus at the lower end, from which a little serous discharge oozed.

Remarks by Mr. WILLIAM H. BENNETT.—The operation of cholecystotomy may fairly be considered so successful a method of treating symptoms arising from mere impaction of gall-stones that it is hardly necessary to make a point of recording cases of that kind. There is, however, another class of case in which the treatment, although equally justifiable, is followed by results which are either less perfect in themselves, or are obtained only after considerable interruption of the convalescence. It is to this class that the cases described above belong. They are recorded because one of them shows the strength of the operation as a means of saving life under apparently hopeless conditions, whilst the other two well demonstrate how much the treatment is weakened by the difficulty of diagnosis which is met with in many of these cases. The diagnosis of a distended gall-bladder is, as a rule, not difficult, but at the same time it is frequently impossible to foretell with any degree of certainty the cause of the distension. The cause may, it is true, be generally the impaction of a gall-stone, but whether this impaction is associated with malignant disease it seems impossible to tell in the early stage. It is also clear that patients may suffer from symptoms of biliary colic with distended gall-bladder, and yet when the gall-bladder is opened no stone may be found, the obstruction being apparently due to a small nodule of malignant disease about the duct. Such being the case, it is, I think, well to be cautious in the first instance in promising too much from the treatment. The operation should be regarded in the majority of cases as a purely exploratory proceeding, which, in the hands of those conversant with its details, is almost without risk. It is only by regarding the treatment in this light that it is to be saved from risk of some discredit, for it must be admitted that the results, although at first beneficial, are sometimes ultimately disappointing. In Case 1 nothing could have been more precise than the symptoms of distension from impacted stone, a diagnosis originally made and subsequently verified at the operation. There was, however, no indication of the coexistence of malignant disease, excepting perhaps the loss of flesh, a symptom seen in most cases of trouble produced by impacted stones, quite independently of any complication. That the operation was justifiable there is no doubt, for it relieved all pain, allowed the patient to gain flesh and strength, and certainly prolonged her life to some slight extent. The association of small nodules of malignant disease with impacted gall-stone is probably more common than it is ordinarily supposed to be. The relation of these conditions to each other is of great interest. Does the impacted stone cause the irritation which produces the new growth, or is the stone merely arrested by the malignant mass? It is obviously very difficult, if not impossible, to determine this point with any approach to certainty; but there is at all events sufficient probability that the impaction of the gall-stone precedes the onset of the malignant disease to make it justifiable, from a surgical point of view, to consider the desirability of opening a gall-bladder if chronically distended, although no symptom worth mentioning may have arisen, with a view to the removal of a source of irritation which, if left alone, may ultimately tend to excite the growth of malignant disease. In the second case the diagnosis was altogether more doubtful. Clear evidence of distension of the gall-bladder existed, but there was also a strong suggestion of malignancy. The operation revealed a very unusual condition of things, and the nature of the case was by no means plain. The necropsy showed pretty distinctly that the case was originally one of primary cancer of the gall-bladder—a very rare affection. Under these circumstances the plan which I followed, of draining the malignant gall-bladder, may be, perhaps, open to adverse criticism, since it is possible that the case would have done equally well if the incisions had been closed without drainage. On the whole, considering the doubtful character of the disease, the use of the drainage-tube was, I think, right; especially as the symptoms from which the patient suffered were apparently entirely due to the distension of the cyst. It was therefore probable that drainage would relieve the discomfort by preventing reaccumulation of the fluid. It may also be thought that the open wound in the parietes contributed somewhat to the formation of the fæcal fistula, but the aspect of affairs post mortem led me to conclude that this did not materially affect the case. Taking all the circumstances into consideration, I should in a similar case be inclined to follow the same course. The third case is an admirable example of the actual saving of life by this method of treatment. As will have been seen from the notes of the case, the patient's state was apparently hopeless; so much so, indeed, that I was compelled, in order to remove him from the table alive, to complete the operation before I could properly explore the deeper parts after the extraction of the first stone. The immediate benefit which followed the treatment was certainly extraordinary. The haste with which the operation had to be terminated necessarily rendered it incomplete. The result of this was the tedious convalescence caused by the spontaneous escape of the second stone and small concretions, which I have no doubt could have been easily removed at the operation if the state of the patient had been otherwise than it was. The small sinus existing when the man was last seen seemed likely to heal of its own accord; if it should not do so, I presume that its closure by operation will not be difficult.

LONDON COUNTY ASYLUM, HANWELL.

A CASE OF FATAL INJURY TO THE PERICARDIUM AND HEART; NECROPSY; REMARKS.

(Under the care of Mr. J. PEEKE RICHARDS, Medical Superintendent of the Female Department.)

WOUNDS of the cardiac region always present features of great interest, and the following case is one which presents unusual features. The patient, who was a lunatic, was unable to give an account of herself. This made the history very difficult to obtain, and the diagnosis much more difficult than it would have been had there been an account of the occurrence such as a sane person would have given. It will be observed that the patient did not die in consequence of the direct injury to the heart, but as a secondary result of ulceration into the coronary artery and hæmorrhage into the pericardium. Death from wound or injury to the heart may take place as a result of shock, of hæmorrhage into the pericardium, from anæmia of the lungs and brain, or from inflammation of the heart or pericardium. A case very similar to the following was mentioned by Mr. Croft[1] in the discussion on Mr. Callender's case, read before the Medico-Chirurgical Society. A boy who stated that a needle had been run into his chest, died of pericarditis, and it was found at the necropsy that the broken part had projected into the pericardium, and caused pericarditis, having rubbed against the heart in its movements. Gross had possession of a pericardium with a needle two inches long encysted, giving evidence of its having been there for a long time without causing serious injury. Several cases (nine out of thirteen) of punctured wounds of pericardium and heart are mentioned by Mr. Callender in his paper,[2] caused by the penetration of needles. In some of them the foreign body was found only at the necropsy; occasionally the history was unknown. In his case, where the needle was felt and removed, the patient recovered. The cases to which he alludes were chiefly taken from the tables of Fischer, all of which could not be verified. Since Mr. Callender's table Wyman[3] has brought

[1] THE LANCET, vol. i. 1873, p. 272.
[2] Ibid., Trans. Med. Chir. Soc., 1873
[3] Boston Med. and Surg. Jour., vol. ii., 1889.

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forward a case somewhat similar in many respects to the case of Dr. Richards—that of a child who had a needle in the chest, which was probably embedded to some extent in the cardiac wall, and was removed with success. More than one instance of recovery after the removal of a needle which had penetrated is recorded, but in most the history has been clear, and there has been something locally to guide the operator. For the following notes we are indebted to Mr. J. Cautley Holderness.

The following case presents several interesting features apart from its surgical aspects.

A. A——, aged forty-one, was admitted into the London County Asylum, Hanwell, April 14th, 1888, suffering from chronic mania with delusions; she was very irrational and irrelevant in her replies to questions, occasionally excited and impulsive, but at other times industrious (would occupy herself doing needlework &c.). Her appearance was never very robust, but she enjoyed good health. She appeared to be in her usual health until April 7th, 1891, when she was seized with an attack of retching, and vomited a little. As she was menstruating at the time her indisposition was attributed to this circumstance. She was ordered to rest in bed. She remained in bed until the 11th, taking her food well, without any recurrence of the retching, and as she appeared to be better was ordered up again. After being up about three hours she had another attack of retching. Her face was flushed, and breathing a little hurried. Pulse quick and feeble; tongue slightly coated; temperature, as far as could be judged by the sense of touch, did not seem much elevated. The use of the thermometer was out of the question, on account of her extremely restless and excited state. She was at once ordered to bed. Owing to her mental state no assistance could be got in forming a diagnosis, as she refused to allow a physical examination to be made. She took her food fairly well during the day, but was restless and very abusive when anyone approached or attempted to do anything for her. On the morning of the 12th she appeared much worse; her face was slightly cyanotic and wore an anxious expression. Respiration shallow and hurried. For the first time since the commencement of her illness she allowed a physical examination to be made. Extensive dulness was found in the cardiac area, extending upwards almost to the left clavicle. Heart sounds were feeble, and indistinct respiratory murmur, loud and harsh; no râles could be detected. She continued in this state until 10.30 P.M., when the night nurse noticed a change for the worse. She was then in a state of collapse, suffering from severe dyspnœa. Her face, which wore an expression of intense anxiety, with wildly staring eyes, was markedly cyanotic and bathed in clammy perspiration. She was tossing about in a wild and excited manner. Radial pulse imperceptible. Stimulants were at once procured, but she refused to take any, and resisted when an attempt was made to give her some by means of a feeder. She died at 11.15 P.M., apparently from failure of the heart's action.

Necropsy, thirty-two hours after death. — The pericardium was thickened, more especially on the right side, and was distended by a large quantity of dark-coloured serous fluid. Lying at the most dependent part was a recent blood-clot about half an ounce in weight, and several small clots were floating in the fluid. On the front of the right auricle immediately above the auricular-ventricular furrow was a shallow, ragged ulcer (the size of a threepenny piece), the floor of which was covered with recent blood-clot. Embedded in the thickened pericardium opposite the site of this ulcer was the pointed end of a darning needle 1¼ in. long, the point being directed towards the heart and projecting a short distance into the sac of the pericardium. There were several patches of pericardial inflammation around the site of the needle. The ulcer had doubtlessly been formed by the heart rubbing against the needle, ultimately resulting in the erosion of a small branch of the coronary artery, and thus giving rise to the hæmorrhage into the pericardial sac which hastened the fatal termination of the case. The left side of the heart was empty, the right being filled with dark fluid blood. The other organs were healthy, but much congested. On Feb. 28th the patient was sitting at the table in the ward doing needlework. The nurse asked her for it, whereupon the patient threw it upon the table, and while the nurse was picking it up the patient seized her by the wrist. The nurse immediately called another nurse to her assistance, and while they were disengaging the patient's hands the nurse felt a sharp pain over the back of her wrist, which she attributed to a sprain, being quite unaware that anything had entered it. Her wrist continued very stiff and painful until April 8th, when the back of the hand became swollen and inflamed, and something projected under the skin, which on being extracted turned out to be the eye end of a darning needle, three-quarters of an inch long. This, when compared with the piece found in the patient's pericardium, appeared to be part of the same needle; although on comparing the two pieces with a darning needle of the same pattern (the only pattern used in the institution), about § in. was found to be wanting to complete the needle. As it is known that the patient was in the habit of putting needles in the front of her dress whilst at work, it is extremely probable that while freeing the nurse's wrist from the patient's grasp her hand came into contact with the patient's chest, and the eye end of the needle entering the back of the wrist caused the sharp pain she felt; the pointed end at the same time entering the patient's chest, the needle then breaking into three pieces, the middle piece being lost.

Remarks.—A point of great interest in this case, and one which renders it probably unique, is the strange way in which the time and manner of entrance of the needle into the body can be fixed, occurring as it did in a person whose mental condition was such that she never gave any indication that such an accident had happened. The matter would have remained enshrouded in mystery had it not been for the strong circumstantial evidence afforded by the injury to the nurse's wrist. This throws considerable light upon the case. Another interesting feature is the length of time the needle was evidently in close proximity to most vital parts without giving rise to any urgent symptoms. The exact point of entrance and the course it took to reach its final position are matters of pure speculation, as there was nothing in the post-mortem examination to throw any light upon this point. That the first symptom noted—viz., retching—was due to irritation of some branch of the pneumogastric is extremely probable. The case also indicates clearly the difficulties one has to contend against in the treatment of the insane.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cystic Tumours of Jaw.—Aural Exostosis.—Lipoma of Spermatic Cord, with Hernia.—Ulcerative Colitis.—Infantile Syphilitic Caries of Calvaria.—Papilloma of Ary-epiglottidean Fold.—Myocarditis.—Psorospermia Cultivations and Inoculations.—Leprosy.—Cicatricial Contraction of Stomach.

THE annual general meeting of this Society was held on May 19th, the President, Dr. W. H. Dickinson, in the chair.

The report of the Morbid Growths Committee on the various specimens submitted to them was read; their conclusions were in the main confirmatory of the opinions expressed by the exhibitors of the specimens.

Mr. H. BERTRAM ROBINSON described a specimen removed from a man aged forty-nine, by Mr. Sydney Jones, on Oct. 18th, 1889. Ten weeks before admission he had a severe blow on the right side of the lower jaw, causing a little bleeding into the mouth, but no wound of the skin. This was followed in three weeks by pain and swelling. On admission there was a tumour the size of an orange on the outside and below the lower jaw fixed to the bone, and felt from within the mouth to be wrapping round its lower border. It extended from just outside the symphysis to the anterior border of the masseter. The skin was adherent and slightly reddened. No enlarged glands. On section it was rounded, with a fairly well-defined edge; the bone was not expanded, but its outer surface was eroded by the growth. It had a fibrous appearance, and scattered through it were small cysts. Microscopically, there was seen to be a fibrous stroma with extensive round-celled infiltration; embedded in this were epithelial masses arranged in a lobulated manner. On the outer side of these masses the epithelium was columnar, but in the centre the cells became spheroidal, and in some places vacuolated. There were no epithelial nests to be seen. The soft

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tissue in the interior of the bone showed no growth at all, only a little inflammatory round-celled infiltration, and from this, coupled with the non-expansion of bone, it could be said definitely its origin was not central. The tumour strictly was not one "of the lower jaw," but "involving the lower jaw." Of a similar tumour he could find no record in pathological literature, but it bore some likeness histologically to some of the cystic jaw tumours described by Mr. Eve in his lectures at the Royal College of Surgeons in 1882. As to the origin of the growth, it must have started from one of the skin appendages or from some epithelial remnant in relation with the first branchial bar. If from the latter, which seemed the more probable, there was good reason for its resemblance to certain cystic jaw tumours which might arise from similar rudiments embedded in the maxilla; and, again, it was known that curious cystic epitheliomata arise in the neck lower down whose origin could only be associated with similar remnants in relation with the lower arches and clefts.

Mr. ROBINSON also described a Spheroidal-celled Carcinoma of Upper Jaw which was removed from a man aged fifty-five, by Mr. Clutton, and to him he was indebted for bringing the case before the Society. Two years before admission the patient first noticed a little lump on the left superior maxilla, just external to the canine fossa. There was from time to time discharge from the left nostril, and then the tumour disappeared. For the last four or five months before admission the swelling remained permanently, and continued to increase in size, and became painful at night. Five weeks before admission he noticed another lump, the size of a horse bean, at the lower margin of the left orbit. This had increased rapidly, and almost joined the primary tumour. The discharge from the nostril, which had ceased, reappeared during the last four or five days. There was a small gland below the jaw, which had been present almost the same time as the first swelling. On admission there was marked fulness over the left superior maxilla, especially below the left orbit, where there was a localised soft elastic swelling attached to the bone, but the skin was free over it. Below this was general swelling over the maxilla, quite hard and resistant. The soft elastic growth extended to the posterior extremity of the alveolar margin. No enlargement of alveolus or depression of palate, no bulging between cheek and jaw, no prominence of left eye. No obstruction of left nostril, but some obstruction of lacrymal duct. The gland below the jaw was hard, but freely movable. At the operation the growth was found to have arisen within the antrum, and to have absorbed its anterior bony wall; the orbital surface of the superior maxilla was involved, and it extended also into the nostril, and backwards into the spheno-maxillary fossa. The growth was fairly firm, and of a pale grey colour, and it was apparently all removed. The gland below the jaw was removed a few days later. Microscopically, the growth was seen to be epithelial, varying considerably in structure. The epithelium was arranged in alveoli, and of a spheroidal shape; in some of the alveoli the cells were identical in shape throughout, with well-marked nuclei, while in others they were very swollen and irregular in size, with nuclei not so well marked, and many of them vacuolated. There was no evidence of nest formation. The connective tissue showed extensive round-celled infiltration. The gland also showed that it was invaded by typical spheroidal carcinoma. The type of this tumour was that of a spheroidal carcinoma—a very rare, if not previously undescribed, tumour in this region. Although suggesting at the operation a columnar-celled growth, there was no trace in any of the sections of a columnar epithelium at the periphery of the cell masses. There could be little doubt that the growth started in the mucous membrane of the antrum; but, instead of growing from the surface epithelium, it had arisen from the acini of the secreting glands. Recurrence of this growth had since taken place.

Mr. BALLANCE showed a large Aural Exostosis which he had removed from the temporal bone of a married woman aged twenty-four. Since the age of twelve there had been a history of ear trouble, which had been worse during the last three years. Last October a mucous polypus was found projecting into the concha, and there was a solid growth blocking the tympanic canal, except at the anterior and upper part. It was of osteomatous nature, and measured three-quarters of an inch in diameter. The father had had a growth removed from the ear.

Mr. ROUGHTON showed a specimen of Lipoma of Spermatic Cord with Hernial Sac, taken from a dissecting-room subject. It exhibited a small inguinal hernia in front of and adherent, to which was a small lipoma continuous with the subperitoneal fat near the internal abdominal ring by a thin pedicle. He suggested that the lipoma had arisen in the subperitoneal fat and travelled down the cord, drawing the hernial sac after it.—The PRESIDENT asked if there was any evidence that the fat was produced by irritation from the presence of the hernia.—Mr. STEPHEN PAGET had seen a similar specimen, but in that the sac was much larger than the lipoma, and reached down into the scrotum. He failed to see how the fatty tumour could have dragged down such a sac.—Dr. ROLLESTON said that a specimen of lipoma in connexion with hernial sac was in the museum of St. George's Hospital.—Mr. ROUGHTON, in reply, expressed his conviction that the lipoma preceded and was the cause of the hernial sac, and he referred to a paper strongly upholding this view, published by Mr. Jonathan Hutchinson, jun., in an earlier volume of the Transactions.

Dr. SEYMOUR SHARKEY read a paper on Ulcerative Colitis, from the notes of Dr. C. D. Green, with whom he had seen the case. The patient was a woman aged thirty-three years, married, and had had one child, which was six years old. She was first seen by Dr. Sharkey in January, 1890, when she had had a longitudinal fissure in the dorsum of the tongue, which took several weeks to heal, and iodide of potash had no effect upon it. There was no evidence of syphilis. On Sept. 16th, 1890, she complained of diarrhœa and abdominal pain, which did not yield to treatment, but got steadily worse. The motions were mostly finely divided and dark in colour, with an occasional mixture of blood. There was occasional vomiting. He took the temperature often, but not every day, and only on one occasion was it at all raised, being 101°. The diarrhœa was constant, and uninfluenced by diet. The patient had an attack of erythema nodosum involving both arms and both legs, which ran an ordinary course. She gradually and slowly emaciated, and died exhausted in about ten weeks from the commencement of her illness. There had been abdominal pain and tenderness for some days prior to death. At the necropsy he found the whole length of the large intestine, from the cæcum to the termination of the rectum, extensively ulcerated, and so thin that it was difficult to remove it from the body without tearing it. Two perforations had taken place, one in the cæcum and the other in the sigmoid flexure. The ulcers were for the most part confluent, but here and there were some more isolated, the edges of which were well defined. In one or two places a slough could be seen. Only one ulcer was found in the small intestine, rather high up. The rest of the organs were healthy. In the large intestine it might be seen that the inflammation and ulceration had made great havoc. The greater part of the mucous membrane was gone. Here and there irregular islands remained, but over the greater portion of the bowel the muscular coat was exposed, and the surface as a whole was pretty smooth. One or two perforations were seen. Two other very similar cases were described, in which profuse diarrhœa, with blood and mucus in the motions, terminated fatally, and similar ulceration of the large intestine was found. In one case, very high fever was present all through the course of the disease. Such cases had not received much attention, and were not as a rule taken into consideration when an obscure case of diarrhœa presented itself clinically. Mild cases perhaps not infrequently recovered, but such as had been described seemed to terminate regularly in death. It was not improbable that several causes might be capable of giving rise to ulcerative colitis, and it was not certain that in some, at any rate, the same cause was not in operation which produced true dysentery.—The PRESIDENT could not see in what way the two cases last related differed from dysentery, many sporadic cases of which had come under his notice in London.—Mr. H. B. ROBINSON said he showed a card specimen of a very marked instance of this disease, taken from a man aged sixty-six, who had suffered from excessive melæna. He was the subject of chronic renal disease, and left inguinal colotomy gave temporary relief. At the necropsy a large ulcer was found in the sigmoid colon, and several small punched out ones in the descending colon.—Dr. ALLCHIN had seen several cases. He did not regard them as truly dysenteric, for the symptoms and the character of the stools were different. The cases usually occurred in constipated women, and were catarrhal in character, and there were distinct areas of tenderness along the course of the colon.

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The symptoms were of short duration compared with the severity of the lesions found post mortem.—Dr. GOODALL had seen two cases at Guy's Hospital. One, in a woman of thirty, had existed several months, and the other, in a woman of twenty-five, presented symptoms suggestive of typhoid fever. He dwelt on the importance of rectal examination, which revealed the presence of ulceration in both the cases related.—Dr. SHARKEY, in reply, said that the objections to regarding these cases as true dysentery seemed to be clinical rather than anatomical. Though all the cases he had described occurred in women, he pointed out that Dr. Hale White regarded the male sex as most frequently affected.

Dr. PAYNE showed a specimen of Syphilitic Caries of the Calvaria in an infant admitted into St. Thomas's Hospital when nine months old, suffering from diarrhœa and stoppage of the nose with "snuffles." The symptoms and general aspect led to the diagnosis of congenital syphilis, though there was no eruption, and a course of mercury and chalk in small doses was given. Under this treatment the snuffles subsided, and the general condition improved. However, while under observation the bones of the skull, which were natural on admission, were noticed to become irregular, with deep depressions; but there was no external sign of inflammation. The child died in a month with symptoms of bronchitis. On post-mortem examination, the cranial bones were found irregularly excavated on the upper surface under the periosteum, which was intact, with an appearance like that of syphilitic caries in the adult, being quite unlike the usual craniotabes of congenital syphilis. The nasal bones were unaffected. Caries of this kind seemed to be, if known at all in congenital syphilis, excessively rare.

Dr. SEMON and Mr. SHATTOCK showed a Laryngeal Growth which had been removed by the former with the galvano-caustic snare from the left Ary-epiglottidean Fold of a gentleman aged forty-four. The patient had been sent to Dr. Semon by Dr. Malbranc of Naples with the diagnosis of angioma of the larynx, which had been corroborated by Professor Massei. On examination a tumour was seen of the size of a small mulberry, springing apparently from the left pyriform sinus, and overhanging the entire left posterior part of the larynx. It was mostly bluish, in part bluish-red, somewhat lobulated, and had a smooth surface, so that its appearance seemed to justify this diagnosis. After removal the tumour entirely gave the impression of an angioma, but on microscopic examination turned out to be a genuine papilloma, completely encased in a shell of partly recent, partly organised blood-clot. The interesting features about the case were (1) the unusual situation of the papilloma, (2) the occurrence of spontaneous hæmorrhage, which in laryngeal papillomata was practically unknown, and, (3) above all, the formation of a complete blood shell around the real tumour, which entirely concealed the true nature of the latter. The authors were not aware that a similar case had ever been reported.

Dr. ROLLESTON showed a Heart in which there were marked Interstitial Myocarditis and Fatty Infiltration limited to the right auricle and ventricle. The pericardium was very firmly adherent indeed all over the right side of the heart; over the left side the adhesions were less firm and not so thick. The heart weighed twenty ounces, the right ventricle was dilated and hypertrophied, its endocardial lining was covered with a thin film of adherent and decolourised ante-mortem clot. The tricuspid orifice was widely dilated; the segments of the tricuspid and pulmonary valves were normal. There were thickening and slight stenosis of the mitral valve and hypertrophy of the left ventricle. The myocardium of the left ventricle was healthy, that of the right side was a pale yellow colour, non-resistant and brittle. On microscopic examination there was marked fatty infiltration, there was fibrous increase spreading in from the pericardial surface which separated and compressed the muscle fibres of the heart wall. The muscular fibres were granular, and in many, though not in all, had lost their transverse striation. The limitation of the change in the myocardium seemed to depend on the fact that the adhesion and thickening of the pericardial layers was far more marked over the right, or anterior aspect of the heart, than on the left or posterior surface. The intensity of the pericardial inflammation, which was rheumatic in origin, was propagated to the myocardium. The greater intensity of the adhesions over the front of the heart was probably due to the effusion which accompanied the rheumatic pericarditis collecting by gravity, the patient being horizontal behind the heart, and thus separating and preventing early adhesions of the inflamed pericardial surfaces there, while they were allowed to unite and form adhesions anteriorly.

Dr. DELÉPINE showed some cultivations of Psorospermia. He said that bodies resembling psorospermia had been observed by him several times during the last two years in tumours of the skin and mucous membranes, and of the liver, obtained from various human subjects. These bodies were identical with those described by Darier and those exhibited lately at the Medico-Chirurgical Society by Mr. Bowlby and Mr. Hutchinson, jun. The entire absence of definite characters or reactions rendered it impossible at the present time to speak positively of the nature of these psorospermoid cells. This did not necessarily prove that they were not psorospermia. In order to solve, if possible, this difficulty, and to prepare the ground for inoculation experiments, the author had for the last few months cultivated psorospermia obtained from the rabbit's liver, and had succeeded in following their development through various stages. Interlamillar films of distilled water, serum, nutrient gelatine, and other fluids were inoculated. By this method the changes occurring in individual psorospermia could be followed for weeks. Briefly speaking, the following changes had been observed. In nutrient albuminous fluid subdivision of the protoplasmic contents of the encapsulated bodies occurred rapidly, in less than a week. At the end of that time about half of the parasites under observation contained two or four oval bodies. These so-called psorospermia or spores did not retain long their oval or round shape, but soon assumed an elongated form, and showed slow amœboid motions, becoming in turn cylindrical, pyriform, fusiform, oval, and round. In most cases not more than four of these bodies were formed, but occasionally five, six, and perhaps more, were observed. They became in time very slender, and seemed to coalesce so as to form a long coiled filament within the capsule. They sometimes assumed the hooked form described by Eimer and Schneider; but this was not universal. Small round bodies highly refracting light and resembling much blood-corpuscles in shape were found in all the vermiform bodies (sometimes one, generally two or more). These bodies were also found on the surface of many organisms, as if in the act of passing through the capsule. Their escape, however, was not actually observed. Similar bodies also became more and more numerous in the surrounding nutrient medium. At the end of a month some of these small protoplasmic masses had nearly doubled in size, others were elongated, and not a few showed evidences of multiplication. These small bodies seemed to show no evidence of structure, but one end was often brighter than the other. It was therefore possible to observe very definite changes in psorospermia cultivated in suitable media. If by the same methods similar changes could be demonstrated in the bodies observed in tumours and in Paget's disease, the nature of these bodies would cease to be doubtful.

Drs. DELÉPINE and SLATER related a case of Leprosy. They were indebted to Dr. Cavafy for permission to publish some observations made by them on the case, which was under his care in 1889. These observations consisted of: 1. Numerous attempts to cultivate the bacillus made independently at two different periods during the life of the patient, and on both occasions with negative results. 2. Attempts to demonstrate the bacillus in the blood and lymph obtained from tubercles in various stages and in the exudation from ulcers. These also gave negative results, except that in a small ulcer of the ear bacilli were found abundantly in the pus. 3. Repeated examinations of the sputa during the last year of the patient's life. The sputa contained a very large number of bacilli which could not be differentiated positively from the bacillus tuberculosis, but presented peculiarities in number and distribution. These were not, however, sufficiently marked to justify a definite diagnosis. 4. Examinations of the lesions found in various organs after death. The lungs being extensively diseased, this case seemed to afford a good opportunity to investigate the question whether the lung lesions were tubercular or leprous. The existence of a leprous phthisis had been doubted by many observers. Inoculations being out of the question in this case, for several obvious reasons, the investigation was necessarily confined to a study of the properties of the bacilli, of their distribution in the tissues, and of the nature of the lesions. The various staining methods given for differentiating the bacillus of leprosy from that of tuber-

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culosis were found to be untrustworthy, because—(1) All the methods which successfully stained the bacillus of leprosy were found to stain undoubted tubercle bacilli (an account of this research would be found in a paper by Dr. Slater); (2) because the same bacillus varied in staining reaction according to the organ from which it was obtained. The study of the distribution of the bacilli and the nature of the lung lesions showed numerous differences from ordinary tubercular phthisis, and many points of analogy with the appearances found in organs other than the lungs. The authors concluded, with Bonome and Arning, that a true leprous phthisis existed. Among various anatomical facts, interesting as bearing on questions of etiology or on points in dispute, the following seemed specially worthy of attention: 1. The existence of masses of bacilli, both discrete and in typical leprous cells, in the Haversian canals and spaces of the bones of the little finger in which the usual mutilating lesions were commencing. 2. Of the ulcers examined only one of those found in the skin showed any bacilli in the exudations. In the intestine nearly all the ulcers showed abundant bacilli in the necrosed elements at the bottom of the ulcer, and in the cellular infiltration forming the walls. In the lung the walls of the cavities were covered with an almost pure culture of bacilli, with hardly any admixture of cells or cell débris. 3. The intestinal lesions were almost entirely confined to the large intestine, and did not present the usual characters of tubercular ulceration. These lesions were undoubtedly much more recent than those of the skin. 4. There seemed strong evidence that the skin was primarily affected, and that the parasite gradually extended from the surface of the body to the deeper parts, in great measure along the lymphatics.

Messrs. SHATTOCK and BALLANCE read a paper on Negative Results of Psorospermial Inoculation in Animals. They recounted a series of experiments made upon different animals with the object of seeing whether experimental infection could be brought about from the psorospermial bodies so common in the rabbit's liver. They were led to do this after Darier's description of the presence of psorospermia in the epidermis in Paget's disease of the nipple, and the alleged association of psorospermia with carcinoma in general. The experiments were made on rabbits, monkeys, dogs, and rats, and, although the results had been negative, the authors thought it worth while to record them in order that others who took up the same inquiry might modify the method adopted as experiments with other forms of psorospermia or with other classes of animals. The plan consisted in picking out the psorospermial material from the livers of rabbits just killed, and with this at once inoculating the animals referred to. The chief experiments were performed on rabbits as being the most likely to receive infection. The method was to scarify the ear on the inner aspect (under chloroform), or to make one or more long valvular incisions, and then to press or rub into the wounds, after bleeding had ceased, quantities of the psorospermial material. Similar vaccination experiments were made upon the ears of two monkeys, and also on the ears of dogs. The wounds healed by scabbing and without suppuration. In the case of rabbits, small, firm, rounded elevations, and in the case of the incisions, elevated lines, appeared at the part; but these did not increase, and microscopic sections of the case showed the elevations to be due to reparative hyperplasia of the injured cartilage; no trace of the psorospermia remained. The authors also injected into the internal jugular vein of two healthy dogs large quantities of psorospermial material suspended in sterilised distilled water or in warm salt solution; but careful examination after death, five or six months later, showed no lesions whatever in the viscera; the lungs were perfectly healthy. Although nothing could be held as finally disproved from such experiments, the authors submitted that Darier's views must be tried by Koch's postulates. Until a culture had been made from cases of Paget's disease or from carcinomatous tumours, and the lower animals or human subject experimentally infected, nothing could be taken as proved in regard to a causal relation between psorospermia and the conditions with which they were alleged to be associated. The authors found a successful culture fluid in the blood serum of the rabbit sterilised discontinuously and used in a fluid state.

Mr. GOLDING BIRD and Dr. PITT showed a man aged thirty-four with Extreme Contraction and Cicatrisation of the Stomach due to Corrosive Poisoning. The patient was suddenly seized with symptoms of acute irritant poisoning in November, 1888, suffering intense epigastric pain, with frequent vomiting, and hæmatemesis. The incessant vomiting continued, and three months later he had greatly emaciated. An œsophageal bougie passed without difficulty, but all food caused intense pain, and was returned at once unchanged. At the end of January, 1889, Mr. Golding Bird performed gastrostomy with a view to dilating the pylorus later. What appeared to be the stomach was attached to the abdominal wall. This was opened the next day, and food was introduced through the opening. The patient died from inanition five days later. At the inspection the stomach was found drawn up under the ribs, and contracted to a sac five inches long and two and a quarter broad. The mucous membrane was almost entirely destroyed, and the pylorus would only admit a No. 8 catheter. The lower part of the œsophagus was cicatrised and scarred, with some contraction at the cardiac orifice and also two inches higher up. The opening had been made in the duodenum owing to the abnormal position of the stomach.

Annual Meeting.

The annual meeting of the Society then took place. The report of the Council showed a flourishing state in point of numbers, though the expenditure had slightly exceeded the income. Some alterations had been made in the by-laws, extending the sphere of usefulness of the Society, and the duties of some of the officers had been revised. The following were elected to serve during the ensuing year:—President: Sir George Murray Humphry, M.D., LL.D., F.R.S. Vice-Presidents: Sir Joseph Fayrer; William Tennant Gairdner, M.D., LL.D.; Frederick William Pavy, M.D., F.R.S.; P. Henry Pye-Smith, M.D.; Sir Joseph Lister, Bart., D.C.L., LL.D., F.R.S.; J. Neville C. Davies-Colley; J. Warrington Haward; and Henry Trentham Butlin. Treasurer: William Cayley, M.D. Honorary Secretaries: S. G. Shattock and Francis Charlewood Turner, M.D. Council: William Henry Bennett; Sidney Coupland, M.D.; F. G. Dawtrey Drewitt, M.D.; William Ewart, M.B.; Richard G. Hebb, M.D.; Percy Kidd, M.D.; William Arbuthnot Lane, M.B., M.S.; David B. Lees, M.D.; Frederick Walker Mott, M.D.; G. Newton Pitt, M.D.; D'Arcy Power, M.A., M.B.; Charles A. Ballance; Edgar Crookshank; R. J. Godlee, M.S.; William Hickman; Jonathan Hutchinson, jun.; George Henry Makins; Herbert William Page, M.C.; Samuel West, M.D.; and German Sims Woodhead, M.D.

Dr. W. H. DICKINSON, in vacating the presidential chair, said it only remained for him to say a few words in acknowledgment of what had been said on that the last occasion of his meeting the Society as its President. He felt deeply the honour which had been conferred upon him, and he would look back upon his term of office as one of unalloyed gratification both from the uniform courtesy and consideration which he had received from the members and from the kindness and cordial coöperation he had experienced at the hands of the officers, especially the secretaries, to whose efforts more than to any other circumstance the prosperity of the Society was due. In this acknowledgment he desired to include, not only the present officers, Dr. West and Mr. Shattock, to whom he owed much, but also Mr. Godlee, to whom he owed no less, who was secretary in the earlier part of his term of office. He thought it would be admitted that the Society had in no respect fallen off from its old reputation, but had advanced with the times and kept on the crest of the wave of progress. A change, which he considered to be a most judicious one, had, as already stated, been made in the rules, in virtue of which they were free to discuss pathological processes in their widest sense, without any restriction as to the exhibition of specimens. They were no longer a society for the display of pathological products, but one which took for its function the science of pathology in its widest scope. The matters which had recently been before them would excite the astonishment of their founders could they be made aware of them, more especially what related to micro-organisms, whether animal or vegetable, in their relations to disease. Only recently they had before them new observations with regard to the essential causes of cancer and of diphtheria, with regard to which, though it was too early to speak confidently, as he was sure their authors would be the first to allow, yet they showed in what manner and to what ends they were working. The practical possibilities in the future, as the results of the kind of work they did, included a harvest of tangible good not less than could be anticipated were the treatment and

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prevention of disease among their recognised aims. The harvest was near. Let them be content if they only sowed the seed, leaving it to others to reap the crop, which but for them and their fellow-labourers they never would have seen. He need not dilate upon the melancholy topic, the losses by death which the society had sustained during the past year—this had been dealt with in the Council's report—but he could not forbear to refer to a circumstance of another kind, though the same report had not failed to do justice to it. He referred to the approaching completion of his seventieth year by their distinguished honorary member, Professor Virchow. Professor Virchow occupied so exceptional a position that the Council had proposed to take a no less exceptional course, and to signalise the event by the congratulatory address which had been read. That it might be long before this eminent, he might say super-eminent, member of their society claimed notice of a different kind must, he was sure, be the wish of everyone who honoured transcendent ability associated with uprightness and public spirit. He ended as he began, by reiterating his sense of the honour which the Society had bestowed upon him; and if he might venture on his departure to prophesy, it would be of the increasing prosperity and scientific importance of that Association—issues which he was sure would be promoted by the accession of his respected teacher, Sir George Humphry, to the position which had been far less worthily occupied by himself.

The following card specimens were shown:—

Dr. S WEST: Secondary Sarcoma of Lung.

Dr. A. F. VOELCKER: Tuberculosis of Thyroid.

Dr. ROLLESTON: Lung invaded with Myxo-Sarcoma.

Mr. H. B ROBINSON: Ulcerative Colitis.

Dr. W. H. ALLCHIN: Pigmented Intestine and Adrenals from a case of Addison's Disease.

Mr. J. H. TARGETT: Entero-Cystoma from Ox.

Dr. F. HAWKINS: (1) Aneurysms above and involving the Sinuses of Valsalva—Death by Rupture of one into the Pericardium; (2) Malignant Tumour of the Ileo-Cæcal Valve.

Dr. LAURISTON SHAW: Contraction of Stomach from Chronic Inflammation.

After the usual votes of thanks to the retiring officers the Society adjourned.

OPHTHALMOLOGICAL SOCIETY.

Arterio-venous Aneurysm of the Orbit.—Parageusia with Ophthalmoplegia.—Emphysema of the Conjunctiva.—Eyelashes in the Anterior Chamber.—The Formation and Pathology of Pyramidal and Central Anterior Capsular Cataracts.

AN ordinary meeting of this Society was held on May 7th, the President, Mr. H. Power, in the chair.

Mr. RICHARD WILLIAMS (Liverpool) read a description of a case of Arterio-venous Aneurysm of the Orbit. The patient, a youth, aged fourteen, had received a kick from a horse on the left temple. The left eye had been "swollen out" ever since the accident, and the swelling was gradually increasing. At the upper and inner angle of the orbit there was an oval swelling about the size of a small walnut, which distinctly pulsated. Ligature of the common carotid was performed, and the pulsation ceased, but returned in some degree later, and then gradually subsided, until one day, whilst weeding in the garden, the eye felt suddenly painful, and the lids became swollen. Since then the pulsation entirely ceased, and the appearance and vision of the eye became normal, all that remained being slight ptosis and contraction of the pupil. Mr. Williams cited other cases in which recovery had occurred after compression or ligature of the common carotid, and expressed his opinion that this latter was the most satisfactory method of treatment.—Mr. WHERRY (Cambridge) had tied the carotid in a lad exhibiting similar symptoms after sustaining a fracture of the base of the skull. Subsequently there were double ptosis and optic neuritis. The operation was followed by grave symptoms—coma lasting fourteen days, hemiplegia on the opposite side of the body, with contraction of the limbs, and almost complete loss of reason. No doubt the brain had been seriously bruised at the time of the accident; probably some thrombosis had occurred, and extended rapidly when the blood supply was retarded by ligature of the carotid. So far as the operation was concerned, the immediate recovery was all that could have been desired.—Mr. FROST mentioned a case under his own care in which the condition remained stationary for some years, and the patient was able to follow his occupation as a wheelwright. He deprecated early interference in such cases, as a considerable number of spontaneous recoveries were on record.—Dr. MULES (Manchester) mentioned a case in which intermittent pressure on the carotid was applied by the patient himself with perfect success.—Mr. CHARLES LEE (Liverpool) said he had had the advantage of seeing both the cases mentioned by Mr. Richard Williams, and he was an advocate for early operation. In one of the cases mentioned operation had been postponed, and severe hæmorrhage occurred from dilated veins in the eye of the affected side, and the sight had been lost.—Mr. SILCOCK mentioned a case he had shown to the Society some years ago. No operation had been performed, and the man was now in practically the same condition as when first seen.—Mr. TATHAM THOMPSON (Cardiff) referred to three cases of arterio-venous aneurysm of the orbit. One, a girl aged ten, perforated the orbit by falling on a knitting needle. The aneurysm which ensued was completely cured by electrolysis. In the second case, also in a child, the orbit was penetrated by the frame of an umbrella. In the third, a woman aged forty, during a severe fit of coughing in pregnancy, experienced the sensation of a pistol crack in the eye, and ever after heard a buzzing noise The bruit could be stopped by pressure on the carotid.—Mr. CROSS (Bristol) referred to the case of a child fifteen months old in which the symptoms appeared after a fall. No operation had been performed. Recent rapid increase in the symptoms made it doubtful whether the case was not one of new growth.

Mr. WHERRY (Cambridge) read a paper on Parageusia with Ophthalmoplegia. A gentleman, aged forty-seven, who was first seen on Dec. 9th, 1890, had homonymous diplopia, worse on looking to the right. The right eye was kept shut in walking to avoid dizziness and double images. No signs were present of tabes dorsalis or of optic neuritis. Both pupils were dilated, and did not act to light or in accommodation. The vision was not affected in either eye. He could read J. 1 at 10 in., and write perfectly with both eyes, using his accustomed glasses. Three days before the attack began, when he was in his usual good health, he noticed at table that everything tasted bitter; he thought that saliva collected a little more on the left side of his mouth; he had then occasional diplopia. On Dec. 16th there was marked divergence and crossed diplopia, but each eye separately would move well to the canthi, with no weakness of any single muscle; convergence was impossible, and all near work was done with one eye, the left for choice. Some patches of numbness were noticed on the outer side of the left thigh and on the left little finger. Severe nocturnal pains in the head and scalp were relieved by hot compresses. The taste symptom had been a serious distress; even water was too bitter to be touched. Hungry, and with a clean tongue, the patient was unable to dine. A glass of champagne was tried, but it was found impossible to drink it. This parageusia lasted acutely during five days. The external squint and dilatation of the pupils remained until ten days later, when all pain disappeared. The pupils were smaller, acted slightly to reflected light, and attempts at convergence could be seen. After another ten days the pupil acted to light, and convergence and single vision were possible with effort. The symptoms finally passed away about two months from the onset. There was a history of syphilis twenty years before. The patient was married, with three healthy children. In the treatment, iodide of potassium was pushed to 110 grains daily. Butcher's meat and alcohol were avoided, and a midday sleep was obtained. Mr. Wherry thought it probable that the ocular symptoms were due to a syphilitic lesion affecting the nuclei of the third nerve about the aqueduct of Sylvius. The palsy of convergence and dilated pupils without affection of accommodation, pointed to a very minute lesion, and offered interesting clinical evidence of the existence of centres which separated the various functions. In reference to the distressing disturbance of taste, it might be found to be more common in functional disorders, and cast a doubt on the origin of the attack. The patient himself thought it due to a cerebral hæmorrhage during sexual excitement.

Mr. TATHAM THOMPSON (Cardiff) read notes of a case of Emphysema of the Conjunctiva occurring in a clergyman aged about thirty. After breakfast on the day he was examined, and whilst blowing his nose rather violently, he

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felt a sudden "shock," a sensation as of something gradually covering the right eye, and a peculiar "stiffened" feeling in it. He had no pain. On examination the right eye was found to be displaced downwards two-thirds of an inch, and forwards half an inch. Both lids tensely stretched, purplish colour, and with superficial veins engorged. Cornea clear, but surrounded and partly overhung by an enormous chemosis of the ocular conjunctiva, of a bluish colour, and almost non-vascular. This "bullous" conjunctiva protruded far between the lids. Crepitation was readily elicited on palpation. The conjunctiva was snipped in a radial manner, the air escaping with each snip, the remainder squeezed out, and the eye returned by steady pressure and massage. All uncomfortable symptoms at once subsided, and vision rapidly returned. The eye was still slightly misplaced downwards and forwards, and it was found that ten or eleven years before he had been operated on by Mr. Edgar Brown for exostosis of the orbit, and there had been slight permanent displacement since then. The eye was kept lightly bandaged for twenty-four hours, and forty-eight hours after all traces had disappeared. There had been no recurrence.

Mr. LAWFORD (for Mr. G. D. Johnston, of Vancouver) read notes and showed a sketch of a man who had received a wound of the cornea from a piece of wire, which had carried five eyelashes into the anterior chamber. These were subsequently removed by operation, with recovery of a useful eye.

Mr. ERNEST CLARKE reported a case of Eyelash in the Anterior Chamber occurring in a boy aged thirteen under his care, who had wounded his eye with a knife. An eyelash was carried into the eyeball, the bulb of the cilium remaining in the corneal wound. It was extracted eight days after the accident.—The PRESIDENT alluded to the case of a sailor who received a wound from a clasp-knife, by which an eyelash was carried into the anterior chamber, where it remained for some months, giving rise only to slight irritation.—Mr. CRITCHETT mentioned a somewhat similar case.

Dr. MULES read a paper on the Formation and Pathology of Pyramidal and Central Anterior Capsular Cataracts, limiting his observations to the class of cases where there was no proof of previous corneal perforation. From a case of his own, where persistent bands of pupillary membrane remained attached by their apices to a central cataract, and by their bases to the larger circle of the iris, he inferred that the central spot was a patch of cretified pupillary membrane, with or without a lymph cone, and he instanced McKenzie's observation of the ease with which many of these spots could be brushed off the capsule, leaving it intact, as confirmatory of his own view; he further pointed out the importance of this explanation in reference to other congenital lenticular opacities.—Mr. MARCUS GUNN said that he had suggested a nearly similar explanation for some cases of anterior capsular cataract in a paper he published in the *Ophthalmic Review* a few years ago.—Mr. HARTRIDGE mentioned the case of a boy aged fourteen, in whom an extensive perforation of the cornea occurred, and where the lens was for some days in contact with the cornea; yet the resulting nebula was very insignificant. It was only in young children that capsular cataract was believed to follow such accidents. He thought perforation of the cornea might leave very little evidence besides damage to the lens. The hypothesis put forward by Dr. Mules would require the persistence of pupillary membrane in many more cases than were at present met with.—Mr. STEPHENSON said that he met with remains of pupillary membrane very frequently.—Dr. MULES said, in reply, that it had been stated by Wells that perforating ulcer of the cornea in these cases need leave no nebula. The author of the paper had never seen such a case. Those he mentioned showed no trace of a nebula and gave no history of any inflammatory change. In three the condition was unilateral.

The following card specimens were shown :—

Mr. LAWFORD: (1) Retinal Hæmorrhage and Exudation, with Venous Thrombosis; (2) Subconjunctival New Growth (?) Gumma.

Mr. R. WILLIAMS: Dermoid of Cornea and Conjunctiva.

Mr. SPENCER WATSON: Dermoid of Cornea and Conjunctiva.

Mr. ERNEST CLARKE: Absence of Iris, with Opacity of Lens, after Injury.

Mr. LANG: New Growth, (?) Sarcoma, at Sclero-corneal Junction.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the State Medicine Section was held on May 1st.

On the Fifth Year of Medical Education.—Dr. FALKINER read a paper on this subject. The author, referring to the resolutions of the Medical Council of 1889–90, pointed out that, in order to be qualified for holding a Poor-law appointment, six, and not five, years of study were required. In defence of the short period of study at present in vogue, Dr. Falkiner referred to the abuse of hospital and other charities, and also the state of degradation that some of the English general practitioners have fallen into. He urged that the expense of medical education was more than equivalent to the value received by the student, and objected to any increased outlay. He advocated the method adopted by the Conjoint Board of England, who in the minor subjects make the examination, and not the certificate of the teacher, the standard of their degrees, and finally spoke strongly of the pupil's residence in a general hospital with an out-patient department as the true foundation of the medical student's training.—Dr. R. MONTGOMERY said, after over twenty-five years as an examiner in the Apothecaries' Hall, he found that general answering had deteriorated. He thought that attendance under dispensary officers would be most advantageous. Pharmacy was the great deficiency. Few men now were able to write prescriptions after the manner of Hudson and other learned Presidents. He thought the additional year was advantageous, as it would lessen the number of men going to the profession, and perhaps lessen the disgraceful practice that was carried on in England of 6*d.* and 1*s.* dispensaries.—Dr. J. W. MOORE noticed that Dr. Falkiner considered the fifth year proposed by the General Medical Council to be in reality a sixth year, since a diploma in State Medicine, with a year's curriculum, would in future be required in addition to the proposed five years' curriculum. But, in his opinion, the suggested reform by the General Medical Council would really reduce the curriculum to three years, the first year of medical study being practically spent in non-medical schools and non-medical courses, while the proposed fifth year would be practically spent by the candidate as "an unqualified assistant," that anomalous individual upon whom had descended the heaviest wrath of the General Medical Council in recent years. The speaker was strongly in favour of a prolonged period of genuine medical study, such as existed in Sweden and Norway; but he considered that a fifth year should be spent either in the wards of a clinical hospital or in a first-rate continental school, such as that of Vienna, Berlin, or Paris.—Dr. R. K. JOHNSTON thought the want of knowledge in the diagnosis and treatment of simple ailments on the part of senior students and junior practitioners arose through the students being anxious to see rare diseases, and this was due to the fact that the examiners expected them to have an accurate theoretical knowledge of rare diseases. Hospital physicians seldom lectured on the so-called simple ailments. Who, as a student, had ever heard a clinical lecture on biliousness?—Dr. Tobin, Dr. Doyle, Surgeon-Major Macnamara, and Dr. Savage also spoke.—The CHAIRMAN remarked on the importance of the question which Dr. Falkiner had brought under the notice of the Section, and the very interesting and varied opinions which had been elicited by the discussion. With respect to the great pressure on the students' time now complained of, he stated he used to go to hospital at 8 o'clock, attend medical and arts lectures all day, and often dissection in the evening, and many of his fellow students did the same. He was afraid students were not so industrious now as they were thirty years ago, or complaints would not be so numerous. Dr. Falkiner advocated attendance at a Poor-law dispensary as a suitable way of obtaining instruction in practical medicine and surgery, and pointed out how the class of diseases treated at dispensaries could not be properly studied in clinical hospitals. He (the Chairman) quite agreed that such institutions would be useful and desirable, and were at present difficult to obtain; but when it was remembered that there were some three-fourths of the members of the profession engaged in general practice, and that of these a great number held public or quasi-public appointments, and that many of them were quite unfit to act as teachers, he could not see that, under the present circumstances, it was desirable to accept certificates of study from

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such a large class as must necessarily be included. We were sure of the instruction given in clinical hospitals, but could not be sure of what might be given at the dispensaries. The Chairman thought that while the instruction at dispensaries should be encouraged as an additional acquirement, it should not be allowed to be substituted for any portion of hospital clinical instruction. As to the suggestion that general pharmacy was not sufficiently studied, he was of opinion that it got quite enough of attention; it was no more the business of the medical practitioner to make tinctures and extracts than to make splints and to sharpen instruments. Pharmacy, like instrument making, was a trade attached to the practice of medicine. In conclusion, he sympathised with Dr. Falkiner's proposals, but was unable to see how they could be carried out.—Dr. FALKINER, in reply, held, in answer to the Chairman's objection to practitioners becoming teachers, that only those men who could teach would get pupils, as in the case of grinders and hospital teachers, and also differed from him as to the benefit of a knowledge of practical pharmacy to the practitioner, which Dr. Falkiner considered of extreme importance and value.

A meeting of the Section of Medicine was held on April 17th, the President, Dr. Finny, in the chair.

Hypnotism.—Dr. CRUISE read a paper on hypnotism. He commenced by describing the state of curiosity and doubt into which he had been thrown by extended reading on the subject, which led him ultimately to go to Nancy, and study there with Drs. Liébault and Bernheim. He related at some length what he had seen, and explained the favourable impression made upon him regarding hypnotism.—Dr. G. C. KINGSBURY asked that hypnotism should be accorded a trial in Ireland, on the ground that thoughtful physicians in France, Germany, Russia, Belgium, Holland, Austria, Spain, Italy, Greece, Denmark, Sweden, Norway, Switzerland, Portugal, and America had practically tested it, and declared it useful. He explained that when Charcot speaks of hypnotism he refers to certain manifestations of disease met with rarely amongst hystero-epileptics, whereas what is meant by hypnotism at Nancy is not a disease, but a method of treatment. Dr. Kingsbury showed that the principle underlying all the methods was the continued stimulation of one or more of the senses, with the constant suggestion of sleep. The further process of treatment was then detailed, and it was shown how the verbal suggestion of relief, of which it mainly consisted, could be greatly emphasised according to the nature of the case—e.g., by friction in rheumatism or neuralgia, by inducing the patient to inspire deeply in pleuritic affections, by ordering the patient to walk in functional paralysis, &c. Dr. Kingsbury held it to be justifiable to try hypnotism in all cases where a distinctly nervous element could be detected. All functional disorders might also be treated by means of hypnotic suggestion. He disclaimed any desire to replace ordinary methods of treatment, but thought that in many of the cases indicated hypnotism might be used in conjunction with drugs, whilst in some it might be tried alone. In midwifery, hypnotism seemed justifiable wherever any anæsthetic was thought necessary; but he advised anyone wishing to try it to hypnotise the patient several times beforehand, to familiarise her with the process, and also to ascertain what degree of anæthesia could be produced. In many cases of ovarian pain and menstrual derangement it might be useful. It seemed absurd to think that painful menstruation could be rendered painless, or that amenorrhœa or menorrhagia might be corrected by verbal suggestion during hypnosis made beforehand; nevertheless, such benefits were frequently seen to follow hypnotic treatment. The alienist was justified in trying hypnotism, though lunatics were very hard to affect, and moral ailments seemed to offer a wide field for the trial of hypnotism, including cases of inebriety, morphinomania, cocainomania, kleptomania, masturbation, &c. Dr. Kingsbury mentioned that before the introduction of chloroform, Braid, Liston, Velpeau, Broca, and others had performed many operations painlessly by means of hypnotic anæsthesia. Esdaile of Calcutta had also recorded over 200 cases of operation, including lithotomies, and the removal of immense tumours in elephantiasis performed in this way without pain. It is nowhere proposed now to supplant our ordinary anæsthetics by hypnotism, but Dr. Kingsbury declared that if he knew that a patient could be hypnotised deeply, so as to be completely anæsthetised, he would much prefer to employ hypnotism than chloroform for operative purposes. The dangers of hypnotism were shown to be grossly exaggerated. Dr. Kingsbury had failed to find any case where insanity could be shown to have been produced by hypnotism employed by a medical man. He thought it was time that the practice of hypnotism should be confined to the medical profession alone *by right*, but also maintained that scientists should be *allowed* to conduct hypnotic experiments for the elucidation of physiological and psychical problems. All that he asked was a careful and scientific testing of hypnotism.—Dr. CONOLLY NORMAN said that the extreme moderation of Dr. Cruise and Dr. Kingsbury would do as much service to hypnotism as the most extravagant claims of Voisin had done harm.—Dr. FITZGERALD made mention of two cases in which he obtained great benefit from hypnotism. In the first case, the patient had suffered from deafness and tinnitus, the latter of a very distressing character. The deafness was due to chronic catarrh of the middle ear of some years' standing, and though no improvement was gained as regards the hearing the tinnitus became greatly lessened, and at times disappeared. In the second case, that of a young man of a highly nervous temperament, who also suffered from tinnitus, great benefit followed the treatment.

Reviews and Notices of Books.

Cyclopædia of the Diseases of Children, Medical and Surgical. Edited by JOHN M. KEATING, M.D. Vol. IV. Philadelphia: J. B. Lippincott Co. London and Edinburgh: Young J. Pentland. 1890.

THIS volume worthily completes a great undertaking—a work which not only fills a distinct place in medical literature, but one which is sure to be regarded for a long time to come as the standard of reference upon diseases of childhood. The contents of this fourth volume are varied and important, and the articles are of as high quality as those to be found in the preceding sections. Diseases of the Ear are dealt with by Dr. Charles Burnett, the Professor of Otology of the Philadelphia Polyclinic, whilst the various affections of the Eye are discussed by Drs. Schweinitz, Turnbull, and Oliver; the last named treating in a very interesting manner the subject of Ophthalmoscopy. Of all these articles it may be said that they are systematic as well as clear, and that their writers, who speak with authority upon subjects which they have specially studied, have succeeded admirably in presenting the abundant facts at their disposal in an attractive and easily comprehensible manner. To the general practitioner the information here given upon aural and ocular affections will be as welcome as it is to the specialist. Several articles follow upon Hygiene, which might well have found a place at the commencement of the work. The first of these is a monograph of rare excellence and utility. It is written by the editor, Dr. Keating, in conjunction with Dr. J. K. Young, and its subject is Physical Development. We find in it a well-ordered sifting of statistical facts relating to the subjects of growth and development, whilst the physiological aspect of animal mechanics and the value of regulated exercise and gymnastic training are admirably see forth. The article is fully illustrated by reproductions of some of Mr. Muybridge's instructive photographs of the body in motion, and it constitutes a real contribution to knowledge. In the same section a brief but sufficient exposition of Massage is contributed by Dr. W. A. Edwards; an article on Prophylaxis of Disease (limited to contagious diseases), by Dr. Wellington Byers; a useful and practical essay upon School Hygiene, by Dr. D. F. Lincoln; and one on the Construction of Children's Hospitals, by Mr. Lindley Johnson. Topics of wider interest are those of Juvenile

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Crime, discussed by Mr. Percy Keating, and of Medico-legal Testimony, by Dr. Jerome Walker.

The remainder of the volume is devoted to Diseases of the Nervous System. We can only refer to a few of the numerous articles which are comprised under this head, but we may say in general that the writers appear to have been well selected, and to have for the most part sustained the reputation of the work. The account of Multiple Cerebro-spinal Sclerosis, by Dr. W. B. Pritchard, reminds us that this affection is by no means limited to the adult, and that in the child the symptoms of tremor, staggering gait, increased reflexes, nystagmus, speech defects, and sometimes of strabismus and optic atrophy, constitute a well-defined group. The affection with which it is most likely to be confounded is Friedreich's ataxia, and, like that disorder, multiple sclerosis has a strong tendency to hereditary transmission. We note the stress laid upon traumatism as an etiological factor in this form of degeneration of the nerve centres, and believe that it is of great importance. As may be expected from its author's reputation, the article on Tubercular Meningitis by Dr. A. Jacobi is as scientific as it is practical; we only regret that it should be comparatively so brief. One remark the writer makes is worthy of considerable attention, for, true as it is, it has not been fully recognised. It is to the effect that many cases of this disease owe their origin to tuberculous disease of the bronchial glands, which may remain long latent, and may have been initiated by whooping-cough or measles in the earlier years of life. This fact, he thinks, should suffice to show the inutility of expectant treatment in "self-limited" diseases. The legacies left by measles are perhaps not fully appreciated; they may be overlooked because of the long period that elapses before they are made manifest. Dr. B. Sachs has an admirable article on Cerebral Hæmorrhage, Thrombosis, and Embolism; whilst the one that succeeds this—viz., that on Intra-cranial Tumours, by Dr. M. Allen Starr—is a model of excellence in arrangement and description. It is valuable, too, in view of cerebral localisation, and is based on a careful and extensive study of recorded cases. To Dr. Mary Putnam Jacobi has been allotted the description of Myelitis, Spinal Meningitis, and Hæmorrhage, the clinical parts of the article being those which will probably attract most attention. The writer gives a very complete account of meningo-myelitis following Pott's disease. Polio-myelitis anterior is described by Dr. Wharton Sinkler, who does good service in contrasting the features of true infantile paralysis with those of cerebral palsies. As to treatment, he points out that a vermifuge, by expelling lumbricoid worms, may considerably ameliorate paralysis at its onset. Leeches, counter-irritation, or ice to the spine are measures to be advised in the early stages, and ergot is recommended to be given internally. Electricity and massage are, of course, the chief measures for restoring muscular nutrition in the chronic stage. Friedreich's ataxia is concisely treated by Dr. Charles L. Dana, who thus summarises the "major essential symptoms" (p. 719): "(1) Ataxia, beginning in the lower limbs and extending to the arms and tongue; (2) peculiar rolling, ataxic gait, ataxia gradually involving the arms; (3) disturbances of speech; (4) talipes and spinal curvature; (5) gradual development of paraplegia; (6) loss of knee-jerk; (7) absence of cutaneous anæsthesia, of bladder troubles, of eye troubles except nystagmus, and of severe pains; (8) the development of the foregoing at about the time of puberty." The Operative Surgery of the Brain and Spinal Cord is dealt with by Dr. Charles Nancrede; it shows how great have been the advances in this line of treatment within recent years. The article on Chorea is contributed by Dr. B. Sachs, who, it may be remarked, found a satisfactory history of rheumatism in only eight out of seventy cases of chorea, and heart disease in only twelve cases. Of his own cases more than one-half arose from fright. The pathology of chorea is, he admits, still unknown; it would seem to be linked with a widespread nutritive and functional disturbance of the central nervous system, mostly of the cerebral centres, a disturbance which may own several causes. There is a very complete and careful article on Convulsions by Dr. Morris J. Lewis, and one on Epilepsy by Dr. Landor Carter Gray. The subject of Hysteria is treated by Dr. Charles K. Mills in a paper abounding in interesting facts; and, lastly, the subjects of Idiocy and Imbecility, by Dr. Edward Brush, and of Insanity, by Dr. E. C. Spitzka, are discussed with sufficient breadth for a general treatise of this class.

We have before expressed our sense of the service rendered to medical literature by the editor of this volume and the able physicians and surgeons whose services he has succeeded in securing; and we need only reiterate our conviction that the work as a whole is one which for erudition and practical utility has but few equals. Many of the articles which find a place in these volumes will rank as the best monographs on the subjects of which they treat, and it adds to the interest and importance of the work that its contributors include the names of many of the foremost living authorities on these topics in America, Canada, and England.

A Text-book of Chemical Physiology and Pathology. By W. D. HALLIBURTON, M.D., B.Sc., M.R.C.P., Professor of Physiology at King's College, London. London: Longmans, Green, & Co. 1891. Pp. 874. With 104 illustrations.

PROFESSOR HALLIBUTON may be congratulated upon having executed in a most meritorious manner an exceedingly difficult task. The field covered by the pages of the work before us is so extensive that it required most judicious arrangement and thorough grasp of the subject to enable a writer to present to his readers at once a comprehensive and yet not an encyclopædic book, and in the present instance both indications have been carried out. We are told that the title of "Chemical Physiology" has been preferred to the more familiar one of "Physiological Chemistry" because the aim of the book is rather to deal with the subjects from the point of view of their function in the body than from that of their chemical relationships one to another, and this line is steadily adhered to throughout. A careful perusal of Dr. Halliburton's chapters impresses the reader with the breadth of treatment and latitude of research which are therein represented. Not only do we find the purely physiological side of the matter clearly and concisely dealt with alike from the standpoint of human and comparative physiology, but some of the most interesting sections discuss the chemistry of the physiology of disease, giving most suggestive tables of analyses and statements concerning the various pathological processes which commonly fall under the notice of the clinical physician. The first part explains methods of research and analysis, including the usual chemical processes of analysis, alkalimetry, &c., the ultimate analysis of organic compounds, and gas analysis, whilst it closes with a careful description of the optical instruments employed in chemico-physiological investigations. In Part II. the chemical constituents of the organism are reviewed, and of the eight chapters therein contained those dealing with the proteids, the albuminoids, ferments, the processes of fermentation, with ptomaines and the leucomaines are especially important, and marshal together a large number of facts. The tissues and organs of the body are dealt with in Part III. While Chapter XIV. gives a most thorough exposition of the physiology of the cell, the following three chapters are occupied by the consideration

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of the blood in health and disease. These review the blood both in vertebrates and invertebrates in a very complete manner, and lay largely under contribution Poulton's valuable papers upon the blood of Lepidoptera. But even more interesting are the sections dealing with blood in various morbid conditions, and here and elsewhere we are compelled to regret that the exigencies of space have prevented Professor Halliburton from elaborating his discussion of various points in chemical pathology. In treating of chlorosis, much stress is laid upon the absence of iron in the blood, and it is stated that "chlorosis also is that form of anæmia in which the administration of iron causes the best effects." In Chapter XVIII. lymph and allied fluids are considered; and here, again, the "clinical side" of the work exhibits conspicuous excellence, hæmorrhagic and chylous pleurisies, and other conditions usually only dealt with in monographs being noticed. The composition of pus cells is accurately given, myosin a commonly mentioned constituent being, according to Miescher and Dr. Halliburton, absent. Respiration and the chemical processes therein involved are fully and thoroughly described. That the highly important and interesting questions involved in the varying conditions of these processes in disease—e.g., fever—are relegated to small type was, we suppose, unavoidable. Our clinical and pathological manuals do not, however, deal with these matters at all fully, so that we regret the more that an author who shows himself so capable of grappling with such questions was compelled to curtail his remarks. The chemical nature of the tissue changes in myxœdema are well described, Dr. Halliburton having had unusual opportunities of studying this subject. Alimentation is considered in the twelve chapters which constitute Part IV., and its various complex chemico-physiological bearings are clearly reviewed, foodstuffs, dietaries, digestion, natural and artificial, being all in turn dwelt on. Professor Halliburton insists strongly upon the nutritional value of a food being estimated rather by its capacity for being assimilated than by its analytical value as a nitrogen supplier. Part V., which treats of excretion, is certainly one of the most useful in the book, and the sections dealing with urine in health and disease well epitomise the vast amount of literature and experiment which have grown about the subject. Chapter XLV., on the quantitative analysis of the constituents of normal and pathological urines, will be found both useful and reliable. General metabolism, which forms the subject of Part VI., has unfortunately had to be condensed into twenty-five pages, but the author manages in even so small a space to compress a good deal of matter. Speaking generally, we must regard the work as one of the utmost value to the physiologist, the research student, and the clinical observer. Those who desire light thrown upon some of the most obscure problems of pathology from the side of chemistry will find Dr. Halliburton's book a valuable help; while to those actually working either in the physiological or pathological laboratory, its aid will prove invaluable. The style is easy; the print, illustrations, and arrangement are excellent.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. BATTY TUKE, M.D., and D. NOËL PATON, M.D. Vol. III. Edinburgh and London: Young J. Pentland. 1891.

THESE annual reports of researches carried on at the pathological laboratory established by the Royal College of Physicians of Edinburgh have earned a conspicuous position in scientific literature. The variety and importance of the work they record show to how great extent the resources of such an institution may be utilised, and reflect credit on the public spirit of the college which initiated it. By the removal of Dr. Sims Woodhead to London the office of director of the laboratory has passed to Dr. Noël Paton, and he may be congratulated upon having gathered around him so many earnest scientific observers. The volume contains thirteen papers, the first being a very careful study of the pharmacology of Morphine and its derivatives, by Dr. Ralph Stockman and Mr. B. D. Dott. The similarity in action between morphine and its numerous allies is clearly shown; and amongst other new points it is proved that stimulation of the spinal cord is not a *sine quâ non* of the administration of the drug, but that it depends on the largeness of the dose, and also on the facility for direct action on this nerve centre. It is also shown that, when such direct action can be ensured at once, there is no antecedent depression. The authors consider that opium applied to the surface has very little, if any, action on the sensory nerves. Dr. Stockman also has a short paper on the Excretion of Balsams in the Urine, in which he proves that these drugs do not excite nephritis in the doses ordinarily administered. Dr. T. Arthur Helme has an interesting paper on the Physiology of the Uterus, and the Physiological Action of Drugs upon it, the essential point being the determination of the fact that the uterus undergoes regular and rhythmical contraction, and he has studied the influence thereon of cold, heat, ergot, and other measures. In an exhaustive paper on the Nature and Varieties of Leucocytes, Dr. G. Lovell Galland sustains the thesis that these structures are independent "organisms," their variations corresponding to different stages of life. The paper contains further an adequate discussion of the subject of "mitosis," which has done so much to widen our conceptions of cell-life. The literature of the subject is thoroughly utilised. The same writer contributes a paper on the Development of Adenoid Tissue, with special reference to the Tonsil and Thymus. His researches on the histology of these organs in the fœtus have led him to the conclusion that the ingrowth of epithelium constituting their earliest stage causes a condensation of the connective tissue, with cell proliferation and leucocyte infiltration. If these views be established, they will go far to harmonise pathological with physiological facts. Dr. Charles Kennedy contributes a paper on Cystic Disease of the Liver and Kidneys, based on a case where that condition prevailed extensively in both these organs. The author seems to incline to the view that the cysts are due to constriction of ducts and tubules by chronic inflammatory tissue; but he discusses other theories, which do not, however, associate the renal and hepatic changes so closely. Dr. Noël Paton and Mr. J. M. Balfour, M.B., give the results of their observations on a case of biliary fistula, upon the composition, flow, and physiological action of the bile in man. Amongst their conclusions are the demonstration that the quantity of bile secreted is less than is commonly supposed; that it is irregular, being highest about midday and lowest in the early morning hours, and that the amount of fluid imbibed has a marked effect on the flow. Amongst drugs they find salicylate of soda and calomel to actively influence the flow, and they confirm the fact that bile plays a considerable part in the absorption of fats. Altogether they say their studies point to the bile being regarded "rather as an excretion than as a secretion playing any essential part in digestion." Dr. Noël Paton also describes an experiment on the influence of muscular work on the proteid metabolism. Mr. J. C. Webster, B.A., M.B., contributes a paper on the Nerve-endings in the Labia Minora and Clitoris, with special reference to the pathology of pruritus vulvæ, the essential change in the latter being a fibrosis of the nerves, and of the end-bulbs and genital corpuscles. The writer, after alluding to the inefficacy of lotions &c., so frequently found in the treatment of this troublesome complaint, considers that excision of the affected skin alone can really be curative. Dr. Berry

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Hart has a short paper upon the Anatomy and Mechanism of Early Abortion; Bacteriology is represented in a paper on Bacterio-Therapeutics by Drs. Woodhead and Cartwright Wood, and one on the Influence which the Process of Inflammation exerts on the course of Infection, as exemplified in Anthrax and Erysipelas, by Dr. Cartwright Wood and Mr. J. Maxwell Ross, A.M., M.B. The first of these papers is a suggestive research on the degree of immunity which may be conferred by the introduction of other toxines than that concerned in inducing the disease from which protection is sought. In this way it is hoped that the cells of the body may be stimulated to resist successfully the specific toxines, and a line of treatment, rather antidotal than antiseptic, be adopted for infectious disease.

Analytical Records.

BAILEY'S CONCENTRATED EXTRACT OF CLAMS.

(G. H. FULLER, TOWER CHAMBERS, MOORGATE-STREET, E.C.)

The liability of foods, and more particularly liquid foods, to become contaminated by the metal in which they are often preserved has been a matter of frequent comment in the columns of THE LANCET. True it is that in many instances the amount of metal is very small, and not likely to produce injury in the robust. But when such foods are intended for the use of invalids or infants, then absolute immunity from this likely source of mischief should surely and reasonably be insisted upon. We willingly assign space to a second notice of the above interesting preparation, as the vendor (acting on the remark which we made on the occasion of recording the results of our previous examination) has recently put up concentrated clam juice in stoneware jars. This is a step in the right direction, and one which we cordially welcome, and it seems a pity that other foods cannot be satisfactorily preserved in the same material. The results of our analysis substantially confirm those already reported. The clam juice was in excellent condition, and yielded negative reactions as regards the presence of injurious substances.

LIQUOR SALICYLICUS (SELLERS'), A COMBINATION OF THE SALICYLATES OF SODA AND QUININE WITH SALICIN.

(J. SELLERS, 57, FARRINGDON-ROAD, E.C.)

We find this to be a perfect solution of the salicylates of soda and quinine with the alkaloid salicin. Ether in an acid solution extracted the salicylic acid, and in an alkaline solution the quinine and salicin, all of which were recognised by well-known tests. It is needless to point out the probable value of a preparation like this in cases where the salicylates are indicated.

SYR. FERRI PERBROMIDI AND SYR. FERRI QUININÆ ET STRYCHNINÆ PERBROMATUM.

(BURGOYNE, BURBIDGES, & CO., 12 & 16, COLEMAN-STREET, E.C.)

Practitioners who may wish to prescribe ferric iron in combination with bromine, and if need be with strychnine and quinine hydro-bromates, will doubtless find these two preparations of value. Each fluid drachm of the syr. ferri perbrom. is said to contain five grains of the perbromide ($Fe Br_3$). Our analysis confirms this, as the figure actually gained was 4·94 grains. The syr. ferri quininæ et strychninæ contains in each fluid drachm 5 gr. of perbromide of iron, 1 gr. of quinine hydrobrom., and $\frac{1}{32}$ gr. of strychnine. On suitable treatment all these constituents were isolated and recognised. These results enable us to regard both preparations as trustworthy.

FLEXIBLE GELATINE CAPSULES &c.

(DUNCAN, FLOCKHART, & CO., EDINBURGH.)

The administration of nauseous as well as unstable drugs in the form of flexible and soluble gelatine capsules has found favour with many, and a well-known firm like Messrs. Duncan, Flockhart, and Co. are sure to devote great care to the preparation of medicaments of this kind. An illustration of this is afforded in the case of the Blaud's pill capsule, which of course should contain as far as is possible the iron in the proto or ferrous condition. On examining a capsule made by this firm, and said to contain the equivalent of three pills, we found that of the total amount of iron present 92 per cent. was in the form of proto-carbonate. Taking this as a typical case, we may regard the following preparations, which we have also received, as of an equally satisfactory nature. Compound iron capsules (Easton), each containing an amount equivalent to 60 minims of Easton's syrup. Capsules, each equivalent to half a teaspoonful of Gregory's powder. Cascara capsules, each equal to half a teaspoonful of the fluid extract of cascara sagrada. Compound syrup of hypophosphites, containing, in each fluid drachm, hypophosphite of iron $\frac{2}{3}$ gr., manganese $\frac{1}{4}$ gr., quinine $\frac{1}{4}$ gr., and strychnine $\frac{1}{100}$ gr. The presence of all the constituents in the last preparation was confirmed by qualitative analysis. The syrup is neutral to test paper, and is not disagreeable in taste.

TABLOIDS OF COMPRESSED WILLOW CHARCOAL.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL, E.C.)

In the now familiar form of drug known as tabloid, the above firm make a preparation of compressed pure willow charcoal, each containing five grains. The tabloids dissolve in the mouth with slight effervescence, and a taste resembling musk or red gum lozenge is experienced. The charcoal is evidently of a selected kind, and the microscope shows it to exist, when the tabloid is dissolved, in a finely divided state.

MEDICINE CACHETS.

Medicine cachets are intended to enclose solid and liquid medicines of a nauseous taste, as castor oil, copaiba, &c. They may be likened to a salt spoon, about two inches long, having a short flat handle. The medicament is placed in the bowl of the spoon and the handle wetted. It is then doubled over so as to form a tight lid to the bowl. The material, according to our own examination, is a perfectly pure form of starch. The cachets are accompanied with a metal ladle and mould.

COMPRESSED HOPS.

(WILKINSON, 37, CANNING-PLACE, LIVERPOOL.)

We have received an excellent and well-dried specimen of compressed hops from the above firm. Hops, it is well known, have been used in the form of bitters or tea as a stomachic, tonic, and sedative, and in the form of poultice for the relief of neuralgia. In a compressed state hop leaves offer a convenient and ready means of obtaining any of the above preparations.

GOUDRON DE GUYOT, LIQUOR CONCENTRÉE ET TITRÉE.

(L. FRERE, A. CHAMPIGNY ET CIE, 19, RUE JACOB, PARIS.)

Tar of Guyot is a brown liquid with a pleasant smell resembling rope yarn. It is alkaline to test paper, and the addition of acid causes separation of a dark-brown oil, which no doubt has its origin in crude tar. The well-known active antiseptics of tar have evidently been removed, and on this account it may be taken internally. Tar of Guyot has been used in certain diseases of the stomach, and it has been employed with good results, it is stated, in the treatment of bronchitis, asthma, and catarrh.

EXCELSIOR AUTOMATIC DISINFECTANT.

(WAGNER & GERSTLEY, 8, MOOR-LANE, E.C.)

This consists of a neat paper box, about half an inch deep, containing a solid crystalline substance, which emits a pleasant odour of a well-known coal distillation product. It is intended to be hung up on the wall of a room or closet. The substance is readily volatile, melts at 79·2° C., and boils at 217° C., figures which are in close accord with those yielded by pure naphthalene. While probably acting as a

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mild antiseptic and disinfectant, this simple contrivance will also, it is said, be found useful in keeping away moths, mosquitos, &c.

FINE OLD HIGHLAND WHISKY, GALLEY BRAND.

(ANDREW MCNAB AND CO., GLASGOW AND LEITH.)

It is not difficult to pronounce this whisky a well-matured spirit, as it is exceptionally mellow to the taste. As will be seen from the results of analysis, the proportion of alcohol is what it should be; and in spite of a deeper colour than is usual, the quantity of residue is very small. Absolute alcohol, 42·55 per cent. by weight; 50·05 per cent. by volume, equal to proof spirit, 87·70 per cent.; residue, 0·06 per cent.; mineral matter, *nil*.

PETERMAN'S COCKROACH AND BEETLE FOOD.

(J. F. SHOREY, 57, FARRINGDON-ROAD, E.C.)

Many persons would be glad to know of a preparation which claims to be effectual in removing what are now very common pests of the kitchen and larder—the cockroach and beetle. We have examined this powder, and while we find it contains nothing of a nature injurious to children or pet animals, the analysis revealed the presence of a chemical compound which we know has been advocated for the above object. The powder has a faint, sickly smell, suggestive of bone meal, and it probably proceeds from a substance which serves to allure the vermin.

ANGLO-SWISS CONDENSED MILK.

(ANGLO-SWISS CONDENSED MILK COMPANY, CHAM, SWITZERLAND, 10, MARK-LANE, E.C.)

Of the samples submitted to us, one was prepared in Switzerland and the other in England. The former on analysis contained 7·70 per cent. of fat and 2·04 per cent. of mineral matter, and the latter 8·30 per cent. of fat and 1·96 per cent. of mineral matter. Both, therefore, represent original milk of good quality, 2·6 parts of which have been condensed into 1 part. There is evidently, we are glad to note, no abstraction of cream, and the addition of preservative other than cane sugar has not been resorted to. If, as is stated, there is much condensed milk in the market from which the greater portion of the cream has been skimmed off, it would be an advantage perhaps if respectable vendors were to label their tins with a guarantee in the form of a statement of the composition of the contents.

GERM BREAD AND BISCUITS.

(MESSRS. PAINE AND CO., ST. NEOTS.)

Wheat of a selected kind is evidently employed in the preparation of the samples of biscuits and bread which we have had occasion to examine. The bread contains a goodly proportion of nitrogenous principles which, according to the nitrogen found, amount to 10·00 per cent. calculated on the moist bread. The flavour of both is of special excellence, although that of the bread is somewhat sweet, resembling in this respect malt.

New Invention.

HEARSON'S PATENT BIOLOGICAL INCUBATOR.

ALL those to whose lot it has fallen to work with mercury regulators, especially where the gas supply is bad, will hail with pleasure any other method by means of which they are able to obtain a constant temperature for various kinds of bacteriological work, and will feel specially inclined to thank Messrs. Charles Hearson and Co., 235, Regent-street, London, W., for a most convenient thermostat, for which it is claimed, and with perfect justice, that it is suitable "for the cultivation of micro-organisms, for researches in embryology and histology, and in preparing and embedding objects for section cutting." This incubator differs materially from any that has yet been placed at the disposal of bacteriological workers, and although it is a modification of the egg incubator made by the same firm, a short description of its structure may be given in order that its advantages may be fully appreciated. Like the ordinary thermostat, it consists of a chamber surrounded by a copper water jacket; outside the water jacket is a covering of one inch pine, which thus takes the place of the ordinary felt; this does not accumulate dust and is much more readily kept clean. The chamber is closed with an inner glass door and an outer wooden one. The regulation of the temperature is effected by the expansion and contraction of a few drops of liquid (having a boiling point at or near that at which the temperature is to be maintained) contained in a hermetically sealed metal capsule. As this expands a weighted lever is raised and the gas is cut off by an ingenious valve arrangement; as the temperature falls the liquid again condenses, the lever is allowed to fall, more gas enters, and the temperature is again brought up. By adjusting a sliding weight on this lever, the boiling point may be so altered that a range of about eight degrees is obtainable; but once adjusted, the apparatus is so delicate that whatever the pressure of gas in the mains may be, the temperature may be kept so constant that it will not vary more than half a degree (although the makers say a degree and a half) for weeks together. A more important improvement, however, is a paraffin lamp regulator which can be adjusted to the same chamber; this, to those who are working in the country or abroad, will prove a very great boon, as it is, so far as we know, the only practically perfect paraffin lamp regulator now in the market. By means of a very simple arrangement of air-valves worked by the volatile fluid in the capsule a constant temperature is obtained, so that one of the main difficulties in connexion with research in parts of India and other countries where no gas can be obtained is removed. One great advantage of this arrangement is that, as the expansion of the fluid in the capsule is owing to its boiling, which takes place at a definite temperature, the lever is only acted upon when the critical temperature is reached, no sensible effect being produced at even a single degree below that at which the capsule is to act; so that any deviations are dependent entirely on barometrical variations, and by observing the reading of the barometer from time to time, and slightly altering the sliding weight on the lever rod, even this variation can be reduced to a minimum. It is claimed that by the use of cold water, ice, and one of these regulators, the air in a biological incubator can be made to act at any temperature from 70° to about 300° F. (21° to 150° C.). The makers say, and those who have worked with this apparatus fully corroborate their statements, "that in actual practice it is found that the temperature can be maintained uniform within half a degree without readjustment of any part for months together, and this, too, in defiance of great changes of gas pressure, and of air temperature in the room in which the apparatus is working." This apparatus is in every way much in advance of anything made either in France or Germany, and it gives us great pleasure to bring it under the notice of our readers.

FIRING HORSES.—At a meeting of the Council of the Animals' Institute, Mr Atkinson pointed out that the custom of firing horses was terribly abused by ignorant persons being permitted to perform this painful operation at their own discretion. Popular opinion erroneously imagines that it is not only a cure, but also a preventive, for all forms of lameness. If such a remedy is necessary, it should be performed by a qualified person.

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THE LANCET.

LONDON: SATURDAY, MAY 23, 1891.

THE meeting of the General Medical Council somehow or other becomes more and more a matter of interest to the profession. Its powers are sadly too limited. It cannot stay epidemics; it cannot suppress quackery; it cannot solve the problem of a Teaching University for London; it cannot adequately punish those who degrade medical practice and its methods. Yet for all that it is a body whose proceedings excite a general interest in the profession, beyond those of any of the leading constituent bodies, of whose representatives it is predominantly composed. For one thing it is an open body, and its proceedings are carried on in the light of day and under definite state sanctions. For another, it is in touch as none of the individual bodies are with the body of the profession. How unreasonable it seems that while representatives of the profession sit in the Medical Council, and confessedly without any disastrous consequences to its education or interests, the Council of the College of Surgeons, and other corporations for that matter, exclude their members from all authority and representation. The principle of direct representation cannot stop where it is. Having gained a footing in the General Medical Council, in the Convocation of the Universities, and in the General Councils of the Scottish Universities, it is bound to triumph over all narrowness in the individual bodies.

We have not yet been favoured with a programme of the proceedings of the Council, but there are materials enough in the proceedings of the last Executive Committee and of the last meeting of the Council to enable us to forecast pretty closely, with the help of a little imagination, the nature of the subjects which will most engage the attention of the Council. The first business, after the reading of the minutes, will be the election of a President. The ninth clause of the Act of 1886 requires that the president shall be chosen from the members of the Council. There is much speculation as to the member of the Council on whom this honour will fall. All are agreed that it will not be easy to find a man with so many fitting qualities as were united in the late President, whose genial face and rule will be much missed. This election over, the most important business of the Council at its May meeting will be the discussion and determination of questions in medical education, and two or three circumstances conspire to raise several such questions at the approaching meeting. The first of these is an uncomplimentary communication from the Secretary of State for War, announcing that he has before him a report from the Director-General of the Medical Staff "of the manifest deficiency in orthography prevalent amongst the young medical officers of the army," and adding that "this deficiency has for some time past so forced itself on the notice of the military medical authorities, that a special clause has been introduced into the Regulations for admission to the Army Medical Staff, to the effect that the Secretary of State reserves to himself the power of making bad spelling a cause of rejection." This is a humiliating communication for the Medical Council and for the medical profession, and perhaps throws some light on the reluctance of the authorities to do justice to the claims of medical officers. It is the more remarkable that in other respects, and in the examinations for appointments, fewer deficiencies are found than used to be found. The Medical Council has not been unaware of the fact so candidly pointed out by the Secretary of State for War. On the contrary, by the late President, by the Education Committee, and by the Inspectors appointed under the Act of 1886, the fault has been well noted. If any blame attaches to the Council it is for not having taken more energetic measures to identify the bodies whose examinations in preliminary subjects are so lax, and to visit them with proper punishment. It is understood that the matter is under the consideration of the Education Committee and will have the serious attention of the Council. It may well be that members of other branches of the public service are not in a position to throw stones at the members of the Medical Department in this matter. But that is poor satisfaction, and does not exonerate the Medical Council from the duty of more sternly refusing to control bodies which examine badly in preliminary education. We have repeatedly pointed out that the present standard of such education is far too low. Another circumstance which tends to make the approaching meeting and its educational discussions more important is the fact that the term of medical education has been extended by the Council to five years, and that the right use of the fifth year has to be more or less indicated by the Council. The Council has clearly accompanied its recommendation of the addition of a fifth year with the stipulation that the last year shall be used in the acquisition of practical and clinical knowledge. There is plenty of room for discussion as to the claims of any special clinical work, or kind of clinical work, to particular attention in this year. The great question of practical teaching in midwifery will be again raised. It was left in a very unsatisfactory position in November, on the understanding that it should be reverted to at the May meeting. It may well be that the representatives of other important groups of disease, such as those of the eye, may make themselves heard in the Council in reference to the uses of the fifth year. But the great duty of the Council is to complete its requirements of all such knowledge as is requisite for the efficient discharge of the every-day duties of the general practitioner. It is conceivable that the zeal of the Council in this matter may be quickened by a reminder that the Lord President is a factor to be reckoned with in urgent questions of medical education.

Important, and on the whole satisfactory, information is likely to be forthcoming on the attitude of the Local Government Boards of England and Ireland, and the Board of Supervision in Scotland, with reference to the desire of the Medical Council that the sanitary authorities in different parts should help candidates for Sanitary diplomas in gaining practical knowledge of the duties of a medical officer of health. One subject of no small moment to the profession in the metropolitan area is the state of the law

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with reference to the application of fines for violation of the Medical Acts. Under the Metropolitan Police Acts such fines are appropriated for police purposes. The consequence is that prosecutions are practically abandoned in this area. Dr. GLOVER has given notice of a motion on this subject to urge the Government to promote such an alteration of the law as was obviously contemplated by the Medical Act of 1858. Several cases of discipline may be brought before the Council, but its primary duty on this occasion is with reference to educational matters.

THE term "functional," as applied to certain forms of obscure nervous disorder, has perhaps a few advantages over its synonym "hysterical." The latter word by its etymology commits the user more or less, according to the individual interpretation of it, to a certain view as to the etiology of the condition to which the term is applied. It may be said that this is not so, that the word has been used to designate so many and such varied conditions that its primary significance has been lost sight of; yet it will scarcely be denied that to use such a word as descriptive of conditions which are found in male patients—much less frequently, it is true, than in female—is at least highly undesirable. The term functional, however, has about it a delightful vagueness. It explains nothing, it has no arbitrary meaning, and it expresses nothing in particular. If it be said that the term is only applied to conditions in which disturbance of function is manifested, then it must be granted that the term is applicable to every diseased condition which we know, for it will not be denied that all diseased conditions manifest themselves by perverted or disturbed function. It may be further asserted that the distinction between so-called functional and other conditions lies in this, that the latter have underlying them some morbid condition of organs. This we are prepared to admit, with the qualification that in some at least of what are well-recognised forms of disease there is no general consensus of opinion as to what the morbid condition in the organs is. On the other hand, can it be positively asserted that there is no anatomical lesion underlying the phenomena of functional paralysis? It is only of disease that kills that the morbid anatomy is known. No doubt cases of so-called functional paralysis do die, but a further examination as a rule leads only to a change in the original diagnosis, and even if no lesion be discovered, imperfection of methods of examination could reasonably be urged as the explanation of this. It will be seen, then, that the question narrows itself down to this, Can we draw a definite line of distinction between what is known as functional paralysis and what everyone recognises as true organic disease?

In deciding whether a given case is one of functional paralysis it is evident that the personal equation of the observer must be a very large factor. The diagnosis in such a case is usually arrived at by a process of exclusion, and it is evident that much will depend upon the knowledge and experience of the investigator, and that the greater such knowledge and experience, the rarer will the diagnosis be made. In his presidential address to the Neurological Society of London, bearing the significant title, "The Simulation of Hysteria by Organic Disease," Dr. BUZZARD drew attention to a large and important class of cases in which the diagnosis is far from easy, and in which that of "hysterical" or "functional" is too often made. The class referred to is that of disseminated sclerosis, and it was pointed out how very hysterical (no other word is available) such patients frequently are, although the organic background of the picture is plainly visible if it is carefully looked for. And if, as no doubt will be the case, wider recognition is granted to this class of cases, the ranks of the so-called hysterical will be appreciably thinned, and a large and important addition made to those of the sufferers from organic disease.

These being excluded, however, a large group of cases still remains to which the term "functional" seems to be the only one applicable. The prominent symptoms which may be enumerated are contraction of the visual fields, hemi-anæsthesia, with, it may be, motor weakness on one side, or in both lower limbs, and often associated with a peculiarity of manner which is difficult to describe, but is of great diagnostic significance. As those cases almost invariably recover perfectly, the question which remains for discussion is, On what does the disturbance of function which is present depend? Is there some underlying morbid condition which might be recognisable if an opportunity occurred for examination, or which might elude our present methods of investigation, or is the condition due to voluntary deception on the part of the patient? No one, we think, will deny that this problem is one of the most difficult and intricate in the whole field of medicine, and it is one on which we can only expect to throw a small ray of light by contrasting the two sides of the question. On the one hand, the manner of the patients is highly suggestive of deception, and in some of the cases simulation does undoubtedly play a part; but, on the other, against the view that it is all voluntary, the very fact that the cases can be so definitely grouped, and that the symptoms present such a very close agreement, seems to contend strongly. If there were analogous conditions where the idea of malingering was out of the question, the existence of such would naturally favour the view that the symptoms were not due to voluntary deception; but while the phenomena of hypnotism naturally suggest themselves, they can hardly in our present state of ignorance as to their causation and their underlying conditions be cited in this relation. And although post-epileptic paralysis may present some suggestive analogy to the conditions which we are discussing, and although there can be no doubt as to its reality, it cannot be urged that the resemblance in the conditions is at all close. We cannot, in short, as yet hope to give any definite answer to the question; but we can at least be on our guard against too readily, and without sufficient grounds, diagnosing hysteria, and falling into the lamentable error of including, among the functional or hysterical, patients in whom there exists the slightest definite sign of organic disease. And even supposing that we may be able to exclude every known form of organic disease, we must recognise that our knowledge of disease is as yet but in its infancy, and that in applying the term "functional" we are not making a diagnosis, but merely a convenient and temporary classification. As time goes on and our knowledge extends we may be

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quite sure, to quote from the address already referred to, that "the figure of hysteria will shrink in proportion as the various forms of organic disease acquire greater solidity and sharper outline."

SINCE the recent remarkable epidemics of lead-poisoning in certain districts of England, the nature of the action of water upon lead has very properly received a considerable amount of attention, both from medical officers of health and investigating chemists. One of the ablest of the records of experimental inquiry that have appeared from time to time as to the cause and mode of this action of water on lead, has recently come under our notice.[1] In this work Dr. GARRETT gives a very interesting account *in extenso* of experiments in which the action of distilled water, and water from melting ice, rain water, the water as supplied to Mirfield, Yorkshire, by the Huddersfield Corporation, the water supplying Okehampton in Devon, and the water of the New River Company was closely observed. It has been generally held that when distilled water acts upon lead, it is the oxygen in solution which is concerned in the production of a lead compound consisting of hydrate and oxide in molecular proportion, and that this compound is more or less soluble in the water according to the nature of its constituents. Although the action is doubtless due to oxygen, the author finds that it is not direct oxidation that takes place, but oxidation through the agency of an intermediate body which is present in the water. Thus he found that when recently boiled water was used considerable action was seen to take place, even when the temperature was maintained at boiling point. As there could be no dissolved oxygen under these circumstances, the author infers that the lead derived its oxygen from another source, and that this source is most probably a nitrate, a body which is known to act as an oxygen carrier in many familiar operations. Even distilled water contains sufficient nitrate to account for its action upon lead. The occurrence of nitrate in distilled water may possibly be due to the breaking up of nitrogenous matter, which, undergoing oxidation, yields nitrate in the distillate in the form of ammonium salt. In one experiment, for example, where distilled water of a slightly acid reaction was used a faint ammoniacal odour developed after a time, and the reaction changed to alkaline from the presence of lead oxyhydrate. It is quite conceivable that the nitrate undergoes reduction to nitrite, and that the lead oxide formed reacts with the ammonium nitrite so reduced, to form hydrate of ammonia and nitrite of lead—a theory which is supported by the fact that in many of the experiments the pieces of lead were found coated with nitrite. The author, however, does not appear to have determined whether the lead used was pure. He merely states that the lead employed in the experiments was a piece of new one-inch service pipe. Now were the lead associated with but a small proportion of other metal the action might reasonably be assigned to a different cause; for it is well known that dissimilar metals in contact with one another set up galvanic action, and a notable quantity of metal may thus become oxidised and not improbably dissolved. In the largely employed method for the determination of nitrates in water, for example, chemists take advantage of the action of the copper-zinc couple in bringing about conversion of the nitrates into nitrites, and finally ammonia. However this may be, the lead compound first produced is unquestionably oxyhydrate, and it only remains to determine how it is that certain waters are active in producing this compound, while other waters apparently possess little or no power to act. Lead oxyhydrate, the author finds, is distinctly more soluble in water containing common mineral constituents, such as the salts of ammonium, sodium, calcium and magnesium, existing as carbonates, chlorides, nitrates, and sulphates. It dissolves to the extent of $\frac{1}{2}$ gr. per gallon in New River water, $\frac{1}{4}$ gr. in Huddersfield water; and while cold distilled water takes up $\frac{1}{10}$ gr. per gallon, boiling water dissolves only $\frac{1}{50}$ gr. Sulphate of lime was found to retard the oxidation, although it facilitates the rate of solution. Common salt tends to increase the amount of lead compound produced. Sodium phosphate in an alkaline water protects the lead from action as soon as a film of phosphate of lead is formed; but phosphate in an acid solution failed to protect the lead, and the water eventually became alkaline from formation of oxyhydrate. In the same way alkaline silicate prevented the process of oxidation—a result which the author attributes to the carbonate rather than the silicate of sodium, inasmuch as water to which silicate of soda made distinctly acid had been added acted in a marked way upon lead. Sulphuric, nitric, hydrochloric, and acetic acids, as might be expected, act readily on lead, neutralising the oxyhydrate first formed, the solution eventually becoming alkaline in reaction. Alkalies in the form of carbonate of ammonia and soda effectually check the progress of lead oxidation in consequence of the formation of a protective coat of basic carbonate of lead. Carbonic acid unites with oxyhydrate to form carbonate of lead, which is soluble in excess of the gas. Our own experiments have shown that when carbonic acid gas is passed through water containing lead a considerable quantity of metal is taken up, and basic carbonate of lead is deposited on boiling. The author appears to think that contamination from this cause is not likely, as the amount of carbonic acid gas existing in ordinary waters, generally associated as it is with lime, is as a rule so small as to be nullified by the oxyhydrate of lead in the production of basic and insoluble carbonate. But although carbonic acid gas when present in water occurs in general along with much chalk, which no doubt obviates metallic contamination, we have met with certain waters containing only three to four grains of solid matter, and yet a large proportion of free carbonic acid gas. In fact, it was noticed that in one instance the water after passing through a zinc-lined pipe was found to contain a notable quantity of zinc as carbonate, and on boiling off the carbonic acid the zinc salt was precipitated.

Lastly, very interesting comparative results are given of experiments made with the water supply of Huddersfield, Okehampton in Devon, and the New River Company. The Huddersfield and Okehampton waters were both acid to cochineal, very soft, and like rain water (which acts strongly on lead), they contained nitrate of ammonium, and but very little fixed mineral matter. Both waters acted

[1] The Action of Water on Lead. By John Henry Garrett, M.D. Pp. 116. London: H. K. Lewis, 136, Gower-street, W.C. 1891.

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markedly on lead piping. The water of the New River Company differs very essentially from the two just mentioned in containing a comparatively high proportion of mineral constituent, chiefly of course carbonate and sulphate of lime. It has practically no solvent action upon lead, action being prevented doubtless by the presence of carbonate. Moreover, when one part of New River water (containing 13 gr. of carbonate of lime per gallon) was mixed with twenty parts of Huddersfield water (Mirfield) it was found to be more than enough to prevent action upon lead. In the face of a result like this it seems highly probable that if a water could be made to take up a sufficient quantity of carbonate of lime by a suitable and convenient process, the contamination of a water-supply with lead would be obviated. On the other hand, good results have been stated to follow on the use of flints, but Dr. GARRETT thinks that such results were more likely due to the neutralisation of the water by the alkaline carbonate contained in the flints. The author is strongly inclined to regard the acid which occurs in lead-dissolving waters as of an inorganic rather than organic nature, and in view of the fact that the waters in question contained nitrate, he is of opinion that it is nitric acid. The idea of the existence of the so-called peaty acids, humic and ulmic, he rejects, although many chemists have attributed the action of waters, especially those which have their origin in peaty districts, to these bodies. For further information of an equally interesting nature we commend our readers to a perusal of this instructive record of experiments, which have for their aim so desirable an object as the removal of what has threatened to be a great danger to the health of the community.

THE history of inhalations in the treatment of phthisis is not an encouraging one. They have been widely employed and hailed as the most rational and effective mode of assailing the disease at its seat. But the results of this method of medication have not been commensurate with the expectations excited by it, and we imagine that of late it has been gradually falling into disfavour and disuse. Several potent objections have been urged against the method. First, it has been denied that the various antiseptic and germicide agents applied by inhalation succeed even in reaching the seat of the disease—viz, the submucous tissue of the bronchial mucous membrane,—but are arrested often in the pharynx, oftener still in the larynx. Then it has been shown that, even assuming that the medicated atmosphere produced by one of the ordinary inhalers really reaches the seat of the disease, its impregnation with carbolic acid, creosote, thymol, or other such agent, is so exceedingly feeble as to leave no solid ground for anticipating serious benefit from its use. Further, many authorities urge with much force that if the phthisical patient be taught to rely upon inhalations the inevitable result will be a life of indoor invalidism and constant tinkering with his inhalers—a mode of existence sure to effect an amount of mischief more than sufficient to counterbalance the problematical advantages of inhalation.

There is much weight in the above objections, and until they can be satisfactorily met the place of inhalations in the therapeutics of phthisis cannot be an important one. Professor GERMAIN-SÉE, in a recent paper presented to the French Academy of Medicine, has sought to overcome the first of the objections to which we have made allusion—viz., the failure of the medicated atmosphere to reach the actual seat of the disease. He recalls the researches made at various times into the action of creasote upon tuberculosis. This drug has had a remarkable and somewhat chequered career. Discovered in 1832 by REICHENBACH, its true composition was first made known in 1853 by GORUP-BESANEZ, who showed that it consisted mainly of two substances—gaïacol and créosol. It was in 1877 that BOUCHARD and GIMBERT conceived the idea of its possible utility in phthisis, and made trial of it both *per primam viam* and hypodermically. Later, FRAENZEL and SOMMERBRODT in Germany made extensive trial of creasote, and reported benefit from its use. GUTTMANN, in his researches in the year 1889, found that the saturation of the system with creasote arrested the development of the bacilli, and suggested that the best means of bringing the system thoroughly under the influence of the drug would be to submit the patient to an atmosphere saturated with creasote under pressure. This is also the method recommended by Professor GERMAIN-SÉE. He describes it as follows: "The patient is shut up in a metal chamber, hermetically closed, and compressed air, passed through creasote and eucalyptol, is made to enter slowly. The air in passing through these liquids is saturated, and arrives charged with a large quantity of these medicaments. The pressure must be slowly increased, and should not exceed a half-atmosphere. The speed of delivery of the air saturated with the medicated vapours is from fifteen to twenty cubic metres per hour for a space of five cubic metres of capacity. The length of time the patient remains in the chamber is usually two hours, sometimes three or more, and no inconvenience ensues as the result of this procedure. The inhalations are made daily or more frequently."

Professor GERMAIN-SÉE has tried this method in twelve cases, of which one was a case of apical bronchitis, a second was a case of fetid bronchitis, and the remaining ten were genuine cases of tubercular phthisis, all of which, with one exception, had arrived at the stage of softening. The results obtained would appear to be surprising, a marked amelioration being in most cases observable, not only in the amount and character of the expectoration, but in the general constitutional condition, and in some cases, though not in all, a corresponding improvement in the physical signs. Contrary to what might seem probable, hæmoptysis was not only not excited, but seemed controlled by this mode of treatment, and the appetite and digestion were improved rather than otherwise. Hectic fever was also diminished. Naturally, the least improvement was manifested in the physical signs, but Professor GERMAIN-SÉE is inclined to hope that by this new method the disease, if not cured, may be at least arrested, and further progress prevented. Benefit was obtained in some cases in a fortnight, in others the treatment was kept up for three months. Very great benefit was obtained in some cases of scrofulous enlargement of the cervical glands.

At the present time it is hardly necessary to emphasise the necessity for extreme caution in admitting the claims of any new alleged remedy for tuberculosis, and the evidence before us in the present case, although interesting, falls immeasur-

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ably short of demonstration. Further trials will no doubt be made, and their results will be awaited with attention. One benefit, somewhat negative in character, may even now be derived from Professor GERMAIN-SÉE'S researches—viz., the realisation of the utter futility of the methods of inhalation so long adopted, and the uselessness of the inhalers now commonly employed. If inhalation is ever to become a valuable agent in therapeutics, it will probably be by the adoption of some plan analogous to that sketched above, and according to our present knowledge the most hopeful medicament with which to experiment would seem to be creasote.

Annotations.

"Ne quid nimis."

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES IN LONDON.

THANKS to the energy of the Medical Council and the Royal College of Physicians, the metropolitan asylums hospitals have now been opened for clinical instruction in infectious diseases. This makes an enormous addition to the clinical field of the London schools. We have before us a poster headed "Medical Instruction at Fever Hospitals." This has been sent to the deans of all the medical schools. A two months' course has been announced, to be commenced on May 4th, by Dr. Collie at the Eastern Hospital, Mr. R. M. Bruce at the Western Hospital, and Dr. J. MacCombie at the South-Eastern Hospital. It remains to be seen now how far London students will do their part in this matter. In Edinburgh, Dr. Littlejohn lately said in a letter to THE LANCET, nearly 200 students a year receive such instruction. In Glasgow they have the same success. In both towns it is noted that it is a most exceptional thing for students to be attacked by the fevers they study. In the Metropolitan Asylums a carefully drawn set of rules is likely to secure a similar immunity. But, in any case, the diseases have to be studied. We gather that, so far, the number availing themselves of these arrangements is rather disappointing. This probably arises from a want of familiarity with the arrangements, from distance, &c. But these difficulties must be overcome, or the regulations of the Medical Council will turn out to be a dead letter, and errors of diagnosis under the Notification Acts will arise to discredit their authors. The authorities of the Local Government Board and the managers of the Metropolitan Asylums Board have shown great earnestness in this matter, and it will be a matter of regret if they are disappointed by a want of response on the part of medical students and teachers.

THE INTERNATIONAL CONGRESS OF HYGIENE.

WE have to congratulate the organisers of the International Congress of Hygiene on the progress they have made. This week the press at large has noticed at length the subjects that the various sections are to discuss, and given the names of the very eminent scientific authorities who compose the managing committees of these numerous subdivisions of the Congress. There is no doubt that the Congress has received widespread support. It will be a magnificent gathering and a unique opportunity of achieving real practical work. The Congress will have the power to shape the sanitary legislation of many countries, and we trust that it will exercise this unquestionable influence to the best possible advantage. The organisers have been well inspired in publishing, in pamphlet form, the entire programme of the proceedings, as the numerous circulars issued by the various sections were becoming somewhat unwieldy. It is unfortunate that the Congress cannot meet in a single building, but as there are to be ten and probably eleven, sections or divisions debating simultaneously, we understand that it would be most difficult to find premises large enough for so many, as it were, separate congresses to sit under one roof. From abroad most encouraging reports have been already received. The Governments of Denmark, Italy, France, Holland, Turkey Switzerland, the United States, Hong Kong, New Zealand, and Victoria have appointed official delegates, and their example is sure to be followed by many other Governments. Certainly, thirty, and perhaps forty, nationalities will be represented, and our colonies will be in great force. The different Governments of India are taking energetic measures to secure a good hearing in urging the claims of India to a large share in the benefits of sanitary reform. In this respect we would suggest that some reports on the condition of native labour in the cotton and other factories of India that compete with Lancashire would be most appropriate at the present moment. This is a question that the Industrial Hygiene Section should take in hand, for the advocates of factory legislature in India are greatly in need of the moral support such a congress could give, and give most effectually.

DEATH AFTER A DOSE OF SALOL.

SALOL is usually considered a tolerably innocuous drug, but there are not wanting clinical observations which tend to show that, under certain circumstances at least, its use may be followed by dire results. Thus a case was some time ago reported by Aufrecht and Behm in which death followed its use in acute endocarditis, and more recently Dr. Chlapowski has published in a Bohemian medical journal an account of a case in which a similar fatal result followed a fifteen-grain dose ordered to a patient who was suffering from severe gastric symptoms, and who was being examined by Ewald's method. After taking the salol the patient became restless and unconscious, the pupils dilated, the pulse became irregular, there was constant vomiting, and the urine became dark, and contained salicylic acid. Death occurred twelve days later. At the necropsy there were found gastritis and hæmorrhagic enteritis, a gastric ulcer cicatrised at the cardiac end, chronic endometritis, and a cyst of the ovary. No doubt was entertained that the salol had caused the symptoms of poisoning.

MEASURES AGAINST SMALL-POX, ANCIENT AND MODERN.

THE *Pall Mall Gazette* quotes the following from a newspaper published in Minnesota, U.S.A., in February of the present year:—"Prairie du Chien, Wis., Feb. 15th.—P—— D—— died to-day in the pest-house from small-pox and pneumonia. He was sent to the house, which has been established owing to the epidemic, to look after a small-pox patient, and from him contracted the disease. In his delirium he escaped and caused a panic by running through the street, everyone trying to get out of the way of the dreaded infection. Finally, the town marshal, with a gun, started in pursuit, and, the man refusing to halt, shot him in the leg. He was then taken back to the pest-house, where he died to-day. There are no new cases of small-pox." Thus it is clearly an offence—punishable, if need be, by death—to spread the small-pox infection in Minnesota. But there was a time when it was obviously an offence in this country to contract small-pox at all, and our contemporary reminds us of an "old-time punishment" which is to be found in the accounts of a Huntingdonshire village constable of

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1710: "Paid Thomas Hawkins fur whipping 2 persons yt had small-pox, 8*d*." It has sometimes been suggested that, instead of compulsory vaccination, some punishment should attach to the responsible head of a family in which small-pox occurs; but we imagine that when small-pox again becomes epidemic most of the now boasting defaulters will make a rush to the vaccination stations, and hence it is hardly worth while to re-enact whipping by constables. But it may be convenient for Leicester to know that under an Act of the seventh year of King George I, 1721, it was enacted that in case an infected person quarantined in the pest-house "shall actually escape out of such ..... house, lazaret, or other place, where he, or she, shall be so placed for performance of quarantine, before he or she shall have fully performed the same, he or she shall be adjudged Guilty of Felony, and shall suffer Death as a Felon without benefit of Clergy." It has always been a matter of wonder to us how Leicester will manage, if small-pox should become somewhat prevalent, to keep people detained under their vaunted system of "quarantine" in the old wooden shed which they devote to that purpose; but, if this Act of George I. be not repealed, all difficulty may disappear, unless indeed town authorities should prefer the New World method of last February, and thus generously waive the matter of "benefit of clergy."

DOES ERROR OF DIAGNOSIS DISENTITLE TO FEES FOR NOTIFICATION?

THE practical Scottish mind is exercising itself characteristically on questions arising out of the administration of the Infectious Diseases (Notification) Act. At Partick measles seems to have been included in the diseases to be notified, but Dr. Barras, the medical officer of health, does not advise the continuance of this inclusion, as very few cases are sent to hospital; and it is well known that the infection operates before the disease is pronounced. A nicer question has been raised and settled. The notifier, being a medical man, is not supposed to be very fallible in his diagnosis. But mistakes will happen even in highly trained hands. And they have so happened at Govan, Partick, and other places. The town clerk of Govan has given it as his opinion that those practitioners whose diagnosis turns out to be wrong are not entitled to receive the fees payable under this Act. This point seems to us to admit of argument. It surely cannot be maintained that infallibility of judgment in a medical man is essential to constitute a claim to remuneration. Where there is gross carelessness or want of skill the case is different, but where the point is a nice one and the medical man is careful, we think he is entitled to his fee.

OPERATION FOR FRACTURED SPINE.

AT a recent meeting of the Glasgow Medico-Chirurgical Society, an account was given by Mr. D. N. Knox of a case of much interest which had been under his care at the Royal Infirmary. The patient was a pit boy, aged thirteen, who was admitted on account of a severe injury to his back which he had sustained through a cage falling upon him. His back was much bruised, he complained of pains of a cramp-like character in his legs, and he could only rest when laid on his side with his legs drawn up. There was a very distinct projection of the eleventh dorsal spine, evidently the result of displacement of the corresponding vertebra. There was complete loss of ability to move the legs the morning after admission, and loss of sensation, but the patient passed his urine voluntarily. An operation was undertaken thirty-six hours after the injury, and it was found that the body of the eleventh dorsal vertebra was fractured, that it was displaced backwards and its spine rotated to the right, and that the upper articular processes were also fractured and displaced. After the theca had been exposed by sawing through the laminæ of the tenth dorsal vertebra the spine was extended, and the displaced vertebra restored to its position. The spinal cavity was carefully cleaned, and, on account of the large amount of bruising, the wound was stuffed with gauze, and afterwards allowed to granulate. The patient rallied well, and on the day after the operation had completely regained sensibility in his legs. The progress as regards motor power was very slow but steady, and at the time the paper was read the patient was able to take a few steps without support. The chief difficulties that had to be contended with after operation were apparently the wasting of muscles, with the proneness of the joints to become fixed, and massage and galvanism were employed with the view of obviating these. There was also difficulty at first in keeping up a good position of the back, the tendency to projection when he raised himself from the recumbent posture being impossible to counteract. Mr. Knox is to be congratulated on his success in dealing with one of a class of cases which have hitherto not been found the most favourable for operation, and it is to be hoped that the complete restoration of the patient's power is only a question of time.

BLOODLETTING IN BERI-BERI.

A JAPANESE physician has had recently some excellent results from bloodletting in beri-beri or kakké, and in cases, too, which were not *in extremis* at the time, as some which were said to have been benefited by similar treatment several years ago, were when venesection was employed as a last resource. The idea of the value of bloodletting occurred to this practitioner from seeing three cases of the disease in which menstrual or hæmorrhoidal hæmorrhage had been followed by marked improvement. The main symptoms are those of anæmia; and it will be remembered that, paradoxical as it appears, venesection has recently been strongly recommended and practised for extreme anæmia. The method employed is not bleeding from a vein in the arm, but cupping—from 100 to 250 cubic centimetres of blood being abstracted in two or three sittings.

QUACKERY IN BRUSSELS.

THE attention of the Belgian public, both medical and lay, is, as has already been stated, being called by the efforts of the press to the sad results which have followed the prolonged visit of the oriental eye quack, Golam Kader, to Brussels last year. A further report has just been made to the Brabant medical commission by Dr. van den Bergh, which enters more into details than the paper of Dr. Legros, which dealt only with the subject of granular ophthalmia. Dr. van den Bergh states that in his out-patient department, which is situated in the centre of the city, there were seen in the month of April, 1891, 423 separate patients, the number of cases of granular ophthalmia being 55, whereas in the corresponding month of the year 1890 there were only 320 patients seen, of whom only 12 had granular lids. One woman who had had granular lids of a very chronic kind, after going to the quack, contracted violent purulent conjunctivitis of one eye, with a bad abscess of the cornea. Another woman had granular disease, together with double cataract, that on the right side being mature. By means of very assiduous treatment the granular condition had been sufficiently subdued to render it possible to think of operating on the cataract. Just at this time she fell under the care of the quack, and in a couple of months Dr. van den Bergh saw her again in a most pitiable plight, with acute granular ophthalmia and purulent discharge of a very obstinate character. Another woman

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who consulted the quack for a simple weakness of sight came away with purulent ophthalmia on both sides. The following cases illustrate how the many vaunted "cures" were effected, and will give an idea of their value. A woman had complete detachment of the retina of the right eye, which was pronounced by Dr. van den Bergh incurable, the left eye being sound. She went to the quack, and curiously enough had a slight glimmer of perception of light afterwards, which was magnified into a complete cure, and trumpeted about as an example of Golam's success where an eminent hospital surgeon had pronounced cure to be impossible. So far from this being the case the poor woman is again a patient, with the right eye as blind as ever, and with the left suffering from granular pannus, which so seriously affects her sight that she can scarcely see to walk about. An old man had purulent dacryocystitis on both sides, as well as double cataract. Dr. van den Bergh had taken a great deal of pains to remove the dacryocystitis in order to be able to operate on the cataracts without danger of panophthalmitis; all was satisfactorily accomplished, and the man had excellent vision—of course with spectacles. Having heard, however, of the "cure" of the previous case, he had recourse to the quack, who promised to make him see well without glasses; instead of which he gave him granular ophthalmia. Two cases are mentioned in which patients who had cataract were operated on by Golam by the couching method, and lost their eyes completely. Perhaps the saddest of all the cases was that of a man who had double optic atrophy, and was only able to see a glimmer of light; after going to Golam throughout the summer he became affected with terrible inflammation in both eyes; the corneæ are now perforated and staphylomatous, the eyelids greatly swollen and everted, looking as large as hen's eggs, and discharging purulent matter. Such are the results of letting ignorant people meddle with eyes.

CHARING-CROSS MEDICAL SCHOOL.

WE recently announced that a scheme had been inaugurated for commemorating the long services of the late Dr. Julius Pollock and the late Mr. E. Bellamy in connexion with the Charing-cross Hospital. A meeting of the subscribers to the memorial fund was held at Charing-cross Hospital Medical School on Tuesday, May 19th, in order to decide what form the memorial should take. After several proposals had been discussed, it was ultimately resolved to apply the fund towards extending the present anatomical department, by adding a collection of specimens to the Anatomical Museum, to be called the Bellamy-Pollock Collection. The first list of subscribers was announced, from which it appears that an amount nearly approaching £100 has already been subscribed. At the request of several past students it was agreed that the subscription list should remain open for further contributions, which may be sent to Mr. Stanley Boyd, the Dean of the Medical School, Mr. R. C. Ackland, or to Mr. G. T. Bishop, the Secretary of the Students' Club, until the end of the present month.

CHANGES IN THE KIDNEY IN PHTHISIS.

THE condition of the kidneys in phthisis has never been fully investigated. Several observers have described a fibroid condition. Becquerel and Rayher concluded that Bright's disease was very frequently associated with tubercular disease of the lungs. Peacock in 117 cases of kidney disease found 30·7 per cent. of phthisis. Frerichs found that out of 42 cases of Bright's disease 6 also suffered from phthisis. Bamberger stated that the disease was found in 15 per cent. of those suffering from kidney disease. In the *Centralblatt für Allgemeine Pathologie und Pathologische Anatomie*, Feb. 1st, 1891, Dr. C. von Kahlden publishes his results on the same subject. He is of opinion that slight degeneration of the renal epithelium is almost always found in active phthisis. It may, however, be so slightly marked that it is only visible on microscopic examination, and even then may be easily overlooked. The kidney may be either normal in size or somewhat enlarged. Macroscopically the following conditions are noticed. The surface of the organ is smooth and yellowish in colour; the capsule peels easily; the cortex is usually slightly thickened, and also yellow in colour; the medullary portion is pale. The microscopic changes chiefly affect the cortex, the parenchyma being first attacked. The epithelial cells undergo fatty degeneration, but are occasionally replaced by fresh epithelial cells. The interstitial changes are therefore secondary, and generally slight, and take the form of a small round-celled infiltration, and some increase of the connective tissue. The glomeruli also take part in the degeneration. The cortex is not uniformly affected, but the changes take place in patches. These lesions are evidently chronic, as is shown by the thickened capsule, the atrophy of some of the glomeruli and the changes in shape of the epithelial cells of the tubules, these being altered from a club form to a cubicle or cylindrical shape. Clinical symptoms which accompany the renal degeneration are unreliable. Albumen in the urine is rarely present. The author states that the condition is one of a chronic parenchymatous nephritis, and thinks that it may be caused by the poisonous products of the tubercle bacilli.

A NOVEL CASE OF ISOLATION.

WHATEVER the measures adopted, the principle of isolation is the essence of all genuine disinfection. Its efficiency for this purpose was recently well shown at Epsom Common. One of the children in a gipsy encampment having been taken ill with scarlet fever was, along with its mother, very successfully separated from the rest of the community by the simple expedient of a ring fence made of rope drawn round the infected tent and regularly watched. The result has been that the slow progress of convalescence has been passed through and disinfection completed without further extension of the disease. The surveyor, Mr. Harding, is to be congratulated on the success of his novel and effectual manœuvre. The satisfactory result thus easily attained is of obvious importance in connexion with the approaching Derby day, with its attendant crowd of "all sorts and conditions of men" flocking to Epsom, and the simple method employed deserves to be remembered in case of later emergencies of a similar kind.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE AND THE BOARD OF TRADE.

IT is somewhat difficult to understand the reasons which have weighed with the President of the Board of Trade in his decision to withhold consent to the omission of the word "limited" from the registered title of the British Institute of Preventive Medicine, as stated in the letter from Sir Joseph Lister which we published last week. The only opposition to the application appears to have been that raised on behalf of those who object to experimentation on animals; but we have yet to learn that this kind of work is such as to be henceforth regarded as having a commercial basis. We cannot but believe that if the President of the Board of Trade had waited until he had received Sir Joseph Lister's letter explanatory of the objects of the institute, he would not have hesitated to grant the required dispensation. It is not, as Sir Joseph Lister points out, the function of the Board of Trade to grant licences for vivisection; that

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rests with the Home Secretary, and, although the action taken by the Board may be explained away on other grounds, it is impossible to doubt that the pleas of the objectors must have unduly influenced the decision arrived at. We regret this decision extremely, and must regard it as owing to a misconception of the main objects of the proposed institute. These objects are strictly scientific and charitable—to afford opportunity for the study of preventive medicine, and thus to benefit the community at large. It is bad enough that in this country the State should decline to aid in this direction, and that Great Britain should be singular in having no institution comparable, for instance, with the Imperial Hygienic Institute of Germany. We have grown accustomed to the neglect of such objects by our Governments, and it is the Englishman's way to rely far more upon private enterprise than on State aid in matters of scientific research. But it is far worse to find the State as represented by one of the Government departments actually putting obstacles in the way of the prosecution of work which ought by rights to be materially supported by it. The question does not, we fear, involve the Institute of Preventive Medicine alone. The decision of the Board of Trade in this instance may serve to show that, no matter what may be the grounds of objection to applications for registration without the word "limited"; no matter whether it be proved to demonstration that the objects of the petitioning body are purely charitable and carried on entirely without monetary profit to any of its supporters, yet if only the objectors be urgent enough in their demands, they are too likely to succeed in an opposition which can scarcely be characterised in strong enough terms. It is wholly foreign to our notions of "fair play" to prevent the carrying out of beneficent schemes, because a few people regard certain portions of such schemes with distaste.

CANADIAN MEDICAL CERTIFICATES.

THE College of Physicians and Surgeons of the Province of Quebec has, with the earnest coöperation of the universities, been endeavouring to get its certificates recognised in Great Britain on the principle of reciprocity. The terms of the Act of 1886 require, however, that before foreign or colonial diplomas can be recognised in England they must be recognised in the country in which they are obtained. Qualifications gained in Quebec are only recognised in the province of Quebec. Canada herself in other provinces does not recognise the certificates of the province of Quebec. In great questions this partial application of legislation provincialises and belittles; and it will have to be modified if countries with strong central Governments are to recognise those where local restrictions prevail.

MUSIC IN THE TREATMENT OF DISEASE.

THE value of music as a therapeutic method cannot yet be so precisely stated that we may measure it by dosage or by an invariably similar order of effects. Of its wholesome influence in various forms of disease, however, there can be little or no doubt. In making this assertion we do not, of course, assign to it any specific or peculiar action. It is no quack's nostrum, no reputed conqueror of ache or ailment. It is only, as we have already shown in a recent article, one of those intangible but effective aids of medicine which exert their healthful properties through the nervous system. It is as a mental tonic that music acts. Accordingly, we may naturally expect it to exert its powers chiefly in those diseases, or aspects of disease, which are due to morbid nervous action. The evidence of its utility on occasions where fatigue or worry has disturbed the proper balance and relation between the mind and body of the so-called healthy will explain its action in disease. We can readily understand how a pleasing and lively melody can awake in a jaded brain the strong emotion of hope, and energising by its means the languid nerve-control of the whole circulation, strengthen the heart-beat and refresh the vascularity of every organ. We can picture the same brain in forced irritation fretfully stimulating the service of the vaso-motor nerves, and starving the tissues of their blood-supply. Here, again, it is easy to comprehend the regulating effect of quieter harmony, which brings at once a rest and a diversion to the fretting mind. Even aches are soothed for a time by a transference of attention, and why, then, should not pain be lulled by music? That it sometimes is thus relieved we cannot doubt. It is especially in the graver nervous maladies, however, that we should look for benefit from this remedy. Definite statistics on the subject may not be forthcoming, but all that we have said goes to show that states of insanity, which are largely influenced by the condition of the sympathetic system, should find some part of their treatment in the hands of the musician. It is, therefore, for such cases especially that we would enlist his services.

DEATHS OF TWO EMINENT PHYSICIANS.

WE regret to record the death of Dr. Robert Martin, F.R.C.P., consulting physician to St. Bartholomew's Hospital; also of Dr. Henry Monro, F.R.C.P., of Upper Wimpole-street, and Orchard Leigh, Bonchurch, Isle of Wight, at the age of seventy-four, of influenza, a physician of repute in connexion with insanity and lunatic asylums. He was the author of several works on psychological topics, and was the president of the Medico-Psychological Association in 1864. We hope to be able in a future number to give some account of the professional careers of the above physicians.

RHEUMATIC FLAT-FOOT.

DR. F. B. HARRINGTON contributes a paper to the *Boston Medical and Surgical Journal* of April 9th of this year on "Flat-foot." He explains that whatever lessens the motion or the power of the foot, be it disease or injury, may be followed by temporary flattening, or other deformity of the foot, or by those symptoms which, although no deformity exists, may be attributed to analogous conditions. The extent of the deformity depends upon the amount of displacement of the bones and the extent of yielding of tissues. The acuteness of pain is not at all dependent on the degree of deformity. Very few of the cases are in any way connected with rheumatism, except that, being disabled joints, they are more liable to acute rheumatic arthritis, like other crippled joints. There is, however, a class of cases in which rheumatism is the primary cause of the flat-foot and the accompanying disability. Dr. Harrington relates two cases which well illustrate this condition. There is a considerable number of cases, he says, in which, after rheumatism, the deformity is slight or wanting, but the disability is great. Sometimes this disability is due merely to the arthritis which persists after the disappearance of the disease. Often it is a combination of arthritis and those conditions which, for the want of a better general term, we call "flat-foot." Great relief can be afforded in many of these cases by supporting the arch of the foot. The reasons for the appearance of flat-foot after rheumatism are many. The muscular power of the leg and foot is diminished. The tissues are softened by inflammation. The effort to use the foot with the least discomfort—that is, with the least motion—induces the patient to abduct the feet. The patient swings the feet along with the toes diverging, and walks with little or no motion at the ankle. This necessarily throws him upon the inner border of the foot, and on account of the weakened state of the

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foot is more likely to produce breaking down of the arch. At the same time the abductor muscles, by their persistent effort to evert and fix the foot, are brought into a state of spasm and become contracted. Dr. Harrington draws special attention to the importance of correct use of the feet after rheumatic attacks, and the avoidance of such deformities as he describes. If patients use the feet while they are still painful, they should be watched to see that they do not do positive injury to them. If disability persists, even though no deformity can be seen, much relief may often be obtained by the use of foot-plates. The use of the plates should be combined with massage and appropriate medical treatment as indicated by the case.

MEDICATED LOZENGES.

AMONG the nicetics of therapeutics nothing perhaps is more irregular, more irrational or unscientific than the custom of administering powerful drugs in the form of lozenges or sweetmeats. Again and again has the custom of self-medication resulted in the most disastrous consequences to those who practise it, yet it is in these days a flourishing fashion. In its more open forms it is of too clearly injurious tendency to find much favour at the hands of the profession. We cannot but regret, therefore, that in the pharmacopœial sanction of the drugged sweetmeat it should appear to possess a species of medical recommendation, for, however we may disguise the fact, there can really be no question that the art of the confectioner is throughout a bid for popular custom. Its employment in the preparation of potent remedies we cannot but regard as a mistake. In appearance, if not intention, it suggests a needless transfer of professional responsibility, the consequence of which it is impossible to forecast. As a recent illustration of the serious mischief which may arise from this practice we may notice the case of a child who was recently poisoned by helping himself to a packet of the well-known trochisci morphiæ which had been prescribed for his father. There is danger, though less, for the parent as well as the child in this mode of prescription. No doubt it may be modified by specific directions as to use, but even thus it is hardly possible to invest with any permanent and adequate suggestion of danger the familiar aspect of a lozenge. This form of remedy is now indeed but little used, and might without loss be discarded as a means of treatment.

"PSEUDO-SYRINGOMYELIA."

SUCH is the name which Charcot gives to a case which was lately the subject of one of his lectures delivered at the Salpêtrière, and published in the last number of *La Semaine Médicale*. The patient was a young man of twenty-three, who was accidentally wounded by a bullet in the back some years ago. The bullet entered to the right of the seventh cervical vertebra, and was never extracted. At the time of the accident the patient had paresis of the right arm and leg, but this soon cleared up, and in fifteen days he was able to be about as usual. For three years he remained quite well, until one day, in lifting a heavy weight, he had a sudden acute pain in the back. He also had paresis of the right leg, and this never quite recovered, but passed into a condition of spastic rigidity. From the time at which this sudden pain came (eighteen months ago) he had gradually become worse, until he was in the condition described in the lecture. He had wasting of the muscles on the inner side of the right arm, and of those forming the thenar and hypothenar eminences, with characteristic loss of thermal and painful sensibility and retention of tactile, this, however, being limited to the inner side of the forearm. There was a well-marked spastic condition of the right leg, and a zone of sensory disturbance below the axilla on the left side. This disturbance consisted in inability to distinguish different kinds of sensations, every kind of sensory stimulus apparently producing only a sort of painful thrill. The pupil was contracted, but reacted to light; there was no nystagmus. A spinal curvature was also present, so that the picture presented by the case had a very close resemblance to that of syringomyelia, and indeed the case had been sent to Charcot with this diagnosis, and gave him the opportunity of calling attention to the liability of being deceived by such a case. The view which he took of it was that the bullet had penetrated to the vertebral column, that under the exertion referred to at which the present condition had its commencement, a collapse of the bodies had taken place, giving rise to pressure on the first dorsal pair of nerves, associated with the usual result of pressure on one side of the cord. Such a diagnosis of course makes a great difference in the prognosis; for whereas in syringomyelia there seems to be little hope of cure or even amelioration, in such a case as this the prognosis is at least not desperate, even without surgical treatment, and in the present state of spinal surgery may even be regarded as hopeful.

ARMY MEDICAL STAFF.

THE officers of the medical staff are awaiting the result of the recent conference between Sir Andrew Clark and Dr. Farquharson, M.P., and the Secretary of State for War. Mr. Stanhope was to consider and furnish an early reply to the points laid before him, and it is very desirable that some official expression of his opinion and judgment should be promulgated soon, seeing that, in the meantime, there are various rumours as to the Minister for War's intentions.

PERONEAL TYPE OF MUSCULAR ATROPHY.

DR. DONKIN makes another contribution to the literature of this curious condition in the last number of *Brain*. The cases which he reports are three in number, a father and two children—a boy and girl. The boy, aged nine, was first seen, and in him the condition was well marked. He had a high-stepping gait, and the ball of the foot was brought down suddenly and before the heels; the muscles below the knees were wasted, the thighs appearing normal, and sensibility seemed to be blunted. The knee-jerks were present, and there was no ankle clonus. The upper extremities presented the ordinary appearance seen in progressive muscular atrophy—wasting of thenar and hypothenar eminences,—and the wasted muscles showed either absence of or greatly diminished faradaic irritability. A similar condition was present in a sister aged seventeen, and in the father aged forty-two. In all three patients the weakness and wasting began in the legs, and the hands were noticed to be affected about two years later. Of a family of eight, four are alive, two suffering in this way, and the paternal great-grandfather is said to have suffered in his hands in a similar manner.

A LURKING DANGER.

IT is no new thing that stamps and envelopes should be blamed as a cause of numerous petty illnesses which occur to those who constantly use them. The connexion between a habit of licking the gummed surface and an irritated tongue is not entirely imaginary. The mere contact of the mucous membrane with an adhesive substance, if often repeated, must encourage abrasion of the former. Another element of danger exists in the well-known impurity of office gum. We would not indeed credit all that has been said by talkative alarmists on this subject. The supposed transference of infectious disease by this means is probably something more than a myth evolved by the brain of an

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amateur germ-student. So is it in some degree with the communication of other poisonous properties in like manner. An illustrative case in which the receiver of a letter is said to have become violently sick after moistening with the tongue a gummed envelope which had previously been licked by an opium taker is, however, entirely too dazzling to be appreciated by an ordinary comprehension. Perhaps it is to be regarded as a literary tit-bit intended for the Transatlantic intellect. There are facts of daily occurrence which tend to show that there is a definite relation between the germ theory and some common sequences in the use of gum. Thus a fresh cut in the skin, if covered as it often is with the gummed paper surrounding stamps, is liable to inflammation. The occasional virulence of this process, moreover, favours the conclusion that it is not the mere consequence of retained discharges, but is due to injurious matter added by the dressing itself. Certain precautions are therefore in this connexion as natural as convenient, and we need hardly emphasise the teaching of experience with regard to them. It is usually as easy as it is advisable to avoid licking stamps, and it is never safe to apply them to a wound. The evident advantage of adding some preservative to gum during its manufacture needs no comment.

HEMIOPIC HALLUCINATIONS.

WITH reference to the paper on this subject recently published by Dr. Peterson of New York, of which a notice appeared in our columns, Dr. Schweinitz in the *New York Medical Journal* refers to a case published by him as one of a series in 1887 in the *Journal of Nervous and Mental Diseases*. The patient was a young man of twenty-nine, who had several convulsions and was the subject of optic neuritis with left homonymous hemianopsia. He became mentally deranged and was sent to an asylum. Preceding the onset of hemianopsia he had visions of chairs, tables, and other common things floating about. Although he was quite rational at the time, he was unable to state whether those visions disappeared coincidentally with the onset of the hemianopsia or persisted for a time. He died afterwards in the asylum, and at the necropsy there was found a gummatous infiltration at the base of the brain pressing on the right optic tract. The author is unable to state definitely that there was no affection of the occipital lobe, and he regards the case as one of the class described by Dr. Peterson in which the hemiopic hallucinations are simple and transitory.

THE REVISION OF NOTIFICATION CERTIFICATES BY MEDICAL OFFICERS OF HEALTH.

IT is with regret that we find it necessary to recur to the unfortunate attitude which has been adopted by a few medical officers of health towards medical practitioners notifying disease under the Notification Act, 1889. According to the printed proceedings of the medical officer of health of a rural district, and to certain published correspondence which has ensued, it appears that the official in question "investigates" every case of infectious disease notified to him, the rural authority "insisting" on this practice, although no such duty devolves on the medical officer of health under the order of the Local Government Board, neither is he paid for any such work. And further, when this official does not "think" the diagnosis of his fellow practitioner to be right, he gives his sanitary authority the benefit of his unfortunate doubts, and literally returns the notification to the medical practitioner signing it. Naturally this has resulted in considerable indignation, and when such a practice is resented, the complaining practitioner is calmly told to "prove" the correctness of his diagnosis, the official in question still holding "that many of the cases notified . . . will not bear inspection." Unless there be a definite desire on the part of certain medical officers of health to wreck the system of notification, the attitude to which we have adverted had better come to a speedy end. The Act in question was not intended to secure a system of espionage; the Local Government Board have distinctly announced that it cast "no new duty" on medical officers of health; sanitary authorities have no right to demand such behaviour and practices on the part of their officials; and in this very case the Local Government Board have distinctly declared that neither the statute nor any order "imposes on a medical officer of health any obligation to visit each case notified to him under the Act for the purpose of testing by personal examination of the patient the accuracy of the certificate, and it appears to the Board that it would usually be inexpedient that he should undertake such an examination unless he has reason to believe that the certifying medical practitioner is not acting in good faith." The last part of this opinion sets out the only condition under which such revision of certificates as we have called attention to can be justified. A sanitary authority has a right to be protected by its officers against fraud, and when fraud is suspected it may become the duty of a medical officer of health to test a notification return. But whenever this is done the proceeding should be carried out openly, with the knowledge of the practitioner whose certificate is in question; and the report should be submitted to the sanitary authority, who should themselves return the certificate or take any other needed action. But for a medical officer of health who only "thinks" he is correct in differing from a fellow practitioner to take action which, as the central authority suggest, ought only to be contemplated in the case of absence of "good faith," is a proceeding of which we trust we have heard the last.

GANGRENE OF THE LUNG.

IN the *Allgemeine Wiener Medicinische Zeitung*, No. 15, is an abstract of an interesting paper by Dr. Otto Hewelke on the etiology and treatment of gangrene of the lung. As regards the causal relationship which is supposed to exist between pneumonia and gangrene, Dr. Hewelke makes some important observations. He collected the reports of 2359 necropsies made at the Warsaw University, amongst which were 50 cases of pulmonary gangrene, and 146 cases of croupous pneumonia in none of which gangrene had supervened. From these data the author concluded that the occurrence of gangrene as a sequel of croupous pneumonia was only an accidental one, and stood in no causal relationship with the inflammation of the lungs. He suggested that a fresh infection must have taken place by means of the staphylococcus aureus or albus, probably from the inspired air, or decomposing material in the mouth or air passages, and that owing to the condition of the lungs the germs would find a favourable nidus on which to become engrafted. In regard to the treatment, Dr. Hewelke considered that the ordinary measures, such as the administration of turpentine, creasote, or inhalations of carbolic acid, only exert a palliative influence on gangrene of the lung, and he therefore attempted in undoubted cases a modified surgical treatment by antiseptic injections into the pulmonary tissue. The injections were made by means of a syringe holding about 2·5 ccm., and provided with a stout hollow needle about 5 or 7 cm. long. No unpleasant local effects were noticed. At first he used a mixture containing 2 parts of menthol, 3 of oil of eucalyptus, and 100 of water. Afterwards, however, he found it better to employ an alcoholic solution of thymol in the strength of 1 in 300, or 1 in 200. Not more than 2·5 ccm. should be injected at one time. In addition to the antiseptic action of the injections,

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Dr. Hewelke was of opinion that they were beneficial on account of the slight irritation they produced, so aiding expectoration and accelerating the emptying of the cavities. The results obtained were satisfactory, the duration of the disease was lessened, the symptoms were not so severe, and the author considered that his preliminary researches denoted that in these injections is to be found one of the best methods for the treatment of this grave condition.

SANITARY ADMINISTRATION AT MIDSOMER NORTON.

THE action of the Midsomer Norton Local Board of Health in superseding their medical officer of health, Mr. Waugh, who has served the district with credit for seventeen years, is typical of that class of procedure that makes the intelligent public dread extension of the system of local government as opposed to a centralised control, and that actually led to the omission, from the Local Government Act, 1888, of the schedule by which important powers were intended to be transferred from the Local Government Board to County Councils and sanitary authorities. Mr. Waugh's offence lies in the fact that he has told his authority the truth, and the truth happens to be particularly unpalatable. An understanding existed that the chairman was to nominate Mr. Waugh for re-election, but a majority who had read Mr. Waugh's last annual report with "surprise and disapprobation" passed him over and elected another officer. Appeal to the Local Government Board has followed, but we fear it will be useless. That Board has no power to dictate to an authority whom they should appoint, and its function is practically limited to withholding assent to repayment of half the salary out of the county funds, in the case of appointments to which objection is taken. But even their objections must be such as would be recognised as valid under the statute, and they cannot be enforced merely because an authority decides that a skilled and trustworthy officer, against whom nothing can be said except that he has performed his duty, shall be replaced by a successor whom there is every ground for believing is also competent and trustworthy. The remedy lies with the community who have elected the body locally described as consisting largely of "sensitive men ..... who hungered for compliments on their zeal"; instead of desiring to know the true sanitary circumstances of the district which had been placed under their care in their capacity as representatives of the public.

ANTISEPTICS FOR DENTAL PURPOSES.

IT is not many years since it was laid down as a cardinal rule that the whole of the carious part of a decayed tooth should be removed prior to stopping, even if this involved exposing the pulp. Recently the view that better results may be obtained by not encroaching upon the dentine in near contact with the pulp, even should it be diseased, has become generally accepted; it is therefore a question of some importance how far this diseased tissue can be rendered innocuous. Of the microbes which are found in carious dentine, which are presumed to be the immediate cause of the lesion, some do not require oxygen in order to live and propagate, so that even if an air-tight filling is made this will be no guarantee against the further progress of decay. Dr. Miller of Berlin has been for some time past engaged in a series of experiments to show the relative value of various antiseptics for sterilising carious dentine. A 5 per cent. solution of trichloride of iodine seems, from these experiments, to be by far the most powerful germicide and has no escharotic action, but, on the other hand, is decidedly acid in reaction. Next comes bichloride of mercury, followed by peroxide of hydrogen, which latter does not appear to have much penetrating power, probably due to the products of decomposition present in the superficial layers of the decayed dentine disengaging the atom of oxygen, leaving only H_2O to act upon the deeper portion of the dentine. Carbolic acid gives good results. It is a very active antiseptic agent, but falls considerably behind bichloride of mercury and trichloride of iodine in its penetrating power. Chloride of zinc is about equal to carbolic acid, but its escharotic action and the pain attending its application are distinct disadvantages. The essential oils, pyoktanin, benzoic acid, alcohol, thymol, and resorcin were examined, but found to be of comparatively little value.

METROPOLITAN HOSPITAL SUNDAY FUND.

IN accordance with our usual custom, we shall produce in connexion with next week's impression of THE LANCET a Supplement in support of the Hospital Sunday Fund collection, which will be gratuitously circulated and in the hands of the ministers of religion of all denominations within the metropolitan area for distribution amongst their respective congregations on Sunday, May 31st. Many of our readers will be in a position to facilitate the distribution of this Supplement, and to further its effect by bringing under the special notice of clergymen or others of their acquaintance the object of this publication, and explaining how its judicious use may be made to subserve in a very important degree the interests of the medical charities of the metropolis, and especially the success of the Hospital Sunday Fund collection which will be made a week later, on Sunday, June 7th.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

WE have already announced that Dr. John Rose Bradford will deliver a series of three lectures on the Physiology of the Vaso-motor System on Monday, Wednesday, and Friday, May 25th, 27th, and 29th, at the Royal College of Surgeons. Following on these, Professor James Berry will lecture on the subject of Goitre, its Pathology, Diagnosis, and Surgical Treatment on June 1st, 3rd, and 5th. Professor William Anderson will take for his subject the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes, on June 8th, 10th, and 12th; and Professor Reginald Harrison will discourse on Stone in the Bladder, Enlarged Prostate, and Urethral Strictures on June 15th, 17th, and 19th. The lectures will be given at 5 P.M.

"DIAGNOSIS AND TREATMENT OF EPILEPSY."

THIS is the title of a paper by Dr. James Stewart in the last number of the *Montreal Medical Journal*. While there is nothing absolutely fresh in what he has to say concerning the diagnosis, he emphasises several important points, especially calling attention to the difficulty of the differential diagnosis of epilepsy from hysteria, and to the close connexion of epilepsy with megrim. He also quotes several cases illustrating the relation of epilepsy to traumatism and to alcoholic excess; but with regard to the latter of these, it seems to us that the occurrence of a fit, or even several fits, after a drinking bout does not necessarily imply that the patient suffers from epilepsy, any more than does the occurrence of fits in kidney disease or any other condition of toxæmia. In the matter of treatment, Dr. Stewart warns against the indiscriminate use of bromide; but as regards other drugs, he confesses that his experience of their use is small. He attaches much importance, however, to the removal of the epileptic from what are undoubtedly often very harmful home surroundings, and everyone who has experience of the hospital treatment of epileptics will be able to endorse the view that removal from those surroundings is often of the greatest efficacy. As to diet, the author thinks that a good nitrogenous diet

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is not only desirable, but necessary, to many adolescent epileptics; while in the case of senile epileptics, a reduction to a carbohydrate diet is often most beneficial. The paper is a plea for the rational treatment of epilepsy, and for the treatment of each individual case on its own merits.

A NUMBER of medical practitioners, feeling that it would not be right to allow the major portion of the expenditure connected with the opposition to the two Midwives Registration Bills to fall upon Dr. Rentoul, have commenced a subscription to reimburse that gentleman the £160 which he has expended in his opposition to the Bills. Some £25 have already been raised. Subscriptions are being received by Dr. Hugh Woods, 11, Archway-road, Highgate.

WE understand that the in-patient department of the Middlesex Hospital is to be closed for a period of two months from July 20th next, in order to allow of teak flooring being laid down in five of the principal wards. The cancer wards will, however, remain open, and some beds will be retained for cases of great urgency. The out-patient department will also be open as usual.

CHOLERA appears still to prevail in Manipur and Burmah, and has numbered two lieutenants of the Indian army amongst its victims. Six fatal cases also are reported to have occurred amongst the 16th Rifles at Rangoon, whilst the disease has played sad havoc amongst the Darjeeling coolies.

THE INFLUENZA EPIDEMIC.

WE are glad to learn that the influenza outbreak has rapidly diminished in Yorkshire during the past week, and that the mortality in Sheffield is fast regaining its more usual limits (the rate for the week ending May 16th being 34·5 per 1000). At the same time the affection is still very prevalent in other parts of the country. Our Liverpool correspondent says that the deaths primarily attributable to influenza during the past week amounted to 21, those from bronchitis to 80, from pneumonia 44, the total death-rate for the week being 31 per 1000. At Leicester 8 or 9 deaths have been primarily attributed to influenza, and the mortality from respiratory diseases is still high. The death-rate of London has been steadily rising during the past four weeks—viz., from 21 in the week ending April 25th to 26·1 for the week ending May 16th. How large a part of this increase is due to the prevalent epidemic may be seen from the fact that the deaths from respiratory diseases last week numbered 620, or 303 in excess of the corrected average, 352 deaths being attributed to bronchitis and 207 to pneumonia; whilst the deaths primarily attributed to influenza rose to 266, "being more than double the highest number in any week of last year." These returns justify the conclusion as to the greater intensity of this year's invasion, although the number of individuals attacked seems to have been less, judging from the hospital returns given below. Amongst the victims to influenza and its complications we regret to have to record Mr. E. Long, R.A., Lord Edward Cavendish, M.P., Sir Patrick Colquhoun, and Mr. Henry Sampson of the *Reference*. Many of the statesmen who have been attacked are happily convalescing, and there have been but few fresh cases amongst members of Parliament during the Whitsuntide recess. We may hope that the indications of a decline in the epidemic may be fulfilled; but it may not be out of place to remind our readers to warn convalescents to avoid exposure during the present inclement weather.

The number of patients treated for influenza at the various metropolitan hospitals since last Thursday seems to have slightly decreased. This, however, may be partly accounted for by the intervention of the Whitsuntide holidays. At the London Hospital 221 cases were treated; at Guy's, 50; at St. Mary's, 82; at University, 63; at Charing-cross, 150; at Westminster, 50; at St. Thomas's, 209; at the Middlesex, 110; at St. George's, 42.

BRISTOL MEDICAL SCHOOL.

THE students of the Medical School, affiliated to University College, Bristol, assembled last week for the prize distribution at the Lecture Theatre of the Museum and Library. Professor Lloyd Morgan, Dean of the College, presided, and the prizes were distributed by Dr. Long Fox, who congratulated the school upon a good average of students who had passed the necessary examination, and the general excellence of the work. English medical students showed a higher sense of the responsibilities of life, a deeper devotion to duty, a more assiduous desire to fit themselves for a profession second to none in usefulness to all classes of men than any other body of young fellows of the same age. Reviewing the immense strides made in medical knowledge in the last half century, Dr. Fox said it would be impossible even to touch upon a few of the scientific thoughts of that period without glancing at one of the most important suggestions of the age, the theory of evolution, in which Darwin's name must ever be honourably associated. Probably those most anxious for its universal reception would be the first to confess that as yet very much remained to be proved. He entreated students to approach it in an unbiased spirit. Whether in the future the whole theory of evolution was worked out by convincing proofs or not, their attitude towards its chief apostle must be one of reverential admiration, of thankfulness that so scientific a spirit had been allowed to rise in their own time, and by his world-wide observations to enrich so largely their knowledge of physical facts and physical phenomena.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

South Molton Urban District.—Notification has been adopted in this district, and Mr. Albert Hind has organised visits to the elementary schools so as to secure early preventive measures in case of the onset of infectious diseases. Markets, slaughter-houses, dairies, &c., are periodically visited, and there have been numerous systematic inspections, details being obtained as to the sanitary circumstances of 320 of the dwellings of the labouring classes, and recommendations to owners and others have been based on the information acquired. Evidently that class of work which makes but little display, but which forms the basis for the best sanitary progress, is steadily going on. Last year the death-rate was 16·4 per 1000 living.

Northampton Urban District.—This borough is proceeding with the much-needed erection of a new infectious hospital at Kingsthorpe; improvements are being made in the condition of the sewers, and the new water-works are completed. This latter measure should, we hope, soon secure the closing of all domestic wells, the existence of which in this borough of some 66,000 people can only be associated with risk. The Notification Act is said by Mr. L. F. Cogan to work well, and it certainly reveals the material for a good deal of work in the way of restricting infection, whether in hospital or as regards school measures. We hope before long to find that private slaughter-houses, many of which are most unsuitable for their purpose, have been got rid of. The infectious fevers were, happily, by no means very fatal last year, and the general death-rate was 16·8 per 1000.

Bollington Urban District.—This report gives a general account of the diseases that have prevailed during 1890, and in referring to erysipelas it is stated that the disease, which was met with in different parts of the district, was in almost every instance associated with bad drainage and unsatisfactory sanitary arrangements. This, and other points adverted to, seem to indicate that no house-to-house inspection and record of the sanitary circumstances of individual premises has been made. If it had, the conditions referred to would probably have been discovered and remedied before instead of after the occurrence of disease. Mr. Allen gives the death-rate for this little town of some 4000 people as 21·2 per 1000, a rate which we hope is an unusual one.

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Swinton Urban District.—This report deals mainly with statistics and disease occurrences, but it is added that the sewerage system, in the main, works well, that privies have been improved, and that the principle of using waste water from sinks is to be extended in its application to water-closets. All depends, in so far as success is concerned, on the adequacy of flush provided, which means storage and automatic discharge in bulk. Some of the contrivances referred to are a source of nuisance, others answer their purpose fairly well for out-door closets. Mr. W. M. Jones gives the 1890 death-rate as 16·9 per 1000 of the population.

Durham Rural (Western) District.—Twice during 1890 has scarlatina appeared at milk farms; and in enforcing the provisions as to dairies &c., it is reported by Dr. E. Jepson that the loss to the farmer is aggravated by the circumstance that the health authority have made no provision for the isolation of the sick, and hence have needlessly prolonged stoppage of trade results. In some respects the authority have made progress, and it is to be hoped that a sufficient staff will be provided for the proper supervision of the new by-laws, and especially of those as to new buildings—a matter that will in the future be largely concerned in the healthiness of the district. Especially should care be taken to prevent recurrence of the mischief that has followed on the old midden-privy system. In 1890 the death-rate was 17 per 1000 living; and amongst the diseases notified were 217 cases of scarlet fever.

Haslingden Urban District.—Dr. J. A. Harrison has some adverse remarks to make on the need of reporting with sufficient plainness to satisfy the Central Authority, and on the risk of thus displeasing a local authority with whom absolutely rests the question of his retention in office. But he is able to report a progressive diminution in typhoid fever, a new drainage system, the replacement of faulty privies by tub-closets, and other like matters. The reforms mostly needed at present relate to the defective surroundings of farms, and to the need of an isolation hospital for current infectious fevers, without which notification can only do a limited amount of good. The death-rate last year was 12·6 per 1000 on over 16,000 people.

Winchester Urban District.—Mr. T. C. Langdon enters somewhat in detail into the question of the vital statistics for the city during 1890, and gives the general and the zymotic death-rates as 14·1 and 0·9 per 1000 respectively. The occurrences of infectious disease presented no features of especial interest, but it is satisfactory to note that improvements continue, and that the isolation hospital was found useful as a means of controlling infection. Improvement of the system of drains for surface water and also for subsoil water is a matter that is put forward as needing attention.

Surbiton Urban District.—Dr. Coleman, in the best estimate of population he could make, records the general death-rate during 1890 as 10 per 1000; he gives a detailed report as to an occurrence of diphtheria in which twenty-seven persons were attacked in twenty-two houses, all having their milk from the same source; and as regards the question whether milk need be boiled before consumption now that the disease has passed, he wisely says that it is, for many reasons, a prudent thing to do at all times. Means of isolation for first attacks of infectious diseases are still needed, and though the rural authority have a hospital near by, they do not seem inclined to admit cases from the urban district, from the inhabitants of which they did not receive much help when they erected their present buildings.

Bacup Urban District.—Dr. J. Brown reports that the notification of infectious diseases is proving of much value both from a practical and a scientific point of view, and he also refers to the isolation hospital as having been of material service. Phthisis causes some excess of disease, and the need of its prevention in Bacup seems to call for the precautionary use of respirators in certain trades, and for adequate ventilation of bedrooms; the latter requisite being one needing general application elsewhere than at Bacup. The infant mortality was 117 per 1000 births; the zymotic rate was 1·7 per 1000 living and the general rate was 18·1.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5963 births and 5772 deaths were registered during the week ending May 16th. The annual rate of mortality in these towns, which had increased in the preceding four weeks from 22·5 to 28·9 per 1000, further rose last week to 30·1, the highest rate on record. The rate was 26·1 in London and 33·3 in the twenty-seven provincial towns. During the first six weeks of the current quarter the death-rate in the twenty-eight towns averaged 25·9 per 1000, and exceeded by 4·7 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 16·1 in Hull, 19·1 in Brighton, 23·3 in Sunderland, and 23·6 in Cardiff; the highest rates were 40·2 in Leicester, 41·9 in Manchester, 43·5 in Leeds, 50 in Bradford, and 51·6 in Huddersfield. The exceptionally high rates in the last-mentioned towns were due to the fatal prevalence of influenza. The deaths referred to the principal zymotic diseases, which had been 461 and 442 in the preceding two weeks, further declined last week to 401; they included 167 from whooping-cough, 104 from measles, 45 from diarrhœa, 34 from "fever" (principally enteric), 32 from diphtheria, 19 from scarlet fever, and not one from small-pox. These diseases caused the lowest death-rates in Brighton, Birkenhead, Wolverhampton, and Sunderland; and the highest in Bristol, Plymouth, Leicester, and Portsmouth. The greatest mortality from measles occurred in Huddersfield, Leicester, Bristol, Blackburn, and Portsmouth; from scarlet fever in Preston; and from whooping-cough in Liverpool, Salford, Manchester, Plymouth, Leicester, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. The 32 deaths from diphtheria included 19 in London, 2 in Leicester, and 2 in Salford. Small-pox caused no deaths in any of the large towns last week; 35 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 924, and showed a slight increase upon the number on the previous Saturday; the patients admitted during the week were 118, against 100 and 79 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 588 and 584 in the previous two weeks, rose again to 620 last week, and exceeded by 303 the corrected weekly average. The causes of 75, or 1·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Sunderland, Cardiff, and in three other smaller towns; the largest proportions of uncertified deaths were recorded in Blackburn and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 22·1 to 23·9 per 1000 in the preceding three weeks, further rose to 24·1 during the week ending May 16th, but was 6·0 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 10·9 in Greenock to 28·4 in Glasgow and 33·1 in Paisley. The 630 deaths in these towns showed an increase of 5 upon the number in the preceding week, and included 32 which were referred to whooping-cough, 24 to measles, 12 to diarrhœa, 6 to "fever," 6 to scarlet fever, 3 to diphtheria, and not one to small-pox. In all, 83 deaths resulted from these principal zymotic diseases, against 80 and 72 in the preceding two weeks. These 83 deaths were equal to an annual rate of 3·2 per 1000, which was 1·1 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 25 in each of the preceding two weeks, rose last week to 32, of which 14 occurred in Glasgow, 8 in Dundee, 4 in Paisley, and 4 in Edinburgh. The deaths referred to measles, which had declined from 43 to 22 in the previous three weeks, were 24 last week; 10 were recorded in Paisley, 9 in Glasgow, and 5 in Edinburgh. The 6 fatal cases of scarlet fever showed a decline of 5 from the number in the preceding week, and included 4 in Glasgow. The 6 deaths referred to different forms of fever showed a further increase upon recent weekly numbers, and included 5 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had risen from 143 to 157 in the preceding three weeks, declined to 141 last week, but exceeded by 33 the number in the corresponding week of last year. The causes of

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60, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 23·0 to 26·4 per 1000 in the preceding three weeks, declined again to 25·5 during the week ending May 16th. During the first six weeks of the current quarter the death-rate in the city averaged 26·2 per 1000, the rate for the same period being 22·5 in London and 20·2 in Edinburgh. The 173 deaths in Dublin during the week under notice showed a decline of 6 from the number in the preceding week, and included 5 which were referred to whooping-cough, 1 to diphtheria, 1 to "fever," but not one either to small-pox, measles, scarlet fever, or diarrhœa; in all, 7 deaths resulted from these principal zymotic diseases, against 4 and 6 in the preceding two weeks. These 7 deaths were equal to an annual rate of 1 per 1000, the rate from the same diseases being 1·8 in London and 2·5 in Edinburgh. The fatal cases of whooping-cough, which had been 0 and 4 in the previous two weeks, further rose to 5 last week. The death referred to diphtheria was the first recorded in the city since the beginning of April. The 173 deaths in Dublin last week included 31 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon the numbers recorded in recent weeks. Four inquest cases but no deaths from violence were registered during the week, and 56, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or more than 12 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

MEDICAL STAFF CORPS.—His Excellency, General Sir Lothian Nicholson, K.C.B., commanding the forces at Gibraltar, has, we understand, conveyed to Surgeon-General Meadows the following expression of his opinion of the services rendered by the officers and men on the occasion of the wreck of the ss. *Utopia*, which occurred on March 17th:—"The willingness with which they have discharged their exceptionally difficult and painful duties in connexion with the disposal of the bodies of victims from the *Utopia* disaster, shrinking from none of the hard, and oftentimes revolting, work thereby entailed upon them, prompts me to place on record my high sense of their most excellent conduct, and to request you to convey to them the thanks, not only of the Government, which I have the honour to administer, but of the public at large."

INDIAN MEDICAL SERVICE.—The Queen has approved of the retirement from the Service of Brigade Surgeon Robert Gray, Bengal Medical Establishment (dated April 3rd, 1891).

Madras Medical Establishment.—Surgeon-Major (ranking as Lieutenant-Colonel) Arthur Luke Hackett to be Brigade Surgeon (dated Jan. 27th, 1891).

Bengal Subordinate Medical Establishment. — Senior Apothecary, Second Grade (ranking as Honorary Lieutenant), Richard Francis Knight to be Senior Apothecary, First Grade; and Apothecary, First Grade (ranking as Honorary Lieutenant), Christopher Hart to be Senior Apothecary, Second Grade (both dated Aug. 31st, 1890).

Madras Subordinate Medical Establishment. — To be Senior Apothecaries, Second Grade (ranking as Honorary Lieutenants): Apothecary, First Grade, Samuel Charles White (dated Jan. 16th, 1891); Apothecary, First Grade, Theophilus Todd (dated March 11th, 1891).

Bombay Subordinate Medical Establishment. — Senior Apothecary, Second Grade (ranking as Honorary Lieutenant), Diego Sant Anna de Lima to be Senior Apothecary, First Grade (dated Aug. 31st, 1890).—To be Senior Apothecaries, Second Grade (ranking as Honorary Lieutenant): Apothecary, First Grade, Wm. Reith Scroggie; and Apothecary, First Grade, Antonio Andrew De Souza (both dated Aug. 31st, 1890).

VOLUNTEER CORPS. — *Artillery:* 1st Glamorganshire: Acting Surgeon J. D. Griffiths, M.D., resigns his appointment (dated May 16th, 1891).—2nd Volunteer Battalion, the Royal Scots Fusiliers: Acting Surgeon W. J. Lawrie, M.D., to be Surgeon (dated May 16th, 1891).—1st Volunteer Battalion, the Cheshire Regiment: Acting Surgeon P. P. Young resigns his appointment (dated May 16th, 1891).—2nd Volunteer Battalion, the South Wales Borderers: Robert John Paton, M.B., to be Acting Surgeon (dated May 16th, 1891) —1st Volunteer Battalion, the Highland Light Infantry: Acting Surgeon N. Stark, M.B., to be Surgeon (dated May 16th, 1891).—1st Volunteer Battalion, the Princess Charlotte of Wales's (Royal Berkshire Regiment): Acting Surgeon A. G. Paterson, M.D., to be Surgeon (dated May 16th, 1891).

Correspondence.

"Audi alteram partem."

A TRIBUTE TO SURGEON PARKE.

To the Editors of THE LANCET.

SIRS,—I have made it a hard-and-fast rule never to write letters to newspapers or magazines unless such are actually called for; but on this occasion, on the eve of my departure for Africa, I beg of you space to insert these few lines as a small tribute to a medical man who has done his work so well and nobly. I refer to my old comrade, Dr. T. H. Parke, of the late Emin Pasha Expedition. I feel certain people have not fully realised the services of Dr. Parke to humanity. It matters nothing where or under what circumstances these services were rendered; blacks are capable of just as keen suffering and anguish as we white men are; and I therefore ask you to record the following incident, which is by far the bravest and noblest it has ever been my lot to be a witness of:—"When a portion of the expedition was stationed at Fort Bodo, in Central Africa, Dr. Parke, who was one of the number, was seized with a violent attack of bilious remittent fever; each day he grew worse, his temperature for the whole twenty days of illness never falling below 101° F. Quinine and arsenic and all other medicines failed, and Captain Nelson and I gave up all hope of his ever recovering. He was able only to crawl slowly about his hut, and could keep nothing of the poor foods we had to give him on his stomach. In spite of this, after about fifteen days' illness, when worn away to nothing, he crept out of his hut unawares to Nelson and myself, reached the hut of a black chief, Khamis Pari, and lanced for him a large and painful abscess, cleansed and dressed a wound, and was found by Nelson and myself in an absolutely helpless condition, and carried back by us to his hut. Next day reaction set in, and both Nelson and I expected he had only but a few hours more to live. He has never spoken to any of us, or to anyone that I know, a single word of this. I think it only fair to show to his brother medical officers what one of their number has done. Those who have suffered the agonies of a heavy fever will, I feel sure, appreciate and remember this brave action on the part of Dr. Parke."—I remain, Sirs, yours truly,

N. E. STAIRS, Captain.

St. James's-place, London, S.W., May 19th, 1891.

"SEQUEL TO A CASE OF ABDOMINAL SECTION."

To the Editors of THE LANCET.

SIRS,—Mr. Tait's communication on this subject in THE LANCET of the 9th inst. is more marked for its ingenuity than for its probability as a solution of the facts as I recorded them. I fail to see what occult meaning he has in view when he speaks of a "third operation if the full truth were known," nor do I think that the instance quoted by him of the man who had his testicles removed has anything to do with this case. My statement was a plain one. It embodies the full truth, and may be viewed without any side issues being imported. I will briefly recapitulate it. In 1884 I made an exploratory abdominal incision upon a girl at the General Hospital. Nothing was removed. The case was entered in the hospital record, and was afterwards attested by the house surgeon, and by others present at the time of the operation. Subsequently the patient went to Mr. Tait; he declares that, opening the abdomen again, he found one ovary ("set of appendages") *completely* removed, and that he removed the other set. The patient returned to my care unrelieved, and I have kept her under observation ever since. She has menstruated regularly all the time,

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last year was married, and has given birth to a full-grown living child. Mr. Tait accuses obstetric physicians of having short memories; I am afraid that his memory has defects also. It is true that I did not answer his letters, but it is equally true that they were answered by the house surgeon at the time, who distinctly told Mr. Tait that nothing had been removed from the patient—a fact which Mr. Tait utterly ignored in his printed letter to the chairman of the Hospital Committee, and which he has again lost sight of in his present criticism.

I am, Sirs, yours faithfully,

May 20th, 1891. EDWARD MALINS.

To the Editors of THE LANCET.

SIRS,—On referring to my notes of Mr. Tait's operations in January, 1885, I find the operation on Dr. Malins' case is entered as having been performed on Jan. 26th. One ovary and tube were removed, and I find Mr. Tait quoted as stating that there was "no trace of ovary or tube on the left side—the peritoneum sweeping down from the uterus to the side of the pelvis—no nodule even." No reference is found to any ligature or its removal in this case. But in another operation similar to that on Dr. Malins' case, in that it was performed on a patient who had already had an abdominal section made by another surgeon, an operation done by Mr. Tait on Jan. 23rd of the same year, it is noticeable that I find the record that after removing a distended tube on one side Mr. Tait found and removed the knot of an old ligature on the opposite side. As these facts may have an important bearing on the questions now at issue between Mr. Tait and Dr. Malins, it appears necessary for me to bring them before your notice. These notes were made at the time of operation, when I was acting as assistant to Mr. Tait, and I was quite ignorant of their possessing any possible value as bearing on the controversy with Dr. Malins until some years after I had made them, when I was arranging them for reference.—I am, Sirs, yours truly,

JOHN W. TAYLOR.

Birmingham, May 12th, 1891.

THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Together, with other earnest seekers after truth, I much regret the tone and lack of courtesy in Dr. Lawrie's reply to my letter upon this subject. Dr. Lawrie will hardly strengthen his position by accusing me of "gratuitous invention," or by the sneer conveyed in his sentence: "If Dr. Buxton were as familiar with the A B C of logic as *he would have us believe* he is with the A B C of the chloroformist's duties, he would know that proof of the absence of anything must always be negative proof." The italics are mine. Unfortunately for Dr. Lawrie's argument, he quotes my words, which are "its [i.e., the Hyderabad Commission's] conclusions are based upon purely negative evidence." I cannot suppose Dr. Lawrie can confuse the terms "evidence" and "proof" or the phrases "negative evidence" with "negative proof." If he does, I may perhaps be excused if I declined to accept his views upon the rules governing the constitution of the logical syllogism. Dr. Lawrie again indulges in calling what he regards as my "methods" by hard names; but this I can forgive, for he evidently does not understand in what they consist. Unless purely personal matters are excluded in discussing questions, the foundations of which are purely scientific, I must decline to participate in them. It cannot tend to increase our knowledge of the physiological action of chloroform for us to hear that Dr. Lawrie of Hyderabad regards Dr. Dudley Buxton's method as "impracticable," and its "absurdity only surpassed by the absurdity of another specialist." Such an unguarded manner of expression can subserve no useful purpose.

I am, Sirs, yours obediently,

DUDLEY W. BUXTON,
Anæsthetist in University College Hospital.

Mortimer-street, W., May 18th, 1891.

To the Editors of THE LANCET.

SIRS,—Surgeon-Major Lawrie's remarks in THE LANCET of May 16th upon my letter contained in your issue of April 4th are of such a nature that I trust your readers will peruse the latter before accepting his comments.

I am, Sirs, yours faithfully,

RICKARD W. LLOYD.

Russell-road, Kensington, W., May 20th, 1891.

ROYAL COLLEGE OF SURGEONS, IRELAND.

To the Editors of THE LANCET.

SIRS,—The Council of the Royal College of Surgeons, Ireland, is composed exclusively of Fellows resident in Dublin. More than half (I believe nearly two-thirds) of the electorate reside in the provinces, and yet this large body of Fellows has no direct representation on the governing body of their College. I ask, is this fair? Many of the leading Dublin surgeons think it is not, and have loyally welcomed the candidature of Dr. Kelly of Drogheda, and myself, on former occasions. We both intend to offer ourselves at the coming election for seats on the Council, and I hope we shall receive the support of the city and county Fellows as well as those in the army and navy and abroad.

I am, Sirs, yours faithfully,

Omagh, May 17th, 1891. EDW. THOMPSON.

"MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—As this Bill has been frequently discussed in your columns, perhaps you will kindly allow me a word of explanation as to why the promoters have withdrawn the Bill from the papers of the House. I may say at once that it was not for the reason that there is any less desire for a good measure dealing with the question, as they believe the opposition comes from a comparatively small number of members of the profession, as is evidenced by the numbers both of the petitions against the Bill and the signatures attached thereto. On the other hand, most of the principal obstetricians and others have warmly supported the Bill or a modification of it, and the deputations both of doctors and ladies who waited upon the Lord President of the Council were so fully convinced that a Select Committee would be granted at an early day next session that the promoters deemed it much wiser to withdraw a Bill which pressure of public business would prevent from being properly discussed this session, with the determination, if possible, of pressing forward the measure to a conclusion next session, and they feel confident of success when they again take up the matter. In the meantime any improvements which may be suggested in the Bill will be fully considered, and, if possible, adopted.

I am, Sirs, yours faithfully,

Ennismore-gardens, May 15th, 1891. HY. FELL PEASE.

TESTIMONIAL TO DR. H. STEVENS.

To the Editors of THE LANCET.

SIRS,—On the resignation of Dr. Henry Stevens of his appointment of senior medical inspector of the Local Government Board many medical friends have shown a desire to express to him in some tangible form their appreciation of his zealous and faithful services and general courtesy in the performance of his duties as inspector of public vaccination. During the twenty-eight years Dr. Stevens was employed by the Government he visited nearly every town and village in England and Wales, besides Edinburgh, Glasgow, and Dublin, and thus came in relation with almost all the public vaccinators of the country. The committee appointed for raising a fund in honour of Dr. Stevens are desirous of procuring the coöperation of the medical profession generally. Subscriptions can be forwarded and paid to the "Dr. Stevens Testimonial Fund" at the bank of Messrs. Prescott, Dimsdale, Cave, Tugwell, & Co., 62, Threadneedle-street, E.C.

We are, Sirs, yours faithfully,

ROBERT N. FOWLER, Bart., M.P., Treasurer,
CLAUDE C. CLAREMONT, M.R.C.S., Chairman.

May 20th, 1891.

THE INFLUENZA EPIDEMIC.

To the Editors of THE LANCET.

SIRS,—In view of the really serious nature and fatal results of the influenza, I would like to suggest the desirability of making it one of the subjects for discussion at

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the International Congress of Hygiene in London in August next. I believe the programme is already printed, but that ought not to preclude a subject which is exceedingly *apropos* to the scope and objects of the Congress.

I am, Sirs, yours truly,

Town Hall, Halifax, May 15th, 1891. D. AINLEY.

*** We commend the suggestion of our correspondent to the notice of the authorities of the Congress.—ED. L.

LIABILITY OF LEAD-MINERS TO LEAD-POISONING.

To the Editors of THE LANCET.

SIRS,—Your issue of March 7th is just to hand with a report of Dr. Oliver's first lecture (Gulstonian) on Lead-poisoning. I write to take exception to one remark in it wherein he very definitely states that "those engaged in lead mining never suffer." Here, in Broken Hill, we have very extensive lead mines, and our miners are very susceptible indeed to lead-poisoning, and often in a very severe form, more generally colic, but not infrequently coma and epileptiform convulsions. Further on Dr. Oliver remarks that "it is not the producer of the raw material who suffers; it is the smelter." We have also several smelters in blast here; but although we sometimes get smelters suffering from lead-poisoning, much more frequently we find it is the miner working down below, especially when working in the carbonate ore. I am, Sirs, yours truly,

J. BARTLEY, M.B., B.Ch.,
Resident Surgeon, Broken Hill Hospital,
Broken Hill, April 11th, 1891. Australia.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary.

THERE will be an election for an assistant surgeon to the Royal Infirmary on June 2nd. Mr. R. A. Biekersteth, Mr. George G. Hamilton, Mr. Damer Harrisson, Mr. Arthur MacLeod Ross, and Mr. Thelwall Thomas are candidates for the vacancy. The contest will be a very keen one, and the election will, unfortunately for all concerned, be as heretofore in the hands of the trustees—i.e., subscribers of two guineas and upwards, donors of twenty guineas and upwards, and the clergy and ministers who preached on Hospital Sunday, Jan. 11th last. This mode of election entails considerable expense and trouble to each candidate, as well as much annoyance to the trustees. It is confidently expected that this will be the last election by the trustees, and that all future vacancies will be filled by the decision of an elective committee.

Suspected Murder and Mutilation.

The body of a boy aged ten was found in a black sailor's bag floating in the Sandon Basin at 4 A.M. on the 19th inst. The legs had been cut and sawn off below the knees, in order that they might be got more easily into the bag; a new knife and saw were also in the bag. The body was examined externally by Mr. Paul, Lecturer on Forensic Medicine at the Liverpool University College, and a post-mortem examination will be made to-day.

Death from Chloroform at the Royal Infirmary.

An inquest was held last week by the city coroner upon the body of a fruit porter aged thirty-six, who had been suffering from varicose veins. He was admitted into the Royal Infirmary, and consented to an operation being performed under chloroform. After being carefully examined, chloroform was administered by two trained assistants in the presence of one of the house surgeons. Before the deceased was properly under the influence of chloroform it was seen that something was wrong, his face becoming suddenly pale. The administration was at once stopped, and artificial respiration was immediately resorted to, but without avail. The deceased was apparently a healthy man, but at the post-mortem examination the heart was found to be in a state of fatty degeneration; this could not have been detected during life. So far as could be ascertained, the heart's action and respiration ceased simultaneously.

May 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary and the College.

THE second stage in the dispute between the Royal Infirmary and the College has now been reached. The Infirmary Board has issued to the public its reasons for refusing the site for a new hospital offered by the College. Summed up, they amount to this: that to extend the present institution by erecting a new building in Oxford-road would be more costly both in the first outlay and in the after maintenance; that they have already three large separate branches to administer; that a dual control with the College would inevitably lead to friction; that the present central position is more healthy and more convenient for patients as well as students; and that the building of a branch might ultimately lead to the removal of the entire institution from its present site. This manifesto is supported by a supplemental one from the Medical Board, who emphasise the advantages of the present site over the proposed new one. In reply, the College authorities immediately issued a counter-statement, putting before the public the case from their point of view. They insist that their primary object was the public good, and, secondly, the advancement and welfare of the medical school, which is an integral part of the College, and the interests of which they are bound to maintain and advance; that they have no wish or thought of removing or interfering with the present central infirmary; and that the public are quite competent to judge as to the expediency of further enlarging the old building or erecting a new one away from the crowded centre of the city. They assert that it is an anomaly that the College, which is practically the medical school, should have no control over an important part of their students' education—i.e., the clinical work,—and are sanguine that a scheme for conjoint representation on the governing body of the new hospital can be formulated, which would work satisfactorily and without friction; also that they will use their influence to obtain funds for building, and not leave this to the infirmary alone. Since these two sides of the question have been published, several free lances representing the opposing bodies have rushed into print, Dr. Ross and Messrs. Wright and Hardie representing the infirmary staff; whilst Drs. Sinclair and Leech have taken up the cudgels on behalf of Owens College. Apparently the next step must be an appeal to the public (as represented in the whole body of subscribers to the infirmary) as to whether the present building shall or shall not be enlarged; if not, then probably it will be left to the College to make the next move in getting a new hospital erected. The whole business has been an unfortunate one; but so far the weakness of the infirmary case is that the members of its staff are not unanimous in their verdict, at least one of the strongest supporters of the College being its senior physician, Dr. Leech.

Influenza.

The epidemic of influenza now prevailing here is quite as widespread as last year, and in many instances the attacks appear to be of greater severity. Amongst the numerous deaths which have been caused by it is that of the High Sheriff for Lancashire. Thirty-eight deaths were registered last week as primarily due to it, whilst no less than 146 were from respiratory diseases, nearly 100 per cent. in excess of the average. The death-rate last week was 42·2 per 1000.

Illness of Dr. Ward.

Professor Ward, principal of Owens College, is in a critical condition from a severe attack of pneumonia, but it does not appear that this was connected with influenza. He has been attended by Drs. Leech and Dreschfeld, in addition to his own medical attendant. At the time of writing, some improvement in his condition is reported.

Whitsuntide and the Weather.

After a few days of summer temperature we have got back again into almost midwinter weather. On Saturday and Sunday heavy falls of rain, hail, and snow, accompanied by a biting north wind, theatened to utterly spoil the great carnival week of Lancashire and Yorkshire. From Sunday-school scholars to cotton princes, "Whit week" is for all and everyone a holiday time. Yesterday the sun did, however, temper the keen wind for the 20,000 children who went in annual procession through the streets

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to the cathedral, though it is to be feared that coughs and colds will be largely increased as the result of the three or four hours' exposure. As usual, the Volunteers of Manchester and the surrounding district are away for a week's training under canvas. Our infantry battalions have gone to Aldershot under the medical care of Surgeon-Major Armstrong; the Manchester Volunteer Medical Staff Corps, under the command of Surgeon-Major Crockwell, are at Lytham; the artillery are in their old quarters at Southport, with Surgeon Tomkins in charge of the medical arrangements; and the Salford corps is at Blackpool; whilst at numerous other places along the coast and in North Wales other regiments of the district are undergoing a week of camp life. From all these come reports of severe weather—frozen tents and water-cans on the first two nights; but, with the exception of a few colds or slight influenza, the health bulletins are favourable.

Manchester Air and its Improvement.

Attention continues to be directed to the condition of our atmosphere, and the town gardening section of the Manchester Field Naturalists' Society has issued an enlarged preliminary report of "the air analysis committee," which contains some interesting observations, set forth with a considerable amount of scientific accuracy, as to the various polluting constituents. Our local health authorities also have been showing considerable activity of late in attempting to diminish the evil, so far as it is increased by smoke offenders and chemical manufacturers. At the last meeting of the City Council Drs. Simpson and Russell made a vigorous appeal for a cheaper gas supply, maintaining that if this agent could be brought into general use as a fuel for domestic purposes in place of coal, more would be done to diminish the smoke nuisance than by any other means. Should this take place, it will be necessary for much better arrangements to be made in the construction of gas stoves and fireplaces so as to get rid of the injurious products of combustion which at present too often exist, or another and more injurious impurity will be added to the air we breathe.

Manchester, May 18th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Influenza in the North of England.

SINCE my last notes the epidemic influenza has considerably extended its effects, being felt right across the country from sea to sea. In some parts of Yorkshire it shows signs of abating, having, so to speak, burnt itself out. About the Thirsk and Malton district it is still very bad, where the Earl of Mexborough is reported to be dangerously ill. On Saturday last Dr. Young, the medical officer of health, died from the disease at Malton. He was sixty-nine years of age and was well-known at Newcastle, where he studied and graduated at Durham. The disease is said to be subsiding at Whitby, but at Thirsk it has spread considerably. At one of the "works" there are already fifty hands incapacitated by the disease. At Wigton and neighbourhood it is very prevalent, the vicar and his curate being prostrated by it. At Workington it is also rife, the mayor being amongst the sufferers. A very severe outbreak has taken place in Craven and Milnthorpe in the Kendal Union, where five of the poor inmates are lying dead, while the master and matron and fifty others in the house are laid by from the effects of the malady.

Newcastle Eye Infirmary.

The annual meeting of the Newcastle Eye Infirmary has been held and the biennial report of the committee was read, from which it appeared that the subscription list showed a marked improvement as compared with previous years, and the list of places from which patients have been sent indicates that the reputation of the hospital has spread very considerably. The essential character of the institution is a charitable one, and the committee would be glad if by charitable subscriptions they were placed in a position to be able to admit a greater number of non-paying patients, a class for which the hospital was originally founded. Since the last report there had been 5893 out-patients and 581 in-patients, making the large number altogether of 6474.

Saltburn: Opening of New Sea and Brine Baths.

Saltburn, as is well-known, has for long ministered to the health and pleasure of the very large populations of the various towns on the north-east coast, especially Stockton, Darlington, and Middlesbrough. The discovery of salt, however, at the last-named town has been a most fortunate event for Saltburn, for now it finds itself on the same footing as Droitwich and Malvern by the recent erection of magnificent baths at a cost of £5000, and these were opened on the 11th inst. amidst much rejoicing. The baths are most complete, and fulfil every requirement, from swimming and bathing as an exercise to the more special modes known as "cures." The swimming bath, it may be mentioned, is 75 ft. long by 43 ft. broad, and is supplied directly from the sea by special pumping apparatus, but it is likewise kept at a tepid temperature by hot-water pipes laid along the bottom of the bath, so that sea bathing can be carried out at all seasons. The sulphur baths are also well contrived, while the brine is conveyed in tanks by rail, a few miles distance from Middlesbrough. At the opening ceremony it was believed by all that now, with its beautiful gardens, majestic cliffs, unrivalled sands, and ocean prospect, Saltburn may claim a foremost position amongst seaside health resorts.

Ripon Hospital Demonstration.

Ripon, I believe, is the smallest city in England as regards population, but it is still by no means behind in charitable public spirit, as evidenced by the demonstration made last Sunday by the various friendly societies in aid of the Ripon Cottage Hospital and Jepson's Hospital. The procession was headed by the city band, and was joined by the Mayor and corporation on its way to a special service at the cathedral.

Stockton.

At the last meeting of the Stockton corporation, sitting as a sanitary authority with regard to influenza, it was stated to be still spreading, and seven deaths had been in the last fortnight certified as primarily due to it, and there was a large increase in the deaths from diseases of respiratory organs, no doubt also due to influenza. A discussion took place on the propriety of omitting continued fever from the list of diseases requiring notification; but the medical officer properly asked that it should be retained, and showed that some cases of typhoid fever did not manifest their type for about a fortnight, and were continued fever not to be notified it would leave the door open to the non-reporting of typhoid fever.

Pauperism in the Northern Poor-law District.

Mr. Knollys, inspector for the Northern Poor-law District, which includes Cumberland, Northumberland, Durham, and the North Riding, has presented his usual annual statistics, which show that the total number of paupers in the district in the first week of January, 1890, was 36,959, and the number in the corresponding week of 1891 was 35,315. In-door pauperism shows a slight increase. On the other hand, out-door pauperism shows a decrease.

Sunderland Nursing Institute.

Mr. Arthur Laing has sent to the honorary secretary of the Sunderland Nursing Institute the very handsome donation of £100, accompanied by a letter expressing his appreciation of the valuable services rendered by nurses from the institute during the late visitation of sickness at his house. Mr. Laing desires that one-half of this sum should be devoted exclusively to nursing amongst the poor.

The Will of Mr. J. Bainbridge Fife, F.R.C.S.

The will of the late Mr. Joseph Bainbridge Fife, F.R.C.S., has been proved, leaving a personalty of over £28,000. After providing for certain legacies and annuities, he directs the proceeds to go to the purchase of real estate in the north of England or Scotland, to be settled on his nephew, but so that in the event of any tenant for life becoming entitled to the Whitehill estate under the will of Mr. John Cookson the succession to Mr. Fife's estate shall shift to the person next entitled.

Darby and Joan!

A discussion as to aged couples in the workhouse having special rooms allotted to them took place at the Middlesbrough board of guardians, and it came out that the board were compelled, should the couples desire it, to provide apartments, but, as a matter of fact, they never desired this accommodation, but preferred to live apart!

Newcastle-on-Tyne, May 20th.

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EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Post-graduate Course in Edinburgh.

IT has been decided to have a post-graduate course in Edinburgh at the end of September and beginning of October. Various important improvements are to be made in the course as a result of the experience of previous years and of communications received from some of those who attended former courses. It is proposed to make the clinical courses more definite, and also to more fully meet the wants of those attending for special subjects. An influential committee has been formed to arrange matters, and Drs. Alexander James and George Mackay have been appointed secretaries to the committee.

Edinburgh Health Returns.

It has been reported to the public health committee that the total number of deaths in the city during the month of April was 426, making the death-rate 18·56 per 1000. The average rate for the corresponding month during the previous five years was 17·97 per 1000. As regards age, 33·09 per cent. of the total were under five years, 21·83 per cent. between thirty and sixty, and 30·98 per cent. above sixty. The deaths from diseases of the chest numbered 161, and from zymotic diseases 39. There were 529 cases of infectious disease reported, which comprised 14 cases of typhoid fever, 10 of diphtheria, 95 of scarlatina, and 410 of measles. With the exception of last year this is the largest number reported in the month of April since 1886. The number of patients in the City Hospital was 173, comprising 1 suffering from typhus fever, 30 from typhoid fever, 8 from diphtheria, 61 from scarlatina, 24 from measles, 14 from whooping-cough, and 18 from erysipelas. The birth-rate for the month was at the rate of 29·58 per 1000. During the month 55,467 lb. of unsound meat were condemned. Of 310 animals condemned, 10 were affected with pleuro-pneumonia and 53 with tuberculosis.

The Edinburgh Water-supply.

As intimated by me last week, the engineers appointed to report and advise on the Edinburgh water-supply have sent in their report, and it has now been published. The report is a long and elaborate exposition of the conditions of the present supply. The authors point out that there is much waste, to check which it would be necessary to divide the city into districts and to have a Deacon meter for each, and, in addition, the water-fittings in very many of the houses would require to be replaced by new ones. But even were this done in a few years the supply would be short of the demand, and even now they say that if the season were exceptionally dry we should be short of water both this year and next year. They conclude that, under the circumstances, it is imperative for the Water Trust to proceed at once to provide for bringing in an additional supply.

Health of Edinburgh.

The mortality last week was 108, and the death-rate 20 per 1000. Diseases of the chest caused 38 deaths, and zymotic diseases 12. The intimations for the week were—typhoid fever 1, diphtheria 3, scarlatina 10, and measles 96.

Scottish Microscopical Society.

The seventh ordinary meeting of this Society was held in Edinburgh on the 15th inst., Professor Rutherford presiding. Mr. H. J. Stiles, M.B., read a paper on the Development of the Mammary Gland, giving the results of an elaborate investigation of its development in the human subject, the calf, pig, dog, rabbit, and other animals, which had convinced him that the secreting acini of the gland are developed from the epiblast, as Kölliker long ago stated, but which Dr. Creighton had endeavoured to disprove. The paper was illustrated by an elaborate series of microscopic specimens demonstrating the author's views. Mr. W. H. Barrett, M.B., gave a demonstration of some New Methods of Handling Paraffin Sections which he had devised and which will enable the microscopist to overcome embarrassing difficulties in a simple way. Professor MacFadyean gave a communication on Disseminated Necrosis of the Liver. Mr. Ballantine, of Lizars & Co., opticians, Glasgow, exhibited a new Photo-micrographic Camera made by him on the design of the late Mr. Schulze, whose skill as a photographer of microscopical objects is well known. The instrument is remarkably compact and apparently well adapted for the purpose He also exhibited his No. 2 Student's Microscope which he had made on the suggestion of the late Mr. Schulze. The instrument is designed to meet the requirements of the bacteriologist as well as the ordinary histologist.

Alleged Irregularities at Leith Hospital.

As reported in the newspapers here, the medical officer of health for Leith has submitted to the Town Council, as local authority, a report regarding Leith Hospital, in which it is pointed out that the directors of the hospital have set aside the oldest portion of the building for the reception of fever patients, and that the wards are not well adapted for the purpose. The wards provide accommodation for thirty-six patients—a number not sufficient for the population when epidemics occur. Not only this, but it is stated that the management of the department is not satisfactory, and in proof of this instances are given. In 1890 there was an outbreak in the burgh of scarlet fever, and three outbreaks of typhus. The first outbreak of typhus comprised thirty-one cases, and of these twelve at least caught the contagion within the hospital, six being patients under treatment for scarlet fever. These facts were brought under the notice of the medical officers of the hospital, and they recommended that in future no case of typhus fever be received into the hospital, but be sent direct to King-street Hospital. This recommendation was conveyed to the directors of the hospital, who notified the Council of it, but added that the directors had difficulty in seeing how typhus fever could be received into King-street Hospital, seeing it was reserved for small-pox patients. As a result of this, the medical officer reported the matter to the Public Health Committee, and they came to the conclusion that the typhus fever accommodation in the hospital and the method of managing such cases were not satisfactory. This was communicated to the hospital authorities, who asked for more information. The medical officer points out, in addition to the foregoing, that one night nurse attended the different cases in the fever wards, that the nurses were overworked, and that the system of disinfection for clothes was so faulty that two laundrywomen got typhus fever by washing the clothes of typhus fever patients.

May 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Royal College of Surgeons.

THE annual elections for examiners were held on the 15th inst., when considerable changes took place as compared with the outgoing office-bearers. On Monday, June 1st, a President, Vice-President, Secretary, and Council will be elected for the ensuing year. Mr. H. Gray Croly, J.P., whose presidency expires, will seek re-election and will not be opposed, but a contest will ensue for the vice-presidency. Mr. Carte, Vice-President, it is rumoured, will not seek re-election, but I should not be surprised if he becomes the third candidate for the post. Dr. Cranny and Professor Theodore Stack will be candidates for the vice-chair. Dr. Cranny has not had a seat on the Council, but Professor Stack has been a member of Council for several years, and I expect will be well supported. For Council, the only new candidate that I have heard of is Mr. John Lentaigne, surgeon to the Mater Misericordiæ Hospital; but probably some additional names may be forthcoming.

University of Dublin.

On Friday, June 5th, the Council will nominate a Regius Professor of Surgery in the place of Mr. William Colles, resigned. There are, I understand, three distinguished Dublin surgeons candidates for the post, the duties of which are not very onerous; the remuneration is £100 a year.

Meath Hospital, Dublin.

There were 1310 patients in the wards last year, of whom 82 died, or a mortality of 6·76. The total average cost of each bed occupied for the year was £49 3*s.* 9½*d.*, something over 2*s.* 8*d.* per day. The large number of 4063 accidents were treated as extern patients. During the year the dispensary buildings were entirely remodelled; these are detached from the main building, and are very suitable for the purposes required.

Caution to Chemists.

A chemist was prosecuted last week, at the instance of

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the Commissioners of Inland Revenue, for selling wine without a licence—viz., Liebig's extract of meat and malt wine, which on being analysed was found to contain 31·9 proof spirit and a small quantity of organic substance answering to Liebig's extract of meat, which was not recognised as medicine. A fine of £10 was inflicted.

Dublin Kyrle Society.

This is a branch of the London society, with similar objects. Briefly they are: To decorate by mural paintings, pictures, flowers, &c., workmen's clubs, hospital wards, schools, and other places of meeting for the working classes; to lay out waste grounds, encourage the cultivation of plants, and to organise a choir of singers to give oratorios and concerts to the poor. These and other objects have been largely utilised during the past year, and great credit is due to the members of the Society for their exertions and the interest they have shown on many occasions.

Dublin Ladies' Sanitary Association.

The annual meeting of this Association, which for the future will be known as the "Irish Health Society," was held last week. Lectures on hygiene, sewing classes, wood carving, window gardening, lessons on sick nursing, which were attended by 111 ladies, are some of the many objects which are carried out by the Health Society. The committee from the first have been anxious that hygiene should be taught in the National Schools, and in 1882 directed the attention of Sir P. Keenan and the Board of National Education to the matter. In 1888 it was made an extra subject for which result fees are paid, and the committee have now recommended the Board of National Education to introduce simple health lessons into the reading-books now under revision. The committee in their report refer to the sanitary defects of tenement houses which keep up the high death-rate of Dublin. They constitute a serious danger to the public health, and often cause outbreaks of disease, and are an injustice to the poor. The Health Society is thoroughly deserving of support.

Templemartin Dispensary, co. Cork.

The contest for a successor to the late Dr. Wall was a very keen one, and the canvassing of votes was carried on unremittently from the time the vacancy was declared until the day of election. There were four candidates, two of whom withdrew, and ultimately Mr. Meade of Ballinhassig was successful.

Royal Hospital for Incurables.

The amount expended last year for the new buildings came to £15,915, only one-third of which was supplied by donations, the balance being obtained by the sale of £2000 of stock, the use of bequests, and the transfer of £1700 from current account. The recent outlay, although it cost a considerable sum, was a necessity, and the friends of the institution should help the governors to restore the amounts taken from the investments.

Under the provisions of the Rabies (Ireland) Order of 1886 the guardians of the South Dublin Union have ordered all dogs to be muzzled in the South Dublin district.

BELFAST.

Death of Dr. Frazer.

It is with sincere regret I announce the death of Dr. Frazer, a well-known medical man, who practised in Armagh, where he died from congestion of the lungs on May 10th. Dr. Frazer qualified as L.R.C.P. & L.R.C.S.I. in 1868, and obtained the M.D. of Glasgow in 1881. He practised all his professional life in Armagh, where he was assistant surgeon to the county infirmary, medical attendant to the Macan Asylum for the Blind, consulting medical officer of health, medical officer to the union workhouse, and physician to Shiel's Institution. Dr. Frazer, who was only forty-three years of age at the time of his death, enjoyed a large share of the practice in Armagh and the surrounding districts, where he was extremely popular amongst all classes. He was buried in St. Mark's Graveyard, Armagh, on Wednesday, May 13th.

The Royal Hospital.

At a special meeting of the corporation of the Belfast Royal Hospital, held on May 18th, a resolution was passed conveying the warmest thanks of the friends of the charity to the Countess of Shaftesbury and her son for the munificent gift of a lease of the hospital for 10,000 years at the nominal rent of 2*s.* 6*d.* per annum. This gift is very valuable, as, the Royal Hospital having only a lease of eighteen years to run, the property, in the event of removal, was practically valueless, as no one would purchase such premises on such a lease; but by this gift there is now, subject to the approval of the Countess or her representatives, a very valuable property at its disposal. There are at present two schemes discussed for enlarging and improving the hospital. One is to obtain the splendid grounds and premises of the Belfast Charitable Society for a new hospital, that body being willing to move their habitation into the country if they are provided by the hospital authorities with sufficient means to take their inmates elsewhere. Another plan is to purchase the buildings immediately adjacent to the Royal Hospital, which are held in perpetuity by the Society of Friends, and to extend the hospital wards in that direction. Should either plan be adopted for the extension and rebuilding of the hospital, an Act of Parliament and plenty of money would be needed; but in the solution of this very pressing question the Hospital Board have been placed in a very different position to make terms by the splendid gift of the Countess and her son, the present Earl of Shaftesbury.

May 19th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Microbes of Osteomyelitis.

As might have been expected, considerable prominence was given in the recent discussions of the French Surgical Congress to the microbian origin of diseases which come under the surgeon's observation. One of the most important contributions to our knowledge of the etiology of diseases, the causes of which have until recent times been involved in mystery, was made by Professor Lannelongue in connexion with acute osteomyelitis. Having investigated bacteriologically thirty-seven cases of this disease that have come under his notice during the last two years and a half, he found that the micro-organisms that excited the morbid process could be thus classified:—Staphylococcus aureus, twenty-one cases; staphylococcus albus, seven cases; both the preceding concurrently, one case; streptococcus, four cases; pneumococcus, two cases; Eberth's bacillus, two cases. The microscopical results were controlled in each instance by the reproduction by inoculation of the pure cultures of the same form of the disease in the lower animals. The following points of distinction were established between streptococcic and pneumococcic osteomyelitis: In the streptococcic form arthritis and erysipelas were common. There is a sudden elevation of temperature, a fall in the course of two or three days, rapid supervention of suppuration, the pus being almost serous in consistence. The skin soon assumes a red appearance, due to angeioleucitis. This variety occurs chiefly in very young children whose mothers have suffered from puerperal complications—in other words, streptococcic infection. In the two cases of pneumococcic osteomyelitis, the point of entrance of the micro-organism was not discovered; it is therefore probable that the infection occurred through the medium of the general circulation. In this form the joints are the seat of profuse suppuration, but they soon recover. In conclusion, Professor Lannelongue states that of these different varieties of the affection that due to the staphylococcus is the most serious, the pneumococcic form is the least dangerous, while that occasioned by the streptococcus takes an intermediate place.

Two Cases of Poisoning.

Two unfortunate therapeutical misadventures have lately occurred in France, each being in its way instructive and worthy of record. In one instance a medical man was held answerable for the accident; in the other case, a chemist had to suffer for his culpable ignorance. The facts are as follows: A practitioner having been called in by a young lady aged twenty, who was a prey to severe toothache, prescribed a wafer containing one milligramme ($\frac{1}{65}$th of a grain) of aconitine. The dose was no sooner swallowed than the unfortunate girl was seized with colic, and succumbed after a few days' suffering. The expert who made the necropsy diagnosed poisoning by an overdose of aconitine, and the medical man was fined 100 fr. for *homicide par imprudence*. In England aconitine is rarely, if ever, prescribed as an internal remedy, but in France it is not at all unusual to do so. Two varieties of aconitine are

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met with—viz., the amorphous and the crystallised, the latter being four times more active than the former, the dose of which is stated to be from one to three milligrammes per diem. Professor Brouardel, who gave evidence in the above case, declared that the question of the dosage of this alkaloid was not yet properly settled, but that the French Codex sanctions the employment of the crystallised variety only. In view of the danger involved by confusing the one form with the other, the professor promised to bring the matter forthwith to the notice of the Académie de Médecine. In the other mishap, an infant of three months, affected with bronchitis, had administered to it as an emetic by the medical attendant a hypodermic injection of what should have been two centigrammes (about one-third of a grain) of apomorphine. Unfortunately, the chemist who had prepared the solution ordered happened to be "out of" apomorphine, and, being ignorant of the difference between the therapeutical properties of that drug and hydrochlorate of morphine, substituted the latter substance. The infant promptly responded to this medication by lapsing into a comatose condition, from which it never emerged. The chemist was sentenced to three months' imprisonment. I may perhaps be allowed to remark that the proper dose of apomorphine administered hypodermically as an emetic being, for the adult, from $\frac{1}{10}$th to $\frac{1}{4}$th of a grain, a dose of one-third of a grain is somewhat heroic for an infant of only three months.

A Patriotic Accoucheur.

The thinking section of the French public has for some years past been much exercised in its mind by the almost stationary condition of the population of this otherwise favoured land. The matter has been discussed at the Académie de Médecine for weeks past, and the discussion has resolved itself into an interchange of views concerning compulsory vaccination and revaccination, and the means of arresting the progress of typhoid fever. In other words, the Academy is of opinion that the best way to remedy the stagnation complained of is to put into operation prophylactic measures calculated to render less frequent epidemics of two of the most fatal maladies prevalent in France. Professor Tarnier, the President of this learned Assembly, opines, however, that encouragement of a more direct kind might have the effect of stimulating the procreative faculties of his compatriots. Acting upon the precept that charity should begin at home, he has appealed to the thrifty instincts of the peasants of his native parish, Arch-sur-Tille, by offering for each child born in that happy district between Jan. 1st and Dec. 31st, 1892, a prize of 100 francs. The village sage-femme ought to feel grateful to her eminent hierarchical superior for having taken a step which will probably have the effect of adding to her income during the coming year.

The Alcohol Bill in France.

In a recent lecture M. Jules Rochard, the well-known hygienist, calculates the loss, direct and indirect, entailed by the consumption of alcohol in France. The following are the figures he gives: Value of alcohol consumed (exclusive of duty paid), 128,298,384 fr.; loss of labour, 1,340,174,500 fr.; medical treatment and stoppage of work, 70,842,000 fr.; cost of maintenance of insane, 2,652,912 fr.; suicides and deaths from accidents, 1,922,000 fr.; cost of repression of crime due to alcohol, 8,894,500 fr.—total, 1,555,757,296 fr. M. Rochard calculates that the loss occasioned in England by the consumption of alcohol is not far short of double the above sum—viz.: 2,922,130,075 fr.

Paris, May 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow on Koch's Discovery.

IN a recent debate in the Prussian House of Deputies on the granting of additional funds for Koch's Institute for Infectious Diseases, Professor Virchow said, among other things: "I have never expressed any opinion to my professional brethren on the fundamental value of Koch's method, simply because I do not know how such an opinion can be formulated. I have only communicated a series of personal observations, which have indeed been of service in directing attention to one part of the question, and have especially enforced the need for calm and objective study that is so requisite in these difficult subjects. Dr. Graf [a previous speaker] is still steeped in optimism. He has no right to speak of the importance of the matter till he has proved it, and it is, in fact, not proved. But it would be just as foolish if we, as pessimists, were to say, 'The matter is of no importance whatever; it is only a poison, a noxious substance.' The question has, in fact, been developed in unexpected directions, leading in many quarters to the hope that very striking results can be produced by those powerful measures—a hope which we cannot yet say has been annihilated. As a matter of fact, there is not a single case known in which any form of tuberculosis has been cured by this means. All cases which were for a while regarded as cured have afterwards been found to relapse; the improvements were merely temporary, such as often occur under other treatment. On the other hand, there is no doubt whatever that many serious dangers have been revealed, with regard to which I may claim some merit for myself. I have not yet seen any need to retract one word from that which I wrote at the end of January in compliance with a Ministerial request. It was, indeed, much worse than what Herr Graf seems to think. Nevertheless, from what I have just said, no doctor who feels called upon to make further trial of the remedy could by any possibility lay himself open to prosecution. The original trials were, in point of fact, made after results had been obtained in animals which seemed to justify the expectations that were raised regarding the discovery." It is said that Professor Koch is about to publish a third communication on his treatment of tuberculosis, and to make known the manner in which tuberculin is prepared.

Dr. Karl Schaedler.

The chemist, Dr. Karl Schaedler, who died here on the 25th ult., was a copious writer on theoretical chemistry and on technology. His principal writings were, "Chemico-Technical Investigations," a handbook of the technology of the fats and oils of the vegetable and animal kingdoms, a handbook of the technology of fossils, a guide to the chemistry of the hydrocarbons, "Numbers for Chemists," a treatise on precious stones, and a "Biographical and Literary Hand Lexicon of Chemists of Scientific Importance," published this year. Dr. Schaedler was only forty-eight.

Official Statistics of Suicide.

The number of suicides in Prussia in 1883 was 6171; in 1884, 5900; in 1885, 6028; in 1886, 6212; in 1887, 5898; in 1888, 5393, and in 1889, 5615. Of the suicides of 1889, 4430 were males and 1185 females—i.e., 31 suicides per 100,000 men, and 8 per 100,000 women. The number of suicides per 100,000 persons was 19 in 1888 and 1889, 21 in 1887, and 22 in 1886. The number of suicides in Berlin proper was 366 in 1886, 371 in 1887, 386 in 1888, and 425 in 1889. Twenty-five per cent. of the deaths by suicide in 1889 were ascribed to mental disease.

Karl Wilhelm von Naegeli.

Karl Wilhelm von Naegeli, who stood in the first rank among modern botanists, died on the 10th inst. at Munich. He was born in 1817, at Kilchberg, near Zurich, and studied first in Zurich, and afterwards in Geneva and Berlin. The teacher who influenced him most deeply was Lorenz Oken, who strengthened in him, he said, the "impulse to combine all that he learned, and to arrange it under general points of view." In Berlin he heard Hegel, of whose lectures he said that, "though he tried most earnestly, he failed to find anything intelligible or reasonable in the abstractions which were propounded." He graduated in 1841, just about the time when Schleiden, by the publication of his "Botany as an Inductive Science," opened a new era in botanical investigation. The central doctrine of Schleiden's work is the necessity of applying the inductive method in botany. In this endeavour Schleiden found one of his most zealous supporters in Naegeli, who had begun to teach as a private lecturer in Zurich. In 1844 they united as co-editors of the *Zeitschrift für wissenschaftliche Botanik*, which, however, lived only for three years. Naegeli was the first to carefully distinguish protoplasm from the other constituents of the cell, to draw attention to its importance in cell-formation, and to demonstrate its azotic nature. He showed that the cellular membrane, which had been overrated till then, must be reckoned among the secondary parts of the cell. Of equal importance was Naegeli's demonstration of the fact that every stem or branch, every leaf or other organ, has at its vertex a single cell, through the division of which, according to fixed laws, all the rest originate; so that the

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origin of every tissue cell from that vertex cell may be proved. Naegeli remained at Zurich till 1852, when he was appointed ordinary professor at Frieburg, whence he went to Munich in 1858. It was about the time of his transference to Munich that the theory of molecular structure and growth by intussusception began to dawn upon him, a theory which he gradually developed into a comprehensive molecular theory of organic formations, and which has an important bearing on the origin of species. He spent the rest of his life in Munich, but was released from his professional duties some years ago.

The Munich papers have printed an appeal for contributions to a fund for the erection of a monument in honour of the late Professor von Nussbaum.

Berlin, May 18th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

American Medical Association.

THE forty-second annual meeting of the American Medical Association was held in Washington on May 5th to the 8th. The session was largely attended. The question of removing the publication of the Journal of the Association from Chicago to Washington was decided in favour of Chicago. The sense of the members had been obtained by correspondence, and there was an overwhelming response in favour of the former city. A committee was appointed to petition Congress in favour of the creation of a new executive department of public health, the chief of which should be a Cabinet officer. A meeting was called to consider the propriety of establishing a National Medical Temperance Society after the model of the British Society, and the movement was approved. The committee on the Rush Monument reported very slow progress, alleging that, instead of seven years, seventy times seven would be needed before Dr. Rush's memory could be perpetuated in imperishable bronze. The committee appealed by letter to 1700 physicians of Philadelphia, the native city of Dr. Rush, and received 160 replies; the cost of the appeal was $95, and the amount received was $155.50. The sections were well attended, and a large number of interesting papers were read and discussed. The Association is growing more and more vigorous in spite of the large number of special associations which are annually being organised.

A Cork in the Bronchial Tubes.

A clergyman of Brooklyn, holding in his mouth the cork of the vial out of which he was administering medicine to his child, was provoked to laughter by the child's acts, and lost his hold upon the cork. The cork was of considerable size, being about half an inch in diameter and an inch in length. He was seized with a spasmodic cough, which soon subsided. During the cough he could distinguish the up and down movements of the cork in the trachea. He passed a comfortable night, and on the following day (Sunday) preached twice. During the first service he had but little cough or disturbance; in the evening he coughed much more, without, however, interrupting his discourse. On the next day efforts were made to dislodge the cork, and for that purpose he was suspended by the feet. This means failed, and meantime there was evidence that the cork had descended into the left bronchus, and was there fixed, interrupting completely the entrance of the air into a large area of lung tissue. Tracheotomy was next performed, and efforts were made to seize the cork, but they failed. On the following day the wound was reopened and an instrument employed having a corkscrew extremity. This penetrated the cork, but was ineffectual in dislodging the foreign body. It was then proposed to exsect the ribs and cut through the bronchus; but the patient's condition became so doubtful that no further efforts to remove the cork were made. Death soon after followed, and at the necropsy the cork was found in one of the first divisions of the bronchus, swollen, and firmly impacted, with the large end upward. A small fragment had been detached by the corkscrew instrument.

A Railroad Corporation indicted.

An accident on the New York and New Haven railroad, in the tunnel in this city, by which several lives were lost, has led to an indictment of the Board of Directors by the grand jury. The accident is alleged to be due to deficient lighting of the tunnel. Much interest attaches to the case owing to the failure of the efforts that have been made to compel the company to properly light the tunnel. This is the second accident of the kind within two years.

Execution by Electricity.

Two murderers are under sentence of death by electricity, but these executions have been delayed by appeals to the higher Courts. The case has finally gone to the Supreme Court of the United States, where it may remain a long period before a decision will be handed down.

New York, May 10th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

McGill University Intelligence.

CONVOCATION of McGill University for conferring degrees in arts, science, and law was held on April 30th, Sir Donald Smith, Chancellor, presiding. Principal Dawson, in the course of a most interesting address, spoke of the possible founding by the Chancellor of a college for women, providing the training required for all the learned professions to which women may wish to devote themselves.—At convocation of the Queen's University, held in Kingston on April 29th, degrees were conferred, and the annual address delivered by the Chancellor, Mr. Sandford Fleming, C.M.G.—The annual report of the University of Toronto for 1890 appears as an appendix to the annual report of the Minister of Education for Ontario—the attendance in all departments was larger,—the number of candidates examined being 1290, of which 264 were in the department of medicine and 32 in that of dentistry. Reference, of course, is made to the deplorable calamity of Feb. 14th, 1890, and thanks acknowledged to the various classes of donors both in Europe and America for the many valuable contributions towards the restoration of the library and museum, and the hope is expressed that the building will be completed to permit of occupation at Michaelmas term this year. The Minister's report shows that of the 427 teachers in the high schools and collegiate institutes of the province 273 are University graduates, and of that number 179 claim Toronto as their *alma mater*.

Tracadie Lazaretto, N.B.

The report of the inspecting physician to this institution appears in the annual report of the Department of Agriculture for the Dominion, though why it and quarantine should be classed under this head it is difficult to understand. There certainly is work for a Dominion Department of Public Health through which legislation could be obtained in the direction suggested by Dr. Smith. On the last day of 1890 there were in the lazaretto eighteen patients, eight males and ten females, only one in the advanced stage of leprosy. Five deaths occurred, and four new patients were admitted during the year. These new cases came from the vicinity of the new focus of leprosy found last year below Caraquet, Gloucester County, New Brunswick. From Tracadie, so long prolific of the disease, no cases came for a period of two years. The doctor adds: "The disease seems to have disappeared from this settlement, and to persistent segregation I attribute the happy change." Two cases dismissed within the past few years, by reason of the disappearance of all external symptoms, he reports as remaining healthy, but they continue under supervision. Recommendation is again made with regard to the enactment of enforced examination of suspected cases and segregation of leprous persons as the only safeguards against the ravages of the disease.

Toronto, May 6th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Typhus and Relapsing Fevers.

THE provincial fevers, to which I referred in my last letter, are abating as the warm weather approaches, and this is partly due to the out-of-door habits of the peasants, who no longer spend the day and night cooped up in airless mud hovels with their women and their animals. During the last week of April eleven villages remained infected, scattered over four provinces, and eighty-three patients remained under treatment after a mortality of thirty-two during the month. This is comparatively satisfactory, for

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it is less than half the mortality of March. Several cases of typhus fever have been admitted into Kasr-el-Aini Hospital, and thence transferred to tents in the desert. One of the cases came from a boys' school, and two women were sent from the city prison, but they have not been followed by other cases from these sources. Typhus fever has, until this year, been unknown among Europeans; but now a Greek doctor is suffering from it, and an English officer is said to have been unfortunate enough to have caught it.

Small-pox Reports.

Small-pox has been reported in April from five districts, with a total number of fifty-nine cases and five deaths. At this time of the year small-pox is liable to be confounded with chicken-pox, of which four cases have lately been seen at the hospital. The natives have no distinctive word for varicella, and call it either false small-pox, or the small-pox of the donkey.

Drainage of Cairo.

It is now sixteen months since Mr. Baldwin Latham submitted to the Government of Egypt his hydraulic scheme for draining the city of Cairo; but the officials have not yet decided whether to adopt or reject his plans. The native officials are quite content to do nothing, and it is useless to expect any action from them. The European advisers of the Government have been much occupied with financial, judicial, and police reforms, and require stimulating almost as much as the Egyptians. Individually, they allow that some drainage is urgently necessary; but the financial difficulties of raising a loan are very great, in consequence of its being feared that the European Powers would refuse their consent to a reform which is likely to redound to the credit of England and to enrich the pockets of English contractors.

English Language Prize Fund.

It has long been felt that English has been greatly neglected in the Government schools, and in cases where a foreign language was elected by the boys it has until two years ago been almost invariably French. But now the tide is turning; boys are eagerly placing themselves on the English side of the large schools, and, instead of the French having almost a monopoly, English is taught to-day in thirty-seven out of a total of forty-four schools; and though there are only five schools where the official languages are Arabic and English, compared to sixteen schools where boys are taught in Arabic and French, there are now seventeen schools where there are French and English masters in addition to the native teachers. This prize fund has already amounted to £150, all subscribed by English residents, and this is to be divided into small prizes for English in all the important schools of the country, £16 having been devoted to the students of the medical school. At the age of nine years a boy practically decides now whether he will learn French or English, and it is hoped that suitable prizes may have some effect upon his decision.

Porro's Operation.

Mr. Milton two weeks ago performed Porro's operation upon an extremely rickety, malformed woman; but the child was extracted dead, and the mother, who was throughout most difficult to manage, died within two days of peritonitis. Extirpation of a cancerous uterus by the vagina has also been done for the first time in Egypt by the same operator. The patient, who was a German, recovered after a sharp attack of fever, and has left the hospital relieved of her tumour, but still suffering from weakness and diarrhœa.

Rare Medical and Pathological Cases.

During a post-mortem examination on a child aged four months who died of broncho-pneumonia it was discovered that the small intestine, especially near the ileo-cæcal valve, was the seat of more than a dozen distinct grey Peyer's patches in an early stage of infiltration, together with many enlarged solitary glands. The child was brought dying to the hospital, and no history could be obtained as to temperature, diarrhœa, &c. This evidence of infantile enteric fever is of great interest in Egypt, where this fever is very common among European adults and very rare among Egyptian adults, where native doctors are unable to diagnose fevers, and where there is a mortality in Cairo alone during last April of 399 children under the age of five years, under the statistical headings of "gastritis, gastro-enteritis, and diarrhœa." The tremendous mortality of Egyptian towns is chiefly due to the high infant rate, and this is enormously increased during the hot months when the Nile is low. At another necropsy upon a surgical case, which died of pleurisy after excision of the lower jaw for a cystic enchondroma, it was noticed that the corpse was very anæmic, and a careful search was made for entozoa, with the following result:—Fifty anchylostomata duodenales were found attached to the jejunum, and sixty-eight others were discovered in the washings of the small intestine, besides three ascarides, three oxyurides, and no less than thirteen of Bilharz's distoma worms in the portal vein. There have lately been in the hospital wards five cases of mycetoma, or the fungous disease of India. This is apparently the first time that the disease has been noticed out of India. Three cases were in men, two in women, all in one foot, with enlarged superficial veins of that lower extremity, and enlarged femoral glands on the affected side. In Mr. Sandwith's wards there is a man suffering apparently from negro lethargy, the fatal sleeping sickness of the West Coast of Africa. He is always asleep excepting at meal times, and when being treated by electricity.

Capital Punishment.

An Albanian murderer was executed in Old Cairo at daybreak this morning by means of a seven-feet drop instead of the old-fashioned hanging by strangulation. Death was painless and instantaneous, and a necropsy, conducted by Dr. Keatinge at the medical school five hours afterwards, showed partial dislocation of the second and third cervical vertebræ.

Cairo, May 12th.

Obituary.

WALTER WILSON YOUNG, M.D.

DR. YOUNG, who died recently at the age of fifty-one, was born at Hamilton, near Glasgow. He studied at the University of Edinburgh, where he graduated as M.B. and C.M. in 1865. Shortly afterwards he settled in the town of Aldershot, where he pursued the active practice of his profession for over five-and-twenty years. His skill, especially in surgical and obstetrical cases, and his kindness and attention to his patients, of whatever station in life, won him the confidence and esteem of all classes. He held sundry public appointments, including those of parish medical officer and public vaccinator, and police surgeon. In 1878 he graduated as M.D., with a thesis on Diseases of Joints. About twelve months ago symptoms of Bright's disease began to develop, and although he continued in the full discharge of his professional duties, it was latterly with manifest difficulty that he performed them. An acute attack of nephritis in March last confined him to bed, and he never regained strength, but sank gradually, and died on April 30th.

WILLIAM BURNIE, M.D., L.R.C.S. EDIN.

THE subject of this brief memoir died on the 1st inst., at his residence, Houghton House, Bradford, in his seventy-sixth year. He was born in Dumfriesshire, and went to Bradford in 1836 as assistant to Messrs. Cooper and Douglas of Rawson-place, having just previously obtained his medical qualifications. On the death of Mr. Cooper he removed to London, where he practised successfully for fifteen years, and held the post of honorary senior physician to the Islington Dispensary, returning to Bradford to join the firm of Messrs. Douglas and Kay. Subsequently, on the retirement or death of these gentlemen, he conducted the practice alone until 1879, when he took his son, Mr. W. G. Burnie, into partnership. Dr. Burnie was the author of a series of articles on "Medical Reform," and some valuable treatises on the "Treatment of Pneumonia." He took an active interest in the movement which resulted in the throwing open of the medical appointments of the Bradford Infirmary to general practitioners. He was a permanent vice-president of the Yorkshire branch of the British Medical Association, of which he had also been president, and was three times president of the Bradford Medico-Chirurgical Society, and a Fellow of the Medical Society of London. He held several important medical appointments, and his loss will be felt by a large professional and scientific circle. He leaves a widow, two sons, and a daughter.

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Medical News.

UNIVERSITY OF CAMBRIDGE. — At a Congregation held on May 14th the following degrees were conferred:—

Doctor of Medicine.—Edmund Carver, St. John's.

Bachelors of Medicine and Bachelors of Surgery.—Robert Alexander Bickersteth, Cecil Huntington Leaf, Trinity; Henry Greaves, Gonville and Caius; Frank Belben, Christ's; and John Edwards Creswell, Cavendish Hostel.

The following gentlemen have passed the Third Examination for M.B.:—

Ds. Attlee, J., John's.
Berkeley, G. H. A. C., Caius.
Bradford, Caius.
Cropper, Trinity.
Daniel, Trinity.
Devereux, Selwyn Hostel.
Dixon, Trinity.
Drake, Clare.
Edmondson, John's.
Glover, L. G., John's.
Grimsdale, Caius.
Kent, Trinity
Law, Christ's.
Ds. Lee, Cavendish Hostel.
Miller, Queen's.
Perkins, J. J., Emmanuel.
Phear, Trinity.
Roberts, L., Caius.
Senior, Queen's.
Simpson, H., John's.
Stack, Pembroke.
Troutbeck, Caius.
Wallace, non-collegiate.
Ware, John's.
Watkins, Caius.
Wilkinson, G. (sen.), Emman.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND. — At the May examinations the following obtained the licences in Medicine and Midwifery of the College:—

Medicine.—William Greenwood, Robert Kerr Johnston, and Samuel Whitten.

Midwifery.—William Greenwood and Samuel Whitten.

The undernamed have been admitted Members:—

Thomas S. Cogan, William Robert Macaulay, Ignatius M'Donagh O'Farrell, Henry Shea, and Ross F. Maguire.

SWIMMERS' LIFE-SAVING SOCIETY.—The first public Lecture and Demonstration of the principles of Resuscitation and Life-saving will be given in the Swimming Baths attached to the Polytechnic, Regent-street, on Monday next, commencing at 8 P.M.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the President, Vice-President, and Council, held on May 15th, the following examiners were elected for the ensuing year:—Anatomy and Surgery: John Barton, F.R.C.S.; Sir William Stokes, F.R.C.S.; Robert L. Swan, F.R.C.S.; and William Thomson, F.R.C.S. Physiology, Histology, and Pathology: R. Glasgow Patteson, F.R.C.S.; and J. Alfred Scott, F.R.C.S. Chemistry and Physics: Robert J. Montgomery, F.R.C.S. Midwifery and Gynæcology: Samuel R. Mason, F.R.C.S. Ophthalmology: Arthur H. Benson, F.R.C.S. Dentistry: Daniel Corbett, jun., F.R.C.S.; Robert Hazelton, F.R.C.S.; George M. P. Murray, F.R.C.S.; Henry Gregg Sherlock, F.R.C.S.; William Stoker, F.R.C.S.; and Montgomery A. Ward, F.R.C.S. Public Health: Hugh Aughinleck, F.R.C.S.; D. Edgar Flinn, F.R.C.S.; R. Glasgow Patteson, F.R.C.S.; William C. Stubbs, B.L.; and John Charles Wilmot, C.E. Midwifery Diploma: Samuel R. Mason, F.R.C.S.; Jeremiah O'Donovan, F.R.C.S.; and William Roe, F.R.C.S. General Education: Frank J. Davys, F.R.C.S.; and Robert Morton, F.R.C.S.

PRESENTATIONS.—Mr. Fredk. A. Heslop, L.R.C.P., L.R.C.S.Edin., of Blackpool, has been presented by the Blackpool Ambulance Police Class in connexion with the St. John Ambulance Association with a silver-mounted claret jug, as a token of esteem and appreciation of his instructions on rendering first aid.—Mr. P. B. Stoney, L.R.C.P.Edin., M.R.C.S., of Millom, Cumberland, has received as a present from the members of the St. John Ambulance Association, Millom Centre, a handsome set of electro-plated fish knives and forks, as a testimonial of their goodwill and gratitude for his services to them on ambulance work.—Mr. Alfred Barber, M.B., C.M.Aberd., of Richmond, Yorkshire, has been presented by the members of the Richmond Branch of the St. John Ambulance Association with a gilt and oak timepiece, in acknowledgment of the value of his ambulance lectures.—Mr. G. H. Fosbroke, M.R.C.S., D.P.H. Camb., medical officer of health for Worcestershire, has been presented by the medical men practising in Stratford Combined Sanitary District with a handsome dining-room clock, as a token of their appreciation of the courteous manner in which he had for the past seventeen years performed the duties of medical officer of the district and of his high personal character.

HOSPITAL SATURDAY IN BIRMINGHAM.—The total amount received in this year's collection amounts to the grand sum of £10,241 15*s.* 7*d.*, as compared with £9374 9*s.* 5*d.* last year.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—A member of the Council of Management of this hospital has undertaken to make a donation of £500 on the condition that a similar sum is forthcoming from some other well-wisher of the charity.

ACCIDENT TO A MEDICAL MAN.—As Mr. J. Leslie Callaghan, L.R.C.P. Edin. &c., of Colyton, was driving through Seaton last Tuesday his horse shied, and his carriage colliding with a butcher's cart, he was thrown out and his right leg was fractured.

NATIONAL HEALTH SOCIETY.—The Duke of Westminster has contributed £100, and increased his annual subscription to £20, in aid of the new and useful work in the suburbs of London and the provinces which the Society is inaugurating by lectures amongst the poor on home sanitation and other subjects of domestic hygiene.

INFECTIOUS HOSPITAL FOR CARDIFF.—The Cardiff County Council, at its meeting on May 11th, approved the recommendation of the Health and Port Sanitary Committee for the erection of an infectious hospital near the Ely Paper Mills, at a cost of £24,500. The plans had been prepared by the borough engineer.

WORKINGTON INFIRMARY. — Mrs. Curwen of Workington Hall has intimated to the committee of the infirmary her intention to contribute £500 towards the fund which is being raised to build a new wing. The gift is in memory of the late Mr. E. Darcy Curwen, her eldest son, who died from typhoid fever a few weeks ago at Constantinople, whither he had gone as honorary *attaché* to the British Embassy.

THE NEW INFIRMARY AT DERBY.—On the 21st inst. the Queen on her way to Balmoral Castle broke her journey at Derby, and, amid many manifestations of loyalty, performed the function of laying the foundation stone of the new Derby Infirmary. Her Majesty was received at the station by the Mayor, Mr. Alford Haslam, and by members of the Reception Committee. Lord Lathom, the Chamberlain, was present, and made the presentations to Her Majesty.

DISINFECTING THE HOUSES OF PARLIAMENT.—An attempt has been made to fumigate and render wholesome the chambers in which our senators discharge their important functions for the benefit of the country. Mr. Plunket informed the members on Thursday last that the House, the lobbies, and all the surrounding rooms used for official purposes, also the rooms used by members, including the tea-room and reading-room, the rooms occupied by Ministers and officers of the House, had been thoroughly fumigated with sulphur, and afterwards sprinkled with eucalyptus oil. The floors had been washed with carbolic soap, the cushions, carpets, rugs, and other movables, had been taken out and thoroughly cleaned. The library had been purified with a preparation of sulphur and camphor, which was, he believed, extremely efficient as a disinfectant, and which had no injurious effect upon the bindings of the books. A very powerful draught of air had been constantly kept going in every portion of the House and its precincts.

ROYAL METEOROLOGICAL SOCIETY.—At the usual monthly meeting of this Society, held on the 20th inst., the following papers were read:—(1) "On the Vertical Circulation of the Atmosphere in relation to the Formation of Storms," by Mr. W. H. Dines, B.A. (2) "On Brocken Spectres in a London Fog," by Mr. A. W. Clayden, M.A. During the dense fogs in February last, the author made a number of experiments with the view of raising his own "spectre." This he ultimately succeeded in accomplishing by placing a steady lime-light a few feet behind his head, when his shadow was projected on the fog. He then made some careful measurements of the size and distance of the spectre, and also succeeded in taking some photographs of the phenomenon. (3) "An Account of the 'Leste,' or Hot Wind of Madeira," by Dr. H. Coupland Taylor. Mr. Shelford Bidwell, M.A., F.R.S., exhibited an experiment showing the effect of an electrical discharge upon the condensation of steam

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TORBAY HOSPITAL: PROPOSED NEW BUILDING.—A meeting of the governors was recently held at the small bath saloon to receive the report of the weekly board, in compliance with a resolution adopted at the annual meeting held in January last, requesting the board to point out a suitable site for a new hospital, together with an estimate of the cost. It was now stated that the board believed the site would cost £2500, and £12,500 would be required for the building, to accommodate in the first instance fifty patients. After a prolonged discussion it was resolved to again refer the matter to the weekly board.

THE NEW DUFFERIN HOSPITAL, MEERUT.—Mr Lawrence, the Commissioner, laid the foundation stone on the 2nd ult. of this new hospital, in the presence of a distinguished company. The report, which was read by the honorary secretary, stated the progress of the Countess of Dufferin Fund Scheme in Meerut. The number of out-door patients treated up to that time had been about 13,500, and with the completion of this new building the sphere of usefulness of the institution would be greatly increased. The site had been obtained by the liberality of eight donors, and 20,000 rupees had already been collected in the district.

THE HARROGATE BATH HOSPITAL.—Mr. A. Cooke, the Mayor of Leeds, presided at an influential meeting in the Town Hall on the 1st inst., convened for the purpose of urging the claims of this institution on the inhabitants of the borough. The president, vice-president, and other officials connected with the hospital, attended. It appeared that the percentage of patients who went to the hospital from Leeds and its vicinity was far in excess of the contributions received by the charity from that town. The borough, in fact, was sending the maximum of patients and the minimum of subscriptions. A debt rests on the institution of £11,397. The result of the meeting was the appointment of a committee for the purpose of obtaining donations, and otherwise assisting the board, by locally furthering the objects of the charity.

GENERAL PRACTITIONERS' UNION.—A general meeting of the Executive Committee of the above Union was held on the 13th inst., Mr. George Brown in the chair. The following gentlemen were appointed District Secretaries:—A. Phillips Hills, M.R.C.S., for Battersea; Cecil A. Digby, M.D., for Staffordshire; and John Grout, L.R.C.P., for Worcestershire. The following registered medical practitioners were elected members of the Union:—Messrs. J. Adams, D. M. Barry, R. F. Benham, G. G. Bird, T. E. Bowkett, H. W. Brighouse, A. H. W. Clemow, C. A. Digby, E. O. Fountain, J. Godding, E. C. Greenwood, J. H. Griffin, J. Grout, J. H. Gwynne, P. Z. Hebert, A. P. Hills, W. H. Horsman, A. Hunt, H. J. Jones, R. W. Jones, A. Kisch, C. F. Knight, F. Lawrance, R. H. Lloyd, W. C. Luffman, W. Y. Martin, W. Moore, E. Norton, R. F. Owen, W. L. Penny, H. C. Pope, C. H. Sers, J. P. Simpson, P. J. Slevin, G. Stevenson, H. C. Strover, G. A. F. Tait, M. Townsend, C. A. P. Truman, and H. Walker.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 19th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	189	56	3	39	..	287	442
North-Western Hospital	139	36	..	11	1	187	443
Western ,,	131	13	..	14	1	159	224
South-Western ,,	151	26	..	8	1	186	240
South-Eastern ,,	143	16	..	20*	1	180	462
Northern ,,	144	14	..	..	..	158	480
Totals	897	161	3	92	4	1157	2291

SMALL-POX.—South-Eastern Hospital, 1; *Atlas* hospital ship, 35.

* Infant with mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALLAN, CHAS. J., M.B., C.M. Edin., has been appointed Medical Officer of the Burgh of Bonnyrigg, Midlothian.

BAILEY, J. HAROLD, M.B., Ch.B. Vict., has been appointed House Surgeon to the Manchester Southern Hospital for Women and Children, and to the Manchester Maternity Hospital, vice A. W. Senior, resigned.

BALLANCE, H. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

BLACK, W. A., M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the Parish of Annan, Dumfriesshire.

BRODIE, THOMAS G., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

BRODRICK, CHAS. CUMBERLAND, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Tavistock Rural Sanitary District, vice M. Williams, resigned.

CAMERON, ALEX., M.D., C.M. Glasg., has been reappointed Medical Officer of the Workhouse of the Caistor Union.

CLABBURN, C. H., M.B., C.M. Edin., has been appointed Medical Officer for the Kitton District of the Stamford Union.

HAWKINS-AMBLER, GEORGE A., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health for the Whitley Urban Sanitary District of the Huddersfield Union.

HISLOP, JOHN T., L.R.C.S., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator to the Milton-Abbott District of the Tavistock Union, vice F. M. Williams, resigned.

HUTCHINSON, JOSEPH, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fawley and Exbury District of the New Forest Union.

LACK, T. L., M.R.C.S., L.M., has been reappointed Medical Officer of Health for the Forehoe Union.

MACKAY, A. W., M.B., C.M. Aberd., has been appointed Non-resident House Physician and Surgeon to the Aberdeen Hospital for Sick Children.

MACKENZIE, WM. L., M.B., C.M., D.P.H. Aberd., has been appointed Medical Officer of Health for the conjoined Counties of Wigtown and Kirkcudbright.

MACKINTOSH, A., M.D., L.F.P.S. Glasg., has been reappointed Medical Officer for Chesterfield.

MORRIS, J. J. N., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

MORTON, A. STANFORD, M.B., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Moorfields Ophthalmic Hospital.

MUDGE, JAS., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Marazion District of the Penzance Union.

NELSON, R., M.D. Irel., M.Ch., M.A.O., has been appointed, *pro tem.*, Medical and Vaccination Officer to the Sheffield Workhouse.

OWEN, WM., M.R.C.S., has been appointed Medical Officer for the Wells-street Workhouse of the Parish of St. Matthew, Bethnal-green.

PLAYFAIR, HUGH, M.B., M.R.C.S., L.R.C.P., has been appointed Assistant Physician Accoucheur to King's College Hospital.

RAIMES, A., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the York Rural Sanitary District.

SANDIFER, H. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

SPENCER, WALTER, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the East Retford Urban Sanitary District of the East Retford Union.

STEPHENSON, O. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth District of the South Stoneham Union, vice Symonds, resigned.

WADDELOW, J. J., L.S.A., has been appointed Assistant House Accoucheur to King's College Hospital.

WHEATLEY, JAMES, M.D., B.S. Lond., D.P.H., has been appointed Medical Officer of Health for Blackburn, vice Dr. Barwise.

WHITFIELD, ARTHUR, M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

WHITTINGTON, T. P., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Neath Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, washing, and lodging.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Honorary Pathologist.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Surgeon.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician. No salary. Board and residence and an allowance for washing. (Apply to the Secretary, at the Office, 24, Finsbury-circus, E.C.)

COUNTY ASYLUM, Whittingham, Preston, Lancs.—Assistant Medical Officer and Pathologist. Salary £200 a year, with board, lodgings, washing, and attendance.

COUNTY BOROUGH OF SHEFFIELD.—Medical Officer of Health for the Borough. Salary £500 per annum. (Apply to Mr. J. W. Pye Smith, Town Clerk, Sheffield.)

COUNTY OF ROXBURGH.—Medical Officer for the County. Salary £350, with allowance for travelling expenses.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Commencing salary £80 per annum, with board and residence.

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DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Commencing salary £180, rising £10 per annum to £220, with residence, garden, and conservatory (rates and taxes free). Conveyance provided. (Apply to the Hon. Secretary, Princes-street, Dunstable, Beds.)

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium £100 per annum. Also Honorary Surgeon.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

GOLD MINING COMPANY IN LOWER SIAM.—Medical Officer. (Apply to T. M., care of Street & Co., 30, Cornhill, E.C.)

GUY'S HOSPITAL, S.E.—Five Assistant Dental Surgeons.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £50 per annum, with residence, board, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer for six months. Salary £50 per annum, with board and residence.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants in both Out-patient and In-patient Departments.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200, £50 allowed for cab fare or towards horse and trap, midwifery fees, &c., with residence, coachhouse and stable, rent and taxes free. (Apply to the Secretary, 91, Queen-street, Leamington.)

M.D., care of P. Dixon, Esq., 13, Gray's-inn-square, W.C.—Assistant Medical Officer in a large Metropolitan Lunatic Asylum. Salary to commence at £100 a year, with board, lodging, washing, &c.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon. Board, apartments, and washing. No salary.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

ST. THOMAS'S HOSPITAL, S.W.—Resident Assistant Surgeon.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Honorary Physician.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. The annual fee for the Examinership is £30. (Apply to Mr. Clapperton, 91, West Regent-street, Glasgow.)

WORCESTER AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary (without residence) £140 per annum, with a portion of midwifery fees, also £20 per annum for cab hire. (Apply to Mr. Gibson, Easy-row, Worcester.)

Births, Marriages, and Deaths.

BIRTHS.

AITKEN.—On May 14th, at St. Mary's, Ashton-on-Mersey, Cheshire, the wife of W. B. Aitken, M.B. and C.M. Edin., of a daughter.

BARSHAM.—On May 19th, at Holmesdale, Bagshot, Surrey, the wife of William O. Barsham, L.R.C.P. Lond., M.R.C.S., prematurely, of a daughter, stillborn.

CHILDS.—On May 13th, at Lindisfarne, Weymouth, the wife of Christopher Childs, M.D., of a son.

MCCALL.—On May 19th, at The Terrace House, Conisborough, Yorkshire, the wife of Anthony McCall, M.B., C.M., of a daughter.

PARKER.—On May 17th, at 7, Bloomsbury-place, W.C., the wife of Herbert Parker, M.R.C.S., of a daughter.

WRIGHT.—On May 6th, at Spring-gardens, Gainsboro', the wife of Mr. Henry Wright, Surgeon, of a daughter.

MARRIAGES.

COLE-BAKER—LIDDELL.—On May 13th, at St. Jude's, Southsea, Lyster Cole-Baker, M.B. T.C.D., of The Elm Trees, Southsea, youngest son of William Cole-Baker, of Ballydavid, Tipperary, to Jennie, eldest daughter of William Liddell, J.P., Banoge House, Lurgan, Ireland.

HENRY—GILBERT.—On April 16th, at St. George's Cathedral, Cape Town, Herbert G. Henry, L.D.S. R.C.S. Eng., Dental Surgeon, of King William's Town, Cape Colony, eldest son of George Henry, Esq., of Hastings, to Louise Blanche Gilbert, of Kilburn, London, England.

PERKINS-CASE—BISHOP.—On May 13th, at Craven-hill Congregational Chapel, Perkins William Perkins-Case, M.D., of Croydon, to Clara Lucas Balfour, widow of the late Walter Ross Bishop.

DEATHS.

HAINING.—On May 12th, at Foregate-street, Chester, William Haining, M.D., in his 47th year.

HIRST.—On May 9th, at the residence of his son, 30, Westbourne-grove, Scarbro', Charles Hirst, L.S.A., L.R.C.P.Ed., of Morley, Yorkshire, aged 61 years.

MACDONELL.—On May 18th, at his residence, Nevern-square, London, Dr. Ewen Macdonell (Inch), formerly of the H.E.I.C.S., last surviving son of the late Lt.-Colonel Archibald Macdonell, C.V., in his 86th year.

MARTIN.—On May 13th, at Queen Anne-street, W., Robert Martin, M.D. Cantab., in the 64th year of his age.

MONRO.—On May 18th, of influenza, Henry Monro, M.D., of Upper Wimpole-street, aLd Orchard Leigh, Bonchurch, aged 74.

SMITH.—On May 10th, at Bridge of Walls, Shetland, John Smith, L.R.C.P.E. & S., third son of the late Hugh Smith, Esq., Ferulester, Coleraine, Ireland, aged 35 years. Deeply regretted.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ARNOLD, EDWARD, Warwick-square, Paternoster-row, London.
The Soul of Man: an Investigation of the Facts of Physiological and Experimental Psychology. By Dr. Paul Carus. Illustrated. pp. 458.

CHURCHILL, J. & A., New Burlington-street, London.
Guy's Hospital Reports. Edited by N. Davies-Colley, M.A., M.C., and W. Hale White, M.D. Vol. XLVII., being Vol. XXXII. of the Third Series. 1890. pp. 367.

CONSTABLE, T. & A., Edinburgh.
Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P. Edin. Vol. I. Part I. 1891. pp. 48.

CORNISH, J. E., Manchester.
The Physical Signs of Cardiac Disease. For the use of Clinical Students. By Graham Steell, M.D. Edin. Second Edition. 1891. pp. 77.

DAVIS, F. A., Philadelphia and London.
Materia Medica, Pharmacology, and Therapeutics. By J. V. Shoemaker, A.M., M.D. Vol. II. Being an Independent Volume upon Drugs. 1891. pp. 1004. Price 19s.

EYRE & SPOTTISWOODE, Fleet-street, London.
University of London. The Calendar for the year 1891-92. Part I.: Charters, Regulations, Lists, &c. Price 3s.

HOEPLI, ULRICO, Milano.
Morfologia del Corpo Umano. Studi del Dott. A. De-Giovanni. 1891. pp. 424.

KEGAN PAUL, TRENCH, & Co., London.
General Physiology, or Physiological Theory of Cosmos. By Camilo Calleja, M.D. 1890. pp. 391.
The Inspection of Meat. By W. Wylde. With Coloured Plates. 1890. pp. 104.

LONGMANS, GREEN, & Co., London.
Quain's Elements of Anatomy. Edited by E. A. Schäfer, F.R.S., and G. D. Thane. In Three Volumes. Vol. I. Part II.: General Anatomy or Histology. Illustrated. Tenth Edition. 1891. pp. 431. Price 12s. 6d.

OLIVER & BOYD, Tweeddale-court, Edinburgh.
Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S.Edin. Third Edition. 1891. pp. 156. Price 2s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.
Diseases of the Digestive Organs in Infancy and Childhood. By Louis Starr, M.D. Second Edition. Illustrated. 1891. pp. 396.

STOCK, ELLIOT, Paternoster-row, London.
The Revelation of the Trinity. By S. B. G. McKinney, M.A. 1891. pp. 190.

STREHZ, THEODORE, M.D., Chicago.
The General Practitioner. By T. Strehz, M.D. 1889. pp. 460.

SWAN SONNENSCHEIN & Co., Paternoster-square, London.
Our Canine Companions in Health and Disease. By J. Woodroffe Hill, F.R.C.V.S. 1891. pp. 297.

La Linfa de Koch en Dermatologia; por el Doctor Juan Azúa (Estab. Typog. de los Sucesores de Cuesta, Madrid, 1891). — Des Déformations Ostéo-articulaires consécutives à des Maladies de l'Appareil Pleuro-pulmonaire; par le Dr. Albert Lefebvre (F. Alcan, Paris, 1891).—Klinische Untersuchungen über Schrumpfniere (Inaugural Dissertation); vorgelegt von T. A. Zangger (A. Diggelmann, Uster-Zurich, 1891).—New Law and Life for Children, being the Report of the National Society for the Prevention of Cruelty to Children, presented May 12th, 1891 (published at the Society's Office, Harpur-street, Bloomsbury, London).—Twenty-third Annual Report of the New York Orthopædic Dispensary and Hospital. — The Dwellings of the Poor; Report of the Mansion House Council for the year 1890 (Cassell & Co., Limited, 1891); price 1s.—Deutsche Zeitschrift für Nervenheilkunde; Band I., Heft 1-2 (F. C. W. Vogel, Leipzig, 1891).—De la Tuberculose Mammaire; par le Dr. A. W. Roux (Henrie Stapelmohr, Genève, 1891). — Étude Clinique sur la Grippe Pandémique; par le Dr. H. A. Maillart (A. Stapelmohr, Genève, 1891). — Annales de l'Institut Pasteur, publiées sous le patronage de M. Pasteur; par M. E. Duclaux; No. 4, April, 1891 (G. Masson, Paris). — Therapeutisches Lexikon für Praktische Aerzte; herausgegeben von Dr. A. Bum; Lieferung 17-20: Schluss des Werkes (Urban und Schwarzenberg, Wien und Leipzig, 1891). — Supplement to a Text-book of Pharmacology, Therapeutics, and Materia Medica; by T. L. Brunton, M.D., D.Sc. (Macmillan & Co., London, 1891).—The History of the Study of Anatomy in Cambridge; by A. Macalister, M.D., F.R.S. (C. J. Clay and Sons, London, 1891); price 1s. — Medico-legal Experience in Calcutta; by S. Coull Mackenzie, M.D. (E. & S. Livingstone, Edinburgh, 1891). — Catechism Series: Anatomy; Part IV., Abdomen. (E. & S. Livingstone, Edinburgh, 1891); price 1s. net. — Manuale di Terapia Clinica delle Malattie Veneree, con Formolario Terapeutico-Ragionato; del Dottore Luigi Carusi (Stab. Tipografico dell' Iride, Napoli, 1891). — Influenza; von Prof. Dr. Drasche (Moritz Perles, Wien, 1890).—Statisque des Vaccinations pendant le Paroxysme Épidémique de 1889-90; par le Dr. Domingos Freire (Imberg and Lefson, Berlin, 1891). — Contribution to the Medico-Military History of Jamaica: "A Retrospect"; by Brigade Surgeon S. E. Maunsell, Medical Staff (Government Printing Establishment, Kingston, Jamaica, 1891). — Index Medicus, Authors and Subjects, Vol. XIII., No. 4, April, 1891 (Trübner & Co., and Lewis, London).

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Medical Diary for the ensuing Week.

Monday, May 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. O. Sturges: Tuberculosis in Children.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Conjunctival Diseases.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (University College).—4.30 P.M. Specimens:—Prof. Thane: Two cases of Abnormal Muscles of the Leg.—Mr. Lawrence: Abnormalities of the Aortic and Pulmonary Valves. Papers:—Sir W. Turner: The Relations of the Dentary Arcades in the Crania of Australian Aborigines.—Prof. Cleland: Burial in Sand for Preparation of Bones.—Dr. H. Spencer: Ossification in the Head of the Humerus at Birth.—Dr. W. Griffith: A case of Congenital Malformation of the Heart with Transposition of the Viscera, in which the Condition was Diagnosed during Life (with specimen).—Mr. Lockwood and Dr. Rolleston: The Situation of the Vermiform Appendix (with specimens).

Tuesday, May 26.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyslop: Delusional Insanity and Moral Insanity.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: The Tinea Group (Cryptogamic Affections).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Sheridan Delépine and Mr. C. T. Dent: On the Changes observed in Healthy Arteries and in Tendon Ligatures during the first four weeks after Ligation.—Dr. G. Thin and Dr. F. J. Wethered: Symptoms and Pathology of a case of Acute Inflammation of the Mucous Membrane of the Ileum from climatic causes.

Wednesday, May 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Clinical Demonstration in cases of Mitral Disease.—Royal London Ophthalmic Hospital: 8 P.M., Mr. J. B. Lawford: Atrophy of the Optic Nerve.

Thursday, May 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. O. Sturges: Broncho-pneumonia and its Relationships to Lobar Pneumonia and Empyema.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Buzzard: Selected cases of Disease of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. G. C. Wilkin: The Common Forms of Disease of the Pharynx, Naso-pharynx, and Fauces.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait: Further Observations on the Method of Restoring the Perineum.

Friday, May 29.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: Clinical Demonstration in cases of Aortic Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Tuberculosis, Human and Bovine (examination of Sputum).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Gastro-intestinal Tract.

Saturday, May 30.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. Hyslop: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 21st, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 15	29·78	N.W.	54	46	107	61	47	..	Cloudy
,, 16	29·76	N.	43	41	89	50	40	·29	Cloudy
,, 17	29·77	W.	48	39	99	51	35	·02	Cloudy
,, 18	29·80	N.E.	41	40	71	44	40	·52	Raining
,, 19	29·59	N.W.	44	40	98	59	38	·18	Hazy
,, 20	29·74	S.W.	51	46	96	58	44	·02	Cloudy
,, 21	29·42	N.E.	45	44	54	50	43	·17	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

KOCH'S REMEDY IN URINARY TUBERCULOSIS.

IN a communication Mr. Hurry Fenwick corrects certain views which have appeared in his name in connexion with the use of tuberculin in renal and prostate tuberculosis. He summarises the dangers arising out of the method under the heads of (1) dangers from septicity, in regard to which he endorses Mr. Watson Cheyne's statement that septicity is a contra-indication to its use; (2) dangers from hæmorrhage, and (3) dangers from throttling of the conducting canals. He concludes by saying that the therapeutic value of the remedy is very doubtful in urinary tuberculosis, but in primary vesical tuberculosis "the injection would replace surgical interference." In primary renal or prostatic tuberculosis it should only be used "as a diagnostic agent to enable us in the former gland to differentiate between tuberculosis and calculous disease, and in the latter to distinguish the same from chronic inflammatory conditions induced by gonorrhœa."

Anglicanus.—Without doubt the antecedents of the lady should prove a bar to marriage, in the interests not only of probable offspring, but even of the lady herself.

F.R.C.P.—The *Monist*, Philadelphia.

"ENGLISH MEDICAL SERVICE IN THE LATE RUSSO-TURKISH WAR."

To the Editors of THE LANCET.

SIRS,—In reply to "Juvenal" in your last issue, I beg to say that English surgeons who served with the Turkish army during the Russo-Turkish War received medals and other decorations. As to their being allowed by the authorities to be used when wearing the uniform of Her Majesty's regiments, it appears to me to be very doubtful. As to civilians, unless at Court or a Levée, I do not think anybody would notice what they wore.

I am, Sirs, yours obediently,

May 20th, 1891. H.

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A NEW DEVICE IN MEDICAL ADVERTISING AT SHEPHERD'S-BUSH.

LENGTH of practice in a neighbourhood ought to be a guarantee against all undignified and unprofessional ways of attracting attention. "Dr. J. W. Hillas," 5, Benbow-road, The Grove, Shepherd's-bush, sends round a printed circular, in which, not content with advertising his scale of fees, his various appointments, the fact that he was physician to the late Sir Mathew Wilson &c., he exceeds all other advertisers we have known in publishing a list of about thirty gentlemen practising in his neighbourhood, and boasts that he has been in practice longer than almost any medical gentleman practising in Shepherd's-bush. We can only hope that he has learnt more of the practice of medicine than he seems to have mastered of its ethics and of its methods.

Irex should consult the article on "Books" published in our Students' Number of Sept. 6th last.

Mr. J. Ingram.—The registration of medical students commenced in the year 1866.

Dr. J. Oliver.—Very shortly.

"AN EXPLOSIVE MIXTURE."

To the Editors of THE LANCET.

SIRS,—The experience of Dr. Grant in attempting to prepare a solution of potassium permanganate in glycerine is not new. I was told several years ago by a pharmaceutical chemist that at the time permanganate of potash first began to be used internally he had a prescription for pills of this salt, in which glycerine was named as the excipient. On crushing the small crystals in his mortar with the glycerine, my friend had a very pretty little explosion—an experience even more alarming than that of your correspondent. The explanation is simple. Danger with permanganate and glycerine arises from the same cause as that attending the admixture of nitric acid and glycerine. Both permanganate of potash and nitric acid are powerful oxidising agents, and the chemical affinity of glycerine for oxygen causes the two to work with so much energy as to produce heat and (under favourable circumstances) explosion. The same terms, I need hardly remark, would constitute an explanation in chemical language of the explosion of gunpowder, wherein the saltpetre (KNO_3) is the oxidising agent. Permanganates, being unstable, are always rather liable to produce rapid oxidation, as prescribers should remember.

Should no other correspondent point out the explanation, perhaps this may be of use to DR. GRANT.—I am, Sirs, yours obediently,

London, May 16th, 1891. T. B. RUSSELL.

To the Editors of THE LANCET.

SIRS,—The readiness with which permanganate of potassium gives up its oxygen to organic matter is well known; and, as a more sensational example than Dr. Grant's experiment given in your last issue, p. 1135, if a few drops of glycerine are dropped on a small heap of permanganate of potash crystals, after a few minutes the "affinity" will be so great that smoke and flame will be evolved. I saw this experiment in a chemistry class many years ago.

I am, Sirs, yours faithfully,

Eccles, May 18th, 1891. J. HEDLEY CROCKER, L.R.C.P.Lond., &c.

*** The action is no doubt a complex one, and appears to depend upon the quantity of permanganate. In the experiments tried in our own laboratory, when crystals were used in the way our correspondent describes, precisely the same results were obtained. The mixture became intensely hot, and the permanganate first assumed a blood-red, then a mahogany, and finally a deep brown colour. No gas, except steam, appeared to be evolved, but a very distinct acetone-like odour was noticed (formaldehyde, acetone?), along with traces of pungent acrolein. The permanganate crystals were not all expended, as on washing out the semi-solid mass the crystals were seen to be covered with a black compound, possibly an oxide of manganese. During the violent action a distinct crackling sound could be heard. When a strong solution of permanganate is mixed with glycerine, the action appears to be the same, but not so violent. With a weaker solution the mixture suddenly becomes solid, so that the tube may be inverted without losing the contents. With a still weaker solution a gradual discharge of the colour merely takes place, the solution becoming brown. Dilute sulphuric acid and permanganate were found to cause copious evolution of carbonic acid gas. Glycerine, when heated with solid caustic potash, it is well known, gives acetate and formate of potassium; and it may be that with an oxidising agent, as solid permanganate, the corresponding acids are produced and fixed by the oxides of potassium and manganese, which result from the reduction of the salt. This might explain the acetone-like smell which is evolved, as acetates when heated yield acetone, while formates yield formic aldehyde. On treating glycerine with weak alkaline permanganate, it is completely converted into carbonic and oxalic acids—a change which is so definite that a process for the estimation of glycerine is founded on this reaction. The change is thus represented: $C_3H_8O_3+8O_2=C_2H_2O_4+CO_2+3H_2O$. In alkaline solution oxalate and carbonate are, of course, formed. Glycerine and permanganates in any case, it would appear, are incompatibles.—ED. L.

THE ESTIMATION OF NITRATES IN DRINKING WATER.

DR. HARROW communicated to a recent meeting of the Chemical Society a simple and rapid method of estimating the nitrates in drinking water. The method depends on the reduction of nitric to nitrous acid by means of zinc dust and chlorhydric acid, in a very dilute solution, in presence of α-naphthylamine and sulphuric acid, the estimation being made by comparing the depth of the pink azo-colouration developed in the solution with that arising on similar treatment of standard nitrate solutions. A beaker containing 50 cc. of the water is placed on a sheet of white paper side by side with other beakers holding 50 cc. of standard solutions containing 1·0, 0·1, and 0·01 of nitrogen as nitrate per 100,000, and to each is added 10 cc. of a test solution, prepared by dissolving 1 gramme of α-naphthylamine, 1 gramme of sulphanilic acid, and 25 cc. of chlorhydric acid in about 200 cc. of water, boiling with a small quantity of animal charcoal, filtering, and making up to 500 cc. A very small quantity of zinc dust,—7 to 8 milligrammes—is added to each beaker. If nitrate be present in the water, a more or less intense pink colour is developed, which may be compared, at the end of fifteen minutes, with that arising in the standard solutions. By diluting the water until the tint produced is judged to be of the same intensity as that of one of the standards—preferably the most dilute—a first approximation is arrived at, and the water having been diluted to the extent indicated by the results, a fresh experiment is made with this diluted water. When nitrites are present, the amount is estimated in a similar manner prior to the addition of zinc dust, and due allowance is subsequently made. The author quotes a considerable number of comparisons with the Crum method, which show that very satisfactory results are obtainable.

POISONING BY ŒNANTHE CROCATA.

To the Editors of THE LANCET.

SIRS,—As cases of poisoning from eating parts of this umbelliferous plant are very uncommon, I thought it might be well to record an instance.

A girl aged nine was found dead in bed on the morning of May 9th. She was loitering on her way back from school on the previous afternoon, and appeared to have eaten portions of the plant, including a leaf. She went to bed almost as soon as she got home without complaining of feeling ill. She half woke up in the middle of the night and muttered to her bedfellow something about feeling sick, dropped off to sleep, and never woke again. I examined the fibrous pulp and chewed leaf I found in the stomach and duodenum, and identified the plant as Œnanthe crocata. The mucous membrane of the stomach was heaped up into congested ridges, and the other post-mortem appearances corresponded exactly with those described in recent text-books on toxicology. Death apparently took place in twelve hours.

I am, Sirs, yours faithfully,

F. N. WILLIAMS, F.L.S.,

Brentford, May, 1891. District Medical Officer for Brentford.

H. P. R.—The County Council may, under Section 19 of the Local Government Act, 1888, "refuse to pay any contribution...." in any case in which a medical officer of health "fails to send" a copy of his annual report to the County Council; but nothing is said as to the date when such failure comes into operation. The Local Government Board, in an official circular issued by them on Oct. 16th, 1890, referring to a date when failure to send in such report to themselves should be regarded as having taken effect, said: "They will accordingly inform the County Council *prior to the end of October in each year* of the cases, if any, in which they propose to certify that any medical officer of health, any part of whose salary is repayable by the Council, has made default in sending to the Board the report and returns required by the regulations." The central authority therefore do not regard the default as having already taken place in the month of May; and we should advise that a copy of the annual report be at once transmitted to the County Council, with an explanation as to inadvertence, together with a reference to the circular of the Local Government Board, and a request that the County Council will reconsider their decision.

"A NEW AND SIMPLE FORM OF HYPODERMIC SYRINGE."

To the Editors of THE LANCET.

SIRS,—The syringe illustrated in your issue of the 9th inst., and described by Dr. Abraham, is not new in principle, and is an infringement of the patent of Messrs. Arnold and Son for a syringe which I suggested to them, and which was described and illustrated THE LANCET last year.—I am, Sirs, yours faithfully,

Portsmouth, May, 1891. T. FREDERICK PEARSE, M.D., F.R.C.S.

"AN UNUSUAL SYMPTOM IN MIDDLE EAR DISEASE."

To the Editors of THE LANCET.

SIRS,—I find Mr. Stewart, in his "Epitome of Diseases of the Ear," alludes to a similar distinct sound (see page 86, last paragraph), which might be the explanation in my case published last week. Will you kindly insert this in justice to Mr. Stewart? Yours faithfully,

Barnes, May 20th, 1891. R. LAKE.

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MEETING OF CONVOCATION OF LONDON UNIVERSITY.

WE regret that in our report of the meeting of Convocation in our last issue the remarks of Dr. Pye Smith were, by an oversight on the part of the printer, not distinguished from those of the preceding speaker, Mr. Bompas, Q.C. This is the more to be regretted since the views of the two speakers on the question were directly opposed to each other. Mr. Bompas's remarks terminated with the sentence, "He would appeal to Convocation to reject the scheme, and thereby finally save their University," on page 1117, twenty-two lines from the foot of the last column. Dr. Pye Smith said that if the scheme was not accepted the whole matter would be left to the arbitrament of alien bodies. Their desire was that there should be one university &c., his remarks concluding with the words "anxious not to lower, but to raise, the medical standard."

FEES FOR AMBULANCE LECTURES.

To the Editors of THE LANCET.

SIRS,—In your issue of to-day "F.R.C.S." writes that "a lecturer only receives one guinea for each lecture delivered to a St. John Ambulance class and his travelling expenses." Surely, he means an examiner. I have delivered two courses of lectures, and have hitherto regarded the post of lecturer as purely honorary. If "F.R.C.S." can tell me where I can obtain a guinea for each lecture delivered, I shall be much obliged to him; so, I imagine, will a good many others who have conducted ambulance classes.

I am, Sirs, yours faithfully,

May 16th, 1891. F. E. N.

ERRATUM.—In our announcement last week of the death of Mrs. Brinton, the late Dr. Brinton was erroneously described as of St. Mary's Hospital, instead of St. Thomas's Hospital.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Hurry Fenwick, London; Dr. Griffith, London; Dr. Wright; Dr. Sedgwick Saunders, London; Mr. Beardmore; Mr. Herringham; Dr. Seymour Taylor, London; Mr. H. Love; Dr. Scatliff, Brighton; Mr. Ernest Clarke; Professor Rutherford, Edinburgh; Mr. R. W. Lloyd; Dr. Hugh Woods, Highgate; Mr. A. Duke, Dublin; Messrs. Brown, Gould, and Co., Leicester; Dr. A. J. Richardson, Brighton; Messrs. Oliver and Boyd, Edinburgh; Dr. F. L. Flick, Philadelphia; Dr. Bartley, Broken Hill, Australia; Dr. Handford, Nottingham; Messrs. McCorquodale and Co., Glasgow; Dr. J. Oliver, London; Dr. A. S. Ashmead, New York; Dr. Harvey, St. Leonards; Dr. Blenkinsop; Messrs. Lloyd and Co., Leicester; Mr. W. M. Davidson, London; Messrs. G. Street and Co., London; Dr. Bamgton, Filey; Dr. Mackay, Devizes; Dr. More Madden, Dublin; Mr. Ryan, London; Captain Stairs; Dr. Dole, Isle of Wight; Dr. E. Thompson, Omagh; Mr. Weddell, Newcastle-on-Tyne; Dr. Callaghan, Colyton; Mr. Trevail, Truro; Colonel Fennan, London; Mr. A. R. Edwards; Mr. N. H. Nixon, London; Mr. F. N. Williams, Brentford; Mr. J. H. Alderson; Mr. W. E. Matthews, Stawell, Vic.; Dr. Charpentier, Uxbridge; Dr. G. M. Cullen, Edinburgh; Dott. Luigi Carusi, Naples; Mr. Ainley, Halifax; Mr. W. J. Nixon, London; Mr. E. A. Barton, London; Mr. H. F. Pease, M.P., London; Mr. Darling, Kelso; Dr. Gilbert, Baden-Baden; Mr. Evans, Oswestry; Mr. Graham, Armagh; Miss Rogers, Cornwall; Mr. Evans, Swansea; Mr. Mivart, Chatworth; Mrs. Fenwick, London; Dr. Weed, Cleveland, U.S.A.; Mr. Harrman, Philadelphia; Dr. Branthwaite, Erdington; Mrs. Aldridge, Rochdale; Messrs. Stern; Messrs. Deacon and Co., London; Mr. Moorhead, Nottingham; Messrs. Blondeau et Cie., London; Mrs. Wallace, Bayswater; Messrs. Krohne and Sesemann, London; Mr. Hilliard, Aylesbury; Messrs. Knight and Co., London; Dr. Renton, Glasgow; Mr. Ridge, Enfield; Mr. Harper, Queenstown; Mr. Kirby, Leeds; Mr. Webster, Halifax; Mr. Randell, Devon; Mr. Andrew, Stockport; Mr. Mosse, London; Dr. McDougall, Cannes; Mr. Morton, Wingham; Dr. Dickson, Fulham; Dr. Tyson, Folkestone; Dr. T. F. Pearse, Portsmouth; Mr. Nicholas; Mr. J. H. Crocker, Eccles; Mr. Hornibrook, London; Pulsometer Engineering Co., London; L.R.C.S.I.; F. E. N.; A General Practitioner; Cardiff Infirmary; P. E. T., London; M.D., Edinburgh; Secretary, Derby Infirmary; Secretary, Liverpool Royal Infirmary; Secretary, Hanover Institute; Vicar, Leamington; Athol, London; Secretary, Dewsbury Infirmary; A. B. G.; Irex; M. O.; H.; H. P. R.; Bouillon Fleet Co.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Heslop, Hants; Mr. White, Dunstable; Mr. Hall, Plymouth; Messrs. Hogg and Son, London; Mr. Tyte, Minchinhampton; Mr. Nicholls, Bury St. Edmunds; Mr. Owen, Fishguard; Messrs. Hazell, Watson, and Co.; Mr. Yearsley, Crewe; Mr. Finlay, Longford; Mr. Moore, Miles Platting; Mr. Tully, Hastings; Mr. Wolfe, Cork; Messrs. Ross and Co., Belfast; Dr. Chippendale, Bayswater; Messrs. Maythorn and Son, Biggleswade; Mr. Crawshaw, Ramsbottom; Messrs. Mason and Co., Chelsea; Dr. McCall, Conisborough; Mr. Hutchinson, Upper Sunbury-on-Thames; Rev. Mr. Manby, Cornwall; Messrs. Bullock and Co.; Dr. Shiels, Dunbar; Mr. Feeny, Dudley; Messrs. Fletcher and Fletcher, Holloway; Mr. Robson, Moneymore; Messrs. Keith and Co., Edinburgh; Dr. Ashurst, Derbyshire; Messrs. Thomas and Co., Bristol; Mr. Adams, Rye; Mr. Stirling, Grays; Dr. Fitzgerald, Folkestone; Mr. Lonnon, Chiswick; Dr. O'Meara; Mr. Heywood, Manchester; Mr. Forjett, Lincolnshire; Dr. McAlister; Dr. Deane, Ellesmere; Mr. Lewis, Llandovery; Mr. Tasker, Sheffield; Dr. Hale, Chesterfield; Dr. Harris, London; Mr. Buller, Martley; Mr. Morton, Wingham; Mr. Shepherd, Wragley; Dr. Lawson, London; Mr. Ely, Abergavenny; Dr. Rickards, Birmingham; Mr. Davis, Maddox-street; Dr. Lloyd, Barmouth; Mr. Aitken, Cheshire; Mr. Ellis, North Wales; Mrs. Campbell, London; Mr. Bryden, Yorks; Messrs. White and Son, London; Mr. Smith, Manchester; Messrs. Schweitzer and Co., London; Dr. Moore, Dublin; Dr. Randle, Devon; Dr. Main, Newbury; Dr. Hirst, Scarborough; Dr. Moore, London; Mr. Walker, Corwen; Mrs. Theobald, Leicester; Mr. Christian, Hammersmith; Alderson, Hammersmith; F.R.C.P., London; Smedley's Hydropathic Establishment, Derby; L. T., London; J. E., Swansea; Hollingbrook House, Littleborough; J. C. W., Manchester; Secretary, Worcester Lunatic Asylum; Cantab., London; M.D., Hanley; Secretary, North Staffs Infirmary; Yorkshire, London; Seaside, London; Winchcomb Union; Skilbeck, London; Surgeon, Devon; *Western Daily Mercury* Co., Plymouth; Medicus, Atherstone; Surgeon, Brighton; Ancoats Hospital, Manchester; J. W. P., London; Phosphates, London; High Shot House, Twickenham; M.R.C.S., London; T. O.; Express Dairy Co., Bloomsbury; Demos, London; Exchange, London; Yorkshire College, Leeds; Statim, Liverpool; R., London; M.A., London; X., St. Helens; Medicus, Burnley; Truth, London; Jaso, London; A. P., London; Statim, London; A. B., London; Nemo, London; P. P. C., London; M.R.C.S., Hastings; M.D. Edin., Fleet-street; Boaz, Manchester; Medicus, Sheffield; Tempora, London.

NEWSPAPERS.—*Bradford Observer, Sussex Daily News, Midland Evening News, Freeman's Journal, Birmingham Daily Post, Glasgow Herald, Dundee Advertiser, Le Figaro (Paris), East Anglian Times, Liverpool Daily Post, Guy's Hospital Gazette, Surrey Advertiser, Leeds Mercury, Bristol Mercury, West Middlesex Advertiser, Spectator, Yorkshire Post, Hertfordshire Mercury, Law Journal, Saturday Review, Windsor and Eton Express, Local Government Chronicle, Mining Journal, Weekly Free Press and Aberdeen Herald, Reading Mercury, Windsor and Eton Gazette, Labour World, Evening News and Post, Essex Standard, Cheltenham Examiner, Norfolk Standard, Hull Weekly News, Cornishman, Coventry Mercury, Cork Examiner, South Wales Daily News, Huddersfield Examiner, Alliance News, Scottish Leader, New Zealand Times, Millom News, Leith Burghs Pilot, Canterbury Journal, Luton Times, Accrington Gazette, Annandale Herald, Grimsby Observer, Scotsman, Devizes Gazette, Penrith Observer, Stirling Observer, Taunton Courier, Falkirk Herald, Banffshire Advertiser, Corriere D'Italia (Rio de Janeiro), &c.*, have been received.

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Clinical Lecture

ON

INFLUENZA AND ITS COMPLICATIONS.

Delivered to the Students of the Charing-cross Hospital Medical School on Tuesday, May 19th, 1891.

BY J. MITCHELL BRUCE, M.A., M.D, F.R.C.P.,

PHYSICIAN TO CHARING-CROSS HOSPITAL, AND TO THE HOSPITAL FOR CONSUMPTION, BROMPTON.

GENTLEMEN,—It is hardly necessary to offer you an apology for delivering a clinical lecture on the subject of influenza and its Complications. In the first place, as you know, influenza was until last year what may be called a disease of history, and few of us who are now engaged in treating patients had seen the disease before. It was a disease of which we had heard, and which had been described in various treatises and in the text-books, but of which we had had no personal experience. Then last year, in the months of January and February, we had a visitation of influenza, for the first time for nearly half a century. Although of brief duration, the epidemic was characterised by its severity, and by the remarkable extensiveness of its distribution, for it swept over half the population. Then almost as suddenly it disappeared. For a few months afterwards we were only reminded of what we had passed through by the number of sequelæ, which, during the whole of last summer, were constantly met with, in the shape of debility, neuralgia, pulmonary diseases, cardiac weakness and the like. A few months ago the rumour arose that the disease had made its appearance once more on the Continent of Europe, and later in the north of England. I confess that I, for one, was rather sceptical about the truth of this report, because a great many troubles which were not influenza at all had last year been catalogued as influenza. Unhappily, there can no longer be any doubt that within the last fortnight or three weeks influenza has made its appearance again amongst us, and many cases of it may be seen daily in the casualty and out-patient departments, and some of its complications in the ward where we are now assembled. You have thus an opportunity of studying a disease which is fortunately a rare visitor; I had almost called it a privilege, for it is just possible that it may now leave us, and may not be seen again for another generation. Influenza belongs to a different category from most of the diseases which we have to treat here every day, and with which you become more or less familiar, for it comes at long intervals and disappears practically between them. But there is another good cause which can be shown for the choice of the subject of to-day's clinical lecture. Though not of itself particularly dangerous, influenza is attended with very serious complications and followed by sequelæ of a peculiarly low type, and it is of the utmost importance that you should make yourselves familiar with a disease which is at once so widely spread and may lead to so many unhappy results.

Now let me proceed to tell you something about this remarkable disease, without pretension to completeness of description or anything approaching details. First, I will give a very brief general sketch of an ordinary uncomplicated case of influenza. Secondly, I will refer more particularly to a few of its most prominent symptoms, and dwell a little upon these. Thirdly, I will deal with some of the most important complications of the disease—namely, bronchitis, pneumonia, broncho-pneumonia, and certain cardiac, gastro-intestinal, and nervous troubles.

First, then, a very striking feature of influenza is that the patient is one of many sufferers: that other people in the same house and in the same neighbourhood and country are affected. The disease is epidemic in its distribution. The invasion is generally quite definite; it may be sudden and swift, coming on in the street or without previous warning otherwise. A few days ago I saw a lady with influenza whose husband received a telegram of her being urgently ill only a few hours after he had left her in her usual health. The patient's first complaint is of a sense of chilliness or "cold water down the back," with a feeling of illness and nausea, perhaps sickness. Very shortly pains make their appearance, and they rapidly increase in severity. The pains of influenza are mainly of two kinds as far as the patient's complaints go: first, headache; and second, pains about the limbs and trunk. The headache is characteristic from its severity, seat, and persistence. It is, indeed, no ordinary headache, and I cannot help thinking that it is even more severe in the present epidemic than it was last year. So violent and so persistent is it, that patients will tell you that they have not been able to sleep for two whole days and nights, in spite of all the different remedies which had been used to relieve it. It is in one or both of the frontal regions, and the eyeballs also ache (one or both), sometimes intensely. The pains in the limbs are also characterised by their severity, by their breakbone character, and in some cases by that distressing inability to keep the aching limbs at rest in bed, which we all know by experience after a day's over-exertion. By this time the patient is, or ought to be, in bed, and when we visit him we find, besides these symptoms, all the ordinary phenomena of fever. He is obviously ill, though not urgently so, and, in addition to the pains, complains of a sense of extreme poorliness or prostration. The pulse counts 92–120, and is large and soft. The temperature has risen to 102°, 103°, or even 104°. The skin is dry, but will presently become profusely moist. There is a white or whitish-brown coat on the tongue, with anorexia, thirst, considerable nausea, perhaps vomiting and looseness of the bowels or constipation, and the urine is scanty, high-coloured, perhaps retained. Various eruptions may appear on the skin—erythema, sudamina, miliaria,—which, if they happen to be associated with sore-throat, as is sometimes the case, may suggest the diagnosis of scarlet fever. Heaviness, apathy, and somnolence, associated with the sense of chilliness and prostration, are frequently observed, out of proportion to the severity of the pyrexia. The patient complains not so much of debility as of a sense of coldness; he lies on a couch in a state of helplessness and apathy, from which he cannot be roused. But I would repeat that in the present epidemic, as far as my experience goes, the pains in many instances overshadow by their severity most of the other symptoms of the uncomplicated disease.

Prominent also amongst the symptoms of influenza in many of our present cases are disturbances of the respiratory system. Cough is very common, of a very remarkable kind, being sudden, paroxysmal, violent, irrepressible, and harsh, attended with soreness in the chest, and ending in expectoration, with exhaustion. The sputa vary in quantity with the degree of involvement of the respiratory tissues. They may be absent or they may be profuse, yellow or grey, and muco-purulent when the catarrh of nose or lower passages is severe. Here let me warn you not to commit the mistake of expecting to meet with coryza in every case of influenza. Many persons will not acknowledge influenza because the nose has never run. They say there is always a cold in the head in influenza. This is an excellent instance of the growth of a popular error. When a nasal catarrh is severe it is accompanied by fever and pains in the head and limbs, and is then said to be a "feverish" or an "influenzal cold." "Influenzal cold" is easily corrupted into "influenza"; influenza itself has probably been never seen; and thus coryza has come to be put down as the essential feature or element of the epidemic disease, instead of the fever, the prostration, and the pains. I have dwelt on this point, insignificant though it may appear, in order to caution you against committing an error in diagnosis. Coryza, however, occasionally does make its appearance, especially in cases where rest and warmth have been neglected. If a man despise his attack of influenza, and walk about for two or three days, he is not only extremely likely to get a certain amount of "cold in the head," but he may be thankful if he does not have bronchitis or pneumonia set up as a consequence of his rashness. These are the most important features of an ordinary attack of influenza. The time at our disposal does not permit me even to mention many interesting varieties of the disease, which you will find fully described in special treatises.

The course pursued by uncomplicated influenza is measured by a few days. For the first two days the pains, fever, and sense of illness and prostration are severe. By the third day the worst is over: the temperature is much lower, perhaps normal, rising a little in the evening; the skin is sweating profusely; the pains are mostly subdued, and already the appetite is returning. In four or five days the patient is apyrexic. A sense of more or less debility remains for a time—possibly for weeks or months. In other instances

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the course is modified. First, variability may be the most striking feature, the patient almost suddenly feeling very ill and much better alternately. Or the duration may be greater, the temperature continuing high for a week on end, and the pains persisting or returning. Such cases are peculiarly disturbing to the practitioner, as they suggest some obscure complication, but happily they may mean nothing more serious than a relapse, or, more properly, a recrudescence of the primary disease.

And now let me dwell for a moment on one or two of the special symptoms of influenza, and on its diagnosis. The most striking features of the complaint are the violent headache and pains in the limbs, the pyrexia, the remarkable sense of prostration, the degree of debility which accompanies it, and may follow it, and the tendency to serious complications. Of the pains I have already said enough for our present purpose. I must refer, however, at more length to the feeling of prostration, which is so generally complained of, so prominent, and out of proportion to the degree of the fever. A few days ago I saw two cases in which the patients were convinced that death was imminent, the subjective "lowness" was so extreme, they said, that existence could not possibly continue, and yet in neither case was there actual danger, though both of them were sharply ill. Accompanying this symptom (which, you understand, is simply a symptom of influenza, as eruption and sore-throat are symptoms of scarlet fever) there is no doubt in many cases actual debility, objectively expressed by the state of the pulse, by a tendency to giddiness or faintness when the patient is raised for examination, or at particular hours of the night, and by extreme muscular weakness; and after the acute stage has passed and convalescence set in, there may be left for a considerable time, as I have already mentioned to you, neuralgia, faintness on movement, liability to "colds," unfitness or incapacity for work, and generally "poor health."

The *type of temperature* is somewhat difficult to describe, because its duration is so brief. Within forty-eight to seventy-two hours the temperature has risen far above the normal, and very likely returned to it. I show you here the temperature charts of some cases at present in the wards. You will observe the sharp steeple-like elevation of the first two days, the slight evening exacerbation on the third day, and the gradual fall to the normal. It is very different with protracted cases, to which I have already referred, and in the complications which we shall presently study.

The *diagnosis* of influenza is not difficult, yet it must very often be confounded with other diseases. First, at the beginning of an epidemic many cases are called by other names; and, secondly, when the epidemic is established, and the practitioner overwhelmed with work, he sees nothing else in his patients—all the cases of rheumatism, bronchitis, and incipient phthisis which he meets with are for the time called "influenza." The aches of influenza suggest rheumatism, but they are more severe than the premonitory or general pains of acute rheumatism, and too widely distributed and apart from the articulations to be confounded with that disease after the pains have "settled' in definite joints. It is well for you to know, however, that the salicyl compounds appear to relieve both; that the two diseases have this further peculiarity in common, that they attack more readily their previous victims; and that true rheumatism may follow close upon influenza, as in an instance lately under my own observation. In tropical and subtropical countries influenza has also to be diagnosed from dengue.

We now come to the most important complications of this disease. First, I will mention, as one of the most serious, *acute bronchitis*. This is a common complication of influenza in the present epidemic—more common, I believe, than in 1890. I have myself seen a good many fully developed cases of the kind within the last week. Bronchitis makes its appearance any time in the course of influenza: it may be an early symptom; it may be so late as to be called a sequela, or at any rate to be attended with a recrudescence rather than a relapse of the fever. Both its symptoms and its signs are thoroughly developed. The respirations rise to 40, or even 48; along with this there may be more or less objective dyspnœa, until in the very worst cases the patient sits up gasping for breath, and finally may perish of asphyxia. The pulse mounts to 100 or more; the temperature by no means uncommonly to 104°, at which height it may remain for days. Cough is urgent, being almost continual, spasmodic, harsh, noisy, and painful. Patients will tell you that they "never stop coughing the whole night." The sputa are of different degrees of abundance, of a glairy, tenacious consistence, greyish-white or yellowish in colour, raised with some difficulty, and sometimes in peculiar discrete lumps or pieces. The skin may be very moist, but not necessarily so for some days at first. With these symptoms of bronchitis you will observe that there coexists the characteristic prostration of influenza.

The physical signs are much as usual, including drummy percussion-resonance, rhoncoid or harsh but weak respiratory murmur, scattered sonorous and sibilant rhonchi, and abundance of râles—mucous or even subcrepitant râles—over the bases of the lungs. Occasionally bronchitis drifts into broncho-pneumonia, patches of consolidation developing over the lower lobes posteriorly, with crisp râles, bronchial breathing, and bronchophony. These cases of influenzal bronchitis are often very serious. Some of them may pass off lightly, but there can be little doubt that the mortality from influenza, of which you read almost daily in the newspapers amongst our public men, is to be put down not altogether to pneumonia, but in some instances to bronchitis. The chief danger in connexion with it is either that it drifts on to the capillary form, which I have mentioned as leading to asphyxia and death; or, on the other hand, into the broncho-pneumonia which I am about to describe.

Pneumonia, the second complication of influenza, is one which was particularly abundant in the last epidemic, and is also very prevalent in the present one. As far as my experience goes there are three fairly differentiated types or varieties of pulmonary inflammation to be found in connexion with influenza. The first type is a well-developed ordinary acute croupous pneumonia; the second is a very curious ill-developed pneumonia, popularly called "congestion," which is apparently croupous pneumonia in the stage of engorgement, where the exudation never becomes completely solid, but maintains a more or less fluid or semifluid character; and the third is that broncho-pneumonia of which I have just said something in connexion with bronchitis.

Ordinary acute croupous pneumonia comes on, first, either at the beginning or in the course of an ordinary attack of influenza. The patient may perhaps be beginning to improve—say, on the fourth day,—when his temperature rises, and other symptoms and signs make their appearance, which tell us that we are face to face with one of the very worst forms of influenza—pain in the side; short, rapid respirations, with movement of the alæ nasi, and characteristic disturbance of the pulse-respiration ratio, a painful short cough, and rusty sputa. When we examine the lungs we discover that the patient has the first signs of an ordinary attack of acute pneumonia. In other instances the patient may not have been known to have influenza at all. He sends for us on account of a pain in the side, and we find that he has got acute pneumonia; but so universal is the distribution of the two diseases just now, and so closely and quickly do cases of the one and of the other occur in the same house or neighbourhood, that we are justified in concluding that, although there were no evidences of influenza in the particular individual before the acute pneumonia, still it is essentially a case of this kind. Here, then, is a patient, such as the young woman in this bed, down with an attack of somewhat asthenic croupous pneumonia. The disease passes through the ordinary phases, which I need not describe. Of the symptoms, some perhaps are less marked: the sputa, for instance, may not be definitely red; the course of the disease is possibly less definite; and the crisis may not be so sharp, the temperature falling more slowly. In other instances you will find that the patient is passing through the acute pneumonia pretty well, losing strength of course, and becoming utterly prostrate (for you must remember that along with this complication the prostration of the influenza itself is present), when a fresh portion of the lung or the other lung is attacked; and just at the time you think all is going well, he is plunged into a further attack, and perishes of double pneumonia on the second or third day from the fresh invasion.

The second or "congestive" type of influenzal pneumonia is comparatively common, if I may judge by my experience both last year and at the present time. The patient has dyspnœa, pain in the side, cough, and expectoration; and on physical examination we find in the way of physical signs a certain amount of dulness, but not the characteristic sniffling or tubular blowing breathing

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of true croupous pneumonia. Instead of these, we find that the dull area is "silent." We hear nothing, and for a moment we think that the patient has pleurisy. If we listen more carefully we detect very feeble crepitations; and after a time in the progress of the case these become more distinct, until they pass into the larger or "mucous" râles, very much as in the stage of resolution of ordinary broncho-pneumonia. Therewith, the clinical picture of acute pneumonia is less perfectly developed as regards respiration, cough, expectoration, local pain, herpes, pulse, temperature, and dryness of the skin. Last year a very striking feature in the epidemic was the frequency of delirium in the course of this type of pneumonia, out of proportion to the other symptoms, and yet by no means of evil significance prognostically.

The third type of pulmonary inflammation complicating influenza is *broncho-pneumonia*. The patient is the subject of acute bronchitis, and his case may or may not be causing you some anxiety, when one day you find that the temperature has risen, and discover dulness at the base of the chest; that the râles have become more crisp; and that you get blowing breathing and other signs which suggest to you that on the acute bronchitis there has supervened some local collapse which is drifting into broncho-pneumonia. This is a point which you should clearly impress upon your minds. Broncho-pneumonia is an exceedingly rare disease in the adult; so rare that some of our best authorities decline to allow that the disease is ever seen post mortem except in children. At the present time, in connexion with influenza, there is no question whatsoever of its existence.

In four cases of the kind which I have lately seen, whilst the general features of the illness were those of acute bronchitis supervening on influenza, and the physical signs have been such as I have just mentioned, the pulse-respiration ratios have been

$$\frac{88}{32}\left(\frac{2\cdot75}{1}\right),\ \frac{150}{54}\left(\frac{2\cdot7}{1}\right),\ \frac{128}{48}\left(\frac{2\cdot6}{1}\right),\ \text{and}\ \frac{112}{49}\left(\frac{2\cdot3}{1}\right)$$

respectively—manifestly a pneumonic ratio. Therewith the temperature rose to 104°, after having declined somewhat, or after being moderate in degree, along with simple bronchitic symptoms. Both the clinical and post-mortem records which have been left of previous epidemics are in accordance with these observations.

Between these three varieties of influenzal pneumonia it is sometimes difficult or impossible to draw a line. Even the well-developed variety may present mainly large moist sounds, as if the exudation never became truly solid; and, on the other hand, if the "congestive" variety be double, with a good deal of scattered crepitus elsewhere in the lungs, suggestive of pulmonary catarrh, as is frequently the case, it may be impossible to diagnose it from a broncho-pneumonia.

Amongst the subjects of acute bronchitis and pneumonia in influenza a certain number have already been suffering from chronic lung disease—from phthisis or chronic bronchitis. There are many very interesting and curious points about these cases, but they are perhaps too special for the present occasion. Some of these patients present severe symptoms, and rapid extension of the old lesions may be especially threatening; but it is wonderful how safely they may pass through the attack, particularly when promptly and carefully treated—as, for instance, in the Brompton Hospital, where influenza was rife last year and is to be found at present, without the patients suffering much.

Although *pleurisy* is not generally recognised as a complication or sequela of influenza, I must not omit to tell you that I was greatly struck by the number of cases of empyema which presented themselves for treatment last summer—some of them peculiarly severe, foul, and quickly perforating inwardly.

I have but a few minutes left to speak of the *cardiac* complications. In the first place, in influenza itself and its associated complications we note that tendency to faintness and prostration which is—partly at least—cardiac. This may occur at the very invasion, or at any period in the course of or after the illness. If the patient sits up he becomes giddy and faint, and feels that he must lie down at once. Other cases perish from asthenia simply, apparently from failure of the heart; or it is only by careful attention on the part of the nurse that they are rescued from death. The second cardiac complication is one which I have not found referred to in the course of my reading, and which I mention therefore with some reserve. As a matter of fact I have seen three cases of acute pericarditis within the last fortnight in association with acute pneumonia, and I may add that two of the three proved fatal. Now, this acute pneumonia may or may not have been influenzal, but the cases occurred in the midst of those of influenza, and certainly they were neither rheumatic nor renal in association, so that the pericarditis is very difficult to account for unless it were pericarditis of the same origin as the acute pneumonia—that is to say, that it was influenzal pericarditis. Let me repeat, however, that you must take this observation merely for what it is worth. Then, in a more chronic form, after the trouble has passed off, by way of sequelæ we get other cardiac symptoms: a tendency to faintness, and serious anginal attacks, recurring in some patients for weeks or months, perhaps of the nature of neuralgia, which is one of the sequelæ of influenza. Again, many (happily not all) of the subjects of chronic cardiac disease will tell you that "from the time of their influenza" they began to suffer afresh from the symptoms of their disease—i.e., of cardiac failure.

I will next refer very briefly to *gastro-intestinal troubles*. I have told you that the patient occasionally suffers from retching or vomiting and diarrhœa in the course of influenza. I may add that at the present time as well as influenza there is found a curious little epidemic of diarrhœa, and that in the same house or in the same institution along with cases of influenza we may have sometimes to treat a series of cases of diarrhœa which we cannot explain otherwise than by attributing them to influenza. This is another complication which has been recorded by writers on previous outbreaks.

The *nervous complications* of influenza involve either the sensory or the motor side of the nervous system. Patients will tell you that since their attack they have suffered from neuralgias in the head or other region. Or certain parts of the body have become more or less weak—for instance, the hand or arm—apparently from neuritis arising in connexion with influenza.

With regard to the *treatment* of influenza, what are we going to do? The first indication manifestly is, as far as uncomplicated cases are concerned, to *combat a specific poison*. It is an epidemic infectious disease, and all our present pathological knowledge points to its being due to some poison of a specific kind. Fortunately, nowadays we possess many powerful drugs which have considerable influence over specific poisons, and we ought to lose no time in exhibiting some such remedy as quinine or cinchona, or one of the newer antipyretics. The second indication is a *symptomatic* one. The patient is urgently ill—in great pain, with high fever, and he calls to you for relief. You must give something which will remove pain as speedily as possible. This can sometimes be done by your quinine or antipyrin. But perhaps of all the plans at present being tried, the one that seems to be the most successful is to begin for a few hours, at any rate, with moderate doses—and you need not use more than moderate doses of from 10 to 15 grains every few hours—of salicylate of sodium. This relieves pain in some cases, especially in the present epidemic; but it should be left off as soon as the pain is relieved. In these cases it is used mainly as an anodyne. As for the febrile symptoms, these will have been relieved by the salicylate of sodium, accompanied by rest, proper feeding, and nursing generally. The next indication which we have to appreciate may be called the *prophylactic*—to prevent complications. We know that bronchitis or pneumonia may make their appearance, and we must do all that is in our power to prevent them. We also know that the trouble is associated with increasing debility, that relapse or recrudescence may occur, and that various sequelæ and slow convalescence are only too common. All these evils must be anticipated, and they serve as definite indications to you to support the patient's strength by every means at your command. This consideration brings us to the most important part of the treatment—that is, the necessity, the moment the symptoms of influenza make their appearance, that the patient should take to his bed and be treated there. The great danger of influenza is that the patients will not lie up sufficiently early; that if the attack is not swift and severe, they hang about and even go to business; that they neglect to make provision against those very urgent complications and this intense debility which will presently seize them. You must there-

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fore prescribe for these patients rest and warmth in bed and faithful nursing, and you must support their strength by abundance of good food, by the administration of powerful tonic and stimulating remedies, such as cinchona, quinine, ammonia, and alcohol, and by the avoidance of depressing drugs, such as antimony, aconite, and ipecacuanha.

To sum up the treatment. Send the patients to bed, provide a good nurse, warmth, and rest, and feed them freely. See that the diet is fluid and of a highly nutritious and stimulating kind, including a definite allowance of wine or brandy. For the first few hours order ten or fifteen grain doses of the salicylate of sodium; and as soon as the pain is gone, drop that and put the patient upon free doses of quinine or cinchona. With these you may have to combine in different instances a whole series of other drugs. You may have to give in the case of bronchitis such powerful remedies as carbonate of ammonium or liquor ammoniæ acetatis; in cardiac complications digitalis and strychnine. In cases of pneumonia by combining these you will employ remedies directed both to the lungs and to the heart, and that along with quinine directed to the specific and original cause of the illness. This is a great deal of drugging, feeding, and stimulating, but the condition is one that calls for prompt treatment. There must be no waiting to see what you are to do next day, for by that time the patient may have drifted deeply into some of those very grave complications which I have just described, and may be beyond the reach of treatment.

CASE OF ACUTE, RAPIDLY FATAL, GENERAL PERITONITIS IN A CHILD, ASSOCIATED WITH VULVO-VAGINAL CATARRH.[1]

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GYNÆCOLOGICAL SPECIALISTS are well aware of the serious and even fatal abdominal complications which often arise from apparently trivial or neglected affections of the female generative organs. My experience as a pathologist has often convinced me of the serious dangers that may follow neglect of such affections, and therefore I thought it might be of interest to the Society to bring forward the following case, which occurred in the practice of my friend, Dr. James Headrick of Dennistoun, and which I saw in consultation with him.

The patient was a child, Mary M——, aged four years. Her father and mother had always been healthy, and the child, before the occurrence of her fatal illness, had never been under Dr. Headrick's care, although the other children of the family had for trifling ailments. On the morning of May 12th, 1890, the child took her breakfast as usual, her bowels having been opened before this meal, and apparently she was as well as ever. At 10 A.M., about two hours after breakfast, she went to her mother complaining of a "sore belly"; and her mother, thinking perhaps that the bowels required to be moved, took her to the watercloset, but nothing was passed except a little urine. During the forenoon the child was taken a walk of half a mile to her grandmother's house, where the abdominal pain became so severe that two drops of laudanum were administered. The patient had to be carried all the way home, after which a dose of salts was administered by her mother. During the afternoon the pain became worse, and Dr. Headrick was sent for between 5 and 6 P.M. He found the child pale and somewhat collapsed-looking; there was tenderness on the right side of the abdomen; the temperature was 104°; the pulse was small, and almost uncountable; there was no cough; and the urine appeared natural. Dr. Headrick at once applied fomentations, and ordered a cooling mixture containing one-drop doses of tincture of digitalis, on account of the state of the pulse. On the morning of the 13th the child was no better, and during the afternoon she became exceedingly restless and delirious. Dr. Headrick telegraphed for me in the evening, and I saw the patient about 8 o'clock. She was then very collapsed; the lips were dry, and she was continually trying to moisten them; there was great restlessness and occasional retching. The pulse numbered 120; the tongue was coated; and the face was extremely pale. The abdomen was uniformly distended, and the percussion was tympanitic all over. Considerable expression of pain was elicited on pressure beneath the umbilicus and over the right side of the abdomen. During my examination a profuse, sour-smelling, pale stool mixed with mucus was evacuated, and at this time I noticed a distinct leucorrhœal discharge from the vulva. On questioning the mother as to the vulvo-vaginal discharge, she told us that it had been present for some time, but as the child had made no complaint she had paid little attention to it. As to diagnosis, we agreed that the child was suffering from acute generalised peritonitis, and I could not help thinking also that the vulvo-vaginal catarrh was in all probability the cause of the serious peritoneal condition. I thought this the more likely in the absence of any history pointing to previous intestinal or peritoneal trouble, and the copious motion of the bowels which took place at my visit negatived the idea of organic obstruction. Had it not been for the leucorrhœa, the only conclusion to which one could have come would have been that the peritonitis was due to a sudden rupture of the intestine, probably of the appendix. The prognosis was necessarily most serious, and for treatment we recommended the continuance of the fomentations, four drops of laudanum every four hours, and half a teaspoonful of brandy every hour. The next day (the 14th) I received a note from Dr. Headrick, informing me that the child had died about 10 o'clock in the forenoon of that day. She gradually became exhausted, and towards the end livid. Convulsive attacks supervened shortly before death, and the abdomen became more distended. Unfortunately no post-mortem examination could be obtained.

Looking back upon this case after the lapse of nearly twelve months, I am not inclined to alter the opinion as to the cause of the peritonitis which I formed at the time, especially as I find that opinion corroborated by the experience of other physicians. Dr. Francis Huber of New York has reported a case of acute peritonitis following vulvo-vaginal catarrh in a girl seven years old, simulating a perforation of the appendix.[2] In this case, which was not so rapidly fatal, laparotomy was performed, and at the necropsy the fimbriated extremity of the right Fallopian tube was found "inflamed and thickened, and evidently had formed the channel by means of which the infecting process had gained entrance to the peritoneal cavity, and thus gave rise to a train of symptoms simulating closely a perforation of the appendix." Dr. Huber, in his paper gives references to other cases, and the lesson which they, as well as the case now recorded, teach, is that we should always have in view the possibility of this very serious complication in dealing with the vulvo-vaginal catarrh of childhood.

Glasgow.

[1] A paper read before the Glasgow Southern Medical Society, March 2nd, 1891.

KOCH'S TREATMENT AT THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

BY J. G. SINCLAIR COGHILL, M.D., F.R.C.P. EDIN.,
SENIOR PHYSICIAN TO THE HOSPITAL.

(*Concluded from page 1145.*)

CASE 9.—Percy S——, clerk, aged nineteen, strumous diathesis, fair, tumid lips. Height 5 ft. 6½ in.; weight 9 st. 4 lb. 10 oz. Admitted Nov. 5th, 1890. Has had scarlet fever and whooping-cough, and has always been very susceptible to cold. In August, 1890, he contracted a heavy cold with severe cough, which has persisted, with night sweats and loss of weight. He has had dull aching pains occasionally at both pulmonary apices, especially the right. Voice often husky after taking cold. This patient improved for the first fortnight after admission, but then began to go back, developing dyspeptic symptoms and losing weight, with increase of cough and return of night sweats.

Condition before inoculation: Pulse 86, good; first cardiac sound reduplicated in mitral area, and the second sound accentuated. Urine, sp. gr. 1028, giving haze of albumen with

[2] Transactions of the American Pediatric Society, vol. i., 1890.

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picric acid. Dyspnœa on exertion. Physical signs in right lung: anteriorly flattening under clavicle; deficient expansion, with slightly increased vocal fremitus. Percussion note impaired to third rib, with prolonged respiration and increased vocal resonance; posteriorly same conditions to spine of scapula. Left lung: anteriorly and posteriorly increased vocal resonance at extreme apex, but respiration normal. Inspiration saccaded in axillary region and towards base. Expectoration (purulent), from two to three drachms a day, contains few sparsely scattered bacilli.

Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M., when the temperature was 98·8°, on Dec. 27th. The temperature fell steadily until midnight, when it reached 97°, becoming normal next day at 3 P.M. The expectoration assumed a catarrhal character. The sphygmograph showed short systolic and long diastolic elements, the latter considerably longer than shown before inoculating. There was only local sweating confined to hands and feet. The urine fell to 28 oz.; its sp. gr. was 1020, markedly alkaline in reaction, effervescing on the addition of acetic acid; there was a slight flocculent deposit, with haze of albumen. The second injection of 0·0015 grm. was given on the 29th. The temperature rose to 99·6 at 3 P.M. The pulse fell from 80 at 9 A.M. to 65 at noon, rising to 76 only at 3 A.M. of the 30th. The sphygmograph again showed at first lengthening of diastolic element, but, as temperature rose, altered in character, the curve being higher and the descent more abrupt. There was a distinct enfeeblement of the first cardiac sound after the reaction in this and to a greater or less extent in all the other cases. This patient, from Dec. 27th, 1890, to March 31st, 1891, had in all twenty-one inoculations, increasing from 0·001 grm. to 0·1 grm., equal to 0·5595 grm. of tuberculin. The highest reaction was on Jan. 2nd; temperature 104° at 9 P.M. from 0·003 grm. of tuberculin. On ten occasions the maximum temperature was reached at 9 P.M.; on eight at 6 P.M. Headaches and pains in joints and stomach were prominent symptoms in this case after the earlier inoculations, but did not at any time prevent sleep.

Condition on leaving, April 5th, 1891: Height increased ¾ of an inch; weight increased 6 lb. 12 oz. on the lowest recorded. No pain or cough now; only spits once or twice in twenty-four hours. There is no sweating. Appetite very good; tongue clean; bowels regular; and sleeps well. Pulse 90, strong and full. Slight reduplication of first sound in mitral and pulmonary areas. Respiration 18; the movement over the whole chest is good, but slightly deficient at right apex. The percussion note over both lungs is resonant, and slightly higher in pitch below right clavicle, where also vocal resonance is increased. Expiratory murmur not prolonged. The patient states he feels in much better health than before the inoculations commenced.

CASE 10.—James G——, clerk, aged forty-five, tubercular diathesis. Marked clubbing of nails. Height 5 ft. 5¼ in.; weight 8 st. 4 lb. Father died of some pulmonary complaint. Three years ago, he says, he had a severe attack of "bronchitis," and has never quite recovered from it. A severe persistent cough began two years ago. There are two ounces daily of thick, greenish-yellow nummulated sputum containing abundant bacilli. There has been no hæmoptysis. The night temperature reaches 101°, and in the morning is subnormal. There have been night sweats for the last twelvemonth, with loss of appetite and emaciation.

Condition before inoculations: Urine, sp. gr. 1022, acid; slight mucous deposit, and haze of albumen. Pulse 102; soft and compressible. First cardiac sound in mitral area, and second sound in pulmonary area reduplicated. Respiration 25 per minute. Physical signs in lungs: Flattening at both apices, more so on left side, where movement is also more restricted. On the right side in front the note is impaired to the third rib, with expiration prolonged and vocal resonance increased, and distant amphoric breathing under clavicle. Behind, the note is impaired at apex, expiration lengthened, and increased vocal resonance to spine of scapula; an occasional click is heard at angle of scapula. Left lung: in front absolute dulness to third rib, impaired to fifth rib. Loud superficial cavernous breathing, with pectoriloquy, to lower margin of third rib, with crepitations over the whole of the lung. Posteriorly absolute dulness at apex and in supra-spinous fossa, and in the latter amphoric breathing, but no crepitations.

Patient was inoculated with 0·001 grm. of tuberculin at 10 A.M. on Dec. 27th, 1890. The reaction was very typical, and reached its height at 9 P.M.; temperature 102·5°. The pulse, as was noticed very often in this and the other cases, fell after the injection, but began to rise shortly after, and at 9 P.M. was 116. The breathing was unaffected, but the cough was severe, and the expectoration very frothy, and increased to three ounces in the twenty-four hours. There was great abdominal pain during the night, and this was a marked feature in his subsequent reactions. The urine, sp. gr. 1020, alkaline reaction, and flocculent; phosphatic deposit. Fine crepitations were heard over the left lung posteriorly. On the 29th these had disappeared, and he states that he "has coughed up less the last twenty-four hours than for the last two or three months." Bacilli were found thickly clustered in the sputum. By Jan. 5th he had lost 4 lb. 4 oz., and this loss of weight during the earlier inoculations occurred in seven of the ten patients under treatment. From this I infer that the earlier inoculations were excessive in amount, and involved much confinement to rooms and restriction of exercise. This loss was recovered by Jan. 19th, and increase of weight went on continuously. The fifth inoculation of 0·003 grm. on Jan. 8th was followed by crepitations on coughing over the whole right lung in front and at the apex behind; and in the left lung anteriorly there were crepitations on coughing at the base, and friction round the lower limit of the vomica; at the apex behind there were also coughing crepitations. The development from time to time after inoculation of peculiarly superficial, small, dry crepitations, especially over the bases of the lungs posteriorly, has been noted in nearly all the cases. They conveyed to the ear the impression of some pleuritic origin, as if the pleura itself was hyperæmic, or the pulmonary tissue immediately under it was affected in some way. The association often noted, after the earlier inoculations especially, of pains in the joints, abdomen, and head would point to some concurrent cause, possibly a hyperæmia, affecting in this particular manner the serous membranes of these parts, but not, however, due to the presence of any tubercular elements. Their disappearance was usually as sudden as their onset, and as complete. I arranged, in order to mitigate the distressing symptoms usually associated with the reaction, especially the gastric disturbance, that after injection the patient should remain in bed until reaction had subsided, and that all solid food should be avoided, the diet being a full allowance of milk, beef-tea, eggs, &c. This rule, as regards diet, was experimentally departed from on January 17th, and the patients allowed to dine off chicken and vegetables, with the result, in each of the nine cases inoculated that day, of causing the only really distressing reaction crisis observed, with an excess of temperature of from 1° to 3° over the temperatures of the preceding and subsequent inoculations, and followed by extreme weakness and depression. To April 14th this patient had twenty-two inoculations, the highest 0·065 grm., equal in all to 0·4625 grm. of tuberculin. This patient is still under treatment, receiving one inoculation per week. They have never exceeded 0·06 grm., as the temperatures during reactions have been sufficient with comparatively small amounts, the highest reached on Jan. 8th being 104·6° after 0·002 grm. In this case I was first impressed with what seems to amount almost to a law, that, in proportion to the extent and activity of the tubercular lesions, the greater and more prolonged was the reaction to the same doses of the lymph; hence the more advanced the condition the greater the necessity of smaller doses and longer intervals in its administration.

Condition on leaving, April 16th, 1891: Weight 9 st. 3 lb., being a gain of 13 lb. since Dec 25th, and a gain of 17 lb 4 oz. since Jan. 5th. The patient has improved remarkably in condition and appearance. He expresses himself as "feeling wonderfully better." He has no night sweats. The cough is easier, but the expectoration varies greatly; it is less in quantity, not so purulent and nummular; bacilli, however, are still abundant. The appetite and digestion are excellent, and the functions regular. Physical signs: First sound of heart reduplicated in mitral, and both sounds reduplicated in aortic and pulmonary areas. The pulse is stronger and fuller. The lungs: Flattening marked and movement deficient under both clavicles, more so at left apex. Right lung, anteriorly, note dull to nipple, with increased vocal fremitus, amphoric breathing under clavicle, with a few scattered crepitations. Posteriorly dulness to inferior angle of scapula and a very few crepitations. Left lung, anteriorly, note to nipple more impaired than on right side; loud superficial amphoric breathing,

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with crepitations only on coughing. There are a few crepitations at the extreme base. Posteriorly there is dulness to spine of scapula. Obscure amphoric breathing audible in supra-spinous fossa, towards base a few scattered crepitations.

The treatment of these ten cases extended over a period of from thirteen to sixteen weeks. One hundred and ninety-seven inoculations were made, and in no instance was there any local inflammation excited at the site of puncture. Four grammes and fifty-three milligrammes of tuberculin were in all used. Five of these patients were in the early stages of phthisis, five in the advanced stage with cavitation—in one of the latter the excavation was much more extensive and of longer standing than in the other four. All of them made a notable increase of weight from the lowest point recorded during treatment. The total amounted to 102 lb. 15 oz., or an average of 10 lb. 4 oz. The highest weight gained was 21 lb. in one of the advanced female cases. With respect to the improvement in both the subjective and objective symptoms, which was most marked, I cannot more correctly express my opinion in general terms than by quoting the very words used by my friend, Professor Ewald, in describing his group of successful cases treated at the Augusta Hospital: "I have never seen so remarkable an improvement in the same time from any other treatment." I mainly attribute this result (1) to extreme care in selecting cases, not necessarily on account of their being merely in the early stage of the disease, but because they have sufficient strength to bear the exactions of a very potent and trying remedy, and (2) by rigidly following the advice of Professor Koch as to careful "individualisation"—that is, treating each case by itself as it were; for every patient reacts to tuberculin differently, both with respect to dose and phenomena. The success, therefore, largely depends on a sustained and continuous study of details, of which only those who have attempted it can fully realise the difficulty. I, of course, cannot yet venture to speak of cure in the strict sense of the term in connexion with this treatment. During the last twenty years, among the large number of phthisical patients that have been treated in the Royal National Hospital at Ventnor, although a very considerable proportion have been restored to a condition of health, which has enabled them to resume their avocations, yet during all these years not a single case has been returned in the annual reports as "cured." The term "cure" can only be employed relatively in connexion with pulmonary tuberculosis. In this disease, even under the most favourable circumstances, cure must always be a process extending over a more or less considerable period of time, according to the extent of the disease, the amount of lung tissues destroyed, and the various determining conditions on the part of the individual. The aim of all treatment hitherto has been to raise the whole vitality of the system, so that the local affection may be included in the general improvement. Koch from the beginning distinctly announced that the inoculations *per se* could not cure tuberculosis in the sense of covering the entire treatment of the disease, but only to destroy at its seat its essential pathological element, the other conditions being treated on the general principles hitherto recognised. It is impossible to over-estimate the importance of this statement. Tuberculin is initially destructive in its effect, and therefore merely paves the way for those recuperative changes which act by restoring the degraded tissues to that degree of vitality which enables them to resist the infective agency—the tubercle bacillus, which has been concerned in the development of the specific local affection. Tuberculosis must be regarded as an essentially parasitic disease. I have elsewhere[1] given my opinions on this subject, and endeavoured to show that only on this theory of its nature can a rational treatment of the disease be founded. In view of my own very favourable experience of Koch's treatment in the ten hospital cases reported, and also in twelve private cases all unbroken by a single suggestion of anxiety, I confess myself quite unable to understand the failure and even disasters that have attended this method in other hands. The experiences reported from Paris and some other capitals are to me simply inexplicable. It would hardly meet the question to suggest that in some instances the lymph may have undergone decomposition into some toxic elements. I have myself observed that the activity of tuberculin varies sometimes in different bottles, and in one bottle the first dilution (into decigrammes) reduced, even with sterilised half per cent. solution of phenol, invariably decomposed within a few hours. Space does not permit of my doing more than refer to the theories advanced as to the *modus operandi* of the remedy. I am inclined to think that the destruction of the tuberculous tissue, as stated by Koch, is accomplished by the increased energy of the phagocytes excited by the stimulation of the tuberculin introduced into the circulation. The almost invariable, and in most instances remarkable, impetus given to nutrition, as shown by increased appetite and consequent gain in weight, by the inoculations, in many cases where previously complete anorexia existed, would seem to bear out this view. In conclusion, let me say that I firmly believe that Koch's discovery will soon emerge from the temporary disfavour into which, from a singularly unfortunate train of circumstances, it has fallen; that it has therapeutic properties as valuable as they are unique; and that it only requires to be employed with due caution under certain easily ascertained conditions to receive the recognition it deserves as as invaluable and essential part of the treatment of pulmonary tuberculosis.

Ventnor, Isle of Wight.

[1] Proceedings of the Ninth International Medical Congress, Washington, vol. iv., p. 26.

A NEW METHOD OF PERFORMING CIRCULAR ENTERORRHAPHY.

BY F. T. PAUL, F.R.C.S.,

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A YEAR and a half ago I applied for, and obtained permission to try upon dogs some experiments as to the best plan of uniting a divided intestine end to end. The idea in my mind was to extend the principles involved in Professor Senn's operation of lateral apposition with decalcified bone plates to a direct and continuous union of the severed bowel. That end to end is preferable to lateral union, if it can be obtained with equal safety, stands to common sense, and that Senn shares this opinion is sufficiently indicated by his offering an alternative operation of this nature, though decidedly more fatal in its immediate results. The method that I desire to bring under notice is, I believe, much less dangerous than either, for it has not by itself been fatal in any dog operated upon up to the present. The operation is not suggested to replace the bone-plate method when, as in pyloric obstruction, lateral apposition is necessary, or in matting of the intestines with obstruction, when it is certainly advisable, but rather to replace previous methods of end-to-end union by invagination of the proximal into the distal portion of bowel. There can be no question that the bone-plate operation has proved a very marked success. It was evidently planned to meet the well-recognised causes of failure in stomach and bowel operations. The chief of these I take to have been (1) the time occupied, (2) the difficulty in securing safety from leakage, and (3) the laxity and mobility of the parts. Now, Senn's method shortens the time by about one-half, ensures such a perfect coaptation between the two portions of bowel as to defy leakage, and during the continuance of the bone plates the parts are kept supported and at rest as by a splint. Decalcified bone answers the purposes required of it in these respects remarkably well: firm, elastic, and yet too soft to damage the bowel; maintaining its rigidity during the first day or two, then gradually dissolving and melting away. In my experiments I resolved that decalcified bone should be the supporting material, and have had every reason to be satisfied with it. I had a number of bone tubes made about one inch long and suitable for the calibre of dog's intestine. These were prepared in accordance with Senn's directions. Altogether eleven experiments were made, of which the operation to be described was performed in eight consecutive cases. Four were allowed to live for long periods, and four were killed at early dates, but none were injuriously affected by the operation. Three dogs were operated upon with the object of elucidating points indirectly connected with the main subject. They all died in about thirty-six hours. In one the operation involved a partial resection of the coats of the intestine, which was followed by rapid sloughing and perforation. In another the mesentery was cut away from the colon for abou

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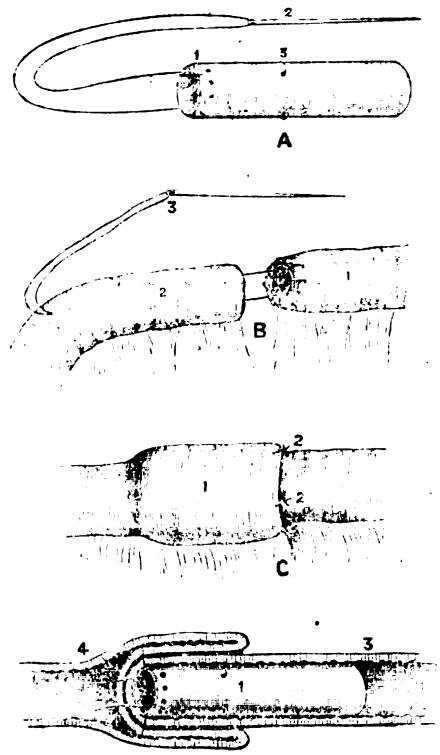
three inches, and an enterorrhaphy done at the spot. The bowel became gangrenous, though all reasonable care had been taken to save the vessels as much as possible. This operation was performed in view of the obstruction offered by the human meso-colon to invagination of any part of the colon. In the third of these experiments the ileum was cut away from the cæcum and connected with the rectum, the isolated colon being closed by invagination at each end. Fæcal matter contained in the colon was driven by peristaltic action to the lower end, where it formed a round ball, which, bursting open the Lembert sutures, liberated the invagination. The sutures in the mucous membrane held, but permitted the exudation of a little fluid from the intestine into the peritoneal cavity. This must have been rapidly fatal, for the dog was left well on the second night, and had been dead some hours when seen the next morning. The attachment of the ileum to the rectum was going on quite satisfactorily.

I learnt from these three cases three facts of importance in operating on the human subject. First, that it would not be advisable to attempt any operation involving interference with the individual coats of the intestine; second, that whilst the mesentery might no doubt be safely separated to a slight extent from the bowel if nothing further were done, yet in conjunction with enterorrhaphy it would probably be fatal; and third, that if, under any unusual circumstances, it became necessary to isolate a portion of bowel, the lower end should be left open and attached to the wound.

I turn now to the eight experiments in which the operation I wish to recommend was performed. The first patient was a black-and-tan terrier. Under chloroform the abdomen was opened, and a piece of small intestine brought out. This was divided, and the bleeding arrested. Next a decalcified bone tube, charged with chromic gut sutures in the middle of its length, was inserted, one half into each end. The sutures were armed with sewing needles, by means of which the two ends of the bowel were at the same time sewn together and to the tube. The next thing to be done was to invaginate the bowel for about half an inch, which, though remarkably easy in the dead subject, proved quite the reverse in the living. However, with some roughness and much patience, it was accomplished in the end, the parts being retained in position by three Lembert sutures. The bowel was then cleansed and returned, and the abdominal wound closed with chromic gut sutures. Considering the rough handling of the bowel I fully expected some sloughing, and was agreeably surprised to find how well the dog appeared to be the next day. The diet was very carefully restricted, only water and gradually increasing quantities of beef-tea being given during the first three days. On the fourth bread-and-milk was added, and all seemed to be going on remarkably well, when straining at stool caused the abdominal sutures to give way, and a piece of bowel escaped. Chloroform was administered, and though no great harm had been done, and the invaginated bowel appeared to be in perfect condition, it was judged right under the circumstances to kill the animal at once. At the necropsy the union at first sight appeared perfect, but closer inspection showed that the invagination had been incomplete on the mesenteric side of the bowel, and but for the attachment of the omentum here there might have been some leakage. Also, it was seen that the distal end had been invaginated into the proximal instead of the reverse, a condition which would, I believe, by other methods have been almost necessarily fatal.

It was quite to be expected that in the first case, especially in the hands of a surgeon unaccustomed to operating upon small animals, things would not go perfectly smoothly. I could see three points required attention. First, the abdominal wound must be better sutured, and the subsequent substitution of silkworm for chromic gut removed that source of danger. Secondly, the bowel must be more carefully invaginated, special attention being paid to the mesenteric border; this too was satisfactorily accomplished in future cases. And thirdly, the actual process of invagination must be made more certain and easy, or the operation on the present lines would be extremely likely to break down from simple inability to accomplish the fundamental step. Believing that experience would suggest some better method if the difficulty on further trial proved as serious, I shortly repeated the operation on a black, rough-haired puppy. Invagination was again only accomplished with the same force and patient persistence. It seemed that the more we tried to push the proximal end of the bowel with the tube into the distal end, the more the latter contracted and resisted. Once, however, start the invagination, and it could be increased to any extent. Though the operation had been very severe, the puppy rallied well, and was soon quite lively. The same night only water was given him, the next day one ounce of beef-tea; second day, two ounces of milk; third, four ounces of milk, and one of beef-tea; bread-and-milk on the sixth; meat on the eighth. On the eleventh turned out of the laboratory, and put in charge of the porter. In about a month's time the puppy had grown double its previous size, and was fat and well, as it had been all along. It was therefore killed, and a necropsy made. Externally the slight scar round the bowel was easily detected, especially as there was a little dilatation of the part just above it. Internally, the calibre of the bowel appeared to be lessened by about one-half, owing to a ring or diaphragm of soft mucous membrane at the site of the invagination. In subsequent cases it was observed that this diaphragm tended to disappear, and considering the nature of the operation it could hardly be expected that the redundance of tissue constituting the invagination could atrophy in four weeks.

In the meantime I had been at work seeking for a more certain method of accomplishing the operation, and at last, by a very simple addition, succeeded. This consisted in supplying the bone tube with a traction thread to be passed through the wall of the distal segment of bowel, for an assistant to pull on whilst the operator manipulates the invagination. I had found the chromic gut sutures attached to the middle of the tube and their six needles very inconvenient, owing to their tendency to get entangled (at a critical moment, and therefore discarded them, the tube now assuming the character shown in the engraving (A). The



A. The decalcified bone tube: (1) the lower or distal end, perforated for sewing to the bowel; (2) the traction thread armed with long sewing needle; (3) its attachment to the tube. B. A stage in the operation: (1) the proximal end of the bowel, with the tube sewn in; (2) the distal end, not yet sewn to the proximal end, but with the traction thread (3) passed. C. The operation completed: (1) the sheath or intussuscipiens of the invagination; (2) the Lembert sutures, for retaining the parts in position. D. The parts dissected: (1) the tube *in situ*; (2) the traction threads cut short; (3) the proximal end of bowel entering the intussusception; (4) the distal end, supplying the returning and ensheathing layers.

tube itself for small dogs should be about 1 in. long by $\frac{3}{8}$ in. outside diameter and $\frac{1}{16}$ in. thick. The lower end (1) is perforated for easily sewing the proximal end of the bowel

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to it, and the traction thread with its needle (2) is fixed well back on the tube (3) to make certain that it cannot break away. For the human bowel I have had made tubes[1] 1½ in. long, with diameters varying from ½ in. to ⅝ in. and ⅛ in. in thickness.

The operation is now performed in the following manner: The bowel being ready to receive the tube, its full length is introduced into the proximal end, the cut margin of which is sewn to the tube through the perforations with a fine continuous, chromic gut suture (B). For this purpose a sewing needle is used, which, in passing, is made to dip more deeply into the mucous than the peritoneal coat. It is not sufficient to take the muscular and mucous coats only, as the attachment to the tube is then not sufficiently secure. When sewing the mesenteric border of the bowel to the tube, care should be taken to pick up the severed edges of the mesentery with the point of the needle, as this is the part most likely to give way, and the mesentery should not be allowed to drag in the least degree from the cut edge of the bowel. Next the needle of the traction thread is slipped along a a director about 3 in. down the distal segment of the bowel and pushed through its wall. Then the distal is sewn to the proximal end by a chromic gut suture all round, the needle piercing the musculo-serous coats only, great care again being taken to fix the mesenteric edge securely. With the same thread the opening in the mesentery can be drawn together. Now an assistant takes the traction threads, and steadily resists the operator as he draws the distal end of the bowel back over the tube, thus invaginating the proximal end, and producing the appearance seen in the engraving (C). The parts are retained in position by a few Lembert sutures, one on either side of the mesentery, and others as they appear necessary. Lastly, the traction thread is pulled tight and cut off short, the small opening caused by it requiring no further attention, and the operation is completed by cleansing the intestine and closing the abdomen in the usual way. The special part of the operation may be said to involve three stages: First, to introduce the bone tube into the upper or proximal end of the bowel, and sew it there; second, to pass the traction thread, and attach the distal and proximal ends together; third, to produce the invagination, retain it in position by a few Lembert sutures, and cut off the traction thread. With no unusual difficulty each stage ought only to occupy a few minutes. I operated in this way upon six more dogs, and they all did remarkably well. Three I killed at short intervals after the operation, to examine the condition of the bone tubes and the stages of repair. They were in excellent health at the time, it having been arranged beforehand how long each dog was to live after the operation. This was carried out in all but one, which should have been killed on the third instead of the fourth day. These dogs were allowed more food than the first two, bread-and-milk being given the day after operation, and nearly all passed a motion daily, showing that the tube offered little or no obstruction to the passage of food. They were not tied up, but left loose in the laboratory, jumping and playing about appearing to do them no harm. Indeed, there was nothing in their manner to indicate that they had been submitted to an operation. Those killed were destroyed at the end of twelve hours, two days, and four days respectively. At the end of twelve hours I found the parts much as I left them, except that the irregularities were smoothed over with lymph and the peritoneal surfaces of the invagination were adherent. The bone tube had practically undergone no change. From the dogs that died in the experiments previously referred to I learnt that the tube was present at thirty-six hours, but much softened. At forty-eight hours it is quite soft and probably collapsed, but the union strong. After this the tube disappears, and at first the lumen of the bowel partly closes with swollen mucous membrane, but it gradually enlarges again as the swelling goes down and the excess of tissue caused by the invagination atrophies.

Of the three that lived some time, one was killed at the end of two months in perfect health. There was still a slight, thin diaphragm at the site of operation, but offering much less impediment, if any now, to the passage of the intestinal contents. One is still living in Manchester, the domestic pet of a friend of the porter, and is reported in its usual health just twelve months after the operation. The other is also living, and very fat and hearty, three months after the operation.[2]

I was particularly struck in all these latter cases with the (to me) extraordinary absence of any sign of pain or illness after the operation. I attribute it to the absolute security from leakage, owing to the firm and close approximation of the parts by this method of operating. It is not altogether due to the nature of the dog as compared with man, for in the faulty operations the dogs, in my opinion, failed more quickly and completely than a man would have done under the same circumstances. Like children, they recover rapidly; but stand shock badly, and collapse at once if anything goes wrong.

In conclusion, I wish to point out that, should any surgeon think sufficiently well of this operation to make use of it in the human subject, it should, in the first place, be limited to quite suitable cases, in which it is necessary to divide or excise a portion of small intestine. I have had only the opportunity of trying it in a case of malignant stricture of the colon, in which, owing to the shortness and inflexibility (due to fat) of the mesentery, a satisfactory invagination could not be produced, another plan having to be substituted in its place. I think this would often be the case with human colon. Sometimes in spare subjects and children, especially in the region of the sigmoid flexure, it could easily be accomplished. Yet in sigmoid colotomy I have often found difficulty in simply invaginating the lower end of the bowel, when the mesentery was short and fat, though that form of invagination is the easiest one could have to do. That the mesentery is the source

TABLE OF INVAGINATION EXPERIMENTS.

Animal.	Operation.	Result.
1. Black-and tan terrier.	Invagination of small bowel on tube without traction thread.	Killed fourth day, on account of rupture of abdominal wound. Bowel invaginated wrong way, but well united except one spot on mesenteric side covered by omentum.
2. Rough-haired black puppy.	Do.	Killed one month. Grown double size. Calibre of bowel at site of operation lessened by circular fold of mucous membrane.
3. Scotch terrier.	Invagination with tube and traction thread.	Killed two months. Perfect health. Still partial diaphragm, but offering no obstruction to feces.
4. Young brown terrier.	Do.	Killed three months. Grown and in vigorous health. Union perfect. No obstruction whatever.
5. Fox terrier.	Do.	Still living twelve months after, and in usual health.
6. Small fox terrier.	Do.	Killed twelve hours. Tube unchanged. Invagination adherent by recent lymph.
7. Fox terrier.	Do.	Killed forty-eight hours. Doing very well. Bowel firmly united. Tube soft and collapsed.
8. Fox terrier.	Do.	Killed fourth day. Tube gone, bowel well united. Lumen much closed by folds of recent invagination. (This dog should have been killed on the third day.)

TABLE OF OTHER EXPERIMENTS.

Animal.	Operation.	Result.
1. Large rough-haired terrier.	Tube, with resection of coats of bowel.	Sloughing, and death in about thirty-six hours.
2. Fox terrier.	Three inches of mesentery cut away from colon, and enterorrhaphy done.	Gangrene of bowel, and death about thirty-six hours after.
3. Fox terrier.	Implantation of ileum into rectum. Invagination of each end of isolated colon.	Lower end of colon partly opened up. Extravasation, collapse, and death in about thirty hours.

[1] By Mr. Reynolds, 9, Rodney-street, Liverpool.

[2] This dog was shown at the Liverpool Medical Institution, April 9th, when it was suggested by the President, Mr. Mitchell Banks, that the Society should have an opportunity of inspecting the condition of the bowel at its next meeting. Accordingly, on April 23rd, the animal having been killed, Dr. Ross opened it at the meeting and examined the bowel. The site of operation was indicated by a circular scar about one-sixteenth of an inch broad and quite soft. There was no trace of roughness or adhesion to omentum or other parts, and there was no obstruction whatever, the bowel above having exactly the same diameter as below, and the calibre at the site of the scar being the same as elsewhere. The President considered the union as perfect as anything of the kind could be.

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of difficulty I believe there can be no doubt. It was on this account that the experiment of cutting away the dog's [illegible] colon was made, with the discouraging result of gangrene of the bowel. It seems to me that injury of the small intestine, whether direct or the result of internal or external strangulation, or any disease requiring excision of a portion, will form the class of cases most suitable for a trial. In such it will be at least no longer than Senn's operations, and decidedly more secure than either his invagination or bone-plate process. When properly done leakage is impossible for about thirty-six hours in the dog, and I should say for at least double that time in man, as the tubes can be made much thicker, and digestion is less vigorous. Another advantage of this method is that so long as the tube is sound liquid food may be given with impunity. During the first two days, the most important time of all, there is no occasion to withhold nourishment. On the third day the tube will probably be collapsing, and the lumen of the bowel partly blocked. It would, therefore, be wise to somewhat restrict the diet at this time, but not to limit it as has been too much the practice, to a little water and meat extract, for good sound, rapid healing cannot take place in a starving body. The success or failure of the operation will not, however, rest upon minor details of treatment, but upon the broad lines of the facility or otherwise with which it can be put into practice, and the nature of the union effected by it. I am now only awaiting a suitable case of the kind indicated to put this operation into practice and report on the result.

Liverpool.

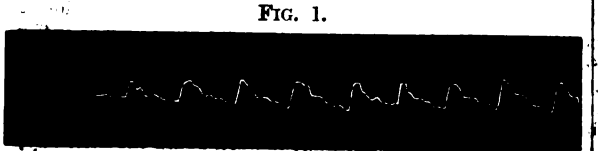
THE TREATMENT OF CHRONIC DISEASES OF THE HEART BY MEANS OF BATHS AND GYMNASTICS.

BY THEODOR SCHOTT, M.D., BAD NAUHEIM.

(*Concluded from page 1144.*)

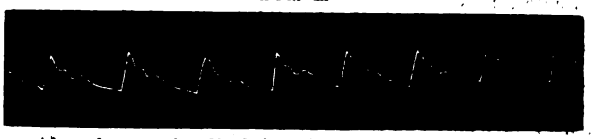
I HAVE been able in another publication to show that a course of baths stimulates the heart to increased contraction by imbibition, not by absorption, through the influence of the reflex action of sensitive nerves; and I desire now to point out that a gymnastic course is capable of inducing identical results through the influence of motor nerves. That such is the case may be readily ascertained by percussion, the recession of the dilated organ being first noted on the right side, and later on the left. Diminution of the vertical diameter of the heart is less easily and more tardily induced; but perseverance in the treatment will often ensure the attainment of that end, as indicated by the ultimate rise of the situation of apex impulse. On auscultation a divided heart sound may be heard to become normally uniform, showing that no actual valvular lesion existed. In those cases of valvular affection in which, in consequence of the weakness of the muscular tissues, the sounds have been barely audible, they become distinctly marked; frequently dyspnœa is relieved, irregular gives place to regular action, the pulse falls from 120 to 100 or less, or from 90 to, say, 72, and the pulse force, as measured by Basch's sphygmomanometer becomes capable of raising successively twenty, thirty, forty, and even more millimetres of mercury; hyperæmia of the liver is relieved to the extent of several fingers' breadth; congestion of the kidneys is reduced; and the secretion of urine becomes normal or even excessive. At the same time, appetite, sleep, and the health generally manifestly improve, mental depression gives place to a cheerful spirit, while in the end the permanence of the result shows the incontestable superiority of the treatment which I advocate to that which might be attempted by means of digitalis and other heart stimulating drugs. In proof of my contention, I subjoin the following tracings of the pulse of a patient aged thirty-one, suffering from cardiac weakness, who was treated with a Nauheim effervescent bath.

FIG. 1.



Before bathing: Frequency of the pulse, 94; pressure of the pulse, 120 millimetres of mercury.

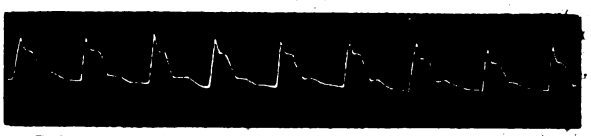
FIG. 2.



After the use of a Nauheim effervescent mineral bath of 87° F., duration fifteen minutes: Frequency of the pulse, 72; pressure of the pulse, 140 millimetres of mercury.

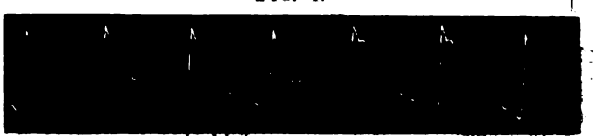
Also the following tracings, which exhibit the effect of the same treatment on a patient aged forty-six, affected with stenosis ostii arteriosi sinistra.

FIG. 3.



Before gymnastics: Frequency of the pulse, 80; pressure of the pulse, 125 millimetres of mercury.

FIG. 4.



After half an hour of gymnastics with resistance: Frequency of the pulse, 65; pressure of the pulse, 160 millimetres of mercury.

Although at Nauheim the treatment mainly consists in the administration of baths, with which I myself combine a gymnastic course, I could enumerate a large number of instances in which marked improvement, and others in which complete cure, have been attained by gymnastic exercises alone, while in other instances in which it became necessary to interrupt the course of baths, gymnastic exercises practised by the patients at their homes have proved effectual in maintaining the improvement already secured, and even in effecting further recovery of heart power. It must not, however, be overlooked that hygienic conditions, and especially the regulation of diet, will require the attentive consideration of the physician. Most of the patients under consideration being more or less ill nourished and anæmic, their food should be of a definitely invigorating description. With many it is necessary to direct attention to the improvement of the quality of the blood stream, and to increase the amount of adipose tissue. To attain these ends the diet should be very easy of digestion, and the free use of albuminoid foods and of butter should be insisted on, and if necessary peptones should be administered. Sometimes it may be necessary to relieve the more vigorous who exhibit indications of fatty degeneration of the heart tissues of a certain amount of their fat, but very serious consequences may ensue unless this end be pursued with the greatest caution and by very slow degrees. I have elsewhere reported a case analogous to one prominently alluded to by Oertel—namely, of fatty degeneration complicated by kypho-scoliosis, which was cured, without enforcing any reduction in the amount of fluid taken and without any diminution of the body weight, by regulation of the diet, baths, and gymnastics. Generally speaking, it is better to prescribe frequent small meals than heavy ones taken at comparatively long intervals, as it is important to avoid upward displacement of the diaphragm. For the same reason effervescing beverages, whether natural or artificially prepared, whether alcoholic or otherwise, as well as beer, must be withheld. I generally recommend light wines, and, where stronger stimulants are indicated, from 20 to 30 cc. of diluted cognac, to be taken two or three times a day.

North of the Alps, the best months for treatment by baths are May, June, August, and September. July, the hottest month, should be passed in a mountain resort of moderate elevation, say, from 600 to 900 metres above the sea level. The regions I generally recommend are the Black Forest, the Hartz mountains, Switzerland, Thuringia, and the Carpathian heights. By preference, the winter should be passed in some southern region. San Remo, Bordighera, Nervi, Cannes, and places of similar climatic

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character, in which rainy days are few in proportion to sunny ones, and where the invalid can spend the greater part of the day in the open air, are the most suitable.

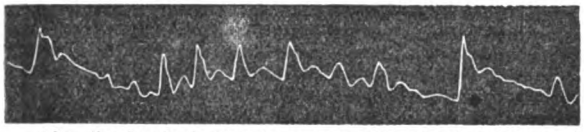
With regard to the pathological contraindications for treatment, setting aside those aggravated cases of cardiac disease which are obviously beyond the reach of any treatment, I have only two to enumerate—aneurysm of the heart and aorta and progressive arterio-sclerosis. In such, the slightest additional blood pressure may prove fatal. A small amount of arterio-sclerosis offers no contraindication to bath treatment. As regards other heart affections, whether functional or organic, congenital or acquired, I am able to attest that no evil effect can be attributed to the practice of the system which I am advocating. On the contrary, in the great majority of instances it is followed by remarkable improvement; in many by complete cure. I may instance the marked improvement reported to me a year after treatment by the Nauheim baths of a patient, twenty-eight years of age, affected with well-marked congenital mitral incompetence.

The following are tracings taken from a patient affected with attenuation and dilatation of both ventricles, aged twenty-six, who was under treatment three years and a half ago, and who has up to the present time continued to enjoy good health.

FIG. 5.

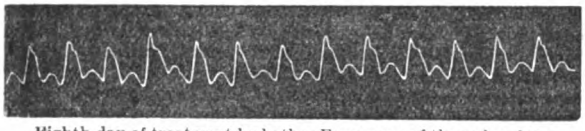
Before the beginning of the treatment the pulse could not be counted (more than 150); pressure of the pulse, 82 millimetres of mercury.

FIG. 6.



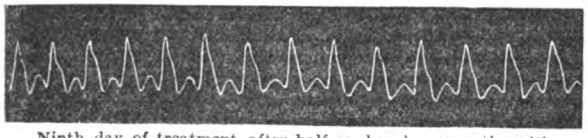
After the first bath, containing 1 per cent. of salt, temperature 89·5° F., duration ten minutes.

FIG. 7.



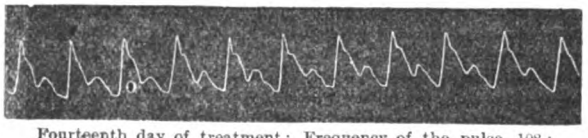
Eighth day of treatment by baths: Frequency of the pulse, 144; pressure of the pulse, 95 millimetres of mercury.

FIG. 8.



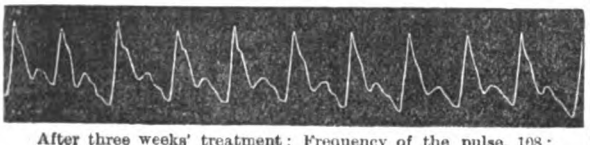
Ninth day of treatment, after half an hour's gymnastics with resistance: Pressure of the pulse, 110 millimetres of mercury.

FIG. 9.



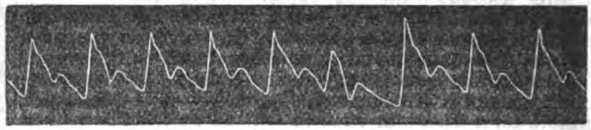
Fourteenth day of treatment: Frequency of the pulse, 108; pressure of the pulse, 115 millimetres of mercury.

FIG. 10.



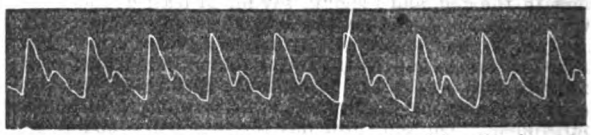
After three weeks' treatment: Frequency of the pulse, 108; pressure of the pulse 125 millimetres of mercury.

FIG. 11.



Before gymnastics with self-resistance: Frequency of the pulse, 102; pressure of the pulse, 130 millimetres of mercury.

FIG. 12.



After an hour and a quarter of gymnastics with self-resistance: Frequency of the pulse, 92; pressure of the pulse, 145 millimetres of mercury.

I must not close these observations without making some reference to the diseases in the course of which cardiac affections mainly originate or are most commonly observed as complications, and for which the Nauheim and other waters are the most effectual remedies: rheumatism of the structures generally, and widely diffused among them as to its effects; acute rheumatism of the articular kind (specially alluded to by Beneke with reference to the Nauheim waters); congestive affections of the kidneys, in which a considerable diminution in the quantity of albumen or its complete disappearance may be looked for; abdominal plethora, especially of the gouty kind; and intestinal dilatation, especially when complicated with constipation. Such cases are often relieved with great promptitude by our Kurbrunnen and Karlsbrunnen, the former being very similar to the Kissingen Ragoczy and the latter differing but little from the Homburg Elizabethbrunnen. Our Ludwigsbrunnen, closely resembling Vichy water, with its constituents of lithia and bicarbonate of soda, also yields excellent results. The Schwalheim spring, rich in ferruginous ingredients, is effectual in relieving the chlorosis and anæmia which so frequently attend cardiac affections.

In conclusion, I would beg to offer a reply to some of my colleagues, both in Germany and abroad, who inquire in what lies the special suitability of Nauheim for the treatment of cardiac disease. In the first place, it depends on the remarkable constitution of our waters and their great variety which favour their application to so many kinds and phases of disease; their range extending from the simplest kind of brine bath to the strongest flowing effervescent baths; their appropriate natural temperatures, which range from 95° to 80° F.; and the opportunity of bringing into simultaneous use several different drinking waters containing the various mineral ingredients which have been specified. In the second place, it depends on the situation of the place itself, lying as it does at the foot of the Taunus mountains on the edge of a widely extending plain, and enjoying a climate of a mildly stimulating character, and affording exceptional facilities for taking walking exercise, first in the plains, next on the adjoining hills, and finally among the still higher mountains.

CASE OF CEREBRAL ABSCESS, LOCALISED BY "FOCAL" SYMPTOMS, AND SUCCESSFULLY TREATED BY TREPHINING; INTERCURRENT HÆMATURIA.

BY EDWARD N. NASON, B.A., M.B. CAMB., M.R.C.S.

GEORGE S——, a hatter aged eighteen, having been previously in good health, fell down on the slippery pavement on Jan. 8th last and struck the back of his head as he fell. He did not think much of the fall, or even mention it to anyone at the time, but from that date he began to suffer from headaches. He fell a second time in a similar way on Jan. 22nd, and again on the following day. The third fall was at 8 A.M., and made him feel sick, though he did not vomit, but at 10 A.M. he began to shiver, and continued to do so until nearly 1 o'clock. He went to work again the next day, but came home in the afternoon feeling ill. From that day

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until Feb. 3rd he remained at home, spending most of his time sitting over the fire, and suffered from headache of sufficient severity to prevent his sleeping at night. (This history was obtained from the patient subsequently, during his convalescence.) On Feb. 4th I saw the patient in consultation with my brother, Dr. W. S. Nason. He was then extremely ill; temperature 103·4°; tongue brown, coated, and dry; bowels confined. He complained of severe frontal headache, worse on the right side. There were one or two cooing sounds scattered over both chests and a soft basic systolic murmur. The examination of the abdomen gave no evidence of enteric fever. The urine was free from blood or albumen. On Feb. 5th the temperature rose to 104°, and remained the same on the 6th, while the pulse was only 56 to 60 per minute, and was not particularly full. He was becoming drowsy and apathetic, and wandered slightly at night. Cerebration was extremely slow; he answered questions after an interval of about twenty seconds, but his answers showed that his mind was perfectly clear. He complained of severe headache, the point of maximum intensity being at about one inch behind and one inch above the external angular process of the right frontal bone; also of pain in the back of the neck on movement. There was no vomiting, and no further sign of mischief in chest or abdomen. On the morning of Feb. 7th I noticed left facial paralysis and paralysis of the left arm, with impairment of sensation (chiefly tactile sensation) over the paralysed areas. The tongue also deviated slightly to the left when protruded. I thought, too, that the left leg did not move quite so freely as the right. There was no paralysis of the ocular muscles, and the pupils were equal and reacted to light. There was well-marked double optic neuritis, with distension of the retinal veins, more marked in the right than in the left eye. The patient was becoming more somnolent, and was apparently quite unconscious while his eyes were being examined. On the 8th the temperature came down to 99·4°, but without any improvement in the general condition. At 3 A.M. on the 9th he had a rigor lasting till 3.30 A.M., and at twelve o'clock he had a convulsive seizure, beginning in the left side of the face and the left arm. This was accompanied by conjugate deviation of the eyes to the left, turning of the face to the left, and considerable cyanosis. From these symptoms taken together I concluded—(1) That the patient was suffering from cerebral abscess, possibly of traumatic origin; (2) that the abscess was situated in the substance of the brain somewhere between the cortical centres for face and arm and the internal capsule, causing the paralytic symptoms; (3) that it was beginning to involve the cortex near those centres, causing the symptoms of cortical irritation; (4) that trephining gave the patient his only hope. After a great deal of difficulty I obtained the consent of the parents.

On the evening of the 9th the head was shaved and prepared for operation, and the room cleaned and all unnecessary furniture removed. On the 10th the patient was anæsthetised with the A.C.E. mixture, and trephined over the lower third of the fissure of Rolando, the point on the skull being over the temporal ridge, an inch and a quarter behind the coronal suture. A semilunar flap was raised and a small portion of temporal muscle freed from its attachments. When the button of bone (¾ in. diameter) was removed, the dura mater was seen to be bulging and without pulsation. A small wound in the dura made by the lower edge of the trephine was enlarged, and the brain, which was anæmic and flattened at that point, was exposed. While an exploring trocar was being prepared a small bead of pus was noticed pushing its way up from beneath the cortex of what was probably the lower portion of the ascending frontal convolution. This opening was at once enlarged, and about half an ounce of thick, yellowish, gelatinous pus, free from odour, allowed to escape from an abscess cavity situated slightly below and anterior to the opening. A small drainage-tube was inserted, the pericranium stitched down with catgut sutures, but the bone not replaced, and the wound closed and dressed with powdered boracic acid and wood-wool wadding. I was assisted in the operation by our two district nurses, to whose subsequent untiring care the ultimately successful result was largely due. At 3.15 P.M. the patient had a slight fit, consisting in twitching of the mouth, grinding of the teeth, conjugate deviation of the eyes to the left, and turning of the head to the left, accompanied by stertorous breathing, but no movement of the limbs. This fit lasted about five minutes. At 7 P.M. the patient, who was quite conscious and had said that the pain in the head was much less, complained of feeling extremely cold down the left side and of a great deal of pain in the left shoulder. The surface temperature on the left side was found to be very distinctly less than on the right, the skin feeling quite cold to the touch. About 10 oz. of high-coloured urine were drawn off by soft catheter. The left leg seemed to be moved quite freely now, but the left arm and the left side of the face were unaltered.—Feb. 11th: Patient slept the greater part of the night. His breathing was natural; temperature normal; pulse 58. He complained of stiffness of the left shoulder and pain down the whole of the left side. There was no return of movement or sensation in the left arm or face. The wound was dressed and looked healthy; a considerable amount of discharge had come through the tube, but it was very thick, and did not flow readily. Patient answered questions with less delay, and was less drowsy. He passed urine naturally; bowels confined.—12th: Patient passed a good night, but at 1.30 A.M. complained of much pain in the left arm. After it had been rubbed for some minutes he suddenly gained power and sensation from the shoulder to the elbow. At 7 P.M. he regained power in the forearm. The wrist and fingers remained paralysed, but he had to some extent regained sensation in them.—13th: Patient slept through the whole night and the greater part of the day. The pulse, which in the morning had risen to 72, fell again in the evening to 56 per minute. The wound was dressed, and all stitches removed. The tube was removed, cleaned, and replaced.—14th: The patient slept all through the night, and asked to be allowed up this morning. At 5.30 P.M. he was lying on his left side, and was trying to move his still paralysed wrist and fingers. He turned over on to his right side, and at once regained power in both. Temperature 98°; pulse 58. Knee-jerks present; no ankle clonus. Face still paralysed on left side.—15th: A good deal of discharge from the wound; flap showed signs of giving way. Tube removed from the brain, shortened, and replaced in external wound. Face still less paralysed; power in hand returning. Optic neuritis still remained, but retinal veins were no longer distended.—17th: Flap had given way almost entirely, and there was free suppuration. The intrinsic muscles of the hand were still paralysed, but power of grasping had steadily increased. The adductor and opponens pollicis were the last muscles to regain power.—20th: Wound granulating healthily. Optic neuritis slowly subsiding.—22nd: At 1 P.M. patient began to pass porter-coloured urine, which on examination was found to contain a considerable quantity of blood and a proportionate amount of albumen, several fibrinous and a few hyaline casts; sp. gr. 1018. The urine was also crowded with micrococci and was very greatly increased in quantity. The temperature remained normal and pulse 72. No pain in the loins or in the urinary tract, and not the slightest discomfort or constitutional disturbance.—23rd: Patient still passed bloody urine, which, examined immediately after being passed, was still found to be crowded with micrococci, in chains and groups; some of the casts seemed to be formed entirely of micrococci; sp. gr. 1016.—26th: Urine still contained a trace of blood and some few micrococci; sp. gr. 1020. Patient steadily improving.—25th: Urine quite clear and free from blood and albumen.—26th: Both discs are still a good deal swelled, and cannot yet be defined.—March 10th: Wound healed. Patient allowed to sit up. Left disc can be fairly well defined, though still slightly hazy. Right disc cannot yet be defined.—23rd: Both fundi are now almost normal. Patient seems quite well, and but for the fingers of the left hand being still a little clumsy, has completely recovered.

Remarks.—The chief points of interest in this case are: 1. That a blow of apparently so trivial a nature should have given rise in a healthy boy to an abscess at a distant part of the brain as a result of *contrecoup*. There is, however, in the family a distinct tendency to suppurative inflammations, though in other respects the family history is good. 2. It is unusual that a cerebral abscess should give rise to symptoms sufficiently local to enable its position to be accurately determined. 3. That the case, occurring amid most unfavourable surroundings (an ill-smelling and insanitary cottage of four rooms and ten inhabitants, and by no means free from vermin), should have recovered without any drawbacks. 4. The mode of recovery from the paralytic condition goes to prove that the various cortical centres are centres for associated movements and not for individual muscles; also that sensation and motion are

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represented together in the central convolutions. It also would tend to prove that the centres for the various associated movements of the arm are placed from above downwards in the following order: shoulder, upper arm, forearm, wrist, and hand, the thumb being lowest of all. 5. The one-sided coldness due to constriction of peripheral vessels points to a disturbance of a corresponding vaso-motor centre. 6. The intercurrent hæmaturia, accompanied by increased urinary secretion; the urine having certain peculiarities in common with a condition noticed as occurring in the course of suppurative meningeal affections, and suggestive of a kindred cause.[1] 7. The presence of micrococci in the fresh urine.

Note.—May 26th: Patient, who has been at work for the past six weeks, remains in good health, and has quite lost the clumsiness of the fingers of which he at first complained.

Nuneaton.

NOTE ON A CASE OF EMPYEMA TREATED SUCCESSFULLY BY RESECTION OF THE RIBS.

BY SURGEON A. W. D. LEAHY, F.R.C.S. ENG.,
OFFICIATING RESIDENCY SURGEON, HYDERABAD, DECCAN.

W. M——, aged thirty-four years, a boiler inspector in the employ of the North-Western Railway, was admitted into the Civil Hospital at Quetta on March 6th, 1889, suffering from well-marked pleurisy of the right side. The patient stated he was taken ill four days prior to his admission into hospital, and that he was formerly a private in the first battalion of the Worcester regiment. He has been a fairly steady man during his life. He says that in the course of his daily work he has frequently been exposed to sudden and great changes of temperature, in having to get into the interior of locomotives for purposes of inspection, and then having to examine their outward mechanism, standing exposed to a cold keen wind while doing so. The man's temperature an admission was 102·4° F.; he complained of intense pain in the right side, which was increased during the act of inspiration, and suffered from a short, sharp, irritating cough. Linseed-meal-and-mustard poultices were applied to his chest, and he was ordered a saline and morphine mixture with half a grain of morphine subcutaneously at night. On the evening of the third day after his admission into hospital a distinct pleuritic rub or friction sound became audible just below the point where he complained of most pain. Seven days later this sound was no longer to be detected, and the physical signs showed the right pleural cavity had become filled with fluid. The patient's morning and evening temperature now remained normal, or a little above it, except for two days, during the remainder of his stay in hospital. He was, however, weak, anæmic, and suffered much from breathlessness on exertion, while the condition of his right pleural cavity as regards the fluid remained the same. The man now expressed his intention of leaving hospital and returning to his work, saying that he was losing pay and could not afford to remain. I strongly dissuaded him from this, and pointed out to him the folly of attempting to work in his then condition. However, he rejected my advice, and left hospital to return to his duties on April 15th. On May 26th he again sought admission, and on examining him we found the right pleural cavity still full of fluid. The man was looking greatly emaciated; had lost weight; complained of fits of shivering and of nightly attacks of fever. The morning temperature was 100°; evening, 103·4°. It was in every way probable we had now to deal with a case of empyema; or, in other words, that the fluid filling the right pleura, which at the time of the patient's leaving hospital was serous, had now become purulent. One of the smaller trocars of a Dieulafoy's aspirator was carefully introduced into the right pleural cavity, and about an ounce of laudable pus was withdrawn. Two days later—i.e., on May 28th—I made an incision in the sixth intercostal space, a little behind the mid-axillary line, opened the pleura, and introduced a piece of full-sized indiarubber drainage-tube into the cavity, evacuating two pints and a half of pus. The cavity was afterwards washed out with a solution of perchloride of mercury (1 in 3000), and the good effect of relieving tension became at once apparent; for the temperature of the succeeding day fell to normal, and continued so for many days—in fact, for as long as the tube drained the cavity. Our difficulties, however, were only just commencing. Day after day showed what we expected—viz., the falling in of the right side of the chest and the gradual approximation of the ribs one to the other, with, as a result, the lessening in size of the intercostal spaces. The opening of the chest cavity had been conducted antiseptically, and the discharge was still sweet, though greatly reduced in quantity. Matters continued thus until June 15th, by which date the ribs bounding the intercostal space in which the opening was made had so closely approached each other as to nip the indiarubber tube during expiration, completely preventing the exit of fluid from within the chest, while, during the act of inspiration, air entered the pleura through the tube. On June 15th the temperature, which had been normal or thereabouts since May 27th, suddenly rose to 102·8°. The indiarubber tube was removed on the next day and a silver tube introduced in its place, leading to the evacuation of a large quantity of pent-up matter. This silver tube could not be closed by the pressure of the ribs, and it was tied in its place with tapes. For a time the tube acted well, but the pressure of the approaching ribs continued, and eventually rendered its removal difficult, while the edges of the ribs themselves became necrosed from the pressure they exerted on the unyielding metal of the tube. On June 28th the man's temperature again rose to 103°. This was due to the tube having become occluded by lymph within the chest, and I decided to remove a portion of the shafts of the sixth and seventh ribs opposite the opening in the intercostal space. Chloroform was administered on June 29th, and I removed an inch and a half of bone from each rib. This left an opening of considerable size into the chest cavity, through which I was easily able to introduce the whole of my right forefinger. The thickened and velvety character of both parietal and visceral layers of the pleura was thus easily felt. The day following the operation the patient's temperature remained elevated, but as the drainage from the cavity was in every way perfect, this persistent rise in temperature was, in all probability, due to the operation on the bones. From July 1st the case did marvellously well. The man's temperature remained normal, the drainage of the cavity was excellent, the discharge became less and less in quantity, and the patient began to increase rapidly in weight and was able to take out-door exercise. On August 15th he left the hospital and went back to his work on the railway. Five months later he was seen by Dr. Fullerton, who had relieved me at Quetta, when his condition was as follows:—He was stout and healthy in appearance, able to walk long distances, and do his daily work without any inconvenience. There was no breathlessness or other symptom in connexion with his chest. A small opening in the chest wall still existed, into which the blunt end of a probe could be passed for about one-third of an inch. From this opening a slight discharge comes, sufficient to just stain a piece of rag with which the man keeps the fistula closed.

Of the advantage of this method of treating empyemata there can, I think, be little doubt. By the removal of a piece or pieces of bone from the ribs a large permanent opening is made into the pleural cavity, and that cavity is thoroughly and completely drained. We may look upon such a cavity as being nothing more or less than a large abscess, the walls of which will continue discharging pus until the cavity becomes filled up with granulations. As the cavity becomes obliterated by this process of filling-up, the discharge will cease entirely, and the opening in the wall of the chest will close. This is the natural termination of such a case, and the cure is a complete one. There are many interesting points that might be considered with reference to the condition of the lung on the affected side, as well as that of the lung on the sound side, upon which an immense amount of extra work is thrown during the progress of the case. Of course cases of empyema treated by resection of a portion of rib will, when cured, present the usual flattening and falling in of the ribs on the affected side

[1] THE LANCET, Dec. 14th, 1889; on the Occurrence of Hæmorrhagic Nephritis in the Course of Suppurative Meningitis, by Drs. G. F. Crooke and E. N. Nason.

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together with the curvature of the spinal column. But I cannot help thinking that as time goes on the tissue of the lung on the affected side undergoes some secondary developmental changes that lead to a considerable restoration of its useful powers.

Before concluding I would direct attention to a practical point in the management of these cases which I have found of considerable use. After the operation of resection of a rib for empyema, difficulty is not infrequently experienced in completely emptying the lower portion of the pleural cavity—i.e., that portion of it which lies below the level of the opening in the wall of the chest. To overcome this difficulty I have found it best to get the patient close to the edge of the bed in a sitting position on the right or left side, according to which pleural cavity is to be emptied, and then to instruct him to place his right or left hand palm downwards on to the ground and to gradually lower his head on to the back of his hand. By this means the lower part of the pleural cavity is raised and can be easily emptied when a tube had been introduced into it before resecting the rib. If the patient is weak and unable to raise himself, he can still be *gently placed* without danger into this position, with his head resting upon a pillow, on the ground. In the three cases of empyema I have treated by resection I have found this method of emptying the lower portion of the pleural cavity exceedingly useful.

Hyderabad, Deccan.

OBSERVATIONS ON THE ADMINISTRATION OF NITROUS OXIDE GAS.

BY PERCY EDGELOW, L.R.C.P. EDIN., M.R.C.S.,
ANÆSTHETIST TO THE NATIONAL DENTAL HOSPITAL.

IN offering the following remarks on the administration of nitrous oxide gas, it is with the belief that they appertain in some measure to its successful administration.

It may seem superfluous to premise that whatever form of apparatus be used it should be in sound working order. I have, however, in not a few instances observed a faultiness in the accuracy of the fittings of its component parts which interferes with the perfect administration of the gas. The improved pedal attachment which I devised prevents any waste of gas in addition to its other distinct advantages, as explained in THE LANCET of Dec. 13th, 1890. With regard to the bag, I prefer one capable of holding three gallons, and connected at one end with the pedal attachment (a silencer intervening) by a broad tube of about 30 in. in length, and at the other end with the face-piece by a broad tube of about 25 in. in length. A distended bag connected immediately with the face-piece is to many patients a source of intimidation; whereas, with the intervention of some length of tubing, so as to let the bag rest well out of view of the patient, sensitive feelings are less aroused. The valves of the face-piece should be invariably tested prior to each administration. The margin of the face-piece should, in its entirety, be in contact with the face; upon their accurate coaptation greatly depends the absence of that feeling of extreme tension in the head, which usually ensues where less care is observed. The supplemental bag I entirely discard, and this for many reasons. I have failed to observe a longer period of unconsciousness from a to-and-fro breathing with it than from the inhalation of pure gas. I am convinced that a patient recovers from the effect of pure gas with less chance of unpleasant feelings, such as giddiness, headache, &c., than when the supplemental bag has been used. The anæsthesia produced with it is of a mixed nature, partly asphyxial, and only partly true nitrous oxide narcosis. Again, it is a most unhygienic arrangement. In view of the continual forward and backward breathing of all sorts and conditions of patients, this must necessarily be so, unless the interior of the bag be thoroughly cleansed after each administration, a proceeding very difficult to carry out. The only points that can possibly be urged in its favour are that it promotes an economy of gas, and that it can be utilised for obtaining anæsthesia when a full supply of gas is suddenly found wanting. This latter condition, however, can now be entirely discounted with the use of the improved pedal attachment. I am in the habit of observing the following rules in the operating room:—To reassure the patient of the practically absolute safety of the gas, and that the operation, whether it be a dental one, the incision of an abscess, the slitting up of a sinus, the extraction of a toe-nail, or other small operation, shall be perfectly painless. To refrain from any special physical examination of the patient. If the heart's action is very weak, as indicated by the pulse, or said to be diseased, I enjoin the recumbent position as far as the operation will permit. To be perfectly satisfied that breathing is quite free and unimpeded by any article of dress. To allow two or three inhalations of air to commence with. To count slowly from one to twenty during the administration, directing the patient to see how far he or she can follow me. To allow the operation, if dental, to commence only when stertor is well marked and jactitation *en évidence*. Should the case, however, be the single or multiple incisions of deep-seated suppuration, where forceps or director requires to be inserted, or scraping performed, the breaking down of joint adhesions, or other operations not involving the mouth or nose, I direct that the operation can begin at the onset of stertor, continuing the inhalation during the operation as far as may be necessary, only removing the face-piece should the breathing become greatly embarrassed. To keep the patient in the same position until complete sensibility has returned and giddiness has quite passed off. I frequently administer gas to the same patient twice or three times following, with an interval of one or two minutes, should there be no headache or continued giddiness between each administration. A few days ago I was giving gas to a powerfully built young gentleman with massive jaws. The dentist, a very dexterous extractor, was quite unable to move the right upper second molar tooth during a first and second administration of the gas, although anæsthesia was deeply induced. After waiting two minutes I gave it a third time, again very deeply, and on this occasion the tooth yielded, being a perfect specimen of a most difficult extraction, with three large and divergent roots. The patient recovered from the effect of the third inhalation as completely as from the first. With children I find it better to remove the face-piece almost immediately after the first signs of jactitation, as these so very often rapidly culminate in opisthotonos and other extreme convulsions of the body.

Old Burlington-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

OLD-STANDING (? CONGENITAL) DISLOCATION OF PATELLA; REDUCTION OF PATELLA AFTER DIVIDING THE VASTUS EXTERNUS AND CHISELLING A NEW TROCHLEAR SURFACE ON THE FEMUR; RESTORATION OF FUNCTION OF THE LIMB.

(Under the care of Mr. BILTON POLLARD.)

WE publish this week the account of a patient recently shown at the Clinical Society by Mr. Pollard. The history of the case is unusual. There is the statement of weakness in the limb of some kind in early life, then the supervention of genu valgum on the same side, which it was necessary to correct by means of an operation (a deformity of limb so frequently found in patients who have sustained traumatic dislocation of this bone). From the condition of the external condyle as found at the operation it is probable that the displacement was due, in a large extent, to want of development of that part of the femur, an occasional cause, as we have already mentioned when previously writing of dislocations of the patella[1] which are not obviously due to severe injury. The other causes given are: sudden muscular contraction in patients the subject of knock-knee,[2] weakness, or shortening of the quadriceps

[1] THE LANCET, vol. ii. 1889, p. 1057.
[2] Erichsen, vol. i., p. 710.

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extensor following infantile paralysis;[3] some mechanical cause acting during intra-uterine life; some congenital weakness of the part.[4] Previous relaxation of the ligaments of the joint is considered necessary by Professor Steubel.[5] Hamilton[6] says: "In some persons there appears to exist a preternatural laxity of the ligamentum patellæ or of the quadriceps extensor, which exposes the subject to this accident from a very slight cause. The operation performed by Mr. Pollard is, we believe, the first of the kind that has been done. The operations suggested or others performed for the remedying of the condition on failure of apparatus to correct the ill effects of the dislocation have been: 1. A lateral incision and the suturing of the inner edge of the bone to the tissues on the inner side of the joint, the patella having been pushed well inwards (Wright). 2. Removal of the patella (Fowler). 3. Osteotomy of the femur and the production of a condition of bow-leg (Davies-Colley). The operation, a severe one, has been most successful. The following description is from notes by Mr. Raymond Johnson, late surgical registrar.

The patient was a young woman aged twenty-one years, who had followed the occupation of a domestic servant. She could not fix the period at which her patella became displaced. The affected limb had been weak from childhood, but neither the patient nor her sister had noticed anything wrong with the knee. In December, 1885, she slipped and fell, but did not notice that anything had happened to her knee, and she was able to walk a distance of a quarter of a mile to her home. Since the accident she had walked lame. A few weeks later she was admitted to University College Hospital, under the care of Mr. Marcus Beck. She had well-marked genu valgum on the left side, and when she attempted to bend her knee the patella slipped down on the outer side of the external condyle of the femur.

On Jan. 28th, 1886, Mr. Beck performed Macewen's operation for genu valgum, which was completely and permanently corrected thereby, but the readiness with which the patella became displaced during flexion of the knee was in no way altered. The dislocation of the patella was the source of much pain, and the patient said that it incapacitated her from following her occupation. She was readmitted to the hospital in December, 1890, and during the Christmas vacation, owing to Mr. Beck's absence, she came under the care of Mr. Pollard. The left knee was smaller than the right one. When the limb was extended, the inner edge of the left patella projected more forwards than natural, and lay in about the mid-line of the limb. At a little distance internal to the inner border of the patella a ridge could be felt, which appeared to be the inner border of the trochlear surface of the femur. Between this ridge and the patella there was a slight groove. When the patient bent her knee the patella slipped down on the outer side of the external condyle of the femur, and no force could prevent the displacement as soon as a few degrees of flexion had been made. Flexion was painful, but was possible to a few degrees beyond a right angle. The width of the right patella was an inch and a half, and that of the left was three-eighths of an inch less.

On Dec. 30th Mr. Pollard operated as follows: The limb being rendered bloodless by means of Esmarch's bandage and tourniquet, and the skin being most carefully cleaned, an incision about two inches in length was made outside and above the patella, and the insertion of the vastus externus and the outer part of the capsule of the joint were freely divided, but it was still impossible to replace the patella or to prevent its slipping on the outer side of the condyle when the knee was bent. An incision about 3 in. long was now made a little internal to the inner border of the patella, and the joint was freely opened at this spot. The trochlear surface of the femur was found to be exceedingly small in all its dimensions. The groove was only broad enough to take the little finger, and the outer border of the groove prevented the replacement of the patella, which, even in the extended position of the limb, was found to rest on the external condyle, outside the trochlear surface. The cartilage and some of the bones were chiselled away until a sufficiently broad and deep trochlear surface was made. The patella could then be placed on the new articular surface, and during flexion and extension it slid downwards and upwards in a perfectly normal manner, the old tendency to external dislocation having quite disappeared. In order to secure the patella more safely in its new position, a strip of capsule about 1½ in. long and ¾ in. wide in the middle was excised and the borders of the wound were sutured with silk. In this way the inner side of the capsule was braced up. During the operation the wound was constantly irrigated with a 1 in 4000 solution of perchloride of mercury. The inner skin wound was completely closed, but the outer, which was made to penetrate the joint at the lower part, was left open at this spot, in order to give vent to any effusion which might take place within the joint. No tube was employed. The knee was dressed with cyanide of mercury gauze and sal alembroth wool. The limb was fixed in a trough of Gooch's splint. The temperature reached 99·8° in the evening of the first day after the operation; it then gradually fell, and reached the normal on the fourth day. The patient had a good deal of pain in her knee on the day after the operation, but after the second day she was free from spontaneous pain. The dressing was changed on the eighth day after the operation. The discharge was dry. The knee was alternately passively flexed and extended. The movements caused much pain, and the patella was felt to grate against the bony surface of the new trochlear articular surface, but the patient was able to flex and extend her knee voluntarily. The patella showed no tendency to slip from its position. Passive movement was repeated on the thirteenth, fifteenth, and nineteenth days. The stitches were removed on the fifteenth day after the operation. On the twenty-first day the patient was allowed to get up, and on the twenty-eighth day she was able to walk down the ward. She went home on the thirty-second day after the operation. The patient was shown at the Clinical Society on April 24th. It was then four months after the operation. The movements at the knee-joint were free and painless; there was a little grating as the patella slid over the new trochlear surface. The patient said that her leg was stronger and more serviceable than before the operation. She had resumed her occupation as a domestic servant, and was able to scrub out four bedrooms and walk four miles in one day without any inconvenience to her knee.

[3] Malgaigne; also Pitts, Med. Soc. Trans., vol. xii.
[4] Wright and Ashby, Diseases of Children, p. 648, and others.
[5] Holmes' Surgery, p. 464.
[6] Fractures and Dislocations, p. 893.

JOHANNITER HOSPITAL, BEIRUT, SYRIA.

A RECORD OF SOME CASES INJECTED WITH TUBERCULINUM KOCHII.

(Under the care of Dr. H. GRAHAM.)

THE line of treatment followed has been that described by Professor Libbertz, the commencing injection in all cases of phthisis being 0·001 grm. The fluid was diluted with distilled and sterilised water, and the dilution raised to the boiling point each time after the patients had been injected before again closing the tube with cotton. The sputa were in every case examined before the patient was put under treatment, and the tubercle bacillus was found. The day after each injection the sputa were again examined in each case to see if any change had taken place. Each patient was carefully weighed once a week, and the weight recorded to determine whether there was gain or loss.

CASE 1.—E——, a carpenter aged twenty-two. His family history is good, and he himself is well built, but nervous-looking, with clear white skin, and hectic spots on his cheeks. He entered the hospital on Feb. 5th, complaining of cough, feverishness, and some emaciation, from which he had been suffering about two months, but up to that time had been in excellent health. He complained of weakness and loss of appetite, but had no night sweats. On the right apex there was dulness, increased vocal resonance, prolonged and roughened expiratory sound, and a few subcrepitant râles. A few bacilli were found in about half the cover glasses examined. The first injection was followed by a marked reaction, but in no case did his temperature rise higher than 39° C., so that the dose was rapidly raised, and on March 8th he was given 0·150 grm. without any reaction. The physical signs had cleared up and his cough with expectoration had ceased. He was discharged on March 9th, and since that time has been constantly under observation, and there have been no signs whatever of a return of his disease.

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CASE 2.—M. S—— was admitted on Feb. 4th. She is twenty-two years of age, married, and has two children. Her father died of phthisis after four months' illness, and one sister died at the age of twenty-two from the same disease after three months' illness. The patient had been ailing for some two months before admission, suffering from cough and emaciation for one month. Her condition on admission to hospital was not good, as she was already much emaciated and suffered greatly from a high temperature, which was constantly between 38 5° C. and 39 5° C., and from night sweats. The physical signs, however, did not indicate more than an extensive consolidation of the left apex, and but few bacilli were found in her sputa. After the first injection the temperature rose to 40·1 C., but fell the next morning to 37·7° C., but soon rose again to 38·5° C. She was injected twice a week for one month, the bacilli constantly increasing in number, and her temperature always remaining very high. She lost weight rapidly, and was troubled much with a severe dry hacking cough, which could not be relieved. The physical signs during this month seemed to indicate no progress. The injections were discontinued when they had reached a dose of 0·018 grm. After the injections had been discontinued for about a week she seemed to grow worse even more rapidly than before, the physical signs indicating rapid destruction of the lungs. She was discharged on March 18th, and has since not been heard of.

CASE 3 —N. J——, aged eight, entered the hospital on Feb. 3rd. His father died of phthisis. A year ago Dr. Post had resected his elbow-joint for caries, but after some six months the disease had returned, and upon admission the elbow was much swollen and discharging from three sinuses. The wrist was also swollen and discharging. The apex of his right lung was consolidated to a considerable extent. He was weak and emaciated. After the first injection of 0·001 grm. his temperature rose to 40·7°C., but fell again the following day to normal. The injections were gradually increased until the beginning of April, when the dose of 0·05 grm. was given. The injections have always been accompanied by a very marked general reaction, and by but little local reaction. The swelling has gone almost completely from the elbow, and the discharge is very slight. Very few signs of consolidation of the right apex remain. He has increased in weight, and his general condition has improved very much. He has had no other treatment either medical or surgical. For the past week the improvement has not been marked, if there has been any, and his temperature, which always returned to the normal the day after the injection, now remains somewhat up for the second and even the third day.

CASE 4 —E. S——, aged eighteen, was admitted to the hospital on Feb. 8th. Her family history is good. She had been treated for phthisis at the Polyclinic for about a year. On admission she was suffering much from fever and night sweats. She had no appetite, was emaciated, and her feet were œdematous. Her voice was very husky, so that she could not make herself heard at any distance, and she had suffered from diarrhœa. By physical examination there were depression and limited motion of the upper part of the right chest, dulness on percussion, extending nearly to the base, increased vocal resonance, cavernous respiration just under the clavicle, and subcrepitant râles as low as the fourth rib in front. No signs were found on auscultation to account for the dulness reaching almost to the base. The left lung did not seem to be implicated. The expectorated matter was large in amount, and contained very many bacilli. The first injection was given on Feb. 9th, and was followed by a marked general and local reaction, as were all the succeeding ones. This patient constantly affirmed that when the injection was given on the diseased side the reaction was much greater than when the injection was made on the other. Within two weeks her night sweats had almost ceased, and her temperature between the injections was almost normal, but her throat was very much swollen, and she could only speak in a whisper. At the end of a month her voice was as good as ever, and the pain and swelling were completely gone. She increased in weight gradually for the first six weeks, her appetite and strength returning to a very marked degree. Her sputa were much less and contained very few bacilli, at times eight or ten cover glasses being examined without finding any. After eight weeks' treatment she seemed to remain at about a standstill, and was sent home. Since then she has been under observation, and has grown no worse. Her condition, as shown by general symptoms and local signs, is, beyond a doubt, very much improved, and as she has not ceased to react improvement may still be expected. The physical signs in this case have been very much changed, there being now no cavernous respiration, and but few subcrepitant râles. The dulness on percussion has been unaffected.

CASE 5.—W. A——, aged twenty-two, was admitted to the hospital on Feb. 20th, 1891. One brother died of phthisis. On admission he had been ailing for a year and had had a cough, which increased very much when winter came on. One month previously he was attacked with severe vomiting and nausea, so that he was unable to take any solid food whatever for a week. He was much emaciated and his temperature was 39°C.; a rise in temperature which was followed by an exhaustive colliquative sweat. On physical examination the following were found: Flattening and sinking of the right apex, subcrepitant râles as low as the third rib in front, tubular respiration just below the clavicle, and dulness on percussion. The first injection was followed by a moderate reaction, and he was given the lymph twice a week in gradually increasing doses. There has been a gradual improvement in his general condition, with an increase in weight. He has, however, been kept back by a very severe dry cough, which has not been relieved by treatment. It is always worse for a day or two after an injection. The bacilli have never been abundant, and lately have not been found. The physical signs of disease have largely disappeared.

CASE 6.—N. S——, aged twenty-two, entered the hospital on Feb. 20th. His mother died of phthisis, and he has a sister who is now suffering from the disease, which in his case has been of fully a year and a half's standing. He suffered from night sweats and diarrhœa, but at the time of entrance his temperature was about normal, and he was in a fairly comfortable condition as far as symptoms were concerned. There were signs of a cavity at the upper and back part of the right lung and consolidation of the upper part of the left. He expectorated a great deal of purulent mucus, full of bacilli. His first injection was given on Feb. 21st, and the last one up to date was 0·08 grm. He has made constant improvement, gaining in appetite, strength, and weight. His night sweats have ceased, and he has not at any time had a return of his diarrhœa. At the present time he spits very little purulent matter, but a great deal of frothy mucus. He gradually increased in weight up to the fifth week, then lost somewhat, and has remained stationary as regards weight for the past week (April 8th). The physical signs, however, have shown a better condition of the lungs, with a diminution in the size of the cavity and a disappearance of late of the subcrepitant râles during the intervals between reactions. He has had cod-liver oil and tonic treatment in addition.

Remarks by Dr. GRAHAM.—The treatment was begun early in Case 1, and as nearly as I can tell the patient has been completely cured. In addition to the injections, he had quinine, iron, and arsenic, with a sedative expectorant mixture. Among the cases of phthisis which have been reported, and others under treatment for a shorter length of time, in almost all the treatment has at first been followed by a very marked improvement in the local symptoms and general condition. After the patient has undergone treatment for from six weeks to two months the remedy does not produce so prompt a reaction, and the patient seems to remain at a standstill. He has undoubtedly been improved, but not completely cured, and it seems as though he would easily go back to his old condition. The injections were in no case accompanied by any untoward symptoms, nor has an abscess in any case followed. It was noticed that usually after the patient had undergone treatment for a week or two the number of bacilli was increased, and at the end of a month they were reduced in number very markedly. It has been noticed also that the sputa after a month's treatment were apt to become very thick, streaked with or tinged by blood, and to contain much fibrinous material, which coagulated on the cover glasses in the form of an exceedingly fine dense network. These dense sputa were accompanied by a large amount of light frothy mucus. The following two cases of lupus are the only completed ones. Both were bad cases to treat, as they had lasted a long time, and were of a very severe type. It would be unfair to draw conclusions against the lymph from such unfavourable cases.

CASE 1.—The patient was sixty-five years of age, and the

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ulcer was of about three years' standing. He had been admitted to the hospital on July 10th, 1890, and during his long stay had had the ulcer cauterised weekly with caustic potash. His left eye was completely gone, the ulcer encroaching on the eyebrow at one margin, and on his mouth at the other. There was a hole through into the posterior nares large enough to allow of the passage of the index finger. He was pale, weak, and anæmic, and had suffered much from the pain. He was given the first injection of 0·010 grm. on Feb. 6th. This produced some reaction, local and general, his temperature rising to 38·4° C. The dose was gradually increased, and on March 3rd he was given 0·3 grm. For the first two weeks the ulcer appeared to be cicatrising, but then it seemed no better for a week, and when the injections were withheld it went gradually back to its old condition. To ascertain whether the ulcer might be an epitheliomatous one, a portion was removed from the margin of the growth, fine sections were cut from it with a Schause microtome, and, having been stained according to Gram's method, in several of them a few tubercle bacilli were found. The patient was again injected after this with 0·4 grm.; but no reaction having followed, he was discharged in even a worse condition than he was before the treatment was begun. Twice after large injections this patient was unable to get out of bed except with great difficulty, complaining of stiffness all through his body.

CASE 2.—A woman, thirty-five years of age, from the desert, with lupus exedens of four years' standing. The eye was gone and a portion of the nose, and the ulcer, which was about four inches in diameter, extended deeply into the orbit. She had been under treatment in the hospital for eight months, and had improved somewhat. The first injection of 0·01 grm. was given on Feb. 6th, and in all she received twenty-two, the maximum being 0·3 grm. The ulcer began to cicatrise after the first injection, there being marked local reaction, although almost no general, and continued for about six weeks to skin over, until fully three-fourths of the ulcer was covered. Then the reaction ceased to follow the injection, and no more improvement took place. In fact, the ulcer seemed to be enlarging again. The woman refused to stay in the hospital any longer, and has not been seen since.

The following cases were injected without producing any reaction: (1) A young man suffering from mitral regurgitation, with signs of brown induration, dose 0·01 grm.; (2) a case of chronic pneumonia following measles, dose 0·01 grm.; (3) a little girl with swollen glands of the neck and axilla, dose 0·007 grm.; (4) three cases of disease of joints, evidently non-tuberculous, dose in each case 0·008 grm.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Changes in Healthy Arteries and in Tendon Ligatures during the first four weeks after Ligation.

AN ordinary meeting of this Society was held on May 26th, the President, Mr. TIMOTHY HOLMES, being in the chair.

Dr. SHERIDAN DELÉPINE and Mr. C. T. DENT read a paper on the Changes observed in Healthy Arteries and in Tendon Ligatures during the first four weeks after ligation. The authors first explained the origin of the paper. They gave a detailed account of the state of healthy arteries five, nine, thirteen, seventeen, twenty, and twenty-three days after ligation in their continuity. They summed up these results as follows:—1. (*a*) When a healthy artery was tightly tied in its continuity and the ligature was sufficiently applied, a permanent obstruction was invariably obtained, whether a clot formed or not, and whether the point of ligation was near a collateral branch or not. (*b*) Up to the fifth day the proximal end of the occluded artery was gradually filled up with coagulated blood, which by the fifth day formed a plug composed of clots of various ages. Through the unequal shrinking of the various clots channels were produced, chiefly at the periphery of the thrombus, and into the crevices thus formed fresh blood penetrated. Thus a "spurious circulation" was established. (*c*) From the fifth to the thirteenth day the proliferating elements of the intima penetrated into the sides of the clot and bridged over its surface. By the thirteenth day tracts of young fibrous tissue extended all through the clot, and a thick layer of flattened cells, continuous with the intima, covered the proximal surface of the clot. (*d*) The remains of the clot were gradually absorbed, and by the thirteenth day only a few scattered masses of pigment indicated the previous existence of the thrombus. As the absorption went on the plug shrank, and ultimately its surface became concave. (*e*) While these changes were going on within the vessel, similar processes occurred in the exudation surrounding the ligature outside the artery. Embryonic vessels formed in this region as well as in the artery. At first these embryonic vessels were simply solid columns or tracts of spindle cells, and were therefore only "potential vessels." (*f*) By the twenty-third day both the extra-arterial and intra-arterial new vessels began to extend through the degenerated muscularis close to the seat of the ligature. Inosculation of the new vessels took place, followed by canalisation, and thus true circulation was able to take place through the new set of true vessels. (*g*) The ligature during the whole of this time underwent slow absorption, and was gradually replaced by young connective tissue. 2. From these results the following inferences were drawn: (*a*) That tight ligation of healthy arteries resulted in sound and permanent obstruction within two weeks; (*b*) that tight ligation with flat tendon ligature did not injure the fibrous coat of the artery, even though it were applied with sufficient force to cause complete rupture of both internal coats; (*c*) that the obstruction of the vessel by young fibrous tissue, replacing the clot, was complete long before the flat tendon ligature showed any sign of being absorbed or of giving way. 3. (*a*) The use of tendon was advocated, because this material was very uniform in structure and because the shape presented certain advantages; (*b*) tight ligation was advisable, because it gave results which were constant, and which were speedily and with certainty obtained. 4. The use of the loose ligature was deprecated, and in criticising that method allusion was chiefly made to Messrs. Ballance and Edmunds's paper, on account of its being one of the most recent and important contributions to the subject. Loose ligation should be avoided because (*a*) the method did not give constant results; (*b*) it did not give the same results as tight ligation within the same time; (*c*) it did not offer any advantages whatever as regards the operative procedure, and, if anything, was more troublesome to carry out than the recognised method. 5. In conclusion, the authors discussed the question briefly from the clinical point of view, and stated their conviction that the results of their investigation were supported by practical experience. They considered that tight ligation was the method least likely to lead to injurious consequences to the ligatured vessel, and most likely to bring about the effects which it was commonly desired to obtain by the operation.

The PRESIDENT said that he had devoted a good deal of thought to this subject, at which he had also worked practically, though not by modern microscopical methods. He had come to the conclusion that it was safer and easier for the surgeon, as well as more prudent for the patient, to have the vessel tied with such an amount of force as to divide its inner coat. This incurred no extra danger, and one was sure of producing a permanent obliteration of the lumen of the vessel. In the history of many of the cases of arterial ligature which had done badly the cause was found to be due to a too early establishment of free circulation through the weakened vessel; the danger was a practical one, and was greater than the theoretical benefit from the avoidance of rupture of the internal coat. John Hunter, when he first tied an artery in St. George's Hospital nearly 130 years ago, used three or four flat tapes in order to obliterate the vessel without division, and some surgeons at the present day were inclined to imitate this loose ligature. He thought that at the present time a sufficient amount of practical evidence had been collected to say that those surgeons who had used the tight ligatures had not been less successful than those who had employed the occlusion method.

Mr. MACNAMARA agreed that the tight ligature gave the greatest chance of recovery to the patient. He had ligatured the common carotid, the external iliac, and the common femoral recently with a good result. He used silk ligatures which had been previously boiled in carbolic acid. The tissues around the artery were disturbed as little as possible in the application of the ligature; no blood-clot was left in the wound, deep sutures as well as superficial

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were inserted, and the part was kept at rest for a considerable time afterwards. Silk was as safe or safer than tendon, for there was no chance of the ligature expanding or giving way. He objected to the chromicised ligature, which remained for a long time in the wound, and, on the whole, his experience of it was not favourable.

Mr. BALLANCE, after complimenting the authors on their elaborate and careful paper, said that he had studied the subject for many years, and had performed a very large number of experiments. The minute changes which had been described were identical with those which he had found, and which he had narrated in his lectures at the Royal College of Surgeons. After 132 days a tendon ligature was not entirely absorbed in the region of the knot. Encapsulation of the ligature invariably occurred in aseptic wounds, and, though an antecedent to absorption, was no bar to it. The multiplication of the endothelium he regarded as due to an alteration of nutrition. He hoped that the profession would suspend their judgment on this question till the whole of the recent work of himself and Dr. Edmunds was before them.

Mr. SPENCER WATSON said that the experiments which had been narrated had been performed on healthy arteries; but surgeons were often called on to deal with atheromatous vessels when perhaps a loose ligature would be safer.

Dr. DELÉPINE, in reply, said that the experiments of Mr. Ballance and Dr. Edmunds had been taken as a type of the action of the loose ligature. The experiments described in the paper were opposed to these, and he held that they proved the points which had been laid down.

Mr. DENT, in reply, said that the tendon remaining in the wound a long time was not an objection to its use. It was smoother and more homogeneous than silk, and was therefore better suited for the purpose of ligature. His conclusions were not drawn merely from the six experiments related: he had worked at the subject for a number of years, and had given an attentive study to all that had been published. By the term "loose ligature" he understood one which approximated the walls and occluded the lumen of the vessel without rupture of the inner coat. The experiments of Jones, which had been referred to, were not to be compared with those under discussion, for they were probably septic ligatures used in a wound which was allowed to become septic also.

CLINICAL SOCIETY OF LONDON.

Congenital Cranial Synostosis.—Modified Stephen Smith's Amputation.—Fæcal Fistula.—Congenital Scrofula.—Hereditary Muscular Spasm.—Scoliosis.—Typhoid Fever with Arterial Thrombosis and Mania.—Leucocythæmia.—Pulmonary Embolism.

THE last ordinary meeting of this Society for the present session took place on May 22nd, Sir Dyce Duckworth, President, in the chair.

Dr. CALVERT showed a case of Congenital Cranial Synostosis in a child aged fifteen weeks. The bony union was firmest in the region of junction of the coronal and sagittal sutures.

Mr. BRUCE CLARKE showed a man on whom he had performed a new method of Amputation just below the Knee-joint. The procedure was a modification of Stephen Smith's method, a small portion of the head of the tibia being left and the knee-joint not being opened. The amputation wound was a very small one, and the gastrocnemius was practically the only muscle cut.

Mr. W. H. BATTLE exhibited a case of Fæcal Abscess after operation. The patient was a girl aged eighteen, who had come under his notice at the Royal Free Hospital, with a fæcal discharge at the umbilicus which had been going on for seven years and was believed to have commenced after an attack of typhoid fever. The patient was in a hectic condition, and was passing solid fæces as well as pus from the fistula. Exploration showed it to be connected with the sigmoid flexure and to communicate with an abscess which occupied the lower part of the peritoneal cavity behind the abdominal wall. Plastic operations on the gut having failed to close the fistula, he cut it across and brought out both ends at the abdominal opening. The girl was now practically in the condition of a patient after inguinal colotomy. The parents would not consent to a further operation for closure of the fistula.

Mr. HURRY FENWICK showed a man whose left testicle had been removed for tubercular disease; the right organ exhibited evidence of the same affection, and a large tubercular deposit had been scraped away from the prostate. His wife had recently given birth to a child which presented large cheesy swellings at the nape of the neck, the elbow, and the knee. He recorded it, as cases of congenital scrofula were extremely rare.

Dr. BOLTON TOMSON (introduced by Dr. Savill) showed a case of Hereditary Muscular Spasm. There was loss of power in the hands and face as a result of cold, and muscular exertion would also bring on spasm. The affection had been transmitted to the third and fourth generations.

Mr. BRODHURST showed a girl affected with Scoliosis with Rotation, who had been under his treatment for ten years. She had been made to recline, and pressure had been applied to the convexity of the curve by means of an instrumental support, the pressure being gradually increased from below upwards. The result was very satisfactory.

Dr. SIDNEY PHILLIPS related a case of Typhoid Fever with occlusion of the femoral artery during convalescence, and with acute maniacal attacks. The patient was an adult male, and the attack was a mild one, but the heart's action weak and irregular from the first. During convalescence sudden pyrexial attacks occurred. The first rise was to 103°, with sudden pain in the right hypochondrium; the second to 103·4°, and the left common femoral artery became blocked, with absence of pulsation in it and in the popliteal and tibial arteries. Retention of urine occurred at the same time. The limb became powerless, with slight anæsthesia. There was slight œdema of leg and foot, and the affected limb became hotter than its fellow. The surface thermometer showed on one day a difference of five degrees. The rise of temperature lasted three weeks. Pulsation gradually recurred in the limb, which completely recovered. In the third attack of pyrexia the temperature rose to 103·2°, subsiding with epistaxis. The fourth, fifth, and sixth attacks of fever were accompanied by outbreaks of excitement, almost of acute mania, and in one the temperature rose to 106·1°. The patient eventually became quite well. Dr. Sidney Phillips said the plugging of the artery might have been from thrombosis or from embolism, probably the latter; such plugging of the large arteries was not very common as a sequela of fevers, and frequently led to gangrene, as in the case lately recorded in THE LANCET by Dr. Drewitt. A rise of temperature in the affected limb after occlusion of the main artery was not usual, and even if the ordinary collateral circulation were sufficient to the temperature of the part up to the normal, it could not be credited with raising the temperature above the normal. It seemed probable that the shock of the embolism led to a reflex paralysis of the spinal centre, producing retention of urine, and the same shock in the same way led to a paralysis of the vaso-motor constricting nerves of the arteries of the lower limb, allowing an unusual hyperæmia. Dr. Gaskell had shown that these nerves originated in the anterior cornua of the spinal cord, and passed out in the anterior nerve roots to the sciatic plexus. Anything, therefore, which would produce a paralysing influence on the spiral centres for the bladder might also paralyse the centres of origin or the vaso-motor nerves to the arteries of the leg. Referring to the maniacal attacks, Dr. Phillips observed it was not common to get such attacks as immediate sequelæ of fever, with such rises of temperature the patient being quite calm and the temperature normal in the intervals. Possibly they were embolic in origin, but more probably were only signs of functional nerve disturbance in an emotional individual.—The PRESIDENT inquired if there were any family history of insanity, if the superficial veins were enlarged, and if headache were complained of when the maniacal attacks began.—Dr. HALE WHITE suggested that the condition of the limb might be due to thrombosis of the femoral vein, which again might press somewhat on the artery. It would explain the œdema and great heat of the limb, and it was a much commoner complication.—Dr. PHILLIPS, in reply, said there was no family history of insanity, there was slight enlargement of the superficial veins, and the patient did not complain of headache. He was convinced that the artery was blocked, though the vein might have been thrombosed also.

Dr. ORD and Dr. COREMAN described a case of Leucocythæmia which had been under observation nearly three years. The patient, a schoolmaster, aged thirty-six, was first seen on May 5th, 1888, and was under almost continual

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observation until the time of his death on Jan. 19th, 1891. When first examined the spleen occupied the whole of the left side of the abdomen, and in the umbilical and hypogastric region passed to the right of the middle line. The organ was firm and the outline well defined. The patient had first noticed general enlargement of the abdomen towards the end of 1886, and attributed the splenic enlargement to a fall early in 1887. There had been no sickness or diarrhœa, no loss of appetite, no emaciation. He complained of gradually increasing weakness, palpitation, vertigo, and bleeding from the nose and gums. While under observation the spleen gradually increased in size, but not continuously, exertion or excitement causing rapid enlargement, rest in bed, diminution in bulk. When last admitted in December, 1890, the organ extended from the seventh rib in the axillary line to Poupart's ligament, and at least 2 in. to the right of the middle line at the level of the umbilicus. There was at no time any evidence of peritoneal inflammation, but the spleen became tender after exertion. The liver also underwent steady enlargement, at first firm, afterwards softer in character, but without pain or tenderness. There was slight but gradually increasing ascites. The accessory symptoms were few; he suffered severely from headache; he had from time to time hæmorrhages from the nose and gums, and retinal hæmorrhages were also observed. There was no marked variation in temperature. There was a variable presence of albumen in the urine. He was treated by rest, feeding, and the administration of hypophosphite of soda and arsenic. At the post-mortem examination, made thirty hours after death, the spleen was found, large, firm, and smooth, 7¼ lb. in weight, occupying the whole of the left hypochondriac and iliac regions. The liver was enormously enlarged and very friable; the kidneys were enlarged, pale and firm. No enlargement of any gland was found. The blood was everywhere of the consistence of thick chocolate, and there was no coagulation. The points of interest were—first, the duration of the disease, which certainly went as far back as 1886; second, the comparative absence of complications; third, the beneficial effect of arsenic in the treatment. Examination of the blood by Dr. S. M. Copeman was frequently done while patient was in hospital. It was always more opaque than usual, due to the presence of an unusually large number of white corpuscles, for the most part granular in appearance, and presenting no amœboid movements. The proportion between the white and red corpuscles at various observations varied between 1 to 8 and 1 to 4. There were three varieties of white corpuscles recognised—one of normal size, which stained deeply with methylene blue; one three times as large, not staining so deeply with that reagent; and a third about half as large again as an ordinary leucocyte, resembling cells found by Dr. Sherrington in the blood in cholera. The red corpuscles occasionally showed a tendency to the formation of rouleaux, but at times this was altogether absent. Nucleated red corpuscles were found from time to time, and blood platelets were as a rule present in increased numbers. On standing, the red corpuscles rapidly broke down, and the hæmoglobin first underwent reduction, and then, under favourable circumstances, appeared as rectangular crystalline plates. The latter phenomena disappeared when the patient was under the influence of arsenic. The amount of hæmoglobin in the blood was reduced to between 51 per cent. and 32 per cent. of normal, these figures giving the highest and lowest records. Colourless oblong crystals, such as have been described by Charcot, were sometimes found in the blood after standing. These were also found in large numbers in the blood obtained post mortem. The specific gravity of the blood was considerably lowered, the last recorded observation being 1043·5.—Dr. WILBERFORCE SMITH asked what doses of arsenic were given and whether it was found necessary to increase them.—The PRESIDENT inquired if it had been considered desirable to perform transfusion.—Dr. FREDERICK TAYLOR remembered a good many cases which had lasted more than two years; in the case of a boy who was a servant of his own the duration was nearly three years. He asked what was the condition of the patient as to pallor. Was he persistently pale? He had seen many cases in which the anæmic condition was not apparent in the face to the degree that one would expect.—Dr. ORD, in reply, said he had used liq. arsenicalis in doses of from five to ten minims three times daily after food, alone or given with hypophosphite of sodium. It had never given any discomfort. The patient was looking poorly nourished, but was not markedly pallid.—Dr. COPEMAN remarked on the presence in the blood of corpuscles which stained blue and contained purple granules. Mr. Hankin had seen similar bodies in the blood of animals poisoned with anthrax, and Dr. Sherrington had found them in the blood of cholera patients. It was possible they might represent some antagonism between the organism and the poison with which it had been dosed.

Dr. LEONARD REMFRY read notes of a case of Pulmonary Embolism. The patient was admitted with abdominal tumour and commencing intestinal obstruction. After a few days the obstruction was complete. The tumour was aspirated per vaginam, and found to be a hæmatocele. An incision was made, and the cavity washed out and a drainage-tube inserted. Irrigation daily. Rapid relief of symptoms and steady convalescence. The last morning on which the douche was used the patient was suddenly taken with intense dyspnœa and cyanosis. The breathing became weaker and weaker, and finally ceased. Artificial respiration was kept up for three hours, followed by administration of oxygen. There was rapid improvement under the latter. The corneal reflex was absent three hours and a half. Consciousness was very gradually recovered. Paroxysms of dyspnœa and cyanosis occurred at intervals for twenty-four hours. There was deficient expansion of the chest, and pain referred to the right side; crepitations, and afterwards tubular breathing in right lung. The patient gradually but completely recovered. There were six reasons for considering the case to have been one of pulmonary embolism: (1) The suddenness of the attack; (2) the tumultuous breathing, followed by sighing respirations, and finally cessation of breathing; (3) the rapidly developed cyanosis, which disappeared only after forty-eight hours; (4) the occurrence subsequently of localised pneumonia in a small area of the middle of the right lung; (5) the inferior expansion of right side of chest, which was noticed directly after the attack; (6) the occurrence of attack after manipulations which might easily dislodge a clot.

Reviews and Notices of Books.

A Dictionary of Applied Chemistry. By T. E. THORPE, B.Sc. Vict., Ph.D., F.R.S., Treas. C.S., Professor of Chemistry in the Royal College of Science, London. Assisted by Eminent Contributors. Vol. II. London: Longmans & Co. 1891.

IT will be remembered that when a new edition of Watt's "Dictionary of Chemistry" was required the publishers decided to divide the work into two distinct books, one in four volumes being devoted to pure, and the other in three volumes to applied, chemistry. The editors of the first part are Dr. Forster Morley and Mr. Pattison Muir of Cambridge, and they have already issued two volumes of the highest scientific value. Professor Thorpe undertook the technical dictionary, and although he started later, his second volume is now before us. He has frankly admitted that his work overlaps its companion to some extent, but this will readily be pardoned in consideration of the greater completeness which is thereby gained. Few who are seriously interested in chemistry will be satisfied without having both dictionaries on their shelves. Each is in its way a treasure.

Of the present volume about one-fourth has been written by the editor and the rest by a staff of thirty-three contributors, all eminent in one or more branches of applied chemistry. The great mass of the shorter as well as some of the longer articles have been supplied by the editor, whose untiring industry and extensive knowledge are quite as manifest in this volume as in the first. Many of them are models of condensation, and if we sometimes find ourselves wishing for more details it is only necessary to remember that the book had to be completed in three instead of in thirty volumes. As examples of Professor Thorpe's style we may quote the articles on Ethyl Compounds, Fluorine, Manganese, Mercury, Milk, and Nitrogen. The recent history of fluorine is to the scientific reader not only in-

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teresting, but exciting. The extreme activity of the element, the nature of which was first indicated by Ampère in 1810, received early recognition, and countless attempts to isolate it were made. But it resisted all assaults and seemed almost to realise the old alchemical dream of a universal solvent which no bottle could retain. Some investigators—notably, Mr. George Gore of Birmingham—nearly succeeded in the difficult task, but it was reserved for M. Moissan to produce the pure element by the electrolysis of hydrofluoric acid, to which a little hydrogen potassium fluoride had been added. The potassium salt gave the necessary conductivity to the liquid, and fluorine was obtained as a colourless gas, with all the electro-negative energy which had in anticipation been assigned to it. The method for its preparation is here fully described and illustrated by diagrams.

In the articles contributed by other chemists a certain inequality may of course be recognised, although each writer has evidently done his best. Many have but a remote bearing on medical science, as, for example, Mr. Turner's essay on Iron, and Mr. Bedson's on Lead; but, on the other hand, many have the highest interest for, and will be essential to, our readers. Taking merely their titles, we may refer to Glycerine, by the late Mr. Lant Carpenter; Maltose, by Mr. O'Sullivan; no less than twenty-five short articles by Dr. Senier on Drugs; and, above all, a most excellent article on Fermentation by Professor Percy Frankland, who, with the assistance of his accomplished wife, has lately added so much to our knowledge of the subject. In addition to the yeast fermentation to which the name was originally applied, dozens of more or less analogous processes are now recognised. We have not only formed or organised and unformed or soluble ferments, but also an indefinite number of ferments of oxidation and reduction. All of these are classified and their conditions indicated with great lucidity, and many practical directions for the cultivation of organisms and their microscopic detection are given. Nitrification and denitrification are slightly noticed, as they are more fully discussed, the former especially, in a separate article by Mr. Warrington.

Professor Thorpe must be congratulated not only on the excellence of his work, but on the rapidity with which it is being accomplished.

Medical Symbolism in connexion with Historical Studies in the Arts of Healing and Hygiene. By THOMAS S. SOZINSKEY, M.D., Ph.D. Philadelphia and London: F. A. Davis.

THIS is a volume of no little interest to medical men, who, however ready they may be in attaching significance to signs and symptoms of disease, are frequently at a loss to explain those allegorical figures and symbols which from prehistoric times have been associated with the healing art. Symbolism has been defined as crystallised mythology, but many symbols could be mentioned which have never had anything to do with mythology. It was a pictorial method of appealing to a rude and untutored people, and of conveying by the law of association more vivid impressions of abstract ideas. In the volume before us we have an admirable and successful attempt to set forth in order those medical symbols which have come down to us, and to explain on historical grounds their significance. An astonishing amount of information is contained within the covers of the book, and every page of the work bears token of the painstaking genius and erudite mind of the now unhappily deceased author. We cannot do more than hint at some of the many interesting subjects dealt with in the book. With remarkable clearness the author points out that these symbols, significant as they were of the onset or cure of disease, in many cases consisted of the figure of the deity to whom the origin of the disease was ascribed, or of some one of his attributes. Hippocrates expressed the popular belief in the words, "Men regarded the nature of disease and its cause as divine, from ignorance and wonder." The sun god, Apollo, or Phœbus, or Peon, was regarded as a personification of the healing powers of nature. In mythology he is represented as with Coronis, a Thessalian virgin, becoming the father of Æsculapius, with whose name so much of medical symbolism is attached. Coronis was slain by Artemis, the Goddess of Chastity, Æsculapius, like most of the ancient heroes, being rescued as was Macduff, and afterwards suckled by a she goat. Under the care of Chiron, "the sire of pharmacy," he became a master in the healing art; and so few of his patients died, that he excited the envy of Pluto, and was killed by Jupiter on account of the perfection to which he brought the medical profession. His two sons, Machaon and Podalirius, and more especially his daughters Hygeia, Panacea, Jaso, and Ægle, also form fruitful subjects of medical symbolism. On the various statues of Æsculapius are to be found, in consonance with ancient custom, the attributes of the god. There are the Æsculapian staff and serpent, frequently confounded with the caduceus of Hermes, which is adorned with two serpents in the posture of generation. The author remarks that the association of Hermes or of his caduceus with the art of medicine was not complimentary to the physician, as Hermes, being an expert thief, was classed as the God of Rogues. It was his function "to draw the souls from hollow graves" and "drive them down the Stygian waves,' which the author submits is scarcely a part of the physician's function. The meaning of the staff and serpent has given rise to much controversy, as also the significance of the bunch of herbs, the wreath of laurel, the bowl, the scroll, and more curiously the dog, the cock, and the goat which are associated with the god. How few medical men, for instance, could explain why the dog days (July 22nd to Aug. 23rd) were called the physician's holiday, or with what subjects of anatomy, pathology, and therapeutics the Hermetic medical works dealt.

The chapter on Egyptian Medicine will perhaps show how far progress has been made in preventive or State medicine since Moses enunciated his methods of dealing with contagious diseases, which the writer claims to be "far in advance of our practice of to-day." The explanation of the symbol of the pine cone will afford proof that the medical virtues of the fir tree were not by any means discovered during the present century, as some would have us suppose. The chapter headed "Dibbara, the God of Pestilence," is most interesting. It explains and illustrates how every race has ascribed the causation of epidemic diseases to the incensed feelings of a god. "He that sinneth in the sight of his Maker shall fall into the hands of the physician," says the author of Ecclesiasticus; although nowadays it is usual to adopt the view of Hippocrates, who combats this superstition in the words, "I do not count it a worthy opinion to hold that the body of man is polluted by God," and to ascribe epidemic diseases to other agencies than evil spirits, the pestilence that walketh in darkness, or the destroying angel. This subject is treated of in an able and instructive style; and the author proceeds to describe the medical charms and amulets which were formerly, and by many classes of persons are even now, regarded as possessing mysterious powers of removing evil influences and of curing diseases. Among these he refers to adder stones, blessed objects, relics, numeral letters, and certain colours, especially red. To this day a red string is occasionally seen around the necks of children, to protect them from scarlet fever, and the belief in the special virtue of red flannel is almost universal. Edward II., when suffering from small-pox, ordered his bed and his attendants to be "all n scarlet," and imputes "ye cure in great measure to ye virtue of ye colour.' Letters of the

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alphabet, touch pieces, issued first by Henry VII. to persons "touched for the evil," the medicine bag of the North American Indians, all have been used as a means of mitigating disease. The author insinuates that, as in ancient and less enlightened times, the superstition which even now exists in the land would still lead Puck, the fairy's messenger, if he could see the "fond pageants" of modern mortals of even an advanced type, when dealing with agencies for the prevention and cure of disease, to exclaim with astonishment, "Lord! what fools these mortals be!"

The personal signs and symbols connected with the profession of medicine—the barber's pole, the yellow flag, the peculiar mode of travelling, the gold-headed cane—are all dealt with, and will afford interest to curious readers.

It has been put forth as a matter of regret that at the present time there is nothing about the dress of the physician symbolic of his calling; and recently recommendations have been made on the subject. The following are the items of the dress worn by Dr. Henry Revell Reynolds, one of the physicians of George III.: "a well-powdered, three-tailed wig, a silk coat, breeches, stockings, buckled shoes, and lace ruffles." "The wig," says Jeaffreson, "gave profound learning and wise thought to lads just out of their teens," and the author of "Medical Symbolism" slyly remarks, "If this were the case, it should be coaxed into use again." We heartily recommend this volume as a work of great literary skill, and deeply regret that the young and able author has not been spared to add still more to a class of literature replete with information of a most attractive and useful kind. The volume, "containing as it does," to quote the words of the biographer of the deceased author, "so much that is unique, and in a field not often touched by previous writers, 'Medical Symbolism' is sure to find appreciative readers not only among the fraternity to which Dr. Sozinskey belonged, but among scientific and literary circles generally."

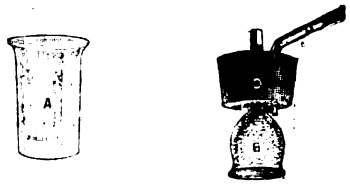
The River Irwell and its Tributaries. A Monograph on River Pollution. By G. E. and A. R. DAVIS. Manchester: J. Heywood. 1890. Pp. 96. With Sketch Map.

THIS work consists of forty-six tables, giving somewhat full analyses of the waters of the several rivers near their sources, and at selected points in their courses at drought, normal, high-water, and storm-flow, with remarks on the nature of the pollutions and the methods of analysis, which must obviously differ in their details from those employed in the examination of potable waters. The state of the Irwell, without exception, unless the Calder be one, the foulest river in the land, is at once the product and shame of our boasted civilisation, and this picture of the river as it is, is the more opportune seeing that the Manchester Ship Canal with its succession of locks and basins will convert what is at best a running sewer into a series of cesspools. To call these rivers "sewers" is, however, mere flattery, since some of them are incomparably fouler than the sewers of Leeds, Sheffield, or Salford itself, while the Thames at London Bridge is relatively a crystal stream. Some of the figures—e.g., 294 grains per gallon of soluble solids and 33 of chlorine yielded by Tottington brook in drought—are enough to take away one's breath, and one is almost driven to the conclusion that the waters are too foul for the growth of pathogenic organisms or that these are destroyed by the putrefactive organisms. But unless compulsion can be brought to bear there is little hope for improvement, since the members of the local sanitary (?) authorities are themselves the chief offenders. It is high time that the Local Government Board assumed the right of indicating the best, or a few of the "best possible means" of purifying factory wastes and enforced their adoption; for Messrs. Davis maintain, and very properly too, that efficient processes are known for almost all circumstances. For example, the poison evaporator in many paper works pays its cost within a year by the recovery of the soda alone, and we know that the grease from wool is the source of so profitable a product as lanoline. We shall await with interest their promised work on these matters. We are, however, not a little surprised that such experts should refer to the recommendation of the commissioners as to an authority, for it is obvious that the proportion that the volume of an effluent bears to that of the river is more important than its actual composition, and that it is always possible to bring the work below the specified concentration by diluting it with water taken from the river to which it is to be returned, thus complying with the letter while violating the intention of the recommendation. The only true standard would be the relative purity of the stream above and below the point of discharge. We note, too, the misuse of the term "watershed" for basin or drainage area; watershed = German *Wasserscheide*, being properly the *parting* of the surface and subsoil waters in opposite directions, or line of demarcation between two river basins.

New Invention.

NEW CHLORIDE OF AMMONIUM INHALER.

THERE are in the market many inhalers by which the fumes of ammonium chloride can be produced in a state of purity and brought easily into contact with the mucous membrane of the pharynx and nasal passages. One of the simplest, neatest, and most compact we have yet seen is that which has been forwarded to us by Mr. J. Preston, High-street, Sheffield. It consists of a small glass vessel stoppered with a tightly fitting perforated cork, into which a glass bulb, open below and filled with glass wool, is inserted. Above, this bulb communicates with the air. At the side of the cork is a bent glass tube open at both ends. In order to



produce the vapour some thirty or forty drops of the dilute solution of ammonia are placed in the glass vessel, and about the same number of drops of strong hydrochloric acid is poured on to the glass wool in the bulb. The cork is now fixed in the vessel, and the fumes are given off and inhaled, and may be made to pass through the nostrils. If any volatile substance requires to be inhaled it may be placed on the glass wool and hot water put in the glass vessel. The apparatus is simple, safe, and effectual, gives a neutral vapour, and can be used for any volatile medicament.

ROYAL UNIVERSITY OF IRELAND.—The following Honours and Exhibitions have been awarded:—*Second Examination in Medicine:* Exhibitions, Second Class, £15 each: Emily Winifred Dickson and William McMath. Honours, Second Class: Emily W. Dickson and William McMath.—*Third Examination in Medicine:* Exhibitions, Second Class, £20 each: Alexander Jamison and Robert Leathem. Honours, Second Class: Alex. Jamison and R. Leathem.—*Medical Degrees* (*M.B., B.Ch., B.A.O.*): Exhibitions, Second Class, £25: *Hester D. Russell. Honours: Hester Russell. (*Disqualified by standing.)

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THE LANCET.

LONDON: SATURDAY, MAY 30, 1891.

THE opening proceedings of the General Medical Council upon the first day of the session were necessarily somewhat subdued and sad. The temporary occupation of the chair by Mr. WHEELHOUSE and the reception of Mr. THOMAS BRYANT, the new representative of the Royal College of Surgeons, emphasised the fact that the Council was a house of mourning, and that a new President must be elected in lieu of the late Professor JOHN MARSHALL. In one sense this task was purely formal, since Sir RICHARD QUAIN had been acting as President during the interval, and there could be no doubt that at the first opportunity he would be unanimously appointed. Still, in spite of the happiness of the terms in which Mr. BRUDENELL CARTER proposed his election, and the enthusiasm with which the election was made, the feeling of regretful melancholy came to the front once more during Sir RICHARD QUAIN'S touching references to his predecessor, and the gloom deepened during the few words of Dr. HAUGHTON in seconding the resolution of condolence with the family of the late President. This resolution referred to the characteristics by which he had endeared himself to all who came into contact with him, his unfailing kindness and courtesy, his patient and well-balanced judgment, and to the sense of personal loss of "so worthy a colleague and so able a President."

Turning from these sad thoughts to the present and the future, we may note, in passing, the terms in which the election of the President was moved. To hear that one strong claim lies in the power of giving "rather pertinent reminders of the costliness of eloquence" is distinctly encouraging, and, unless this power is to remain in abeyance, it may be hoped that the proceedings of the General Medical Council will be somewhat shorter than usual. The adroitness of the reference to the peculiar advantage of selecting a Crown nominee as one "capable of holding an even balance between all the conflicting interests" was also noteworthy, expressing, in brief, the cause of so much costly eloquence. Sir RICHARD QUAIN merits and has our heartiest congratulations on his election. He has worked assiduously upon the Council, both as treasurer and in many other ways, for many years, and he is therefore, by his experience, as well as by his other qualities, admirably fitted to discharge the duties of the presidential chair. Reference to his opening remarks shows that he already feels the influence of his new position of power, and we cordially hope he may long be enabled to display for the benefit of the profession the qualifications mentioned by Mr. BRUDENELL CARTER.

It cannot be said that the first day was productive of much in the way of serious business. When the usual statistical tables were received, it was pointed out that there were no returns of the examination for the Fellowship of the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow; but, on the technical ground that the Fellowship was not a "qualifying examination," this omission was excused. Then an amusing interlude on election procedure ensued. Direct representatives on the General Medical Council have shortly to be elected, and it was proposed to change the date of the autumn meeting to give them an opportunity of being present. According to the Medical Act (1886), new representatives have to be elected three weeks before the term of office of their predecessors expires, and therefore the difficulty of two representatives claiming to sit in the same seat has to be met. Sir WALTER FOSTER, a direct representative, seemed to share the difficulties of Mr. GILBERT'S "Mikado." His remarks imply a conviction that "self-decapitation is an extremely difficult, not to say dangerous, thing to attempt; and it's suicide, and suicide is a capital offence," of which he doubted the legality, so the matter was referred to the law officer of the Council to ascertain the exact legal position. The removal of a name from the Register, although ultimately agreed to, gave rise to a certain amount of discussion. There can be no doubt that the exercise of its disciplinary powers entails on the General Medical Council the consumption of a vast amount of time, which might be saved, perhaps, if all qualifying bodies possessed the power of withdrawing the qualifications they had conferred. A disagreeable duty has sometimes to be performed, and certainly the time of the Council would be economised if this duty were performed by the qualifying bodies. Sir JOHN SIMON'S idea that those who have not got the power ought to have the power was sufficiently clear, but he did not conclude with a resolution, although he traced the question back to ecclesiastical times. The next business was the consideration of a proposal that University graduates in Medicine should be required to have spent not less than two years in the study of mechanics, physics, chemistry, and natural history, and not less than four years in the study of medicine, surgery, and midwifery. However, the previous question was promptly moved on the ground that a debate upon this subject would be a serious loss of time, and the feeling of the majority was found to be in favour of the previous question, and the labours of the first day were brought to a close. The second day's sitting was taken up wholly with the consideration of cases of alleged unprofessional conduct.

THE publicity which has been given to the allegations as to the insanitary condition of St. Bartholomew's Hospital is evidence of the interest which is felt in institutions devoted to the medical treatment of the sick poor. The bare suggestion that there has been negligence to provide proper surroundings for those who in times of illness are removed from the care of their friends has created a feeling which can only be allayed by the most careful inquiry and the fullest publicity as to the circumstances of the institution.

The report of Dr. SEDGWICK SAUNDERS, medical officer of health for the City, gives a detailed account of the condition of St. Bartholomew's Hospital, and at once places before the public all the facts which are necessary to enable this condition to be understood. Briefly stated, the hospital has shared, with other institutions erected a number of years ago, faults which the better thought of more recent times has taught should be avoided. Water-

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closets and slop sinks have been situated in chambers opening directly into the wards; sink wastes have been connected directly with drains; branch drains have been laid beneath buildings and have not been aerially disconnected from large brick main drains, which Dr. SAUNDERS shows are to all intents and purposes sewers; and lastly, the size of these sewers has been so great that they would have served the purposes of a population more than twenty times that which is resident in the hospital. In other words, the drainage of the institution has not been reconstructed since drainage has been more carefully studied and the proper method of its construction has been understood.

The prevalence of diphtheria among the attendants has led to the suggestion that the disease was due to the structural defects stated above. The investigations which have been made by Dr. THORNE THORNE, by Dr. SAUNDERS, and by the hospital staff sufficiently dispel this idea. The diphtheria was practically limited to members of the nursing staff who have been employed in the diphtheria wards, and there is no reason for believing that injury has accrued to the patients from conditions which admittedly need improvement. Since January this improvement has been taken seriously in hand, and Dr. SAUNDERS bears witness to the skill shown in designing the work which has been carried out, and to the thoroughness with which it has been executed. The reconstruction of the main drains or sewers has, however, not yet been undertaken, and we desire to refer to this point because Dr. SAUNDERS appears to be under the impression that Dr. THORNE has regarded this reconstruction as unnecessary. On this point he is evidently in error. Dr. THORNE'S statement was to the effect that whilst these drains are, in point of size, constructive and otherwise, by no means such as would be regarded as proper ones, yet he anticipated such material advantages from the works which he had recommended, as regards the drains leading from the several buildings named into the main drains, that he was not *at present* prepared to advise that any reconstruction of the main drain is called for. That the existing main drains should eventually be replaced by others better suited to the requirements of the institution is accepted by all. The only point upon which there appears to be difference of opinion is as to the time when this alteration should be made. If there is no very urgent reason for delay, we would submit that the work should be executed at once.

We note that on Wednesday the Commissioners of Sewers decided to serve upon the hospital authorities notice to comply with the recommendations contained in Dr. SAUNDERS'S report. Apart from any question as to the statutory powers of the Commissioners, we cannot but think this proceeding to be superfluous. The governing body of the hospital have shown themselves desirous of doing everything that should be done to place the hospital, from a sanitary point of view, beyond suspicion, and we do not doubt their willingness to complete work much of which has been done already with great efficiency.

THE transmission of epizoötic aphtha—or, as it is commonly called, foot-and-mouth disease—from cattle to the human subject, though fortunately not of very frequent occurrence, has several times been reported. Thus Dr. ROBINSON of Dover had an opportunity of examining a large number of cases of this disease near Ashford in 1884, and a somewhat similar epidemic occurred once in Norwich.[1] On the Continent, too, outbreaks of foot-and-mouth disease in human beings have been reported by BOLLINGER, HERTWIG, GAUPP, and others. A paper has just been published on this subject in the *Vrach* by Dr. NESVITSKI, who has recently had under his care six children and two adults suffering from foot-and-mouth disease. One of the children he was able to observe most carefully all through, and he reports this case pretty fully. All, however, presented much the same symptoms with some comparatively slight differences. There was catarrhal inflammation of the mucous membrane of the mouth, and a vesicular eruption on the soft palate, on the buccal mucous membrane, on the gums and lips, and on the edges of the tongue; but in no case on the posterior wall of the pharynx, on the tonsils, on the arches of the palate, or on the dorsum of the tongue. On opening the vesicles, a thick, yellowish liquid exuded. This was much thinner and of a lighter colour in the case of vesicles which had only just formed. The course of the vesicles was very regular; they dried up, leaving a small excoriation, which readily bled but soon healed up, never going on to ulceration. All the patients had some rise of temperature, which persisted until the eruption disappeared. In the case of which details are given the evening temperature for the first five days was about 39·5° C.; on the 6th it was 38·6° C; and after that it became normal. In all the cases there was an acrid smell from the mouth, with profuse secretion of saliva and coryza. In three of the children there was pain in the abdomen. One little boy suffered from diarrhœa, the rest of the children being rather inclined to constipation. In the two adults there was no disturbance of the bowels. The duration of the affection was from eight to twelve days. In two of the children there was parotitis, which, however, did not present itself until after the other symptoms had disappeared. In none of the cases could any affection be found in the body or limbs, there being no purpuric spots as described by BOLLINGER, and no affection of the finger-nails, as has sometimes occurred. On the other hand, no other writer, as far as the author is aware, has noted parotitis as a complication. Again, diarrhœa seems to have been much more common among BOLLINGER'S cases than in this Russian series, which in this respect more nearly resembled those seen by GAUPP. The diseases for which foot-and mouth disease in the human subject is liable to be mistaken are catarrhal stomatitis—simple, erythematous and phlegmonous—ordinary aphthous stomatitis, and thrush. The diagnosis in Dr. NESVITSKI'S cases was rendered all the more certain by the discovery that in every instance the patients had been drinking milk from cows affected with foot-and-mouth disease. The treatment adopted was to give quinine in very frequent doses and to rinse out the mouth with a boracic lotion. The small excoriations were painted with nitrate of silver. With respect to the treatment of this affection, some important laboratory and clinical observations have quite recently been conducted in Germany by Professor HUEPPE and Veterinary Surgeon RENNER on the

[1] See THE LANCET, vol. i. 1884, pp. 434 and 629; also vol. ii. 1885, p. 863

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action of dithiosalicylate of soda—a substance discovered by HEINRICH BAUM—upon foot-and-mouth disease. It would seem to exert a powerfully destructive action on a good many micro-organisms which are connected with infectious diseases, a 15 per cent. aqueous solution, for example, it is stated, destroys the bacilli of cholera and anthrax in from two to fifteen minutes. Herr RENNER painted the udders and hoofs of affected cows with 2½ per cent. and 5 per cent. solutions, and found that a very rapid cure ensued; a number of German stockkeepers, too, who have used this remedy speak very highly of its efficacy. It appears that it may also be given to human patients internally, for Dr. LINDENBORN of Frankfort has prescribed it for hospital patients suffering from chronic articular rheumatism, in eight-grain doses four or five times daily, with good effect. A lithium salt has also been prepared, and is said to produce remarkably good results in both rheumatism and gout.

As might have been anticipated, the extension of the curriculum of study to a period of five years is already causing much concern to those who are charged with the necessary rearrangement of studies and of examinations. At a recent meeting of the College of Physicians the obstetricians urged their claim for an increased period of study, but the various schemes submitted showed that more trouble had been experienced with materia medica than with midwifery and diseases of women. The view has often already been expressed in these columns that the present system of examination in materia medica can only lead to disastrous results. It is allowed to be taken far too early in the student's career for him to have acquired any grasp of the meaning of many of the terms employed, and the schedule of the Conjoint Board still employs the very misleading term "medicinal actions," so that, unless guided by a teacher who knows the real requirements of the examiners, the chances are largely in favour of the student struggling and floundering hopelessly in his first year through the therapeutic actions, and thus storing up a mass of wrong impressions through necessary ignorance of the proper applications and limitations of the technical terms employed. These difficulties have been so well recognised that, for the purposes of the examination, the term "medicinal actions" has apparently long been held to mean nothing more than "physiological actions." Even this concession has not been found to be altogether satisfactory. At the time when this examination may be taken, even physiological terms may not be appreciated, and, on the other hand, it has been found that this limitation of knowledge leaves a therapeutic blank which is rarely filled up at a later date. Complaints of the ignorance displayed in prescribing are frequently heard from examiners in medicine at the Final Examination. To judge from the schemes submitted to the Colleges, all these difficulties have been fully realised, and much ingenuity has been displayed in the attempts to split up the subject so as to obtain more satisfactory results. One most important step in the right direction is the proposition that attendance on a course of lectures on materia medica and therapeutics should once more be compulsory. This will tend to discourage the system of cramming, which it is to be feared has lately grown into fashion. But beyond this decided step, and the conviction that an examination in therapeutics should form part of the examination to be held at the end of the fourth year, the suggested schemes appear to betray some bewilderment. What is the most convenient time for the examination in materia medica and pharmacy? The first schemes placed an examination in pharmacy together with chemistry and biology, but the scheme which has been provisionally approved by the Royal College of Surgeons provides for an examination in materia medica, pharmacy, and therapeutics at the end of the fourth year, when the candidate is also being examined in medicine, surgery, forensic medicine, and public health, and possibly also midwifery and diseases of women. All who remember the amount of wearisome detail comprised under the terms materia medica and pharmacy, will sympathise with the candidate required to bear this heavy burden, and will regret that at a time when there is so much book work and clinical work of a more attractive nature any energy should be diverted into this channel. While fully realising the importance of a study of therapeutics concurrently with a study of medicine, it is to be hoped that candidates may at least be allowed the option of clearing off the examination in pharmacy at some earlier period. So far the scheme approved by the Council of the Royal College of Surgeons expresses adherence to the principle of four examinations, but on the understanding that details are subject to further consideration. We believe that with very little trouble the whole subject of materia medica, pharmacy, and therapeutics might conveniently be split up into two or more portions, with regard to which examinations might be held at different times. In this way the subject might be made more practical and of greater lasting utility.

Annotations.

"Ne quid nimis."

THE HOSPITAL SUNDAY FUND.

IN another part of our impression to-day will be found the Supplement to which we last week referred as about to issue in support of the Hospital Sunday Fund Collection. We have there given a comprehensive view of one aspect of hospital work, and in the tabular statements by which it is illustrated a summary of the whole of the work accomplished during the past year by the hospitals of the metropolis. Such a statement should prove very helpful to those who next week will be making appeal to the various congregations of the metropolis to aid in the most charitable work of serving the sick poor. We trust that it will actually prove so, and we have, as usual, widely circulated abstracts from the Supplement which we to-day publish among the ministers of various denominations in the metropolis. On this occasion, moreover, we have sought to bring our professional brethren into line with this great movement, and for this purpose have circulated among the medical practitioners residing within the metropolitan area a large number of copies of the abstract. If our readers will be at the pains to place these in the hands of patients whom they think likely to be influenced by such a picture as is here presented of hospital work, they will make a most important contribution to the

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success of the present appeal. Many persons would attach to a statement which came to them from a medical man whom they knew and trusted an importance which they would by no means attribute to the same communication if less well authenticated, especially when its bearing is on such a subject as hospital management or hospital work. We desire, therefore, to-day to enlist the sympathy and assistance of our many friends in giving a much-needed impulse to the effort which will next week be made by the religious congregations of the metropolis to aid in the great work done by the hospital medical charities of the metropolis in aid of the London poor.

A TEACHING UNIVERSITY FOR LONDON.

THE Royal Commission having decided that the Charter to grant medical degrees asked for by the Royal College of Physicians of London and the Royal College of Surgeons of England ought not to be granted, and the recent vote of Convocation having determined that the Senate and Convocation of the University of London cannot apply for a new Charter, such as was drawn up by the Senate after a reasonable time as suggested by the Royal Commission, the petitions of University and King's Colleges, praying to be constituted into a University in and for the London district, with power to grant degrees in the Faculties of Arts, Science, and Medicine, have now to be considered. We understand that the Lord President of the Privy Council has given notice to the authorities of those Colleges that he will be prepared at an early date to appoint a committee of the Privy Council, and to hear counsel in regard to their petition and those petitions which have been lodged against their prayer. The petitions which are before the Privy Council opposing the demand of University and King's Colleges are from the University of London, the Royal Colleges of Physicians and Surgeons, the University of Durham College of Medicine, and the University of Edinburgh, which latter is in general sympathy, but raises objections to certain provisions affecting their interest. From the list scheduled in the appendix to the report of the Royal Commission it appears that a statement of the Westminster Hospital Medical School gives reasons in support of University and King's Colleges, so far as the medical faculty is concerned; whilst the petition of the surgeons and physicians in certain metropolitan hospitals recognises the need in London of some academic body to grant medical degrees, which shall directly concern itself with the educational affairs of the faculty. It states that "in the proposed Charter of University and King's Colleges certain advantage is given to the medical schools of those Colleges, and that each metropolitan medical school affords a complete course of medical teaching, "and prays" that in any Charter granted by Her Majesty the position of the medical schools represented by the petitioners may be fully recognised, and that they may be admitted into the constitution of any proposed university on terms of equality with any other teaching institution of like standing." The Scotch and Irish corporations object to any new university which would give special privileges to the English Royal Colleges. It is evident that the other bodies interested, besides the two Teaching Colleges, will soon be called on by the Lord President of the Privy Council to support their petitions, and it behoves the London medical schools to take early and efficient steps to have their just claims brought before the Privy Council, as it is very apparent that the question will soon approach a crisis. In this connexion we are glad to note that a meeting of the delegates of the various medical schools (including those of King's and University Colleges) has been summoned for Thursday, June 4th, at 5 P.M., at the Middlesex Hospital. The Draft Charter of the two Teaching Colleges was published by us *in extenso* on Aug. 6th, 1887.

THE ROYAL BRITISH NURSES' ASSOCIATION.

IT has been already announced through the columns of the daily press that the application made by this Association to the Board of Trade for a licence to register without the addition of the word "limited" to its title has been refused, the Board not having been satisfied with the case put forward by the promoters. This decision has, we understand, been arrived at without hearing the promoters in support of their application, and is not to be considered as a final deliverance. It may be that when explanations come to be exchanged between the Board and the promoters the scruples which at present stand in the way of the necessary permission will be removed. Even if some modification of the powers which the Association proposes to take, and of the definition of its objects, should be necessary, we cannot imagine that any serious difficulty will be found in making such verbal amendments as will satisfy the official requirements. The scope of the undertaking is certainly in no sense that of a business or profit-making concern, so that the difficulty, if any, can only be a matter of expression. We are informed that an interview will be sought with the President of the Board of Trade for the purpose of endeavouring to arrive at an understanding, and we should hope that the result will be to remove, in one way or another, the existing difficulty in the path of the Association.

FOREIGN BODIES SWALLOWED BY A STOWAWAY.

ON Thursday, May 21st, the body of an Arab, found dead on one of the ships in the Albert Docks, was taken to the Seamen's Hospital, name unknown. A necropsy was ordered by the coroner, and made by Dr. F. Croucher, house surgeon to the branch hospital. There were no signs of disease in the brain or the chest, except a few old adhesions in the left pleural cavity. The gall-bladder was very distended and full. Three small ulcers existed on the anterior coat of the stomach. Several patches of inflammation were found in the small intestine. In the cæcum were found twenty trousers buttons, three cog-wheels (apparently out of a watch, two of them 1 in. in diameter—these were doubled), one 2 in. steel screw bent double and one 1 in. screw, six pieces of a lock (the biggest piece was 1¼ in. long and ½ in. broad), a circular piece of brass (1⅜ in. in diameter folded into four), several pieces of iron wire (four were 1½ in. in length), brass, and lead, and two key tallies on a ring, one inch in length. In the ascending colon, about five inches from the cæcum, were found a piece of steel wire one-eighth of an inch in diameter, and three inches and a half in length, bent double, and one small cog-wheel. The weight of these bodies together amounted almost exactly to half a pound. The body was much emaciated; no subcutaneous fat was present in chest or abdominal walls, or any fat round the kidneys. The deceased was quite unknown; no particulars could be discovered by the police employed to obtain evidence for the purposes of the inquest. There was no perforation of intestines, or any sign of disease in the colon.

INDIA AND THE INTERNATIONAL CONGRESS OF HYGIENE.

WE are pleased to record that a strong Indian committee has been formed in London to ensure the adequate representation of Indian interests at the forthcoming Congress. The committee is composed of leading Anglo-Indian officials and prominent East India merchants, together with other non-officials. Thus what has often been termed the Second India will have voice in the Congress. By this is meant the non-official India, and it embraces very vast interests. Finally, there are three native Indians on the com-

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mittee—namely, Mr. Dadabhoy Nowrojee, Mr. B. M. Malabari, and Mr. M. M. Bhownaggree, C.I.E. These three gentlemen are Parsees, but several prominent Hindoos and Mahomedans have been asked to join the London committee. In India the Chambers of Commerce of Bengal, Bombay, Kurrachee, and Upper India have already appointed delegates, thus following the example of the Indian Government and the Municipal Corporation of Calcutta. Other leading municipalities and the syndicates of the Indian universities have intimated their intention of nominating delegates, and we are especially pleased to hear that some native princes have promised aid, either by sending subscriptions or deputing representatives. In one respect, however, prompt and energetic action is necessary. The London Indian Committee have strongly urged upon the Secretary of State for India the desirability of securing the attendance at the Congress of a certain number of native experts. It is understood that the home authorities for India thoroughly approve of this proposal. Surely on further consideration Lord Lansdowne's Government will be equally desirous to see this carried out. There can be no lack of suitable candidates; and how can the native populations of India be taught to appreciate the benefits of sanitation if we do not have native Indians as members of the Congress of Hygiene? The suggestion we threw out last week as to the advisability of discussing the factory legislation proposed for India has, we are informed, been already adopted. The mill-owners of India will, in any case, have their say at the Congress, and we hope that the native workpeople will find their interests equally well befriended.

SAFETY LAMPS AND MINERS' EYESIGHT.

AFTER having been in use for about three-quarters of a century, the lamp known as the Davy lamp has had a heavy indictment laid against it. It is said to be the cause of serious visual troubles, amongst which the most important are nystagmus, hemeralopia, and intolerance of light. The lamp in question was one of the products of Sir Humphry Davy's genius, and was invented by him about the year 1815. Finding that the gases derived from coal required a very high temperature to ignite, and that it was difficult to reach that temperature in the proximity of metal, on account of the rapid conduction of heat that took place, he gradually reduced the length of a series of chimneys till at length they formed only a network of metal threads or gauze. In the Davy lamp the flame was surrounded by a wire gauze, the threads of which had a diameter of one-fortieth of an inch, so arranged as to present 748 apertures to the inch. The effect of such a septum between flame and an inflammable gas may be well shown by bringing down a sheet of gauze upon gas issuing from an ordinary argand burner; the gas above the gauze may be lighted without communicating the flame to the gas below the gauze, even though the wire may become red-hot. The limit of size of Davy's lamp was found to be two inches in diameter, and that of the meshes one-twentieth of an inch. Various improvements were subsequently made, as by Müseler, a Belgian, who greatly improved the light by replacing part of the gauze with glass; whilst Davy himself suggested the introduction of a small cage of platinum wire into the wire gauze safety lamp, the ignition or incandescence of which supplied a tolerably good light. The amount of light obtained by these means is, however, at best but small. In the Staveley district the lamps in use only afford a light equivalent to three-fourths of that imparted by a standard candle, or, under the ordinary conditions of its use, to not more than one-half that of a candle. A further disadvantage is that under the special rules in force in collieries safety lamps are required to be placed at least two feet away from the swing of the pick. And lastly, Dr. Court finds that after burning for some hours the light distinctly deteriorates. It is to Dr. Court that the miners are indebted for making a careful inquiry into the whole subject of safety lamps and miners' eyesight. Dr. Court's practice lies in the midst of a closely aggregated mining community, and, finding that various affections of the eye were becoming more common in this district, he set to work to determine the cause. He soon obtained some remarkable statistics. He examined 1097 persons, representing all grades of workmen employed in mines. Roughly speaking, one-half of these were men habitually using safety lamps, whilst the other half were working with naked lights. Now, of the 524 men working with safety lamps, 164 were found to be suffering from nystagmus or oscillation of the globes, 127 from hemeralopia, and 61 from photophobia, while of the 573 miners using naked lights only 32 had nystagmus, 12 hemeralopia, and one photophobia. Many of the last group had, however, previously worked in safety-lamp mines, and it was found that of 544 men who had always used naked lamps, only three had nystagmus, and amongst 228 men using torch lights not a single case of the disease occurred. There seems then to be strong reason for believing that the feeble light of the safety lamp is at the root of the mischief. It is difficult to give any precise explanation of the cause of the supervention of nystagmus in those working in a feeble light; but it may be remarked that, as may be seen in looking at the stars, a small image falling on the fovea centralis of a highly sensitive retina soon exhausts it and the eye is rolled a little to one side that the image may fall on an adjoining region. By this means a kind of restlessness or oscillation is commenced, which is accentuated by the awkward recumbent position which is commonly assumed during work, requiring for fixation a constant, and therefore fatiguing, effort on the part of the internal and external recti. The intolerance of light and dimness of vision observed on return to ground are more easily intelligible. It is clear that there is room for improvement in the light employed by miners, and the possibility of using some form of portable electric light naturally suggests itself; and, as our contemporary the *Leeds Mercury*, in referring to this subject, remarks, inventors would do well to seek a greater degree of perfection in this direction, bearing in mind that to insure the general adoption of a new lamp its construction must be a commercial as well as a scientific success.

RECOVERY AFTER INTRA-PERITONEAL WOUND OF THE BLADDER.

DR. ROSENBAUM recently communicated to the Caucasian Medical Society an account of an interesting case of a dagger wound of the abdomen, which penetrated the bladder from its peritoneal surface, the patient recovering. Wounds of this character are well known to be exceedingly dangerous, and Dr. Rosenbaum had not met with any case in medical literature in which recovery had occurred. The patient was a man of twenty-nine years of age, who was wounded on Dec. 12th at 8 o'clock in the evening by a dagger thrust in the lower part of the abdomen. He felt at the time very severe pain, but there was little hæmorrhage. Very soon he found the intestines protruding from the wound, and attempted to prevent their extrusion by pressing a handkerchief against them with his hand. He remembers that he then felt a great desire to pass urine, but was unable to do so. After this he lost consciousness, and was in that condition when he was brought to the Michael Hospital in Tiflis at 9 o'clock. On examination he was then very pale, the pupils acted badly to light, the extremities were cold, he lay motionless on the injured side, the pulse was thready and scarcely perceptible, and he gave no sign of intelligence when asked a question. There was a large gaping wound

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occupying the left iliac region, six centimetres in length, running upwards and to the left from just above the symphysis pubis. From this there was extruded a mass of omentum as large as half the fist, together with some loops of small intestine. The skin in the neighbourhood of the wound was very dirty and covered with hair; the omentum was also very dirty, and was therefore excised, and with the stump, after thorough cleansing with a solution of perchloride of mercury, returned into the abdominal cavity. The protruded intestine was found not to be wounded, and, after assiduous disinfection, was returned. The bladder was now examined, as the wound was just over it. About a tablespoonful of bloody urine was with difficulty drawn off by means of a silver catheter. The finger introduced into the abdominal wound could be passed directly into the cavity of the bladder. In order to obtain sufficient room to suture the vesical wound it was necessary to enlarge the abdominal wound to about thirteen centimetres. The edges of the bladder were brought together by means of forceps, and eight or ten silk sutures inserted according to Lembert's plan for suture of the gut, the length of the wound being five or six centimetres. Afterwards the cavity of the abdomen was very carefully washed out with a 6 per cent. solution of chloride of sodium and the vesical wound stitched to the abdominal wound, the whole being sewn with a double row of interrupted sutures, Sir William Mac Cormac's advice about making the smallest stitches close to the edges being observed. A Nelaton's self-retaining catheter was introduced, a bladder of ice placed on the abdomen, and a dose of opium administered. The next evening there were pain and vomiting, together with a moderate degree of pyrexia. The pain was troublesome for some time, but the vomiting did not recur. The temperature ran up above normal during the first eleven days. Some trouble was experienced from abscesses which formed in the neighbourhood of the wound, and also from catarrh of the bladder, which, indeed, lasted for a month. The wound was entirely healed on Feb. 12th, and the man was able to leave the hospital on the 21st.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE President of the Board of Trade has consented to receive a deputation from the British Institute of Preventive Medicine on Friday, June 5th, at 11 A.M., when the facts in connexion with the application to register that body as a limited liability company, with the omission of the word "limited"—an application which, however, Sir M. Hicks Beach, yielding to certain opponents of the institute, recently refused to grant—will be more fully placed before him. We trust that the deputation will be in every way a representative one, and feel sure that the President of the Board of Trade will give most careful consideration to the views it represents, the importance of which can hardly be over-estimated.

THE TRANSATLANTIC CATTLE TRADE.

THE committee appointed by the Boards of Trade and of Agriculture to inquire into the transatlantic cattle trade has been at some pains to investigate the conditions under which this traffic is carried on. Its members are agreed that the business is, on the whole, a prosperous one, and that success in it, as well as the security of life and limb among the animals themselves, are dependent not only upon the uncertainties of weather, but upon a variety of arrangements connected with shelter, ventilation, space, fittings, and attendance on shipboard which are, or ought to be, well within the control of trading and shipping companies. At the same time, a lengthy catalogue of recommendations is very suggestive of the fact, indignantly denied by those engaged in the trade, that needless hardship or, in blunter English, cruelty is frequently endured by cattle on the Atlantic passage. Particular directions are laid down respecting the stowage of cattle on deck, the stability of shelters and of fittings, the space allowed for passage ways, and that ever most essential condition—ventilation. The suffocation of cattle below the weather deck, it is maintained, should be held to prove the unfitness of any vessel for the transport of these animals. The efficiency of cattlemen is rightly regarded by the members of the committee as a matter of importance, and the staff allowed as requisite for every hundred head consists of one foreman and four assistants. These men, moreover, are to be considered as under the authority of the captain and responsible to him for their treatment of the live cargo. Insurance companies, it appears, make no objection to the slaughter, when considered necessary, of suffering cattle, and the committee accordingly advise that this fact should be communicated to cattlemen, many of whom are under a contrary impression. A final suggestion that powers of regulation and inquiry should in future be entrusted to the Board of Agriculture, sums up the findings contained in this report. On the whole, the members of the committee must be congratulated on the care and the practical sense which characterise their work. There is nothing in the recommendations above-stated suggestive either of mere sentimentalism or of prohibitory restriction. On the contrary, their evident purpose and effect, if rightly understood, must be viewed as compassing no less the interests of cattle-owners than the regard which is always due to a rational humanity.

THE INFLUENZA.

THE influenza epidemic during the past week has distinctly declined in the metropolis, and very considerably so in Yorkshire. Fresh outbreaks are reported from various parts of the country, but the diffusion has been by no means so rapid or so wide as in January-February of last year.

INTRA-CRANIAL TUMOURS AND THEIR LOCALISATION.

IN a paper read in the course of last year by Dr. Putnam of Boston before the New York Medical Association attention is directed to the value of the commencement of a convulsion as an indication of the position of the exciting cause of the fit. He starts with the Jacksonian dictum that, given an irritation of the arm or leg area, the attack is most likely to begin in the thumb or fingers in one case and in the toes in the other; these parts being the most highly specialised, or the most lately evolved in their respective limbs. Considerations are urged by Dr. Putnam which are really corollaries of this proposition. They refer chiefly to the occurrence of convulsions in the limbs as effects of tumour at some distance from the limb areas. Particular reference is made to one case published by the author, in which he himself witnessed a convulsion of several minutes' duration, occurring at the shoulder, and unattended by loss of consciousness. This, however, was the only attack witnessed, although (according to the history) there had been others of a more general character, and it was not considered to furnish sufficient justification for operating. Had an operation been performed, with the indication afforded by the occurrence of this convulsion, the tumour would have been found, for it lay at the posterior end of the middle frontal convolution, and had rolled over the upper edge of the hemisphere towards the falx cerebri, strongly compressing the intervening parts. To sum up, the author concludes that the following list indicates approximately the liability to convulsion by irritation in the neighbourhood: (1) Hand, (2) face, (3) toe and foot, (4) elbow, (5) leg,

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(6) shoulder, (7) trunk; and, conversely, convulsions limited to or commencing in the parts mentioned in the end of the list would furnish much more reliable indications for localising the irritation than convulsions starting in the hand or face. A similar line of argument is pursued with regard to indications afforded by speech derangement, comprehension of speech in this relation being regarded as the less specialised or evolved condition, and therefore as furnishing by its disturbance a more reliable guide in localising a lesion than is afforded by disturbance of the more highly specialised power of expression.

PUBLIC HEALTH (LONDON) LAW AMENDMENT BILL.

CLAUSES 35, 36, and 37 of the above Bill, giving important powers to the London County Council, were approved on Thursday by the Standing Committee on Law of the House of Commons. It is much to be desired in the interest of the public health that these clauses may be retained in the subsequent passage of the Bill through Parliament.

THE PERILS OF FOOTBALL.

DURING the football season that has just concluded scarcely a week has passed in which we have not recorded more or less serious accidents which have occurred at the game. It is necessary to point out that we have in no way made any special effort to obtain a complete roll of the casualties that have happened to football players. We have recorded them as we have chanced to come across them in the columns of the daily and weekly newspapers which come under our notice in the ordinary routine. There is little doubt that if we had consulted the pages of our sporting contemporaries, and taken other means of ensuring that our list should be an exhaustive one, and inclusive of minor casualties, it would have been multiplied at least twentyfold. There can be no question that these accidents (which are too often caused by unnecessarily rough play, and sometimes, it would seem, almost of malice prepense, players being told off to "stop" a good man of the opposite side) have of late years increased enormously in numbers. It would also appear that they have, as the game has attained greater and greater popularity, become of a much more serious and fatal character. Amongst the casualties we have recorded are twelve cases of death directly attributable to injuries received in football matches: "Asphyxia caused by paralysis of the muscles of respiration"; "acute peritonitis consequent on injuries received while playing in a match"; "injury to the brain"; "rupture of the intestine"; "rupture of the right kidney"; "abdominal injuries" are given as some of the causes of death. It is unnecessary further to particularise. We have said enough to show that this game has, unfortunately, dangers far exceeding those encountered in other forms of amusement. We shall, of course, be told that serious accidents occur in the hunting field, out shooting, at cricket, and at other games. This there is no denying, and we would be at no pains to attempt to deny it; for risk must accompany us all our lives, and every moment of them, and we are not disposed to make much of the little additional risk that is run in healthy and reasonable forms of sport. Football, however, stands almost alone as regards the *causation* of its accidents, which are nearly invariably the result of personal encounter with players of the opposing side, and it is this element of personal conflict which we chiefly deplore. It must never be forgotten that it is often the breadwinner of the family who is incapacitated or killed, and that much misery and suffering are thereby indirectly inflicted. We need not now stop to consider which form of football is the more perilous; there is not a great deal to choose between them, though doubtless the Rugby Union game is responsible for more internal injuries than is that of the Association. Football should be an admirable game and an excellent means of vigorous and wholesome exercise. Indeed, there is no real reason why so desirable a consummation should not be attained. It lies in the hands of the respective authorities of the two games, and more especially of the referees and umpires. It is stated that these latter have been a great deal more severe during last season. We trust that they will much further increase their severity and their vigilance, and so remove the impression which widely, and, as it appears to us, not undeservedly, prevails, that a very considerable amount of wholly unnecessary roughness and danger attends football as at present played. We have more than once expressed our opinion that the game is one capable of doing a great deal of good in the way of affording exercise and recreation to countless young men. Let the referees and umpires and other, perhaps more responsible, authorities see to it, and afford some guarantee that the good football does is not overbalanced by its accompanying perils.

SIR GEORGE HUMPHRY, F.R.S.

HONOURS multiply on the head of Sir George Humphry. The last recorded one will not be the least grateful to him. The *Cambridgeshire Weekly News* of May 22nd reports the proceedings of a special court of the Governors of Addenbrooke's Hospital, under the presidency of the Lord-Lieutenant of the Council. The court was assembled to receive a marble bust of Sir George Humphry, executed by Mr. J. Wiles of Regent-street, Cambridge, the granite pedestal of which bears the following inscription: "Sir George Murray Humphry, M.D., F.R.S., F.R.C.S., LL.D., Professor of Surgery in the University of Cambridge; Surgeon to Addenbrooke's Hospital during half a century; presented by his friends and pupils." The Vice-Chancellor and the Masters of Colleges and Professors vied with each other in saying what Sir George Humphry had done for Cambridge, for Surgery, and for the Addenbrooke Hospital in particular. The Vice-Chancellor made the speech of the day, and descanted on the growth of the Science School in Cambridge, as shown by the 120 candidates this year for the Science Tripos, which is due so largely to Sir George Humphry; he also alluded to his munificence, and to the attachment known to subsist between him and his pupils. Sir George Paget claimed the credit of introducing Sir George Humphry to Cambridge through his brother Sir James Paget. In reply to a vote of thanks for his speech, the Vice-Chancellor said that that hospital was Sir George Humphry's memorial.

ANTIPYRIN IN EPILEPSY.

DR. MCCALL ANDERSON has recorded a case in the *International Journal of the Medical Sciences* under the heading "Case of Epilepsy Cured by Antipyrin." The patient was a boy aged nine years, who had been subject to fits for two years and a half. The first fit occurred six weeks after a fall. At first they occurred from four to six times daily, but later they had been much more frequent, occurring as often as from thirty to forty times a day; there was also paresis of the right arm, and, after this had recovered, of the left. Three months afterwards the fits entirely ceased after the application of blisters to the head, and they remained absent for fifteen months. They began again, however, seven months before the patient's admission to the hospital, and he had as many as thirty or forty or even fifty a day. Just before admission, however, they had decreased in frequency, only occurring about twelve times in the day. On admission on Dec. 20th he was put on five grains of antipyrin three times daily, and this dose was increased gradually until Jan. 9th, when the dose had reached twenty-five grains.

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This was continued until Jan. 16th, and then reduced to twenty grains, and again increased on the 28th to twenty-five grains. During the first six days the average number of fits per diem was 16·5, in the next four it was 13·2, on Dec. 31st he had ten, and on Jan. 1st the same number; on Jan. 4th three fits, and then none till Jan. 28th, twelve days after the antipyrin was reduced, when he had one slight fit. The dose was again increased, and no fits occurred when the last report was received on March 12th. While we have to congratulate Dr. McCall Anderson on the excellent result in this case, which he ascribes entirely to the antipyrin, we would demur in the first place to his description of the result as one of cure, and we should also be inclined to ascribe at least some of the benefit received to the changed conditions in which the patient was placed. It is always difficult to say that an epileptic is cured, and this is especially difficult in the case for a patient who has had a period of freedom from fits of fifteen months' duration on a previous occasion, and subsequent to therapeutic measures entirely different from those employed on this occasion; we should therefore hesitate to accept the case as one of cure until a much longer interval of time had elapsed.

CALCUTTA CHOLERA RETURNS.

RECEIVING, as we do from time to time, the periodical reports and appended vital statistics issued by Dr. W. J. Simpson, medical officer of health to the city of Calcutta, we are reminded again and again of the unenviable notoriety which the capital of our Indian Empire retains as the cholera centre of the world. Ever since the issue of Dr. Koch's work, after his Indian visit of 1884, in which he exhibited by means of plates and chapters of descriptive matter the glaring sanitary defects of the native portions of Calcutta, as also the abundance of those conditions which favour the excremental contamination of air and water in the midst of the population, we have felt that nothing short of the most strenuous efforts in the direction of securing wholesome water to drink and reasonable purity of air to breathe could meet the demands which might fairly be made of those responsible for the health of Calcutta. Month by month Dr. Simpson attaches to his report a chart in which red dots tell the number and locality of the cholera deaths, and the map for February now before us shows how densely these deaths are massed together in certain quarters, and how these dots, though diminutive in point of size, wellnigh cover entire areas of the city. It is sincerely to be hoped that the Indian Government and the Municipality of Calcutta will not become so accustomed to the evidence which Dr. Simpson's maps periodically afford as to lose a due sense of the task which that evidence so imperatively imposes upon them.

"LIFE ASSURANCE WITHOUT MEDICAL EXAMINATION."

WE gladly give publicity to a letter from the manager of the North British and Mercantile Insurance Office, appearing on page 1229, in which he replies to certain criticisms which we recently passed on his company's report; but, on referring to the article of which he complains in the light of his explanations, we are at a loss to perceive in what sense our statement is "calculated to mislead." He says that the sudden growth of claims to which we drew attention is mainly due to the claims arising out of the business of another company which was taken bodily over by the North British. This explanation not having been put forward in the directors' report, we were not aware of it when writing, yet we said that "we could not suppose that the financial result under discussion was wholly due to the ill-omened Civil Service scheme." But we remarked on the singular circumstance that with such a fact demanding explanation the directors had afforded no information as to the Civil Service mortality, and drew from their silence an unfavourable inference. Our correspondent now supplies the desiderated figures, and it appears that during the few weeks that the scheme was in operation during 1890 it cost the company, in claims, £3400. Probably six or seven times this sum would represent the corresponding annual cost, say £22,000. Such a beginning to their great experiment abundantly vindicates the wisdom of the directors in receding, as we pointed out, from their original position, and demanding now of all new comers some sort of certificate of health.

THE LATE MR. W. E. POOLE.

WE regret to have to record the death of Mr. William E. Poole, registrar of the Medical Society of London, which took place at 11, Chandos-street, Cavendish-square, on the 22nd inst. He had been in failing health for some time past, and was to have retired on a substantial pension in September next. Mr. Poole had held the office of registrar for upwards of a quarter of a century, and, as stated by the President and other officers at the last anniversary dinner of the Society, its present prosperous condition is in no slight measure due to the unremitting attention he had so long devoted to its interests and to the uniform courtesy with which his multifarious duties were discharged. By his death the Society has lost a faithful servant, whose memory will be long cherished by its Fellows, and in a special degree by the officers and Council, past and present, to whom he had so long rendered loyal service.

ANATOMY AT OXFORD UNIVERSITY.

ON Tuesday next a grant for £7000 will be asked from Convocation to procure permanent accommodation for the teaching of human anatomy. Since 1885, when this subject was first taught separately, the number of students attending the dissecting-room has increased from three to forty-seven (in 1890), and the existing accommodation is altogether too limited for the proper teaching of so important a subject. Human anatomy stands alone amongst the other preliminary subjects in its want of fitting accommodation, as there exist good laboratories in the University for the teaching of chemistry, physics, biology, and physiology. If the grant be passed by Convocation, Oxford will be in possession of the means of teaching adequately all the preliminary medical subjects which are required for the first M.B. examination.

THE POLLUTION OF THE STOUR.

MR. FOSBROKE has commenced an important part of the work devolving on him as medical officer of health to the county of Worcester by submitting a report on the condition of the river Stour, and he has little difficulty in showing that this stream is, almost throughout its entire course, subjected to such wanton and deliberate pollution as the Rivers Pollution Act was intended to deal with. Sewage is poured into the stream in profuse abundance, and often without any attempt whatever at disguise; trade refuse is cast in from wellnigh every industry along its course, and a streamlet, which was originally a source of enjoyment and healthiness to the district, is now nothing but an eyesore and a nuisance owing to its utter filthiness. But, incidentally, Mr. Fosbroke has much to say as to the sanitary state of the localities through which the polluted water-course flows, and he instances the Lye, Wollescote, Cradley, Hasbury, and Halesowen as being gravely neglected in almost every sanitary respect. The houses, too, which are occupied by a number of artisans, also call for adverse comment, quite irrespectively of any conditions resulting from the dirty occupations in which some of the people are engaged

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It would indeed seem as if people who had been brought up amid sanitary neglect, whether of their general surroundings or of their native stream, had become habituated even to that form of filth which, as Mr. Fosbroke says, a little limewashing from time to time would materially abate. The main remedy involved as regards the state of the Stour means comprehensive schemes of sewerage for the places specified above. Quarry Bank and Rowley Regis are also prominent offenders against the Rivers Pollution Act, 1876; and in addition to a recommendation that these places should also be dealt with, there is, further, one that Dudley Town and the Stourbridge rural district should take steps to abate the evil. But beyond such specific recommendations, the report shows clearly that a far more active sanitary administration is called for in all parts of the valley of this little but much-befouled stream.

INDIAN MEDICAL SERVICE.

OUR attention has been called to a matter of vital importance to medical officers serving in India, and more especially Indian medical officers in civil employ, and that is the ability—or rather inability—of such officers to obtain leave or furlough when due. It is alleged that there is a very wide difference between the amount of leave that a medical officer may actually obtain as compared with that which he may reasonably expect to get under the rules and regulations published on the subject. Owing to reasons of State, leave is, we are assured, practically stopped for medical officers. Almost every year the same stereotyped reply is given—scarcity of medical officers, expeditions on the frontiers, tribal wars, epidemics, or what not. Moreover, when the medical officer is exceptionally lucky and has leave granted him, he is often put to much inconvenience and expense owing to his not being definitely told beforehand when he will be relieved. Medical officers serving in remote stations in uncongenial climates and surroundings feel the monotony of their lives and duties very much, and look forward to furlough to recruit themselves for further work. Medical officers are more, rather than less, entitled to the same amount of leave that other officers enjoy. They all serve alike under the same rules in this respect. A desire to do things cheaply and the effort to maintain a sufficient reserve to meet the actual requirements of the service are the real causes of the grievance of which complaint is justly made.

MUSHROOMS AS FOOD.

THE alarming symptoms which occasionally follow the use of fungi when taken as food are familiar to most of our readers. The risk in this particular, however, is less than it might be. In actual market custom we recognise but a very few forms of edible fungi, though it must be allowed that even in these we are liable to deception of a somewhat dangerous kind. It is therefore a matter of some importance that the public mind should be informed as far as possible of the qualities which distinguish the edible from the poisonous varieties. To give a precise definition which would also be comprehensive is, however, no simple matter, and as a matter of fact the number of edible fungi, even in this country, is much greater than is commonly understood. It may be said, however, that a high colour, a scaly or spotted surface, and tough or watery flesh are usually associated with poisonous properties, while the edible species are but seldom highly coloured, scaly, or spotted, but usually white or brownish, and brittle on fracture. The former, moreover, grow clustered on wet or shady ground, the latter singly in dry pastures. The common British mushroom is known by its pink hymenium or gills. Fungi which have a bitter or styptic taste, or which burn the fauces, as well as those which yield a pungent milk, those of livid colour, and those which on bruising assume various hues, ought to be avoided. It should be remembered also that all plants of this class readily undergo decomposition, and should therefore be eaten as fresh as possible.

THE SANITARY STATE OF EGYPT.

THE recent publication of Sir Evelyn Baring's able reports has again called attention to Egypt. Its rapid and progressive improvement since our occupation is, as it deserves to be, a source of unqualified satisfaction to ourselves, as it may be a possible source of jealousy to some other nations. There is, however, one direction in which English rule has accomplished almost nothing, and that is in the sanitary improvement of Egypt. We learn from the *Times* correspondent that the weekly mortality has gradually risen to 79 in Cairo, 52 in Alexandria, and 102 in Port Said per 1000 annually. As it was in the days of the Pharaohs, so it is in our days. With one of the driest, healthiest, and most beautiful of climates, man has contrived to make Egypt one of the most insanitary places in the world. The rates of mortality in its cities exceed those of some of the worst cities in Europe. Nature adopts a very simple method of dealing with the population of a country where all sanitary laws and precautions are neglected. High rates of sickness and mortality are simply danger signals to attract attention, and if these are unheeded, a big epidemic comes later on, to be succeeded by others in due course until the lesson is read aright. We may be quite sure that Sir Evelyn Baring is alive to these facts. A scheme for the drainage of Cairo was submitted to the Government of Egypt long ago, but no decision has been arrived at, and nothing has been done. When the next reports upon the administration and material progress of Egypt appear, let us hope Sir Evelyn Baring may have to chronicle something as to the improvements that have taken place in the sanitation and public health of that country since his occupation of it as our representative.

AN AMERICAN MEDICAL CONGRESS.

AT the recent meeting of the American Medical Association resolutions were passed to initiate a medical conference during the Chicago Exhibition. It was proposed to invite the coöperation of members of the profession not only of the States, but of all the republics and colonies of the western hemisphere. The gathering, it is hoped, may be the first of a series of such congresses to some extent comparable with the International Medical Congress.

STARVATION AND DISEASE.

SO long as poverty, from whatever cause, is a constant condition of human life, so long must hunger continue to be one of its natural consequences. Probably we should add that, at all events under any circumstances now known or conceivable, instances of actually fatal starvation will from time to time occur. Partly from the practical impossibility of minute inspection, partly from a desire on the part of the poor to shun all avoidable contact with parochial help, cases must now and then appear in which death finds no visible explanation but that of absolute starvation. As for the complication of this condition with serious disease, we need not wonder if here the fatal issue is really a foregone conclusion. The crisis of the poor man's typhoid fever or pneumonia, otherwise possibly not very grave, finds him shrunk with tissue changes the result of inanition, and one might sometimes truly say that he dies, not so much of illness, but because in illness he lived. A number of such cases were last year the subjects of inquest, and others this year will doubtless be added to them. Parish officials, it has been suggested, have sometimes

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erred in refusing relief in such cases, and such an error is doubtless possible, nor is it always easily avoidable. The relieving officer's reluctance is probably founded in some instances on a knowledge of the applicant's habits and a natural desire to retain supplies which would soon be converted into alcohol at the nearest public-house. The need of discrimination on the part of officials, and also of voluntary donors of charity, is therefore the more evident. At the same time, the fact that deaths from starvation do occur more frequently than may be supposed ought to temper such discrimination with a due regard for liberality. Particularly should this be remembered in presence of the necessities which often surround the lot of the unfortunate, but industrious and uncomplaining poor.

NOTIFICATION IN NEWINGTON.

THE curious attitude adopted by the Newington Vestry in the matter of the notification of infectious diseases has come to an appropriate end by the rescinding of the resolution which led to it. The Act of 1889 requires that where a medical officer of health receives a certificate of a medical practitioner relating to a patient within the metropolitan area he shall, within twelve hours after its receipt, forward a copy of it to the managers of the metropolitan asylums district. But the Newington Vestry instructed their medical officer of health not to obey the Act of Parliament in this respect; an instruction which was altogether invalid, and would hardly have saved the medical officer of health from a *mandamus* had the neglect been persisted in. The vestry would probably only have suffered in public esteem, whereas their officer would have made statutory default. Whatever the views of the vestry on the subject of notification, they hardly took a dignified attitude in their method of expressing them.

SPINA BIFIDA.

A CASE of this condition in which excision was practised is related by Dr. Gardner in the *Philadelphia Medical News*. There was no hydrocephalus, paralysis, or other condition in any way complicating the case. The child was fourteen months old at the time of operation and in appearance healthy, and the tumour measured nine inches and a half in circumference. Aspiration had been performed several times about a year before, but without any lasting benefit. At the operation no nervous structures were seen in the sac, and it was removed by means of an incision on each side of the tumour near the base, the edges being then brought into accurate apposition by silk sutures. Pressure was applied by means of a large pad of absorbent cotton. Large quantities of cerebro-spinal fluid issued constantly from the wound, but for three days the child to all appearance did well. On the third day, however, it became pale, refused food, and gradually sank and died.

THE DR. STEVENS TESTIMONIAL.

THE letter relating to the "Dr. Stevens Testimonial" which appeared in our last issue, signed by the late Sir Robert N. Fowler, M.P., and Mr. Claude Claremont, M.R.C.S., comes with a particularly fitting grace at the close of Dr. Stevens's long professional and official services, for the blending of those two names represents a wide circle of personal and professional friends, the formation of which commenced during his university career. Dr. Stevens gave up much when he first placed his services at the disposal of the Privy Council for the purposes of their original inquiry into the state and practice of vaccination in various parts of England and Wales, and if his time was so largely devoted to this single branch of the public health service, it was because of the acknowledged grasp which he had of the subject, and because of the success which was so often attained by reason of his personal influence. It is no secret to say that it was with a sense of pain that Dr. Stevens came to see that the arduous duties to which he had so long devoted himself, and which involved almost incessant journeying, could no longer be performed with satisfaction to himself; and we trust that the scheme which has been set on foot will receive such support as to convince Dr. Stevens that, in his retirement, he has carried with him from a large circle of friends, a sense of esteem and regard which is as sincere as that entertained towards him by his former colleagues at Whitehall.

COMPOUND FRACTURE OF THE SKULL.

A CASE is reported by Dr. Rohrbauch in the *New York Medical Record* of a boy who had been kicked on the head by a pony. When first seen he was semi-conscious, with paralysis of the left lower extremity. There was a scalp wound in the right parietal region an inch from the middle line, and the bone underneath was fractured and depressed. The following day the patient was trephined, and the depressed bone raised and removed. The dura mater was found divided and the brain lacerated in the region of the superior parietal lobule four lines to the right of the longitudinal fissure. A considerable quantity of the injured brain substance came away in the process of cleansing the wound. It was dressed antiseptically, and in spite of some breaking down followed by a slight discharge of pus, and accompanied by paralysis of the left arm as well as of the legs, improvement gradually took place; but the legs remained somewhat paralysed, a result apparently of the secondary degeneration consequent on the destruction of brain substance.

PUBLIC HEALTH IN CORNWALL.

A SPECIAL COMMITTEE of the Cornwall County Council have, under the chairmanship of Mr. Silvanus Trevail, completed an analysis of the various annual reports of the medical officers of health throughout the county, and apart from various specific recommendations applicable to special districts, they express the opinion that a number of matters need special attention throughout the county. These are: the indifference with which scarlatina in its mild form is regarded, the alarming increase of cancer, the high infant mortality, the influence of elementary schools as a source of infection, the need for increased vigilance in arresting epidemics, the question of filth accumulations near dwellings, the inadequacy of means for disposal of excreta, and overcrowding. Such matters are, indeed, serious; they involve a number of complicated medical questions of importance, and in their solution skilled investigation is obviously called for. It is therefore with astonishment that we read, in the paragraph which follows this grave array involving so many medical problems, a definite recommendation to the effect that "the consideration of the subject of the appointment of a county medical officer of health ..... be postponed" for another year. The recommendation seems to be singularly inconsequent, and we shall look with interest to see how a number of difficult etiological questions shall by January next have managed to solve themselves by reason of the lapse of twelve calendar months. Apparently, the Committee have been influenced in their recommendation by the fact that most of the sanitary authorities have begged the County Council not to make such an appointment. We hardly wonder at this, in view of the sanitary state of some parts of Cornwall, and of the suggestively faint praise which the Committee bestow, where they say that they are, however, of opinion that "some" improvement has been made during the past year

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FOREIGN UNIVERSITY INTELLIGENCE.

Cairo.—Dr. Mohamed Effendi Chakir has been appointed to the Chair of Anatomy.

Jena.—Dr. R. Semon has been promoted to an Extraordinary Professorship of Laryngology.

Kazan.—Dr. Lubimoff has been promoted to the Chair of Anatomy.

Lausanne.—Dr. Dufour has been promoted to the Chair of Ophthalmology, Dr. de Cërenville to that of Medical Pathology, Dr. Roux to that of Surgical Pathology, Dr. Stilling to that of Pathological Anatomy, and Dr. Blanc to that of Zoology and Embryology. Dr. Dind has been appointed to the post of Extraordinary Professor of Dermatology and Syphilography. Dr. L. Secretan has been recognised as *privat-docent* in Otology and Laryngology.

St. Petersburg (*Military Medical Academy*).—Dr. Pasternataki has been appointed to the Professorship of Clinical Therapeutics in succession to the late Professor Koshlakoff. Dr. Samshin has been recognised as *privat-docent* in Midwifery and Gynæcology.

Toulouse.—The new Faculty of Medicine has just been formally opened.

Vienna.—Dr. Kassowitz has been promoted to be Extraordinary Professor of Children's Diseases, and Dr. Chiari to be Extraordinary Professor of Laryngology and Rhinology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Lochmann, Professor of Pharmacology in the University of Christiania.—Dr. E. Nasser, Stadtphysicus of Vienna for many years. The death is also announced of M. A. E. Becquerel, the well-known physicist.

MR. PERCY FORBES WINSLOW, eldest grandson of the late Dr. Forbes Winslow, has just died, at the age of twenty-two, under somewhat painful circumstances. Mr. Winslow had recently completed his medical education, but was still pursuing his studies at Charing-cross Hospital, where he contracted blood-poisoning. The illness was at first very obscure, and after undergoing four operations under chloroform he sank from exhaustion on Sunday the 17th inst. Dr. Abercrombie and Mr. Boyd of Charing-cross Hospital were unremitting in their attentions to him during his painful illness.

THE official minutes of Convocation of the University of London, which are now published, show that 733 members were present during the debate on May 12th, and that 197 ayes voted in favour of, and 447 (not 461) noes against, the adoption of the scheme of the Senate. An analysis of the division list gives—Arts and Laws: 116 ayes, 276 noes; Medicine: 71 ayes, 136 noes; Science: 10 ayes, 35 noes.

THE annual dinner of the officers of the Medical Staff will take place in the Whitehall Room of the Hôtel Métropole on Monday, June 8th, at 7.30 P.M., and those intending to be present should send their names without delay to Brigade Surgeon J. Hector, Naval and Military Club, Piccadilly, W.

IN consequence of important University business requiring Dr. Burdon-Sanderson's presence at Oxford on June 2nd, his first Croonian lecture will be delivered at the Examination Hall on Tuesday, June 9th, at 5 o'clock. The remaining three lectures will be given on the following three Tuesdays.

AT their last meeting the Council of Queen's College, Birmingham, elected Dr. C. W. Suckling into the Professorship of Medicine, vacant by the retirement of Sir James Sawyer.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, MAY 26th, 1891.

THE Summer Session of the Council commenced on Tuesday, May 26th. Mr. Wheelhouse occupied temporarily the chair in consequence of the death of Mr. J. Marshall, F.R.S., the late President. Sir Richard Quain had been previously appointed to act as President during the period that has elapsed since the death of Mr. Marshall.

New Member.

Mr. Thomas Bryant, President of the Royal College of Surgeons, was received as the representative of that body for the term of five years, dating from March 12th, 1891.

Election of President.

Mr. BRUDENELL CARTER moved, and Sir WM. TURNER seconded, that Sir Richard Quain be appointed President in lieu of the late Mr. John Marshall. He said he had much pleasure in proposing that Sir Richard Quain be elected as President of the Council. They all knew how long a series of years Sir Richard had been not only a member, but an ornament of that body. They all knew his thorough mastery of every duty of the business of the Council. They all knew the distinguished services which he had hitherto rendered to them in the important office of senior treasurer, not least, perhaps, in his occasional rather pertinent reminders of the costliness of eloquence. Apart from those claims of high qualifications, there was, he thought, a peculiar fitness in conferring the office of President upon one of those members of the Council who belonged to them by virtue of nomination of the Crown. The representatives of the Corporations and the direct representatives of the profession had special duties to their own constituents, but the nominees of the Crown were in a peculiar sense national representatives, charged with the duty of endeavouring to hold an even balance between all the conflicting interests, and to adjust them for the public good. This was pre-eminently, also, the duty of the President, and therefore there was much reason for the selection of a Crown nominee for that high office. The subject was one on which he need not enlarge; but on the ground he had already given he had pride in moving that Sir Richard Quain be elected.

The motion was carried heartily and unanimously, and Sir Richard Quain was then conducted to the chair by the mover and seconder of the motion and formally installed into the office, all members standing.

Sir RICHARD QUAIN said that he could not find words adequate to express his sense of the honour the Council had conferred upon him by electing him to fill this high office. During a long life of seventy years he had passed like others through anxieties and difficulties incident to us all; but the position in which he had been placed that day amply compensated for them all. To preside over an assembly composed of the distinguished representatives chosen out of every department of the medical profession was an honour of which he wished he could feel himself more worthy. He felt he could hardly venture to undertake the position if he was not conscious of having had great experience in the business of the Council. For the last twenty-eight years he had been a zealous member, and had hardly ever been absent from a single meeting. He had watched the progress of its proceedings, and he believed that as the Council went on it would get into closer relation with the various corporations and would be held in still higher esteem by the profession. He thanked the Council most cordially for conferring the appointment upon him, and he would endeavour to the best of his ability to fulfil the duties connected with this most honourable position. He had filled the duties of President for the last six months, but he did not think it necessary to give a summary of the duties he had performed. They would be found on the agenda papers. He could not take the chair without expressing his deep sorrow that he was the successor of one who was his valued friend and fellow student. For fifty years he had learned from his good example and his widespread sympathies—his desire to do his duty in every sphere of life in which he was called whether as teacher, surgeon, as President of the Roya College of Surgeons, or as President of this Council. His

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aim was ever to do his duty, and he had always done it well. It was the noblest work of man to do his duty, and his dear friend Mr. Marshall had always done his. He would ask the Council to accept the following resolution, setting forth in better terms than he could their appreciation of their late President:—"That the Council desire to convey to Mrs. Marshall and the family of the late President an expression of the great sorrow they feel at the loss they have sustained, and to offer them the tribute of the Council's sincere and affectionate sympathy. By his long, able, and untiring services to the Council, by his unfailing kindness and courtesy, by the patient and well-balanced judgment with which he at all times conducted its affairs, and by the dignity with which he at all times represented the Council on all public occasions, he had endeared himself alike, not only to his colleagues and the officers of the Council, but to all with whom his labours brought him into official contact. The Council could not refrain from offering to his family their sense of the personal loss entertained by its members individually by the death of so worthy a colleague and so able a president."

Dr. HAUGHTON felt constrained to say that this time twelve months he had had the honour of entertaining Mr. Marshall in Dublin, when he received from the University of Dublin, in common with Sir Richard Quain, the highest honour that University had to bestow, and in that week he had had an opportunity of seeing and judging for himself of the inner working of that good man's mind. He felt that the impression of that week's intercourse with Mr. Marshall had left him a better and a wiser man.

The resolution was agreed to unanimously.

The Fellowship of the Edinburgh Colleges.

On the motion to receive the usual statistical tables, Dr. GLOVER called attention to the absence of any returns of the examination for the Fellowship of the Royal College of Surgeons of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow.

Dr. HERON WATSON explained that the Fellowship was not a qualifying examination, and that the tables only gave "results of professional examinations for qualifications."

Dr. GLOVER thereupon pointed out that both the Irish and English Fellowship results were returned in the tables. Formerly the Scotch bodies granted their Fellowships without examination; but happily, now that examinations were conducted, it was desirable that the Council should be in possession of the results.

Election Procedure.

The report on the mode of procedure recommended for adoption in the present year for the election of the direct representatives of the medical profession on the General Medical Council was submitted to the Council, and Sir WILLIAM TURNER moved that it be received and entered in the minutes. The report proposed to postpone the autumn meeting of the Council until Tuesday, Dec. 1st, so that the newly elected representatives might have an opportunity of taking part at that meeting of the Council. The Medical Act (1886) provides that the returning officer shall, not less than six weeks, nor more than two months, before the day on which the term of office of the representatives expires, issue his precept requiring the Branch Council to cause representatives to be elected within twenty-one days after the receipt of the precept. The recommendations contained in the report gave rise to considerable discussion.

Sir WALTER FOSTER questioned the legality of the position; they had no power to turn men out of office before their term of office had legally expired, and this report proposed to elect candidates to fill offices which were not vacant. He thought that was a preliminary difficulty in accepting the report.

Dr. BRUCE pointed out that Clause 8 of the Medical Act (1886) required that the "said representatives [i.e., elected in that year] shall come into office on Jan. 1st, 1887." It seemed to him that this rule should be followed now, and that the members elected in October next should not come into office until Jan. 1st following.

Sir WALTER FOSTER ultimately moved that the committee be requested to withdraw the report, and to appoint a conference with the law officer of the Council in order to ascertain the exact legal position, and this was agreed to.

Case of Dr. Alexander Paterson and University Discipline.

The following communication from the Royal College of Surgeons of England, submitted to the General Council by direction of the Executive Committee, in regard to Dr. Alexander Paterson, non-registered as resident in Sydney, with the qualifications M.B., M.S., 1866, M.D. Edin., 1868, and M.R.C.S. Eng., 1866, was read. It stated that "as Mr. Alexander Paterson, admitted a member of the College on Nov. 15th, 1866, has refused to make the statutory declaration required by the Council, and as the advertisements issued by him are, in the opinion of the Council, in the terms of Clause 2, Section 16, of the by-laws, 'prejudicial to the interest,' and 'derogatory to the honour of the College,' and 'disgraceful to the profession of surgery,' he be removed from being a member of the College."

It was moved by Mr. WHEELHOUSE, and seconded by Mr. BRYANT, that the qualification of the Royal College of Surgeons be removed from the Register.

Dr. GLOVER asked whether the University of Edinburgh could not act in this case.

Sir WILLIAM TURNER pointed out that the Scotch universities had no such power.

Sir JOHN SIMON said a man became a member of the profession, not by the action of the Council, but by the action of qualifying bodies. If the bodies withdrew the qualifications, the graduates became practically disregistered; but there were bodies which had not that power, and the view which he took, and one for which he could quote the authority of their lamented late president, was that these bodies ought to have the power. It was in the knowledge of the Executive Committee that the late president had prepared a draft bill which would give to all bodies granting medical qualifications the power of withdrawing the qualifications. He was strongly of opinion that that was the right policy of the Council. It was a most scandalous thing to have cases brought before them where persons doing infamous things in some parts of the United Kingdom had qualifications which could not be removed. He could quote cases in which various bodies had come to the Council asking to have names of their diplomates struck off the Register, on the ground that they had no power to withdraw the qualification. The time of the Council should not be taken up in dealing with cases of that kind. Those who put on ought to have the power to take off, and they ought not to shirk the responsibility of striking off their Register those who were guilty of proved offences. The case of the Universities was somewhat different, but not importantly different, and if they asked for power to be given to the Universities to remove, upon cause, the degrees which they had granted, neither the Universities could reasonably object to that power being given them, nor could Parliament reasonably refuse to grant them the power. The present state of things had, he thought, dated from ecclesiastical times. There was a touch of "Once a priest always a priest" in it, and as they could not "un-priestify" a man, they would not "undoctorise" him. It was a remnant of old prejudice relating to other subjects. The Universities should, he thought, concur with the Council in asking Parliament to give them power of this kind. He cautioned the Council against going with too light a heart into these everlastingly increasing questions of throwing discredit amongst individual bodies, whether English, Irish, or Scotch.

After a few remarks from Dr. WILKS, and in accordance with the motion of Mr. WHEELHOUSE, it was agreed to erase from the Medical Register the qualification which Dr. Alexander Paterson had obtained from the Royal College of Surgeons.

Mechanics, Physics, Chemistry, and Natural History.

Dr. HAUGHTON moved: "That, in the opinion of the Medical Council, university graduates in medicine should be required to have spent not less than two years in the study of mechanics, physics, chemistry, and natural history; and not less than four years in the study of medicine, surgery, and midwifery." He said that the time had come when universities in conferring their degrees should differentiate themselves from corporations and bodies giving licences of qualification to practise. The proposal for the five years' curriculum stank particularly in the nostrils of the authorities of Dublin University, because of the extraordinary proposal to spend six months of the last year in learning medicine from a practitioner who had forgotten all he knew forty or fifty years before. They would never consent to such a degradation of the University degree. He was here proposing a better thing in conformity with the practice of the University of Dublin and the growing and prosperous medical schools

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of Cambridge. In Dublin they did not look upon these physical sciences as belonging to medicine; they were general sciences and ought to be studied, and were studied, by young men intended for other professions. In subjects of natural history, Scotland and her universities had held for many years a well-deserved and most honourable supremacy. To accept a three years' curriculum would be to admit a suppressed premiss—that these subjects, mechanics, physics, chemistry, and natural history, were branches of medicine. And there was another fallacy which implied that these great subjects could be learned in one year. As a teacher for over forty years, he maintained that in one year no knowledge of them that was worth possessing could be obtained. It was notorious that these subjects were not taught in schools, and therefore the Universities ought to claim from their graduates in medicine a far higher knowledge of these important scientific subjects than was absolutely necessary for the bare feeling of a pulse, using a stethoscope, or cutting off a leg. He had never been convinced that four years was not amply sufficient to learn all that was necessary to fit a man for practice in medicine, surgery, and midwifery if these four years were commenced with an adequate knowledge of mechanics, chemistry, physics, and natural history before medical studies were undertaken. Although these were not medical studies, they were the pillars on which medicine rested, and a more intimate knowledge of these subjects ought to be required of University graduates. Unless some such change was brought about, he knew the time would come when Universities would cease to have degrees which were valued as higher than those of an ordinary qualification.

Sir JOHN BANKS seconded the motion.

Mr. MITCHELL BANKS moved the previous question, and thought that a debate upon this subject would be a serious loss of time to the Council.

Dr. PETTIGREW seconded the previous question, which was carried by a majority of 14 to 6.

The Council then adjourned.

WEDNESDAY, MAY 27TH.

Removal from the Register for Advertising.

The Council had under consideration the case of William Ainslie Goodall (registered as L.K.Q.C.P.I., 1885), who had been summoned to appear before the Council on Wednesday, May 27th, at two o'clock, on the following charge, as formulated by the Council's solicitor: "That he was associated with a notorious objectionable concern called 'London Staff,' and had adopted the reprehensible modes of practice of that organisation, by offering to practise gratuitously and to guarantee cures, and by issuing objectionable and disreputable advertisements to the public, for which conduct his name had been erased from the Medical Register of the Province of Nova Scotia, and from the Roll of Licentiates of the Royal College of Physicians of Ireland." The accused did not appear in answer to the charge, and the Council, after deliberating in private, directed that his name and qualification be removed from the Medical Register.

The whole of the remainder of the afternoon was occupied with the consideration of a case of alleged covering, which was adjourned.

THURSDAY, MAY 28TH.

Report of Finance Committee.

The first business of the Council to-day was the consideration of the financial Report, which shows that the income of the General and Branch Councils for the year ending Dec. 31st, 1890, was £8042 18*s.* 7*d.*, an amount which is less by £465 6*s.* 5*d.* than the income for the previous year. The expenditure during the year 1890 has been £7868 12*s* 2*d.*, an amount greater than that of 1889 by the sum of £1193 2*s.* 8*d.* A comparison of the income with the expenditure shows that the income during the past year has exceeded the expenditure by the sum of £174 6*s.* 5*d.*

On the motion of Dr. Wheelhouse, seconded by Dr. Moore, the report of the Finance Committee was duly adopted and ordered to be received and entered on the minutes.

Sir WILLIAM TURNER said he thought that the report of the Finance Committee should not be allowed to pass over without the Council expressing its deep obligations to Sir Richard Quain for the very valuable manner in which he had discharged his duties as treasurer during so many years. The Council might congratulate itself upon the highly satisfactory position of its finances, and his successor would find the financial position of the Council thoroughly satisfactory. He therefore moved that the cordial thanks of the Council be accorded the late treasurer.

Sir WALTER FOSTER, in seconding the proposal, rejoiced that the long and faithful services rendered to the Council and through the Council to the medical profession by Sir Richard Quain were at last recognised by his being elected to the chair, and he trusted that he would be long spared to preside over their deliberations, and that the sagacity and wisdom brought to bear for so long a period as treasurer might now be transferred to the higher and nobler position of President for the benefit of the Council and the medical profession.

The resolution was passed unanimously.

The PRESIDENT, who heartily thanked the Council for the resolution they had passed, said that when he joined the Council twenty-eight years ago the funds were £20,000, and he left them at £35,000, which he felt was a very satisfactory position for a treasurer to hold. He also observed that when he was appointed treasurer the Council met in a miserable hole in Soho-square, but, thanks to Mr. Lowe, they were now able to meet in their present beautiful hall.

Appointment of Treasurer.

Sir DYCE DUCKWORTH pointed out that it became necessary for the Council to appoint a senior treasurer to succeed Sir Richard Quain, and he begged to propose that Mr. Bryant be elected as his successor.

Mr. WHEELHOUSE seconded the motion, which was carried unanimously.

Examination Inspectors.

Dr. BRUCE had a motion on the paper on this subject, stating "that it will conduce to uniformity of result if a single inspector be permanently appointed to visit the different examining bodies and report on the standard requisite to pass in medicine, surgery, and midwifery; and that he shall henceforth become a paid official of the Council, who will be ready to inspect, at any time he may be asked, any of the universities or licensing corporations of the three divisions of the kingdom." Dr. Bruce withdrew his motion in favour of Dr. Struthers' motion, which followed—viz., "That a committee be appointed to consider the subject of the visitation and inspection of examinations under the Medical Acts of 1858 and 1886, and to report, if possible, to the Council at its present session."

Dr. STRUTHERS thought that since the Council had obtained this power of visitation there had been a reluctance to put it into operation. It was to him a surprise that some years ago the conclusion was come to that this inspectorship might be suspended. The question for them to consider was whether at that time they had erred, or whether they had done wisely. He thought the power of visitation should be extended to all subjects. Some years ago a motion had been made by Sir John Simon, the main principle of which was adopted by the Council. The principle was that the "visitations and inspections should systematically cover the pass examinations in *all* branches of knowledge which the Council deems essential."

The committee appointed consisted of Dr. Struthers, Mr. Wheelhouse, Dr. Bruce, Sir Dyce Duckworth, Sir Walter Foster, Mr. Mitchell Banks, Dr. Macalister, Sir John Simon, Dr. Leishman, Dr. Heron Watson, Sir John Banks, Dr. Moore, and Dr. Kidd.

Practical Instruction in Midwifery.

Dr. GLOVER moved: "That it is urgently necessary for the examining bodies to require of candidates for their diploma additional guarantees of practical education in obstetrics; and that candidates at the final examination be required to produce proofs that they have personally conducted at least six, and been present at at least twenty-four additional labours, and of having attended as pupils for six months a lying-in hospital, or the lying-in department of a general hospital or a maternity institution, with arrangements for clinical teaching approved by the examining body granting the diploma." He said the subject was one which he brought forward at their last meeting. It was not his fault, but it was his regret, that it should have to come before them again. The matter was left at their last meeting in a very unsatisfactory condition. His motion was rejected by only two votes. Then a resolution to leave things as they were was not carried.

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A similar resolution by Sir W. Turner was negatived, and after much discussion there was a clear feeling in the mind of the Council that it was desirable that the thing should stand over to the present meeting, and to that feeling he deferred. There was always some advantage in the delay of questions, and he hoped the advantage to those who thought strongly on the matter would be apparent. There were some features in the discussions and divisions of last year which might be recalled. Many of their most distinguished Irish members were not present. Many members did not vote. He hoped the time which had elapsed would give them the advantage of the definite vote of those gentlemen. He took it that the principal duty of this Council was to guarantee the sufficiency of the standards of examination not merely in medicine, but in surgery and midwifery. The peculiarity of the Act of 1886 was to make midwifery as important as either medicine or surgery, and to impose upon the Council the duty of seeing that the demands and standards were equal to those in medicine and surgery. However, their demands had been very different with regard to midwifery as compared with medicine and surgery, especially in regard to the clinical experience and the hospital practice required by the medical student. The demand in midwifery of the College of Surgeons of England and of the Apothecaries' Society of England was twenty cases, but no lying-in hospital practice, though demands were made for the latter in medicine and surgery. Glasgow required hospital practice for two years, but in regard to midwifery it was content with twelve labour cases, or three months' in-door practice in obstetric medicine. How did the Council justify this difference? If hospital practice was good in medicine and surgery it was equally good in midwifery. He wished to impress the point especially because of the fact that midwifery was one of the subjects upon which they could not examine students as they did in medicine and surgery. With regard to the points attempted to be made against him last year by Professor Leishman and Sir W. Turner, he might be permitted, as a Scottish graduate, to express his regret that the opposition to his motion should derive its principal strength from those two distinguished professors. He would remind them that the two greatest teachers in practical midwifery who ever lived were Scotsmen. Dr. Smellie, when he came to London, taught something like a thousand pupils in nine years, and he took them to the houses of the people and gave them practical demonstrations, which he (Dr. Glover) wished students could have that day. Dr. Leishman said he would undertake to teach more midwifery by the demonstration of one case than students would in a haphazard fashion take up in thirty cases. One case, it need not be said, would not illustrate the varieties of labour, not to mention the other fact that the students of Dr. Leishman never saw him demonstrate a case of labour. A point made against him last year was the objection by Sir W. Turner to the number of cases.

Dr. HAUGHTON: In Edinburgh?

Dr. GLOVER: And in some other places. But he considered he produced proof that that difficulty would be met in those places. If it could be met in Edinburgh and Aberdeen it could be met elsewhere. He desired to conciliate Sir W. Turner, and would like to point out to him that the addition of one year made to the curriculum would extend the time in which this necessary experience was to be got. It would not only increase the time, but in all probability somewhat diminish the number of men requiring cases. The resolution of the Council required a student to have attended twelve cases of midwifery, three cases personally, *or*, as an alternative, three months' practice in a lying-in hospital. There was no proportion between these conditions, and he thought that recommendation of the Council was entirely inadequate and absurd. In conclusion, he earnestly hoped something would be done now to put practical teaching in midwifery on something like a level with the practical teaching in medicine and surgery.

Dr. ATTHILL, in seconding the motion, said it was with some feeling of shame that it should be necessary, at the present time, when such advances had been made in every other branch of the profession, to have to bring forward such a motion before the Council. He thought that the very moderate improvement sought to be effected in midwifery would be endorsed by almost every practitioner throughout the country as being absolutely essential, and would be considered as being the very minimum which the Council should insist on as being necessary to stamp a man as fit to conduct cases of midwifery. Of course he admitted that a number of women could be delivered without any aid at all, but the mortality of mothers and of children was very serious, and was the lamentable consequence which resulted from the ignorance and inefficiency of those who attended such cases. Instead of the students personally conducting six cases, he would be glad if the number was increased to sixty; but that was not possible. He wished to throw no unreasonable obstacle in the way of schools, and he had been told there was great difficulty in attending the cases; but it should not be so. To all the best managed hospitals there was a maternity institution attached, and such institutions should be established at every large hospital. Students should receive at least the same amount of instruction in midwifery as in medicine and surgery. That, however, was not the case, although the very first cases a junior practitioner was sent to attend were midwifery cases, whilst years might pass before he would be trusted with a serious case of surgery or medicine in which he received a larger amount of instruction. He therefore hoped that the Council would pass the motion unanimously, and thereby enforce a fair amount of education for pupils in obstetrics.

Mr. WHEELHOUSE supported the motion. He maintained that, as the law stood, present requirements were utterly inadequate. During the past year there had been great agitation in Parliament and all over the country on the subject, and the Council had been taunted with laying down that three cases of midwifery were sufficient for the instruction of the student.

Dr. LEISHMAN held himself bound to protest against the grounds upon which this proposal was mainly made. It proceeded, as far as he understood it, upon the initial fallacy that the proper way of teaching midwifery was to be based upon the number of cases. He ventured to say that the proper way of teaching midwifery was careful clinical teaching, and in that respect he entirely agreed with Dr. Atthill. Clinical teaching in regard to this important subject should be carried out as far as possible in the interests of the students and of the practitioners, and also in the interests of the patients—those persons whom he called unfortunate patients, who were looked upon apparently as so much clinical material. Surely common delicacy would urge us not to expose these women to indelicate treatment further than was absolutely necessary. Instead of increasing the number of cases beyond what is considered sufficient in continental schools, they should rather be content with the minimum they had fixed. He recapitulated the history of the new proposals with regard to midwifery, and pointed out that the question had been fully considered by the Council already, and that they were merely having a repetition of the arguments urged at the last meeting of the Council. He argued the question on the ground that serious difficulties existed in certain schools in regard to obtaining clinical material for this subject, but as he was anxious to meet the views of those of the Council who differed from him, he proposed "that every student should be required to attend for six months either a lying-in hospital or a maternity institution."

Dr. KIDD strongly supported Dr. Glover's motion, and said that there was no branch of the profession in which ignorance was followed by such lamentable results.

The following members of the Council also took part in the discussion:—Sir John Banks, Dr. Haughton, Mr. Brudenell Carter, and Dr. Struthers.

Sir JOHN SIMON thought it was better to leave the number of cases to be fixed by individual authorities. One of the seven wise men said that "the perfection of wisdom is in the sense of proportion," but this proposal dealt very disproportionately with certain of the licensing authorities. The function of the Council was to deal with general principles and not to nibble at particularities.

Sir WALTER FOSTER strongly supported Dr. Glover's motion.

Several amendments were subsequently moved, and after a long debate it was agreed, on the motion of Dr. MACALISTER, "that the Council, having duly considered the question of the amount of obstetric practice which should be required of candidates for medical qualifications, resolve to adhere to the present recommendations of the Council as fixed on May 26th, 1888."

The Council then adjourned.

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THE NEW INFIRMARY, DERBY.

HER MAJESTY THE QUEEN, amid many hearty congratulations of loyalty, laid the foundation stone of the New Infirmary, Derby, on Thursday, May 22nd. The Queen received an address from the Corporation of Derby, and from her carriage replied as follows:—"I have received with much pleasure your loyal and dutiful address, and I highly appreciate the cordial welcome which has been accorded to me by my faithful people of Derby. It is with sincere satisfaction that I observe how largely your ancient borough shares in the general prosperity and progress of my kingdom, and I feel encouraged in meeting the responsibilities that devolve on me when I know I have the hearty support of my faithful subjects. Although I am glad to be here to-day, I cannot but feel the greatest sorrow, which, I am sure, is shared by you all, at the death of Lord Edward Cavendish, who was so universally beloved. I condole most sincerely with his father and his family, and regret that this sad event has deprived us of the presence of Lord Hartington on this occasion." Addresses from numerous other bodies were also presented.

On arrival at the Infirmary, where a guard of honour of the 1st Battalion, the Sherwood Foresters (late 45th Regiment), was drawn up, Her Majesty was received by the High Sheriff of the county, the Mayor of Derby, and Lord Scarsdale, in the absence of the President of the Infirmary. Lord Scarsdale read an address, to which the Queen made the following reply:—"It is with sincere pleasure that I receive your address and lay the foundation stone of the new building which you propose to erect. I earnestly hope that this undertaking, in which I take a deep and personal interest, may effectively contribute to the relief of human suffering, and to the help of those whose career of honourable labour has been interrupted by accident or by sickness. I am glad to testify by my presence here to day my appreciation of the generous efforts that have been made on behalf of this noble charity." The Lord Bishop of Southwell offered prayer. Upon the trowel and level being handed to Her Majesty by Mr. Young and Mr. Hall, architects, the Queen laid the foundation stone, after which the following presentations were made to Her Majesty by the Earl of Lathom:—The Lord Bishop of Southwell, the Lord Bishop of Derby, the High Sheriff of the county, Lord Scarsdale (vice-president), the architects, the senior physician (Dr. W. Ogle), the senior surgeon (Dr. W. G. Curgenven), the house surgeon (Dr. C. H. Taylor), and the matron (Miss Pratt). Her Majesty re-entered her carriage, and the Royal party returned to the Midland Railway Station by the London-road.

The following is a description of the contemplated buildings:—The new hospital for the county of Derby will consist of thirteen blocks of buildings, which for the purpose of description may conveniently be numbered as follows: (1) Front administration; (2) back administration; (3) laundry and engine house; (4, 5, 6, 7, and 8) ward pavilions; (9) out-patient department; (10) chapel; (11) operation room; (12) home for nurses; and (13) mortuary. The central block, round which the wards and other buildings are grouped, is No. 1 (the front administration). This is a three-storey building, and contains on the ground floor the main entrance to the hospital with the secretary's office, waiting-room, porter's office, and room for medical staff closely adjacent. The eastern part of the ground floor is devoted to the casualty department with its separate entrance, waiting-room, consulting-rooms, and a small ward for cases of urgency. On the first floor is the board room, with the residential quarters for the medical staff and the matron. The second floor is devoted to bedrooms for the servants. This building is connected to the back administration (Block No. 2) by a corridor, and again to the main hospital corridor, which, running at right angles, divides the block in question into two unequal parts. The lower or larger part of the block contains on the ground floor the stores, linen rooms, &c., and on the upper floor the kitchen offices and larders. The upper or smaller part contains on the ground floor the nurses' dining-room, servants' hall, and pantry, and on the upper floor, bedrooms and sitting-rooms for the porters. Block No. 3 contains the laundry, with a separate washhouse for infected linen, the boiler house, engine-room, disinfecting house, and crematory for refuse. Block Nos. 4 and 5 are similar in all respects, so that a description of one will suffice for the other. Each block is approached from the main corridor by a covered bridge, with free ventilation at each side and of sufficient height only to afford proper head room. The object of this arrangement is to isolate each ward from aerial contact with the other wards, and thus to prevent the connecting corridors being channels for the conveyance of air from one ward to the other. The wards are 127 feet long and 29 feet wide, and are arranged to hold twenty-four beds each. Each bed is separated from its neighbour's by a window, and each patient will have 145 feet of floor space and 1890 feet of cubic space. The floors will be laid with teak or some similar hard wood bedded directly on concrete, and the framework of the floors and ceilings will be of iron bedded in concrete. In the finishing of the walls, floors, ceilings, windows, and doors, all internal angles will be rounded, in order to provide against lodging places for dust. The wards will be warmed partly by open fireplaces placed in the centre with descending flues, and partly by steam coils placed in window recesses and provided with fresh air from outside. At the further end of the wards are two towers, connected with the wards by covered bridges, containing the sanitary offices and the bath rooms. Between these towers are balconies for the use of convalescent patients. Block 6 is on the ground floor, exactly similar to Nos. 4 and 5. On the upper floor it contains six small wards for one bed each, and a general ward for ten beds, all of which will be allotted to the gynæcological department. Block 7 is similar in all respects to Nos. 4 and 5. Block 8 is a two-storey building, and will be devoted on the ground floor to diseases of the eye. It contains two wards for six beds each, and has, in addition to the usual ward offices, a separate operation room, with a recovering room attached. The upper floor of this block contains two wards for children, with the necessary offices. The out-patient department (No. 9) is at the extreme south-east of the main corridor, and is a one-storey building. The entrance for patients is in the centre of the front facing the London-road. Immediately inside the entrance are two small waiting lobbies for new patients, separated from each other by the porter's office. From these access is obtained to the general waiting hall. Off this hall are placed the four consulting rooms, each of which is provided with a small examining room. From these consulting rooms the patients will go to a second waiting room, where they will wait their turn to receive their medicines from the dispensary. Behind the dispensary is the pathological department and museum. The chapel (No. 10) is placed midway between the back administration and the eastern ward pavilion (Blocks 4 and 5). In the corresponding position to the last on the western side of the administration block is the operation room. Beside the operation room itself there is a room for the administration of anæsthetics, and a room for the staff. The operation room will be lined with marble slabs up to height of between seven and eight feet, above which the walls and ceiling will be painted and varnished. The floor will be laid with "mischiati," which consists of marble chips bedded in cement, and forms a very hard, impervious surface. In all its details every effort will be made to secure as entirely aseptic conditions as possible. The home for nurses (Block 12) is a detached building, and will afford accommodation for forty-eight nurses. Each nurse will have a separate bedroom and separate sitting room, and reading rooms will be provided for the staff nurses and probationers respectively. The mortuary block (No. 13) is also a detached building, and will contain, in addition to the mortuary and post-mortem room, a separate chamber where bodies will be placed for friends to view, and an ambulance house and stable. Externally the buildings will be faced with red bricks, with Bentley Brook stone mullions, cornices, and mouldings. The style adopted is late Elizabethan.

JUBILEE OF THE PHARMACEUTICAL SOCIETY.

THE official celebration of the jubilee of the Pharmaceutical Society took place on Tuesday evening at the Society's house, 17, Bloomsbury-square, W.C., in the presence of a very large number of ladies and gentlemen. The President (Mr. M. Carteighe), who occupied the chair, read the names of the original members and founders of the

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Society, and then invited the delegates of the scientific societies represented to present their addresses of congratulation.

Sir Dyce Duckworth (Treasurer of the Royal College of Physicians) said that the relations between pharmacy and medicine were so close that he need only say that the College of Physicians must ever take the greatest interest in all matters pharmaceutical. He came to bring that Society words of welcome and hearty sympathy on that most auspicious occasion. Sir Dyce Duckworth also conveyed to the Society the congratulations of the Clinical Society, of which he is the President.

Sir William Thomson, P.R.S., said no other of all the applications of science was so full of beneficence as the application of chemistry and the science of materia medica generally to the relief of mankind from illness and to the improvement of the public health. On behalf of the Royal Society he congratulated them, and wished them all possible success in the excellent efforts which they made for the advance of science.

A very large number of addresses from British and foreign societies were then read and presented, and at the conclusion of this part of the proceedings the President presented the Hanbury gold medal to Dr. Hesse, the distinguished German chemist, specially known for his researches into the qualities of cinchona alkaloids.

Dr. Hesse, who was cordially received, expressed his appreciation of the honour which had been conferred upon him by the Society, and offered to the President a contribution on coca alkaloids for publication in the journal of the Society.

Professor Odling moved a vote of thanks to the chairman, which was seconded by Mr. Ryder Cooke and heartily accorded. During the evening the band of the Grenadier Guards, under the direction of Lieutenant Dan Godfrey, performed a selection of music in the examination hall.

In the evening the President and members of the Society entertained about 350 guests at dinner at the Criterion Restaurant in celebration of the Society's jubilee. The toast of "The Founders of the Pharmaceutical Society" was responded to by Mr. E. Horner. That of "The Medical Profession" was replied to by Sir Dyce Duckworth, who took occasion to express his regret that botany should have been removed from the medical curriculum. The "Learned Societies" was acknowledged by Professor Michael Foster and Mr. T. Holmes. The toast of the evening, "The Pharmaceutical Society, and the Health of its President," was given by Sir Lyon Playfair, who remarked that he had spent six months in a druggist's shop in order to learn thoroughly the art of pharmacy. Other toasts followed, including one in recognition of the foreign guests who were present on the occasion. The gathering was altogether of a successful character.

THE LATE PROFESSOR JOHN MARSHALL, F.R.S.

SUBJOINED is the second list of subscriptions to the Marshall Memorial Fund. Those who wish to contribute to the fund are requested to send their subscriptions to the treasurer, Mr. John Tweedy, 100, Harley-street, W.

	£	s.	d.		£	s.	d.
Dr. Tempest Anderson ..	1	1	0	Dr. W. R. Gowers	2	2	0
Mr. P. Ballard	1	1	0	Mr. J. Penn Harris	2	2	0
Dr. W. Banks	1	1	0	Sir W. Jenner (second			
Dr. J. Beddoe	1	1	0	contribution)	3	3	0
Dr. R. Boxall	1	1	0	Mr. Morris Lewis	1	1	0
Mr. C. J. Bond	0	10	6	Mr. H. Littlewood	1	1	0
Mr. W. Cadge	1	1	0	Dr. W. H. Paine	1	1	0
Dr. H. Colgate	2	2	0	Mr. Rushton Parker ..	1	1	0
Mr. W. H. Copley	1	1	0	Mr. Oliver Pemberton ..	1	1	0
Dr. D. A. Davies	0	10	6	Mrs. Oliver Pemberton ..	1	1	0
Dr. E. Diver	0	10	6	Sir R. Quain	5	5	0
Dr. W. McD. Ellis	1	1	0	Dr. Walter Rickards ..	2	2	0
Mr. W. H. Flower	1	1	0	Dr. P. J. Thompson	1	1	0

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE greatest interest is shown in medical, scientific, parliamentary, and legal circles in the deputation which is to wait upon Sir Michael Hicks-Beach, the President of the Board of Trade, at 7, Whitehall-gardens, on June 5th, at 11 A.M. The deputation will be introduced by Sir Joseph Lister, Bart., and although a few days only have elapsed since the invitations to attend have been sent out the following gentlemen, among others, have expressed their willingness to be present:—

The Duke of Westminster, K.G.
Sir Henry Acland, Bart.
Sir William Bowman, Bart.
Sir Joseph Lister, Bart.
Sir Spencer Wells, Bart.
Sir T. A. Abel.
Sir Benjamin Baker.
Sir James Crichton Browne.
Sir Frederick Bramwell.
Sir George Humphry.
Sir Lyon Playfair, M.P.
Sir William Houldsworth, M.P.
Sir Henry Roscoe, M.P.
Sir Robert Rawlinson.
Sir Edwin Saunders.
Dr. C. Allbutt.
Dr. Louis C. Parkes.
Dr. Beevor.
Mr. Bland Sutton.
Dr. James Oliver.
Dr. George Harley.
Mr. Haldane, M.P.
Professor Boyd-Dawkins.
Professor Liveing.
Dr. Marcet.
Professor Dewar.
Professor Geikie.
Dr. Jacob (Leeds).
Dr. T. Barlow.
Dr. Buzzard.
Dr. H. Charlton Bastian.
Dr. J. T. Walker.
Mr. Thiselton Dyer.
Mr. Sutton (Royal Agricultural Society).
Mr. Macnamara.
Mr. Everett Millais.
Dr. Meymott Tidy.
Professor Pemberthy.
Mr. Watson Cheyne.
Professor C. S. Roy.
Dr. Armand Ruffer.
Professor E. Ray Lankester.
Dr. A. H. Barrett.
Dr. Lauder Brunton.
Dr. Pye-Smith.
Mr. G. H. Makins
Dr. Glynn (Liverpool).
Dr. Fleming (Royal Veterinary College).
Mr. Victor Horsley.
Dr. Coupland.
Mr. D'Arcy Power.
Dr. Murray (Newcastle).
Professor J. Burdon Sanderson.
Professor G. J. Romanes.
Dr. Sidney Turner.
Professor Sidgwick.
Professor Stewart
Dr. Sherrington.
Dr. W. Hunter.
Mr. Pickering Pick.
Professor Michael Foster.
Mr. Hill (Downing College).
Dr. Sturges.
Dr. Starling.
Dr. Washbourn.
Dr. Oliver (Newcastle).
Dr. Gaskell.

The Earl of Derby, Sir William Roberts, Professor Huxley, Dr. Byrom Bramwell, Professor Sylvester, Mr. Walter Gilbey, and a number of gentlemen of eminence in medical, scientific, and Parliamentary circles, have expressed their regret at their inability to be present, and their sympathy with the objects of the institute.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5178 births and 5502 deaths were registered during the week ending May 23rd. The annual rate of mortality in these towns, which had increased in the preceding five weeks from 22·5 to 30·1 per 1000, declined again last week to 28·7. The rate was 25·9 in London and 30·8 in the twenty-seven provincial towns. During the first seven weeks of the current quarter the death-rate in the twenty-eight towns averaged 26·3 per 1000, and exceeded by 5·3 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 17 in Brighton, 17·1 in Newcastle-on-Tyne, 20·7 in Nottingham, and 20·8 in Bristol; the highest rates were 43 in Bradford, 44 in Manchester, 45·2 in Halifax, and 50·4 in Oldham. The exceptionally high rates in the last-mentioned towns were due to the fatal prevalence of influenza. The deaths referred to the principal zymotic diseases, which had declined from 461 to 401 in the preceding three weeks, further fell last week to 361; they included 145 from whooping-cough, 102 from measles, 36 from diphtheria, 30 from diarrhœa, 24 from scarlet fever, 24 from "fever" (principally enteric), and not one from small-pox. The deaths from these diseases were recorded in Brighton, Norwich, Birkenhead, and Huddersfield, while they caused the highest death-rates in Leicester, Manchester, Oldham, and Portsmouth. The greatest mortality from measles occurred in Salford, Blackburn, Halifax, Hull, Bristol, and Portsmouth; and from whooping-cough in Bradford, Liverpool, Newcastle-upon-Tyne, Manchester, and Leicester. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight large towns. No death from small-pox was registered in any of these large towns last week; 31 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, but not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals at the end of the week was 927, against 911 and 924 at the end of the preceding two weeks; the patients admitted during the week were 66,

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against 79 and 118 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 584 and 620 in the preceding two weeks, declined last week to 601, but exceeded by 296 the corrected weekly average. The causes of 70, or 1·3 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, Sunderland, and in seven other smaller towns; the largest proportions of uncertified deaths were recorded in Liverpool, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 22·1 to 24·1 per 1000 in the preceding four weeks, declined to 23·8 during the week ending May 23rd, and was 4·9 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 15·5 in Leith and 18·4 in Greenock to 26·5 in Glasgow and 33·1 in Paisley. The 622 deaths in these towns showed a decline of 8 from the number in the preceding week, and included 34 which were referred to measles, 24 to whooping-cough, 9 to diarrhœa, 7 to scarlet fever, 5 to diphtheria, 5 to "fever," and not one to small-pox. In all, 84 deaths resulted from these principal zymotic diseases, against 72 and 83 in the preceding two weeks. These 84 deaths were equal to an annual rate of 3·2 per 1000, which was 1·3 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 22 and 24 in the preceding two weeks, further rose to 34 last week, of which 13 occurred in Glasgow, 13 in Paisley, and 8 in Edinburgh. The deaths referred to whooping-cough, which had been 25 and 32 in the previous two weeks, declined again last week to 24, and included 9 in Glasgow, 6 in Edinburgh, and 6 in Dundee. The 7 fatal cases of scarlet fever exceeded by 1 the number in the preceding week; 4 occurred in Glasgow and 2 in Edinburgh. The 5 deaths from diphtheria exceeded those recorded in any recent week, and included 4 in Glasgow; and of the 5 fatal cases of "fever," 2 occurred in Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 157 and 141 in the preceding two weeks, were 145 last week, and exceeded by 25 the number in the corresponding week of last year. The causes of 60, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·4 and 25·5 per 1000 in the preceding two weeks, further declined to 20·8 during the week ending May 23rd. During the first seven weeks of the current quarter the death-rate in the city averaged 25·5 per 1000, the rate for the same period being 23 in London and 20·6 in Edinburgh. The 141 deaths in Dublin during the week under notice showed a decline of 32 from the number in the preceding week, and included 2 which were referred to whooping-cough, 2 to "fever," but not one to small-pox, measles, scarlet fever, diphtheria, or diarrhœa; in all, 4 deaths resulted from these principal zymotic diseases, against 6 and 7 in the preceding two weeks. These 4 deaths were equal to an annual rate of 0·6 per 1000, the rate from the same diseases being 1·6 in London and 3·6 in Edinburgh. The fatal cases of whooping-cough, which had been 4 and 5 in the previous two weeks, declined to 2 last week. The 2 deaths referred to "fever" exceeded those recorded in either of the preceding two weeks. The 141 deaths in Dublin last week included 24 of infants under one year of age and 43 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in recent weeks. Four inquest cases and 3 deaths from violence were registered during the week, and 49, or more than a third, of the deaths occurred in public institutions. The causes of 13, or more than 9 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major Alfred Lewer retires on retired pay (dated May 23rd, 1891).

INDIAN MEDICAL SERVICE.—*Bengal:* Deputy Surgeon-General F. Walsh, Medical Staff, has been appointed Administrative Medical Officer in Bengal, in succession to Deputy Surgeon-General Collis; Major P. L. Clowes, 8th Hussars, has resigned his appointment as Aid-de-Camp to the Commander-in-Chief, Bombay Army.—Surgeons on probation to be Surgeons, I.M.S. (dated Jan. 31st, 1891):—James Muir Crawford, John William Wolfe, Bawa Jiwan Singh, Hugh Robt. Campbell Barber, Charles Henry James, Frederick O'Kinealy, Christopher Clemons Cassidy, and Arthur William Treminhere Buist Sparks.—Surgeons to be Surgeons-Major (dated March 31st, 1891):—Francis Fredk. Perry, Pultoney William Dalzell, M.B., Stephen Little, M.D., George Hart Desmond Gimlette, M.D., Christian Bernard Hunter, and Julian Carter Carington Smith, M.B.—Surgeon G. J. H. Bell to be Resident Surgeon of the Medical College Hospital, vice Surgeon J. R. Adie.—*Bombay:* Surgeons on probation to be Surgeons, I.M.D., Bombay, (dated Jan. 31st, 1891):—Ernest Gerald Robt. Whitcombe, Frank Erskine Murray, Henry James Younger, and Baman Das Basu.—*Punjab:* Surgeons to be Surgeons-Major (dated March 31st, 1891):—Francis Frederick Perry and Stephen Little, M.D.—The retirement of Brigade Surgeon G. Massy, notified in G. G. O., is cancelled.—Surgeon-Major T. E. L. Bate, returned to duty from furlough and appointed Inspector-General of Prisons, Punjab (dated April 3rd, 1891), vice Brigade Surgeon R. Gray retired.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Fleet Surgeon Matthew F. Ryan to the *Boadicea* when recommissioned (dated June 6th, 1891).—Staff Surgeons: R. F. Yeo to the *Tamar* (dated May 27th, 1891), and Edward Ferguson to the *Swiftsure* (dated June 8th, 1891); Charles A. Macauley to the *Thunderer*, and Edward W. Luther to the *Belleisle* (both dated May 22nd, 1891); Henry T. Cox to the *Malabar* (dated June 8th, 1891.—Surgeons: Edgar R. Dimsey to the *Boadicea* when recommissioned, and Jeremiah Stugrue to the *Fearless* when recommissioned (dated June 6th, 1891); Mr. Colin M'Callum, M.B., to be Surgeon and Agent at Elie, and Mr. John Johnstone Wilson to be Surgeon and Agent at Auchruther (both dated May 22nd, 1891); Mr. William E. St. L. Finny to be Surgeon and Agent at Baldoyle, Houth, and Sutton (dated May 21st, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st London (City of London): Acting Surgeon D. T. Key to be Surgeon (dated May 23rd, 1891).—*Rifle:* 4th (Cambridge University) Volunteer Battalion, the Suffolk Regiment: Acting Surgeon J. H. Hough to be Surgeon (dated May 23rd, 1891).—2nd Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Acting Surgeon T. C. Eager resigns his appointment (dated May 23rd, 1891).—1st Cadet Battalion, the Manchester Regiment: Milton Prentice Ledward, M.B., to be Acting Surgeon (dated May 23rd 1891).

Correspondence.

"Audi alteram partem."

RECONSTITUTION OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—In rejecting the late proposed Charter for the reconstitution of the University of London, it should be understood that those who primarily organised the opposition are not hostile to arrangements for that purpose on the lines suggested by the Royal Commission. But when the Senate so profusely gave up all their duties and responsibilities to outside bodies, and yet pleased none of them except the two Royal Colleges, which gained everything they wanted, Convocation had no alternative but to act as decisively as it did. Convocation would yet gladly accept a fairly devised scheme wherein the duties and the functions of a university were retained by the Senate, even though the outside colleges in one or all faculties were arrayed against it. It would have been better had the Senate, after all the care and time they had expended on the new Charter, in the first instance boldly faced the opposition of those colleges, and relied on the coöperation and support which Convocation would have given it, provided that the

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interests and duties of the University had been duly preserved. I am, Sirs, yours truly,

Cranley-place, S.W., May 25th, 1891. M. BAINES, M.D. Lond.

*** Dr. Baines will see from our remarks in another column that the question will now come before the Privy Council without waiting for any other scheme which may be proposed by the University of London.—ED. L.

THE PRELIMINARY KNOWLEDGE OF MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—As you say in your leading article in this week's issue, the present standard of preliminary education is far too low, and it is much to be hoped that the Medical Council will direct its serious attention to this fact, especially as the military authorities have gone so far as to call its notice to the marked want of orthographical knowledge displayed by some qualified men. If the information given in the last Students' Number of THE LANCET be correct—and I have no reason to doubt its entire accuracy,—the preliminary knowledge required from medical students is far smaller here than in any other country in Europe, now that the *officiat* has been abolished in France. It is simply disgraceful that in such a matter we should be behind Spain and Portugal. I suppose it is hopeless to expect that the Council should enact that all students must be graduates in arts or science of some respectable university. If it were to do so, it would raise the status of the profession—educationally at least, and probably also socially too—to the level above that occupied by the Church and the Bar, and would do much to arrest the present unseemly practices so generally deplored by all right-minded members of the profession which are so difficult to deal with by legislation directed against them. If such a standard is too high to be thought of just yet, surely it might be decreed that a university "little go," or an examination accepted instead by universities such as the senior certificate of the Oxford and Cambridge Schools Examination Board, should be required. That would ensure either a university or a public school education. I am, Sirs, yours truly,

Woolwich, May 23rd, 1891. THEODORE MAXWELL.

SEQUEL TO A CASE OF ABDOMINAL SECTION.

To the Editors of THE LANCET.

SIRS,—Dr. Malins is mistaken in supposing that I attempted any explanation of his facts. My only comment was that the days of miracles were fortunately not past. Here is a statement of my facts, and I am perfectly ready to substantiate them.

E. M——, a girl of twenty, came to me on Jan. 22nd, 1885, she and her mother asserting that her left ovary and tube had been removed on July 24th, 1885, by Dr. Malins at the General Hospital. She had the usual abdominal scar. If such an operation had not been performed upon her, how could I for a moment imagine that she and her mother could get so vividly impressed with the idea as to come to me and state that the pain which had formerly existed on the left side had been cured by the operation, and had returned on the right—a very common result of unilateral operations, and completely consistent with the patient's statements? They expressed a strong desire to have the other set of appendages removed, and I admitted the girl for the purpose. I wrote to Dr. Malins on the 23rd, asking him for the particulars of the operation he performed. My letter came back *unopened* and *unread*, enclosed in another envelope. I operated on the 26th (though Dr. Malins will have it that I operated on the 22nd), and my account of the operation is fully confirmed by Mr. J. W. Taylor, who was then my assistant, in his letter in THE LANCET of to-day, except in the unimportant incident of the removal of the knot. But the removal of the knot in this case is well remembered by others who saw it done, and Mr. Taylor's notes are in error in this matter, as I could very easily show in his own handwriting if it were necessary. For the second time I wrote to Dr. Malins on Jan. 30th, and I received a reply from some subsidiary and irresponsible officer of the General Hospital. To this gentleman I wrote on Feb. 2nd, and again on Feb. 4th, to the effect that his communication did not convey to me the information required, but to neither of these letters did I receive any reply. I then applied to the committee of the hospital for access to the records of the case, and this I succeeded in getting after much trouble in September, 1885. To my amazement I saw there a statement that nothing had been removed from the patient, and from the characters of the entry I had no doubt that its origin was of much later date than that of the operation. If this is the kind of statement of case which Dr. Malins likes to have brought up against him, he is welcome to it, but I cannot say I admire his judgment. For my own part I have to say that whether this case is an example of miracle or mistake, the merit in either case must rest with Dr. Malins. The real trouble about the letter to the governors of the General Hospital, which has so much, apparently, exercised Dr. Malins' mind, arose out of the fact that in 1884 the authorities of the Queen's Hospital stopped the performance of abdominal sections at that institution on account of the high mortality. Discussion in private was taking place about the necessity of doing the same thing at the General Hospital when Dr. Malins published an article in your own journal in which occurred the following sentence (THE LANCET, Nov. 1st, 1884):—"The majority of the [twenty-five] cases were done in the General Hospital under the conditions expressed in the record of the previous series. The amount of success justifies the conclusion then drawn, that abdominal sections may be successfully performed in any institution with proper precautions and care." It then became necessary to go into the whole question, and to show, as was shown in that letter, that the general mortality of abdominal sections performed in the General Hospital was between 20 and 30 per cent., and that of thirty-five ovariotomies 11 had died, giving a mortality like that of the old days of the clamp, of 32 2 per cent. As Dr. Malins very aptly says, "I will leave your readers to draw their own conclusions."

I am, Sirs, yours truly,

Birmingham, May 23rd, 1891. LAWSON TAIT.

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I have observed several times of late in persons who had suffered from the so-called Russian influenza in the epidemic of 1889-90 a train of symptoms which suggest to my mind a second attack of the complaint, of an incomplete or abortive kind. At any rate, they seem to point to something more than a mere coincidence. I have taken notes of five cases in all. In general the earliest and leading symptom is giddiness, not by any means of an intense nature but sufficiently uncomfortable, the patient usually complaining that the ground seems to heave under his feet as he walks. The giddiness is most marked when he commences to walk after sitting for some time, and is generally absent when he is sitting or lying down. Other symptoms, more or less pronounced in character, and given as far as possible in order of frequency, are: lassitude, sometimes with slight muscular tremors, especially referred to the knees; drowsiness, heaviness, and dull aching of the eyes; depression of spirits; lumbar pain; constipation; slightly furred tongue; perhaps anorexia. In most of my cases the urine was high-coloured, and in some urates were deposited, but in other respects it was normal. One patient, a gentleman aged forty-one, after having ailed for nearly a week, had a syncopal attack; his heart seemed perfectly sound, and he had never fainted before in his life. None of the patients had elevation of temperature (in two it was subnormal), or acceleration of pulse, rigors, pains in limbs, marked headache, respiratory or pulmonary complications, and in no case did one feel bad enough to lie up. I was mostly consulted for supposed liver derangement after the symptoms had been hanging about for several days, but in almost every case the patient informed me he had never before been troubled with his liver. The indisposition generally lasted from five to fourteen days or more, and though a trivial one, yet it seemed an odd coincidence that each patient should have suffered months before from epidemic influenza. In treatment I seemed to get some good results from a blue pill and seidlitz powder, followed by a mixture containing quinine, strychnine, and nitro-hydrochloric acid.

I am, Sirs, yours obediently,

E. G. YOUNGER, M.D., M.R.C.P.

Great James-street, Bedford-row, May 26th, 1891.

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PRIMARY HÆMORRHAGE INTO THE SPINAL CORD.

To the Editors of THE LANCET.

SIRS,—I am prompted by reading in your issue of the 23rd inst. the report of a lecture by Dr. Sharkey on "Primary Hæmorrhage into the Spinal Cord," in which he speaks of it as a very rare disease, to send you the following brief note. In discussing its etiology, he mentions sudden hyperæmia as probably "the effective cause in sudden alterations of atmospheric pressure, such as occur in the case of divers." Such a case came quite recently under my notice. On May 14th W. P——, aged twenty-eight, a petty officer in the Royal Navy, of remarkably fine physique and healthy appearance, was engaged in passing through a course of instruction in diving. The course had lasted for six weeks, and he was making his last dive at a depth of between twenty and twenty-one fathoms. He had been down at the bottom for some ten minutes, when he was signalled to return to the surface. The officer in charge, observing that he was coming up much too quickly, tried to check him, but in vain; he reached the surface, ascending over 120 ft. in a minute and a half. When remonstrated with he said, laughingly, that he was all right, and that as it was his last dip he wanted to see what sensation was produced by coming up rapidly. After taking off the helmet he complained of a pain in the stomach and of numbness of the legs. Finding that this numbness still continued he had the dress taken off and went on board an old hulk to walk up and down, and rub himself in order, as he said, to "restore the circulation." After the lapse of more than an hour he found himself worse and was brought on board this ship, when he was seen by me. I found him suffering from paraplegia from the waist downwards. He was quite unable to stand, but could move his legs easily when lying down. Sensation was much impaired, but he could feel a pin. It amounted to a feeling of numbness. The plantar reflex was increased. The pulse was 111, and there was no headache. Hæmorrhage into the spinal meninges was diagnosed, and he was sent to hospital. He passed then from under my care. The paralysis gradually spread upwards, and death occurred on the sixth day. At the necropsy the diagnosis was confirmed. The cause of this hæmorrhage was without doubt due to the sudden alteration in the atmospheric pressure, due time not having been allowed, by a slow ascent, for the proper equilibrium between the intra- and extra-vascular pressure to be established, and as a consequence capillary rupture ensued. The atmospheric pressure at 120 feet is over 52 lb. to the square inch, which will give some idea of the enormous pressure suddenly thrown upon the vascular system.

I am, Sirs, yours truly,
HERBERT M. ELLIS,
Fleet Surgeon, Royal Navy.

H.M.S. *Cambridge*, May 25th, 1891.

A TRIBUTE TO SURGEON PARKE.

To the Editors of THE LANCET.

SIRS,—If ever the Albert medal was deserved it is in the case of Dr. T. H. Parke. The story reported by Captain Stairs, and it is a pity Captain Stairs has not told the tale long before this, is one of almost incredible bravery and unselfishness. Although during the Stanley Expedition at very death's door from remittent bilious fever of fifteen days' duration, Dr. Parke crawled to the hut of a black chief in order to render him surgical relief. It would have been a glorious act of self-sacrifice if Dr. Parke had done this for a fellow Englishman, but to have done it for a black man makes the act, I am sure, one which has never been surpassed. I trust, Sirs, that you will use your influence to ensure the reward of the Albert Medal to this great hero, and may most of us be present at its bestowal.

I am, Sirs, yours faithfully,
PUGIN THORNTON.

Canterbury, May 24th, 1891.

"LIFE ASSURANCE WITHOUT MEDICAL EXAMINATION."

To the Editors of THE LANCET.

SIRS,—In your issue of the 9th inst. you made mention of the accounts of this company up to Dec. 31st last, and you referred, in particular, to the amount of the claims paid in 1890 as compared with 1889, suggesting that an abnormal increase in claims took place last year. I am instructed by my directors to point out to you that in comparing our revenue account for the year 1890 with the revenue account for the year 1889 you are comparing two different things. The account for the year 1889 shows the claims before the business of the "Scottish Provincial" Company was on Jan. 31st, 1890, transferred to us; while the account for the year 1890 includes not only "North British and Mercantile" claims, but also claims under "Scottish Provincial" policies during eleven months of that year. If the amount of these "Scottish Provincial" claims—viz., £124,000—be deducted from the total in our account, it is seen that the amount paid under "North British and Mercantile" policies is £335,000 odd, a sum approximating closely to the totals for the years 1888 and 1889, and presenting no abnormal feature. The claims under Civil Service policies, embraced in our account for 1890, amount to £3400. As the statement which you have made is calculated to mislead the public, it is hoped that you will publish this letter in your next impression.

I am, Sirs, your obedient servant,
HENRY COCKBURN, Manager and Actuary.

North British and Mercantile Insurance Office, 61, Threadneedle-street, London, E.C., May 22nd, 1891.

POLLOCK AND BELLAMY MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—Will you be so good as to give me space in your columns to acknowledge the subscriptions to the Pollock and Bellamy Memorial Fund, as per list enclosed? Allow me to thank you for the very kind notice of the meeting of the subscribers to this fund which you inserted in your issue of last week.

I am, Sirs, yours faithfully,
STANLEY BOYD.

134, Harley-street, W., May 27th, 1891.

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Dr. J. G. Victor Sapp	1	1	0
Sister Frances	1	1	0
Henry Skelton	1	1	0
B. Wilfred Thomas	1	1	0
James Turton	1	1	0
W. M. Turner	1	1	0
Herbert F. Waterhouse	1	1	0
H. R. Whitehead	1	1	0
C. Wigan	2	2	0
Dr. Fredk. Willcocks	1	1	0
C. J. Woollett	1	1	0
S. Wyborn (promised)	1	1	0
Other smaller sums making the total up to	£99	7	6

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The late Mr. T. H. Bartleet.

IT is proposed to found some memorial of the late Mr. Bartleet in recognition of his twenty-four years' service as Surgeon to the General Hospital, and in memory of the many high personal qualities and public spirit he exhibited. The subscription is limited to three guineas. It is not decided as to the form which the memorial shall take; many of his friends, looking upon his connexion with the hospital as the paramount one in his life, are anxious that a stained glass window should be erected in the new hospital. This would adorn the building, and would be a pleasant as well as fitting tribute.

The Vacant Post.

The lamented death of Mr. Bartleet creates a vacancy on the surgical staff of the General Hospital. At present there

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are two candidates before the electors—Mr. Gilbert Barling, M.B., F.R.C.S., and Mr. W. F. Haslam, F.R.C.S. Both of these gentlemen are at present assistant surgeons to the Institution. The election will take place on June 4th.

The Influenza Epidemic.

The virulence of this epidemic shows at present no signs of abatement in this district. A number of medical men have been attacked. Nurses are very scarce, and many public offices are far short of their full complement. The advent of fine weather would be hailed with gratification as the probable means of restoring the equilibrium of health and diminishing the death-rate. Genial sunshine and dry air would form important adjuncts to therapeutics, and would materially add to the spirits of those oppressed or threatened with this dire scourge.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Influenza in the North of England.

IN the Ripon and Malton district and the villages about Richmond the influenza prevails to a large extent. At Ripon, the family and household of the bishop of the diocese (with the exception of his lordship and Mrs. Carpenter) have all been seized with the malady. Service at the palace was abandoned on Sunday last in consequence, and the ordination arranged to take place there this week will be held at the deanery instead of its usual place.

Newcastle Boys' Seaside Summer Camp.

The annual meeting of this useful association has been held under the presidency of the Mayor. The annual report showed that the society had worked well last summer, and had been the means of giving a healthful and invigorating holiday to 166 boys of Newcastle and eighty-five of Gateshead, being an increase of seventy-nine on the total of the summer of 1889. It was decided that the camp should be opened for the season on May 20th, but it is to be hoped that the first batch of boys have been selected from the hardiest, as this month, so far, has been exceptionally severe, even for north-eastern boys. The Mayor spoke of the work in the highest terms, and hoped that before long it would be practical to establish a permanent home at the seaside, a step which would be most desirable considering the fickle nature of our climate. Much credit is due to Mr. John Burdon, surgeon, and the others associated with him, for bringing this useful society to its present state of efficiency.

The late Mr. John Hancock, Naturalist.

At the anniversary meeting of the Tyneside Naturalists' Field Club held last week, at which Dr. G. S. Brady, F.R.S., presided, an address by the President, Canon Tristram, was read, in which fitting reference was made to the valuable work accomplished by the late Mr. John Hancock in his lifetime. He claimed for them some permanent recognition, and suggested an annual medal for the encouragement of the study of natural history. I hope this may be carried out. Meantime a strong incentive to the young naturalist may be seen in John Hancock's own work in the Natural History Society's Museum in this city.

Death of Dr. McCuaig.

Dr. McCuaig of Middlesbrough died at his residence there on Friday last of pneumonia, which supervened on typhoid fever, with which he was attacked about three weeks ago. Dr. McCuaig was a prominent practitioner in the town, and held the posts of police surgeon and consulting physician to the North Riding Infirmary. He was a native of Edinburgh, where he studied and graduated. He came to Middlesbrough about thirty years ago as a partner with the late Dr. Craster. Dr. McCuaig was an enthusiastic golfer, and was at one time the finest golf player in the north of England, and was a man of remarkably fine physique. His death in his fifty-third year was unexpected. His loss is much regretted by the public, and much sympathy is felt for his family, consisting of his widow, two sons, and a daughter.

Sunderland and Sedgefield Asylum.

The Durham County Council have officially informed the authorities at Sunderland that they can receive no more lunatics at the County Asylum, which is already much overcrowded. The Local Government Commissioners have been asked to appraise Sunderland's share in the Sedgefield institution, and their award is expected next week.

A Generous Donor to the Poor.

By the will of the late Mr. Robert Watson of Bishop Auckland, £400 has been left to the poor of Bishop Auckland and neighbouring towns, payable over a period of years. The first payment has been made as directed, with an additional £10 to the inmates of the Auckland Workhouse. The deceased was a native of the district, but spent a large portion of his life in America, where he amassed considerable wealth. About nine months before his death he erected a colossal monument in Auckland Cemetery to himself.

York: Attack of a Patient on a Nurse.

A patient at the York County Hospital, while being attended to by a nurse on Friday last, suddenly drew a pocket-knife and inflicted a severe wound in her eye, which it is feared may result in the loss of sight. He was charged with the offence at the police-court before the Lord Mayor, and made a rambling statement, showing that he is probably insane, as he was under the delusion that the attendants at the hospital wanted to destroy his life by poison.

The New Archbishop of York.

A correspondent of the *Newcastle Chronicle*, in giving some notes about the family of the newly appointed Archbishop of York, mentions that his father in early life served as an army surgeon in the Peninsular War, but while comparatively young he settled in Edinburgh as a physician, and died so recently as 1865. Dr. John Brown, the author of "Rab and his Friends," characterised him as "this good old man who never made an enemy and never lost a friend, the valued family doctor and friend, the public-hearted citizen, the genial companion of Edinburgh's best men for fifty years." Dr. Maclagan's family consisted of seven sons, of whom three are prominent medical men—viz., Douglas (now Sir Douglas), Professor of Medical Jurisprudence in the University of Edinburgh; Philip, medical practitioner in Berwick-on-Tweed; and James McGregor, long medical officer of health for the Hexham district, near Newcastle.

I hear that a severe outbreak of influenza has occurred at the Whitehaven Union Workhouse, and that many of the inmates are seriously ill. The house is being fumigated with sulphur.

Newcastle-on-Tyne, May 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Sir Joseph Lister, Bart., in Edinburgh.

ON Friday of last week an interesting ceremony took place in Edinburgh. Sir Joseph Lister had been awarded the Cameron Prize by the University. This prize is given for any important advance in therapeutics, and is not confined to *alumni* of the University. As the holder of this prize Sir Joseph Lister delivered a short lecture in the Synod Hall to a large audience of students and members of the General Council, while the platform was occupied by the Principal, Sir William Muir, and the members of the University Court, professors, and most of the teaching staff in the School of Medicine, and others, most of whom were in academic costume. Sir Joseph Lister met with a most enthusiastic reception. He named his theme "A Lesson in Antiseptic Surgery," and his remarks were based upon a case which occurred in his hospital practice recently. He had come to the conclusion that operation cases would heal without suppuration without the application of antiseptics, if it could be guaranteed that no deleterious matter should be introduced by the hands or instruments or dressings. Proceeding on this view, he obtained the results he anticipated in a case of ligature of the external femoral; thereafter he treated a case of excision of the mamma in a similar fashion, but in a few days erysipelas supervened. This was the first case of erysipelas which had originated in his hands for about twelve years, and the question arose, how had it arisen? It was discovered on investigation that the nurse who had handed the sponges at the operation had been the

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nurse who had been set apart to attend to a case of erysipelas which had been admitted into the general ward for lack of accommodation elsewhere. A streptococcus, which doubtless was the streptococcus erysipelatosus, had been cultivated by Dr. Crookshank from this case, and he had also experimented, at the request of the lecturer, on the influence of mercurial antiseptic solutions on this organism, and it was found that the organism was killed by a much weaker solution than they had previously been using to irrigate wounds with after operation. The organism was really killed; it was not that its growth was simply inhibited, this being proved by making the mercurial salt inert by adding sulphide of ammonium, and after this the organism not developing. From this he contended that if he had washed the raw surfaces, as had been his wont of late, the organism would have been killed. If it were possible to ensure at every point that no deleterious matters were introduced to a wound, antiseptics might be dispensed with as direct applications to the surface; but as this was practically impossible, he considered it essential to irrigate the surface after operation. The great complaint of the lecturer's audience was that the address was too short. More especially was this the complaint of the students, who had expected, and hoped for, a longer dissertation, reviewing the modifications in his methods which had taken place since he occupied the chair of Clinical Surgery in the University. To most of them this was the first opportunity they had had of seeing and hearing Sir Joseph Lister, and they would gladly have listened to a historical *résumé* of the subject from him.

Health of Edinburgh.

The mortality last week was 111, and the death-rate 21 per 1000. Diseases of the chest caused 44 deaths, and zymotic diseases 18, of which 8 were due to measles and 6 to whooping-cough. The intimations for the week were:—Typhoid fever 6, diphtheria 3, scarlatina 13, and measles 64. The mortality in Leith last week was at the rate of 18·40 per 1000.

Medico-Chirurgical Society of Glasgow.

At the annual general meeting of the Society, held on the evening of the 8th inst., the following gentlemen were elected office-bearers for the Session 1891–92:—President, Dr. Joseph Coats. Section of Medicine—Vice-President, Dr. S. Gemmell; Councillors, Dr. Robert Pollok and Dr. Alex. Miller; Secretary, Dr. Geo. S. Middleton. Section of Surgery—Vice-President, Dr. Hector C. Cameron; Councillors, Dr. James Paton and Dr. D. Macartney; Secretary, Dr. John Barlow. Section of Pathology—Vice-President, Dr. J. L. Steven; Councillors, Dr. A. Milroy and Dr. R. M. Buchanan; Secretary, Dr. T. K. Dalziel. Section of Obstetrics—Vice-President, Dr. S. Sloan; Councillors, Dr. J. K. Kelly and Dr. M. Cameron. Secretary, Dr. Lawrence Oliphant; Treasurer, Mr. Henry E. Clark; General Secretary, Dr. Walker Downie.

Fire at the Royal Lunatic Asylum, Glasgow.

A few days ago a fire broke out at the Glasgow Royal Lunatic Asylum, situated about three miles from the centre of the city. A steamer was despatched to the scene from the central fire station, and the flames were speedily extinguished. The fire was confined to the north-west dormitory of the eastern section, and the roof and upper storey were destroyed. Fortunately the female patients were not in the dormitory at the time.

May 6th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons.

As I contemplated, Mr. Croly will be re-elected President without opposition at the annual elections of President, Vice-President, Secretary, and Council which will take place on Monday next, June 1st. For the Vice-Presidency there will be three candidates—Mr. Carte, the outgoing Vice-President, Mr. Stack, and Dr. Cranny. For nineteen members of Council eighteen go up for re-election, and the following additional candidates also seek a seat—viz., Messrs. W. Stoker, R. D. Purefoy, John Lentaigne, Edward Thompson, and R. T. O'Callaghan, the last two named being provincial Fellows. Complaints have been made by the provincial Fellows for some years of their exclusion from the Council of the College, but if they (the provincial Fellows) had a little more energy and were united among themselves, which they are not, they would have no difficulty in placing four of their body—one for each province—on the Council. By choosing delegates from each county and working the matter up properly, selecting the best men and avoiding all clashing of individual interests, success would be certain; but they should not rely on the support of the town Fellows, who as a body will not vote for country candidates for Council. A correspondent has stated that Mr. Kelly of Drogheda will be a candidate on this occasion, but this is a mistake, as that gentleman's name is not on the list of candidates. It is, however, a subject of regret that he is not competing this year, inasmuch as he obtained last year 105 votes, or an increase of thirty-four over the previous year, and probably might have been elected on this occasion. The annual meeting of the Fellows, to receive the annual report of the Council, will be held on Saturday, 30th inst.; and in the evening the Fellows, Professors, and Examiners will dine together in the College.

University of Dublin.

The tercentenary of this University will take place next year, and it has been decided by the College authorities to celebrate the auspicious occasion in the week commencing July 4th, 1892. About 200 distinguished guests, representing 100 foreign universities, are expected to take part in the celebration. It is proposed to found one or more scholarships in the divinity school, to be called "The Magee Theological Scholarships," in memory of the late Archbishop of York. I believe the following is a correct list of the candidates for the Regius Professor of Surgery, the nomination for which will take place by the Council on the 5th inst.:—Mr. C. B. Ball, surgeon to Sir P. Dun's Hospital; Sir George H. Porter, Bart., surgeon to Her Majesty; Sir William Stokes, Professor of Surgery, Royal College of Surgeons; Mr. Edward Hamilton, Professor of Surgery, Royal College of Surgeons, and surgeon to the Lord-Lieutenant; and Mr. W. J. Wheeler, ex-President, Royal College of Surgeons.

Royal University of Ireland.

A meeting of the Senate was held last week, when the Right Hon. Lord Emly was re-elected Vice-Chancellor of the University, and the following were re-elected as Medical Fellows of the University:—Dr. J. J. Charles, Dr. C. P. Coppinger, Dr. P. J. Hayes, Dr. J. P. Pye, and Dr. P. Redfern. The Senate adopted petitions to Parliament praying that medical officers of health in large towns should be required to devote their whole time to the proper discharge of the duties of their office; and that in any amendment of the present Factory and Workshops Act care should be taken that the safeguard at present existing requiring the certificate of a proper medical officer of the fitness of a child for employment shall not be abrogated.

Poisoning from Oxalic Acid.

A commercial traveller during a fit of temporary insanity swallowed a quantity of oxalic acid last Wednesday, and was admitted to Jervis-street Hospital, where he died the following day. Apparently he regretted having taken the poison, as when he reached the hospital he handed the resident surgeon a card, on which was written "Oxalic acid leaves me thus." The dose probably was not a very large one, death not taking place until the following day.

Cork South Infirmary.

A special meeting of the trustees of the institution was held on the 22nd inst., to elect an extern physician, in the room of Dr. W. J. Cummins, who had resigned after a service of nearly twenty years. There were three candidates but two having withdrawn, Dr. Cremen was unanimously elected.

Several cases of influenza have appeared of late in Dublin and suburbs, but the disease so far has not been very fatal.

Dublin, May 26th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Origin and Rôle of Pus Cells.

PROFESSOR RANVIER made an interesting communication at a recent meeting of the Academy of Sciences on the origin and signification of pus cells. He said that for some years

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past histologists generally were agreed that the cells of pus were none other than the white corpuscles of the blood, which had emigrated from the vessels at the time suppuration was set up. He found it difficult, however, to believe that the blood could yield in this way, and in a time comparatively short, the enormous quantity of pus found in many pathological conditions, such, for example, as the purulent infection of wounds, accidental and operative. That the white cells do emigrate in the manner generally accepted he had no doubt. This takes place under normal physiological conditions, while it is still more pronounced in certain pathological states not ending in actual inflammation, in the process of which it is of course abundantly evident. What his experiments led him to establish, however, was that pus cells had also quite another origin—viz., the transformation into lymph cells of clasmatocytes, elements derived from migratory cells, which under the influence of irritation revert to an embryonic condition and proliferate rapidly. As to the *rôle* of the pus cells, M. Metchnikoff has shown the importance of lymphatic cells in the combat of the organism against microbes. In simple inflammation determined by caustics, or other irritant agents, their *rôle* is not less important. They eliminate the dead elements, and thus prepare the way for the processes of regeneration.

"Typhoid Pleurisy."

At the last meeting of the Medical Society M. Fernet read the notes of a case of pleurisy with effusion in which was found in abundance the bacillus of Eberth. The patient was a young man of eighteen, who manifested in addition to pleuritic symptoms the general signs of enteric fever except the rose spots. The history revealed that the pleuritic symptoms had existed for two months anterior to admission to treatment for typhoid fever symptoms, and from this it might appear that the typhoid fever was contracted subsequently to the pleuritic attack, and that the bacillus of the former had found its way to the pleural cavity, already in a state of inflammation. M. Fernet, while admitting that the establishing of the true sequence was a difficult matter, was of opinion that the most plausible explanation was that the pleurisy was the antecedent manifestation of the typhoid fever, and that, like the latter, it was set up by the bacillus of Eberth. One could hardly generalise from a single case; but if other similar ones should be recorded there might be warrant for creating a new subdivision of pleuritic affections under the name of "typhoid pleurisy."

Cæsarean Section by an Unqualified Person.

Condemnations for illegally practising medicine amongst the living are of frequent occurrence in this country. Can, however, an unqualified person who performs an operation on a dead body be held to have illegally practised? Odd as this point of law may appear, it was recently submitted to the local tribunal of Espalion, which decided the question in the affirmative. The curious circumstances under which the operation was performed were as follows. A woman, pregnant and at about full term, died from causes which, I gather, were not associated with her pregnancy. The parish clergyman and a neighbour were present at the death scene, when the latter, encouraged and persuaded by the former, undertook the Cæsarean section in order to save the child. The operation was quickly, albeit roughly, done, and with the happiest results so far as the child was concerned. The operator was, however, indicted before the local Correctional Court and fined fifteen francs for illegally practising medicine. The law as interpreted by the lawyers would appear clear enough on the point, but as interpreted by the medical press leaves latitude for a second opinion.

Curious Violation of Professional Secrecy.

The Municipal Council of Paris had recently brought under its notice a curious violation of what is laid great stress on in this country—viz., professional secrecy. The Administration sold as waste paper several large bundles of medical reports, dating from 1873, containing the official notification of the demise of people whose names, diseases, and concerning whom other details of a private nature were given. The retail dealers in certain quarters bought the waste paper and used it to wrap up their wares in when disposed of to the public, who had thus ascertained particulars about the immediate ancestors of their neighbours by no means desired by the latter. The Prefect of the Seine being appealed to decided that for the future the documents in question should be destroyed and not sold.

The Influenza.

While London and England generally are being visited by a severe epidemic of this many-sided affection, Paris is comparatively free from it. It is reported, however, from Alsace that the disease is visiting in a severe form the town of Uttweiler. It is added that there is hardly a house in the town which has not been visited by the epidemic, and that a very large percentage of the patients has succumbed.

Paris, May 21st.

Obituary.

JOSHUA SOUTHWOOD, M.D. ST. AND., F.R.C.S., &c.

WE have to record the death, at the advanced age of eighty-one, of Dr. Southwood, who for more than half a century—viz., for fifty-two years—held the post of resident medical officer at the Metropolitan Dispensary, Cripplegate, City. He died on May 20th, after a few days' illness, from the prevailing complaint, influenza. Dr. Southwood was educated at Guy's Hospital, and took his first qualification to practise at the Apothecaries' Hall in 1834, while in 1839 he received the appointment to the post he occupied for so many years. Even before this he was connected with the City, having been apprenticed to one of the medical officers to the City Dispensary. Dr. Southwood retained his health and activity up to a few days before his death, and his memory was unimpaired; his recollections of the old style of surgical practice in pre-chloroform days, of the various cholera epidemics, and of the peculiar characteristics of the consultants of the past generation were most interesting. At one time he carried on a large private practice, but during the past few years had relinquished it. The great respect in which he was held was shown by the large attendance not only of the committee of the dispensary and of his medical colleagues, but also of the poor of the neighbourhood, at the funeral service at St. Giles's, Cripplegate, on Saturday last. Dr. Southwood was never married.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 21st inst. the degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on

Ernest John Drum Mitchell, Gonville and Caius.

At the Third Examination (Part II.) for Medical and Surgical Degrees, held at Easter Term, 1891, the following gentlemen were examined and approved:—

Abram, B.A., Caius.
Anderson, H. K., B.A., Caius.
Beaumont, W. H., B.A., Downing.
Bennetts, B.A., Caius.
Calthrop, G., B.A., Caius.
Carruthers, B.A., Christ's.
Carter, B.A., Pembroke.
Colclough, B.A., Caius.
Colvin-Smith, B.A., Caius.
Crosby, B.A., Caius.
Devereux, B.A., Selwyn Hostel.
Dumbleton, M.A., Peterhouse.
Earl, M.A., Cavendish Hostel.
Felce, B.A., Jesus.
Fisher, B.A., Cavendish Hostel.
Gimson, B.A., Cavendish Hostel.
Gornall, B.A., Catharine.
Hall, R. H., B.A., Pembroke.
Head, Trinity.
Latter, B.A., Pembroke.
Lea, J., B.A., Caius.
Lewis, S., B.A., John's.
Low, B.A., Clare.
Morris, B.A., Trinity.
Palmer, B.A., Downing.
Pethick, B.A., Downing.
Phear, B.A., Trinity.
Richards, B.A., Downing.
Richardson, M.A., Caius.
Roberts, M.A., Cavendish Hostel.
Rowland, B.A., Caius.
Savory, B.A., Cavendish Hostel.
Smith, A. H., B.A., King's.
Surridge, B.A., Caius.
Thompson, A. H., M.A., Trinity.
Watts, B.A., John's.
West, B.A., John's.
Wilks, B.A., Caius.

UNIVERSITY OF LONDON.—The following candidates passed in the respective divisions at the May examinations for the Pass M.B.:—

First Division.—Frank George Bushnell, Douglas Richard Green, John George Hewitson, Richard Gundry Rows, and John Alfred Waring, University College; Charles Coles and Llewelyn Roberts, St. Bartholomew's Hospital; John Norton Collins, London Hospital; Arthur Colborne Lankester, St. Thomas's Hospital; Florence G. Longbottom, London School of Medicine for Women; Cyril Gordon Mack, St. Mary's Hospital; and William Gusterson Rogers, Guy's Hospital.

Second Division.—Albert Edward Berry, Owens College and Manchester Royal Infirmary; George Arthur Berry, Owens College and

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Middlesex Hospital; Henry Ambrose Burrowes, Liverpool Royal Infirmary; William Adams Clark, St. Bartholomew's Hospital; John Hazlewood Clayton, Birmingham Medical School; Herbert Vigers Hickman, Guy's Hospital; Theodore Henry Ionides, Eric Leonard Norman Pridmore, and Walter William Hunt Tate, University College; Harold Mason, Queen's College, Queen's Hospital, and General Hospital, Birmingham; Mildred Ernestine K. Staley, London School of Medicine for Women; and Frederic Ryott Percival Taylor, Westminster Hospital

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on the 18th inst.:—

Alexander G. R. Foulerton, M.R.C.S., of St. Bartholemew's Hospital; Clement B. Voisey, M.R.C.S., of Owens College, Manchester and St. Mary's Hospital; Frank N. Windsor, of Owens College, Manchester, and Cambridge University; Charles F. M. Ward, of Queen's College, Birmingham; Francis H. Marson, of Durham University and Queen's College, Birmingham; Wilfred Edgcombe, of University College, Liverpool; James Musgrove, M.R.C.S., of Edinburgh University; William G. Laws, of Durham and Edinburgh Universities and St. Thomas's Hospital; George Lawrence, of Cambridge University and Guy's Hospital; and John Hartley, M.R.C.S., of Middlesex Hospital. (Eleven candidates were referred.)

Passed on the 19th inst.:—

Francis H. Langlands, of Melbourne University and Middlesex Hospital; Frederick C. Scotson, James B. Carter, and John Stephenson, of Owens College, Manchester; Harold B. Dickinson, of University College, Liverpool; Charles W. Curtis, of Middlesex Hospital; Albert E. Martin, M.R.C.S., of Durham University and London Hospital; Arthur H. Cheatle, M.R.C.S., and William Turner, of King's College. (Eleven candidates were referred.)

Passed on the 22nd inst.:—

Edward Cotterell, M.R.C.S., of University College; Kenneth Lawson, of Middlesex Hospital; and Ernest W. Ormerod, of Cambridge University and St. Bartholomew's Hospital. (Eighteen candidates were referred.)

Passed on the 23rd inst.:—

John S. Sloane, Henry B. Maingay, and Henry S. Elworthy, of St. Bartholomew's Hospital; William F. Lucas and Francis E. Rock, of Middlesex Hospital; William J. Harris, of Cambridge University and Guy's Hospital; Charles S. Pantin, John B. Leathes, Richard H. Luce, and Daniel W. Samways, of Guy's Hospital. (Eleven candidates were referred.)

Passed on the 25th inst.:—

Henry A. D. Dickson, of St. Thomas's Hospital; Edward S. Cardell, of St. Bartholomew's Hospital; Alfred Foster, M.R.C.S., of St. Mary's Hospital; Arnold Chaning-Pearce and David M. Beddoe, of Guy's Hospital; Francis W. J. Coaker and George B. Robinson, of London Hospital. (Thirteen candidates were referred.)

103 candidates presented themselves for this examination, 39 of whom passed, and 64 referred for six months.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the subjects indicated during May:—

Surgery.—V. H. Barr, Guy's Hospital; H. B. Bates, University College, Liverpool; G. T. B. Blick, St. Mary's Hospital; T. F. Daniels, Royal Infirmary, Manchester; E. Middlebrooke, University of Iowa; H. E. Pittway, University College; W. K. Steele, Guy's Hospital; H. E. Tomlinson, Yorkshire College, Leeds; and L. Whitby, Royal Free Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. G. Bullmore, St. Mary's Hospital; R. T. Cassall, University College; G. E. T. Haydon, London Hospital; R. M. Hughes, University College; W. J. C. B. Pitt, Queen's College, Birmingham; H. W. Roberts, St. George's Hospital; W. Robinson, Middlesex Hospital; H. B. Shepherd, Middlesex Hospital; H. E. Tomlinson, Yorkshire College, Leeds; E. B. Wrench, Cambridge University and St. Thomas's Hospital; W. Wright, St. Bartholomew's Hospital; and W. S. Wright, St. Mary's Hospital.

Medicine and Forensic Medicine.—T. F. Daniels, Owens College, Manchester, and R. A. Smith, Sheffield and Leeds.

Medicine and Midwifery.—J. F. Brown, Toronto University; and M. Jenkins, Guy's Hospital.

Midwifery and Forensic Medicine.—H. S. Cooper, Westminster Hospital.

Midwifery.—W. E. S. Jones, Guy's Hospital.

Forensic Medicine.—W. H. Savery, Sheffield.

To Messrs. Cooper, Haydon, Hughes, Middlebrooke, Preston, Shepherd, Tomlinson, Wrench, W. Wright, and W. S. Wright was granted the Diploma of the Society, qualifying for registration, and entitling them to practise Medicine, Surgery, and Midwifery.

OPEN SPACES.—Last week the Duchess of Albany formally opened at Surbiton, as a public recreation ground, eight acres of land, acquired on lease at a low rent from the Earl of Lovelace. It is situated between Surbiton and Tnames Ditton.—The Hornsey Local Board has purchased seven acres of land on the Western side of Middle-lane, near the junction with the Priory-road, which is to be appropriated to the use of the public for recreation purposes.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The annual meeting of the Association will be held at the rooms of the Royal Medical and Chirurgical Society to-day (Friday), at 4 P.M. Dr. B. W. Richardson will preside. Prizes will be given to the successful students in the examination on Alcohol, after which Dr. McDowel Cosgrave will read a paper entitled Alcoholic Self-delusion.

THE CITY POLICE CELLS.—At the hearing of a charge against four young men of larceny at the Guildhall on the 14th inst., the solicitor who appeared for the defendants complained of the condition of the cells of the Moor-lane police station, which he characterised as abominable. Mr. Alderman Phillips, the presiding magistrate, promised that the matter should be inquired into.

PROPOSED COTTAGE HOSPITAL, CHIPPING NORTON.—A public meeting was held at the Town Hall on the 21st inst., to consider the steps necessary to be taken to secure Mr. Fowler's generous gift of £1000 towards the erection of a cottage hospital. The ex-mayor of the borough presided. A unanimous opinion was expressed that the gift should be accepted, and a committee, treasurer, and honorary secretaries were appointed to promote the object in view.

LONDON WATER-SUPPLY.—The Hybrid Committee appointed by the House of Commons to inquire into the Bill affecting the London water-supply resumed their meeting on Thursday for the first time since the recess. Sir Matthew White Ridley presided. The case in support of the Bill promoted by the London vestries to constitute a water trust, with power to acquire the London water undertakings, together with the Rickmansworth and Leatherhead Water Companies, was continued.

CROYDON GENERAL HOSPITAL.—At the last meeting of the committee letters were read from Dr. Strong and Dr. Adams resigning their positions as surgeons on the staff. The committee spoke in the highest terms of the services rendered by these gentlemen during a period of many years, and it was resolved that an illuminated address should be presented to each gentleman. Dr. Strong thanked the committee on behalf of himself and Dr. Adams, who was unavoidably absent. He stated that the reason for his retirement, and he might perhaps add for that of his colleague, was that, having held the position for so long a time, he felt that others well qualified to do so should have the privilege afforded them of rendering similar service.

HOSPITAL FOR SICK CHILDREN.—At the thirty-ninth annual court of the governors of the hospital, Great Ormond-street, held on Wednesday, Mr. Arthur Lucas in the chair, the report of the committee of management was presented. It expressed a hope that the friends of the hospital would contradict a prevalent rumour that the hospital had been placed in a condition of independence by the recent bequest of Mr. Barry. That bequest would produce an annual income of £1400, raising the secured income of the hospital to about £1800. The accounts for the year showed a deficit of £600. The Duke of Fife had consented to become president of the hospital. Dr. Cheadle, elected in 1875, had consented to retain his post until the opening of the new wing.

PRESENTATIONS.—Dr. Buckley Pogson, having resigned the post of resident medical officer at the Durham County Hospital, has been presented with a handsome clock as a wedding present and mark of esteem by the matron and nursing staff of that institution.—Mr. John Mackenzie, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., of Intake, near Sheffield, has been presented by the members of the Intake and District Ambulance Class with a marble timepiece as a slight recognition of his instructive lectures on "First Aid."—Mr. C. E. Harold West, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., on his resigning the house-surgeonship of the North Cambs Cottage Hospital, has been presented by the matron and nurses of the institution with a handsome silver match-box as a mark of respect and esteem; whilst Mr. Whittlesea, the porter, and his family, have made him a present of a well-finished pipe.—Surgeon-Major T. D. Buchanan, M.D., L.F.P.S. Glas., has been presented by his brother officers, on his retiring from the regiment after thirty-one years' service and the rank of lieutenant-colonel, with a gold watch and chain and the badge of the regiment.

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FIRE AT THE BRISTOL INFIRMARY.—On Saturday morning last a fire broke out in the linen-room of this infirmary, but owing to the prompt and energetic action of the fire brigade and resident officers but little damage was done. No alarm was created in the wards.

WEST CORNWALL MINERS' HOSPITAL, REDRUTH.—The report for the past year bears testimony to the value of the good work done by this institution. Fifty-seven more patients were admitted than in the previous year, and the total (271) was the largest on record since the opening of the hospital. The committee were convinced that the hospital was thoroughly central for serving the ends Lord Robartes had in view when building it. Thanks were accorded to his lordship for continuing to make up the financial deficiency, which this year was £436 1*s.* 1*d.*, but less by £391 14*s.* 7*d.* than in 1889.

ROYAL MEDICAL BENEVOLENT COLLEGE.—The thirty-eighth annual meeting of the governors of this College was held on Thursday last at the office in 37, Soho-square, Dr. Holman, treasurer, in the chair. There was a fair attendance of the governors. The secretary read the report, which amongst other matters expressed the deepest regret at the death of Earl Granville, who had been for many years president of the institution. Several matters of interest were brought before the meeting, but the full report of the proceedings must be deferred until our next number.

SOCIETY FOR THE PROTECTION OF WOMEN AND CHILDREN.—Mr. F. D. Mocatta (in the absence of the Earl of Meath) presided at the annual meeting held on Monday at St. James's Hall, Piccadilly. The report pointed out the valuable assistance the Society had rendered to a class of sufferers from cruel treatment who were unable to protect themselves. In moving the adoption of the report, the Chairman remarked that the sums received and paid away in the past year amounted to £448 17*s.* 9*d.*, and during that period 492 cases had been dealt with, of which 221 had received legal assistance. The objects of the Society were worthy of the sympathy and generosity of the public.

EARLSWOOD ASYLUM FOR IDIOTS.—The forty-fourth annual festival dinner in connexion with this institution took place at the Hôtel Métropole last week. Mr. Blundell Maple, M.P., occupied the chair. The attendance was large and influential. The Chairman, in proposing the toast of the evening, stated that in Great Britain there were only five institutions which were devoted to the care of idiots. At present there were at this asylum 600 inmates received from all parts of the kingdom, and 150 applicants were seeking admission. Additional funds were needed to enable the Board of Management to deal with these candidates or some of them. Subscriptions were announced amounting to £3956.

THE FEEBLE-MINDED AND EPILEPTIC.—A special meeting of the Council of the London Charity Organisation Society was held on Monday to hear a paper read by Miss Stacey, of the Birmingham Board of Guardians, on the Poor-law provision for the care of the feeble-minded and epileptic. Mr. T. Holmes, F.R.C.S., presided. The Chairman stated that the meeting was called to promote a movement which the Council believed to be urgently needed in defence of a class of persons whom the law at present inadequately protected. Miss Stacey then read her paper, limiting her remarks chiefly to the case of feeble-minded paupers. The Secretary of the Society explained that the proposal made was for an amendment of the law, so as to enable a board of guardians to deal with the feeble-minded and epileptic in like manner as they were empowered to do in respect to the blind, deaf, and dumb. A long discussion ensued.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AITKEN, W. B., M.B., C.M. Glasg., M.R.C.S., has been appointed Officer of Health for Jamestown, South Australia.

ANNACKER, ERNEST, M.D. Berlin, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Manchester Royal Infirmary, vice Blore, resigned.

ANNINGSON, B., M.D. Camb., M.R.C.S., has been reappointed Medical Officer for the Rural Sanitary Districts of the Chesterton Union.

ARNISON, W. D., M.D. Dunelm, has been appointed Senior House Physician to the Royal Infirmary, Newcastle-on-Tyne, vice W. Balgent, M.D., resigned.

ATKEY, P. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

BEVILLE, F. W., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

BOX, C. R., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

BRADY, A. J., L.R.C.P., L.R.C.S. Irel., has been reappointed Honorary Senior Aural Surgeon to the Sydney Hospital, New South Wales.

BROWN, JAMES, M.B., C.M. Edin., has been appointed Medical Officer for the Aldbury District of the Berkhampstead Union.

CALVERT, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Sussex County Hospital, vice Hodgson, resigned.

CARTER, R., M.D. Aberd., M.R.C.P. Edin., has been appointed Senior Physician to the Bath Royal Mineral Water Hospital, vice Hensley, deceased.

CHAMBERS, M. W., M.R.C.S., has been reappointed Honorary Senior Obstetric Surgeon to the Sydney Hospital, New South Wales.

COBBETT, L., L.R.C.P., F.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

COLLINS, M. J., L.R.C.S. Edin., has been appointed Surgeon on the Medical Staff of the Defence Force, Queensland.

CONNOR, DANIEL, L.R.C.S., L.M. Irel., has been appointed Resident Medical Officer to the Victoria Plains District, West Australia.

DOYLE, H. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent of the Newcastle Hospital, New South Wales, vice Hester, resigned.

EASTON, G. F., M.D., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the Alnwick Rural and Urban Sanitary Districts.

EVANS, WM. GEO., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Clinical Assistant to the City of London Asylum, near Dartford, Kent.

FORDE, T. A. M., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

FORWARD, F. E., F.R.C.S., L.R.C.P., has been reappointed Non-resident Ophthalmic House Surgeon to St. Thomas's Hospital.

GOODE, W. H., M.D., M.Ch. Dub., has been reappointed Honorary Surgeon to the Sydney Hospital, New South Wales.

GRIFFITH, W. S., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

GROWSE, WILLIAM, B.A. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Convalescent Home, Kenilworth, vice Dr. Atkinson, resigned.

HARPER, J. B., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

HEELAS, WALTER W., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Hospital for Sick Children, Newcastle-on-Tyne.

HUXTABLE, L. R., M.B., C.M. Edin., has been reappointed Honorary Physician to the Sydney Hospital, New South Wales.

JACKSON, C. G., L.R.C.P. Irel., has been appointed Officer of Health for the District of Derby, Tasmania.

JOYNT, H. N. H., M.B., B.Ch. Dub., has been appointed Resident Medical Superintendent of the Bradford Fever Hospital, vice Evans.

KERR, W. J., F.R.C.S., L.R.C.P. Edin., has been reappointed Medical Officer for the Melksham Rural and Urban Sanitary Districts.

KELLOCK, T. H., M.A., M.B., B.C. Cantab., L.R.C.P., F.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

LAKE, C. LEONARD, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Noble's Hospital and Dispensary, Douglas, Isle of Man, vice Dr. Miller.

LANE, HUGH, L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Bath Royal Mineral Water Hospital, vice Carter, resigned.

LOGIE, JAS., M.B., C.M. Aberd., has been appointed Medical Officer for the Raglan Sanitary District, Monmouth.

LOW, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

MARTIN, C. J., B.Sc. Lond., M.R.C.S., has been appointed Demonstrator in Physiology at the Sydney University, New South Wales.

MCALDOWIE, A. M., M.D., M.B., C.M. Aberd., has been appointed, *pro tem.*, Deputy Medical Officer for the Borough of Stoke-on-Trent.

MCCALL, A., M.B., C.M. Glasg., has been appointed Medical Officer for the Conisborough Sanitary District of the Doncaster Union, vice Hills, resigned.

MEAD, RIVIS, M.B., C.M. Edin., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Quirindi, New South Wales.

METCALFE, A. W., M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the York Dispensary.

MORISON, JOHN, M.D. Edin., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer of Health for St. Albans, Herts.

NIHILL, J. E., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician, Melbourne Hospital, Australia.

PAYNE, J. W., M.R.C.S., has been appointed Officer of Health for Davenport, Tasmania.

PHILLIPS, A. C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon on the Medical Staff of the Defence Force, Queensland.

PRICE, A. E., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

ROUILLARD, L. A. J., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

SHAW, RAYMOND H., M.B., B.S. Dunelm, has been appointed House Surgeon and Assistant Secretary to the West Herts Infirmary Hemel Hempstead, vice W. D. Arnison, M.D., resigned.

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SHEPPARD, H. A., M.R.C.S., has been appointed Medical Officer for the Workhouse and the Eling District of the New Forest Union.

STILWELL, G. R. F., L.R.C.P., M.R.C.S., L.S.A., has been appointed Non-resident House Physician to St. Thomas's Hospital.

STOKES, W. G. G., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

STRANGMAN, T. H., L.R.C.S. Irel., has been appointed Government Medical and Health Officer for Port Douglas, Queensland.

SWEETNAM, F. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Minhamite Shire, Victoria, Australia, vice Jackson.

TOMER, S. G., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

UMNEY, W. F., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric Clerk to St. Thomas's Hospital.

USHER, C. H., B.A., M.B., B.C. Cantab., has been appointed Non-resident Ophthalmic House Surgeon to St. Thomas's Hospital.

VOLKMAN, RONALD, L.R.C.P. Edin., M.R.C.S., has been appointed Public Vaccinator for the District of Rangiora, New Zealand.

WEBSTER, P. S., M.B. Dub., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgeon to the Victorian Eye and Ear Hospital, Melbourne, Australia.

WILKINSON, W. C., M.B., B.Ch., L.R.C.P. Irel., has been reappointed Honorary Assistant Aural Surgeon to the Sydney Hospital, New South Wales.

WINDER, A. E., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Thurstonland Urban Sanitary District of the Huddersfield Union.

WOODFORDE, W. T. G., M.D. Lond., has been reappointed Medical Officer of Health for the Berkshire Combined Sanitary Districts.

WORRALL, R., M.D., M.Ch. Dub., has been reappointed Honorary Assistant Obstetric Surgeon to the Sydney Hospital, New South Wales.

WYMAN, C., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL CITY LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary £120 per annum, with furnished apartments, board (except beer, &c.), and washing.

COURT FORESTERS' ISLE, NO. 1822, AND JUVENILE SOCIETY.—Third Qualified Medical Practitioner. (Apply to the Secretary, Foresters' Hall, West Cowes, Isle of Wight.)

CUMBERLAND INFIRMARY, Carlisle.—Assistant House Surgeon for one year. Salary £10 per annum, with board, lodging, and washing.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House Surgeon for six months. No salary, but a bonus of £10 is given, and board and washing.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Commencing salary £80 per annum, with board and residence.

GUY'S HOSPITAL, S.E.—Five Assistant Dental Surgeons.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £50 per annum, with residence, board, and washing.

HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Chief Demonstrator of Anatomy.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior House Surgeon. Salary £50 per annum, with board and residence.

R. W., care of Mr. W. Davis, Grocer, Abergavenny.—Doctor to a Medical Aid Society. £40 a year and lodgings.

ST. MARY'S HOSPITAL, Paddington, W.—Dental Surgeon for five years.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

SUSSEX COUNTY HOSPITAL.—Surgeon.

SUSSEX COUNTY HOSPITAL.—Assistant Surgeon. (Apply to the Secretary, Brighton.)

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board and lodging provided.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary (without residence) £140 per annum, with a portion of midwifery fees; also £20 per annum for cab hire. (Apply to Mr. Gibson, Easy-row, Worcester.)

Births, Marriages, and Deaths.

BIRTHS.

ACKLAND.—On May 25th, 1891, at 24, Southernhay, Exeter, the wife of J. McKno Ackland, M.R.C.S., L.D.S. Eng., of a son.

ALEXANDER.—On May 22nd, at the London County Asylum, Hanwell, W., the wife of Dr. R. R. Alexander of a son.

ANDERSON.—On May 21st, at Belsize-park, N.W., the wife of Dr. Ford Anderson of a daughter.

BAINES.—On May 8th, at Toronto, Canada, R. J. Ella, the wife of A. M. Baines, M.D., L.R.C.P., of a son.

BIRT.—On May 21st, at Priory-terrace, Leamington, the wife of Stephen Birt, L.D.S. Eng., of a daughter.

HANDCOCK.—On May 22nd, at Girlington, Bradford, the wife of George Handcock, M.R.C.S., of a son.

HILLSTEAD.—On May 21st, at Upper Richmond-road, Putney, the wife of Herbert John Hillstead, M.B., of a son.

POLLARD.—On May 26th, at Queen Anne-street, Cavendish-square, W., the wife of J. Pollard, M.R.C.S., prematurely, of a son, who only survived a few hours.

SCOTT.—On May 22nd, at Westbourne Villa, Ealing, the wife of Alfred Langston Scott, M.R.C.S., of a son.

TEBB.—On May 21st, at Charlcombe, Bournemouth, the wife of W. Scott Tebb, M.A., M.D. Cantab., of a son, who lived only a few minutes.

MARRIAGES.

POPE—BILLSON.—On May 26th, at St. John the Baptist's, Knighton, Leicester, by the Rev. Mortimer H. Linklater, Frank Montague Pope, M.B. Cantab., M.R.C.P. Lond., eldest son of the late Thomas Pope, of Harewoods, Bletchingley, Surrey, to Catherine, eldest daughter of William Billson, The Lawn, Stoneygate, Leicester.

STONE—FIELDEN.—On May 20th, at Nutfield Parish Church, Dr. Stone, of Holmfield, Reigate, to Kate, fourth daughter of the late Joshua Fielden, Esq., of Nutfield Priory.

DEATHS.

ATKINSON.—On May 17th, at the Grange, Rotherham, James G. Atkinson, M.D., F.R.C.P. Edin.

BROWNE.—On May 24th, at his residence, Montpelier-road, Brighton, George Browne, M.R.C.S., in his 71st year.

COOPER.—On May 21st, at Albion-street, Hull, Henry Cooper, Knt., M.D., J.P., aged 84.

COSSAR.—On May 21st, at East Craigs, Corstorphine, N.B., Thomas Cossar, M.D., F.R.C.P.E., aged 71.

CROMPTON.—On May 22nd, at Brookmead, Cranleigh, Samuel Crompton, M.D., aged 74.

DIXON.—On May 21st, at his residence, Brighton, suddenly, James Lewis Wilmot Dixon, M.R.C.S., L.S.A., in his 71st year.

DRACACHIS.—On May 25th, at Herries-street, Kilburn, N.W., Leonidas Dracachis, M.R.C.S., in his 84th year.

FORBES-WINSLOW.—On May 17th, at Rivercourt, Hammersmith, Percy Forbes, eldest and much beloved son of Dr. L. Forbes-Winslow, aged 22, Student of Charing-cross Hospital, after five months' terrible suffering, the result of blood-poisoning.

HILBERS.—On May 23rd, at Brunswick-place, Brighton, Surgeon-Major William Hilbers (retired), aged 75.

HIRON. — On May 18th, at Studley, Redditch, John H. Hiron, M.R.C.S.

HOGGAN.—On May 18th, at Nice, George Hoggan, M.B. and C.M. Edin. Cremated at Père-la-Chaise on his 54th birthday, May 24th.

JOSEPH.—At Moi Mir, Little Bay Mines, Notre Dame Bay, Newfoundland, 24th April, 1891, Alice Jane Duder, wife of Louis E. Joseph, M.B., C.M., Surgeon, Newfoundland Consolidated Copper Mining Company.

MOYLES.—On May 22nd, at his residence, The Bushes, Edgbaston, Thomas Moyles, M.D., aged 74.

SMITH.—On May 15th, at Shrewsbury, James Onston Smith, L.R.C.P. Edin., M.R.C.S.

SOUTHWOOD.—On May 20th, at Fore-street, E.C., Joshua Southwood, M.D. St. And., L.R.C.P. Edin., F.R.C.S. Eng., aged 80.

TIBBITS.—On May 24th, at Warwick, John Tibbits, M.D., J.P., aged 65.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on May 26th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	175	54	3	28	..	260	442
North-Western Hospital	128	30	..	11	..	169	443
Western ,,	139	14	..	14	1	168	224
South-Western ,,	151	23	..	8	..	182	340
South-Eastern ,,	127	17	..	18	1	163	462
Northern ,,	157	14	..	..	..	171	480
Totals	877	152	3	79	2	1113	2391

SMALL-POX.—*Atlas* hospital ship, 30.

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Medical Diary for the ensuing Week.

Monday, June 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. J. H. Morgan: Congenital Deformities of Hands and Feet.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: Cataract.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. F. H. Balkwill: Notes on some Morphological Dental Irregularities in some of the Skulls in the Museum of the Royal College of Surgeons of England. Casual Communications:—Mr. Sewill: The Production of Caries by Artificial Means out of the Mouth (illustrated with microscopic sections).—Mr. A. W. Barrett: (1) A Clamp extemporised to arrest Alveolar Hæmorrhage; (2) An Underhung Bite, probably due to incomplete development of upper maxilla, dependent upon non-eruption of wisdom teeth.—Mr. Ackery: Unilateral Absence of Teeth in a patient aged thirty-five.

Tuesday, June 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: General Paralysis of the Insane.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: Arsenic as a Drug.

Wednesday, June 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. T. Henry Green: Demonstration of Clinical Cases.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Quarry Silcock: Choroidal Affections.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Kelson, Mr. Alban Doran, and others.—Dr. Herbert Spencer: On Visceral Hæmorrhages in Still-born Children, an Analysis of 130 Autopsies, being a Contribution to the Study of the Causation of Stillbirth (with exhibition of museum and microscopic specimens).—Dr. John Phillips: The Influence of Purpura Hæmorrhagica upon Menstruation and Pregnancy.

Thursday, June 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. J. H. Morgan: Cases of Defective Gait in Children.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Ormerod: Varieties of Tremor.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. W. R. H. Stewart: Some of the Causes of Ear Disease.

Friday, June 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. T. Henry Green: Demonstration of Clinical Cases.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Actinomycosis (Sections of Actinomycosis).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Kidneys and Genito-urinary Tract.

Saturday, June 6.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 28th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 22	29·62	S.W.	48	46	99	58	45	·10	Raining
,, 23	29 77	S.W.	49	46	100	63	45	·03	Cloudy
,, 24	29·65	E.	48	46	82	51	46	·05	Raining
,, 25	29·72	N.E.	44	42	70	48	42	·50	Raining
,, 26	29 72	W.	48	44	101	59	43	·06	Cloudy
,, 27	29 62	W.	51	47	89	58	43	·04	Cloudy
,, 28	29 67	W.	53	47	100	58	45	·02	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

SCARLET FEVER BY POST.

OWING to the prevalence of scarlet fever at Johannesberg it is said that the sanitary authorities of Cape Colony have cautioned recipients of letters and newspapers from that city to have them fumigated as soon as received. We believe there is good evidence of the transmission of the contagia by this means, and some years ago we received several letters quoting unequivocal instances of this mode of propagation (THE LANCET, vol. i. 1875). The precaution suggested has therefore a foundation in fact. The daily contemporary from which we take the information points out that there is probably as much intercourse by letter between Johannesberg and London as there is with Cape Colony, and we should be glad to know if any of our readers have met with instances of the disease being thus conveyed. We need hardly say that the proofs of such communicability will require to be very cogent before they can be accepted.

Dr. R. R. Rentoul.—It would be better for the communication to be referred to the journal in which the alleged misstatements appeared.

Matron.—The case might be submitted to one of the physicians of the hospital.

MIDDLESEX HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Referring to the paragraph on page 1174 of your current issue I beg to inform you that the report as to the closing of the in-patient department of this hospital for two months from July 20th is premature, as it has not yet been definitely decided to close the hospital, in view of the strike in the carpentering trade which might seriously delay the work of laying the new teak floors in the hospital.

I am, Sirs, yours faithfully,

F. CLARE MELHADO,
Secretary Superintendent.

May 27th, 1891.

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THE INFLUENZA AS AN ADVERTISING MEDIUM.

A CORRESPONDENT points out the evil of the action of those who use the influenza for vaunting their remedies in the public papers. He does well to condemn this procedure. If any medical man has anything really original and important to suggest, the medical press is at his service; and if he prefer the lay press, he must not be surprised if critics credit him either with being afraid to submit his views to those who can test them, or with motives of vainglory.

Yorkshire.—The recent works of Laveran, and of Kelsch and Kiener. Also Marchiafava and Celli, Dolega, and others in the *Fortschritte d. Medicin* for the last few years; Laveran, Archives de Méd. Expérimentale, 1889 and 1890. Abstracts of several recent papers are to be found in the Centralblatt f. Allg. Path. u. Path. Anat., i., No. 12, June 1st, 1890. See also Klebs, Allgemeine Pathologie, I., 1887, chap. viii., where further references may be found.

Ethnologist.—The Census has been taken in British India and Burma. The population in Lower Burma in the last census was about 3,730,000, and according to the present Census is approximately 4,430,000,—an increase of 700,000, or 18¾ per cent. The total population of the country under the control of the Chief Commissioner of Burma will be found to exceed 7,500,000.

Plumb.—For the most recent information regarding plumbism we would refer our correspondent to Dr. Oliver's Gulstonian lectures, an abstract of which appeared lately in our columns.

"THE VALUE OF THE TONGUE AS A RESPIRATOR."

To the Editors of THE LANCET.

SIRS,—I was rather surprised, on reading an article in THE LANCET of May 23rd, 1891 (p. 1149), under the above heading, by an honorary surgeon to a throat and ear hospital, to find him not only recommending his patients to breathe through the mouth, but averring that he himself does so. I have always understood that the nose is nature's only true respirator, and that to breathe through the mouth, especially when facing a cold east wind or breathing quickly the night air, is not only unphysiological, but dangerous. It has been proved experimentally by Aschenbrandt, Block, and in this country by Greville Macdonald, that however low the atmospheric temperature may be, the air is raised almost to blood heat by passing through the nose alone, and that, however dry, it is completely saturated with moisture by passing through the same way. It is well understood, I think, that much harm may ensue from simply breathing through the mouth. Asthma, bronchitis, pharyngitis, laryngitis, and many other diseases may be started by habitual mouth breathing. It is bad enough for people to breathe through their mouths when unable, from disease, to get the air to pass through nature's proper channel, the nose, and I certainly do not feel justified in following the advice of Dr. Scatliff. It is the invariable rule among savage nations to breathe solely through the nose, and they seldom, if ever, suffer from disease of this organ or the throat. The lower animals, with the exception of the dog tribe, seldom breathe through the mouth, and I am perfectly convinced that we should see far less disease of nose or throat did everyone learn to breathe *solely* through the nose. I am sorry to differ from Dr. Scatliff, but I do so on what I conceive to be purely physiological grounds.

I am, Sirs, yours faithfully,

FRED. A. A. SMITH, M.D.,
Hon. Surgeon, Cheltenham Eye, Ear, and Throat Infirmary.

Cheltenham, May 25th, 1891.

AN APPEAL.

MR. W. LAIRD-COX, Southborough, Tunbridge Wells, wishes to make an urgent appeal on behalf of two old ladies, daughters of a deceased medical man. They are much in need of change of air in consequence of illness through the winter. They could be received at a convalescent home, but this would entail an outlay of about £10, and this sum is quite beyond their very slender means. Any contributions will be gladly received and acknowledged by Mr. Laird-Cox.

H.B., M.R.C.S., L.R.C.P.—We hardly think our correspondent has any just ground for complaint. He was for the time being the *locum tenens* of the dispenser, and therefore should not have refused to discharge the duties of that office. Although holding the diploma named, its requirements cannot override the fulfilment of duties appertaining to his appointment.

SAWTELL FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us to acknowledge with many thanks the following additional subscriptions to the above fund?

Professor J. W. Groves, £5 5*s.*; Mr. John Adams, £2 2*s.*; Mr. Arthur C. Roper, £1 1*s.*; Mr. Henry Stear, £2 2*s.*

We beg also to point out that in the list published in THE LANCET of May 16th (p. 1135) Mr. Harrison Cripps' subscription was erroneously given as £5 5*s.* It should have been announced as £2 2*s.*

We are, Sirs, yours very truly,
V. D. HARRIS,
G. T. PENNY,
H. TAYLOR.

May, 1891.

THE TRAINING OF WILD ANIMALS.

THE degree of docility to which the wildest and most ferocious classes of animals may be brought by training, and that of a humane character, is illustrated in a very striking manner by an exhibition now open to the public at the Crystal Palace. Lions, tigers, bears, panthers, chetahs, boar-hounds unite to form a happy family, and mingle in frolics on terms of the greatest possible amity. The quiet obedience to the commands of the trainer and his assistants shown by animals commonly looked upon as almost untamable is not the least interesting part of the display. Of course, wonder is the feeling which alone is excited in the minds of ordinary spectators; but thoughtful persons will probably find themselves indulging in speculations on the plasticity of brute minds, and the possibility, however remote, of bringing into the service of man the strength, fleetness, and courage of animals which have hitherto been regarded as simply quarry for the sportsman, or as consignments to zoological societies for the observation of biologists or the delectation of youthful holiday-makers.

Mr. C. G. B. forwards us a correspondence with Dr. B——, in which Dr. B—— declines to meet him in consultation after having fixed a time to do so, and not only so, but appears as taking the case into his own care. Dr. B—— admits the politeness of the terms of Mr. B——'s letter, but throws no light on the reason for so unusual a course. He says, indeed, that Mr. B—— had "long ago forfeited any claim to courteous consideration." But Mr. B—— says that he is unconscious of having done or left undone anything to justify such words. We trust there is some misunderstanding in this case. Where substantial cause of offence exists and leads to such an unhappy display as in this case, it should be the subject of explicit and definite statement by the gentleman offended.

THE PLAINT OF THE INFLUENZA MICROBE.

To the Editors of THE LANCET.

SIRS,—In justice to my reputation, and for the due edification of "General Practitioner," who wrote a quite uncalled-for letter to a lay contemporary this week concerning my conduct, I, who after all am only a poor microbe, beg to assure him and other Galen's 'prentices that gelsemium or any other "emium" does not distress me. I smile at salicylates and roar at sulphonal. As for aconite, I positively enjoy it, and quinine does not in the least make me feel queer. Eucalyptus is wholesome, but a fig, say I, for the Pharmacopœia. You that are possessed go to bed and stay there if you want to get rid of me. Have a fire, too. I pity poor humans without one this weather. Call in your favourite general practitioner and let him look learned, for faith is a great thing. He cannot touch me, but he can bring down your temperature. Take nourishment, anorexia notwithstanding; and be not above alcohol, but put it down. What I really object to is, that low spirits, suicidal feelings, and other such sickening sequelæ are unblushingly ascribed to me. Rather look for them down in the depressant depths of the apothecary's mortar. It is not pleasing, and is a source of sorrow to have pneumonia sputa ejected in my face too. What have I to do with pneumococcus or tubercle bacilli either? I am beyond bacteriological laboratories, and Koch or anyone else cannot catch me. Alas for the cultured! Whatever else is said, I do good to those that hate me; but they treat and malign me so much, I mean to fertilise elsewhere, and shall soon be going away. A legacy will be left behind which will not be due entirely to my benevolence.

I am, Sirs, yours, not to be caught by chaff or gelsemium either,

May 21st, 1891. AN OVERBURDENED INFLUENZA MICROBE.

COFFEE DRINKERS.

T. S. R.—The following curious calculation has been made, but we cannot vouch for its accuracy:—The Dutchman drinks on an average 16½ lb. of coffee per year; the Belgian about half that quantity; the Norwegian about 6½ lb.; the German about 4½ lb. per head, being about 2 lb. more than the Frenchman, who has the reputation of being a great coffee drinker; whereas, according to statistics lately taken, the Englishman consumes only ½ lb. a year, and the Russian one-fifth of a pound.

A WARNING.

To the Editors of THE LANCET.

SIRS,—On Monday, May 25th, a man of gentlemanly appearance called at my house. He gave the name of Higgins, and asked if I was in. My servant informed him that I was out, but would most likely be in soon to lunch. He was shown into my consulting-room, where my wife saw him immediately afterwards, and he informed her that he had come from the country to consult me. He said he would not wait then, but would take some lunch and return in half an hour. He did not, however, and it was discovered that he had carried off a box of surgical instruments. The man is tall (about 6 ft.), very fair complexion, light sandy hair, moustache, and no whiskers. He looks about thirty years of age, and wears a long, loose, fawn-coloured overcoat and brown bowler hat.—I am, Sirs, yours faithfully,

THOMAS HAMILTON, M.B., F.R.C.S. Edin.

Green Lanes, Stoke Newington, N., May 25th, 1891.

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MEDICAL ATTENDANCE ON EMERGENCIES.

M.D. asks to be informed who is liable for the fee when a medical practitioner is summoned by the police to an urgent case at the patient's house in close proximity, and what is the recognised fee under such circumstances?

Dr. Knox-Bond.—The letter has been received.

Mr. Tubby's paper will appear shortly.

ETHNOLOGY.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me the name of an elementary work on Ethnology, a subject with which I am unacquainted, but am anxious to look into? I am, Sirs, yours faithfully,

May 19th, 1891. INEXPERTUS.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Glover Lyon, London; Dr. A. Ruffer; Mr. F. Treves, London; Mr. Lawson Tait, Birmingham; Sir M. Mackenzie, London; Professor Windle, Birmingham; Mr. Tweedy, London; Dr. Tily, Chiswick; Dr. F. Smith, Cheltenham; Mr. W. Adams, London; Messrs. Griffin and Co.; Mr. H. Cockburn, London; Dr. Black, Inverness; Messrs. Lee and Martin, Birmingham; Dr. Downie, Glasgow; Messrs. Kegan Paul and Co., London; Dr. Auld, Glasgow; Dr. Gardner, London; Mr. Pugin Thornton, Canterbury; Mr. W. Tyndall, Hampton; Messrs. Lloyd and Co., Leicester; Mr. A. Bury, Scunthorpe; Messrs. Wagner and Gerstley, London; Dr. Cattle, Nottingham; Mr. Harkness, Stamford Hill; Mr. Murray, Halifax; Mr. C. Candler, Melbourne; Mr. Gordon Green, London; Hon. Mrs. P. Roberts, London; Messrs. Blondeau et Cie., London; Mr. Lawrence-Hamilton, London; Messrs. Drysdale and Co., London; Dr. Sisley, London; Dr. D. V. Harris; Dr. Theodore Maxwell, Woolwich; Mr. C. G. Brown, Goole; Messrs. Melachrino and Co., London; Mr. W. G. Nash, Plymouth; Messrs. Hopkinson and Co., Notts; Dr. Boyd, Dublin; Dr. Jacob, Leeds; Dr. Sedgwick Saunders, London; Dr. Weir, Tranckei, U.S.; Messrs. Keene and Ashwell, London; Dr. Rentoul, Birmingham; Messrs. Gallais and Co., London; Fleet-Surgeon Ellis; Mr. Dukes, London; Dr. J. Lindsay Stevens, Glasgow; Mr. Laird-Cox, Southborough; Messrs. Beal and Son, Brighton; Surgeon-Major Doble, London; Messrs. Oliver and Boyd, Edinburgh; Mr. T. B. Browne, London; Messrs. Ledger and Co., London; Mr. Melhado, London; Dr. Younger, London; Dr. T. Brooke, Oxford; Dr. Court, Staveley; Mr. Cardew, London; Mr. L. Mark, London; Dr. Hamilton, London; Mr. Yoakley, Newcastle-on-Tyne; Sig. Lodia, Barcelona; Mr. T. Smith, London; Dr. Dutton, London; Mr. C. Steele, Clifton; Mr. Hare, Manchester; Mr. Brooks, Hull; Mr. Carey, Barnes; Mr. Blount, Paris; Mr. Earle; Mr. New, Eton; Miss Walker, London; Mr. Shortley, Coventry; Mr. Ricker, St. Petersburg; Mr. Sell, London; Mr. Saxon, London; Dr. Garman, Kendal; Mr. Langley, Nottingham; Mr. Hornibrook; Dr. Zangger, Zurich; Mr. Edwards, Sunbury; Dr. Bottentuit, Paris; Mr. Merck, Darmstadt; Dr. Johnstone, London; Mr. Head; Mr. Stephens, Isle of Man; Mr. Johnston, Glasgow; Mr. Norton; Mr. Wade, Compton Bishop; X.; Sigma, London; Physician, London; An Overburdened Influenza Microbe; Secretary, General Infirmary, Derby; A Working Man; J. C. W., Manchester; Alpha, London; Secretary, Queen's College, Birmingham; Secretary, General Hospital, Suffolk; Sussex County Hospital; Bachelor, London; Assistant Secretary, Stockport Infirmary; Matron, Cardiff; Orthos, Llandudno; Ichthyol; Bolton Infirmary; Alpha, Sheffield; M.D., Edinburgh; Plumb; A. B. G., London; Med. Practitioner.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Snow, London; Mr. Evans, Oswestry; Mr. Baker, London; Hon. K. Scott, Ventnor, I.W.; Dr. Orr, Godalming; Dr. Ridge, Enfield; Dr. Shiels, Dunbar, N.B.; Mr. Lockwood, Huddersfield; Mr. Tyte, Minchinhampton; Mr. Morgan, Studley; Dr. Harrison, Ealing; Dr. Wallis, Poole; Mr. Goodall, Chesterfield; Mr. Tully, Hastings; Mr. Morgan, Oswestry; Dr. Griffith, Cumberland; Mr. Paton; Messrs. Gale and Co., London; Mr. O'Meara, Loughborough; Messrs. McCorquodale and Co., Glasgow; Mr. Manby, Wolverhampton; Messrs. McNab and Co., Leith; Dr. Rice, Derby; Mr. Pead, Woolwich; Messrs. Wilcox and Co. London; Mr. Knox, McKeesport, U.S.A.; Dr. Ellis, Bishop Auckland; Mr. Wolcott, Keeseville, N.Y.; Mr. Roberts, Peckham Rye; Mr. Craig, Wick, N.B.; Mr. Saxon, London; Mr. Ralph, North Woolwich; Dr. Murrell, Derby; Mr. Gratan, Armagh; Mr. Swanson, Plaistow; Mr. Anderson, Bodmin; Mr. Deane, Salop; Dr. O'Neilly Tuam; Mr. Bell, Leytonstone; Mr. Dobbs, Southgate; Dr. Vasey, Whitby; Mr. Thin, Edinburgh; Mr. Tyrrell, Malvern; Mr. Herbert, Pendlebury; Mr. Reid, London; Dr. Jones, Hirwain; Dr. Williams, Cowes, I.W.; Dr. Bower, Bedford; Mr. Wand, Leicester; Mr. Gray, Shrewsbury; Rev. Mr. Reynardson, Stamford; Messrs. Duncan and Flockhart, Edinburgh; Mr. Beckett-Turner, London; Dr. Kirby, Ben Rhydding; Dr. Sutherland, jun., Newcastle-on-Tyne; Messrs. Slinger and Son, York; Mr. Heywood, Manchester; Dr. Lloyd, Birmingham; Mr. Ackland, Exeter; Dr. Nesfield, Manchester; Mr. Yearsley, Crewe; Rev. W. Butler, Bristol; Mr. Bryden, Shipley; Mr. Straker, Corbridge; Mr. Walker, Corwen; Dr. Wetherby, Yorks; Dr. Waters, Liverpool; Mr. Bragg; Mr. Edwards, Oswestry; Mr. Davenport, London; Mr. A. Ward, Manchester; B. A., London; S. L., London; Vicar, Leamington; P. E. T., London; Secretary, Newcastle-on-Tyne Dispensary; Commissioner, London; J. D., London; Medical Health Officer, Ilfracombe; Yorkshire, London; Statim; Barnwood House Hospital, Gloucester; R. W., Abergavenny; Expectans; Ashwood House, Staffs; Beaumont, Leeds; Physician; Isa, London; Gordon Hotels Co., London; Riviera; Surgeon, Somerset; Wirral Children's Hospital, Birkenhead; Nemo, London; M. S., Birkenhead; Medicus, London; Medicus, Oldham; Pharmacist, London; Medicus, Bradford; Arbutus, Cheshire; Medicus, Lewisham; Medicus, Bournemouth; Trinity, London; Locum, Sheffield; Nemo; Medicus A. O., London; Box 52, Cheshire; E. C., London; Theta, London; Oxon, London; B., London; C., London.

NEWSPAPERS.—*Daily Oracle, Yorkshire Post, Leeds Mercury, Huddersfield Examiner, Scottish Leader, Liverpool Daily Post, Bristol Mercury, Liverpool Courier, Times of India, Leicester Mercury, Western Mail, Dundee Advertiser, Commonwealth, Windsor and Eton Gazette, Labour World, Brighton Society, Surrey Advertiser, Reading Mercury, Weekly Free Press and Aberdeen Herald, Cambridgeshire Weekly News, Local Government Chronicle, Hertfordshire Mercury, National Bulletin, West Middlesex Standard, Mining Journal, Sunday Times, Spectator, Newcastle Chronicle, Insurance Record, Maidstone Journal, West Middlesex Advertiser, South Eastern Gazette, Cornish Telegraph, Windsor and Eton Express, Derby Mercury, Northamptom Mercury, Isle of Ely Advertiser, Brighton Guardian, Courrier de Londres, Worcester Daily Times, English Mechanic, Evesham Journal, Waterford Chronicle, Madras Times, Hampstead Express, Glossop Times, The Rio News (Rio de Janeiro), Whitehaven News, Sheffield Daily Telegraph, Derbyshire Advertiser, Orkney Herald, Hereford Times, Inverness Courier, Glasgow Herald, Cambridge Chronicle, Indian Medical Record, Scotsman, &c.*, have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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METROPOLITAN HOSPITAL SUNDAY FUND.

THE LANCET SPECIAL SUPPLEMENT.

Published in aid of the Appeal to be made on Sunday, the 7th June, 1891.

THE HOSPITALS AND INDUSTRIES OF THE METROPOLIS.

IT has again become our duty to address the readers of THE LANCET, and that still larger public for which the Hospital Sunday Supplement is prepared, on the subject of the claims of the hospitals of the metropolis upon their sympathy and generous support. To many this subject will have become so familiar, that it may well be considered threadbare. But we think that upon perusal of the following pages this will be found not to be the case. Notwithstanding the fact that the work of the metropolitan hospitals has been reviewed at considerable length in these pages during a succession of years, the work itself is so vast in magnitude and so multifarious in its forms, that we are as yet far from having depicted all its striking and interesting features. The aspect which we have on the present occasion selected for especial remark is its bearing upon the industrial life of our vast community. There are some phases of industrial enterprise which, by reason of the manifest peril or excessive hardship encountered in their pursuit, strike even the slowest imagination, and surely awaken feelings of gratitude and of sympathy. Thus we easily kindle over the winter's fire at thoughts of the cost in toil and solitude and danger at which our coal has been won from the "secret mine," or ruminate during the wakeful hours of a stormy night upon the hard conditions of a seafaring life. These things are too obvious to be overlooked, and too striking to be under-estimated. But in the vast hive of industry in which we dwell are crafts as arduous as the miner's, as perilous as the seaman's; and yet few of us remember, even if we recognise the fact at all, that London, the great metropolis of commerce, is also a great centre of mechanical and chemical industry. Yet so it is. Upon the riverside, from London Bridge to Greenwich, there extends an almost unbroken line of wharves and docks, constituting the Port of London. South of the river there is established in Bermondsey and its neighbourhood a tanning industry scarcely inferior in dimensions to that of any other seat of the trade. North of the river, closely investing the city on every side, are vast printing establishments, which probably contribute more to that flood of literature which is the most distinguishing characteristic of the present age than any equal area throughout the world. Sown throughout the metropolis are the terminal stations of the great railways, with their vast complement of officials and attendants, their incessant bustle, and seething crowds of passengers, and all the perpetual risk to life and limb incidental to the motion of multitudes of people and heavy vehicles, and the handling of goods in ponderous and often unwieldy masses. Nor is it the terminal stations only which make demands upon the hospital accommodation of the metropolis. For long distances down the lines leading out of London the sufferers from railway accidents seek relief in the metropolis. Indeed, it needs no words to show how much easier it is to bring an injured man for fifty or a hundred miles along the line than to carry him for ten or even five miles across country. Both time and suffering are saved to the patient, and often in such cases the saving of time and suffering means the saving of life.

The same thing happens in the neighbourhood of the docks to the hospitals situated on the riverside. Owing to the frequency and variety of accidents connected with the shipping, shipbuilding, and allied industries which are located in the Port of London, it has been found desirable to establish at Poplar a hospital devoted exclusively to the relief of injuries arising from accidents. Here there are annually received not only very large numbers of casualty cases, great and small, arising in the neighbourhood of the hospital, but a certain number also of persons who have received injuries at sea, and are brought into port on board homeward-bound ships. Thus, as an incident of its unique position as the greatest commercial centre and one of the greatest industrial centres in the world, does London pay an annual tax in lives, limbs, and suffering, in money and in money's worth, which no figures can adequately represent. Perhaps, to the ordinary mind, the best and most adequate impression of the havoc wrought in any single year by the pursuit of peaceful industry in a vast community like that of London may be obtained by picturing in imagination the carnage of a battle-field. The slaughter and wounds on many a famous field have not been more numerous or more severe, nor the terrible total of human suffering vaster, than that of which a very imperfect and incomplete account is given in the following pages. The men who fight and fall in battle are invested with heroic rank, and their memory is cherished as an inspiration and a boast; but those others who have one by one fallen at their various posts with equal merit though without renown have perished or have suffered, as the case may be, unhonoured, unremembered and unknown. It must be so, and they would have been unaided too but for the beneficent organisation of the metropolitan hospitals which brings to bear for their relief the highest skill and the best conceived appliances that science and ingenuity can produce. The support of such a work can never be the object of an unsuccessful appeal to the sympathy of the more charitably disposed among the dwellers in the metropolis. The steady and pleasing growth of the Hospital Sunday collection since its inauguration in the year 1873 is of itself a sufficient ground of this confidence. But though our appeal to-day is primarily made upon the ground of charity, we shall not hesitate to remind our readers that the service to which the present effort is ancillary is not more a work of mercy than of duty. As fairly might an army on the field of battle neglect its wounded soldiers as an industrial community its incapacitated members when the incapacity results from the pursuit of their avocations. It is in the common interest that they have suffered, and consequently their sufferings are matter of common concern. We say therefore with the fullest confidence that every reader's conscience will re-echo our words that no man or woman who dwells in London for the sake of the advantages which its commercial pre-eminence or its industrial greatness directly or indirectly yields, can afford to contemplate with an unsympathising eye or an empty hand the sufferings of the labourer, or the necessities of that organisation of medical and surgical relief by which alone those sufferings can be mitigated. But to show this somewhat more in detail, we will pass in cursory review a few of the great industries of London, as to which it is not difficult to point out that they conduce to casualties or maladies with which the hospitals of the metropolis effectively deal.

SHIPPING.

To the shipping industry we have already made a passing allusion. It will be of course perceived that for our present purposes the word must be understood to comprehend a great many industries connected with shipping which are pursued at the docks and by the riverside. Such are the loading and unloading done by dock labourers and lightermen, and the repairing, fitting, and shipbuilding which occupies a large population of ship's engineers and artificers of various crafts. It is indeed in these other trades associated with shipping that the greater number of casualties occur, which can be described as typical of the perils of a port. The accidents which happen at sea, and are brought home for treatment, are indeed comparatively few, though often very severe A seaman, for example, falls from the mast-head upon the deck, or tumbles into the ship's hold; but on shore a score of less obvious

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LIST NO. I.—GENERAL HOSPITALS.

Name of hospital.	Charitable income.	Hospital Sunday Fund.	Proprietary income.	Legacies.	Loans, balances, &c.	Total income.	Ordinary expenditure.	Balances, capital, expenditure, &c.	Total expenditure.
	£	£	£	£	£	£	£	£	£
Charing-cross	3,954	1,010	3,802	1,142	12,631	22,539	14,926	7,613	22,539
French	—	—	—	—	—	—	—	—	—
German	3,020	667	2,366	300	3,589	9,942	9,123	819	9,942
Great Northern Central	4,825	312	335	180	827	6,479	5,897	582	6,479
Guy's	4,947	153	26,892	—	6,694	38,686	35,780	2,906	38,686
Italian	610	94	87	—	2,377	3,168	914	2,254	3,168
King's College	8,725	1,406	1,157	5,400	9,790	26,478	17,126	9,352	26,478
London	23,720	3,125	31,058	21,586	6,854	86,343	55,574	30,769	86,343
Metropolitan	3,209	313	470	2,140	2,527	8,659	8,659	—	8,659
Miller Hospital and Royal Kent Dispensary	1,794	279	242	1,310	250	3,875	3,403	472	3,875
North-West London	—	—	—	—	—	—	—	—	—
Poplar	3,268	219	423	265	831	5,006	3,011	1,995	5,006
Royal Free	—	—	—	—	—	—	—	—	—
St. George's	8,926	1,615	13,230	21,603	3,777	49,151	27,383	21,768	49,151
SS. John and Elizabeth	—	—	—	—	—	—	—	—	—
St. Mary's	9,413	2,083	2,571	8,277	1,264	23,608	22,199	1,409	23,608
Seamen's	6,280	708	3,856	7,094	7,651	25,598	12,766	12,832	25,598
Middlesex	10,233	2,083	8,319	—	6,482	27,117	24,533	2,584	27,117
Tottenham	4,220	—	339	—	29	4,588	4,512	76	4,588
University College	12,659	—	4,765	1,974	3,755	23,153	21,060	2,093	23,153
West London	5,724	573	1,840	1,424	3,150	12,711	8,275	4,436	12,711
Westminster	2,184	1,146	4,168	6,611	—	14,109	12,924	1,185	14,109
	117,720	15,786	105,920	79,306	72,478	391,210	288,065	103,145	391,210
Estimated to supply omissions	10,551	1,583	2,971	6,725	—	21,830	19,450	2,380	21,830
Total	128,271	17,369	108,891	86,031	72,478	413,040	307,515	105,525	413,040

LIST NO. II.—SPECIAL HOSPITALS.

Name of hospital.	Charitable income.	Hospital Sunday Fund.	Proprietary income.	Legacies.	Loans, balances, &c.	Total income.	Ordinary expenditure.	Balances, capital, expenditure, &c.	Total expenditure.
	£	£	£	£	£	£	£	£	£
City of London Hosp. for Dis. of the Chest	4,839	938	475	3,952	1,398	11,602	9,660	1,942	11,602
Hospital for Consumption	13,420	1,719	7,414	5,101	937	28,591	24,444	4,147	28,591
North London Consumption	—	—	—	—	—	—	—	—	—
Royal for Dis. of the Chest	7,341	390	86	100	—	7,923	6,433	1,490	7,923
Royal National for Consumption	—	—	—	—	—	—	—	—	—
Alexandra for Children	1,758	208	80	5	388	2,439	2,129	310	2,439
Belgrave ,,	—	—	—	—	—	—	—	—	—
Cheyne ,,	—	—	—	—	—	—	—	—	—
East London ,,	6,020	417	944	36	2,205	10,222	7,326	2,896	10,222
Evelina ,,	3,966	490	649	—	1,451	6,556	6,090	466	6,556
Home for ,,	—	—	—	—	—	—	—	—	—
,, ,, Sick ,, & S. Lon. Dis. for Women	760	143	695	—	143	1,731	1,598	133	1,731
Hosp. ,, ,, ,,	—	—	—	—	—	—	—	—	—
North-Eastern ,,	—	—	—	—	—	—	—	—	—
Paddingtn.-gr. ,,	2,508	159	331	18	245	3,351	2,459	892	3,351
Victoria ,,	4,126	354	685	60	79	5,310	5,186	124	5,310
"The Vine" ,,	—	—	—	—	—	—	—	—	—
British Lying-in ,,	—	—	—	—	—	—	—	—	—
City of London ,,	849	—	2,888	—	—	3,737	3,316	421	3,737
General ,,	576	78	2,301	—	24	2,979	2,844	135	2,979
Qn. Charlotte's ,,	—	—	—	—	—	—	—	—	—
Chelsea for Women	3,343	108	636	—	356	4,583	4,051	532	4,583
Hospital ,,	2,577	365	1,328	2,852	1,246	8,368	6,237	2,131	8,368
Grosvenor ,, and Children	—	—	—	—	—	—	—	—	—
New ,,	1,278	135	759	200	8	2,380	2,264	116	2,380
Royal Hosp. for Children and Women	—	—	—	—	—	—	—	—	—
Samaritan Free ,,	3,711	490	17	750	1,180	6,148	5,948	200	6,148
Cancer	4,560	521	1,497	5,239	974	12,791	9,597	3,194	12,791
London Fever	6,288	409	4,500	1,003	1,128	13,392	8,365	5,027	13,392
Gordon Hospital for Fistula	418	81	439	500	14	1,402	942	460	1,402
St. Mark's ,, ,, ,,	837	104	691	39	729	2,400	2,137	263	2,400
National ,, ,, Dis. of Heart	—	—	—	—	—	—	—	—	—
Female Lock	2,798	260	750	475	—	4,283	4,098	185	4,283
Male Lock	121	62	1,104	9	208	1,504	1,504	—	1,504
Hosp. for Epilepsy &c.	—	—	—	—	—	—	—	—	—
National for the Paralysed	—	—	—	—	—	—	—	—	—
West-end	—	—	—	—	—	—	—	—	—
Central London Ophthal.	579	63	246	—	199	1,087	923	164	1,087
Royal London ,,	—	—	—	—	—	—	—	—	—
Royal South London ,,	—	—	—	—	—	—	—	—	—
Royal Westminster ,,	1,758	117	398	—	125	2,398	2,169	229	2,398
Western ,,	413	0	310	—	82	805	652	153	805
City Orthopædic	—	—	—	—	—	—	—	—	—
National ,,	—	—	—	—	—	—	—	—	—
Royal ,,	—	—	—	—	—	—	—	—	—
Hosp. for Dis. of Skin	—	—	—	—	—	—	—	—	—
Cent. Lond. Throat and Ear	—	—	—	—	—	—	—	—	—
Royal Ear	—	—	—	—	—	—	—	—	—
Hosp. for Dis. of Throat	—	—	—	—	—	—	—	—	—
London Homœopathic	—	—	—	—	—	—	—	—	—
London Temperance	1,809	466	496	308	1,337	4,416	4,377	39	4,416
The Dental	—	—	—	—	—	—	—	—	—
National Dental	—	—	—	—	—	—	—	—	—
	77,343	8,183	29,819	20,653	14,456	150,454	124,809	25,646	150,468
Estimated to supply omissions	70,349	7,564	13,959	15,200	—	107,072	101,547	5,525	107,072
Total	147,692	15,747	43,778	35,853	14,456	257,526	226,356	31,171	257,530

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risks waylay the labourer. He frequently wounds his hand or arm with the hook used to seize bales of goods, and, when he does, the merest scratch is apt to be a serious business, for such hooks are commonly enough contaminated with putrescent animal or other septic matter which poisons the wound. Then there are all the unnumbered risks of being struck by bales of goods in motion, receiving injury through failure of strength or skill in bearing and manipulating burdens. So much for the dock labourer. Of the iron worker and ship's carpenter it is unnecessary to do more than merely allude to the obvious and well understood perils which attend upon work with the materials and tools which they are called upon to employ. Bearing these things in mind, one reads without much surprise that at the Poplar Hospital casualties to the number of 730 were received during 1890 of such severity as to require treatment in the hospital wards, while lesser accidents and surgical emergencies, such as to be susceptible of out-patient treatment, numbered upwards of 13,000. Striking as these figures are, they only represent in concrete form the fact which we have just been stating in more general terms, that the vast industrial population which crowds about the docks and riverside cannot go through a single day without incurring numberless risks to life and limb, and scores of more or less serious casualties.

LIST No. III.—CONVALESCENT AND COTTAGE HOSPITALS.

Name of hospital.	Charitable income.	Hospital Sunday Fund.	Proprietary income.	Legacies.	Loans, balances, &c.	Total income.	Ordinary expenditure.	Balances, capital expenditure, &c.	Total expenditure.
	£	£	£	£	£	£	£	£	£
Metropolitan Conval. Institution	5,219	677	502	500	708	7,606	6,928	678	7,606
Do. do. do, Bexhill-on-Sea	3,348	302	91	200	585	4,426	2,872	1,554	4,426
Bexhill-on-Sea Convalescent	—	—	—	—	—	—	—	—	—
All Saints ,,	—	—	—	—	—	—	—	—	—
Mrs. Gladstone's ,,	923	—	417	—	72	1,412	1,412	—	1,412
Hanwell ,,	—	—	—	—	—	—	—	—	—
Herbert ,,	841	44	535	—	22	1,442	1,258	184	1,442
King's College ,,	—	—	—	—	—	—	—	—	—
Mrs. Kitto's ,,	519	83	—	—	55	657	626	31	657
,, Marsham's ,,	—	—	—	—	—	—	—	—	—
Mary Wardell ,,	908	146	909	10	15	1,988	1,665	323	1,988
Morley ,,	—	—	—	—	—	—	—	—	—
Princess Frederica's ,,	633	36	6	—	—	680	515	165	680
Ramsgate ,,	—	—	—	—	—	—	—	—	—
St. Andrew's ,, Clewer	2,073	167	1,118	—	66	3,424	2,779	645	3,424
Do. ,, Folkestone	1,912	167	1,445	—	75	3,599	3,599	—	3,599
St. Barnabas ,,	—	—	—	—	—	—	—	—	—
St. Leonards-on-Sea ,,	1,504	—	188	1000	14	2,706	1,518	1,188	2,706
St. Mary Magdalen ,,	393	—	378	—	51	822	815	7	822
St. Michael's ,,	556	42	278	100	83	1059	743	316	1059
Seaside ,,	3,647	—	123	—	903	4,693	3,423	1,270	4,693
Beckenham Cottage	428	52	82	—	—	562	533	29	562
Blackheath and Charlton Cottage	589	68	176	—	106	939	827	112	939
Burstead ,,	—	—	—	—	—	—	—	—	—
Chislehurst &c. ,,	471	62	90	—	153	776	566	210	776
Eltham ,,	169	31	211	—	129	540	252	288	540
Enfield ,,	—	—	—	—	—	—	—	—	—
Epsom and Ewell ,,	757	—	170	—	135	1,062	627	435	1,062
Reigate and Redhill ,,	556	52	157	100	45	910	810	100	910
Shedfield ,,	109	8	56	—	14	187	170	17	187
Sidcup ,,	232	8	76	—	50	366	366	—	366
Wimbledon ,,	344	25	120	—	82	571	467	104	571
Establishment for Gentlewomen	—	—	—	—	—	—	—	—	—
Hampstead Home Hospital	1,532	—	1,493	—	—	3,025	2,362	663	3,025
National Sanatorium	—	—	—	—	—	—	—	—	—
Royal Sea Bathing Infirmary	—	—	—	—	—	—	—	—	—
Invalid Asylum	457	73	310	50	365	1,255	1,024	231	1,255
Firs Home	525	31	301	—	509	1,366	1,182	184	1,366
St. Catherine's Home	1,041	—	425	—	297	1,463	1,463	—	1,463
	29,611	2,074	9,357	1,960	4,534	47,536	38,802	8,734	47,536
Estimated to supply omissions	14,605	1,237	4,777	880	2,269	23,768	20,401	3,367	23,768
Total	44,216	3,311	14,134	2,840	6,803	71,304	59,203	12,101	71,304

BREWERIES.

In local contiguity, but otherwise in striking contrast with the shipping and allied industries of the metropolis, is its enormous brewing interest. Some persons, perhaps, who entertain strong opinions concerning the liquor traffic may consider any pointed reference to this industry inopportune; but it is, to-day at least, no part of our duty to enter upon considerations which do not immediately bear upon the subject in hand, and we shall be content to say that the work to which we particularly allude has no direct relation to the use or abuse of alcohol. It is undoubtedly the fact that much of the disease and many of the casualties, especially minor casualties, from which labouring men suffer are either produced or promoted by drunkenness. But there does not seem to be any ground for attributing this vice in any special sense to brewers' workmen The mishaps which chiefly befall them are such as naturally arise in the course of their work—from dealing either with hot liquids or heavy barrels. Apart from scalds, which are less common and less serious in this industry, perhaps, than in some others, such as sugar refining and starch manufacture, the accidents to which brewers' men are most exposed are such as crushed hands or feet, or contused or fractured limbs. The most of these accidents are less severe, perhaps, than those previously referred to as besetting the dock and riverside trades, but their number is too great for them to be considered as in any sense a matter of small account. It is not indeed possible to ascertain what figures would represent them, since the only figures which comprise these returns include others with them. Thus, for example, the casualties reported by the London Hospital in Whitechapel, which is situated in the very centre of a brewing district, include such as occur in numberless other trades located in the east of London, in the aggregate larger—by many times probably—than the vast brewing trade, and also a great number of accidents arising from domestic and other causes not peculiar in any sense to an industrial occupation. But the London Hospital is situated, as is well known, in what is *par excellence* the industrial quarter of the metropolis, and industrial pursuits, in some one or other of their many varieties will be by far the most prolific source of the accidents reported there. The figures of this hospital report are, therefore, worth quoting, although they are subject to the observation already made. Even after making a very large abatement, the reader can hardly fail to be impressed with the fact that among the in-patients 2000 were accident cases and among the out-patients nearly 9000. It would probably be within the mark to assume that sixty or seventy per cent. of these cases are attributable to the class of injuries now under consideration.

BUILDING.

One of the greatest industries of London and one of the most risky is the building trade. The extent to which building operations are constantly in progress in the

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TABLE NO. I.—GENERAL HOSPITALS.

Name of hospital.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients.	Accidents and emergency.	In-fluenza.
Charing-cross	2,165	868	1,128	—	141	181	86,560	274	20
French	496	141	272	14	44	39	15,575	386	—
German	1,492	422	753	385	109	134	59,730	3,061	25
Great Northern Central	992	187	700	113	67	80	45,022	3,448	—
Guy's	5,747	5,199		235	426	512	100,000	20,334	30
Italian	239	15	218	40	—	6	9,741	—	—
King's College	2,518	654	1,291	226	206	178	29,556	10,337	—
London	9,193	3,248	4,408	768	616	874	120,158	8,847	—
Metropolitan	709	—	—	—	—	—	66,506	—	—
Miller Hospital and Royal Kent Dispensary	167	—	—	—	—	—	10,118	—	—
North-West London	665	96	457	18	20	12	24,409	15,554	—
Poplar	736	—	—	18	36	40	—	736	—
Royal Free	2,138	1,819		61	143	176	70,167	10,804	1,060
St. George's	4,406	3,661	359	1,175	373	422	82,220	16,785	
SS. John and Elizabeth	100	65	—	12	50	35	—	—	—
St. Mary's	3,878	827	2,457	169	262	358	93,445	623	866
Seamen's	2,864	603	1,801	30	223	149	8,552	355	65
The Middlesex	3,109	1,005	1,861	138	256	341	94,346	25,032	3,000
Tottenham	745	—	—	—	—	72	19,000	2,022	—
University College	2,773	1,082	1,140	—	190	290	146,062	29,476	—
West London	1,539	1,321		—	92	126	66,094	3,532	—
Westminster	2,730	2,312		287	185	233	90,000	11,614	—

TABLE NO. II.—SPECIAL HOSPITALS.

Name of hospital.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergency.	In-fluenza.
City of London for Diseases of the Chest	1,077	954	38	78	133	85	56,965	—	45
Hospital for Consumption	1,836	1,426		479	174	239	71,168	—	—
North London "	—	—	—	—	—	—	—	—	—
Royal for Diseases of the Chest	—	—	—	—	—	—	—	—	—
Royal National for Consumption	763	614	—	614	124	25	None	—	—
Alexandra for Children	143	11	31	13	81	7	381	—	—
Belgrave " "	190	73	92	—	—	9	—	—	—
Cheyne " "	—	—	—	—	—	—	—	—	—
East Lond. " "	1,213	226	603	104	85	266	45,279	—	—
Evelina " "	716	521		100	52	143	24,214	—	—
Home "	—	—	—	—	—	—	—	—	—
Home for Sick " and S. Lond. Dis. for Women	225	—	—	—	45	—	3,898	—	—
Hospital for Sick Children	—	—	—	—	—	—	—	—	—
North-Eastern for Sick Children	—	—	—	—	—	—	—	—	—
Paddington-green for Sick Children	454	390		90	25	52	27,624	2,491	—
Victoria " "	978	735		—	40	125	—	—	—
"The Vine" " "	—	—	—	—	—	—	—	—	—
British Lying-in	—	—	—	—	—	—	—	—	—
City of London Lying-in	423	—	422	—	23	1	1,331	—	—
General "	430	—	—	—	—	2	1,055	—	—
Queen Charlotte's Lying-in	892	857		46	31	4	7,490	—	—
Chelsea for Women	464	189	209	No acc. kept	35	12	12,242	—	—
Hospital for "	697	296	267	57	55	18	31,041	—	—
Grosvenor for Women	107	68	41	9	7	3	9,084	—	17
New " "	213	78	123	—	—	3	13,600	—	—
Royal for Children and Women	509	387		32	43	47	27,154	—	—
Samaritan Free for Women	504	90	407	24	25	16	15,112	—	—
Cancer	630	525		12	56	105	6,639	—	—
London Fever	682	—	602	—	60	20	—	—	—
Gordon for Fistula	157	10	135	2	8	2	2,642	—	—
St. Mark's	310	23	269	32	13	5	—	—	—
National for Diseases of the Heart	—	—	—	—	—	—	—	—	—
Female Lock	731	634	—	264	97	2	2,468	—	—
Male Lock	225	—	—	—	18	1	19,685	—	—
Hospital for Epilepsy	137	—	—	6	18	3	8,885	—	—
National for the Paralysed	847	253	358	136	166	36	25,167	—	—
West-End	—	—	—	—	—	—	—	—	—
Central London Ophthalmic	180	—	—	—	—	—	17,797	—	—
Royal " "	1,927	—	—	5	59	—	128,235	1,560	4
Royal S. " "	—	—	—	—	—	—	—	—	—
Royal Westminster Ophthalmic	414	283	131	4	14	1	52,338	—	
Western "	45	—	—	—	—	—	6,926	—	—
City Orthopædic	160	—	100	—	60	1	9,000	—	—
National "	136	101		—	35	—	2,485	—	—
Royal "	153	44	60	—	49	—	7,451	—	—
Hospital for Diseases of the Skin	—	—	—	—	—	—	—	—	—
Central London Throat and Ear	227	59	144	4	14	6	33,233	—	—
Royal Ear	113	—	—	—	5	—	8,466	—	—
Hospital for Diseases of the Throat	—	—	—	—	—	—	—	—	—
London Homœopathic	791	211	430	195	59	81	22,239	—	—
London Temperance	753	258	390	30	62	45	3,282	201	56
The Dental	—	—	—	—	—	—	48,764	—	—
National Dental	—	—	—	—	—	—	—	—	—

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metropolis is but little appreciated, chiefly because building is in the nature of things an industry that is not carried on in one great centre, but is distributed over the entire metropolitan area. This wide distribution does not by any means diminish the risks that must be incurred; on the contrary, it has a great tendency to augment them, since the inevitable consequence of thus splitting a vast aggregate operation into a number of small operations is that a certain amount of makeshift in the plant used is inseparable from the latter conditions. In the building of a vast pile like the Law Courts or the Houses of Parliament, the very scaffolding is erected with the solidity of a wooden bridge, and cranes are fixed in position to do practically all the work of raising and lowering the materials used in the structure. But in the building of a suburban villa it is not so. The scaffolding is put together roughly, while mortar, bricks, and anything else that can be divided into sufficiently small parcels is carried up ladders and in hods. It is thus, in spite of the gradual introduction of improved appliances, that the bulk of the building in London is still carried out, and a trade, terribly hazardous at the best, comes to be fraught with from great heights or blows of great violence is indeed their most distinctive feature, and in this particular they may well be compared with that very formidable class of accidents to which we alluded in the commencement of this review as arising in the experience of the riverside population.

RAILWAY ACCIDENTS.

Of the volume and complexity of the railway traffic between London and the provinces or foreign parts we shall make no attempt to speak. Every reader will be already furnished with more vivid and adequate impressions derived from his own recollections of a great terminus on a busy day than any words or figures could convey. Of the perils, too, which are habitually incurred by railway workmen it is the less necessary to speak, because everybody understands them in a greater or less degree. But the impressions which the ordinary passenger derives from his casual observation of what takes place at the starting or arrival of a passenger train are very inadequate as a measure of the risks incurred by railway men, if for no other reason than that they leave wholly out of view the most risky aspects of the work. It may

TABLE No. III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of hospital.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out patients' visits.	Accidents and emergency.	Influenza.
Metropolitan Convalescent	2,862	1,321	2,190	—	—	2	—	—	—
Bexhill on-Sea Convalescent	1,475	506	893	—	31	3	—	—	—
All Saints ,,	3 263	1,448	1,688	—	136	3	—	—	—
Mrs. Gladstone's ,,	1,047	—	—	—	—	1	None	—	—
Hanwell ,,	—	—	—	—	—	—	—	—	—
Herbert ,,	347	156	117	—	37	—	—	—	—
King's College ,,	477	231	224	—	15	2	—	—	—
Mrs. Kitto's ,,	342	—	—	—	—	—	—	—	—
,, Marsham's ,,	—	—	—	—	—	—	—	—	—
Mary Wardell ,,	248	—	—	—	—	—	—	—	—
Morley ,,	—	—	—	—	—	—	—	—	—
Princess Frederica's ,,	171	—	—	—	—	—	—	—	—
Ramsgate Children's ,,	—	—	—	—	—	—	—	—	—
St. Andrew's (Clewer) Convalescent	795	—	—	—	65	12	—	—	—
Do. (Folkestone) ,,	1,676	558	1,116	—	50	5	None	—	—
St. Barnabas ,,	—	—	—	—	—	—	—	—	—
St. Leonards-on-Sea ,,	807	—	—	—	—	—	—	—	—
St. Mary Magdalene ,,	24	26	—	—	—	2	—	—	—
St. Michael's ,,	275	—	—	—	27	—	—	—	—
Seaside ,,	812	80	732	—	—	—	—	—	—
Beckenham Cottage	93	19	60	—	8	6	—	13	1
Blackheath and Charlton Cottage	161	42	88	5	14	7	3,593	16	—
Burstead ,,	—	—	—	—	—	—	—	—	—
Chislehurst ,,	76	63		—	3	4	—	—	—
Eltham ,,	92	14	65	—	8	5	—	8	—
Enfield ,,	—	—	—	—	—	—	—	—	—
Epsom and Ewell ,,	79	—	—	—	—	—	—	—	—
Reigate and Redhill ,,	210	36	159	24	9	3	None	37	—
Shedfield ,,	48	5	36	—	5	—	732	—	—
Sidcup ,,	88	14	57	7	6	4	—	20	—
Wimbledon ,,	113	77	24	—	9	3	—	—	—
Establishment for Gentlewomen	100	—	—	—	None	2	—	4	—
Hampstead Home	146	30	103	—	9	5	—	2	13
National Sanatorium	240	195	—	2	40	4	—	—	—
Royal Sea-bathing Infirmary	654	239	267	—	144	4	450	—	90
Invalid Asylum	213	163	29	15	26	2	—	—	—
Firs Home	60	24	—	—	17	19	—	—	—
St. Catherine's Home	47	21	—	—	10	8	—	—	—

the most imminent peril to all engaged in it. Add to this consideration the further one that building and rebuilding go on here upon a scale unequalled probably anywhere else in the world, and the importance of building accidents in the experience of the metropolitan hospitals will become very intelligible. The statistics of rebuilding operations are probably not to be had, and it would be idle to supply their place with guesses. But it appeared, as one result of the census of 1881, that the *annual increment* in the number of inhabited houses in London had in the preceding decade been not less than the entire number of houses in the town of Deal. What the census now in progress may disclose concerning this interesting matter it is yet too early to ascertain, but we surmise that the builders' activity will be found to have been no less in the later period than in the earlier, and that during the year 1890, which furnishes the precise materials of our present review, the mere growth of London has been equal to the building of a good-sized town. But it is not only in respect of the frequency and great number of building accidents that they merit especial notice here. They are not less remarkable for their severity. The commonness of severe fractures as the result of falls be true that the failure of a guard to apply his brake, or the delay of an engine driver to shut off steam, may wreck a train. It may be true also that the occasional occurrence of such accidents affords proof enough, if proof were needed, that they are not mere possibilities, but actual, and even considerable, sources of danger. But at worst such accidents are very rare. To get the hand crushed between buffers or the body struck by a slowly but heavily moving waggon, to fall from the footboard of a van that is being shunted, or to get the fingers pinched by a closing door, these are the every-day mishaps of a great railway station. Many of them are not serious if they receive prompt attention; but even for these the near neighbourhood of a hospital is a matter of importance, since it prevents their growing to seriousness; whereas for such as assume more formidable proportions, of which it will be easily believed that there are not a few, recourse, and prompt recourse, to medical aid is a matter literally of vital consequence. Here, again, it is impossible to give figures which will exhibit the scale of the hospital work of institutions in London; but it is not wholly irrelevant to quote from the return of railway accidents recently issued

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from the Board of Trade that there were reported to the Board during the year 1890 railway accidents which resulted in the death of 1076 persons and the injury of 4721 others. These figures include, of course, accidents which happened in all parts of the United Kingdom, and they cannot therefore be taken as affording any guide to the railway accidents dealt with by the hospitals of the metropolis. But it has been already pointed out that not only is London the greatest railway centre in the world, but also that a certain proportion of the railway accidents which occur in the provinces are brought here for treatment because of the facilities of transport in this direction which a main line of railway affords. The Royal Free Hospital, situated in the Gray's-inn-road, lies near to three great railway stations, and a list of the in-patients on a particular day, which has been furnished for our use, shows that out of sixty-one male patients occupying beds something like twenty were railway *employés*.

TABLE No. IV.—DISPENSARIES.

Name of dispensary.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergency.	Influenza.
Battersea Provident	—	—	—	—	—	—	—	—	—
Brixton &c.	4,880	—	—	—	—	—	—	—	—
Brompton Provident	—	—	—	—	—	34	9,449	—	—
Camberwell ,,	—	—	—	—	—	—	38,749	—	—
Camden-town ,,	—	—	—	—	—	—	5,414	—	—
Chelsea	—	—	—	—	—	—	—	—	—
Child's-hill Provident	—	—	—	—	—	—	—	—	—
City	—	—	—	—	—	—	—	—	—
City of London and East London	—	—	—	—	—	—	—	—	—
Clapham General	—	—	—	—	—	—	3,689	—	—
Deptford Provident	—	—	—	—	—	—	—	—	—
Eastern	—	—	—	—	—	—	—	—	—
Farringdon	—	—	—	—	—	—	—	—	—
Finsbury	—	—	—	—	—	—	35,351	—	—
Forest-hill	—	—	—	—	—	—	20,885	—	—
General	—	—	—	—	—	—	—	1,184	—
Gipsy-hill Provident	—	—	—	—	—	—	—	—	—
Hackney ,,	—	—	—	—	—	—	—	—	—
Hampstead ,,	—	—	—	—	—	—	—	—	—
Holloway and N. Islington	—	—	—	—	—	—	—	—	—
Islington	—	—	—	—	—	—	29,626	—	160
Kensal-town Provident	—	—	—	—	—	—	61,743	16	2,196
Kensington	—	—	—	—	—	—	5,661	—	—
Kilburn &c.	—	—	—	—	—	—	—	—	—
Kilburn Provident	—	—	—	—	—	—	—	—	—
London	—	—	—	—	—	—	—	—	—
London Medical Mission	—	—	—	20	300	82	15,564	—	650
Margaret-street Infirmary for Consumption	—	—	—	—	—	—	17,019	—	—
Metropolitan	—	—	—	—	—	—	—	—	—
Notting-hill Provident	—	—	—	—	—	—	—	—	—
Paddington	—	—	—	—	—	35	7,539	—	—
Pimlico Provident	—	—	—	—	—	—	—	—	—
Portland-town (Free)	—	—	—	—	—	—	4,240	—	—
Portobello-road (Provident)	—	—	—	—	—	—	1,750	—	11
Public	—	—	—	—	—	—	17,820	—	—
Queen Adelaide's	—	4,189	—	—	500	56	4,875	—	50
Royal General	—	—	—	—	—	—	—	—	—
Royal Maternity Charity	—	—	—	—	—	—	—	—	—
Royal Pimlico Provident	—	—	—	—	—	—	2,852	—	—
Royal South London	—	911	3,212	—	720	210	5,053	—	—
SS. George's and James's	—	—	—	—	—	—	—	—	—
St. George's, Hanover-square	—	—	—	—	—	—	1,754	15	101
St. John's-wood Provident	—	4,050	—	—	80	—	6,500	—	400
St. Marylebone	—	—	—	—	—	—	18,969	205	500
St. Pancras and Northern	—	—	—	—	—	—	—	—	—
SS. Paul and Barnabas Provident	—	—	—	—	—	—	2,443	60	30
South Lambeth	—	—	—	—	—	—	2,820	—	—
South London Medical Aid	—	—	—	—	—	—	12,612	—	—
Stamford-hill &c.	—	—	—	—	—	86	10,301	2,076	587
Tower Hamlets	—	—	—	—	—	—	1,033	650	—
Wandsworth-common	—	—	—	—	—	—	1,503	—	—
Westbourne Provident	—	—	—	—	—	—	13,081	—	—
West Dulwich ,,	—	—	—	—	—	—	—	—	—
Western	—	—	—	—	—	—	295	—	—
Western General	—	—	—	—	—	—	24,935	696	—
West Ham	—	—	—	—	—	—	50,318	10,801	—
Westminster General	—	—	—	—	—	—	—	—	—

One thing, however, exceeds what the most observant of onlookers can personally see in the course of years, or even of a lifetime, it will be felt that the casualties befalling carmen, cabmen, and the drivers of other vehicles must be beyond all calculation. With such casualties the hospitals of the metropolis deal in the only way in which it is possible for them to be dealt with. In this respect it is not practicable to make a selection or quote any notable instance. Every hospital has its tale of such experiences, and almost every hospital in the metropolis has somewhere in its vicinity a dangerous piece of roadway where accidents are frequent. In this branch of hospital work the general public have a common interest with working men, for, although the driver is more frequently than anybody else a victim to such mishaps, there is no class or section of the community which is free from liability to them. It is a striking evidence of the thoroughness with which hospital work in London is done that within the past two or three years a special ambulance service has been organised for securing the ready conveyance of cases of street accidents to the hospitals, where they may be treated. It has been found that many disadvantages attend upon the employment of cabs for this purpose. For one thing, the cab is ill adapted to the work. In a case of severe injury it is difficult to enter, and not easy to ride in. To obviate these inconveniences a special form of stretcher, carried on wheels, has been devised, and placed at upwards of fifty stations attached to hospitals, fire brigade stations, cab ranks and other easily accessible situations in the London streets. The work of organising

STREET TRAFFIC.

The one remaining industry upon which we propose to touch is not only the largest of them all, but also that which is brought most prominently under the eyes of the public. The transport of goods and passengers daily in the streets of London occupies an enormous number of persons, and is also attended with its own risks, which everybody is able in a greater or less degree to appreciate. Probably few of our readers are in the position of having never witnessed a street accident; and when it is borne in mind how vastly the traffic of London in a single day

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this conveyance service is still going on, and it may be hoped that when it is complete not only will a street accident of a serious character always be dealt with promptly and effectively, as now, at an adjacent hospital, but also always conveyed thither with a minimum of pain and risk to the sufferer.

DISEASES INCIDENTAL TO INDUSTRIAL OCCUPATIONS.

It must not be assumed that the injury to health which arises in the course of industrial pursuits is confined to what are commonly called casualties. On the contrary, there is a vast amount of disease contracted in this way, some of it as the necessary consequence of dealing with unwholesome subject matters and more as the result of insanitary conditions under which actually, if not necessarily, the work is carried on. Of the latter class of diseases we shall not speak here. The appalling facts brought to light respecting sweating in the tailoring and some other trades by the evidence given before the Royal Commission on that subject, and by the inquiries of THE LANCET Sanitary Commissioners, have sufficiently awakened the public mind and startled the public conscience in reference to this matter. Happily that has become a text upon which men now preach reform, and, although the remedy comes slowly, it has at least begun to work. But in the meantime, while reform delays, the poor tailors starve, and stifle, and sicken and die. It is a pitiful lot, but it would be even worse if the poor creatures had not, when overstrained nature fails, the resource of the hospital. But that aside, there are many trades which no conditions can make innocuous. This is not, indeed, in any marked degree the case with the trades which are carried on in London. That statement is, however, consistent with a very serious amount of consequential injury to health. The amount of debility and dyspepsia which arises from mere confinement and the want of exercise is a thing incapable of being tabulated, but which leaves a deep impression on the mind of the hospital physician. So with rheumatism, to which certain classes of the working population are peculiarly liable. Furthermore, there are some maladies which occur with so much regularity in certain trades that one may almost write them down as incidents and not mere accidents of a hazardous occupation. This is the case with certain well-known forms of poisoning—lead poisoning for example. The care necessary, even if sufficient, to ensure a worker in lead and its products against the mischievous effects of lead salts makes too great a demand upon the workers' presence of mind to be practicable, and in some works so clearly is this fact recognised that operatives are only received for short periods of service. In localities, therefore, where lead in some one or other of its several forms constitutes the staple of an industry, lead poisoning is a constantly occurring disorder. Another example of the same kind of thing presents the work of the hospitals in a slightly different light. It is well known that woolsorters are liable to contract from their manipulation of hides a peculiarly virulent carbuncle, called from this circumstance "woolsorter's disease." The enormous hide and leather trade of Bermondsey, to which allusion has been already made, involves of course a serious risk of this terrible disorder; and in the course of our inquiries we made a point of asking at Guy's Hospital—which, being on the spot, would naturally collect the experience of the locality in which such a disease might be expected to manifest itself—whether it was found to be a formidable scourge. The very satisfactory answer was that the disease is comparatively rare; and the explanation of this happy condition, which was more satisfactory still, was that the exposed population has been warned by printed notices placed in the workshops and warehouses where they are employed to repair to the hospital for advice upon the earliest appearance of the first and slightest symptoms, which, apart from such warning, they would be apt to overlook, and treat as a matter of no account. Taken so, the disorder is easily treated, and the consequence of this precautionary measure and of the accessibility of the hospital is that the working population which manipulates the hides is preserved in a state of practically complete immunity from a most terrible disease, notwithstanding that the external conditions of its development are constantly present in their daily surroundings.

So much must suffice from the point of view of an onlooker at the work of the hospitals of London. We are able on this occasion to present to our readers another aspect of the subject, for a few weeks ago the Editors of THE LANCET caused it to be known that they would be glad to receive for the purposes of this Supplement letters of acknowledgment from patients who, having been treated in some one or other of the hospitals of London, had spontaneously expressed their gratitude, or were disposed to express it on receiving a hint to that effect. Several of our contemporaries took up the suggestion, and the result has been a sheaf of correspondence much too voluminous for publication in detail. The broad result may, however, be easily summarised. Without exception, the patients speak in the most appreciative terms of the skill, kindness, and delicate attentions which they have received. Nor are the acknowledgments confined to those who have been personally benefited. Surviving friends of patients who have died under treatment are not less ready to confess the care bestowed in such cases with only incomplete success, but which eased and solaced the last moments of the sufferers, and of which the recollection is treasured by those whom they have left behind. From the materials so placed at our disposal we have made a selection of three letters, and have chosen such as have a special bearing upon the particular subject of this Supplement.

DEAR SIR,—My eyes are going wrong, and I am too utterly poor to pay for medical attendance. Will the doctor at your hospital give me advice gratis? I am a journalist, and earn only a bear subsistance, but I had better lose my life than lose my sight. You may imagine what it means to me. If the doctor will see me, please say day and time, except Saturday. Truly yours,
April 22nd, 1891. ——.

(The relief asked was afforded.)

DEAR SIR,—I beg to express my sincere gratitude to the ——— Hospital for the attention and kindness I received at the above institution, where I consider Mr. ——, surgeon, Mr. ——, and Mr. ——, house-surgeons, saved my left arm from being amputated, and I am now doing duty as lamplighter. Yours respectfully,
——.

To Dr. ——

DEAR SIR,—Would you kindly fill in this Sick Report as the Corps will not pay me till then, and as soon as I get the money, wich is 18s., I will put 2s. to it and make a pound for the hospital as a little token for the great kindness shown me whilst in pain and distress. I ham very sorry to say I ham laid up with the same again, but I have not the same attention shown me at home as I had under you in ——— Hospital. . . . Hoping you will anser this as soon as possible, believe me to remain, Your humble servant,
Oct. 7th, 1890. ——.

DISTRIBUTION OF THE FUND.

During the past year a great deal of criticism has been levelled at certain of the hospitals of the metropolis, and it may well be that the course of this discussion has had an effect not altogether favourable upon the minds of some of those who are accustomed to contribute to the hospital collection. It is much to be hoped that unfortunate impressions of this kind will not be allowed to restrain the charities of the London congregations. The results of the inquiries instituted by the House of Lords' Committee and the Local Government Board are not yet available; and with reference to the latter, it may be well to point out that, important as that inquiry is, it has no direct bearing on our present subject, since the hospital in question is maintained by the Metropolitan Asylums Board, and does not receive any aid from the Hospital Sunday Fund. In regard to hospitals participating in that fund, we may remind our readers, as we have done on previous occasions, that the distribution of the Hospital Sunday Fund is effected upon a method of careful scrutiny into the merits of the various claimants upon its bounty such as no private donor would be expected or is even able to undertake. If any person, then, is troubled with doubts as to the disposition of the money which he may be able to afford for this most charitable purpose, he cannot better resolve them than by entrusting his contribution to the hands of the Mansion House Committee, whose duty and practice it is to inquire into the efficiency of the administration of those institutions to the support of which their funds are dedicated.

Summary of Hospital Work in London during 1890.

Beds daily occupied	6,143
In-patients received	78,033
Out-patients' visits	1,158,026
Sum expended	£606,258

The Editors of THE LANCET desire to acknowledge the kind services rendered by the secretaries, registrars, and

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other officers of metropolitan hospitals who have assisted by furnishing returns of the work of their various institutions and affording opportunities of interview to THE LANCET Commissioner, thus providing the materials for the tabulated statements appearing in the present Supplement.

THE YEAR'S RECORD OF HOSPITAL WORK

The collected statistical results of the work during the year 1890 of the hospitals and medical charities of the metropolis are given in the tables Nos. 1 to 4, which appear in the present Supplement, and in like manner the finance of the year is exhibited by three lists, in which are given the names of the various hospitals, together with a succinct summary of their published accounts. In these lists the dispensaries have not been included, they being in a very preponderating degree self-supporting, and recipients to only a comparatively small extent of public charity, and in particular of the benefits of the Hospital Sunday Fund. Of the facts so disclosed it is not necessary to speak at any length, for the sufficient reason that they carry their significance in their face. But a few words by way of appreciation of the aggregate results shown may not be out of place. Of the vast total of merciful work represented by a daily average of upwards of 6000 occupied beds no one can have any difficulty in forming a strong, even if a not very clear or adequate impression. Similarly, the enormous total of 78,000 in-patients received and treated in the wards of the various hospitals gives another impressive aspect of the same overwhelming fact. But perhaps nothing more strikingly indicates the thoroughness of hospital work than the great numbers of patients sent to convalescent homes. The statistics of the convalescent homes show that not fewer than 15,000 patients participated in their benefits during the year, and the records of the General and Special Hospitals show that about one-half of this number proceeded thither from these larger institutions. Of the very large proportion of cases discharged either cured or relieved, it is sufficient to say, "*Finis coronat opus.*" To this end mainly the work of the hospital staff and liberality of their supporters are devoted. The proportion varies, of course, with the varying circumstances of different institutions, but may be taken to be about 90 per cent. in a typical instance. Yet it is not in these cases only that the benefit of hospital work is to be seen. Of the residue who die in hospital, it may still be affirmed that they have participated in no small measure in the advantages which hospitals secure. When the hand of death has seized its victim, it is no small alleviation of the mortal suffering to be surrounded by the comparatively placid atmosphere of a well-regulated hospital ward, and to have at command all that skill and trained tenderness can supply by way of anodyne.

It will perhaps be observed by some of our readers that we have this year omitted the statistics that have been given on some former occasions, of the numbers of medical men and students, and also of hospital nurses, engaged in the administration of this work. The introduction of the summarised accounts has expanded our tabular matter on this occasion to such proportions that some sacrifice has been indispensable, and we have, making a virtue of necessity, acted on the self-denying plan of withdrawing from view the record of professional work. The merit of such an act of abnegation is perhaps minimised by the circumstance that not even the most cursory view of hospital work is possible which does not exhibit in the foreground the part taken at enormous cost of time and energy freely bestowed by medical men, and zealously expended by their coadjutors, to whom it furnishes a means of livelihood, or, as the case may be, a training school. In such matters the question of reward is really little better than an impertinence. Paid or unpaid, the only service that is serviceable to the sick is that which is inspired by pity, and sustained by sympathetic sorrow for their sufferings.

It will also be of interest to draw attention to the information now collected concerning the work of the institutions under review which resulted from the influenza epidemic of last year. In prosecuting inquiries with regard to this matter we have been met by the difficulty that in many institutions no separate record has been kept of the effects of this epidemic, and consequently the statement which we have been able to compile is exceedingly incomplete. So much will appear upon a mere glance at the tabulated figures. Nor is the reason of this difficult to divine. Last year the disorder assumed a much less serious character than it has lately developed, so much so that it was observed very principally as an out-patients' trouble. The statistics are therefore naturally much less exact than in the case of disorders which receive in-door treatment. But, this notwithstanding, the cases total up to very nearly 10,000, and afford a striking illustration of the way in which hospital treatment is available to meet an emergency. At the present moment this fact, slight as it is, ought to commend itself to the attention of many of those whom we are to-day seeking especially to address, for in its unwelcome return the influenza appears to have selected its victims specially from the more affluent classes of society—a circumstance which should quicken their appreciation of the work which was last year done for their poorer neighbours by the institutions now commended to their generosity. This quality should be manifested in a high degree this year if it be true that "a fellow feeling makes us wondrous kind."

Interested as we feel in the continued success of the Metropolitan Hospital Sunday Fund, we must allude to the devoted and untiring work of the Right Hon. Joseph Savory, the Lord Mayor, the President of the Fund; Sir Sydney H. Waterlow, Bart., the Vice-President; the honorary secretaries, Sir Edmund Hay Currie and Mr. Richard B. Martin; and the members of the Council generally. Nor must we forget the indefatigable secretary, Mr. H. N. Custance, of whose services, we hear, a further substantial recognition will be given. We may safely thank in advance the ministers of religion who on Sunday, June 7th, will bring this great charitable work to the attention of their respective congregations.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Dr. RECEIPTS *for the year ending 31st October, 1890.*

1890.	£ s. d.	£ s. d.
To balance at Bank of England, 1st Nov., 1889	1,731 18 7	
,, Balance in hands of Secretary	23 17 8	
		1,755 16 3
,, Collections made at Sundry Places of Worship	38,767 6 0	
,, Collections at Schools	55 16 1	
,, Donations, including £283 18s. 0d. for Surgical Appliances	2,884 5 4	
,, Legacy—late Thomas Crouch, Esq.	1,003 14 0	
,, Interest on Investment from 16th June to 1st August	103 15 4	
		42,814 16 9
		£44,570 13 0

Cr. PAYMENTS *for the year ending 31st October, 1890.*

1890.	£ s. d.	£ s. d.
By Awards to 104 Hospitals	35,442 13 9	
,, Awards to 7 Institutions	984 7 6	
,, Awards to 55 Dispensaries	2,414 15 10	
,, Surgical Appliances	2,126 11 5	
		40,968 8 6
,, Rent	163 15 0	
,, Coal and Gas	11 17 9	
,, Printing and Stationery	275 13 3	
,, Stamps and Postage	126 13 3	
,, Advertisements	259 16 11	
,, Salaries and Wages	690 12 11	
,, Sundries	15 13 7	
		1,544 2 8
,, Balance at Bank of England, including £1,253 available for Surgical Appliances	2,051 4 10	
,, Balance in hands of Secretary	6 17 0	
		2,058 1 10
		£44,570 13 0

Audited and found correct, this 21st day of November, 1890.

(Signed) HART BROTHERS, TIBBETTS, & Co., *Chartered Accountants*, 14, Moorgate-street.

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Remarks
ON
THE SLOW HEART.[1]

BY SEYMOUR TAYLOR, M.D. ABER., M.R.C.P.,
ASSISTANT PHYSICIAN TO THE WEST LONDON HOSPITAL.

THE subject of bradycardia, or slow heart, is one that has engaged the attention of many writers, but, if I may be allowed to say so, it has appeared to me that the literature thereon is rather scattered, and except within recent years there has been no attempt to classify, in a clinical method, the causes and conditions of the disorder, or the diseases with which it is associated. Amongst the reasons which may be assigned for this is the rarity of the slow as compared with the quickened action of the heart—a remark which also applies to a parallel condition of temperature, low observations being much less frequently recorded than high ones.

DEFINITION.

I take bradycardia to mean that state of the heart's action in which the number of beats does not exceed 40 per minute, the rate to which Dr. Broadbent has applied the term "infrequent,"[2] and although in the progress of this paper cases will be quoted as bearing on the argument in which the heart beats amount to between 60 and 70, it is more especially with the slower hearts that I have been particularly interested. As regards the classification of the causes of a slow heart I have experienced some little difficulty, since the pathology is spread out over such a wide field and the linked causes and associations are so very varied, and probably not at present thoroughly determined or understood. Further, in reviewing the many cases of which I have either studied the records or observed myself, it soon became apparent to me, as it has doubtless to most of my hearers, that the condition of slow heart may, on the one hand, be a symptom of grave disease, and, on the other hand, it may be present in people in whom no other abnormality can be detected. Hence I propose to speak of bradycardia as occurring (*A*) in health, and (*B*) in disease.

A.—IN HEALTH.

It has been stated by Austin Flint that cases of slow heart are very rare in healthy subjects; or, to quote him more correctly, "a persistent slowness cannot be acquired, except rarely, without some serious impairment of health" This dictum I should venture to doubt, especially when we bear in mind the proposition which would logically follow, "that all departures from normal states of health [tend to] increase its frequency."[3] There are cases, according to Fothergill, in which it is a normal phenomenon, and with this statement I thoroughly agree. The condition is not inconsistent with perfect health, great bodily strength, and mental vigour. I have taken the pulse-rates of gigantic muscular men employed in quarrying and other laborious occupations; of Cumberland fell men, accustomed to violent struggles in the wrestling arena, and frequently when they were at rest I have been surprised to find a pulse-rate of 60, whilst in one case I counted only 40 beats, with a corresponding number of heart cycles. Being big men they are naturally slow, elephantine (if I may use such a term) in their movements, and it seems as though the heart muscle itself shared in the deliberateness and ponderosity. An important clinical fact here comes in to substantiate the above proposition—viz., that the slow heart in health should not be attended by dyspnœa. Here I may draw attention to the fact that the elephant has a pulse-rate of 25 to 28 only, whilst in the horse it reaches 36 to 40.[4] Further, it is a condition more frequently observed, I think, in tall folk. I have observed it in six men all six feet or over; and quite recently a distinguished physician certified a man six feet two inches high as "a quite healthy life, and eligible for life insurance," who had a pulse-rate of 30 only. And this leads me to the factor of sex. I have no statistics on this point, but the records and notes of cases show a preponderating frequency amongst males, as might be expected. Peacock has noted that a slow action of the heart is associated with hypertrophy, and not atrophy, of that organ. This may be so in many cases, but by no means in all. But assuming that there is no valve disease, peripheral obstruction, or other condition favouring cardiac hypertrophy—in other words, assuming that the subject's health be apparently normal,—I think an ordinary hypertrophy may be part and parcel of the general muscular development of the individual.

As regards age, although the condition undoubtedly is observed in young men, and also in those enjoying the prime of life, it is not an infrequent accompaniment of age, an age which I take to be a green old age, since the phenomenon under discussion occurs at times with no other sign of decay. Here I admit that I am treading on less firm ground, but many competent observers have noted cases in elderly subjects the records of which are accompanied by positive evidence of no discoverable disease. For example, Noble mentions a pulse rate of 36 in a man of ninety-six; Wheeler a pulse-rate of 40 in a man of seventy-two. Unfortunately there is no record of their pulses in early life, but I would point out the fact that these low rates were observed in men who had passed the Psalmist's span of life, and that physiology teaches us that the pulse-rate should increase from 10 to 14 per cent. between the fiftieth and eightieth year.

There is also in bradycardia one class of cases which seems to be temporary only, and is referred to some abnormal action of stomach or other organ. For want of better nomenclature, and perhaps of better knowledge, we call such cases "functional." Now, in how far such functional disorders of the heart's action are disease it is difficult to say. Hence I have ventured to place this paragraph midway between my Group A (*healthy causes*) and Group B (*causes due to disease*). A remarkable case of this kind is recorded by Dr. Somerville. The patient after a supper of salt fish was seized with vomiting, and the pulse-rate was found to sink as low as 25 per minute. The heart appears to have been carefully examined, and no murmur or other sign of disease of valve or muscular wall was discovered. Under treatment by bromides and belladonna the pulse returned to a normal rate on the eighth day. Some objection may be taken to the above case as being not so much an illustration of functional disorder as of the direct action of some poison on the stomach, and reflected thence to the cardiac inhibitory centre in the medulla. But against this hypothesis we must observe that there is no record of toxic effect on other partakers of the meal. Further, I have noticed a slowing of pulse in other dyspeptics, together with signs connected with pulse and aortic second sound denoting increased arterial tension. The condition, however, is only temporary. It may be stated here that in the great majority of examples of slow heart, whatever the cause may be, there is, as Dr. Mahomed also asserts, a prolonged rest during diastole, and also a longer interval than usual between systole and diastole. The heart seems to be lazy, and the sphygmograph plainly records this. It really means an accentuation of inhibitory action coming to the vagus by spinal accessory fibres from the medullary centre.

B.—IN DISEASE.

As Dr. Broadbent points out, the heart is not often rendered slow by disease; the tendency under morbid influences is to quicken rather than to slow its action. Still, there are some conditions and diseases which undoubtedly produce a permanent slowing of the organ. Further, it is probable that cases are missed or not always noted until some illness, such as faintness, draws our attention to the heart's unusual action; and it should be remembered that a slow pulse-rate of, say, 40, may run to the opposite extreme and become altered to one of 150 or more, under the influence, and towards the termination, of the disease which ends fatally. In these examples both the bradycardia and the tachycardia are equally symptomatic of a weakened muscular apparatus.

1 *Heart.*—Probably the most frequent cause of bradycardia is some affections of the central organ itself, whether it be of wall or of valve, and from an analysis of many recorded cases I find that fatty changes in the ventricles account for the greatest number of these. But, as Dr. Peacock and many other observers state, slowness of action is not of itself a sufficient symptom on which to base a

[1] Read before the Harveian Society, April, 1891.
[2] The Pulse, p. 107. [3] Loc. cit.
[4] Physiology, Landor and Stirling, p. 107.

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diagnosis of fatty degeneration, which requires, in addition, the signs of irregularity and loss of power. I would lay great stress on this last symptom, loss of power or weak heart-thrust, as almost pathognomonic of the condition under discussion being due to failure of heart muscle, as the symptom occurs not only in cases showing manifest degenerative changes, but also in anæmic subjects in whom muscular nutrition is at a low standard.

2. *Valve disease.*—As regards valvular disease as a causal factor, I can scarcely find enough clinical evidence to prove that valve lesion, however severe, does *per se* produce a slow heart beat. Bradycardia is undoubtedly seen in disease of the left-sided valves, both aortic and mitral, but not in the early stages of such conditions, not at that period when the lesion itself may be said to be the direct cause, but rather at an advanced or terminal stage, when hypertrophy has had its day, and when dilatation and degenerative changes are pronounced. It is a symptom, therefore, rather of fatty change than of valve lesion.

3. *Diseases of coronary arteries.*—Again, the slow heart occurs in diseases of the coronary arteries. Numerous cases have been put on record in which during life no sign of endocardial murmur existed, nor was it easy in the absence of other pronounced symptoms to make a correct diagnosis as to the actual condition causing the slow action. The post-mortem examinations, however, showed that the blood-supply to the heart itself was defective, in some being caused by rigidity and calcareous changes in these vessels; in others to an obliteration thereof, either in the form of endarteritis or from thrombosis.

Whatever form of heart disease be the origin of a slow action, it should be borne in mind that marked dyspnœa is as a rule present, even when the patient is at rest, but aggravated of course during excitement or exertion. Nevertheless Dr. Peacock asserts that bradycardia is associated with such different forms of heart disease that it is often a coincidence only of these diseases, and therefore not an effect. This statement is difficult to reconcile with another from the same authority, that the slow heart is a manifestation of palpable heart disease. Also it should help us in our diagnosis of causation to remember the rule laid down by Graves—viz., that when there is no difference in pulse-rate with the varying positions of the body, there is generally cardiac hypertrophy with dilatation.

4. *Blood diseases.*—In close alliance with the heart itself, we must next consider blood disorders as causes of its infrequent action. Cases are recorded in which anæmia and chlorosis have been attended by a considerable and ofttimes a remarkable bradycardia; and, in view of the high arterial tension which we all know often accompanies these blood diseases—a clinical fact which has specially been insisted on by Ord, Broadbent, and other able observers,—it is easily conceivable that this tension may, and often does, cause not only reduplication of heart sounds, but actual sluggishness of its action. But not only is the blood pressure increased, but the excitability of the inhibitory centre is diminished by the decreased supply of oxygen, the reverse being the case after free respiration. Blumenthal records a case of slowing of heart preceding carbuncle, and infers that it may at times be symptomatic of some oncoming serious malady.

5. *Post-febrile.*—There is also observed after fevers and other debilitating diseases a kind of post-febrile exhaustion, which I have seen in typhus and also in enteric fevers. This clinical fact was first impressed upon my mind when studying a case of delirium after typhus fever, which was under Dr. Murchison's care. Here, with marked delirium there were a subnormal temperature and a slow heart-rate (55 per minute). Under the influence of opium, which at the time I, in my ignorance, should have hesitated to prescribe, the patient speedily recovered, the temperature and pulse both rising to the normal level. Again, Norris records a case in which after a marked attack of enteric fever the pulse sank to between 30 and 40 beats; and further researches into the notes of cases of typhoid fever admitted to St. Thomas's Hospital in the autumn epidemics of recent years show a remarkable coincidence of slow action of the heart at the period when the temperature is subnormal during convalescence. These phenomena were an especial feature in children and in those who had passed through a severe and exhausting attack of the fever. But the condition is temporary only, and not a permanent one. It disappears as muscular strength and tone are re-established.

6. *Relation to respiration.*—There are cases, I am convinced, in which the slow pulse is related with disorders of the respiratory function, or perhaps it would be less incorrect to say that at times irregularities of the rhythm of the heart and of the lungs are intimately associated. A distinguished scientist, whom I attended in his last illness with Dr. Ord and Mr. F. Durham, was a case in point. He had a very slow pulse, seldom exceeding 60, and at times as slow as 50. The heart's action was not weak, there was no valve lesion, no rigidity of arteries, and no arcus senilis. But he had dyspnœa on exertion, and during the later months of his life every ventricular stroke did not reach the wrist. The remarkable point about his illness, however, was towards the end. He had some chronic bronchial catarrh, and the respiratory rhythm became affected. It assumed the type clinically known as "Cheyne-Stokes"; and contemporary with the slowness of his breathing the pulse became proportionately infrequent, to be again accelerated as the respiratory efforts were quickened. It is interesting, however, as bearing on my earlier remarks, that this patient was a very tall man, considerably over six feet, and in his early days had been very powerful.

Dr. Bradbury[5] has recorded a somewhat similar case, and in the interesting clinical record thereof, if I understand him correctly, he puts forth Hayden's law as a possible solution of the allied conditions, and asks, "Can lung disease (say, asthma) produce bradycardia, according to the law that functions which are mutually interdependent exercise a reciprocative regulating influence?" But is it not possible that the slow heart may be secondary to chronic lung affection owing to venous hyperæmia of the medullary centre as a result of the embarrassed respiration? On the other hand, we may theorise that in those cases the infrequent action of the heart is due to direct stimulus, or irritation by a passive congestion, of the sinus venosus itself, physiologists showing us that stimulation here is always followed by a lessened frequency of the heart's contractions.

7. *Neuroses.* — Careful study of many recorded cases compels the conclusion that the majority are either associated with, or secondary to, some grave lesion or disorder of the central nervous system. Although freely admitting this, it has, nevertheless, appeared to me that the nerve factor is, as it were, a pivot round which the medical mind unconsciously turns, and that we seek to find in all cases of bradycardia some diseases of the central nervous system; and even if we fail in discovery we tend to the idea that some such condition will be eventually found. Two almost classical cases—viz., Holberton's and Pugin Thornton's—are possibly in a great measure responsible for this line of thought. In Holberton's case the slowness of heart's action supervened after a fall, the post-mortem examination, some time after the injury, showing that pressure on the medulla and upper cervical cord had taken place. In Pugin Thornton's case the pulse sank as low as 24 in the minute after an epileptic fit in a patient suffering from syphilitic disease of the larynx. Charcot is of opinion that such cases are due to disease of, or injury to, medulla or cord. Flint, with his great clinical experience, affirms that the majority of cases are due to some brain disease. Others argue that a slow heart may be produced reflexly by irritation of the cervical or abdominal sympathetic. Again, many interesting and valuable cases are recorded tending to show that irritation of the pneumogastric, whether at nucleus or in its trunk, or at its distribution, is the prime cause. I have referred to central and peripheral irritation, and as regards irritation of the nerve in its course, a case has been recorded in which a cervical bony tumour impinged upon the vagus; whilst I remember seeing a fellow student, now a distinguished member of the profession, being brought to alarming syncope by experimental zeal in pressing on his own vagus. Therefore my perusal of many records and my own experience of some few cases will not allow me to say other than that which I have admitted—viz., that the majority of cases are apparently dependent upon neurotic influence, and that if they are not normal phenomena, they are the manifestations of impaired brain or nervous system. Thus mental shock, excitement, and prolonged mental exertion or study have each in their turn accounted for published cases. Dr. Hewan relates of himself that after a prolonged mental strain his pulse fell from 72 to 55 per minute, the inhibitory action of the vagus

[5] THE LANCET, vol. i. 1877, p. 196.

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apparently overcoming the accelerative function of the sympathetic. This inhibitory action is further seen in the shock of sudden fright when the heart "stands still"; yet the evidence of sufferers as related to me has been that they distinctly felt the "*one-two*" of systole and diastole followed by a lengthened pause before the next beat occurred. Numerous cases of slow pulse in epileptics, antecedent to, and during, their convulsive seizures, have been related by Peacock, Broadbent, Tyson, Day, and many others. In some of them there has been distinct auscultatory evidence of gross cardiac lesion, but I have only considered those records in which highly skilled observers have distinctly failed to detect heart disease. The conclusion is that a slow pulse may occur in epilepsy, and that it is in these cases accompanied by slow heart, without the complication of dropped beats. I find also that it may be present in acute hydrocephalus and in apoplexy; whilst as a symptom of meningitis it has been known for some years, but here accompanied by irregularity in rhythm and force. One of the chief clinical features in all cases coming under the head of "neurotic," as opposed to "cardiac," causes is that as a rule the impulse is strong.

8. *Abdominal lesions.* — I have in an earlier paragraph referred to the slow pulse frequently attending convalescence from severe enteric fever; and it would seem that other abdominal injuries, whether they be of the nature of operation on bowel or other organ, direct injury from blow or wound, may be accompanied, as the result of shock, by slowing of the heart's action. Some years ago I asserted the fact, which is probably well known to most sportsmen, that an animal struck in the abdomen by gunshot is at once brought down or arrested in its course; whilst, on the other hand, if it be shot in the head or in the vital organs of the chest, it may struggle for yards before it finally succumbs, the apparent reason being that the traumatism to such a large sensitive area as the abdominal cavity causes immediate cessation of heart beat. This, after all, is only what physiology teaches us. The well-known observation of Goltz—viz., tapping on the belly wall, or on the exposed intestines, by which the inhibitory centre is excited reflexly and the heart's action arrested—is reproduced by the bullet wound. A similar effect of shock is seen in the temporary slow heart's action after severe operations on the abdominal cavity. Nor is this argument weakened, but rather improved, by the records of two cases of operation for ovarian tumour. In both the pulse-rate was, and had been for some time, below normal before operation (65 and 60 respectively); in both the frequency was still more pronounced for some hours after the operation, the result of shock, whilst in both the heart's action accelerated to a normal rate when convalescence was reached. Tschirien also states that with a slow pulse during pregnancy after parturition there is a subsequent pulse acceleration due to cessation of pressure on the abdominal aorta.

9. *Drugs and poisons.*—As regards substances in use in every-day life, it may not be out of place to draw attention to the abuse of tea, coffee, and tobacco. Frequent examples of slowing of the heart's action by the indiscriminate use of these articles are known and recorded, a remark which especially applies to tobacco. Flint, Peasler, and others have found the pulse to fall below 60 after excessive indulgence in tobacco, to return to its normal rate after periods of abstinence more or less prolonged. A similar experience is known in relation with other narcotics and with cocaine, quinine, and aconite. But perhaps one of the most frequently overlooked causes, so far as drugs are concerned, is the administration of large doses of potash salts, especially the nitrate. When a pupil under Dr. Peacock I was blamed for recording a pulse of 48 in a case of subacute rheumatism. The observation was found to be correct, the phenomenon being due to rather large doses of nitrate of potash which the patient was taking, since the pulse-rate rose after the medicine was discontinued. The first effect of snake-bites is said to produce bradycardia, and similar results have been recorded in cases of jaundice by Murchison, Broadbent, and others. I would here wish to emphasise the necessity in a case of infrequent pulse of always counting the heart's action as well as the waves at the radial artery. There may be a fallacy in a slow pulse, since all the waves of a weakened ventricular stroke do not always reach the periphery, and in such cases an abortive systole may be heard but not felt. But even then a pulse-rate of 30 per minute, and allowing for the possibility of every other beat being dropped or arrested, must be considered as coming in the category of slow heart. A dropped beat is due to deficiency of muscular power in the ventricle; a dropped systole, if I may use the term, is either a normal condition or is due to some defect in nerve mechanism.

It will be apparent to everyone listening to these remarks that they are far from being a complete synopsis of the causes of bradycardia. I do not intend them as such. They are merely based on records of cases which I have had under my care or seen in hospital wards. It is also obvious that many cases occupy a position which is open to attack or dispute; in other words, there are cases which, as it were, overlap one or more of the categories of classification. Indeed, it is difficult to decide in many patients what is the primary cause of slow heart. Is it due to disease of muscular wall, or to nerve mechanism; or is it a result of perverted nerve force? I think, however, that it may be as well if we remember—(1) that there is a series of cases in which it is a perfectly healthy phenomenon, occurring often in tall, muscular men, and in whom it is quite consistent with health and even prolonged life; (2) that it is often a manifestation of advanced mechanical disease of the heart, or of disease of the aorta and its primary vessels; (3) that it occurs as a result of prolonged anæmia or other diseased conditions of the blood, including certain fevers; (4) that it may supervene on the use of various medicinal drugs or as the result of some poisons; and (5) that it is often a sequel of grave neurotic changes and disorders, and is therefore correlated with derangements of respiration, digestion, and other functions.

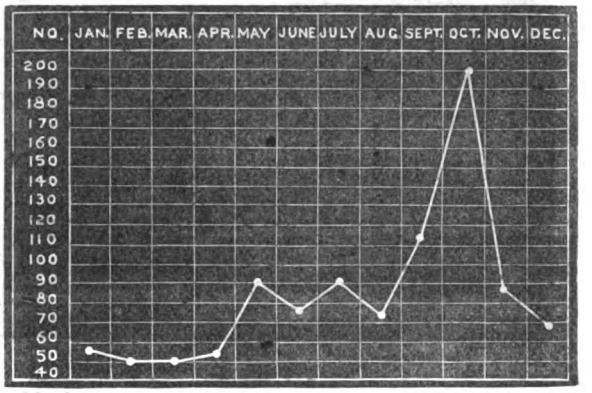
AN ANALYSIS OF 1008 CASES OF SCARLET FEVER ADMITTED INTO THE SOUTH-WESTERN FEVER HOSPITAL DURING THE YEAR 1890.

BY F. FOORD CAIGER, M.D. LOND., D.P.H. CAMB.,
MEDICAL SUPERINTENDENT OF THE HOSPITAL.

IN the belief that the brief record of a considerable number of cases of scarlet fever consecutively treated under conditions favourable for observation would be of interest to the profession, I have summarised the principal facts as follows:—

I.—SEASONAL PREVALENCE.

This seasonal prevalence of the disease, as evidenced by the monthly admissions, was in accord with that observed in London during the last seventeen years. The admissions were at their lowest during the first quarter of the year. A slight rise was observed in May, and was maintained during the summer. A rapid increase was noted in September, and reached its highest point in October. After this the numbers fell rapidly until the end of the year. The



curve of scarlet fever admissions into this hospital in the main corresponds with that of the total admissions into the hospitals of the Metropolitan Asylums Board. They numbered for the year 6565, and represent about 43 per cent. of the notified scarlet fever in London.

II.—DISTRICT.

Of these cases the parish of Lambeth contributed 585, or 58 per cent.; Wandsworth, 334, or 33 per cent.; other

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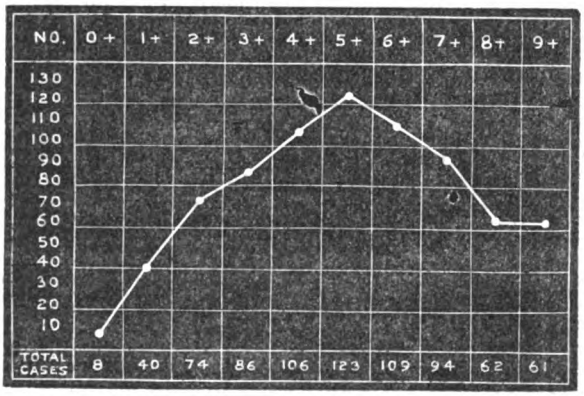
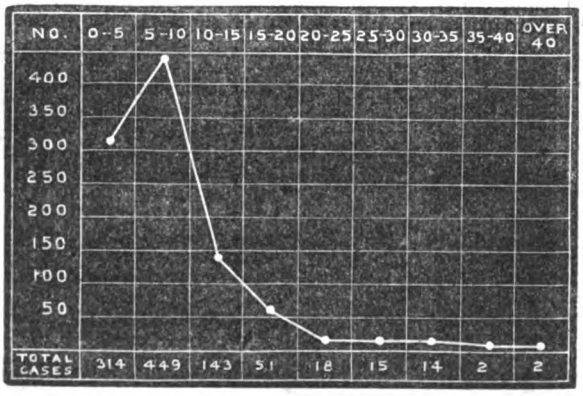
parishes, 89, or 9 per cent. The district from which they are drawn is not without its influence upon the case mortality. It is a recognised fact that the poverty-stricken inhabitants of the poorer neighbourhoods, in consequence of their lower vitality, show a much weaker power of resistance to the attack of scarlatina than those who are better housed and better fed. In this respect, though a large proportion of the patients came from the poorest parts of Vauxhall, Waterloo, and Battersea, they were not so badly off in the aggregate as those entirely drawn from the East-end districts. With this reservation there was nothing noteworthy in the type of disease observed throughout the year.

III.—AGE DISTRIBUTION.

The largest number of admissions fell within the second quinquennium of life; 449, or 44·5 per cent., of the total were between five and ten years. The first quinquennium furnished the next largest number; 314, or 31·1 per cent., were aged from one to five years. If these groups be examined more in detail, it will be seen that the number of admissions regularly increased with each year of life up to the fifth year, at which age they reached their maximum, after which they fell somewhat more gradually until ten years was reached.



After ten years each quinquennium showed a progressively decreasing number until forty years was reached, after which age only two were admitted. It will be seen that after ten years the drop in the number of admissions at each quinquennium until twenty-five years was reached was considerable. These charts may be taken as characteristic of the total scarlet fever admissions under the Metropolitan Asylums Board for many years past.



IV.—SEX.

The numbers for the two sexes were nearly equal. Males, 509; females, 499. Under five years the males exceeded the females in the proportion of 7 to 6; whereas over five years the preponderance was slightly in favour of the females.

V.—MORTALITY.

The death-rate, calculated according to the Registrar-General's formula, comes out at 4·67, a very satisfactory figure when it is remembered that the mortality of 32,484 cases of scarlatina admitted into the Board's hospitals during the previous seventeen years stands at 10·76, and for the last five years has averaged 9·63. As before stated, the conditions of life incidental to the patients in their home relations exert a marked influence on their power of resistance, and it is to this that we must look for an explanation of the fact that the mortality among cases admitted into hospitals is greater than it is among those treated at home. The London Fever Hospital is a standing exception to this rule, the cases treated therein coming for the most part of a much better social class. If from the scarlet fever deaths there be subtracted 2 which died from secondary measles, 2 from puerperal septicæmia, 1 from enteric fever, 1 from whooping cough, and 1 from phthisis, the scarlet fever mortality is further reduced to 3·89. The average severity of the disease was as usual greater during the cold months of the year, the percentage mortality being highest during the first and last quarters. The death-rate in the two sexes was almost identical. As regards the case mortality at different age periods, the death-rate of those under five years was 11·4; over five years, 1·44; between five and ten years, 0·89, this latter class accounting for nearly half the total admissions.

The above record affords additional evidence of the much greater fatality attending scarlet fever in the early years of life and of its comparative mildness in later life. Although all previous evidence bears out this contention there exists a curiously widespread belief that there is greater danger attending scarlet fever in adults. This is quite erroneous. The case mortality of 30,306 attacks of scarlet fever treated in the Board's hospitals shows a progressively decreasing mortality at each quinquennium up to twenty-five years, when it is at its lowest; and in the first quinquennium, for those years of which the record permits of such analysis, a constantly decreasing mortality from the first year of life up to the fifth. The liability to develop scarlet fever and the probability of its fatal issue diminish—in the former case after the fifth year, in the latter from the time of birth—with each year of life. This cannot be too often insisted on, in face of the fact that there are still people who hold to the mischievous belief in the undesirability of isolating the first case arising in a family, on the score that the rest are bound to take it sooner or later and that it is better to get it over. The operation of the Notification Act should have some effect in lessening this objectionable practice.

VI.—COMPLICATIONS.

The following figures give the percentage incidence of the various complications observed in cases completed during the year arranged in their order of frequency:—Otitis occurred in 12·9 per cent. of cases, adenitis in 7·1 per cent., rhinitis in 6 per cent., eczema in 3·3 per cent., albuminuria (simple) in 3·1 per cent, ulcerative stomatitis in 2·8 per cent., nephritis in 2·7 per cent., rheumatism in 2·7 per cent., bronchitis in 2·08 per cent., conjunctivitis in 1·35 per cent., tonsillitis (secondary) in 1·24 per cent. These I propose to briefly discuss *seriatim*.

Otitis, attended with a purulent discharge, was the most frequent complication. It occurred in 125 cases, mainly in young children. The younger the child the greater its apparent liability to the disease. In most instances it began with earache, and more or less fever and restlessness, lasting from one to three days, which symptoms rapidly subsided on the appearance of the discharge. Though the majority were due to otitis media with perforation of the tympanum some few were apparently caused by a simple inflammation of the external auditory canal. There seemed to be a direct connexion between the severity of the scarlatinal attack and the early development of the affection. The milder cases were attacked less frequently, and usually at a later period of their illness, occasionally several weeks after the subsidence of the fever. The continuance of the discharge varied from three or four days to three or four months. Most cases were clear within two weeks. All were detained in hospital until the discharge had entirely ceased. This was usually effected by means of simple treatment. In three instances suppuration occurred over the mastoid process, but by means of early incision down to the bone possible suppuration of the mastoid cells was averted. In only one case did there appear to be very marked impairment of hearing at the time of discharge from the hospital, but to obtain accurate knowledge on this point was difficult owing to the extreme youth of the majority of the patients. Only one case of otorrhœa occurred in a patient over ten years of

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age. No case of meningitis or pyæmia developed during their stay, and as all discharges were cured before the patients were sent home, there is some hope for an immunity in the future. It is a point worth bearing in mind that extreme fetor of discharge in otitis media is not necessarily dependent on bone disease.

Adenitis occurred in 69 cases, and was the next in order of frequency. The adenitis here alluded to is a distinct affection, and does not include the glandular swelling directly associated with the faucial inflammation which, though in some instances so slight as to be hardly noticeable, in others assumes such proportions as to deserve the name "bull neck," a symptom of the gravest omen, being associated with extensive ulceration of the fauces, a fetid discharge from mouth and nose, and symptoms of a pyæmic type. The affection to which I refer is a rapid swelling of one or more of the glands of the neck, usually at the angle of the jaw, sometimes beneath the sterno-mastoid, attended with a fresh rise of temperature, quite apart from the orginal febrile attack, from which it may be separated by an interval of from one to three or more weeks. It either more or less rapidly resolves, or it suppurates, often with little or no reddening of skin or periadenitis. Of the 69 cases, 17, or about one-third, suppurated, necessitating surgical interference. I have been unable to establish any direct connexion between albuminuria and the occurrence of this affection, either simple or suppurative. The large majority of the cases had no albuminuria, though albuminuria was relatively more common in patients suffering from adenitis. Cases of gland swelling with inflammation of the ear passages are excluded from this category as being due to an obvious primary cause, so too those dependent on eczema or pediculi capitis. It has always been to me a matter of surprise that this apparently primary pyrexial adenitis of late development should have escaped recognition in the text-books, or, at any rate, should not have been dissociated from the early affection, which is, as it were, part and parcel of the disease. As regards the incidence of this complication, no determining cause in the individual was apparent, no connexion with age, sex, diet, or locality. Patients who were still in bed, however, as was the case with albuminuria, were certainly more frequently affected than those who were getting up. This is probably explained by the fact that the complication is more frequent in early convalescence; it occurred more often in the first week than the second, and the second than the third week after the fever had subsided. The fact, however, that in some instances coincidence in time of the attack was noted, though the cases were distributed in different parts of the hospital, would seem to point to some wide-spread influence as the exciting cause, such as an atmospheric or ground condition. The influence of cold, however, was clearly negatived. In this respect also it showed an analogy with albuminuria.

Rhinitis, with a more or less purulent discharge, occurred in 58 cases. It was frequently associated with otorrhœa, and was relatively more common in young children. In recording instances of this complication I have endeavoured to eliminate as much as possible those cases in which the discharge appeared in the first week, during the height of the fever, at which time, in common with several others, it is a *symptom* of grave prognostic value. It is always a difficult matter to determine where the line should be drawn between symptoms and early complications. It would be well if the field could be cleared of any such assumed distinctions, but in the present state of our knowledge some such empirical distinction is at least a matter of convenience.

Eczema was noted in thirty-two cases. Its most frequent seat was at the junction of the alæ nasi and upper lip, behind the ears and on the ear itself, especially at the external auditory meatus and within the groove of the helix. It seemed in many instances dependent on the presence of an irritant discharge from the nose or ear, and, from the fact that it is very difficult to prevent young children from picking a sore spot, its extension in an impetiginous form to neighbouring parts of the face frequently occurred. Young children showed a greater liability than older ones, and its incidence was most marked in cold weather and on patients taking a meat diet. In some cases it necessitated a prolonged detention in hospital. Several cases of eczema capitis were very tedious in their convalescence.

(To be concluded.)

FATAL TETANY AS A SEQUELA OF DILATATION OF THE STOMACH.

BY WILLIAM COLLIER, M.D., M.R.C.P.,
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THE subject to which I wish to draw attention is one which I believe has hitherto received little notice at th hands of English physicians. At any rate I can find no reference to it in any of our medical text-books. My first case is one which occurred in my own practice some months since.

CASE 1.—J. D——, aged thirty-six, a miller by trade, was admitted to the Radcliffe Infirmary on August 4th, 1890, with the following history:—He stated that for the past three weeks he had been troubled with persistent and uncontrollable vomiting, that he had lost flesh rapidly, and had become very weak; that during this time his bowels had been very constipated. He added that five years ago he suffered from a very similar attack, had been treated at one of the Dublin hospitals, had had his stomach washed out, and had been told that he was suffering from a dilated stomach; that since then he had been much troubled with constipation and with occasional attacks of vomiting and other dyspeptic symptoms. The patient was put on diet chiefly consisting of peptonised milk, and the constipation was treated by copious oil and water enemata. This treatment was followed by some slight improvement of his general condition.

On Aug. 21st, having returned from my holiday, I saw him for the first time. His stomach was still much distended, and his breath excessively foul. He had just vomited about four pints of brownish, very acid fluid, with thick yeast-like scum floating on the surface. His pulse was small and weak, and he appeared much exhausted. As he was no better on the 23rd, when I next saw him (he had again vomited a large quantity of yeasty fluid), I determined to try washing out the stomach and to change his diet to one consisting chiefly of easily digestible, dry food. The following morning our house physician, Dr. Ogle, washed out the stomach with warm water, using for the purpose a syphon arrangement, and not introducing a very large quantity of fluid at one time. Shortly after this operation the patient expressed himself as feeling relieved, but five hours later he was seized with severe cramps in the arms and legs. On examination the muscles of the limbs and of back and abdomen were rigidly contracted. At one time he complained of stiffness of the jaws, but there was no rigidity. The pulse became very weak, and the patient cyanosed. An injection of one-sixth of a grain of morphia was given, and the limbs were rubbed. In three-quarters of an hour the rigidity passed off, and his general condition improved slightly. The pulse, however, gradually failed, and he died about seven hours after the onset of the attack. An hour and a half before death his temperature on the right side was 100·6°, on the left 100°; the right arm was hot and sweating, the left cool and damp. Shortly before death the rigidity returned, but passed off, excepting in the hands. He was unconscious half an hour before death.

This case at once reminded me of a very similar one which occurred at the Addenbrooke's Hospital, Cambridge, in 1887.

CASE 2.—The patient, a man aged forty-eight, was admitted for stricture of the pylorus; there was much dilatation of the stomach, attended with pain, vomiting, flatulence, and general malnutrition. Ten days after admission it was decided to wash out the stomach. Soon after the tube was passed the patient became very faint, and it was withdrawn. Two hours later he complained of stiffness of the jaws and inability to open the mouth, and rigidity of the arms, which were strongly pronated and flexed, the thumbs being turned into the palms, rigidity spread to all the muscles of the limbs and trunk, and the temperature rose to 103°; he then became pulseless and livid, the temperature rising to 107·2° before death, which occurred about six hours and a half after the washing out. At the necropsy no injury to the mucous membrane was found, and with the exception of the stomach the other organs were healthy. Kussmaul, in his essay on the "Treatment of Dilatation of the Stomach by means of the Stomach-pump," describes three very similar cases.

CASE 3 (Kussmaul).—A young girl, aged fifteen, with great

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dilatation of the stomach, suffered frequently from attacks characterised by tonic spasms of the muscles, principally of the forearms and calves; during these attacks the patient lost the power of speech and suffered with dyspnœa; they lasted sometimes a few minutes, sometimes a quarter, and sometimes half an hour. They occurred most frequently on those days, when in consequence of repeated vomiting, the patient was much exhausted; they ceased with the improvement of the stomach symptoms.

CASE 4 (Kussmaul).—A man aged twenty-seven, suffering from enormous dilatation, caused by a contracted pylorus. Temporary improvement followed the use of the stomach pump, but the patient gradually lost strength and spasms followed. In this case it was after the administration of purgative pills, after excessive vomiting, that the spasms first appeared. They seized on the flexor muscles of the hands and forearms and on the calf muscles; the tonic spasms lasted about two minutes and repeated themselves with great intensity several times. The muscles of the face, the jaws, the neck, and front of the body were in a state of rigidity. If any attempt was made to straighten the arms, considerable resistance was experienced and the patient cried out in pain. This condition lasted five hours, and was followed by great exhaustion; the patient gradually grew weaker, and at length, after a fresh attack, died. On examination, a large quantity of fluid was found on the surface of the brain; there was marked œdema of the pia mater. The brain substance was pale and soft, the lateral ventricles being dilated with fluid.

CASE 5 (Kussmaul).—M——, aged twenty-seven, suffering from enormous dilatation due to pyloric obstruction. The patient was at first much relieved by lavage; but, continuing his drinking habits, he died after a series of spasmodic attacks, which were almost invariably brought on after abundant vomiting. These attacks were marked by pains and tonic contractions of the calves, and of the flexors of the forearms; they were preceded and followed by general exhaustion and dyspnœa.

M. Dujardin-Beaumetz, in a paper entitled "Notes on a Case of Dilatation of the Stomach combined with General Tetany," read before the Paris Medical Society, October, 1884, and recorded in *L'Union Médical*, vol. xxxviii., relates the following case.

CASE 6.—A man aged forty-six who had suffered from symptoms of dilatation for four or five years, and had repeatedly had his stomach washed out, was admitted to the hospital on Oct. 8th, 1883, when the daily washing out of the stomach was recommenced. On Oct. 14th the patient was seized with tinglings in the hands and feet, and then by marked contraction of the hands, which assumed the position of true tetany; rigidity of the feet and legs followed, but to a less extent than in the upper limbs; there was slight trismus. These symptoms had scarcely lasted half an hour, when they passed off, to give place to a feeling of extreme fatigue and exhaustion and numbness over the whole body. The following night the patient was again seized with general cramps, and was found in his bed cyanosed and breathing with difficulty. The jaws were clenched and the chest fixed; the upper limbs were rigid or in position of semi-flexion, the fingers clenched, and thumbs forcibly adducted. The lower limbs were equally rigidly contracted, feet in position of forced extension, and the legs extended on the thighs. In spite of an injection of morphia and a vapour bath rapidly administered, the patient died about midday. M. Dujardin-Beaumetz adds, "We would notice one fact which may have some importance from a pathological point of view in these tetanic cases, that we learnt from his companions, that our patient, unknown to his attendants, had, during his stay in the hospital, been seen to wash out his stomach, which gave him great relief, as often as six or seven times daily, retiring to a waiting-room to escape observation." On opening the skull a large quantity of clear acid fluid escaped from beneath the dura mater; there was marked œdema of the pia mater. The cerebral tissue was softer than normal, and the lateral ventricles contained an excessive quantity of fluid. No other change was noted in any part of the cerebro-spinal system.

It will be observed that in the histories of these patients certain symptoms were common to all. In all the stomach was found to be considerably dilated; all had suffered from severe attacks of vomiting and consequent malnutrition. All were attacked with tonic spasms of certain groups of muscles, especially of the extremities. In all the muscular spasms passed off for a time, to recur at longer or shorter periods. In five these attacks terminated fatally; the sixth, a young girl aged fifteen, recovered. In two the attacks seemed to be connected with the passage of a tube into the stomach, while in the third patient this was probably the exciting cause.

In the other three cases the attacks seemed to be induced by excessive vomiting. In only two have we any mention as to the condition of the brain after death. In each instance different observers remark on the amount of fluid beneath the dura mater and in the lateral ventricles, and speak of the brain substance as being softer than normal, but no coarse lesion is noticed.

In speaking of the cause of these spasms, Kussmaul points out that in these cases the amount of urine excreted is small, which is due to deficient absorption of fluids by the stomach; that in consequence there is a deficiency of water in the blood and an abnormal dryness of the muscular and nervous tissues, which renders them extremely irritable; that in patients suffering from this drying up of the tissues a single copious vomiting, or the evacuation of the fluid of the stomach by means of the stomach-pump, may, by suddenly rendering the dehydration of the tissues more intense, excite these cramps. He suggests the tetany which occurs in connexion with severe chronic diarrhœa is due to the same cause. I think it might fairly be urged that this condition of spasms was probably reflex in character and due to irritation of the nerve endings in the mucous membrane of the stomach, acting on a brain which had been rendered abnormally irritable by exhaustion consequent on the vomiting and malnutrition which is so frequently associated with chronic dilatation of the stomach. Apparently irritation of other portions of the alimentary canal is specially liable to produce reflex symptoms, as, for example, the convulsions which are brought on in young children by the irritation of indigestible food, or by the irritation of worms &c.; while the cramps or tetany which Trousseau points out is so frequently associated with severe chronic diarrhœa in adults may quite as easily be believed to be due to reflex irritation as to the dehydration theory advanced by Kussmaul. But, whatever be the cause, it is of importance that we recognise that this condition, which has been termed rightly or wrongly tetany, may supervene in cases of chronic dilatation of the stomach, and that it is generally fatal, and, further, that it may occasionally, though rarely, be directly excited by washing out the stomach.

Oxford.

A CASE OF VAGINITIS WITH GAS CYSTS, OR SO-CALLED "EMPHYSEMATOUS VAGINITIS."

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A NULLIPARA, aged twenty-eight, married nine years, consulted me on June 30th, 1890. About six months previously I had dilated the cervix for dysmenorrhœa. The vagina at that time was healthy. She now complained that for three weeks she had been in constant pain, more or less severe, and had had a slight pink discharge. She had not been aware of any discharge before this. On examination there was found a tender swelling to the right of the uterus. The vagina felt uneven, as if studded with hard nodules. These nodules were closest together on the posterior wall of the vagina and in its upper half. On looking at them with the speculum they were seen to be greyish-black, tense vesicles, in size from that of a hempseed to that of a pea. Each vesicle when pricked collapsed with a distinctly audible pop, no fluid coming out. I poured water into the speculum, and then pricked one of the bladders, and a little bubble of gas rose through the water. I pricked and emptied all the vesicles I could see. There were none on the cervix uteri. The patient was examined subsequently on July 7th, 18th, and 24th, but no more bladders made their appearance. The discharge soon ceased; the patient was not precise enough in her statements to enable me to say exactly how long it lasted. Careful inquiry was made of her husband as to his state of health, and he denied having had any discharge or other recent disease of his genital organs. The painful lump to the right of the uterus,

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which I believe was an inflamed Fallopian tube, disappeared in two or three weeks.

So far as reported cases can tell us, no previous case of this rare and curious disease has been observed in England. A case in which the cervix uteri was the subject of a similar morbid change, was related to the Obstetrical Society of London by Dr. Gervis,[1] but there is no mention of any disease of the vagina. Dr. Gervis's description is: "The entire vaginal aspect of the cervix was seen occupied with close-set glistening vesicles, varying in size from a millet to a hemp-seed. ..... On puncturing these little retention cysts, as one believed them to be, to our surprise nothing but air escaped from any of them; they simply collapsed with an audible noise." He adds: "The cysts appeared too distinct and firm to represent, as I venture to think, any form of subcutaneous emphysema, even if such a condition were possible. I can only suppose them to represent follicles which had become distended in the usual way, and from which the fluid contents had somehow been absorbed. ..... The case in my experience is unique."

The above is the only case at all resembling mine that has been published in this country. German literature, however, contains what, considering the rarity of the disease, may be said to be a large number of such cases. The first case in point of time that I find was described by Braun.[2] The patient was a pregnant woman, with papillary hypertrophy of the vagina, in whom there were numerous elastic vesicles of the size of a pea over the vaginal portion and hinder vaginal laquea. They were pale yellow, translucent, bursting with a noise when pricked, and letting out pale yellow non-viscid fluid. After emptying these bladders no more appeared. There was profuse blennorrhœa. Winckel[3] in 1871 described the disease, and gave it the somewhat cumbrous name of "colpo-hyperplasia cystica." He published three cases, all of them in pregnant women. In all there was vaginal catarrh, and all of them got well after delivery. Only some of the cysts contained gas, others contained fluid or blood. Näcke[4] has reported three cases. He describes projecting steel-grey or blackish vesicles, from the size of a pin's head to that of a pea or larger, which, when pricked, collapse with a noise and without escape of fluid. In one of his cases the condition was discovered during pregnancy; in the others during labour. In all the vesicles were no longer found when examined during the lying-in. He formed a theory of the disease—viz, that it was due to fissures of the vagina, that air was aspirated into the vagina and then enclosed in the fissures, the margins of which healed over it and prevented it from getting out. To test this he experimented on animals, trying to produce the disease by injecting air into the mucous membrane. He managed to get one air vesicle, which collapsed as soon as the syringe was withdrawn. He therefore thinks the condition is a disease of the vaginal follicles. Eppinger[5] discovered this condition in examining post-mortem a case of puerperal pyæmia with physometra. On the cervix and upper part of the vagina the epithelium was raised into papillæ, and in these latter were bladders, from the size of a millet seed to that of a pea, containing air. He thought the condition could not possibly depend on putrefaction, for the necropsy was made ten hours after death, in November, and there was no decomposition. His theory was much the same as that formed, tested, and rejected by Näcke—viz, that during the stretching of the vagina during delivery fine fissures might have formed through which air might have penetrated, either before or after death; that it was a peculiar kind of emphysema.

Chénevière[6] has published a paper on the subject, and with it a coloured plate of the condition. The appearance shown in this plate is exactly that of the vagina in my case, except that, from Chénevière's patient being pregnant, the vagina is represented of a deeper red. He describes three cases, all of them pregnant. In one the disease disappeared after delivery, and in another its course was not observed. The third case is an important one, from the care with which the course of the disease was watched. It was discovered at the end of the eighth month of pregnancy, and for sixteen days after its discovery the cysts increased in number and size, but then began to diminish; this possibly depending, Chénevière suggests, on the further descent of the child's head into the pelvis. Eleven days after delivery the disease was found to have again increased, but five weeks after this only one or two cysts were present. Chénevière's theory of its origin is much like that of Eppinger and Näcke. He thinks the contents of the vesicles more probably air that has got into the vagina than gas secreted by the vagina. The entry of air, he thinks, is favoured by the altered pressure relations incident to pregnancy, air being sucked in when pressure is diminished. Breisky, in notes to Chénevière's paper, says that he has seen four cases, two of them pregnant: in one the disease disappeared after delivery; in the other its course was not ascertained. He once found it at the necropsy of a girl of seventeen, and has seen one other case in a woman not pregnant.

Zweifel[7] has published an important paper on the subject, in which he relates three cases, one occurring in a pregnant woman, and disappearing by the twelfth day after delivery. This case seems to have been a very marked one, for the bladders are described as varying in size between that of a pin's head and that of a hazel nut, and reaching down to the vestibule. The other two were both pregnant. He thinks its connexion with gonorrhœa doubtful. He made an elaborate chemical investigation into the nature of the gas, and has satisfied himself that it is trimethylamine. The line of demonstration is as follows. The little pop with which the vesicles collapse when pricked shows that the gas is confined under tension; therefore it cannot be air that has been sucked in. He filled the speculum with different test solutions, and pricked a vesicle under each. He could get no reaction showing the presence either of ammonia, carbonic acid, coal gas, or hydric sulphide, although from the smell he suspected the presence of a small quantity of the latter. The vaginal secretion stained turmeric paper brown, the colour returning when the paper dried; this showed the presence of an alkaline gas. The smell was peculiar: it was fishy, like pickled herrings. Trimethylamine has an odour like this; it is gaseous at 9° cent., and is very largely diffused in nature. There is a plant called Chenopodium vulvaria, which is said to have received this name because its odour was thought to resemble that of the vulva; and the smell of this plant is due to the development of free trimethylamine. But no chemist has yet shown that the vulval secretion contains trimethylamine. Zweifel thinks he has done it in this way. The smell diminished when dilute hydrochloric acid was injected into the vagina. If a glass rod dipped in acetic acid be held in an atmosphere containing ammonia or trimethylamine, a white cloud forms round it. Zweifel got an assistant to hold the vaginal walls apart, while he held a rod dipped in acetic acid between them. The white cloud formed. Nessler's test gave no reaction: therefore the smell must have been due to trimethylamine. Zweifel tried to see whether pricking a vesicle near the acetic acid rod produced the cloud, but a temporary obscuration of light caused this experiment to miscarry. He also, by washing out the vagina with dilute hydrochloric acid, got a fluid with which he was able to prepare crystals of a double salt like that which was prepared with trimethylamine. On these grounds he concludes that the gas cysts contain trimethylamine. He thinks the glands in the vagina form the gas; when their ducts get stopped up the gas dilates them into cysts. Schroeder[8] has described a case in which the condition was discovered in the last fortnight of pregnancy. He describes grey translucent vesicles, the size of a pea, studding the whole of the vagina. On the tenth day of lying-in vesicles up to the size of a cherry-stone were still present. A week after this only one was found, and when this was punctured no more appeared. He thinks that the vesicles arise under the hyperæmia of an inflamed vagina during pregnancy. The secretion of the follicles decomposes and forms gas. Schmolling,[9] in an inaugural dissertation, has described another case, but gives no fresh explanation.

I have ventured to quote freely the reported cases of this curious morbid change, because there is so little reference to it in our own literature. The most extensive account is a few lines in the "Clinical Lectures" of the late Dr. Matthews Duncan. It is a disease generally associated with pregnancy. Seventeen of the cases I have referred to occurred in pregnant or recently delivered women, and only

[1] Obst. Trans., vol. xxvi., 1884, p. 144.
[2] Zeitsch. f. Ges. der Aerzt. in Wien, 1861, Band ii., S. 182.
[3] Arch. für Gyn., Band ii. [4] Ibid., Band ix.
[5] Prager Viert. f. prakt. Heilk., Bd. cxx., S. 33.
[6] Arch. für Gyn., Band xi., S. 351.
[7] Ibid., Band xii., S. 89.
[8] Deutsch. Arch. f. Klin. Med., Bd. xiii., 1874, S. 538.
[9] Berl. Klin. Woch., No. 29, 1876.

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four apart from pregnancy. In most of the cases it is described as being accompanied with a copious discharge; and in some this is said to have been gonorrhœal. Breisky[10] justifies the inclusion of this disease among inflammatory affections, on the ground of the invariable accompaniments of swelling and hypersecretion. On the other hand, in the opinion of Dr. Matthews Duncan, the disease is "probably not an inflammation."[11] In Gervis's case every sign of inflammation is described as absent. In my own there was certainly not gonorrhœa. In some cases the vesicles were present over the whole vagina and cervix uteri, in some limited to the upper part of the vagina, in one limited to the cervix uteri. They are described by Dr. Duncan as purplish, by Braun as pale-yellow, by others as steel-grey or blackish. The last mentioned description best applies to my case, and it is the colour shown in Chénevière's excellent plate. In some cases the vesicles contained gas only, no fluid at all, as in Gervis's, Näcke's, and my own. In Braun's case they contained pus. The little pop with which the vesicles burst is quite characteristic and peculiar. In some cases the cysts have been found to have an epithelial lining, in others not. Dr. Matthews Duncan[11] says that "the gas is displaceable, and gives an emphysematous feeling." It was not so in my case, nor in Gervis's, and in some of the other cases the descriptions given do not convey to me this idea.

As to its pathology, it appears to me that Schroeder's view is probably correct—viz., that it results from decomposition of secretion retained in vaginal follicles. Granular vaginitis, in which the vagina is studded with papules, which there is good reason to think are inflamed follicles, is not very uncommon. In these cases there is no accumulation of fluid large enough to give the impression of a cyst. But, exceptionally, such follicles may suppurate. I have published a case[12] in which the vagina contained pustules as well as papules. In Braun's case the vesicles contained pus as well as gas. Exceptionally also the secretion of the follicle may decompose and produce gas; and the next stage, I imagine, is the rupture of the follicle and escape of the gas, and restoration to the normal condition. The presence of the gas cysts seems to be only a temporary condition. In some cases they disappeared after delivery, possibly being, as Zweifel suggests, squashed by the passage of the child's head. In others, as in Gervis's and mine, they were pricked, and returned no more. But from this point of view Chénevière's case is the most important, showing as it does spontaneous decline, recrudescence, and finally disappearance of the morbid condition. If Chénevière's case be taken as showing the natural history of the disease (and we have no other observed for so long), it can hardly be placed among new growths; we must regard it as an inflammatory affection. The name given to the disease by Winckel, "colpo-hyperplasia cystica," is a very long one, and does not distinguish gas cysts from cysts of other kinds. I do not think the term "emphysematous vaginitis" is a happy one, for I agree with Dr. Gervis that the morbid change does not represent any form of subcutaneous emphysema; but I cannot suggest a better.

Harley-street, W.

ON

DEPARTURE FROM THE NORMAL LENGTH OF BONES FOLLOWING INJURIES AND DISEASES OF THE EPIPHYSIAL LINE.

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THE conditions met with are necessarily shortening and elongation; but that any alteration in the length of bone is inevitable many recorded instances abundantly disprove.

Shortening.—It is foreign to the purpose of this article to review the stages in the pathological processes by which asymmetry in length of bone is produced. A consideration, however, of the ultimate results prompts me to the conclusion that the cases may be aptly arranged in two categories—those of partial, and those of complete shortening. Under the term "partial" I would group those instances of shortened bones in which the exciting cause, generally of an inflammatory nature, is of such limited intensity and duration as to interfere with the normal rate of growth for a time only. When the cause is entirely removed, the epiphysial lines resume their normal activity. A further factor, difficult of estimation in its effects, is the functional inactivity of the limb while it is idle, during the progress and regress of the lesion. In striking contrast to this partial shortening stands that condition of "complete" shortening due to injuries and diseases of the epiphysial line which arrests entirely its growing power, and leaves the limb inordinately stunted and dwarfed; graphically expressed by a patient when he stated that his "arm never afterwards grew anything." The more common causes are, traumatic separation of the epiphyses without complications, traumatic separation attended by suppuration and necrosis, acute inflammatory processes in the neighbourhood of the epiphysial line; lastly, operations on the ends of young bones, especially excisions.

Shortening following traumatic separation of the epiphyses without complications.—Mr. Hutchinson, writing on this subject, remarks, "No bone shows more arrest of development and atrophy after injury to the epiphysial line than does the humerus, especially if its upper epiphysis is affected." On account of the want of determination of the rate of growth of bones at various ages, it is difficult in view of the definition of "partial" shortening given above to state precisely its exact limits, but I certainly think that in the case of the humerus the disparity should not exceed one inch to one inch and a half. The following two cases recorded by Hamilton are instances of partial shortening. J. S——, aged sixteen, fell down a flight of steps, striking his back and arm near the shoulder, causing a separation of the upper epiphysis of the humerus. At first it was thought that dislocation of the shoulder had occurred, but Hamilton was able to disprove this. Nine weeks afterwards good union had occurred, and there was shortening of one inch.[1] A. F——, aged twelve, fell from a tree, striking her left shoulder, causing diastasis of the upper epiphysis of the humerus. After several months, motion was almost perfect, but the humerus was found to be shortened half an inch.[2] More striking are the instances of complete shortening. Mr. Bryant[3] gives this account of a case, the chief details of which are as follows:—A. D——, aged thirty, received an injury from a fall on the right shoulder when a few months old, but of the exact nature of the injury there was no distinct evidence. The accident was not followed by any suppuration or exfoliation of bone, but by stiffness of the joint and arrest of growth of the right arm. When seen, the right humerus was five inches shorter than its fellow. Dr. P. Vogt[4] writes of a young man, aged twenty, whose left humerus was shortened about five inches in consequence of a displacement of the upper epiphysis of the humerus when ten years old. From that time the upper arm entirely ceased to grow in length. In the forty-fifth volume of the Medical and Chirurgical Transactions, Sir George Humphry notes the case of a woman, aged seventy whose right upper limb had been paralysed since infancy. She had been told it was natural at birth, but had been injured at the shoulder when she was six months old. Movements of the arm were much impaired, and the right humerus was three inches shorter than the left. Another instance of a young lady, aged twenty-five, came under the writer's observation. The right humerus was three inches and a half shorter than the left. The nurse lifted her up by the right hand when three years old, and something was heard to give way at the shoulder. The injury was diagnosed at the time as diastasis of the upper epiphysis of the humerus. In the case of parallel bones, a shortening of one inch or less is attended with serious deformity, especially in the forearm. Mr. Hutchinson has recorded two cases of separation of the lower radial epiphysis, in which the growth of the bone had been arrested while the ulna had continued its normal increase, in one case projecting three-quarters of an inch below the radius, and in another an inch and a half, with great abduction of the hand. In the *Illustrated Medical News* of Nov. 17th, 1888, Mr. Hutchinson figures a case of extreme adduction of the hand due to dwarfing of the ulna, following an injury to the carpal extremity of the ulna in boyhood. I have not been able to find a case of stunted growth of either

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[10] Billroth und Lücke, Deutsche Chir.
[11] Clinical Lectures, fourth edition, p. 181.
[12] Obstetrical Journal, July, 1879, p. 219.

[1] Hamilton: Fractures and Dislocations, p. 231.
[2] New York Medical Journal, 1875, vol. xxi., p. 189.
[3] Guy's Hospital Reports, 1862, p. 253.
[4] Archiv für Klin. Chir., Band. xx.

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tibia or fibula following diastasis. In other positions where separation occurs, complete shortening appears not to be met with. There are many doubtful cases of diastasis of the upper end of the femur, in one of which the shortening is stated to have been one inch and a half. At the lower end of the femur this particular injury was in no case followed by more than an inch and a half; and in the majority, on careful measurement, both limbs were found equal some weeks afterwards.

Traumatic separation of the epiphyses with suppuration and necrosis.—Professor Sir George Humphry records an instance of "partial" shortening in the Medical and Chirurgical Transactions, vol. xlv., p. 291. "A boy aged three years was injured at the upper epiphysis of the right humerus by his father lifting him up to kiss him. Suppuration slowly followed. The abscess burst and healed spontaneously in about a year, leaving a deeply indented cicatrix. The movements of the joint were recovered, and the lad had free use of the limb, but the right humerus is much shorter than the left. He is now nine years old, and the difference between the two arms is still one inch, showing that although the growth was impeded during the progress of the disease, yet it had proceeded as well as in the opposite limb since the wound had healed." This case illustrates extremely well the class of injury included in the term "partial shortening." Instances of complete shortening are happily rare. Mr. Birkett notes the following instance in the Guy's Hospital Reports, 1862, p. 252, of a woman aged twenty-five, whose right humerus measured seven inches and the left thirteen. About two inches below the right acromion process there was a single slight depression with a cicatrix of the skin. No bone had been removed, nor had any fragments been exfoliated. Unfortunately in this extreme case of six inches of shortening there is some doubt as to whether a separation of the epiphysis had occurred. In the *Brit. Med. Jour.*, 1885, vol. ii., p. 700, Mr. Hutchinson speaks of a boy aged sixteen who, when eighteen months old, received an injury to the upper part of the left arm. "Now the difference in length between the left and right humeri is four inches." There is also arrest of growth of the scapula and clavicle on the same side. One other instance, Shearer's case in the *Brit. Med. Jour.*, 1885, vol. ii., p. 780, is that of a weaver aged fifty-three, whose right humerus was four inches shorter than the left. At the age of two he had a fracture in the joint of the right humerus. This was, according to tradition, not properly set and the arm "never afterwards grew anything." Suppuration followed the injury, but there is no history of any segment of bone being detached. A prominence could be felt on the bone beneath the lower fibres of the deltoid, and Shearer thought it was hardly improbable that it was due to any marked displacement of the fragments. It is well known that in diastasis of the ends of the bones sometimes a sleeve of periosteum is torn off the shaft, and remains attached to the epiphysis. If the nature of the injury be not promptly recognised, and as promptly and efficiently treated, lamentable results on the growth of the limb are but too likely to occur.

Shortening after acute inflammation in the neighbourhood of the epiphysial line, such as acute epiphysitis, and acute necrosis of the ends of the shaft.—Sir G. Humphry has collected several instances in his article on the subject in the forty-fifth volume of the Medical and Chirurgical Transactions. One, a lad aged fifteen, had shortening to the extent of three inches and a half of the right femur after some injury to the lower end, attended with exfoliation of bone. Another, a man aged fifty, had shortening of three inches of the right leg, due to disease of the upper part of the tibia, followed by exfoliation of bone. The femur was an inch and the tibia two inches less in length than their fellows. A third case by the same author showed seven inches and nine lines deficiency in length of the right leg, due to disease of the upper end of the right tibia when six years old. Mr. Howard Marsh, in his work on "Diseases of the Bones and Joints," narrates the case of a young woman, aged twenty, who had suffered from acute arthritis of the shoulder-joint when an infant, and the humerus was now five inches shorter than the other, and another of a girl aged nine, whose left leg was three inches shorter than the right, due to acute arthritis of the ankle when four months old. Cases of acute arthritis are now generally accepted to be really acute epiphysitis. Further cases in point might be multiplied, but the evidence of grave deformity following inflammatory lesions of the growing lines is so convincing that it is unnecessary to mention them.

Shortening following operations on the ends of the bones, especially excision.—Sir G. Humphry, summing up the results from an analysis of eighteen cases of excision of the knee, found that in eight the growth of the limb operated on had maintained its proper rate, although in one of them two inches and a half of bone were removed. In the remaining ten cases the growth of the bone was more or less completely arrested. In six of these the epiphysial lines were probably interfered with or cut away in all. In contrast with the favourable results in eight of Sir G. Humphry's cases, Mr. H. Smith cites an instance of a boy who, six years before the date of his communication to the *Medical Times and Gazette* (1861, vol. ii., p. 11), underwent an excision of the knee. At the time of operation an inch and three quarters of bone were removed, and shortly afterwards the limb was two inches and a quarter shorter, and six years later growth had been arrested to the extent of five inches. Elongation merits, I think, discussion in another article.

Finsbury-circus, E.C.

ON THE

TREATMENT OF SYPHILIS, ESPECIALLY OF THE NERVOUS SYSTEM, BY THE SUBCUTANEOUS INJECTION OF PERCHLORIDE OF MERCURY.

BY W. HALE WHITE, M.D.,
PHYSICIAN TO GUY'S HOSPITAL.

IT is often so important to bring a patient rapidly under the influence of mercury, especially if he is suffering from syphilis of the nervous system—for irreparable damage may quickly be done to it,—that I thought the result of the use of several hundred subcutaneous injections of perchloride of mercury might be advantageously placed on record. Calomel baths and mercurial inunctions are rapid in their effect, but subcutaneous injection is much less trouble, an exact dose can be much more easily attained, and the patient is affected even more quickly, that, unless there are strong disadvantages, it seems, *a priori*, to be the best method of giving mercury for syphilis. It is of course impossible absolutely to prove this, because cases of syphilis differ greatly in their response to remedies. It has always been urged against this manner of giving mercury that it produces hard painful swellings which are liable to suppurate, and for this reason the method is rarely used; but by giving the injections in the way about to be described I have always succeeded in avoiding these complications. I am indebted to Dr. MacCall Anderson's "Specific Nervous Diseases" for it.

The part selected for the injection is preferably the gluteal region, and if the patient is liable to bedsores, rather to its outer and upper part, for then he will not lie on the spot at which the injection has been made. If this region should be, from sores or any other reason, unavailable, or if many injections have been made into both gluteal regions, the outer and front part of the thighs and the biceps of the arm are suitable places. The needle of the injection syringe is plunged deeply into the muscles, and an eighth of a grain of hydrochlorate of morphine is injected. The syringe is then detached from the needle, which is left in the muscles, and an eighth of a grain of perchloride of mercury is injected through the needle. The solution of perchloride of mercury is made by dissolving the salt in distilled water. The strength of the solution used may conveniently be a grain to the fluid drachm; then eight minims contain fully an eighth of a grain. I have repeatedly asked the patients if they object to this method of treatment, and none of them have done so. They say the injection is not very painful, and they do not mind the slight induration which occasionally results, and which passes off in a few days. Generally there is no induration, but if there should be, the site of injection must be shifted. I have always given one injection every evening, and have desisted for a few days whenever the patient has shown any signs of salivation. At first, before and after giving the injection, I used to apply a piece of ice to diminish the sensibility of the part, as recommended by Dr. MacCall Anderson; but I soon gave this up, as I found it unnecessary. My house-physicians—Messrs. J. P. Pendlebury, J. M. Gil[illegible], M.B., and J. Fawcett, M.B.—

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have always given the injections themselves. The following are the cases in which during the past nine months I have used this method. They, I think, abundantly prove that the patient can be rapidly and safely mercurialised by this means, and that it often quickly relieves syphilitic manifestations.

CASE 1. *Syphilitic affection of skin.*—James D——, aged twenty-eight, was admitted on Aug. 7th, 1890, for a typical syphilide, having in some parts the appearance of a late secondary, in others that of an early tertiary, eruption. Injections were given on Aug. 10th, 11th, and 12th, but were discontinued on the 13th and 14th on account of diarrhœa. The rash began to disappear on Aug. 12th. On Aug. 15th the injections were resumed, and continued daily, with the exception altogether of four or five days, till Sept. 16th, when the patient was discharged cured. The impression derived from the case was that the rash cleared up remarkably quickly.

CASE 2. *Secondary syphilis.*—Mary A. V——, admitted Dec. 16th, 1890, for syphilitic headache, vaginal condylomata, a sore-throat, and a secondary papular syphilide all over the chest and abdomen. After three injections of the perchloride of mercury the pains in the head and throat were much better, and the rash was comparatively faint. After seven injections the rash could scarcely be seen, and the throat was quite well; the headache and condylomata were much better. On Jan. 5th, 1891, the patient was discharged cured. Occasionally the injections were omitted, as she was easily salivated.

CASE 3. *Cerebral syphilis.*—Frederick M——, admitted on June 21st, 1890. He had had syphilis. On June 12th, 19th, and 23rd he had attacks of convulsions on the right side of his body, each followed by unconsciousness. On admission he was found to be hemiplegic on the right side. He had injections of perchloride of mercury daily for a month, and took iodide of potassium internally. He soon regained considerable power in the hand, and when last heard of, six months after, he had had no more fits.

CASE 4. *Cerebral syphilis.*—Margaret H——, admitted Feb. 16th, 1891. She had had syphilis. For some time past she had been gradually getting deaf. Four months ago the deafness rapidly increased, she became giddy, and began to suffer from severe headaches; in a month she was absolutely deaf. On admission, in addition to these symptoms, she had ptosis of the left eyelid and paresis of the left internal rectus, and a syphilitic eruption. Feb. 18th: Daily injections of perchloride commenced.—24th: Syphilide almost gone; headache better.—28th: Ptosis and headache less; injections omitted for four days on account of salivation.—March 12th: Ptosis and headache have disappeared. She can hear people walking about the ward.—March 22nd: Left the hospital. All her symptoms have disappeared except the deafness, and that is much better.

CASE 5 *Syphilitic myelitis.*—Alfred C——, aged twenty-six, admitted Oct. 8th, 1890. Contracted syphilis in 1884. A fortnight before admission he was attacked with paraplegia, pain in the back, a feeling of coldness down the legs, and loss of control over the bladder. This attack was accompanied by rigors and fever. On admission the chief symptoms were paraplegia and anæsthesia of the lower extremities with incontinence of urine, which was alkaline. The temperature was usually about 101° F. He was given five grains of iodide of potassium thrice daily, and the bladder was washed out with an antiseptic solution.—Oct. 17th: The temperature having fallen, daily injections of one-eighth of a grain of perchloride of mercury were begun. Sensation in the legs soon returned. He gradually gained power in them. Exaggerated knee-jerks and ankle clonus developed. Some of the lost reflexes returned. Six weeks after admission the urine became acid. Between Oct. 27th and Dec. 24th the injection had to be omitted twice, once for four days, and once for seven days, because he became slightly salivated. He had nearly all his injections in the biceps of the arm, because the injudicious application of hot water bottles before his admission had led to a large sore on each buttock. The injection into the biceps was more painful than into the gluteal muscles; it was found that after some fifteen or twenty daily injections into one biceps it became stiff and contracted with flexion of the elbow, but this passed off in a few days if the perchloride was injected into the other arm.—Feb. 11th, 1891: Patient has had the injections daily into the thighs since the last note without any bad results. He is in every way better.—April 18th: Except when they have been occasionally omitted for a few days at a time, either because he was slightly salivated or because he had a shivering fit (he has had ague) the injections have been continued daily. He has regained considerable power in his legs. The urine is acid and the sores have nearly healed.—May 1st: Injections discontinued as an acute bedsore has appeared.

CASE 6 *Syphilitic myelitis and peripheral neuritis.*—John M——, who had been in the hospital before for syphilitic paraplegia, was readmitted in July, 1890, with complete paraplegia, trophic bedsores, cystitis, and glossy skin of the fingers. On July 4th a daily injection of perchloride of mercury was commenced; he also had iodide of potassium. In spite of every treatment the bedsores and cystitis got worse, and he died on Sept. 19th, 1890.

CASE 7. *Cerebral syphilis.*—Arthur M——, admitted March 3rd, 1891. He had had syphilis, and now suffered from headache, giddiness, transient attacks of blindness, and optic neuritis. During his stay of about three weeks in the hospital he had a daily injection of perchloride of mercury, and when he left his headache was much improved, and the giddiness and attacks of blindness had disappeared.

CASE 8. *Syphilitic peripheral neuritis.*—Samuel R——, admitted Feb. 11th, 1891. He gave a history of syphilis. For the last three months paraplegia, accompanied by pain in the legs, has gradually come on. On admission he was completely paraplegic. He was ordered subcutaneous injections of perchloride of mercury. These were continued daily for ten weeks, except when they were discontinued for two or three days on account of slight salivation. He improved very much, and was able to walk about the ward with the help of a stick, and soon after left the hospital.

In the following two cases there was no history of syphilis, but the injections were given, partly because it was possible that some evidence of syphilis might have been overlooked, and partly because it is probable that mercury is beneficent for peripheral neuritis or myelitis even when they are not syphilitic.

CASE 9. *Myelitis.*—Elizabeth B——, admitted on Oct. 1st, 1890, for paralysis and anæsthesia of the lower extremities, together with cystitis and retention of urine. Injections of perchloride were begun soon after admission, and were given daily. The sensation in the lower limbs soon returned, and in November the urine was acid. In December she got up, and in February she was able to get about the ward with help. She continued the injections till April, when she left the hospital.

CASE 10. *Peripheral neuritis (?).*—Thomas B——, admitted Jan. 19th, 1891, for slight paraplegia and diminution of sensibility in the lower extremities. He had perchloride of mercury injections daily till he left, on March 11th, much improved.

Harley-street, W.

MALIGNANT SCARLET FEVER.

BY H. NOBLE JOYNT, M.A., M.D. DUB.,
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LIKE every other exanthem, scarlet fever presents a malignant aspect, which is remarkable as regards its rapid course and fatal termination. Indeed, in no other eruptive fever does the specific fever attain such virulence and kill so rapidly. Some families seem to be especially susceptible to the severer forms of scarlet fever, and I have known in two instances three and four members respectively of a family die one after the other of malignant and anginal scarlatina; in a medical man's family four members had scarlet fever twice and one three times; and in the last outbreak in this family which came under my notice two of the sisters (one the third attack) had marked malignant symptoms, but both happily recovered. The question may be asked, What constitutes malignant scarlatina? Scarlet fever is roughly divided into three kinds: simple, anginal, and malignant. In the first the fever runs a benign course to recovery, in the second throat symptoms predominate, and in the last toxic; but either of the former may take on a malignant form and exhibit malignant symptoms, and yet not be malignant. It may therefore be defined as an acute form of scarlet fever characterised by profound disturbance of the central nervous system by the poisonous effects of the scarlatinal virus, unaccompanied by marked

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inflammatory lesions, and usually proving fatal within a week. Although the general course is similar in all instances, yet clinically three well-marked varieties may be noted, as regards the character of the rash, the extent of the throat inflammation, the prominence of the nervous symptoms, the duration of the fever, and the prognosis.

In the first or asthenic variety the following characteristics appear. The rash is badly marked, being either wholly suppressed or scanty, distributed in irregular dark blotches on the limbs and gluteal region; or, again, it may consist of a general eruption of scattered dark maculæ resembling typhus fever. Purpuric blotches and spots are frequent, as well as petechiæ on the arms, chest, sides, back, and abdomen, but best seen over the legs and backs of the feet. The lower extremities are cold, and present a livid appearance. The face is pale, pinched and cyanosed, the lips and cheeks bluish, and the circumoral pallor pronounced. The eyes become sunken and surrounded by dark rings; the conjunctiva is sometimes injected, but usually anæmic; the cornea dull, and covered with a mucous film; the eyelids fail to close. At first the tongue is thickly furred, but becomes dry and coated with a dirty brown secretion; sordes gather on the lips and teeth. The fauces are somewhat swollen, foul, dryish, of a dark-purplish-red colour, and the tonsils slightly enlarged. Unless kept frequently syringed, all the structures of the mouth become coated with a foul, viscid mucus, which clings to the palate and tongue, and effectually hinders inspection of the fauces. If the throat inflammation becomes more intense, the tonsils enlarge, superficially ulcerate, and a fetid, purulent discharge oozes from the nostrils. But in this group ulceration is always slight and secondary, faucial swelling and dark congestion being the conspicuous features. Vomiting of a green bilious nature is very frequent, the irritability of the stomach is extreme, and nothing swallowed is retained. To add to the difficulty of feeding the patient, diarrhœa accompanies the vomiting, and renders rectal alimentation wellnigh impossible. The temperature is always high, ranging from 102° to 106°. The pulse is very rapid, reaching 200 beats per minute; it is soft, irregular, compressible, and so feeble as to be imperceptible at the wrist. The heart is excited, quickly becomes weak, the sounds barely distinguishable, and in young children uncountable. Respiration is quickened, shallow, and sighing, and towards the end may exhibit the Cheyne-Stokes rhythm. The nervous symptoms are amongst the most pronounced. Delirium, worse at night, is constant, often continuing throughout the whole illness. At first the patient may be violent, getting out of bed &c.; more usually, however, the delirium is of a low muttering type, gradually passing into coma. The child is very restless, rolling from side to side, tossing his arms about, boring his head into the pillow, moaning and grinding his teeth. Muscular tremors of the tongue, face, and hands, and twitching of single groups of muscles may be noticed; but, above all, what strikes the observer is the utter prostration. Towards the end the patient sinks into a comatose condition. If he lives four or five days, a typhoid state, with dry tongue, cold extremities, dull eyes, foul mouth, sordes, pinched pallid face, involuntary evacuations, hiccough, &c., developes. In young adults the mind may continue clear almost to the last. Syncope is a common cause of death; convulsions in a few instances bring on the fatal ending. Death occurs as a rule within four days; in young, weakly, and rickety children in a shorter period. One boy, aged two, whose sister also died of malignant symptoms, succumbed in thirty hours; a girl, aged three, in thirty-six hours; another boy, aged fourteen, in about fifty-six hours; and sixteen others died in seventy-two hours and under. As a rule, the older and stronger the subject the better the fight for life is. Thus a man, aged twenty-eight, lingered for six days; another, aged eighteen, lived for five; and a third boy, aged seventeen, had sufficient vitality to pull through, but when apparently convalescing well fell a victim to an unexpected attack of double basal pneumonia during the third week.

In the second or anginal variety the character and course of the fever are much the same as that already described, but the throat symptoms are more conspicuous. The tonsils are more swollen, ulceration is always present, may spread to the pharynx and nasal passages, and set up a fetid, purulent rhinorrhœa. A diphtheritic membrane often coats the tonsils and meatus of the nose. The mouth is very foul, and the submaxillary glands enlarge to a moderate degree. The rash is scanty, dark, patchy, petechial, often of a livid hue, especially on the extremities; rarely is the eruption general, and then it is measly and dark. Delirium and vomiting are not so marked, but the temperature is as high, and the pulse as rapid and feeble as in the asthenic variety. Slight laryngitis was noted in two instances on the second and third days respectively. This group presents a likeness to the acuter course of anginal scarlatina, and indeed is the connecting link betwen the two. But it differs from true anginal fever in that there are no secondary inflammatory or plastic lesions, such as adenitis, cellulitis, otitis media, or other extensive ulcerative changes, in the pharynx and nasal passages; moreover, death is due to the toxic effects of the scarlatinal poison on the nerve centres, and not to exhaustion from suppuration, septic infection, or inflammatory obstruction of the vital organs. It may be laid down as a general rule that in scarlatina angina death is caused by a complication. In this type children under five with short necks and strumous or rickety habit are the chief sufferers, and death is frequently the result of syncope.

The third or congestive variety presents some remarkable differences from the foregoing. The eruption is very characteristic. The whole body is covered with a dark, often livid, intense diffuse or punctiform rash, aptly likened to the colour of a boiled lobster. Petechiæ, small hæmorrhages, and darker maculæ are common. The face is flushed, the rash well developed over the scalp, on the forehead and sides of the face, and the circumoral pallor is replaced by a crimson hue. The eyes are considerably congested, and hæmorrhages may take place into the orbital conjunctivæ. A copious miliary eruption on the trunk is sometimes seen. About the fourth day the skin becomes dry, often leathery or parchment-like in texture, and of a dark red-brown colour. At the same time, desquamation appears on the forehead and cheeks, round the nose and mouth, on the chin, neck, shoulders, and inside of thighs. The skin peels off in sheets, and with care casts of the fingers and toes may be obtained. In cases that recover the skin may be completely cast off twice or thrice in the first fortnight. The secondary skin, and even the third, has the intense scarlet hue of the primary rash. The throat is dry and but little swollen; the tonsils are seldom enlarged, but the mucous membrane has a peculiar dark red-brown hue, well likened by Dr. W. H. Line[1] "to the appearance and glazed lustre of well-polished Spanish mahogany"; ulceration is uncommon, and superficial when present. The tongue is pointed and dark, raw-looking, stripped by the third day, and the papillæ stand out prominently. Active delirium is present in nearly every case, and it is often difficult to keep the patient in bed. Vomiting is infrequent, but before death the stomach may reject everything. The temperature ranges from 102° to 106° and higher; the pulse is rapid, soft, and compressible. As the fever advances nervous tremors develop, prostration becomes very marked, the eyes become sunken, the face pinched and cyanosed, the pulse thready, hypostatic congestion of the lungs sets in, the motions are passed involuntarily, and death ensues from the fourth to the eighth day. Fortunately, however, this variety is not so fatal as the other two; three-fifths of our cases recovered. This may, perhaps, be accounted for by the fact that the patients were older and stronger than in the former classes. It is more common in patients over seven years of age. Thus, in 25 cases, 7 occurred in patients under five, of whom 5 died; 8 between six and ten; 7 between eleven and fifteen; and 3 over sixteen. As regards sex, 14 were males and 11 females.

From the above description, based on the personal observation of upwards of a hundred malignant cases, it will be seen that scarlatina presents a malignant type, characterised by an intense poisoning of the various centres in the brain and medulla, as shown by the high temperature, delirium, rapid weak heart, tendency to syncope, irregular respiration, constant vomiting, vaso-motor disturbances, all resulting in great prostration, a comatose condition, and death. If the patient's strength can be sustained and the nerve centres sufficiently stimulated until the toxic effects abate, there is hope of recovery. Such, I take it, are the indications for treatment—support and stimulation.

In conclusion, I desire to thank Dr. Manning, F.R.C.S.I., the medical superintendent of the City Hospital, Birmingham, for many kind suggestions.

Birmingham.

[1] Birmingham Medical Review, March, 1886.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ANGINA LUDOVICI.

BY T. ARNALLT JONES, L.R.C.P.LOND., M.R.C.S.

A MAN aged fifty years was seized early in the morning with a severe prolonged rigor, dysphagia, and great pain in the mouth and submaxillary region. I first saw him at 9 A.M. His temperature then was 105° F.; pulse 150; respiration noisy, due to swelling of tissues about the laryngeal orifice; headache, prostration, and covered with cold sweat. On looking into the mouth the tongue was seen pressed up against the palate by the swollen sublingual tissues; and so considerable and firm was this sublingual cellulitis that a spatula could only with difficulty be passed between the tongue and palate; depressing the tongue was quite out of the question, consequently the fauces could not be inspected. The patient could neither swallow nor speak, and it is surprising how he was able even to breathe as well as he did. There was albuminuria to the extent of one-sixth. The sublingual tissues were scarified, and leeches applied below the jaw. Poultices and steam inhalations were ordered. These measures relieved the pain somewhat, and in the evening the temperature fell to 103°, but the dysphagia and dyspnœa continued. The following morning the temperature was 104°. Submaxillary œdema increased, with commencing redness of the skin, and cellulitis was spreading down the neck between the sterno-mastoids. The patient was feebler, and the dyspnœa greater. To relieve tension and drain the tissues two deep incisions were made in the middle line of the neck—one an inch long above the hyoid bone, which reached well down to the floor of the mouth; the second, two inches long, over the cricoid cartilage and thyroid isthmus. The tissues cut through were swollen and sodden, and foul, serous blood-stained fluid poured out from both. These incisions gave marked and speedy relief, and the patient was very shortly able to swallow and speak distinctly. Hot fomentations of tenax were applied, and quinine and aconite administered. Evening temperature 101°; great relief. Brandy mixture ordered.—Third day, 9 A.M.: Temperature 100°; not quite so well. 1 P.M.: Temperature 104°; swelling and redness over upper part of sternum; leeches and poultices applied. 11 P.M.: Temperature 101°; swelling over the sternum disappeared; feels much better. — Fourth day: Temperature 100°; much improved; wounds discharging. — Fifth day: The patient up and about; feels much better, but very weak. From this to the seventeenth day the patient improved, the incisions healed, and he became practically well. Angina Ludovici is attended by a considerable mortality, and is fortunately not of common occurrence. The relief and arrest of symptoms afforded by the incisions and leeching were so marked that they should form the essence of treatment in this disease, and to be of service incisions must be made early in the case. It is too late to cut when the tissues of the neck are sloughing and the cellulitis is spreading down to the chest and the patient showing signs of profound blood-poisoning. There was no local condition, such as a carious tooth or ulcer of the mouth or pharynx, to account for the onset of the angina; but the patient's occupation, that of a butcher, suggested the possibility of his having absorbed or been inoculated with some animal or specific poison.

Aberavon, Glamorgan.

FALLS AND MALPRESENTATIONS.

BY HAYDN BROWN.

THE following interesting case may be deemed worthy of record:—

Mrs. B——, aged twenty-four, wife of a cabman, suffering from the pains of a fourth labour, sent to the Edinburgh Royal Maternity and Simpson Memorial Hospital for medical assistance on the morning of Thursday, April 2nd. I arrived at the bedside at 1 A.M., and on examination found the labour in the second stage, while the presentation was a brow, with very pronounced caput succedaneum, and the position occipito-dextra-posterior. The membranes had ruptured at 10.30 P.M. At 1.30 the child was born, the head emerging in antero-posterior diameter, and the back of the child towards the right acetabulum. The head showed an exceedingly well-marked caput, its long diameter reaching from the glabella to the vertex exactly in the middle line; and it was much flattened from above downwards with prominent occiput. The following day I made full inquiries respecting former labours, and found that they had been ordinary. I carefully examined the pelvis, which was quite normal—indeed a fine large pelvis. Further, however, I elicited the fact that the patient had had a heavy fall "flat on her back" on the stairs at 10 A.M. on the previous Tuesday. This did not seem to affect her very much at the time, but at 4 P.M. the same day "pains" commenced, which lasted until 10.30 P.M. the following day, when the "severe pains" began as above mentioned. In the absence of anything else which might account for the malpresentation, I have little doubt that the fall was the cause of it.

Edinburgh.

ON PERINEORRHAPHY BY DUKE'S OPERATION.

BY THOS. MORE MADDEN, M.D., F.R.C.S. ED.,
OBSTETRIC PHYSICIAN AND GYNÆCOLOGIST, MATER MISERICORDIÆ HOSPITAL, DUBLIN; EXAMINER, CONJOINT BOARD, ROYAL COLLEGE OF SURGEONS, AND APOTHECARIES' HALL, IRELAND.

THE frequency of the occurrence of parturient lacerations of the perineum, as well as the occasional gravity of their consequences, and the difficulties sometimes experienced in their reparation, may, I trust, be sufficient excuse for the following very brief communication on this subject. For many years I was in the habit of treating the injuries referred to by the older methods then in vogue. These procedures I have for some time, however, almost completely abandoned, having become familiar with the improved mode of treatment suggested for such cases by Mr. Duke of Dublin, the advantages of which, I think, are such as to ensure its general adoption in the treatment of the majority of instances of this kind. On first reading the author's account of his method of perineorrhaphy, it seemed to me as being probably a modification of Mr. Lawson Tait's ingenious operation for the same purpose; but on giving it a practical trial, however, I found that it was quite distinct. The differences in detail between the two operations which most impressed me were—(1) the absence of flaps, (2) the depth and shape of the incision, and (3) the introduction of the sutures from without in the operation recommended by Mr. Duke, whose procedure in the latter particular I have modified in my own practice by the adoption of a specially designed form of quill suture. The solidity of the union resulting from the healing of the deep incision is to my mind one of the great advantages of this operation, affording, as I have found, a means of reproducing the perineal body, which may be regarded as the keystone of the entire structure. The results of perineorrhaphy by Duke's method (with the technique of which I need not occupy space here, as it has been sufficiently described by the author) may be best exemplified by the results of the cases of perineal rupture, which within eighteen months were either sent up to me for operation or presented themselves at the out-patient department of the hospital, suffering from the usual sequences of this distressing accident. In only one of these cases did I fail to obtain primary union, and in that instance this was eventually secured by granulation; whilst in nine cases the operation resulted in complete restoration of the structural integrity of the injured parts. The average time occupied by the healing process was about ten days, and the patients then generally left hospital with a practically new perineal structure, the solidity of which was such that it would be difficult to imagine its disruption by any subsequent delivery however tedious or severe.

Dublin.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF MIDDLE EAR DISEASE COMPLICATED BY THROMBOSIS AND SUPPURATION OF THE LATERAL SINUS, WITH SIGNS OF PYÆMIA, SUCCESSFULLY TREATED; REMARKS.

(Under the care of Mr. G. H. MAKINS.)

THE surgery of diseases secondary to suppuration in the middle ear has received a great impetus during the past two or three years, and the wonderful success now occasionally obtained has been marked most fully in cases such as these under the care of Mr. Makins. Formerly, patients presenting such symptoms as are described below were looked upon as beyond the aid of the surgeon; they were regarded as hopeless, suffering from pyæmia, and therefore beyond any human aid. At the most a surgeon was sometimes permitted to make an incision into the mastoid process, with the idea of relieving local pain by the division of the periosteum, and by the local abstraction of blood which resulted from the incision. Now, the suggestion of Mr. Horsley of ligature of the internal jugular vein and removal of any suppurating clot from the lateral sinus in such cases, has been performed a sufficient number of times to prove the great value of this method of procedure. We have published cases which were successfully treated in this way by Mr. W. A. Lane[1] at Guy's Hospital, and by Mr. Ballance[2] at St. Thomas's, and we have no doubt that many lives will be saved in the future by others. With regard to these cases we refer our readers to the full remarks appended by Mr. Makins to the account of them.

CASE 1.—E. R. F——, aged eleven, was admitted into the Alexandra Ward of St. Thomas's Hospital on April 7th, and discharged on May 5th, 1891. The patient had measles six years ago. For the last twelve months she has been attending in the ear department for middle ear disease, with a large perforation of the right tympanic membrane and purulent discharge. She has not attended during the last five weeks. Three weeks ago a swelling was noticed behind both ears, which gradually increased, especially on the right side. For three days prior to admission she suffered from frequent vomiting. She shivered several times, and at night was delirious. When admitted she was very pale and feeble, complained of great pain in her head, lay with eyes closed, and cried out when moved. Temperature 100·4°. There were extensive fluctuating swellings above and behind both ears, that on the right side being the larger, and when this was pressed on pus welled up freely from the external auditory meatus. There was no discharge from the left ear. The scalp was very dirty. The glands on each side of the neck were tender and enlarged. At 5 P.M. Mr. Makins made a free incision behind the right ear, evacuating a large quantity of fetid pus. A gouge was then applied to the mastoid process, when the bone gave way like an eggshell, laying open the inferior fossa for an extent of at least one inch, and exposing the dura mater to a like extent. The whole uncovered portion of the latter was covered with granulations, and the sigmoid sinus was indistinguishable. Bearing the history of repeated rigors in mind, it was thought advisable, however, to ligate the internal jugular vein, and an incision was made in the neck for this purpose. A large gland had first to be removed, and then an abscess cavity was opened. Dissection in the line of the vessels exposed the carotid and vagus, but no trace of the vein could be discovered. A director, however, could be passed readily in the line of the vessel to the base of the skull. It was therefore assumed that suppuration of a thrombus had probably destroyed it, and the wound was closed after the introduction of a drain. The swelling of the left side was incised, and a large quantity of breaking down blood-clot evacuated. The mastoid process was bare, but as there was no discharge from the ear on this side, and the membrana tympani was intact, nothing further was done. The child was considerably collapsed after the operation.

April 8th.—Child very much improved; still complains of pain in head. Temperature normal. Mr. Lawford reports double optic neuritis, especially well marked on right side. After this date recovery was rapid and uninterrupted. After the 13th no further headache was complained of, the discharge rapidly decreased in amount, and the wounds were closed at the end of the month. The optic neuritis steadily passed off, and on April 20th Mr. Lawford reported "vision good."

CASE 2.—L. M——, female, aged twenty-seven, was admitted to hospital on March 18th. When two years of age she had scarlet fever. As long as she could remember she had had a discharge from her left ear. One week before admission she first suffered from pains in the left side of her head and neck, which increased in severity, and soon became localised to the left ear. For two days before admission she frequently vomited, and on the day of admission had a shivering fit, followed by a temperature of 102°. On examination, tenderness was found over the left mastoid process; there was no œdema or redness; the meatus contained pus; no membrana tympani was to be seen. Deafness absolute on the left side.

March 19th.—Rigor last night, with temperature of 102·8°.

20th.—Two rigors last night. Temperature 105°. At 2 P.M. Mr. Clutton trephined the left mastoid process at a point half an inch behind and on a level with the centre of the external auditory meatus. The bone was very dense, and no cavity was found. At the posterior inferior part of the trephine hole a small portion of the lateral sinus was exposed. A communication was made with the middle ear, which was scraped out; it contained caseous pus. Fluid readily passed from the trephine hole through the middle ear, escaping at the external auditory meatus. A drainage-tube was inserted, and the wound closed and dressed antiseptically. At 8 P.M. the same night the temperature rose to 103°.

26th.—Since the operation the temperature has risen to 103°, at least once daily. To-day a rigor at 3 P.M., and the temperature rose to 105°. At 6 P.M. Mr. Makins reopened the wound behind the left ear. The communication between the tympanum and the trephine opening was somewhat enlarged, and a considerable amount of inspissated foul pus washed out of the tympanum. A drill was introduced some three-quarters of an inch upwards and forwards from the trephine opening in the hope of striking a shut off mastoid antrum. The whole mastoid process, however, seemed one solid mass of dense compact bone. A small portion of the roof of the sigmoid sinus was also removed, to allow more effective examination of the sinus. The latter, however, was blue in colour, soft, and pulsating, and there were no signs of inflammatory effusion around it. A layer of antiseptic varnish was applied to preserve the wall of the sinus if possible from contact with the discharge from the tympanum, a drainage-tube was inserted and the wound closed, fluid readily passing from the trephine opening into the tympanum and escaping by the meatus and *vice-versâ*.

27th.—Rigor, temperature reaching 105°; patient complained much of pain in the left ear.

28th.—Another rigor, temperature reaching 103·6°. The patient complains of pain in the head, but her general condition appears good, and there are no signs of any gross secondary deposit. For the last three days there had been very abundant frothy mucous expectoration, but examination of the lungs proved negative. The optic discs were examined on several occasions, but no definite signs of neuritis were discovered. At 2.30 P.M. the wound was again opened and a half-inch trephine was applied above the existing opening in the mastoid, the pin being applied over the ridge continuous with the zygoma, with a view to striking the mastoid antrum, if such existed, and opening the cranial cavity so as to allow examination of the roof of the tympanum. A solid piece of bone three-quarters of an inch thick was removed, and a probe was inserted, and the roof of the tympanum was explored, without discovering any sign of inflammatory mischief. The sigmoid sinus was then

[1] THE LANCET, vol. i. 1889, p. 887; British Med. Jour., vol. i. 1890, p. 1480; vol. ii. 1890.

[2] THE LANCET, vol. i. 1890, p. 1057.

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examined; it looked greenish in colour, and though soft did not pulsate. It was thought wiser to ligature the jugular before incising the sinus, and this was done through an incision along the anterior margin of the sterno-mastoid at the level of the angle of the jaw. The vein was small, but contained fluid blood; it was ligatured in two places and divided. The sigmoid sinus was now freely exposed by cutting away more bone with the chisel; and in the process of enlargement about a drachm of pus was let out from the upper part of the opening. The sinus was incised and found to contain breaking down clot, but it bled fairly freely, especially from the distal end. The hæmorrhage was controlled by a plug of bicyanide gauze. The wound was thoroughly cleansed with perchloride of mercury solution (1 in 1000), and, after the introduction of a spiral wire drainage-tube carried through the tympanum and out of the external auditory meatus, dressed with bicyanide gauze. At midnight the dressing was changed and the gauze plug removed from the sinus without any recurrence of the hæmorrhage.

29th.—Patient comfortable; a considerable amount of offensive yellow discharge from wound. Temperature 103·6°.

April 1st.—Progress in all respects satisfactory, except that the temperature has been as high as 104° on two occasions. Dressed twice daily; discharge free.

3rd.—Temperature has not been above 100° for the last twenty-four hours. Feels much better; sits up in bed; no headache, and the mucous expectoration has ceased.

6th.—Still improving. Temperature normal. Discharge quite sweet.

8th.—Eyes again examined by Mr. Lawford, who reports some signs of double optic neuritis, now passing off.

The subsequent course of the case was uninterruptedly good, a small piece of necrosed bone a quarter of an inch square being removed from the wound on April 26th. The drainage-tube was retained until the end of the first week in May, in consequence of the difficulty which had been experienced in properly washing out the tympanum after he first two operations.

Remarks by Mr. MAKINS.—The first point for comment seems the question of the existence of pyæmia in these cases, the diagnosis resting simply on the occurrence of rigors. In neither was there any evidence of gross secondary deposit, a circumstance of great import for the prognosis. The history of such cases in general, however, makes it probable that the occurrence of septic embolism was a question of time only (at any rate in Case 2), and that the obliteration of the blood current in the jugular vein deserves the credit of preventing the development of secondary abscesses. Before proceeding to the consideration of each case singly, also, it is of interest to contrast the condition of the mastoid process in the two patients. In Case 1 the normal bone was almost entirely absorbed by the surrounding granulations and the process of rarefaction in its interior, while in Case 2 secondary sclerosis had occurred and converted the usually honeycombed process into one mass of dense compact bone. This is, of course, typical of the comparatively acute character of the disease in the first case, and the extremely chronic nature of the affection in the second. A recollection of the probable condition in each class of case is of the highest importance when surgical interference is needed, since in the one too great care cannot be exercised in the treatment of the thinned bone, any excess of force being very dangerous, while in the other the density of the bone forms a considerable difficulty in the operative technique. The two conditions were here certainly exemplified in their extremes. In Case 1 the following particulars also call for comment. The swelling on the left side of the head was unusual in character, consisting as it did of breaking-down blood-clot. I am inclined to regard this as an example of subcutaneous hæmorrhage in a patient the subject of septic infection, since, although the mastoid process was bare, there was no direct evidence beyond of mastoid disease, and the subsequent progress of the case seemed to negative the dependence of the swelling on disease of the left ear, since it was not interfered with, and hearing throughout was nearly perfect on that side. Secondly, the condition of the sigmoid sinus and the internal jugular vein was of extreme interest, since the state of things found seemed to point to an effort of nature to bring about exactly the same result as that aimed at by ligature of the jugular vein by the surgeon. The sinus appeared to have been destroyed, and its place taken by granulations; while the jugular vein had either been destroyed by a process of suppuration of a contained thrombus, or was obliterated for the time being by the pressure of an abscess around. I am inclined to the former belief, since the internal carotid artery was bared and the vagus exposed for nearly an inch of its course, a suppurating track lying behind them, and no trace of the vein could be found, while a Volkmann's spoon could be readily passed in the course of the vessel to the base of the skull. This being the case, surgery can claim perhaps only to have provided a free vent for retained pus as its share in the successful result attained in this patient. The rapid clearing off of the optic neuritis and the good vision retained were also points of importance, since, on admission, the neuritis was very well marked. In Case 2 the most striking particular from an operative point of view was the density of the bone, even the mastoid antrum being entirely obliterated. The small size of the internal jugular vein, and the non-occurrence of distension when exposed, although it contained fluid blood, were of diagnostic interest, as palpation of the exposed sinus seemed to scarcely justify the conclusion that it was quite solid. The hæmorrhage which occurred was readily checked by the gauze plug, and this was able to be removed after eight hours without any inconvenience. In any future case, however, I would substitute for the gauze plug a plug of fine catgut packed into the sinus with a probe, as proposed by Lucas Championnière. This has the advantage of not needing subsequent removal, and the good result obtained by the method in a case in which hæmorrhage occurred from the superior longitudinal sinus in a case I had occasion to trephine for fracture fully bears out what is claimed for it by its proposer. Two points of special clinical interest were also offered by this patient: the one was the late occurrence of optic neuritis, usually so useful a diagnostic symptom in these cases; and the other was the abundant frothy mucous expectoration. This latter came on suddenly after the first operation, was very free, and lasted until six days after the final operation. It was accompanied by no coarse signs in the lungs, and there seems no doubt that it did not depend on an infarct; but its occurrence might be explained by irritation due to the involvement of the vagus trunk in the inflammation spreading from the mastoid cells and in the line of the thrombosed sinus to the jugular foramen. It certainly resembled the very free mucous expectoration I once saw in a case of fracture of the posterior fossa, where a very severe meningitis occurred, particularly in the region of the pons and medulla. I am indebted to Messrs. Stabb and Rouillard, the surgical registrar and house surgeon, for the notes of these cases.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

TUBERCULAR DISEASE OF KIDNEY; MARKED IMPROVEMENT WITH TUBERCULIN INJECTIONS; REMARKS.

(Under the care of Mr. WHIPPLE.)

IT is important at the present time to place on record notes of cases in which the treatment recommended by Koch has been tried, and in which improvement has followed. This remark applies more especially to cases of tubercle of the internal organs which have been under very careful observation during the time the treatment has been employed. The patient whose history is given below cannot be regarded as cured, but has manifested an amount of improvement which could have been produced by no other known method in the same period. We shall hope to give an account of the case at some future date. For the notes of it we are indebted to Mr. W. Gifford Nash, house surgeon.

C. P——, aged twenty-one, was admitted on March 3rd, 1891. He entered the navy at sixteen, and was invalided out in July, 1890, for eczema. In June, 1890, he passed a small lump of white matter, and a fortnight later began to suffer from pain of a dull aching character in the right loin. At times the pain has been sharp, but has never radiated to the groin or testis or caused vomiting. At the same time he began to suffer pain along the urethra, and micturition became frequent, occurring day and night at intervals varying from twenty minutes to three hours. He thought he passed blood in his urine a fortnight ago. There has never been any pain in the left

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loin, enlargement of the testes, or sweating at night. He never had venereal disease. His mother died at the age of thirty-nine from phthisis, but there was no other family history of it. He was a fairly strong, healthy-looking lad, complaining of frequency of micturition and pain in the right loin and in the urethra. The right kidney could be felt, and pressure on it produced pain along the urethra. There was no enlargement of either epididymis or vas deferens. The bladder was sounded without result. The urine was acid, sp. gr. 1020, contained one-sixth of albumen, one thirtieth of pus, and under the microscope numerous pus cells, singly and in masses, and epithelial cells, but no casts, blood, or crystals. From the 3rd to 15th March the urine averaged about fifty ounces, was passed four or five times by night and seven or eight by day, and contained occasionally oxalate of lime crystals. His weight on March 15th was 129 lb. in his clothes. For confirmation of the diagnosis it was decided to try tuberculin injections. On March 17th two millimetres of a 1 per cent. solution of tuberculin were injected without producing any reaction. On the 18th five millimetres were injected, and next day the temperature rose to 99°. On the 21st this was repeated, and the temperature rose to 102·4°. There were also headache and pains in the limbs and back. The injections were repeated every other day and gradually increased. On April 1st his weight was 125 lb., a loss of 4 lb., but on April 12th it was 130½ lb. After April 7th there was no reaction. The frequency of micturition gradually diminished, and on this date was three times in twenty-four hours. The albumen had all but disappeared, and a mere trace of pus remained. On April 21st he weighed 134 lb., on May 6th 137 lb, and on May 13th 138 lb, a gain of 9 lb. since the commencement of the injections and of 13 lb. since April 1st. The injections were gradually increased to a cubic centimetre of a 10 per cent. solution, the last, No. 33, being given on May 19th. On May 21st he was discharged, feeling perfectly well, passing urine three times in twenty-four hours, quite free from lumbar aching and urethral pain. The urine was perfectly clear, free from albumen, and under the microscope only one or two pus cells were seen in each field. For a month the patient had made himself useful in the hospital garden cutting and rolling the lawns.

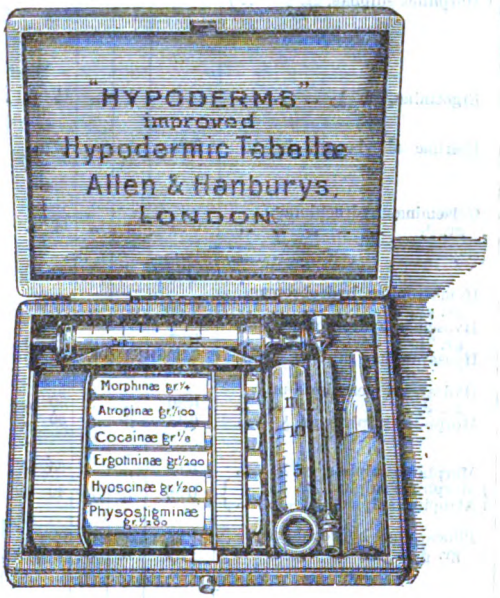
Remarks by Mr. W. GIFFORD NASH.—This case seems worth recording on account of the marked improvement in all the symptoms and in the general condition of the patient whilst undergoing tuberculin injections. The diagnosis of tubercular disease was doubtful until reaction was obtained with tuberculin injections. The great benefit derived from these seems to point to the diagnosis of tubercular disease being correct. I cannot believe that, if the symptoms were due to calculus, they could have been ameliorated by the treatment adopted. The patient was only for a short while kept in bed. He was given ordinary diet, and for at least a month took active exercise, frequently pulling a heavy roller. As to whether the improvement will be permanent of course is doubtful. I shall try to keep the man under observation, but, as he intends to return to sea, this will prove difficult.

Analytical Records.

HYPODERMS—IMPROVED TABELLÆ FOR THE PRODUCTION OF HYPODERMIC INJECTIONS.

(ALLEN AND HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

No apology is needed for giving prominence to a new departure in the production of a novel form of drug-manufacture, more especially when the object avowedly is to simplify the manner of administration, and to secure with greater ease and exactness the proper quantity, of the medicament employed. It has long been held a duty and privilege devolving upon the analytical department of THE LANCET to inquire into and investigate, as the opportunity is afforded, such new forms of drugs as may from time to time be offered to the notice of the profession. In doing so we have been at pains to place on record the facts concerning them, exactly as they are revealed by a carefully conducted chemical analysis, so that the practitioner may be able to put his own interpretation on the results, and to judge whether or not the method under consideration is entitled either to praise or condemnation, and therefore whether worthy or not of general adoption. The treatment of disease by means of the subcutaneous injection of a drug, and more particularly the class known as alkaloids, of which in the majority of cases only a minute quantity for a specific purpose is needed, is seemingly gaining greater favour every day; and in order that this method of treatment may be more exact, more convenient, and more safely resorted to, Messrs. Allen and Hanburys have devised hypodermic injections in the form of improved tabellæ, which they have named "hypoderms." Of the kinds submitted to us we have examined no less than sixteen, and the results of our examination are fully embodied in the table below. For the purpose of analysis the number of hypoderms corresponding to a grain of the active ingredient was in general operated upon. Thus, in the case of the atropine sulphate hypoderm, each containing $\frac{1}{100}$ gr. of the sulphate, a hundred tabellæ were taken for the estimation of the alkaloid, and in the case of the hypoderm containing morphine sulphate $\frac{1}{8}$ gr. eight were taken, and of perchloride of mercury $\frac{1}{20}$ gr. twenty were taken, and so on. When dealing of course with so small a quantity of drug due regard should be paid to the slight errors which may be introduced and the difficulties experienced in carrying out



an analysis of this character; but, in spite of this, the results obtained were such as to give us great satisfaction. As will be seen on a glance at the table, the precise amount of active agent stated to be contained in each hypoderm was strikingly confirmed by analysis. In addition to this satisfactory result, the hypoderms were found to dissolve quite rapidly in water, the time occupied by each varying, it will be seen, from half a minute to two minutes and a half. This rapidity of solution is ingeniously effected by incorporating with the active ingredient an acid and a supercarbonated alkali. Effervescence due to disengagement of carbonic acid gas is thereby set up, and the gas naturally serves to break up the mass, and thus to promote rapid and uniform solution of the active ingredient. The amount of gas given off by each hypoderm varied from 1·6 cc. to 3·4 cc.; and assuming each to consist of the effervescent forming materials, citric acid and sodium bicarbonate, it is probable that they exist

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together in the proportion of one molecule of acid to three molecules of the bicarbonate. When the effervescence has subsided a slight excess of supercarbonate in most cases was on analysis shown to be present. It would be superfluous on our part to add further comment than this, seeing how prominently the especial qualities essential to hypodermic injections in this form are seen to stand out with an remains; then hold the syringe nozzle [upwards, draw the piston further out, unscrew the nozzle from the glass, drop in the hypoderm, allow it to completely dissolve (tapping the syringe gently against the other hand), place the needle on the nozzle, and, keeping the needle erect, drive out the air through it till the fluid begins to follow. The charge is then ready for injection. Besides those examined, the following

Number.	Hypoderm.	Weight in grains.	Size. Diameter.	Size. Thickness.	Time taken for complete solution.	Cubic centimetres, CO_2 evolved.	State of solution.	Average amount of drug found by analysis in each hypoderm.	Amount stated to contain.	Difference.	Notes.
			In.	In.				Gr.	Gr.	Gr.	
1	Atropinæ sulphas, gr. $\frac{1}{100}$ ..	0·30	$\frac{1}{4}$	$\frac{1}{24}$	1¼ min.	2·4	Alkaline; opalescent.	0·012	0·010	+ $\frac{1}{100}$	The atropine extracted gave good reactions with nitric acid and potash (violet), and with sulphuric acid heated emitted an odour of orange blossoms.
2	Cocainæ hydrochloras, gr. ½ ..	0·82	,,	$\frac{1}{16}$	50 secs.	1·8	,, ,,	0·130	0·125	+ $\frac{5}{1000}$	Ether dissolved out perfectly pure cocaine.
3	Cocainæ hydrochloras, gr. ½ ..	1·00	$\frac{3}{16}$	$\frac{1}{12}$	1½ min.	3·4	,, ,,	0·506	0·500	+ $\frac{6}{1000}$	Same as 2.
4	Digitalinum, gr. $\frac{1}{100}$	0·28	$\frac{1}{8}$	$\frac{1}{24}$	2 ,,	2·3	,, ,,	0·011	0·010	+ $\frac{1}{1000}$	The hypoderms containing digitaline yielded on solution a persistent froth. Sulphuric acid and bromine gave violet-red, a characteristic reaction, and hydrochloric acid emerald green.
5	Digitalinum, gr. $\frac{1}{100}$ .. .. .. Morphinæ sulphas, gr. ½ ..	0·51	$\frac{3}{16}$	,,	2½ ,,	3·0	,, ,,	0·130	0·125‡ 0·010§	—	Digitaline and morphine were extracted and weighed together, but both were recognised, the former by reactions mentioned in 4, and the latter by the iodic acid, iron chloride, and molybdic acid test.
6	Ergotininæ, gr. $\frac{1}{100}$	0·28	$\frac{1}{8}$	,,	1½ ,,	2·4	,, ,,	0·008†	0·005	+ $\frac{3}{1000}$	Resin of ergot probably present. Strong sulphuric acid gave yellowish to violet.
7	Eserinæ salicylas, gr. $\frac{1}{100}$ ..	0·25	,,	,,	1½ ,,	1·8	,, ,,	0·011	0·010	+ $\frac{1}{1000}$	Both eserine and salicylic acid were identified, the former giving red with sulphuric acid and bromine, and the latter with iron perchloride intense violet.
8	Gelseminæ hydrochloras, gr. $\frac{1}{50}$	0·28	,,	,,	1½ ,,	1·6	,, ,,	0·021	0·020	+ $\frac{1}{1000}$	Sulphuric acid and potassium bichromate gave reddish-purple, and nitric acid brownish-green, changing to deep green.
9	Homatropinæ hydrobromas, gr. $\frac{1}{100}$	0·27	,,	,,	50 secs.	2·0	,, ,,	0·006	0·005	+ $\frac{1}{1000}$	A derivative of atropine, but less powerful in its action.
10	Hyoscinæ hydrobromas, gr. $\frac{1}{100}$	0·27	,,	,,	45 ,,	2·1	,, ,,	0·005	0·005	—	Hyoscine is isomeric with atropine.
11	Hyoscyaminæ sulphas, gr. $\frac{1}{100}$	0·27	,,	,,	55 ,,	2·0	,, ,,*	0·019	0·020	− $\frac{1}{1000}$	Platinic chloride gave yellow precipitate.
12	Hydrargyri perchloridum, gr. $\frac{1}{10}$	0·30	,,	,,	30 ,,	2·1	,, ,,	0·049	0·050	− $\frac{1}{1000}$	
13	Morphinæ sulphas, gr. ½ ..	0·43	$\frac{3}{16}$	,,	30 ,,	2·6	,, ,,	0·130	0·125	+ $\frac{5}{1000}$	Alcohol-ether gave pure morphia, recognised by tests already mentioned (5).
14	Morphinæ sulphas, gr. ½ ..	0·55	,,	,,	35 ,,	2·8	,, ,,	0·250	0·250	—	Same as 13.
15	Morphinæ sulphas, gr. ¼ .. Atropinæ sulphas, gr. $\frac{1}{100}$ ..	0·52	,,	,,	40 ,,	3·2	,, ,,	0·125	0·125‖ 0·005¶	—	The alkaloids were weighed and extracted together, and each was recognised by the tests quoted above (1 and 5).
16	Pilocarpinæ hydrochloras, gr. $\frac{1}{10}$	0·46	,,	,,	1 min.	3·0	,, ,,	0·106	0·100	+ $\frac{6}{1000}$	Bichromate and sulphuric acid gave green and gold trichloride, a copious precipitate.

* Slightly. † With resinous matter. ‡ Morphinæ sulphas. § Digitalinum.
‖ Morphinæ sulphas. ¶ Atropinæ sulphas.

unmistakable clearness in the comprehensive table below; in short, the following advantages claimed for Messrs. Allen and Hanburys' "hypoderms" are found to be perfectly true; they dissolve easily and rapidly in a minimum of water without the aid of heat or trituration, yielding at once, if preferred, in the syringe itself a uniform solution of the drug; whilst, of still greater import, they contain, according to analysis, the exact amount of active ingredient they are stated to contain—advantages it is obvious which help very materially to make the extemporaneous preparation of hypodermic solutions a matter both of simplicity and convenience. A convenient way of using these tabellæ is, we are informed, as follows: Take the syringe without the needle, draw into it rather more water than is to be used, carefully drive out the excess till the exact quantity required are also prepared: Acidum scleroticum, ½ gr.; aconitina, $\frac{1}{100}$ gr.; apomorphinæ hydrochloras, $\frac{1}{10}$ gr.; caffein sodio-salicylas, ½ gr.; morphinæ tartras, ⅛ gr. and ¼ gr.; picrotoxinum, $\frac{1}{100}$ gr.; spartein sulphas, ½ gr.

DISHORNING OF CATTLE.—At a special meeting of the Norfolk Chamber of Agriculture on the 30th ult. the following amendment, and a motion approving the practice of dishorning of cattle, were carried by a large majority:—"That the Norfolk Chamber of Agriculture agrees with the suggestion of Mr. Chaplin made in the House of Commons that the dishorning of cattle, where necessary, should be done at or under the age of six months only, and that the right hon. gentleman be requested to do all in his power to make dishorning at later periods illegal throughout Great Britain and Ireland."

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THE LANCET.

LONDON: SATURDAY, JUNE 6, 1891.

THE publication of the Special Supplement in support of the collection appointed to be made to-morrow in the places of worship throughout the metropolis in aid of the hospitals of London, which we last week presented to our readers, and the distribution of 135,000 copies of an abstract of that Supplement which the coöperation of the ministers of religion and of our professional brethren located in the metropolis has enabled us to effect, will have accomplished almost all that it lies in our power to do in the way of enlightening the public mind and awakening the public conscience as to the needs and claims of the hospitals of the metropolis. Nevertheless, it may be useful at this moment to restate in a succinct form the main points of our appeal. Something may be gained by compressing into a few sentences the substance of a statement which in fuller detail has occupied much space not only in our last impression, but in corresponding impressions in many previous years.

First, then, we commend the hospitals of London to the generosity of the charitable on the ground of the vastness of the work that they accomplish. The hospital patients of London in the course of a year number, as has been elsewhere said, more than the entire population of the town of Wolverhampton. The hospital population of the metropolis, if that expression be limited to the number of patients constantly under treatment in the wards, is about six thousand strong. If the numbers of sick and injured people who seek the aid of the out-patient department were included or allowed for in the enumeration, the figure, large as it is, would be multiplied.

In the next place, we base these claims upon the results of the treatment afforded in the hospitals. Nearly one-half of the patients admitted to the hospital walls—and admission implies some severity in the disorder—are discharged cured. Rather fewer than one-half are discharged not cured indeed, but relieved to a greater or less extent; and notwithstanding the large number of severe accidents and urgent cases treated, only about 1 in 13 actually dies during the year.

Then, again, the hospitals of London claim sympathy and support because of the way in which they bring aid to the very doors of the sick and needy folk in every part of this vast metropolis. It is a small region only of the one hundred and twenty square miles of densely populated land which make up the county of London that even the most locomotive of Londoners can intimately know, and it is only the merest fringe of the vast aggregate of its miserable denizens that the most zealously and actively benevolent can personally aid. The vast and elaborate organisation of the hospitals and medical charities of the metropolis is, on the contrary, in touch with the misery of London at every point. Wherever disease or accident befall, there is sure to be a refuge in the form of some hospital within easy reach, and no thoroughfares are better known or more pleasantly associated with the sentiment of hope or the memories of relief than those which lead to its door.

Lastly, in this connexion there is to be borne in mind the aspect of this matter to which we have this year drawn special attention—namely, that the hospitals of London minister to a vast amount of disease and suffering which is the consequence or concomitant of that enormous and multifarious industry of which London is the seat. Its manufactures, its commerce, even its pleasures, each and all demand an annual tale of victims whose sufferings arise as the consequences, more or less direct, of the part which it is their fate to bear in the common life of our great community. It would be strange, indeed, if those to whom London is a place of business, of enjoyment, and of rest, their world in which chiefly they "live and move, and have their being," could not find it in their hearts on an occasion like to-morrow to give with ungrudging hands for the relief of their less fortunate neighbours, whose sufferings and sorrows are not indirectly unconnected with that magnificent prosperity which is at once the pride and the fortune of those who are able to share it.

So much for the general claims of the hospitals. It need not be said that they are not all alike, or all upon an equal footing of excellence. But the task of discrimination is a difficult one, and of those benevolent persons who are sufficiently interested in the consequences of their liberality to have a strong desire not only to assist in this great and good work, but also to assist to the best purpose and effect, there will be not a few who to-morrow will confide their gifts with the livelier satisfaction to the hands of the Mansion House Committee, because they know that the Fund contributed by the churches of the metropolis is distributed not with an indiscriminating hand, but upon a painstaking inquiry into the claims of all recipients of the public charity, and with a view not only to the proved service of their past, but also to the efficiency of their future working.

IN our report of the last day's proceedings of the General Medical Council it will be seen that the first public note of opposition to the proposed Charter applied for by King's and University Colleges to constitute a new University in London has been sounded in an unexpected quarter, and our readers will scarcely be struck with the business-like character of the proceedings, or of the wording of the resolution carried by the Council. The proposals of the Royal Colleges of Physicians and Surgeons to "gran degrees in Medicine and Surgery to persons who have obtained qualifications under the Medical Act, and shall be otherwise properly qualified," the suggestions of the Royal Commissioners for a modification of the existing University of London, and the scheme put forward by the Senate of that University and vetoed by an immense majority of its Senate, have all passed by unheeded by the Medical Council; but on the last day of its sittings, and towards the last hour of that day, it discusses and comes to a decision on a question which has been before the public for the past five years. The English Branch Council does not even put such an important business on its agenda paper, but discusses it without special notice, and asks the Council, without any documents before them, to adopt a resolution, "That, while this Council views with the greatest sympathy any well-considered efforts to create

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facilities for London medical students to obtain degrees in medicine, they regard with grave concern, both in the interests of the public and in the interests of medical education, any proposal to found a degree-conferring faculty independent of the existing University and medical licensing authorities that already number four in London alone." In spite of the protests of Sir WILLIAM TURNER, Sir JOHN SIMON, and Dr. GLOVER, who pleaded that due justice could not be given to the full aspect of the case without documents being laid before them, and especially at the close of their sitting, the English members forced the discussion to a vote. Dr. MACALISTER and Sir DYCE DUCKWORTH even wished to omit all reference to the needs of London students to obtain facilities for degrees in medicine and surgery, thereby putting themselves in antagonism to the repeatedly expressed wishes of the profession, and the carefully drawn conclusions in the report of the Royal Commission. The previous question was only lost by two votes. It was stated that the Council had been ignored, and that its dignity was at stake; but a vote taken in the manner described, and without the necessary documents on which to arrive at a decision, is much more likely to injure its dignity than if a full discussion on due notice, and as a principal part of its business, had taken place. In that case the Privy Council might have been expected to treat it with due consideration, as the weighty opinion of an important body which is concerned only with the medical interests of the kingdom; but now it will probably be considered as merely the first incident in what the President calls "the battle of the shops" in London. A condemnation of any proposal to found a "degree-conferring faculty independent of the existing University and medical licensing authorities" must have been drawn up in complete ignorance of the clauses in the Draft Charter put forward by King's and University Colleges, of the other documents considered by the Royal Commission, and of the movements that have since taken place. A degree-conferring faculty was asked for by the Royal Colleges, who desired a Senate of forty-eight persons, including the two Presidents, for the one purpose of conferring medical degrees. King's and University Colleges ask to be formed with the medical schools into a complete university to give degrees in all faculties. Combination with the existing university is rather a late and an impossible suggestion after the vote of the graduates of the University of London in Convocation; and in the Draft Charter provisions are inserted for association with the Royal Colleges, if those corporations so desire. A special clause provides that no ordinary medical degree shall be conferred on any person who shall not previously have obtained a qualification entitling to registration under the Medical Acts. A resolution carried in ignorance of these details, as confessed by some of the speakers, can hardly add weight to the conclusions of the special representative body of our profession.

THE *Western Morning News*, in referring to the statement made by the President of the Local Government Board to the effect that he was advised that influenza was an infectious disease, and therefore came within the operation of the Infectious Disease (Notification) Act, has raised the important question whether it is desirable that sanitary authorities should add to their list of notifiable diseases such affections as measles, whooping-cough, and influenza. It is very properly explained that the two former cause a terrible mortality in this country, and whilst this is so, little or nothing is done to prevent them. According to the annual report of the Registrar-General for 1889, the latest volume issued, measles caused 14,732 deaths and whooping-cough 12,225, or some 27,000 deaths from these two causes in one single year. Dealing with these two diseases first, we would point out that, so far as we know, whooping-cough has rarely if ever been included in any notification returns. Measles, on the contrary, has been dealt with at times on very different lines. Some authorities have included it and have retained it as a notifiable disease; and they have found that they have been able to use the notification with great benefit in respect of school attendances. Children coming from infected houses have been prevented from attending school, school closure and its serious interference with education has become less necessary, and the spread of the disease has been more or less controlled. Other authorities, on the other hand, have waited until the disease was widely diffused, and then they have hurriedly applied to have measles included amongst their notifiable diseases. The action has come too late for the existing epidemic, and when this has been discovered they have at once applied to have measles erased from the list of notifiable diseases, instead of retaining it until such time as it could be usefully put to the test—namely, in the early beginnings of the next apparent prevalence of the disease. If measles is to be usefully made one of the notifiable diseases, its inclusion in the list must be made in advance of a coming epidemic, the information must be used with the object of strictly regulating school attendances, and the disease must remain in the list for at least a term of years. If this is done, there is evidence to the effect that considerable good will follow; and hence the disease, once included, is but little likely to be removed from the list. As to whooping-cough, there is much less experience; but it must be assumed that, if the notification of that disease were adopted and carried out on the same lines as those just indicated for measles, much the same benefit would accrue. But as regards both diseases, it must be remembered that resort to notification in the midst of an epidemic does not offer any very hopeful result, and sanitary authorities must expect that real experience as to its value can only commence after the actual prevalence which has led to the inclusion of these two diseases has subsided. In short, the value of notification depends on its being utilised in the application of measures of prevention to the first cases of disease which would otherwise result in an epidemic.

As to influenza, the matter is a more difficult one if immediate prevention be the principal result aimed at. The disease presents many phases, and the cost of notification in the present state of our knowledge as to what does precisely constitute "epidemic influenza" would probably outweigh the benefits that would for the moment be derived from notification. But any such imperfect result would, as a

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matter of fact, be due to our lack of knowledge; and few things could go further in increasing our knowledge of the etiology of this obscure affection than a system of notification supplemented by skilled inquiry into the circumstances under which the attacks have arisen, and of the conditions under which the infection is diffusing itself. Where this is contemplated only benefit could result; where it is desired simply to get the notification returns, and there is no intention to follow them up by organised and careful inquiry, the most that could be hoped for would be the compilation of statistical returns which might be of some value for purposes of comparison, in so far as they could be regarded as dealing with the same affection. The subject raised by our contemporary is not a new one, but it is raised at an opportune moment, and the points have been put forward in a manner deserving the serious consideration of sanitary authorities, all or any of whom have the power of securing the addition of measles, whooping-cough, and influenza to the list of diseases notifiable in their districts.

THE local press throughout England and Wales has during the past few weeks literally teemed with census paragraphs and data. We have, however, good reason to believe that the whole of these figures have been unofficial and unauthorised, and we know that many of the numbers have been seriously inaccurate. The figures published in the last issue of the Registrar-General's weekly return are, however, authentic beyond question, and afford the first opportunity for considering the results of the recent Census, limited, however, to London and the rest of the twenty-eight large towns of England and Wales dealt with in that return.

The salient feature of the figures now published is the marked decline in the rate of increase of population in our large towns during the intercensal period just ended. In the "weekly return" for the week ending May 23rd the population of these twenty-eight large towns, estimated to the middle of this year on the hypothesis that the rate of increase that prevailed between the two Censuses in 1871 and 1881 had been maintained since 1881, was given as 10,010,426. In the following return, published last Saturday, however, the new estimate for the middle of this year, based upon the recently enumerated, but unrevised, numbers, is 9,388,441, or less by nearly three-quarters of a million—more precisely 621,985 persons. Thus, through the decline in the rate of increase of our twenty-eight largest towns, their population had been over-estimated by nearly three-quarters of a million, the percentage of error being no less than 6·6 per cent. The actual increase of population in these twenty-eight towns in the ten years was, however, little short of a million persons.

This over-estimate of population was very general among the towns, and included 270,764 in London, and 351,221 in the aggregate of the twenty-seven provincial towns; the percentage of error showing but slight difference, being 6·4 in London and 6·8 in the provincial towns. When the percentage of error, however, is calculated for the individual provincial towns, some very startling variations reveal themselves. The two estimates for Manchester, with its half a million of population, and for Leeds are practically identical, showing that the rate of increase was really almost constant in each of these towns during the twenty years 1871–91. The percentage of error was less than 1 in Halifax, and was only 1·5 and 1·6 in Bolton and Preston. On the other hand, it exceeded 10 per cent. in eight of the towns, in seven of which cases the error was of over-estimate, and in the other of under-estimate. The most striking instances of erroneous estimate were errors of 18·6 per cent. in Nottingham, 19·3 in Hull, 20·0 in Liverpool, and 26·3 in Salford, each being a case of over-estimate.

The marked fluctuations in the movement of the population in many of our large towns during two successive intercensal periods are statistical facts of considerable interest, but the importance of their effect upon the calculation of trustworthy death-rates, so essential to sanitary progress in towns, can scarcely be exaggerated. The error of estimate in Nottingham was due to the fact that the rate of increase of population, which was 34·3 per cent. in 1871–81, fell to 13·6 in 1881–91; in 1881–91, in Hull the rate of increase fell from 26·5 to 10·9; in Liverpool, the rate fell from an increase of 12·0 to a decrease of 6·2 per cent.; and in Salford the rate of increase fell from 41·2 in 1871–81 to 12·4 in 1881–91.

It is well to realise what effect these errors of estimate have upon the death-rates, which afford the only satisfactory means for measuring the sanitary condition and health-progress of the populations to which they relate. In the weekly return for the week ending May 23rd the annual rate of mortality during the week under report, calculated on the hypothetically estimated population in Hull, Liverpool, and Salford, was 20·9, 32·6, and 33·2 per 1000 respectively. In the following weekly return, published last Saturday, revised death-rates were given for the same week, calculated upon estimates based upon the recent census numbers—namely, 24·9 for Hull, instead of 20·9; 39·1 for Liverpool, instead of 32·6; and 42·0 for Salford, instead of 33·2. It is evident that the death-rates recently published for these three towns have been so under-stated as to be worse than useless as an indication of the sanitary condition of their populations. The rates in several of the other towns have also been under-stated, through over-estimate of population, by more than 10 per cent., and in two towns, Portsmouth and Newcastle-upon-Tyne, the error was in the opposite direction, as the population of these towns was under-estimated by 10 and 12 per cent. respectively, implying a corresponding over-statement of the death-rate. Until the publication in the Preliminary Census Report of the results of the recent Census in the whole of England and Wales, it will be impossible to determine whether this remarkable decline in the rate of increase of population in our largest towns has been compensated by exceptional increase outside their arbitrary boundaries and in the smaller towns, or whether this first instalment of the Census returns implies that the rate of increase of the whole country during the last ten years has fallen far below the rate that prevailed in the preceding ten years. The figures published for London, at any rate, show that the decline of increase in the central districts of the metropolis has not been balanced by greater increase in

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the outer ring of suburban districts outside the boundaries of the county of London. It appears that the revised estimate of the population of Registration London in the middle of this year is 4,221,452, and more than a quarter of a million below the estimate previously in use, and that the revised estimate for the outer ring is 1,435,457, and 50,774 above the previous estimate. Thus, the population of Greater London at the middle of this year is now estimated from the recently enumerated numbers at 5,656,909, which is less by 220,481 than the estimate based upon the adopted hypothesis. If this decline of the urban rates of increase should turn out to signify that the constant migration from rural to urban districts, which has been shown by preceding Censuses, is now beginning to slacken, the intelligence will be welcomed. The general tenour of the unauthorised figures published concerning rural districts during recent weeks almost forbids, however, the hope that such has been the case.

There are two unavoidable conclusions to be derived from the results of the recent Census, so far as they have yet been made known. The published figures afford conclusive evidence, if such were still necessary, that the movement of population in our largest English towns is far too variable to warrant the hypothesis that their rate of increase in one ten years will be maintained in the next. It follows, in natural sequence, that if death-rates are to retain their power to influence sanitary progress, some means must be found to keep sanitary authorities officially informed of the movement of the populations for which they are responsible. It is evident that this cannot even approximately be done until the Government is convinced that their refusal to recognise the necessity for a quinquennial Census is seriously imperilling the onward march of sanitary progress.

IT is much to be regretted that the General Medical Council, at its sitting on the 28th ult., declined to pass a resolution which would have secured a much more efficient course of training in midwifery than is now insisted on by some of our examining boards, and would have removed very great inequalities in the regulations of the different bodies. The resolution in question, proposed by Dr. GLOVER, was to the following effect:—"That it is urgently necessary for the examining bodies to require of candidates for their diploma additional guarantees of practical education in obstetrics; and that candidates at the final examination be required to produce proofs that they have personally conducted at least six and been present at at least twenty-four additional labours, and of having attended as pupils for six months a lying-in hospital, or the lying-in department of a general hospital or a maternity institution, with arrangements for clinical teaching approved by the examining body granting the diploma."

With Dr. ATTHILL, who seconded the motion, we "experience a feeling akin to shame at having to urge so obvious and so necessary an improvement in the training of students in this department." The English licensing bodies require an attendance on at least twenty cases; the Irish bodies insist on a similar number, or, as an alternative, on a residence for six months at a maternity institution; whilst some of the Scotch authorities are satisfied with an attendance at not less than twelve labours, at least three of which must be conducted personally under the direct supervision of a registered medical practitioner. It is true that what the Scotch student may lack in practice through this regulation he will probably make up in theory, for he is compelled by the Scottish Universities to have attended 100 lectures—i.e., a six months' course on Midwifery. We are strongly of opinion that this is by no means too long for a course, which also includes diseases of women and children, and that it should not be purely theoretical, but should be accompanied by demonstrations. We hope that, with the lengthened curriculum, English students will also be compelled to attend for a similar period, although at the Conjoint Board in England three months' clinical study of diseases of women, in addition to a three months' course of midwifery, is now required. But however much may be taught, as Dr. LEISHMAN says, by careful clinical instruction on a small number of cases, everyone must admit that midwifery is really a practical art, and no practical art can be mastered without a sufficiency of material for the acquirement of practice and dexterity. The fact of witnessing an accomplished obstetrician conducting a case of labour (and, indeed, the number of students who can gain any real information by looking on at such a case must be extremely few) is a very inefficient substitute for the performance of the manipulations by the student himself, who should first be taught the management of simple cases by a superior officer at the bedside of the patient, and then be allowed to take the responsibility of other cases, but should always be bound under the most stringent regulations to summon immediate aid in every case which deviates from the normal. The personal conduct of even six cases is too little, and of three is absurd. Now that every qualification implies a knowledge of midwifery as well as of medicine and surgery, regulations should be laid down by the General Medical Council which would guarantee adequate instruction in the former as well as in the latter subjects, and geographical considerations should not be allowed to enter into such a question. In answer to the argument that the Council has only to lay down principles whilst the licensing authorities are to frame the details, we would point out that the Council has often interfered with the details required by various Boards; and if, as is here the case, a regulation is obviously not such as to secure adequate knowledge, and yet the General Medical Council does not interfere on behalf of the public interest, the Council lays itself open to the charge that it has failed to perform the duties for which it was formed. It would, we fear, seem that sometimes representatives of the Corporations have to study the advantages of those bodies rather than the interests of the profession in general or the welfare of the public.

DR. T. LAUDER BRUNTON, F.R.S., will deliver the Cavendish Lecture "On Elimination and its Uses in Preventing and Curing Disease," on Friday, June 12th, at 5 P.M., in the board room of the West London Hospital.

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Annotations.

"Ne quid nimis."

THE GENERAL MEDICAL COUNCIL.

APART from the questions connected with the proposed new Teaching University and with the educational scheme to which reference is made in other columns, the present session of the General Medical Council has dealt with several subjects of general interest. With his accession to the presidential chair Sir Richard Quain has resigned the office of Chairman of the Pharmacopœia Committee, and has thus afforded the Committee a convenient opportunity of summarising the results of their labours. It appears that altogether 100,000 copies of the British Pharmacopœia have been issued, and 25,125 copies of the Addenda. Owing to its having been found necessary to destroy the larger part of one edition, the financial results have not always been wholly satisfactory, even though the ultimate result has been a pecuniary success. Sir Richard Quain's labours on this Committee well deserve the cordial vote of thanks passed so enthusiastically by the members of the Council. It was in quite another mood that the adverse criticisms of Mr. Laffan and the communication from the War Office were received. The first was an appeal to the Lord President, "to compel a body which guards its own interests, and its own interests alone, to do its duty by the public and by the profession." The two chief grounds of complaint are the non-recognition of "union hospitals" and the alleged abandonment of the system of visitation of examinations. Naturally enough this letter was not received in a conciliatory spirit, though ultimately it was decided to transmit to the Lord President a copy of the report of the Committee appointed to consider this communication. The Secretary of State for War called attention to the manifest deficiency in orthography prevalent among the young medical officers of the Army, and the precise method of dealing with this deficiency afforded ample food for discussion. Whether the communication was a discredit to the War Department or to the Council, whether the deficiency applied to the spelling of technical terms or of common English words, and whether the source of failure was the natural outcome of the action of the War authorities, or was to be regarded as an "organic defect not at all associated with ignorance"—all these were discussed at length with due regard to the dignity of the Council; but in the end it was decided to adopt measures for ascertaining the preliminary examinations in general education which had been passed by candidates subsequently found guilty of faulty spelling. The General Medical Council found some consolation for these amenities by criticising the "confused answers" received from the various bodies who had replied to the request for information in regard to the special laboratory work required of candidates for their sanitary diplomas. The recommendations passed by the Council, speaking generally, certainly indicate the desire to render both instruction and examinations as thoroughly practical as possible.

THE ARMY MEDICAL SERVICE.

WE publish at p. 1283 a letter which has been addressed to Sir Andrew Clark by the War Minister, with reference to the interview (in connexion with the grievances of the Army Medical officers) which was held some few weeks ago. This letter shows that the movement has met with success as respects all material grievances, and we trust that the concessions which the War Office has made will be accepted by the department. It will be seen that Mr. Stanhope has given directions for the preparation of a new Royal Warrant for the Medical Service; and he deserves thanks for the resolution he has displayed in overcoming the prejudices and opposition of the combatant ranks of the army. We fail to notice any allusion to the subject of foreign service, but we have reason to believe, from what has been stated by Sir Andrew Clark, that the remedy has been promised, and will follow in due course.

UNIFORM HOSPITAL ACCOUNTS.

WE publish in another page a letter from the Hospital Commissioner of THE LANCET, who on Monday last gave evidence before the Committee of the House of Lords upon the subject of hospital accounts. A part of that evidence was directed, as will be seen from the full report which also appears in this impression, to the criticism of the statements annually published by the hospitals *from a particular point of view*—namely, that of the subscriber or of a member of the general public interested in the question of hospital finance, and the witness was careful to point out that the effective exclusion of legacies from the accounts, which he chiefly criticised, was the natural result of the way in which the accounts were quite properly prepared for submission to the Council of the Hospital Sunday Fund. The explanation has not, however, obtained equal publicity with the criticism, and, as an incorrect and probably injurious impression is liable to be occasioned by an imperfect notice of the evidence which is going round the press, our Commissioner seeks an opportunity in our columns of applying the necessary correction and clearly stating the position which he has taken up, and to which THE LANCET also adheres—namely, this, that the accounts published annually by the hospitals of London for the information of the public should exhibit in a simple and easily intelligible form the whole income received, from whatever sources, within the year, and that book-keeping devices, which may be proper enough in the preparation of those statements for particular purposes—as, for example, for submission to the Council of the Hospital Sunday Fund, by which authority they are destined to be analysed in a particular way—should not be allowed to cloud the perspicuity of a statement intended for ordinary readers. We believe that it is by taking the public fully and frankly into their confidence both as to their needs and their resources, that the medical charities will best secure, and in the long run most effectively retain, public confidence.

ENTERIC FEVER IN INDIA.

IN the beginning of 1889 the Government of India appointed a Committee to inquire into the alleged increase of enteric fever in the army in India. The report was not very satisfactory in that it left matters connected with the etiology and pathology of that disease very much where they were. Still, the Committee indicated that a new light might be thrown upon the subject by the application of bacteriological research. We are glad to learn, on the authority of the sanitary commissioner with the Government of India, that an important advance has been made in the investigation of the pathology of the enteric fever in this direction. At the date of the Committee's report the evidence of the existence of the so-called typhoid bacillus—the Eberth-Gaffky bacillus—was of a negative character—so far, at any rate, as an examination of specimens of tissues from some cases of enteric fever at Lucknow were concerned. But Professor Bernhard Fischer of Kiel, to whom specimens of spleen and mesenteric glands from two fatal cases of enteric fever in India have since been forwarded, reports that he has discovered the

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bacillus of Eberth in them, thus establishing the identity between some of the fatal fevers of India and the enteric fever of Europe. Thus far a step in the right direction has no doubt been taken, and it only requires the further prosecution of the inquiry by a more extended system of bacteriological examination to show whether all the cases of fever attended with the symptoms and intestinal lesions of typhoid fever are, in reality, of one and the same nature. Pathologists and practitioners in India seem to be generally agreed that enteric fever has probably prevailed in our army from the time we held that country to the present day; that it is the disease of which the young and newly arrived soldier dies there; that the symptoms during life and the anatomical lesions found after death are very much the same as those which characterise it everywhere; and that there is abundant evidence to show that typhoid fever is very frequently attributable to the same causes in India as in England and elsewhere. The only question that arises is as to its etiology; whether this lies naturally and exclusively along the lines of specific infection, so that where an antecedent case cannot be found it may nevertheless be hypothetically assumed to exist. Budd's writings had prepared the way for the acceptance of the bacillus of Eberth as a connecting link between one case and another. The problem that has to be settled is whether the scope of the investigation into all outbreaks requires to be widened or not, in order to include all cases in tropical countries, for example. Eberth's bacillus affords a definite scientific basis to work upon. Its discovery in all the cases of so-called typhoid fever abroad would not only serve to distinguish their nature and stamp their identity, but might afford a clue to the cause of the prevalence and spread of this fever in India, and relegate the effects of climate, for example, to an entirely secondary and subordinate position. If typhoid fever be found to be invariably accompanied and caused by a bacillus, the next step in the inquiry will be into the genesis, development, reproduction, and morphological variations of these bacilli under the various conditions of European and tropical countries. This would have to be followed by investigations to ascertain how and through what channels they enter the human body, and the circumstances essential to their further development and to the display of their pathogenetic properties. The great and increasing prevalence of typhoid fever in India, and the large amount of sickness and mortality it annually causes among our troops, call for serious consideration. Almost every other week, says the *Pioneer*, we hear of some young officer—for it is from the new arrivals the disease selects most of its victims—struck down, often mortally. Every step which brings us nearer an accurate knowledge of the disease brings us nearer also to a discovery of its cause and prevention, and we can only join with our contemporary in echoing the hope that the beginning now made will be earnestly and patiently followed up.

THE MANCHESTER AND SALFORD SANITARY ASSOCIATION.

IN a full but concise report, the Manchester and Salford Sanitary Association have described the methods and developments of their work along with an account of their proceedings during the year 1890. It is hardly possible for us to do more than briefly touch on the varieties of usefulness with which the Association has been occupied during this period. In response to its representations efforts towards the improvement of artisans' dwellings have been assisted by codification of the Acts relating to this subject. Inspection of milk-supply, control of noxious vapours emitted by manufactories, and the provision of recreation spaces are matters of almost equal importance which have likewise occupied the energy of its members. Under its auspices substantial encouragement has been given to Healthy Homes Societies in adjacent districts. The value of these as means of promoting wholesome conditions among the homes of the poor cannot be denied. The distribution of tracts on sanitation is another means towards the same end. This is a somewhat difficult matter to handle with discretion. It appears to have been so used, however, as a rule, by the Association. Health lectures have served the same purpose in another way, the subjects treated of being chiefly such as lie within the sphere of personal and domestic hygiene. The Ladies' Branch does useful work by providing for house-to-house visitation, with a view to the detection and removal of unwholesome conditions, and its report, like that of the parent Society, will at once instruct and interest all readers who take pleasure in undertakings which tend to promote a high standard of public health.

THERAPEUTICS OF DIPHTHERIA.

THE researches of Professor Löffler on diphtheria are so well known that any further communications from him are sure to command attention. To the *Deutsche Medicinische Wochenschrift* for March 5th, 1891, he contributes a paper on the therapeutics of diphtheria. He commences by asserting that the bacilli first described by him are the cause of the disease. To destroy the poisonous action of these germs two things are necessary: first, to guard against the inroad of the bacilli into the healthy mucous membrane; secondly, to destroy the bacilli if they have already attacked the superficial layers of the mucous membrane of the larynx and parts generally invaded, to prevent an extension of the process to unaffected parts, and to destroy the infective material before it affects healthy individuals. Prof. Löffler has made most exhaustive researches as regards the effects on the bacilli of various drugs. These are too numerous to enumerate here, although the results of the action of these agents are given in detail in his paper. During an epidemic of diphtheria, or at any time when healthy persons are necessarily brought into contact with patients suffering from the disease, he recommends that as a prophylactic measure a gargle should be used of a solution of corrosive sublimate of the strength of 1 in 10,000 or 1 in 15,000. This should be employed for five or ten seconds every three or four hours. This gargle, however, has a disagreeable metallic taste, and a solution of cyanide of mercury of a strength of from 1 in 8000 to 1 in 10,000 is equally effective, and less nauseous. Other solutions which he recommends are 1 part of chlorine in 1100 parts of water, to which a little chloroform may be added, and a solution of thymol, 1 part being dissolved in 500 parts of 20 per cent. alcohol. As preventive measures also such remedies as oil of eucalyptus, oil of citron, oil of lavender, benzol, and toluol, given in the form of vapour, are successful. Passing to the active treatment of the disease, he recommends that the patient should gargle every hour or two with one of the weak solutions already mentioned, and he should, in addition, use gargles containing drugs which have been shown to destroy artificial cultures of the bacilli. Of all the numerous agents which he has tried, Prof. Löffler recommends the following as being the most efficacious: Corrosive sublimate 1 in 1000, 3 per cent. of carbolic acid dissolved in 30 per cent. of alcohol and also alcohol and oil of turpentine, to each of which is added 2 per cent. carbolic acid. After a short time the throat may be painted every three or four hours with 5 per cent. carbolic acid, 2 per cent. bromine solution, or 1 per cent. chlorine water. Concentrated watery solutions of creasote may be employed. Professor Löffler concludes by expressing the opinion that if his suggestions are fully carried out the

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mortality in diphtheria will be greatly diminished, for the bacilli only develop locally, and are not carried by the blood to other parts of the body; consequently, if they are destroyed at an early stage in the disease, only a small amount of poison will have entered the body, and this it may reasonably be hoped the organism will succeed in throwing off. The important researches made in this direction by Behring and Kitasato may help to throw light on the difficult question whether the human body is capable of destroying poisons formed in the circulation by the development of bacteria.

HOSPITAL FUNCTIONS AND THE GUILDFORD POOR.

THERE is a sharp division of opinion among the governors of the Royal Surrey County Hospital as to the propriety of continuing medical attendance to *home* patients in Guildford. A special committee has been appointed for the purpose, of which seven members voted for and six against the continuance of the system. The minority of six admitted that in Guildford, as in other places, there may be a section of the people, not paupers, that require medical consideration, not to say charity. They proposed to meet this want by something of the nature of a provident dispensary. It is undoubtedly wise in hospital authorities to restrict hospital relief as much as possible to in-patients who are at once seriously ill and incapable of commanding suitable advice and nursing at home. A hospital goes out of its way when members of its medical staff go beyond its own walls to attend the sick. The argument of those who defend a continuance of the present system is that it is a cheaper course than the creation of a provident dispensary. But this is not a strong argument. The cheapest charity is not necessarily the best; presumably it is the worst. For ordinary complaints and diseases patients should not look to hospitals, but to their own providence. Those who wish to help them should do so through their clubs or provident dispensaries, which call for the exercise of thrift and forethought.

MICROSCOPICAL RESEARCHES ON CARCINOMA.

IN a monograph upon some investigations of the intimate structure of carcinoma (abstract in the *Centralbl. f. Bakteriol.*, ix., 21), J. Schütz says that he found three different kinds of micro-organism in specimens from three cases of cancer of the lip—viz., a slender, rod-shaped organism resembling the tubercle bacillus, large cocci in groups, and spore-containing bacilli with pointed extremities. But he considers that these, as well as the forms described by Scheurlen and others, have no special etiological relationship with the morbid changes. He studied, further, the minuter histology of cancer, and notes some interesting differences between normal epithelial cells and those of carcinoma. The latter in the recent state exhibit an exceptionally large proportion of "mitoses"—a fact he thinks to be associated with the malignancy of a tumour. Next he declares that among the nuclei undergoing karyokinetic changes there are to be found in cancer cells some of exceptionally large size, such as are not to be seen in normal tissues; and this again, he thinks, implies some special degree of virulence. Again the "mitoses" are not of uniform size, as in physiological conditions, but present the greatest variety in this respect in one and the same tumour. A further point is the peripheral disposition of the "mitoses" among the columns of cancer cells; and the frequency with which "wandering" corpuscles with divided nuclei are to be detected within the cancer cells. Lastly, in all cases of carcinoma there is great vascularity and abundant formation of round cells. To recognise these peculiarities, which are deemed to be diagnostic of carcinoma, Schütz advises that the living tissue should be "fixed" in the fresh state by Flemmings's process, and stained with carbolic fuchsin and methyl blue.

MALFORMATION OF THE HEART.

A REMARKABLE CASE of congenital malformation of the heart has been recorded by C. Cipriani (abstr. in *Centralbl. für Path. Anat.*, ii., 10). The subject, a male, lived to the age of twenty, having been markedly cyanosed all his life. There was transposition of the lungs, and the heart lay on the right side. This organ consisted of only two chambers—a lower conical one with a rudimentary septum at the apex, whence proceeded the pulmonary artery (with stenosed orifice) and the aorta. The upper chamber was somewhat narrowed where it was connected with the lower one, and at this spot was a rudiment of a valve. Neither this valve nor those of the pulmonary artery and aorta were competent. The liver occupied both hypochondriac regions, and its left lobe was much more developed than the right. The spleen was hypertrophied, and had a horizontal furrow across its middle portion, whilst in the vicinity were three other spleens, each the size of a fowl's egg. The stomach was very small and atrophied. The duration of life under these circumstances is not the least singular feature of the case.

"THE LANCET" RELIEF FUND.

SIR RICHARD QUAIN, the newly elected President of the General Medical Council, has, with the sanction of the Council, accepted the office of an almoner of THE LANCET Relief Fund.

THE NEED FOR AN ISOLATION HOSPITAL.

THE Sevenoaks Rural Sanitary Authority have taken a step which they may before long have occasion to regret. Although a site for an isolation hospital was actually offered to them as a gift, they have, by a majority of twenty-three to fourteen, practically decided to refuse it, and so to put off making arrangements for the isolation of infectious diseases. They have adopted this step in the face of sound advice to the contrary emanating from those who understand the subject, and who have experience as to the conditions which are necessary to success, and they appear to have been actuated by the opposite sort of advice to adopt an alternative step which is devoid of all promise of beneficial result. Thus a reverend gentleman brought before them a scheme—which he naïvely said he had not been able to elaborate—for the provision of a number of houses, each containing six beds, in different parts of the district. Some such scheme was originally suggested by the Local Government Board themselves as an alternative to a properly constructed hospital in somewhat scattered rural districts; but it could never be acted on, and although some four hundred authorities have provided themselves with means of isolation, in no single instance has a scheme of this sort been matured or carried into effect. But there is a much greater objection to it. Legal proceedings are at times taken against sanitary authorities for the erection of infectious hospitals, and hitherto the strong ground held by the authorities has been that they have complied with conditions as to a surrounding zone and otherwise which the Local Government Board have shown amply to suffice to prevent the diffusion of the infection of the current infectious fevers to the locality around the hospital. If the Sevenoaks Rural Authority want to keep free from legal proceedings, they will have to comply with these conditions also; and, above all, each of their infectious "houses" will have to be surrounded with an unoccupied zone nowhere less than 40 ft. wide, and each site must be properly enclosed. This runs into money, and most

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authorities who have viewed the matter sensibly have come to the reasonable conclusion that one hospital, on one site, with one boundary fence, and one set of offices, is cheaper in the end than multiple appliances, which are rarely complete, and which have constantly to be added to. Unfortunately, none of the alternative plans suggested are likely to be carried out, otherwise they might have served the purpose of proving by experience what are some of the conditions calculated to ensure failure, financially and otherwise. The only effect of the conclusion come to probably is that some extension of disease will now have to be awaited before matters again reach the stage at which they broke down last week.

SERIOUS CHARGE AGAINST A MEDICAL MAN.

THE magistrates of the Houghton-le-Spring Police-court had a few days ago the painful duty of investigating a case in which a practitioner, a medical graduate of Durham, was charged by Elizabeth Richardson with seducing her while she was partly under chloroform, and with taking liberties on other occasions. It was also alleged that he had given medicine containing ergot. Dr. Coley, called to speak to this point, said it was extremely problematical whether ergot would procure abortion. It is always very difficult to refute such charges, and it is at least suspicious that the girl never complained to anyone of the defendant's conduct, and that after his first alleged misconduct she again went to his surgery. It is exceedingly unlikely that a medical man of standing would be guilty of the conduct attributed here to the defendant. The magistrates, however, were satisfied with the evidence, and made an order for 5*s.* a week.

THE PREPARATION OF MUSEUM SPECIMENS.

DR. RICHARD THOMA of Dorpat describes (*Centralbl. für Allg. Path. und Path. Anat.*, ii, 10) a method he has devised for retaining the natural colour of organs in museum preparations. After slight washing in water they are placed for some hours in strong saline solutions, of which he gives two formulæ:—

	A.	B.
Crystallised sulphate of soda...	100 grm.	60 grm.
Chloride of sodium	100 grm.	100 grm.
Chlorate of potassium	100 grm.	30 grm.
Nitrate of potassium	10 grm.	10 grm.
Water to	1 litre.	1 litre.

The organ is suspended for eighteen to twenty-four hours in one of these solutions, and then placed in pure spirit, which requires changing once or twice. It is better to immerse only portions of the larger organs, such as the liver or spleen. The preparations retain their appearance for months, the only notable change being the conversion of the red colour of hæmoglobin into the browner tint of methæmoglobin. Nor is their structure so affected as to be unfit for subsequent microscopical examination.

THE EDUCATION OF GIRLS.

IN an address delivered recently before the Medical Society of the State of New York, Dr. William Warren Potter touched upon an educational problem of increasing interest, the training of girls between ten and fourteen years of age. The reason why this period has been selected is of course obvious, and we would be the last to dispute Dr. Potter's assertion that the appearance of the catamenia ought in every case to engage the solicitude of a watchful parent, and even that they may justify temporary changes in the school arrangements. At the same time we cannot quite agree with all his recommendations in this connexion. When, for example, we are told that the young girl during her first periods must not attend school at all, and that subsequent molimina should be marked by a day or two of hygienic holiday, we are tempted to inquire how it comes about that so many healthy matrons of to-day survive in spite of schooling persistently carried out in utter disregard of the catamenial interruption. Surely there is a danger that so much care may result in careful error. Perhaps our mothers and grandmothers were too heedless to be warned, or perhaps too healthy to need warning as regards this matter. Doubtless, too, the work of education was carried on differently. At all events, the reasonable exercise of mind and body was found compatible with the changes of puberty. Is it not possible that the fault in our days lies rather in the system pursued in education than in its association with these changes? We confess to some sympathy with this latter view. We note also that Dr. Potter has no great respect for the school customs of our time. The sketch of a studious day which he introduces is not purely imaginary. Its leading characteristic is, of course, work; but against this there is almost no play. We can hardly feel surprised that a system which is capable of such illustration is condemned as inconsistent with the healthy employment of nerve energy in other important functions. Its only practical issue is overwork, and this at the menstrual periods doubtless often does result in physical disablement. Some rearrangement more compatible with natural processes is clearly needful, even though this may imply a longer curriculum of study or even a less finished social womanhood. In this, rather than in periodic cessations of school work, we would look for the remedy for present abuses. We cannot now deal with various matters of diet, dress, and the like discussed in this carefully studied paper, which comes as a timely and sensible protest against excesses destructive of success alike in mental and physical development.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE two retiring members of the Council of the Royal College of Surgeons, Sir William MacCormac and Mr. Sibley, are eligible for re-election, and will again become candidates for seats on the Council. We learn that Mr. Sydney Jones has decided not to seek re-election. The names of other candidates have not yet been forwarded to the secretary of the College.

THE HEREDITY OF CRIME.

IT is a truth asserted both in Scripture and in science that the sins of the fathers are visited upon their children. Of late years, moreover, another doctrine has been heard maintaining that in like manner the erring tendencies of parents naturally find expression in the habits of their offspring. We will not deny that this, too, is a deduction founded on faithful observation. More than this, however, we cannot say. We cannot allow that it possesses any claim to belief on account of its necessary accuracy. On the contrary, it is obvious that an assertion so broadly positive is at all times open to fallacious interpretation. As propounded by some in our own day, notably by certain foreign ethnologists, it insists upon the recognition of a reversionary type, a criminal race possessed of special affinities for ill-doing, and it thus almost ignores in them the preservative power of conscience and of will. As for Deity and Religion, they are considered as virtually mere terms current in a former unphilosophic era, but obsolete in this, and unworthy of serious treatment in connexion with the matter. This is indeed a dismal record on the page of Nature's evidences. In contrast with its despairing uncharitableness, we turn with a sense of relief

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to the truer and bolder portrait of human character at its lowest level, which is presented in a paper by Dr. T. M. Dolan on "The Heredity of Crime." While admitting the possible transmission in some degree of a morbid nature, the author justly attaches a great and real influence to circumstance and to certain curative forces inherent in civilisation and in man himself. Chief among these latter are free will, religion, and education. He shows how it is in the power of the will to modify the conditions of the struggle for existence and to wage this battle successfully, but without selfishness or baseness. In it, when instructed by a religion of charity, patience, and continence, and by education conducted under happy and rational influences, he finds the true corrective of moral degeneracy. Whatever the allurements of an opposite and more fanciful philosophy, we must all admit the practical soundness of this view. The connexion between badness and madness is sometimes clear enough, but we agree with Dr. Dolan that it is not so clear by any means that the latter can, for a given class of persons, excuse the former.

THE CROONIAN LECTURES.

DR. BURDON SANDERSON is recovering from an attack of influenza. At the recommendation of Dr. Buzzard, who has attended him with Dr. Andrews of Hampstead, the President of the College of Physicians has sanctioned the postponement for the present of the Croonian Lectures. The lectures will be delivered as soon as possible, and due notice will be given of the date fixed.

OXFORD GRADUATES' MEDICAL CLUB.

THIS club, which was established in 1884, has just held its annual summer dinner at Limmer's Hotel, which was attended by upwards of fifty members and guests. The meeting was of more than ordinary interest, since it was presided over by the new president, Dr. John W. Ogle, who was unanimously elected to succeed the late Dr. Fincham, who had been president since the foundation of the club. The speeches were, as usual, few and brief, but Dr. Ogle made a graceful tribute to the memory of the late president, and to that of Dr. Monro and Dr. Gulliver, who had also been removed by death in the past twelvemonth. The financial condition of the club was shown to be very satisfactory by the statement of the treasurer, Dr. Church; the numbers had increased from 40, at which it started, to 140, which was the number at present on the list. It still maintained its original purpose of being in no way political or polemical, but fulfilled its intention of being a social gathering of Oxford men with a medical degree. He proposed the health of Mr. John H. Morgan, who was resigning the post of secretary, and this was seconded by Dr. Champneys in a few kind and cordial words. Mr. Morgan, in reply, thanked the members for their generous expression of approval of what he had had great pleasure in doing for the promotion and success of the club, and congratulated his successor in having for a colleague Dr. S. West, who had by his labours done so much to bring about the satisfactory condition in which the club now found itself.

MEDICAL AID FOR INDIAN WOMEN.

WE need not now do more than briefly direct attention to that generous and highly useful effort originated by Her Majesty the Queen, but shaped and guided by the efficient hands of Lady Dufferin,—the work of affording medical aid through members of their own sex to the women of India. The movement, which has its headquarters at Calcutta, is, it must be remembered, an essentially Indian project. Its purpose, of educating ladies, Indian as well as British, as medical practitioners, and despatching them to the land of their future labours, has hitherto been carried out with a gratifying measure of success. The good fruit which has resulted from their exertions may be judged from the facts related by Lord Reay—namely, that about 411,000 persons have been relieved through their agency during 1890, that thirty-eight hospitals are connected with their Association, that some forty lady practitioners of different degrees of qualification are employed in the same service, and that 204 female students, their intending followers, are engaged in study at the Indian medical schools. Anyone acquainted with the conditions of female life among the higher castes in India will at once understand the necessity for medical aid of the kind provided by this scheme. However we may regret the fact, Oriental custom still adheres to the policy of exclusion which refuses all aid, even in sickness, from one of the opposite sex. We would therefore heartily commend this undertaking, so far successfully conducted by Lady Dufferin and her helpers, to the still wider circle of those who represent public sympathy and liberality.

DEATH OF DR. FORDYCE BARKER.

WE regret to have to announce the death, from apoplexy, on May 2nd, of Dr. Fordyce Barker, of New York. Dr. Barker was born in 1819, and in 1856 occupied the presidential chair of the New York Academy of Medicine.

BACTERIA IN URINE.

IN a recent number of the *New York Medical Record* Dr. Santvoord discourses on the presence of bacteria in the urine of patients who have never had an instrument passed. Sir William Roberts discussed the subject at considerable length as long as ten years ago, but the mode in which the organisms reached the bladder was not determined. Attention was, however, called to the fact that, in women at least, the condition may exist without giving rise to symptoms, and that it is very amenable in its slighter forms to treatment by salicylate of soda. Dr. Santvoord records several cases which he has observed, some yielding easily and readily to treatment, others resisting it, and from his experience he is led to suggest that a minor degree of cystitis is more common than is generally supposed, especially in females, but, as to its origin, all that is asserted is that it is not in many of those cases the result of catheterisation.

THE BIRTHDAY HONOURS.

WE heartily congratulate those members of the medical profession in the different public services upon whom honours have been conferred on the occasion of the celebration of Her Majesty's birthday. We wish that in this distribution medical officers had received a larger share of honours, for the selection of only three officers out of the large number composing those services certainly cannot be regarded as lavish, but might on the contrary be more appropriately styled very meagre. We should like to have seen some recognition of the heroism of Surgeon Parke, and fully endorse the remarks of our correspondent in his letter, which we publish on p. 1286. The Director-General of the Army Medical Department—William Alexander Mackinnon—is made a Knight Commander of the Order of the Bath, and while we take the opportunity of congratulating him on his convalescence from a sharp attack of influenza, we are glad that a titular distinction is the pleasant accompaniment of his recovery. Sir William Mackinnon has distinguished war services, has long been a C.B., and has been awarded a good service pension. He served in the Crimea, was present at the battles of Alma and Balaclava, in the expedition to Kertch and Yenikale, the siege and fall of Sebastopol, including the assaults on the Redan on June 18th and

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Sept. 8th, 1855. Sir William Mackinnon also served in the Indian Mutiny and the New Zealand and Ashanti wars. Brigade-Surgeon Robert Waters, M.D., is made a Companion of the Order of the Bath. He served in Ashanti and in the Soudan-Nile expedition of 1884–5, and enjoyed a high reputation in the British Medical Service, from which he has retired. Surgeon-Major James Sutherland Wilkins, of the Indian Medical Service, has been appointed to the Distinguished Service Order. He served in the Afghan War of 1880 and the Burmese Expedition of 1886–7.

INSANITY IN TWINS.

INSANITY occurring in twin children is not a common condition. Dr. Worcester records an instance of it in the *American Journal of Insanity*, and the account is the more interesting from the fact that both patients suffered from phthisis. One brother had occasional attacks of excitement and destructiveness, which came on about the age of twenty-five. He had always been weak-minded. He died from phthisis in 1883. The other brother developed symptoms of phthisis at the same time, but it ran a more rapid course, and terminated fatally in 1881. He had previously been feeble-minded, but good-natured and harmless, and had not suffered from the violent fits to which his brother was subject.

NEURITIS OR BERI-BERI (?).

IT is admitted that a disease which closely resembles beri-beri is frequently present among sailors and fishermen in northern latitudes, but as yet its etiology remains obscure. Dr. Petters records five cases which he has seen among sailors who had been trading in different parts of the world, and who all presented similar symptoms. The condition usually begins with pain or numbness in the legs, swelling in those limbs, with weakness, drop-foot, and absence of knee-jerks. There is also usually present some weakness in the arms. All the cases reported here recovered, except one, which died suddenly. No account of the microscopical appearances of the nerves is furnished, but there seems to be little doubt that the condition underlying the symptoms is one of multiple neuritis; but the origin of this condition is still obscure. Diet in all probability has something to do with it, although in the cases to which reference has been made the food was both good and plentiful.

THE RECENT FATAL FIRE AND ITS WARNINGS.

WHATEVER its lessons respecting the necessity of cultivating that inestimable faculty, presence of mind, and whatever the satisfaction that assistance was so timely and so ably rendered, the recent sad occurrence at Egerton-gardens conveys yet one other obvious injunction to those who will receive it. The fatal fire in which Lord Romilly perished was the result of an accident, and unfortunately of one which might easily have been prevented. This is very far from being the first occasion on which the explosion of a lamp or the ignition of its contents has proved the source of a much wider conflagration. Accidents of this kind have been attributable usually to some defect in structure of the lamp, or to careless management in filling or extinguishing. The most fruitful cause of explosion, it should be remembered, is the accumulation in the oil chamber of inflammable fumes, mixed with air. This happens, of course, in proportion as during use the oil-supply becomes exhausted. Happen it must, therefore, in some degree; but in order to provide against its possible effects, great care should be taken that the reservoir is quite filled on each occasion of use. The necessity of accurate adjustment between the wick and its holder, too, should not be overlooked. The method of extinguishing the flame, where this is not provided for by a special apparatus, deserves a word in passing. It may be easily and safely accomplished by the simple device of screwing down the wick to a point just below the upper level of its holder, and then directing the breath across the top, but not down the chimney. One circumstance in particular in connexion with the case above cited deserves comment. This is the absence of any automatic extinguishing apparatus. Different simple contrivances designed for this purpose are now in common use. An important point is the composition of the oil chamber. No one will deny the beauty of some china reservoirs, but this unfortunately implies an increased risk—that of breakage. No reservoir can be regarded as safe unless composed of metal, though china or glass may form the outer shell of one so constructed. As regards precautions to be taken in view of the actual occurrence of fire, we need say but little. The action of Lord Romilly's butler in closing the door of the burning room showed commendable foresight, and the same is true of a correspondent's proposal that heavy wraps, and if possible a supply of water, be conveniently placed wherever in a household there is a possibility of accidental fire.

INFLUENZA.

WE are informed that there have been some cases of influenza among the Royal servants at Balmoral and also at Windsor. We are glad to be able to add authoritatively that they are all of a comparatively mild nature. Amongst the sufferers from the prevailing epidemic may be mentioned Sir Prescott Hewett and Sir J. Risdon Bennett. It is stated that no fewer than eight medical men in Birmingham have died from the effects of the recent disease, the latest victim being Mr. Albert W. Gray of Edgbaston. We learn that during the past few weeks influenza has been extremely prevalent in Hampshire and some of the other southern counties, whilst it seems slowly on the decline in the metropolis. Nevertheless, the death-rate in London for the week ending May 30th was 28·9 per 1000, or an average for the four weeks immediately preceding of 27·4, which is 8·4 per 1000 above the mean rate in the corresponding periods of the ten years 1881–90. The deaths primarily attributed to influenza amounted last week to 310, and in 64 other cases influenza was certified to have occurred in the course of other diseases. The deaths from respiratory diseases were 591—more than double the corrected average,—353 being due to bronchitis and 189 to pneumonia.

HALF-TIME CHILD LABOUR.

THE arguments by which the Home Secretary, in introducing his Factory Bill, advocated the half-time system in education have not been allowed to pass unnoticed. The right hon. gentleman has maintained in this discussion very much the attitude of a special pleader. Whether the question for the moment turns on health, on technical skill, or on ordinary school training, he is alike at one with himself as regards the conviction with which he entered the arena. Under any circumstances the child in school is at a disadvantage compared with his fellow whose industry follows the divided course of learning and of productive work. We confess that we cannot see good cause for approving this confident position. It is only reasonable to suppose that a child under twelve years of age whose whole day is devoted to school work possesses a distinct advantage in regard to prospective examinations as compared with another who for half of this time follows a calling. Statistics on the subject, moreover, as explained by Sir W. Hart Dyke, prove that this is the case. There is something in Mr. Matthews' contention that the half-time scholar is really undergoing a form of technical education. Of some cases no doubt this may be truly said. Of many more it can-

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not. Often the released pupil does not, at this stage even, enter on the real business of after life, but is merely on an insignificant scale a means of profit by odd jobbing to his parents. It is dubious if, with time and work so divided and hurried, as it must be in many such cases, either the lessons of school or of the workroom are well understood. The effect on health must largely depend of course on the character of the occupation followed. The closeness of many school-rooms is notorious; but what is to be said of the hygiene of business houses? The hurry and bustle, the irregularity in meals, and other discomforts of business have also to be considered, and here, again, we are confronted by the decision of the Education Committee, which has on inquiry condemned as inferior the physique of these working school children. When we consider that but eight years fall within the school period, we must admit that six of these do not seem too many to devote to the specific purpose of mental training. This would make the age of half-time work begin at twelve years. What the special exigencies of child labour may be for different districts we have yet to learn, but it is difficult to see how the limit above stated should not accord with any ordinary working conditions. Its adoption, in our opinion, would certainly conduce to the physical and mental well-being of the children.

THE Policlinico at Rome will be so far exempted from the economising policy of the Government as to receive from the Ministry of Public Works 500,000 fr. (£20,000) to put in working order so much of the building as has already been constructed. This subsidy it owes to the energy of its promoter, Dr. Baccelli, who pointed out the scandal it would be for Rome if, on the assembling there of the International Medical Congress in 1893, the Policlinico had not some record of work to show.

THE joint committees of the Councils of King's and University Colleges were summoned to meet at King's College on Thursday at 4 P.M., and we understand counsel have been instructed to present their case to the Privy Council. Delegates from the various medical schools also attended a meeting at the Middlesex Hospital at 5 P.M. of the same day to consider questions in connexion with the proposed Teaching University in London.

THE President of the Royal College of Physicians, Sir Andrew Clark, Bart., F.R.S., has consented to deliver a lecture at the City of London Hospital for Diseases of the Chest, Victoria-park, on Monday, June 15th, at 4 P.M. The subject of the lecture will be "Observations on Some Relations of the Human Soil to the Growth of Tubercular Bacilli and the Evolution and Treatment of Phthisical Lesions."

THE death, from the effect of influenza, is announced of William Edward Steavenson, M.D. Cantab., M.R.C.P. Lond., physician in charge of the electrical department of St. Bartholomew's Hospital, at the early age of forty-one years. One of Dr. Steavenson's latest contributions, on the subject of electric baths, appeared in THE LANCET so recently as March 28th.

SIR DYCE DUCKWORTH has been appointed Physician to the Law Life Assurance Society, in the room of Dr. Robert Martin, lately deceased.

MR. E. C. STABB, M.B., F.R.C.S., surgical registrar, has been appointed resident assistant surgeon at St. Thomas's Hospital.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THURSDAY, MAY 28TH.

Practical Teaching in Midwifery.

THE following is supplementary to the report of Thursday which appeared in our last issue on this subject.

Sir JOHN SIMON said the reason why he could not vote for Dr. Glover's motion was that he did not believe the Council could go beyond a statement of general principles, or very well state principles applicable equally to all places and all circumstances. It was better that the number of cases should be left to the individual authorities. One of the seven wise men had said that the perfection of wisdom was in the sense of proportion, but the proposal was dealing very disproportionately with certain bodies, and he did not think the Council should be continually nibbling at particularities. He thought that such high numbers as were proposed might bring about great difficulties in providing cases. He thought the Council should content itself with drawing the attention of the authorities to the subject, and that this obstetric war would then cease in the Council.

Sir WALTER FOSTER said his feeling was that the Council had nothing whatever to do with the regulations with reference to medical education, so long as the Council saw that the examinations generally were good. The custom, however, had been to particularise with reference to how people should be educated, and how men were to spend their time in certain branches. He had no sympathy with reference to the fallacy of numbers. The question should be discussed from the wide standpoint of public interest, and not in the interests of one or other of the schools. The legal position in this country was that a man should be qualified in medicine, surgery, and midwifery—a trinity of qualifying subjects; and therefore the Council should make regulations on the subject of midwifery with some care and accuracy. At present the regulations of the Council were the subject of ridicule. Those interested in the passing of the Midwives Bill were continually met with the statement, "You are asking those midwives to have really a better training in midwifery than you require from medical men." It had been referred to over and over again in the public papers, and therefore the Council was determined that the third branch of medical education should receive as much careful consideration as the other two. At present the numbers were much too small.

Dr. BRUCE said he did not mean to vote for Dr. Glover's resolution. He quite agreed with Sir Walter Foster that this subject should be put in the same category as the other subjects of medical examination, and studied clinically in the hospitals. It was a great credit to Ireland that it had a hospital of world-wide fame, and had done so much for the study of midwifery. He did not see that it was necessary to have any definitely restricted number of cases.

Dr. GLOVER, replying to Sir John Simon, said he could not accept the easy doctrine that the Council had nothing to do with details. If there was any defect in medical education, the Government did not address itself to the medical authorities, but to the Medical Council. It was too late for Sir John Simon to say that the Council should not go into "particulars." It had already done so, and the particulars were on the face of it inadequate and absurd. It was monstrous to say that the Council had the power to add a year to the medical curriculum, and yet had no right to say how this year was to be used. Sir John Simon charged the supporters of the motion with "nibbling"—first with "fevers," and then with "midwifery." The result of the Council "nibbling" with fevers had been most striking. They had sent a deputation to the President of the Local Government Board, as also had the College of Physicians, and the result was a clause in an Act of Parliament opening the metropolitan infectious hospitals, under conditions, for clinical teaching. Another reason for the interference of the Council in the question of the practical teaching of midwifery was the great discrepancy in the requirements of the different bodies. It was the bodies that were to be charged with "a want of the sense of proportion"—one body requiring twelve cases only, another twenty, a third six months' practice in a lying-in hospital. Where the bodies differed the Council must

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decide. But at present it was responsible for a recommendation altogether absurd and inadequate. Mr. Carter made too light of the duties of the accoucheur, and represented them as consisting in the great majority of cases of mere waiting on nature. But what terrible responsibilities arose in the exceptional cases of midwifery. He was willing to reduce the number to twenty, but he could not consent to leave the number of cases unstated; and his hope was that some of these cases might be attended under the supervision, in the way of pupilage, of a registered practitioner, approved if they pleased by the medical authorities. He wished the Council to recognise that the body of general practitioners included many of the best accoucheurs in the country. Many of the bodies relied on this teaching entirely, and the Scotch universities considered twelve cases under a registered practitioner equal in value to three months' practice in a lying-in hospital.

After considering several amendments, the Council ultimately agreed to adhere to its present recommendations.

Election of Treasurer.

The office of Senior Treasurer, vacated by Sir Richard Quain on his appointment as President, will now be filled by Sir Dyce Duckworth, formerly Junior Treasurer. Mr. Bryant, on the motion of Sir Dyce Duckworth, was elected to the post of Junior Treasurer.

FRIDAY, MAY 29TH.

THE President (Sir Richard Quain) took the chair at two o'clock.

Appropriation of False Titles.

Henry Louis Goodman was charged by the solicitor of the Council with having "issued and published advertisements and other public announcements falsely describing himself in them as Surgeon Dentist to the Queen's Household and Surgeon Dentist to the Household of Her Majesty the Queen and His Royal Highness the Prince of Wales, the effect of such advertisements and public announcements being to convey to the public the false idea that he held an appointment in the Queen's and the Prince of Wales's households, and that, after being repeatedly warned against continuing to issue and publish the said false and misleading descriptions, he had persisted in issuing and publishing the same, and had not withdrawn them." This case had been fully considered by the Dental Committee, who found the facts to be as follows. The accused had been registered in the Dentists' Register on July 31st, 1879, as having been "in practice before July 22nd, 1878," and with the address 41, Ludgate-hill, London, E C. In the year 1890 and since he had styled himself "Surgeon Dentist to the Queen's Household, 1, Ludgate-hill, London," and "Surgeon Dentist to the Household of H.M. the Queen and H.R.H. the Prince of Wales, Glasgow, 251, Sauchiehall-street," both in advertisements and on a brass plate on his door at Ludgate-hill, and in other ways elsewhere. The Lord Chamberlain of H.M. Household in January, 1890, called Mr. Goodman's attention to the fact that he had assumed these titles without warranty. As he claimed the right of continuing to use these titles, the Lord Chamberlain had complained to the General Medical Council of this action on Mr. Goodman's part, June 11th, 1890. He was thereupon warned by the solicitor of the Council that by continuing the use of these titles he was rendering himself liable to be brought before the Council under the Dentists Act. He had continued the use of the titles up to May 6th, 1891.

Mr. GOODMAN appeared in answer to the summons, and in reply to the President said he was prepared to pledge himself not to use any such title in future. The case was considered in private, and on the readmission of reporters it was announced that the Council had resolved, "That Henry Louis Goodman, having admitted that he had improperly used the title of Surgeon Dentist to the Households of Her Majesty the Queen and His Royal Highness the Prince of Wales, and having undertaken that he will not continue this practice for the fature, be admonished by the President in the name of the Council, but that his name be not removed from the Dentists' Register."

Case of Covering.

The Council then resumed the adjourned consideration of the case of John Keys (registered as L.R.C.S.I. 1883, L.M. 1889 K.Q.C.P.I.), who was summoned to appear before the Council on Wednesday, May 27th, on the charge "that he had continuously throughout the year 1890 acted as cover to one Tasker Spence Keys, a person who was not registered or qualified to practise as a registered medical practitioner; that is to say, that he had, in concert with the said Tasker Spence Keys, and by permitting him the use of his name, enabled the said Tasker Spence Keys, at 72, Carlisle-street, Cardiff, improperly to practise and sign medical certificates as if he had been a duly qualified registered medical practitioner." The facts of the case briefly stated are these. Mr. John Keys had a practice in Dublin, and took premises at Cardiff, in which he placed his married brother, Mr. Tasker Spence Key, who had for some time been a medical student in Dublin, to "look after the premises and the furniture" during the time he was conducting his business. In the agreement it was stipulated that Mr. Tasker Spence Keys "was not directly or indirectly to interfere with the management of the business." He therefore appointed a qualified medical practitioner to manage the business, and had occasionally even two qualified practitioners in his employment. He was complained of by Mr. Maurice Evans of Cardiff, and was informed by the registrar of the complaint. He replied that Tasker Keys had nothing to do with the practice, that he was a student in Edinburgh, and owner of the house in Cardiff, where his wife lived. This was considered satisfactory by the Council. Mr. Evans again on November 22nd, 1890, wrote to the registrar to state that Tasker S. Keys was still practising under cover of Thomas Webb, a qualified person, and enclosed a newspaper report of an inquest on Beatrice Rose Smith, an infant, who had been attended both by Tasker Keys and Webb, the death certificate being signed by Tasker Keys "for Dr. John Keys." The jury and coroner blamed the practice of handing over patients to unqualified men, and the coroner remarked on the certificate. Dr. Leslie Phillips sent information of an inquest on Eliza Stapleton, Dec. 4th, 1890, a case which Tasker Keys had attended according to the evidence, and pointed out that his name occurred in the local directory as Dr. T. S. Keys. The solicitor wrote to John Keys that his explanation was unsatisfactory, and he was summoned. Mr. John Keys appeared in answer to the summons, and was represented by Mr. Hume Williams, barrister, who urged that no proof which would be tenable in a court of justice had been urged in support of this charge. After going into the case in detail he reminded the Council of the seriousness of the charge, and suggested that even their censure carried a weight with it which no tribunal in the kingdom possessed.

On strangers being admitted, the PRESIDENT, addressing Mr. Keys, said: "Mr. John Keys, it is my very painful duty to inform you that the Council has come to the following resolutions: (1) That John Keys has committed the offence charged against him; (2) that the offence is, in the opinion of the Council, infamous conduct in a professional respect; and (3) that the registrar be directed to erase his name and qualifications from the Medical Register."

Mr. HUME WILLIAMS, on hearing the decision, asked whether there were any records of the case which would be accessible to Mr. Keys, and the PRESIDENT informed him that the minutes of the Council were accessible.

Appropriations of Fines under the Medical Act.

Dr. GLOVER moved: "That the Council represent to Her Majesty's Government that the appropriation which is claimed in London under the Metropolitan Police Acts, for fines imposed within the metropolitan area, differs, in regard of fines under the Medical Acts from the appropriation in force in other parts of the United Kingdom, and is practically such as to prevent within the metropolitan area prosecutions, which for the protection of the public ought from time to time to be undertaken in respect of offences committed against the Medical Acts; and that, in the opinion of the Council, it is urgently to be desired, either that the metropolitan appropriation of fines under the Medical Acts should be assimilated to the appropriation of such fines in other parts of the United Kingdom, or else that, for the metropolitan area, the Government, as appropriating the fines, should undertake the responsibility of such prosecutions as are requisite for enforcing the Medical Acts." He alluded to the forty-second section of the Medical Act of 1858, which requires "that any sum or sums of money arising from conviction and recoveries of penalties shall be paid to the treasurer of the General Council." Such sums had not been paid to the Council in cases arising within the metropolitan area. The Police Courts Act re-

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quires that the penalties should be made payable to the receiver of police court penalties. This Police Courts Act had been passed before the Medical Act, and had unfortunately not been repealed.

Sir JOHN SIMON seconded the motion. He thought that the common sense of the proposal would commend itself to those who read it.

The PRESIDENT said there could be no doubt about the propriety of Dr. Glover's motion, and it would be a pity to discuss a subject on which they were all agreed. The motion was adopted and agreed to unanimously.

Sir WALTER FOSTER moved: "That a deputation consisting of Sir John Simon, Dr. Glover, Mr. Brudenell Carter, and the President, be appointed to wait upon the Home Secretary, and point out to him the importance of meeting the wishes of the Council in the foregoing resolution." He had had many conversations with the members of Her Majesty's Government upon this subject. He had indicated to them how the present difficulties absolutely prevented those connected with the Medical Defence Union and with other bodies from taking steps to relieve the public from impostors. The Home Secretary professed his inability to meet him in this respect, and he hoped that a deputation would have a better effect than any individual representation.

Dr. HERON WATSON seconded the motion, which was unanimously agreed to.

The Report of the Pharmacopœia Committee.

The PRESIDENT, as his last act in the capacity of chairman of the Pharmacopœia Committee, moved the adoption of the report. This report contained an interesting summary of what had been done since his relation with the Pharmacopœia Committee, and the Council would have the satisfaction of seeing that 100,000 copies of the work had been disposed of.

Dr. MACNAMARA seconded the resolution, which was carried unanimously.

The following is the report of the committee:—

The Pharmacopœia Committee report to the Council that 32,000 copies of the British Pharmacopœia of 1885 have been issued up to the present date. They further report that 10,125 copies of the Additions to the British Pharmacopœia, 1885, ordered to be printed by the Council in November last, have been issued. Professor Attfield, the annual reporter on the Pharmacopœia, attended and presented to the committee the following report addressed to the chairman of the committee:—

"DEAR SIR,—I have made a record of all published criticisms and technical suggestions respecting the Additions to the Pharmacopœia, issued last December, that seemed likely to be of service in the production of a future Pharmacopœia. So far these have been very few in number. The Addendum has hitherto been most favourably reviewed by the press, both in Europe and America, and it appears to have given general satisfaction to medical practitioners and pharmacists. I have collected together the materials for my annual Report on the Pharmacopœia for 1890, and regret that, owing to a special pressure of engagements, I am not able to submit it to the committee. I hope to present it to the subcommittee within a month from the present time.

"Yours faithfully,

"Watford, May 25th, 1891." "JOHN ATTFIELD.

The committee adopted the report by Professor Attfield, and authorised the subcommittee to receive and consider his annual report on the Pharmacopœia, and to arrange for its issue in pamphlet form as usual. Professor Attfield was requested to continue the preparation of the annual report on the Pharmacopœia for 1891, and the usual honorarium was voted to him. The report by the registrar on the several editions and reprints of the British Pharmacopœia and its Addenda was ordered to be entered on the minutes.

On November 24th, 1858, very soon after the formation of the Council, the first steps, as directed by Section 54 of the Medical Act (1858), were taken towards the preparation of the British Pharmacopœia by the appointment of a committee having that business specially in charge, and consisting of the following members: Dr. Christison, Sir James Clark, Bart., Dr. Apjohn, Dr. R. C. Williams, Mr. Nussey, Dr. Thomas Watson, Mr. Green, Mr. Syme, Dr. Andrew Wood, and Dr. Leet. Dr. Garrod was invited to act as secretary. This committee was divided into three subcommittees, one consisting of Sir James Clark, Bart., Mr. Nussey, Dr. Thomas Watson, and Mr. Green, meeting in London; another consisting of Dr. Christison, Mr. Syme, and Dr. Andrew Wood, meeting in Edinburgh; and a third, consisting of Dr. Apjohn, Dr. R. C. Williams, and Dr. Leet, meeting in Dublin; and they requested the coöperation of the Royal Colleges of Physicians and the Pharmaceutical Society of Great Britain, who all appointed delegates to assist the subcommittees. Mr. Squire also was invited to, and did, assist the committee with his advice. On May 20th, 1862, the General Council, having resolved itself into a committee of the whole Council, adopted the manuscript, which had been prepared under this committee's supervision, as the Pharmacopœia; and appointed the executive committee to act in conjunction with the Pharmacopœia Committee, in order to carry out the printing and publication of the work. Two sums of £500 each were voted to the committee by the Council to defray their expenses in the preparation of the Pharmacopœia. Unexpected difficulties, however, arose in carrying out this work, and it was not till Nov. 6th, 1863, that they were overcome; whereupon the publication took place, and two editions were printed, the one a volume in demy 8vo, of which 13,000 copies were printed, and the other a volume in double crown 32mo, of which 15,000 copies were printed. Of this edition, owing to objections raised, it was found necessary to destroy the larger part—viz., 14,179 copies,—thereby entailing a loss of £1206, the cost of the preparation of this first edition having been £6229, and the total receipts from its sale £5023. On April 27th, 1864, it was resolved, on the motion of Dr. Quain, that a new edition should be undertaken, and that the following members should form a committee for the purpose: Dr. Christison (chairman), Dr. Sharpey, Dr. Apjohn, and Dr. Quain (who consented to act as honorary secretary). This committee engaged the services of Mr. Warrington, F.R.S., of the Society of Apothecaries, and Dr. Redwood of the Pharmaceutical Society, to aid in the preparation of the work. On March 28th, 1867, this committee presented to the executive committee the finally revised proof of the second edition of the Pharmacopœia, which was subsequently approved by the General Council. Of this edition 40,000 copies were finally issued. On June 3rd, 1867, a sum of £500 was voted by the Council, as an honorarium, to the members of this committee. In 1885 a third edition of the work was prepared by a committee consisting of Dr. Quain (chairman), Dr. Aquilla Smith, Sir Henry Pitman, Professor Macnamara, Mr. Bradford, Mr. Collins, and Dr. Haldane, and produced under the supervision of Professors Attfield, Bentley, and Redwood. Of this edition 20,000 copies were issued in the first instance; and in 1886, 1887, 1888, and 1890 reprints of this edition, each numbering 3000 copies, were issued, thus making a total of this edition up to the present date of 32,000 copies. In 1874 there was prepared and published an Addendum to the Pharmacopœia of 1867, of which Addendum 15,000 copies were issued. In 1880 there was published an Addendum to the Pharmacopœia of 1885, edited by Professor Attfield, of which, up to the present time, 10,125 copies have been issued. In the preparation of this Addendum important aid in the selection of the articles suitable for admission to it was rendered by several of the medical authorities, whilst the Council also received special and valuable assistance in the preparation of the work from a committee of the Pharmaceutical Society of Great Britain. Altogether, therefore, there have been issued 100,000 copies of the British Pharmacopœia, and 25,125 copies of the Addenda.

Sir DYCE DUCKWORTH said he could not let that opportunity pass without asking that a vote of thanks be passed to the chairman of the Pharmacopœia Committee. For five years he had had the pleasure and satisfaction of working with him on that committee, and could well testify to the labours he had bestowed on the work. So many years of faithful service had been rendered by Sir Richard Quain to this committee that it would be quite impossible to pass on to the next business without tendering a hearty vote of thanks to him for his services on that committee.

Mr. MACNAMARA seconded the motion, and expressed his full conviction that a more able chairman could never have presided over the deliberations of that committee. The result had been that through his indefatigable exertions a Pharmacopœia had been produced which had not only been a pecuniary success, but had been a credit to the country from which it emanated.

The vote of thanks was carried unanimously, amid the loud applause of all the members of the Council.

The PRESIDENT cordially thanked the Council for the resolution and for the way in which it had been received. It was an abundant reward for the labours he had bestowed on the Pharmacopœia that these had been appreciated by the Council. He would never lose sight of the work so long as he remained a member of the Council.

Printing of Material Documents.

Sir JOHN SIMON moved: "That when penal cases are to be brought before the Council the material documents which are to be laid before the Council as evidence in regard to the cases be set in type, and a confidential copy be furnished to each member of the Council in anticipation of the hearing of the case, the preparation of such documents to rest with the president and the legal advisers."

Dr. HERON WATSON seconded the motion, which was agreed to.

Clinical Instruction.

A further memorial addressed to the Lords of Council by Mr. Thomas Laffan, Physician of Cashel, had been forwarded to the Medical Council by the Lord President, with the statement that his lordship would be glad to be favoured with any observations the Medical Council may desire to offer on the other points referred to in Mr. Laffan's memorial, *especially as to the alleged abandonment of the visitation of teaching and examining bodies.*

The following is the memorial:—

"MY LORDS,—I beg again to memorialise your lordships, under Section 19 of the Medical Act of 1886, on the subject of the failure of the General Medical Council to exercise the powers, perform the duties, and do the acts imposed on said Council under the Medical Acts, and the Act of 1886. I appealed to your lordships by a memorial dated Feb. 4th, 1887, against the same Medical Council, and I subsequently sent forward a second memorial, to which your lordships replied on

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March 4th of same year. In that reply your lordships gave as a reason for not exercising the coercive powers of the Privy Council over the General Medical Council that the latter had under consideration the inclusion of union hospitals within the field of clinical instruction. I beg to point out to your lordships that they have been considering it ever since, and that, as everyone expected who understands the interest which they have in preserving to their own hospitals the monopoly of clinical instruction, they have not yet brought their considerations to a close. I beg to point out to your lordships that at a meeting of the General Medical Council, held on Nov. 22nd, 1887, and reported in the official minutes of that body, and in vol. ii. of THE LANCET for 1887, p. 1083, a committee of that body quotes without contradiction the allegation that medical men recently qualified are unfit to take sole charge of the sick, and they recommend such change in the curriculum as would render it imperative on the student to obtain a more complete clinical knowledge, and they add that such change would be viewed with favour by members of the Council and by the profession generally. I beg further to point out to your lordships that we have the official testimony of the visitors of the General Medical Council that the existing clinical material is already too limited. It therefore clearly follows that the means required for such better practical training cannot be had in that portion of the clinical field which is now alone thrown open to students. Yet, in face of these facts, the members of the General Medical Council have failed to enlarge the clinical field by the recognition of union hospitals, while they have still further aggravated the overcrowded condition of the aforesaid existing clinical fields by adding on another year of clinical study, the whole of which may, and the half of which must, be spent at the aforesaid already overcrowded hospitals.

"The half-year's non-compulsory instruction at said hospitals may indeed possibly be spent with a general practitioner; but inasmuch as it is to be purely voluntary, it will be as unavailed of as a corresponding permission to attend the existing hospitals during this identical fifth year has always been found to be where such permission has been freely accorded, as it notoriously has been in many clinical hospitals.

"Moreover, it is a matter well within the experience of the Medical Council that no mere voluntary regulation has ever yet been acted upon by students, no matter how important it may have been; and further, that no clinical hospital could supply the kind of training contemplated by the six months' apprenticeship. I desire further to point out that the system of visitation under which it had become possible for some light to be let in on the defects of teaching and examining bodies, has since been quietly abandoned, and notwithstanding the fact that the completest proof has been forthcoming of the necessity for the continuance of such visitation the Council persists in leaving the bodies unvisited.

"The complete proof to which I refer was the discovery, by means of outside and accidental information, that the University of Glasgow had granted degrees on wholly inadequate examinations and training.

"It is to be observed that these visitors were very far indeed at any time from being independent parties, and that latterly they were the mere servants of the Council, and yet that body dare not venture on their continuance. I therefore appeal to your lordships to exercise the powers conferred on you by Section 19 of the Medical Act of 1886, to compel a body which guards its own interests, and its own interests alone, to do its duty by the public and by the profession by ceasing to oppose interested obstacles to the adequate education of the profession.

"I have the honour to remain,
"Your Lordships' obedient servant,
(Signed) "THOMAS LAFFAN."

The committee appointed to consider this communication now reported to the effect that as regards the complaint in the memorial the General Council would state that the Council have from time to time directed the attention of the medical authorities to the importance of requiring from candidates for examination an adequate attendance on hospital practice with clinical instruction. In June, 1890, the Council adopted a resolution requiring that "the fifth year be devoted to clinical work at one or more of such public hospitals or dispensaries, British or foreign, as may be recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities." The Council endorses the opinion in the report of the committee, and entertains the strongest sympathy with the utilisation of the clinical material in county infirmaries and union hospitals, but they consider that the medical authorities themselves should make inquiries into the means for clinical instruction provided by union or other hospitals. The Council would, therefore, point out that in this respect there has been no neglect of duty on their part, and that if the union hospitals in Ireland desire to be recognised as fields for clinical instruction, application should be made to the respective medical authorities. The memorial contains the allegation that the Council has abandoned the "visitation," or rather the "inspection," of examinations. In reply, the Council would state that the inspection of examinations has not been abandoned. It is asserted in the memorial that "the completest proof of the necessity for the continuance of such visitation" exists in the fact that the University of Glasgow was held by the Council to have "granted degrees on wholly inadequate examination and training." This is absolutely inaccurate, as the examinations for the degrees of the University of Glasgow have invariably been reported on by the Council's visitors and inspectors as perfectly satisfactory. The suggestion contained in the statement made in the memorial has reference not to any medical degree, but to a single examination for the diploma of Public Health, an examination for which this Council has been advised that it has no power of inspection.

Sir WILLIAM TURNER, as chairman of the committee, asked the Council to adopt a procedure in a manner similar to that in which a former communication from the Lord President of the Privy Council had been dealt with—viz., to enter the report upon the minutes, and afterwards to transmit the report to the Lord President as an answer of the Council to Mr. Laffan's complaint.

Sir WALTER FOSTER, as a member of the committee who approved of the report, said the Council had long held the opinion that all clinical fields possible should be utilised for instruction of medical students. The Council were anxious that they should be utilised, and he thought that it was the duty of the various licensing authorities to take steps in that direction.

Dr. GLOVER asked if there was any instance in which the Irish bodies had recognised union hospitals. He was not sure that the Lord President would accept this mode of disposing of his letter, and thought the Council was rather lightly tossing from its shoulders the responsibilities that attached to it in regard to this question.

Mr. MACNAMARA said that there were two sets of hospitals in Ireland—the county infirmaries and the union hospitals; that certificates of having passed six months' clinical instruction in the county infirmaries had been accepted by bodies as equivalent to three months' instruction in a clinical hospital. In consequence of the system of education at present carried out, the students were required to put in three months at Cork, Galway, Belfast, or Dublin, and therefore they practically had given up availing themselves of the instruction in the county infirmaries, taking it out during that three months they were obliged to be in town for carrying out their curriculum. They could not get that six months, inasmuch as three of these months must be spent in their studies at one of the medical schools.

Election Procedure.

This question had, at a previous meeting of the Council, been referred to the committee to consult with the legal adviser in reference to a proposal to postpone the next meeting of the General Medical Council to Dec. 1st, in order to permit newly elected members to take part in the proceedings of the Council on that occasion.

Dr. BRUCE pointed out that Clause 8 of the Medical Act (1886) required that the direct representatives, elected in that year, shall come into office on Jan. 1st, 1887.

The report on election procedure was therefore amended in accordance with the suggestions made by Sir Walter Foster and Dr. Bruce, and was adopted by the Council.

Dr. BRUCE suggested that it would be advisable that candidates for the office should be supplied with a list of the constituents in manuscript whose names had not yet been printed in the Medical Register.

Sir WALTER FOSTER said, when he called attention to this report the other day, his sole object was that the procedure of the Council might be in strict accordance with the Act. He had no desire to prolong his tenure of office. Dr. Bruce was quite correct in assuming that candidates had a right to have a perfect register of their constituents put before them by the Council.

Dental Business.

The following resolution, passed by the executive committee in November last, was agreed to by the Council: "That the by-laws or orders of the Council, which relate to persons who have commenced their professional education or apprenticeship prior to the passing of the Dentists Act, but have only completed it after the passing of that Act, and which by-laws or orders dispense with the certificates, examinations, and other conditions for registration in the Dentists' Register required under the general provisions of that Act be hereby 'revoked,' so as to cease to have effect on and after July 22nd, 1891."

Memorial from the Ophthalmological Society.

This memorial urged upon the General Medical Council the desirability of making the subject of ophthalmic medicine and surgery a compulsory part of the ordinary curriculum. The memorial was signed by Sir Wm. Bowman,

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Mr. Power, Dr. Little, Dr. Ord, Dr. Argyll Robertson, Dr. Swanzy, and Mr. Tweedy.

Mr. BRUDENELL CARTER thought the best means of arriving at the end sought for by the Society was for the examining bodies to be more careful than some of them were to include ophthalmology in their examinations. If that were done there would be no more difficulty. He did not think the General Medical Council was called upon to legislate specially for any branch of medicine.

The communication was entered on the minutes, and the Council adjourned.

SATURDAY, MAY 30TH.

Laboratory Work for Diplomas in State Medicine.

The report by the Education Committee on this subject was now submitted to the Council for its consideration in a committee of the whole Council.

Dr. STRUTHERS pointed out that a large part of the report was composed of what he might call a mass of confused answers received from the various bodies in reply to a request from the Council to be favoured with information "in regard to the special laboratory work required of candidates for their sanitary diplomas." The Committee was sorry to find that the answers supplied in many cases had no particular reference to the subject of the inquiry, and were in most instances eminently unsatisfactory. In the report the committee had supplied their commentary on the various answers. The general drift of the report was that the Council should not itself make recommendations in regard to what the laboratory instruction ought to be, but rather that this report should be sent to the various bodies in order that those bodies requiring to have their curriculum reconstructed should be enabled to compare their mode of working with that of the Royal Colleges of London and the Universities of Edinburgh and Cambridge, which he considered to be full and satisfactory, accompanied with a request that they would consider and draw up regulations for laboratory instruction; and in the event of their not doing so, the Council would then, if necessary, interfere. Although Sir John Simon, whom they looked upon as the great authority on this subject, had not been a member of the committee, the committee had had the advantage of his advice and of his help in drawing up the report. He (Dr. Struthers) therefore moved: "That it is desirable that the regulations of the medical authorities under which they grant diplomas in State Medicine should, in order to give effect to the resolutions of the Council of June 1st, 1889, and Nov. 25th, 1890, contain:—In respect to giving effect to Resolution *c:* A full programme of the practical instruction in a laboratory or laboratories prescribed for candidates for the diploma, with rules for ensuring that such instruction has been received."

Mr. WHEELHOUSE seconded the resolution.

Mr. MITCHELL BANKS expressed, on the part of his colleagues and himself, the enormous debt of gratitude they owed Professor Struthers for the amount of labour he had bestowed on this work. On the last occasion they had a great educational matter to deal with, and it was mainly through the information which he had gathered from all quarters that the Council was able to come to a unanimous decision, which had effected one of the greatest reforms made in the education of medical men in the present day. The report did not contain very much contentious matter; it was rather a means by which the various licensing bodies might be given, as it were, a sort of breathing time in order to be enabled to communicate to the public their rules and regulations and general procedure. It gave them an opportunity of putting themselves in proper line with the various regulations which the Council had imposed upon them.

Mr. MACNAMARA, in supporting the clause, said the body he represented were now fitting up a laboratory of this kind, and loyally trying to carry out the views of the Council in this matter.

Dr. HERON WATSON, in moving an amendment to postpone the consideration of the subject, said he cordially endorsed the expression of admiration of the trouble taken by the committee and by its most worthy chairman in the preparation of this report. But in bringing forward this subject, it should be borne in mind that it was one with which the bodies were to a certain extent unaccustomed. When the Act was passed in 1886 it was distinctly held by the Council that it had no business to lay down any regulations to the bodies, but only to say whether such a diploma was or was not worthy to be entered upon the Register. The bodies ought to have abundant time to give their recommendation full consideration. This report should be sent down to the various bodies mentioned in Schedule A of the Medical Act, in order that they might be fully instructed in reference to this matter. This would secure for them unanimity of feeling in carrying these matters into practical operation, whereas if the Council acted rashly by thrusting the matter forward now, they might run the risk of wounding the tender susceptibilities of some of the bodies, and thus lead to trouble with the Council. He hoped the Council would see their way to postpone the consideration of these resolutions until the autumn session, being content meantime with sending the resolutions down to the various bodies for their information and consideration.

Dr. LEISHMAN thought the report was scarcely one with which the Council should now proceed. Dr. Struthers had very well described it when he called it a "mass of confused answers." Dr. Struthers informed them that he wished for evidence on the model of the information of those bodies he had mentioned; but, looking at the length of those model reports, he found that the evidence he desired would extend to about 100 pages. He did not think many members of the Council would be found willing to wade through such a body of evidence. The essential part was to make sure that each body on the Register honestly wished to give evidence that it intends to carry out the requirements of the Council. He thought it was the general feeling of the Council that this was an attempt at "grandmotherly legislation" by unnecessary interference with details. The Council's desire was to ensure the adoption of general principles. The form of the recommendations was to his mind objectionable.

Mr. MACNAMARA said it was suggested that the Council should send forth this report, and the reason given was that the report was so eminently unsatisfactory that it could not be discussed in the Council. The recommendations should be altered and amended before being sent forth.

Sir WILLIAM TURNER directed attention to the method adopted by the Council in former times.

Mr. MITCHELL BANKS replied that those were times when the Council was being continually reproached for its want of business methods. If this Council refused to go on with the business before them, he thought they were deserving public censure. They were not proposing new things to the bodies, but only asking them to define the general principles upon which they are acting in regard to this matter. The Council was asked to trust to the honest intentions of the bodies! It was only twelve months ago that the Council had some specimens of those intentions.

Dr. STRUTHERS pointed out that if the bodies had not answered fully the reason was that they had nothing to say. The Council might just as well have written to a Highlander to ask him to send his breeches up as to ask these bodies for information on this subject. Having no regulations on this subject they had no information to send to the Council. It was nothing but a "put-off" to delay this subject for three months.

The amendment was negatived by a large majority, and the following recommendations of the Education Committee were afterwards agreed to:—"That the resolutions passed by the Council in Committee, in regard to practical laboratory instruction for diplomas in State Medicine, be adopted by the Council in the following form: I. That it is desirable that the regulations of the medical authorities under which they grant diplomas in State Medicine should, in order to give effect to the resolutions of the Council of June 1st, 1889, and Nov. 25th, 1890, contain: (1) In respect to giving effect to Resolution *c*: A full programme of the practical instruction in a laboratory or laboratories prescribed for candidates for the diploma; with rules for insuring that such instruction has been received. (2) In respect to giving effect to resolution (*e*): A programme of the examination held for granting the diploma, describing fully the nature and extent of the examination, as regards the subjects or portions of subjects comprised in it, and the time assigned to each of its parts, and the methods (especially the practical methods) by which the candidate's knowledge is tested in each. (3) In respect to giving effect to Resolution *d*, as amended by the Council on Nov. 25th, 1890: A statement of any rules the medical authority may have made in regard to the method of carrying out that resolution and of ensuring that any such rules have been duly attended to. These rules should, in the opinion of the Council, include a requirement that

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candidates produce evidence of having received practical instruction in those diseases of animals that are transmissible to man. II. That each of the medical authorities be requested to forward to the Registrar of the Council at the end of October next a copy of the regulations in the form in which they then stand, under which it grants diplomas in State medicine. III. That the information thus received be laid before the Education Committee, for report to the Council at its next meeting, as to whether the regulations of the several medical authorities, in regard to granting diplomas in State medicine, have been brought into conformity with the resolutions of the Council. IV. That a copy of the report, containing the answers received from the medical authorities in reply to the letter of the President, of Dec. 11th, 1890, in regard to practical laboratory instruction for diplomas in State Medicine, be sent, with the recommendations now made by the Council, to the several medical authorities by which diplomas in State Medicine are granted."

Dr. GLOVER intimated that the suggestion contained in Clause 3 of the first resolution was instigated by one of the most eminent men in regard to State medicine in this country.

Sir JOHN SIMON hoped that the Council would agree that a knowledge of such diseases would be beneficial to officers of health. Dr. Ballard, the medical officer alluded to by Dr. Glover, was a consummate master of his subject. He thought that it was much to be desired that every candidate should have had opportunity of seeing such diseases in the lower animals, and which were capable of transmission to man.

Sir WALTER FOSTER said to make the diplomas in Public Health such as the Legislature contemplated, the Council should insist on this kind of knowledge. The Act of Parliament required it.

The recommendation was agreed to *nem. con.*

Amalgamation of Scotch Faculties.

Dr. STRUTHERS moved: "That it is desirable that, instead of each holding a separate examination for granting diplomas in State medicine, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, should combine to form an examining board for that purpose in Scotland."

Dr. HERON WATSON said no doubt the committee had the very best intentions in bringing forward this recommendation. He did not think the Council would gain anything by constantly nagging at the bodies, and suggesting that they should do something or other. The bodies referred to had been in consultation on the subject, and very probably the thing would be done without this recommendation. He should like to ask Dr. Struthers why, if he took such a grandmotherly interest in these bodies, he had not recommended the four universities in Scotland to combine to form a single examining board. Why had he singled out these three bodies, and left the other four alone? He thought the matter should be approached with some degree of delicacy. If the Council would only be good enough to leave the matter untouched for the present, the union would be brought about without their interference.

Dr. STRUTHERS pointed out that, regarding the four universities, there was a Commission sitting just now, armed with supreme power. Dr. Watson was a member of that Commission, and should take his own proposal into consideration there.

On the motion of Sir JOHN SIMON the Council agreed to postpone the consideration of this recommendation. A similar proposal affecting the Irish faculties was dealt with in a like manner.

Registration under the Absence Clause.

Dr. HAUGHTON proposed that the names of three gentlemen who had at the time of the passing of the Medical Act (1886) been out of this country should now be placed on the Medical Register; but, on the motion of Dr. MACALISTER, it was agreed to postpone the consideration of the cases until the evidence bearing on them had, for the information of the Council, been printed.

The Council then adjourned.

MONDAY, JUNE 8T.

Letter from Mrs. Marshall.

The following letter addressed to the General Medical Council by Mrs. Marshall and her daughters was read by the President:—

Mrs. Marshall and her daughters beg to thank the General Medical Council for the resolution of condolence with them on the death of their dearest husband and father. They are deeply touched by the expressions of affection and admiration of his character embodied in the address. The loss to Mrs. Marshall and her daughters is indeed irreparable, but it is some consolation to know that, wherever the name of John Marshall is mentioned, it is with love and respect, and with none more so than in the Council, with which, as colleague and President, he felt so honoured to be associated.

On the motion of the PRESIDENT this letter was entered on the minutes of the General Council.

Preliminary Examination in General Education.

The Education Committee has had under consideration the following communication from the Secretary of State for War, inquiring whether the Council might not insist upon a more efficient preliminary examination of the student before he enters on his medical career.

War Office, Pall Mall, London, S.W.,
November 28th, 1890.

SIR,—I am directed by the Secretary of State for War to acquaint you, for the information of the General Council of Medical Education, that he has had before him a report, from the Director-General of the Medical Staff, of the manifest deficiency in orthography prevalent amongst the young medical officers of the army, and to inquire whether, under these circumstances, the Council might not insist upon a more efficient preliminary examination of the student before he enters on his medical career. I am to add that this deficiency has, for some time past, so forced itself upon the notice of the military medical authorities, that a special clause has been introduced into the regulations for admission to the Army Medical Staff, to the effect that the Secretary of State reserves to himself the power of making bad spelling a cause of rejection, and it was while considering the means to make this decision operative that Mr. Stanhope thought it desirable to call the attention of the General Medical Council to the matter.

I have the honour to be, Sir,
Your obedient servant,
The Registrar of the General Medical Council. RALPH THOMPSON.

Dr. STRUTHERS, on behalf of the Education Committee, moved: "That a copy of that communication be sent to the Director-General of the Medical Department of the Navy, the Director-General of the Medical Department of the Army, the Indian Army Medical Office, and to the authorities mentioned in Schedule A of the Medical Act (1858), with the request that they will send to the registrar of the Council the names of any candidates who are found in the professional examinations to show manifest evidence of defect in spelling, or other part of general education, in order to assist the Council in ascertaining by which of the preliminary examinations in general education recognised by the Council such candidates have obtained admission to the Medical Students' Register; and that a copy of the communication be sent to all the bodies whose preliminary examinations are accepted by the Council." He said there could be no doubt as to the accuracy of the allegation that candidates had shown manifest deficiency in orthography. This letter would be read widely as an insinuation against the whole medical profession. Whatever the feelings of the Council might be with reference to the relations of the Army Medical Department and the profession, they had before them the fact that there was a considerable number of candidates in the service whose education in English was deplorable. The proposition he made had a sort of detective look about it, but they could not allow this state of matters to go on.

Dr. HAUGHTON cordially supported the proposition.

Dr. LEISHMAN said he confessed that when he read this portion of the report of the committee he was far from being satisfied with the manner in which the representation from the Secretary of State for War had been dealt with. He had no wish to disprove the statements made in it that there was manifest deficiency in orthography on the part of the medical officers of the army, but he was by no means certain that the criticism which had been passed on the state of education of young army officers was altogether deserved. The criticism of the late President was of two kinds—that there was a deficiency both in the spelling of scientific terms and of common English words. So far as the spelling of scientific terms was concerned, he observed that they could by no possibility form a part of preliminary education of the medical student. Errors in the spelling of common English words was a very grave deficiency in general education. In reading over many hundreds of examination papers he had carefully followed the spelling, and, although here and there a case of bad spelling occurred, yet he thought this condemnation of medical students was too sweeping. No doubt something should be done to improve the general

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education of the medical student. He thought the Council was doing this by raising the standard of preliminary education. Formerly the candidates for the medical department of the army came from among the best class of our students, but, owing to the action of the Secretary of State for War, within the last few years the service had become very unpopular, and it was notorious that the men who had entered the service during that period were deficient in all the branches of medical education.

Mr. BRUDENELL CARTER said those who had the misfortune to live twenty-five years ago or more would remember that at that period it was the combatant officers of the army who could not spell, and the Duke of Wellington was called to bring his influence to bear on the subject; and *Punch* was very funny about the conjoined efforts of Ensign Famish and Captain Rag to spell "struggle" with three g's. Defective spelling, although ungraceful and undesirable, was by no means a proof of ignorance. Evidently the Secretary of State had now reformed his own department, and was prepared to step outside to reform others. He was by no means prepared to accept the *ipse dixit* of the Secretary of State for War on an educational point. The War Office had succeeded in driving away the best candidates, and he trusted that the Council would not rush into a course of almost servile obedience to the Secretary of State. With some people spelling seemed to be almost an organic defect, not at all associated with ignorance. He remembered a student at St. George's Hospital—an exceedingly brilliant man—who used to spell bowels "bowles." Nothing could induce him to change the habit. The dictation of the Secretary of State was unnecessary, and he looked upon it as derogatory to the dignity of the Council to act upon it.

Sir WALTER FOSTER thought it would be better if the first resolution was withdrawn. The communication was no great credit to the War Department or to the Council. When the matter was first made public he thought of asking a question in the House of Commons with a view of ascertaining whether the deficiency complained of by the department might not be due to their own action. He did not, however, think it desirable, since the department had an answer to all such representations—namely, the large number of candidates they have up to each of their examinations, and moreover he was not anxious to disturb the existing relations between that department and the medical officers. He moved: "That the Council, having had before it the intimation of the Secretary of State for War that he has introduced regulations making bad spelling a cause of rejection for admission to the Army Medical Staff, begs to inform the Secretary of State for War that the character of the preliminary examination for entries to the medical profession has received, and is now receiving, the serious consideration of the Council."

Mr. MACNAMARA had given notice of a motion which was in the spirit of the question they were now discussing, that if any difficulty were to be raised in the career of the medical student it should be done, not at the last, but at the first fence in entering the profession. The preliminary examination should be conducted in a much stricter manner. He thought the recommendation of the committee was a most merciful recommendation, and he would vote for it with the greatest pleasure.

Dr. HERON WATSON thought the Council had overlooked the fact that it was not those young men who came up as candidates to enter the department of the medical service of the army to whom reference was made in the communication, but to those who had been in the army for some time, and who had been called upon to send in official reports in which errors in othography had been observed. He proposed that in acknowledging the letter of the Secretary of State for War a request be made that he furnish the General Medical Council with copies of papers and reports which supplied evidence of the manifest deficiency in orthography prevalent among young medical officers.

This motion was seconded by Mr. BRUDENELL CARTER, and was afterwards negatived.

Dr. GLOVER supported the motion of the Education Committee, and thought the Council ought to treat a communication like that from the Secretary of State for War with seriousness, but that the Council should have precise information in order to discover the bodies that were "unfaithful." He pointed out that it was not the Minister for War who had moved in this matter, but the Director-General of the Army Medical Department. Recent examinations for the department had shown that the candidates were well up in other subjects. This charge had been constantly brought before the Council. He thought that the Council would be failing in its duty if they did not send a copy of this letter to the bodies affected by it.

Sir JOHN SIMON thought that Dr. Glover had quite disposed of the suggestion that some controversial animus was at the bottom of this letter, and the Council ought to know what bodies were slovenly in admitting defective students. The letter contained a good hint when it stated that the Secretary of State for War "reserved for himself the right of making bad spelling a cause for rejection in the Army." The Council had a right to expect that a candidate should not only stand an examination in technical knowledge, but that he should have had discipline in the use of his reasoning powers.

Mr. MITCHELL BANKS thought the subject had been thoroughly discussed in the committee, even to the extent of considering whether some indignant remonstrance should not be sent to the Secretary of State for War. The remedy for the burden of his complaint, the committee thought, was to find out where the responsibility lay, and to visit it upon the offending bodies.

The motion of the committee was then agreed to.

All Preliminary Subjects to be passed simultaneously.

Dr. STRUTHERS moved what he considered to be the most serious part of the educational report—namely, "That the bodies conducting Preliminary Examinations in general education recognised by the Council be informed that the Council will not in future accept any certificate of pass in Preliminary Examination in general education unless the whole of the subjects included in the Preliminary Examination for registration of students of medicine have been passed in at the same time." He confessed he had made a great mistake in sanctioning a piecemeal passing of examinations in the year 1884.

Mr. BRUDENELL CARTER thought that discretion should be exercised by examining boards on this point. He would not move an amendment, but he could not support the proposition.

Mr. MITCHELL BANKS said there was no doubt that the whole system of passing examinations in small bits was one which was bad for the student, and which the Council had already publicly protested against both as regards preliminary and professional examinations.

Sir JOHN SIMON thought the examinations were of an extremely mild kind, such as any decent schoolboy of fourteen years of age ought to be fully competent to pass. He was glad that the Chairman of the Education Committee (Dr. Struthers) appeared before them as the prodigal son in connexion with the question.

Sir WILLIAM TURNER pointed out that the Council had no power to compel the bodies to conform to their resolutions. The bodies who conducted the preliminary examinations were entirely independent of the Council. If Mr. Mitchell Banks had had the experience of Council work which he (the speaker) had had he would have known that the Council had no authority either by Act of Parliament or otherwise to act in such a manner.

Mr. MITCHELL BANKS still stood to his text that the authority and influence of the Council should be brought to bear upon licensing bodies in matters which concerned the welfare of the medical profession and the medical student. He regretted his limited experience, which he could only hope would improve with time; but at the end of his first period of five years he had obtained a little experience of the Council, and he could only say the Council had obtained its present position in public favour by "doing" something. In the old days which Sir William Turner had referred to he did not think the Council did much, and it had been described by Sir John Simon as being at that period of its existence "a somewhat flabby body." He hoped the Council would not retire this session without "doing" something after eight or ten days' continuous talk.

Dr. LEISHMAN supported the motion, and wished that all preliminary examinations might be conducted over the three divisions of the kingdom by a single examining body responsible to the Council for its acts.

The recommendation was agreed to by a large majority.

The Apothecaries' Society and General Education.

The following examining bodies on the list of preliminary examinations at present recognised by the Council were

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proposed, on the recommendation of the Education Committee, to be omitted from the list—namely, "that of the Apothecaries' Society of London Examination in Arts; that of the Royal Colleges of Physicians and Surgeons of Edinburgh, Preliminary (combined) Examination in General Education; that of the Faculty of Physicians and Surgeons of Glasgow, Preliminary Examination in General Education; and that of the Royal Colleges of Physicians and Surgeons in Ireland, Preliminary Examination—certificate to include Mathematics." Most of these examining bodies had deputed the duties of examination to some body dealing with general education.

Mr. BRUDENELL CARTER handed in a legal opinion concerning the right of the Apothecaries' Society to hold examinations for the registration of medical students. On behalf of the Apothecaries' Society he stated that it had taken the lead in this country in requiring some test in general knowledge from persons desirous of entering the medical profession; it had received its authorisation in the year 1815, and in the year 1840 it had instituted an examination in medical knowledge. Twenty years later, in 1860, it instituted its present examination in Arts. While admitting that the interests of the medical profession were, on the whole, safer in the hands of a great examining body than in the hands of any medical body, he submitted that if it was convenient and practicable for a medical body to conduct this examination, it was highly unreasonable to object to its doing so. The examinations had been conducted for the last thirty-one years by university graduates of conspicuous ability, and had been resorted to during the last six months of 1887 by 342 candidates (including 5 women), and of those, 266 passed and 76 failed. In 1888, 725 candidates entered, 574 passed, and 151 failed; in 1889 there were 652 candidates, 524 passed and 128 failed; in 1890, 692 candidates (including 52 women) 471 passed and 221 failed. They had on an average at this examination 700 candidates in each year, and he had never heard any imputations against the efficiency of this examination. It occupied two days in March, and comprised the usual subjects required by the Council; and it appeared from the percentage of rejections to be an examination of high standing. He was certain that the Society of Apothecaries would be willing to meet the views of the Council in any desirable matter. It would be an act of monstrous injustice to take away this privilege, and he hoped the Council would hesitate before taking such a step.

Sir WALTER FOSTER said he had always been a friend of the Society of Apothecaries, and wished it had not taken up the defensive line it had assumed on this question. He pointed out that the action of the Council was not due to any dissatisfaction in regard to its examinations, but because they were anxious to limit the number of examinations the Council would have to deal with.

Mr. MITCHELL BANKS said that the Education Committee had not the faintest wish to attack individual bodies harshly; it might appear to some as coercion, but it was coercion in the cause of progress. The strong pressure brought to bear by the Council upon the licensing bodies two years ago had resulted in the five years' course of study, and he was under the belief that the same firm action, whether it was called moral suasion, or gentle coercion, or what not, if adopted in this case, would again be successful. The Education Committee had endeavoured to get the whole chaotic series of examining bodies reduced to a more general and comprehensive system, and would like to see preliminary examinations in the hands of as few persons as possible.

Mr. MACNAMARA proposed as an amendment, which was seconded by Dr. ATTHILL, "That it be recommended to the various bodies interested that they should discontinue the holding of their preliminary examinations in Arts."

Sir JOHN SIMON pointed out that to pass a compulsory resolution would be to go beyond the powers of the Council. He would have some difficulty in voting for the omission from the list of a body of so historic an examination, such as that to which Mr. Carter had alluded. That body had begun the preliminary examination, and the Council was indebted to that Society for its action in that respect. They had been great improvers of medical education in England, and he therefore thought that the recommendatory rather than the compulsory clauses ought to be supported.

Mr. MACNAMARA'S amendment was carried, and afterwards put as a substantive motion and agreed to by the Council.

TUESDAY, JUNE 2ND.

The Preliminary Examination.

The Council having resolved itself into a committee of the whole Council for the consideration of the recommendations of the Education Committee,

Sir WILLIAM TURNER moved, as a rider to the resolution passed the previous day as to the omission from the list of preliminary examinations at present recognised by the Council: "That in the event of any examinations referred to in the Committee's report being not at once discontinued by the bodies therein specified, they should not be accepted by the Council as valid preliminary examinations except in relation to the professional examinations of the particular bodies which conduct them."

Sir JOHN SIMON seconded the motion.

Dr. STRUTHERS said the recommendations were not made on personal grounds, but simply in order to reduce the number of examinations.

After some discussion the motion was postponed.

Dr. STRUTHERS then proposed, and Mr. WHEELHOUSE seconded, the following proposals, which were agreed to: "That the examinations enumerated in Group III. be omitted from the list, except those conducted by the College of Preceptors, by the Educational Institute of Scotland, by the Scotch Education Department for the Leaving Certificate, and by the Intermediate Examination Board of Ireland. [*Note.*—The examinations here referred to are: That of Queen's College, Belfast, Matriculation Examination; that of Queen's College, Cork, Matriculation Examination; Queen's College, Galway, Matriculation Examination; that of St. David's College, Lampeter, Responsions Examination, to include all the subjects required; that of the Pharmaceutical Society of Great Britain, preliminary and minor examinations (*pro tanto*); and that of the Pharmaceutical Society of Ireland, preliminary examination (*pro tanto*).] That the following examinations be omitted from the list:—That of University of California, examination in department of Letters; and that of Gymnasia of the Circuit of Dorpat, examinations of Maturity. That applications for the recognition of preliminary examinations in general education, in addition to those already recognised by the Council, shall be referred to the Education Committee for report to the Council. That the practice of ante-dating the commencement of professional study to a period before the whole preliminary examination in general education has been passed be discontinued, unless in very exceptional cases."

A motion was moved by Dr. CAMERON to the effect that "Logic" should be removed from the list of optional subjects, and placed among the compulsory ones. The previous question was moved, and the Council proceeded to the next order of the day.

A motion was made by Dr. HERON WATSON proposing to exonerate candidates who had attended courses of lectures in physics, chemistry, and biology from further examination on these subjects; but the Council in this case also passed to the next order of the day without discussing the subject.

The Proposed New University for London.

The Council then proceeded to consider the following resolution reported by the English Branch Council in regard to the proposed foundation of a new university in London authorised to grant degrees: "That, while this Council views with the greatest sympathy any well-considered efforts to create facilities for London medical students to obtain degrees in medicine, they regard with grave concern, both in the interests of the public and in the interests of medical education, any proposal to found a degree-conferring faculty independent of the existing University and medical licensing authorities that already number four in London alone."

Sir JOHN SIMON complained that the Branch Council had discussed it without special notice having been given to the members.

The PRESIDENT said that the Branch Council had been summoned in the ordinary way, and that it was unusual to put the business on the agenda paper.

Sir JOHN SIMON thought that was because the matters dealt with by the Branch Council were usually matters of routine.

Sir WALTER FOSTER, in proposing the adoption of the resolution by the General Council, said he sympathised

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with Sir John Simon, but he happened to be present at the English Branch Council, and was sorry not to have the advantage of his presence. It was generally undesirable that matters should be brought forward without members having had warning thereof, especially matters of such importance. He felt that it was and had been for many years past a standing disgrace to the medical profession, with the government of which the Council was charged, that men educated in the best medical schools should be debarred by the very fact of locality from having the chance of obtaining a degree. There was a strong feeling that there ought to be facilities for students, especially of the London schools and some of the provincial schools, to obtain degrees. The London University did not look with favour on the desire of the general body of the profession to obtain degrees—a desire with which every member of the Council ought to feel the greatest sympathy. He felt, as a representative of the medical practitioners in England, that the Council ought to do something to meet that laudable ambition. Hitherto he thought the Council had not been treated properly, as the matter had been before the Royal Commission, and there had been almost within the point of acceptance a scheme for altering the constitution of the London University, and hitherto the Council had been silent. They were a great department created by the Legislature for looking after medical interests, and they ought to be consulted on all questions affecting the medical profession. And in order to give the Council a *locus standi* he desired a resolution to be passed which would go to the Privy Council and show that the Medical Council was aware of what was going on, and that they wished to have a voice in the final solution of the question. By adopting the resolution of the English Branch Council they would express their sympathy with the laudable ambition of the profession; they would also point out that there were four bodies already in London granting medical qualifications, and that the Council viewed with a certain amount of apprehension any additions to these bodies in the interests both of the medical profession and of the public. He did not want another representative of a new corporation on this board, as it would reduce the vote of the general profession to a still smaller minority. The bodies which in London were supplying degrees and qualifications at the present time were quite capable of acting together in some form of charter, so as to meet the requirements of the profession and serve the interests of the public. The Council had allowed the Privy Council and the Royal Commission to do their work and report without consulting with it. It was time that the Council should assert itself as a body responsible for the medical education in this country.

The motion was seconded by Mr. WHEELHOUSE.

Sir DYCE DUCKWORTH said he had taken a great interest in the schemes connected with the new University of London, and he could not give a silent vote on this occasion. London students laboured under a disadvantage from their inability to obtain degrees, and a certain amount of sympathy was due to such students. Too much had been made of this grievance, however, and a great deal of spurious sympathy had been given. So much was thought of the case that it was proposed that this degree should be handed to gentlemen who had passed a qualifying examination. There were many difficulties in connexion with the existing University of London, but that body had shown itself so difficult to move that a cry had arisen that something more should be done. From all he could hear on this subject the Privy Council had some scheme at present under consideration whereby powers would be conferred upon University and King's Colleges to grant degrees to students in all faculties, and now this Council was very properly asked to step in and see that no new qualifying body should come into London and grant degrees. In the charter of the University which had been put into his hands there was a clause whereby this new University asks that "if it obtain power to grant degrees in medicine it shall not be compelled to give them except to persons who are already examined and qualified, and who are admissible to the Medical Register." The Council did not know what the new university would do if it obtained such powers. It would be certain to come to the Council to ask that its degrees might be placed on the Register. The Council was concerned to see that the Privy Council should curtail the power of this body, so that it should not be granted the power of conferring a degree which should not be a passport to the Medical Register. He thought the motion deserved the support of every member of the Council. The matter was urgent, for those two colleges were now on the eve of appealing to the Privy Council for this power. The Privy Council should know that the General Medical Council considered that it would be harmful in the interests of medicine and of the public that another body should obtain power in the metropolis to grant qualifications in addition to those that already exist.

Sir WILLIAM TURNER asked if the Branch Council who made this proposal had nothing to submit on this question to the General Council in the shape of documents. The Scotch members knew nothing of the matter.

The PRESIDENT explained that the charter was a copy of that found in the report of the Royal Commission. It had been presented to the Privy Council, and the Privy Council had intimated a desire to hear counsel on this subject on the 22nd of this month.

Sir WM. TURNER: Yes, but we know nothing about it. Have the projectors of this university, or has any other official body, sent you a copy of the Charter for presentation to this Council. I know nothing about it, and ought not to be called upon as a member of this Council to be asked to give an opinion upon a question of which I know nothing. Documents should have been laid before the Council. It seems as if there were certain favoured members of this Council who had received information on this subject. This was a London question, I am told. Then let it be settled in London. One half of the Council do not sit here as London representatives, but as representing other divisions of the kingdom.

Sir JOHN SIMON noted that in the scheme there was an express provision that "no medical degree shall be conferred on any person who has not previously obtained a qualification for registration," so that the notion of a fifth body might be discredited. But he would join in Professor Turner's objection on another ground—viz., that the Council should now, at the eleventh hour, be called upon to vote on a particular aspect only of the case. Any time for years past this Council might have appointed a committee to consider the whole subject of this university curriculum for London students, and request the President to appear on behalf of the Council and represent its views. But to be asked to give an opinion at this particular time and from a particular point of view, almost in a partisan spirit, was not right.

Dr. MACALISTER thought the subject had now entered upon a new phase. Now for the first time the Council was face to face with a matter of public interest, the establishment in London of a new qualifying body, because, in spite of the provision in the draft Charter, he thought anyone who remembered the history of the Victoria University would not be at all inclined to believe that provision would stand for long. It might be that before the next meeting of the Council that clause, which was merely thrown in as a "sop to Cerberus," would be cast out, and they would be face to face with the fact that a new degree-giving body had been started in London with the power of putting students on the Register and claiming to be represented on the General Medical Council. He proposed as an amendment to the resolution of Sir Walter Foster: "That in the opinion of this Council it is not desirable in the public interest that a new and independent body empowered to grant medical degrees should be created in London in addition to those already existing."

Sir DYCE DUCKWORTH seconded the amendment.

Dr. GLOVER looked upon this as a serious and difficult question. He wished to express himself entirely in sympathy with the desire to give additional facilities to London students acquiring degrees. He protested at once against the idea of a university that would not have a degree-giving power. Such a suggestion was utterly impracticable. To ask the Council, without hearing parties, and without having documents before them, to take a one-sided view of the matter, was to bring the Council into an undignified position. The Council had not been asked by the Government for their views. The Government had referred the matter to a Royal Commission, and that Commission had sat for years. The London University and the schools of London had been exercised in the matter for years, but the Council was now asked to give in a quarter of an hour its decision on a very one-sided and very questionable resolution. He hoped that the resolution would not be pressed. The Council was made up very largely of bodies with which this new University would enter into competition. There were representatives of nine universities and nine corpora-

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tions at this board, and very many eminent members who were graduates of the University of London. The Lord President would at once see that the Medical Council, constituted as it was, was not a body from which to obtain the most impartial advice.

At this point of the discussion, Dr. HERON WATSON moved, and Dr. BRUCE seconded, the previous question. This appeared to be lost by the casting vote of the chairman, but on the names and numbers being taken twelve were found to have voted against and ten for the motion.

The PRESIDENT felt it was his duty to point out that from the earliest period the object of the Council had been to keep within bounds the number of licensing authorities. They had succeeded, by combination of bodies, in doing so to some extent. Now it was proposed to establish a new licensing authority, which would inevitably lead to a "battle of the shops" in London. The University of London was perfectly independent, and had no interests to serve but those of education. But this proposed new University could only live by the sale of its degrees. It was therefore most desirable that a representation should be made to the Privy Council to say that if they established a University with a power to confer degrees, that that power should not confer the licence to practise.

Sir JOHN SIMON thought every member of the Council must disclaim the desire to multiply authorities. He had always desired as far as possible to consolidate examining responsibilities. This resolution was not doing justice to the opposite side. The title of doctor nowadays did not purport to mean anything more than was meant by the Conjoint Board examination, but it had come to have a very different significance in what he might call the labour market. The Conjoint Board man found himself at a disadvantage with the Scotch M.D. in what he might call the labour market, and he asked why he could not have the title of doctor on some similar terms. That was a case that required fair consideration, and should not come at the very tail of the business of this Council.

The PRESIDENT said the main question was whether the Council was to set still and see another licensing body created. The Council had been ignored, and ought to protest against that in the first instance. They had a right to say that they were not prepared to recommend the creation of another licensing body.

Mr. MACNAMARA considered this one of the most serious questions that could be brought under the notice of the Council. As to the question of standing on their dignity, it was perfectly clear that it would go on the wings of the press to the medical profession, if not to a far larger circle, that the Council, standing on their dignity, objected to give expression to its opinions on a matter of vital interest to the profession. They were bound to vote one way or the other, and he was perfectly willing, and, indeed, anxious, to adjourn the question to the following day, so that it might be more fully discussed.

Dr. BRUCE was distinctly of opinion that this question should be considered properly, and he would vote against Dr. Macalister's amendment on the grounds that he for one did not understand it.

Sir WALTER FOSTER said he could not accept the amendment of Dr. Macalister. The difficulty of it was that it did not express on the part of the Council a desire to meet the laudable ambition of the medical profession to have an opportunity of obtaining degrees in medicine in connexion with the London schools. In that respect the amendment was an insufficient statement of what the opinion of the Council should be. Sir John Simon had protested against the resolution as being one-sided. The resolution was not one-sided; it simply expressed sympathy with the laudable object, and did not interfere with the scheme in question; it was not in opposition to any existing proposal. It was further objected that it was hasty, but he pointed out that this matter had been before the profession for many years. Every individual member knew a great deal about it, and therefore it was not hasty. If members were not fully informed on this subject they had not read the medical journals during the last few years. The necessity for action in the matter had now arisen, for within the last few weeks it had reached an acute stage, and they had now the prospect of the Privy Council coming to a decision within the next few weeks and granting a Charter. He did not think that there was any ground of complaint because the question had been brought up a quarter of an hour before the adjournment of the Council, as there was no limit to the Council's meeting except the business before it and the discretion of the members. The position was absolutely new as well as urgent. He hoped to carry his resolution.

Dr. Macalister's amendment was then put and negatived.

Sir Walter Foster's motion now became the substantive motion, and Dr. GLOVER proceeded to propose the following amendment: "That the Council views with the greatest sympathy the demand for the creation of a Teaching University for London, and the additional facilities for the acquisition of medical degrees by London students, and trusts that this demand will have the earnest and early attention of Her Majesty's Government." He pointed out that there was nothing in his amendment which necessitated the creation of a fifth licensing body. He agreed with the Council that it was not desirable to have a second university in London. But he reminded the Council that they had five millions of people in London, and could even bear a second one. It was desirable that existing bodies should be mutually concessive, and thus enable Her Majesty's Government to solve the problem without the addition of a fifth body.

This amendment was negatived, and the original motion was carried. The names were taken down, and it was found that thirteen members had voted for the motion, six voted against it, three did not vote, and eight members were absent.

On the motion of Dr. MACALISTER, the President was authorised to communicate this resolution to the Lord President of the Privy Council, with the request that the General Medical Council may be notified of any proposals about to be made on this subject.

The various committees were then elected.

The Lancet Relief Fund.

After the conclusion of the business on the agenda the Registrar (Mr. Miller) informed the Council that on Feb. 25th, 1889, the Executive Committee approved the arrangement that the President of the Council should act as one of the almoners of THE LANCET Relief Fund, and that Mr. Marshall, in his opening address on May 28th, 1889, stated that he had, as President, accepted the position, and the arrangement was sanctioned by the Council. Sir Richard Quain was willing, as requested, if the Council should approve, to undertake, as President, to act likewise as almoner to THE LANCET Relief Fund. On the motion of Dr. Macalister, seconded by Sir Walter Foster, the Council agreed "that the arrangement be approved whereby Sir Richard Quain, as President, undertakes to act as one of the almoners of THE LANCET Relief Fund."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE following letter has been sent by the Lord Mayor for publication in the various metropolitan newspapers:—

To the Right Hon. the Lord Mayor of London.

MY LORD,—Special effort ought to be made at the present moment to bring before the public the work and claims of the Hospitals and Medical Charities of the Metropolis, in view of the collection in their support appointed to be taken on Sunday next. To the majority of Londoners the subject has been made familiar, but in so large a community there are probably not a few able and willing to help if the facts of the case were brought to their knowledge. A succinct statement may therefore at this time be both interesting and useful.

The Hospital Sunday collection was instituted in the year 1873, with the object of systematising and extending the plan previously adopted in not a few places of worship in the metropolis, of setting apart the proceeds of one Sunday's collection during the year in aid of hospitals and kindred charities. The suggestion was from the first most warmly taken up by the religious bodies and municipal authorities of London, and the amount realised on the first occasion was £25,855 13*s.*, contributed by 1072 congregations, which sum was augmented by legacies and special donations, and so raised to the total sum of 27,700 8*s.* 1*d.* This was, however, but the beginning of a great movement. From year to year there has been an almost uninter-

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rupted growth in the amount of the collection and in the extent of the area from which it is drawn. The number of congregations contributing to the Fund last year was 1712, and the amount realised £38,823 2*s.* 1*d.*, which was subsequently raised by means similar to those already mentioned to £42,814 16*s.* 9*d.* Altogether the amount collected and distributed by the Mansion House Committee during the past eighteen years has come to not less than £598,523 3*s.* 2*d.*

In awarding its grants the Council proceeds upon certain definite and well-known principles. Four things are taken into consideration in determining the amount which any one hospital is to receive.

1. Its expenditure. 2. By way of deduction, its income from legacies and realised property. 3. By way of deduction also, its expenses of management. 4. The result so arrived at is to be revised upon a consideration of the merits and pecuniary needs of the institution in question.

Thus the points considered may be stated in this way. First, magnitude of the operations conducted; second, dependence upon charitable support; third, cheapness of administration; with a final review of any special claim which can be advanced upon the ground of peculiar merit or exceptional need.

By means of such an examination, annually repeated, the Council secures the best disposition of its own funds; and the effectiveness of the criticism so brought to bear upon the institutions applying for aid may be gathered from the circumstance that in about a dozen instances in the course of the year the Council will either, in an extreme case, refuse a grant altogether, or, in a case of unsatisfactory management or irregular accounts, accompany its grant with an admonition. Nor is the wise administration of its own funds the only result which the Mansion House Committee has thus secured. At the same time that it has enforced economy for one purpose it has enforced it for all purposes, and has thus become in a certain sense the guardian of the public interest in respect of the entire charitable income of the metropolitan hospitals, and keeps a vigilant watch upon their whole expenditure. From materials collected by the Committee it appears that that expenditure amounted in the aggregate last year to £806,258.

Over and above these primary objects of the collection and distribution of the fund, the Council undertakes the distribution of a large number of surgical appliances. About 6 per cent. of the amount annually collected is devoted to this purpose, and the number of appliances so placed at the service of the crippled or otherwise disabled poor exceeds 2000 in the year.

As to the extent of the work done by the hospitals of London, and the number of persons engaged upon it, the following figures may be taken to give, as nearly as they can be ascertained, the effect of one year's operations. In-patients received 89,000—a number exceeding the entire population of the town of Wolverhampton; discharged relieved, 36,000; cured, 37,000; deaths, 6000. Visits paid by out-patients, *two and a quarter millions*. To deal with these patients there are attached to the various hospitals about 250 consulting physicians and surgeons, 550 physicians and surgeons in regular visitation at the hospital wards, 150 resident medical officers, and 1400 nurses, including matrons and sisters belonging to the nursing staffs.

I have the honour to remain, My Lord,
Your obedient servant,
5, Queen's Gate, S.W. THOMAS WAKLEY.

WE are able to announce the following subscriptions, received at the Mansion House up to the 4th inst., in aid of the above fund:—

	£	*s.*	*d.*
E. A. H.	500	0	0
Thos. Muir Drew, Esq.	5	5	0
E. H. F.	50	0	0
Ludwig Mond, Esq.	100	0	0
Miss M. Pope	10	10	0
S. C. K.	10	10	0
M. J. Marsden, Esq.	25	0	0
London Knot of the Friendly Brothers of St. Patrick	10	10	0
Sir R. M. Stephenson	10	10	0
Armourers' and Braziers' Company	8	18	6
Geo. Harker & Co.	10	10	0
A. Leichtenstadt, Esq.	26	5	0
Messrs. Wakley, Editors of THE LANCET	100	0	0

ARMY MEDICAL STAFF.

WE have been favoured with a copy of the subjoined letter, which we have pleasure in publishing:—

War Office, May 29th, 1891.

DEAR SIR ANDREW CLARK,—In continuation of the correspondence which has passed between us, and in reference to the conversation which I recently had with you relative to the status of the medical officers of the Army, I now have the pleasure to inform you that I have given directions for the preparation of a Royal Warrant conferring the following privileges upon the officers in question:—

1. The following substantive ranks to be granted, such ranks to carry precedence and other advantages (except military command, as laid down in present regulations) attaching to the rank indicated by the military portion of the title:—

Surgeon Major-General.
Surgeon-Colonel.
Brigade Surgeon Lieutenant-Colonel.
Surgeon Lieutenant-Colonel.
Surgeon-Major.
Surgeon-Captain.
Surgeon-Lieutenant.

2. Medical officers to be granted sick leave on the same conditions as those which apply to combatant officers.

I trust that this will bring to an end the controversies that have recently prevailed, and which personally I have much regretted. Thanking you for the assistance which you have given in arriving at a settlement,

I remain, yours very faithfully,
EDWARD STANHOPE.

OXFORD UNIVERSITY.

VOTE OF £7000 FOR THE NEW DEPARTMENT OF HUMAN ANATOMY.

IN a Convocation of the University, held at two o'clock on Tuesday last, a decree authorising the expenditure of a sum of £7000 for a dissecting-room, museum, working rooms, and lecture theatre for the Department of Human Anatomy was carried by a majority of 193 to 46.

The vote was proposed by Professor Price, F.R.S., on behalf of the University Council, in a lucid speech, in which, after explaining from what sources the required sum was to be provided, he traced the history of the Department of Human Anatomy from its origin in 1885 to the present time. He stated how the lecturer on anatomy had begun his work in Oxford with three or four pupils in a temporary shed erected by subscription in the yard of the physiological laboratory, how his class had year by year increased, at first gradually, afterwards more rapidly, until now he had forty men dissecting. Professor Price proceeded to state that the plans of the proposed building had been submitted to the criticism of the most distinguished anatomists in the United Kingdom, and had received their approval. Before recommending so large an expenditure the Council had carefully inquired, not only as to the efficiency and completeness of the instruction given, but as to the prospect which at present exists of developing an efficient school of medical science in Oxford. A few years ago there had been no students of medicine; now the number was increasing at a rapid rate. Provision had already been made for teaching the other introductory scientific subjects—viz., Physiology, Materia Medica, Organic Chemistry,—and he had no doubt that if they now provided for Human Anatomy in such a way as its importance demanded, the results would be even more satisfactory than they had been.

The vote was opposed strongly by the Warden of All Souls (Sir W. Anson), to whom in a vigorous speech the President of Corpus (Dr. Fowler) replied. He was followed by Dr. Theodore Williams on the Educational Value of Human Anatomy, and by Dr. Church (the representative of the University on the General Medical Council), who testified as to the efficiency of the teaching of anatomy as now conducted under the direction of Mr. Arthur Thomson, and gave his experience as physician to St. Bartholomew's Hos-

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pital as to the thoroughness with which men were trained in that and other subjects in Oxford.

Immediately after the vote was taken a second decree was submitted to the House for the extension of the department of animal morphology under the direction of the Linacre Professor of Comparative Anatomy (Professor Ray Lankester). This was carried after some discussion *nem con.*

A considerable number of medical members of Convocation had undertaken the journey from London to be present at this important vote. We observed, in addition to the speakers mentioned above, Dr. Andrew, Dr. Payne, Dr. West, Dr. Southey, Mr. Bruce Clarke, and many others. They were warmly welcomed by their friends in Oxford.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE thirty-eighth annual general meeting of the governors of this College was held on Thursday, May 28th, at the office, 37, Soho-square, London, Dr. Holman (Treasurer) in the chair. There were also present Sir E. Sieveking, Sir Joseph Fayrer, K.C.S.I., Sir J. Jennings, Dr. and Mrs. Felce, Drs. Baines, Dickinson, C. Taylor, Galton, F. Taylor; Messrs. John Croft, Jabez Hogg, S. G. Felce, E. Parker Young, Geo. C. Croft, H. Morris; the Rev. E. W. Northey, Surgeon-Major Ince, and Mr. J. Bernard Lamb (Secretary).

The SECRETARY read the report, which dealt exhaustively with the affairs of the College, and in which the Council adverted in terms of the deepest regret to the death of Earl Granville, who for twenty-six years had been the valued president of the institution, and who so recently as last year supported Sir James Paget, Bart., at the annual festival.

The CHAIRMAN, in moving the adoption of the report, referred to the decreasing scale of education of the foundation scholars sent to Epsom College, which he thought was due either to the woeful neglect of home influence or to the fact that, having been once admitted as candidates, the parents, knowing that sooner or later their boys would be sent to Epsom College, became careless. After the worry of an election it would be very hard for the Council to send a boy away because he had been neglected at home. He was sorry to say that the annual subscriptions were decreasing. They had received some very important gifts from the public and the profession, but the annual subscriptions were the backbone of the institution. He regretted to say that the proposed permanent Endowment Fund and the generous offer of the Editors of THE LANCET at the last festival had not met with the response they deserved. He also referred to the fund raised by the friends of the late Dr. Francis Edmund Anstie for the purpose of founding a scholarship tenable for four years at Oxford or Cambridge.

Dr. BAINES seconded the adoption of the report.

Mr. JABEZ HOGG, in referring to the circumstance of the boys coming ill-prepared for the standard required of them, said they ought to reflect how hard a struggle it must be for a widow with perhaps ten children to prepare her boy to become a candidate, more especially seeing that Board schools were hardly fit and proper schools to which children whose parents were suddenly arrested in a career of prosperity should be sent. That was a prejudice which existed, but which would perhaps wear off if education became free all round. He felt that these were extenuating circumstances, and he hoped the Council would take them into consideration and see whether something could be done for those children before they were sent to Epsom College, where the education was of such a very high character. He thought that it was only necessary that it should become known that there was something wanting in the earlier education of the children, and he felt sure that some offer would be made to meet the difficulty. At Christ's Hospital and other institutions there was a preliminary stage, in order to prepare the boys for the higher standard required, and he thought something of the kind might be taken into consideration by the Council. The report, he considered, was very encouraging, as was also the work of the committee in having elected eight of the candidates for foundation scholarships and all the candidates for pensionerships recommended by the Committee of Selection.

Sir EDWARD SIEVEKING moved, and Mr. JABEZ HOGG seconded, that Mr. John F. France be elected a vice-president of the institution, which was carried unanimously. In proposing a vote of thanks to the chairman, Sir Edward Sieveking assured the meeting that the question of the backwardness of foundation scholars had not been overlooked, but hitherto the funds of the institution were not sufficient to do all that they could wish.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.

THE fifteenth annual meeting of this Association was held on May 29th in the rooms of the Royal Medical and Chirurgical Society, under the presidency of Dr. B. W. Richardson, F.R.S. The annual report showed a membership of 397 medical abstainers and 118 abstaining student associates. A resolution of congratulation was sent to Dr. Nathan S. Davis of Chicago, and Dr. T. D. Crothers, the president and secretary of the American Medical Temperance Association, which has just been formed on the same lines. The prizes of £10 and £5 which were offered by the Association to medical students in their third year on a written examination on "Alcohol, and its Action on the Body," were presented to the successful competitors—Mr. U. L. Desai of Grant Medical College, Bombay, and Mr. A. E. Couzens of St. Mary's Hospital. The honorary secretary, Dr. Ridge, then read a paper by Dr MacDowel Cosgrave on "Alcoholic Self-Delusion," in which he adduced various facts and experiments which showed how alcohol deluded and impaired the senses, and reduced the strength and vitality, while the persons taking it imagined it was doing them good. A discussion followed.

ASSOCIATION OF NEUROLOGISTS AND ALIENISTS.

THERE is now (6th and 7th inst.) being held at Baden-Baden the sixteenth meeting of an Association of Neurologists and Alienists of South-Western Germany. The programme includes the following communications:—

Prof. ERB (Heidelberg): 1. Tumour of the Cerebral Cortex successfully removed by Operation. 2. New Statistical Results on the question of Tabes and Syphilis.

Prof. SCHULTZE (Bonn): Nervous Diseases following Traumatism.

Prof. STEINER (Cologne): Hysterical Sleep.

Prof. JOLLY (Berlin): Trophic Derangements in Spinal Cord Disease.

Prof. MINKOWSKI (Strassburg): Pathological Anatomy of Rheumatic Facial Paralysis.

Prof. WEIGERT (Frankfurt): Staining the Medullary Sheath.

Dr. HOCHE (Strassburg): The Ganglion Cells of the Anterior Roots in the Spinal Cord.

Prof. THOMAS (Freiburg): Cases of Hemiplegia.

Prof. SCHRADER (Strassburg): Experimental Focal Inflammation of the Central Cortex in the Dog and Pigeon.

Dr. FRIEDMANN (Mannheim): The Effects of Cerebral Concussion.

Prof. HOFFMANN (Heidelberg): 1. Tetany. 2. The Muscles in a Case of Congenital Hypertrophy.

Prof. von KAHLDEN (Freiburg): Addison's Disease.

Dr. EDINGER (Frankfurt): Pain.

Dr. GILBERT (Baden): Sulfonalismus.

Also papers and demonstranions by Prof. Wiedersheim (Freiburg), Dr. Knoblauch (Frankfurt), and Prof. Marx (Freiburg).

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Aston Rural District.—Whilst the general vital statistics for this district are in the main satisfactory, Dr. Bostock Hill points out that the rate of infant mortality in Aston exceeds that of all the rural districts in the county, and he says that we must look to visitors and philanthropic workers

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to educate the lower stratum of the population, rather than to the sanitary staff, if the waste of human life in question is to be prevented. The isolation hospital is stated to have been of the greatest service during the year, but the accommodation available seems to be limited to two diseases only. It is very properly explained that the adoption of new codes of by-laws must be looked upon as one of the most important features of the year's work. In all probability few things will be more likely to secure a higher standard of health for the next generation than careful supervision as to the wholesome construction of dwellings, and such laying out of streets as will ensure ample movement of air in and about houses. But by-laws alone will not do this. A properly trained and energetic building surveyor or inspector must see that the by-laws are enforced at every stage of the building operations.

Spilsby Rural District.—Dr. Francis J. Walker records that owing to notification he was able, in each reported case of diphtheria, to take such steps as to limit the disease to the first patient attacked, although in some cases several children resided in the invaded houses. In his *résumé* of sanitary work effected and still needed, he urges strongly the necessity for public scavenging at Spilsby and at Wainfleet. Such practice is, of course, needed in every place where the inhabitants have not adequate garden ground in which to deposit their refuse. The general death-rate for 1890 exceeded the average, and reached 17·0 per 1000 living; but the zymotic mortality was low.

Radcliffe Urban District.—The steps adopted on receipt of notification returns are explained by Dr. W. Sellers, jun., and having regard to this statement as to sixty-seven typhoid fever notifications that "every case of typhoid represents some sanitary defect," we may hope that work of the class described will be entered into by house-to-house inspection quite irrespectively of the occurrence of a disease which must be regarded as eminently preventable. Some such system of inspection is in force, and good work is being done; but the best success follows on a regularly organised system in which the sanitary conditions of every house are methodically recorded under different headings, together with the proceedings suggested and taken.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6352 births and 5568 deaths were registered during the week ending May 30th. The annual rate of mortality in these towns, which had been 32 and 30·5 per 1000 in the preceding two weeks, rose again to 30·9 last week. The rate was 28 9 in London and 32·6 in the twenty-seven provincial towns. During the first seven weeks of the current quarter the death-rate in the twenty-eight towns averaged 28·4 per 1000, and exceeded by 7·6 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 16·5 in Norwich, 19 in Hull, 21 in Plymouth, and 21·5 in Portsmouth; the highest rates were 39·9 in Oldham, 43 6 in Huddersfield, 44 1 in Manchester, and 45·9 in Salford. The very high rates in the last-mentioned towns were due to the fatal prevalence of influenza. The deaths referred to the principal zymotic diseases, which had declined from 461 to 361 in the preceding four weeks, further fell to 357 last week; they included 140 from whooping-cough, 94 from measles, 42 from diarrhœa, 38 from diphtheria, 22 from "fever" (principally enteric), 23 from scarlet fever, and 1 from small-pox. No deaths from these diseases were recorded in Norwich or Wolverhampton; in the other towns the rates ranged from 0·5 in Birkenhead and 0·6 in Newcastle-upon-Tyne to 2·6 in Leicester, 2·9 in Salford, 3·2 in Manchester, and 3·9 in Nottingham. The greatest mortality from measles occurred in Hull, Portsmouth, Preston, and Nottingham; from scarlet fever in Halifax; and from whooping-cough in Liverpool, Leicester, Plymouth, and Manchester. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. One death from small-pox was registered in London, but not one in any of the twenty-seven provincial towns; 25 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals at the end of the week was 916, against 924 and 927 at the end of the preceding two weeks; the patients admitted during the week were 88, against 118 and 66 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 620 and 601 in the preceding two weeks, further declined to 591 last week, but were more than double the corrected weekly average. The causes of 118, or 2·1 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Sunderland, Cardiff, and in four other smaller towns; the largest proportions of uncertified deaths were recorded in Salford, Liverpool, Huddersfield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·1 and 23·8 per 1000 in the preceding two weeks, further declined to 23·3 during the week ending May 30th, and was 7·6 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 16·7 in Leith and 17·9 in Dundee to 28·9 in Glasgow and 29·9 in Paisley. The 607 deaths in these towns showed a decline of 15 from the number in the preceding week, and included 23 which were referred to measles, 22 to whooping-cough, 9 to "fever," 6 to scarlet fever, 4 to diarrhœa, 3 to diphtheria, and not one to small-pox. In all, 67 deaths resulted from these principal zymotic diseases, against 83 and 84 in the preceding two weeks. These 67 deaths were equal to an annual rate of 2·6 per 1000, which exceeded by 0·6 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had increased from 22 to 34 in the preceding three weeks, declined last week to 23, of which 15 occurred in Glasgow and 7 in Paisley. The deaths referred to whooping-cough, which had been 32 and 24 in the previous two weeks, further fell to 22 last week, and included 10 in Glasgow, 4 in Edinburgh, and 4 in Dundee. The 9 fatal cases of "fever" exceeded the number in any recent week, and included 5 in Glasgow. The 6 deaths from scarlet fever were within 1 of the number in the preceding week; 5 occurred in Glasgow, where the 3 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 141 and 145 in the preceding two weeks, further rose last week to 173, and exceeded by as many as 71 the number in the corresponding week of last year. The causes of 61, or 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding three weeks from 26·4 to 20·8 per 1000, further declined to 18·8 during the week ending May 30th. During the first eight weeks of the current quarter the death-rate in the city averaged 24·6 per 1000, the rate for the same period being 25 in London and 20·5 in Edinburgh. The 127 deaths in Dublin during the week under notice showed a decline of 14 from the number in the preceding week, and included one from diarrhœa, but not one from any other of the principal zymotic diseases. The zymotic death-rate did not exceed 0 1 per 1000, and was lower than in any week on record; since the commencement of the current quarter the death-rate from the principal zymotic diseases in Dublin has been only 0·8 per 1000, the rate for the same period being 2 both in London and in Edinburgh. Since the beginning of this year Dublin has enjoyed an unusual immunity from the fatal prevalence of any zymotic disease. The 127 deaths in the city last week included 15 of infants under one year of age and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further marked decline from the numbers recorded in recent weeks. Six inquest cases and 5 deaths from violence were registered during the week, and 49, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 7 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

THE Commander-in-Chief has approved of the Volunteer Medical Staff Corps of London, Edinburgh, Aberdeen, and Norwich being permitted to encamp at Aldershot in the

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first week of August, for training with the Regular Medical Staff Corps; and for the Leeds corps at the same time to go to Netley Hospital for the same purpose.

ARMY MEDICAL STAFF.—2nd Life Guards: Surgeon Henry Mitchell, from the Grenadier Guards, to be Surgeon (dated June 3rd, 1891); Surgeon Edward Head Moore, Falmouth Volunteer Division, Royal Engineers, to be Surgeon, ranking as Captain (dated May 30th, 1891).

NAVAL MEDICAL SERVICE.—The following appointment has been made at the Admiralty:—Mr. Ernest F. Gardiner to be Surgeon and Agent at Ilfracombe, Croyde, Morthoe, and Coombe Martin (dated June 3rd, 1891).

VOLUNTEER CORPS.—*Artillery:* 2nd Cinque Ports (Eastern Division, Royal Artillery): Surgeon and Surgeon-Major (ranking as Major) A. R. Ticehurst resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated May 30th, 1891); Acting Surgeon C. Ashenden resigns his appointment; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated May 30th, 1891).—1st Caithness: David Durran, M.B., to be Acting Surgeon (dated May 30th, 1891).—*Rifle:* 6th Volunteer Battalion, the Royal Scots (Lothian Regiment): Surgeon C. J. Allan is granted the rank of Surgeon-Major, ranking as Major (dated May 30th, 1891).—1st Volunteer Battalion, the Lincolnshire Regiment: Wm. Henry Breifit Brook, M.B., to be Acting Surgeon (dated May 30th, 1891).—2nd Volunteer Battalion, the Lincolnshire Regiment: Launcelot William Andrews, M.B., to be Acting Surgeon (dated May 30th, 1891); Surgeon Hugh Jones Roberts to be appointed Captain (dated May 20th, 1891).—4th Volunteer Battalion, the Cameronians (Scottish Rifles): Surgeon D. Newman, M.B., resigns his commission (dated May 30th, 1891).—2nd Volunteer Battalion, the Duke of Cambridge's Own (Middlesex Regiment): Surgeon J. Prince resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Battalion on his retirement (dated May 30th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Manchester Division: Surgeon S. McC. Boyd resigns his commission (dated May 30th, 1891).

Correspondence.

"Audi alteram partem."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—I am anxious, by your courtesy, to remind the public that next Sunday, June 7th, is the day appointed for this year's collection on behalf of the Hospital Sunday Fund.

Hospital Sunday gives everyone an opportunity of making some contribution in aid of those noble institutions which do so much for the relief of human pain and suffering. Nearly 200 hospitals, convalescent homes, and dispensaries participate in the distribution of this fund, and at least £100,000 is very really needed to meet the requirements of the next twelve months.

In consequence of the prevalence of influenza there has lately been a considerable strain upon our hospitals and dispensaries. May I, therefore, plead most earnestly for a generous response this year? Those who may be absent from public worship next Sunday will, I hope, forward their contributions either to some local collection or direct to me here. Cheques or postal orders should be crossed "Bank of England."—I am, Sirs, your obedient servant,

JOSEPH SAVORY, *Lord Mayor.*

Mansion House, June 3rd, 1891.

UNIFORM HOSPITAL ACCOUNTS.

To the Editors of THE LANCET.

SIRS,—There appeared in *The Times* of Tuesday morning last a brief notice of the evidence which I had given on the previous day before the Select Committee of the House of Lords upon Metropolitan Hospitals. This notice, while giving the substance of an illustration which I had adduced from the accounts of three great hospitals of the metropolis, to show how difficult it was to discover from this source to what extent they had benefited by legacies during the year, omitted to give the explanation which I tendered to the committee—namely, that the omission of legacies from the account of income or their inclusion as an item of expenditure, though very anomalous and hard to understand in a statement of accounts intended for the public eye, was in its origin a perfectly legitimate and proper way of keeping the accounts, assuming them to have been prepared for submission to the Council of the Hospital Sunday Fund. The reason of this is, as your readers will easily perceive, that the Council, in arriving at the measure of the institution's claims, writes off from its expenditure a sum equal to its income from legacies. To provide for this operation the expenditure must obviously be first augmented by the same sum or the income diminished thereby, as otherwise the receipt of income from this source would be heavily penalised by the Mansion House Committee. No blame, therefore, can attach to the officers of the hospitals for preparing their accounts and having them audited in this form, and I was careful to put this fact before the Committee. A reader of *The Times résumé* could hardly gather this, and would on the contrary be only too likely to suppose that I had brought a serious accusation against the hospitals in question. Upon seeing the notice on Tuesday morning I wrote at once to the editor of *The Times*, giving the foregoing explanation and requesting its insertion in the columns of his paper; but as I have not up to the present time observed any reference to my communication, and as the original paragraph has already been copied into other papers, I am constrained to ask you to give me the opportunity of making the explanation publicly known.

I am, Sirs, your obedient servant,

Plowden-buildings, Temple, June 4th, 1891. J. W. GORDON.

THE ACTION OF ASPARAGUS ON THE KIDNEY.

To the Editors of THE LANCET.

SIRS,—During the asparagus season, when patients are constantly asking if they may partake of this favourite vegetable, and they are assured by their medical attendant that it is both wholesome and diuretic, I wish to know if this latter character assigned to it is correct and substantiated by careful observation. I am acquainted with instances where the very opposite is the effect. The urine is diminished to half the usual quantity and micturition lessened in proportional frequency. Dr. Lauder Brunton says that the odoriferous character of the secretion is due to the decomposition of asparigin, and that one of the products is supposed to be succinic acid. Has this alkaloid a stimulating or inhibiting action on the kidney?

I am, Sirs, yours obediently,

Grosvenor-street, June 1st, 1891. SAMUEL WILKS.

THE BIRTHDAY HONOURS AND SURGEON PARKE.

To the Editors of THE LANCET.

SIRS,—The birthday gazette has been published, and no recognition has been made of Surgeon Parke's eminent and heroic services. A short time ago Lieutenant Stairs, R.E., was promoted to a company in a line regiment, and has since been again seconded to go on an expedition to Africa, planned by a foreign power (Belgium). Captain Stairs has thoroughly deserved all he has got; but why should Surgeon Parke, who was the only other army officer with Stanley, and who has twice Captain Stairs' service, and has been through two campaigns, be passed over without any similar official recognition of his services? How well he was thought of by Mr. Stanley is a matter of history. The bestowal of the Fellowship of the Irish College of Surgeons, of the gold medal of the British Medical Association, and the degree of Doctor of Civil Law of Durham University, besides numerous other public and private testimonials, amply testify to the approbation by the medical faculty and the laity of Surgeon Parke's valuable and humane services during the three memorable years he was in Central Africa.

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The Albert Medal has been gained by deeds far less heroic than those testified by Captain Stairs in a letter to THE LANCET of the 23rd ult., and also in a letter from him read by the Director-General at a dinner given to Surgeon Parke by his brother officers of the Army Medical Staff last year, in which Captain Stairs distinctly stated that by sucking his (Captain Stairs') wound Surgeon Parke saved his life. The risk Surgeon Parke ran in so doing was amply testified to by the deadly effect similar wounds had on Stanley's black soldiers. Is this noble action in any way inferior to the sucking of the tracheotomy tube in a case of diphtheria by Surgeon Grier in Malta some years ago, and for which he received the Albert Medal? People, especially civilians, believe that his being appointed to the Life Guards is in some way promotion or recognition of his services; but let me assure them it is nothing of the sort, and that since the special medical service of the Guards was abolished, any medical officer who has just come from abroad may be appointed to one of the regiments of Guards in which there may be a vacancy until his turn comes to go abroad again. The appointment is a pleasant one, but monetarily is not one that a poor man cares to have, as it carries with it no increase of pay, but only increase of expenses. I served in the Camel Corps in the Bayuda Desert with Surgeon Parke in 1884–85, and can testify to the bravery, devotion to his duties, and professional zeal he exhibited there during that trying time of "fighting and fasting." Red tape runs riot in the army, but in no branch of it more than in the medical staff—as the medical officers composing it know to their cost; but cannot they for once cut through the chains that bind them and be generous as well as just to an officer who has added such glory and renown to the whole medical service of the army? I have written, I fear, at great length, but the utter injustice meted out to Surgeon Parke must be my excuse, and which injustice I trust you will assist in exposing and remedying.

I am, Sirs, yours faithfully,

J. R. S. ROBERTSON,

London, June 2nd, 1891. Late Surgeon Medical Staff.

THE NATURE AND NAME OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—Being now engaged in compiling a record as complete as possible of the last two epidemics of influenza, with special reference to the modifications in the views held as to the nature of the disease consequent upon recent experience, I make bold to ask you to allow me through your columns to invite your readers to send me their experiences of and opinions upon the subject. The results, positive or negative, of post-mortem examination of the brain and spinal cord would be especially valuable and appreciated by me.

Although Graves in 1837 insisted upon the essential part played by the nervous system, and especially the nerves of the lungs in this disease, influenza up to 1857 was looked upon as a catarrhal affection, associated with great depression, and capable sometimes of assuming malignant properties. In 1857 Professor Gairdner showed that the disease was not a catarrh, but a fever—i.e., a vital reaction caused by the entrance into the body of a specific poison, and not the result of inflammatory states of the mucous membranes. There is, it appears to me, a certain retrogression towards the tenacious old catarrhal theory in Dr. Bristowe's definition of influenza: "A contagious affection of *the respiratory tract*," &c. (The italics are my own.) In THE LANCET of Jan. 18th, 1890, I suggested that the poison of influenza attacked primarily and chiefly the central nervous system. This, I believe, was the first time that view of the disease had been definitely stated. It is now held by many who have interested themselves specially in the disease, notably Dr. Brackenridge and Dr. Bezly Thorne, though the latter goes too far, I believe, when he speaks of a cerebro-spinal inflammation. In THE LANCET of Aug. 30th, 1890, I wrote: "Influenza attacks primarily and chiefly the central nervous systems, hence arise these groups of specific phenomena: 1. Those referred directly to the nerve centres. 2. Those referred to other parts, consisting of a loss of vascular, functional, and sensory tone. 3. Those consisting of disturbances of the vital functions due to involvement of the vital centres.' The constant presence of central symptoms, their frequent severity, and occasional persistence amply prove that the nerve centres are seriously damaged by the poison. I do not mean to contend that there is necessarily inflammation present in the brain and spinal cord, but only that they are injured in a similar manner as in concussion. In well-developed cases the affected centres from time to time, either spontaneously or from slight causes, light up into a state of irritation (such as occurs in Jacksonian epilepsy), and, acting through the nerves, produce in the various parts those curious, apparently diverse, symptoms characteristic of a well-developed but uncomplicated case of influenza. The symptoms in question simulate very closely the acknowledged nervous disorders of the parts—hay fever, asthma, angina, atonic dyspepsia, hysterical polyuria, anæsthesia, and dyspnœa—syncope or cardiac depression such as accompanies shock. Considering how little care is often taken to guard influenza patients from exposure, the infrequency with which well-marked inflammation occurs is very remarkable. When it does arise—at any rate, in the lungs—it is often associated with a widely spread and intense congestion and œdema of those organs (Graves' paralysis of the lungs). In such a case, when fatal, death, I believe, may be fairly attributed (*pace* Dr. Wilks) to congestion rather than inflammation of the lungs, the latter being sometimes insignificant in extent, the primary cause being really central. Could not some of your readers invent a rational name for this plague. "Influenza" is indissolubly associated with catarrh, and is scarcely the name of a disease at all. Why not call it centro-neural fever?

I am, Sirs, yours faithfully,

London, June 1st, 1891. THOS. GLOVER LYON.

"SEQUEL TO A CASE OF ABDOMINAL SECTION."

To the Editors of THE LANCET.

SIRS,—I am reluctant to occupy your space further with this matter, but an insinuation by Mr. Tait in his last letter demands a reply. Speaking of the hospital record he says, "and from the characters of the entry I had no doubt that its origin was of much later date than that of the operation." This is a grave imputation, and it is singular that it should appear now for the first time, some years after the occurrence of the entry. It is as ungenerous as it is unfounded. I regret that Mr. Tait should be capable of holding such a low view of the morality of professional officers in a public institution as to impute that they should falsify the records. As a matter of fact, the books come before the committee every week, and are promptly investigated. Such a charge Mr. Tait did not, and I venture to say dare not, have made at the time to the committee under whose supervision the records are kept. One word with regard to the death-rate of the cases I published in THE LANCET. I have before me the list, which I shall be glad to place in the hands of any impartial person for verification. As to the hospital mortality, it is easy for Mr. Tait to take a number of cases at random and argue the mortality from them. I might as well take the statistics of the Women's Hospital to which he is attached, immediately before it was closed last year on account of the excessively high death-rate, and reason from these. To return to my original communication. Nothing which Mr. Tait has said, or any side issues imported, has shaken the correctness of the case narrated. Mr. Taylor has given a possible explanation, which Mr. Tait has repudiated with a light heart. Mr. Tait says that it is a miracle or a mistake; I confess it would be a miracle if Mr. Tait admitted that he had made the mistake.

I am, Sirs, yours faithfully,

EDWARD MALINS.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to correct an error in Mr. Tait's last letter? He states as a fact "that in 1884 the authorities of the Queen's Hospital stopped the performance of abdominal sections on account of the high mortality." This is certainly *not* a fact. Abdominal sections have gone on uninterruptedly during the whole seventeen years of my connexion with Queen's Hospital, and with as low a death-rate as is seen in the other hospitals of the city. It was only the operation of ovariotomy which was

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stopped in 1884, but since that date this prohibition has been rescinded. I am, Sirs, yours truly,

Birmingham, June 2nd, 1891. JORDAN LLOYD.

*** This correspondence must now cease.—ED L.

EUCALYPTUS OIL IN THE TREATMENT OF SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—The oil of eucalyptus globulus has been used in the treatment of scarlet fever, and favourable reports as to its value have recently appeared in THE LANCET and elsewhere. A specific action as a curative agent has been claimed for it in some quarters. I would wish to place on brief record my own experience with this drug. Amongst a total of 305 cases of scarlet fever dealt with in this hospital during the year 1890, forty-seven were treated with eucalyptus oil. Forty-four of these cases were consecutive in order of admission, and took the remedy internally (from two minims to five minims, according to age), administered in mucilage and water, every four hours, for periods of two weeks and upwards from the day of admission. In a certain proportion the oil was also used either in spray or as a lotion with water to cases presenting severe throat symptoms; and the lotion form was also employed to irrigate the nostrils and naso-pharynx, where the disease had implicated these parts, giving rise to the intractable and deadly "nasal coryza" of scarlatina. In the result there occurred amongst these so-treated cases four deaths, and in no fewer than twenty cases the various complications or sequelæ native to this protean disease arose, including of the severer forms acute nephritis (five cases), multiple pyæmic abscesses (one case), cervical cellulitis (several cases), "rheumatism," pericarditis, and endocarditis. Albumen was found in the urine in sixteen cases. This mortality and complication rate is above rather than below that for all cases during the year. The only definite result noted from its internal administration in these cases was that the mixture caused vomiting in several children. Special stress has been laid upon its efficacy in improving the ulcerated or otherwise diseased throat conditions present in scarlet fever. In these cases it displayed no advantage beyond that due to the lotion form in which it was used, at least equally obtainable from other remedies in use here, and, most noteworthy as bearing on this point, are two cases in the series in which, during its use, secondary ulceration, the so-called "diphtheritic ulceration" of scarlet fever, spreading forward from the palatal arches, invaded the hitherto healthy tissues. It was used both in lotion form and mixed with olive oil as a dressing to wounds and abscesses, and in this shape formed a fragrant and unirritating substitute for carbolic acid. Its efficacy as a deodorant is undoubted. It was not smeared in any greasy preparation over the skin of any of these cases. This is always an unclean and unwholesome proceeding, and should not be adopted.

The conclusion arrived at from a consideration of these cases with regard to the value of eucalyptus oil in the treatment of scarlet fever is that, as a curative agent, it possesses no value, that it neither mitigates the severity nor modifies the course of the disease, that it fails to prevent serious complications and sequelæ arising in due course, and that as an auxiliary to the ordinary methods of treatment it possesses no obvious advantages.—Yours faithfully,

C. KNOX BOND,
Resident Medical Officer, City of Liverpool Fever Hospital (South).

May 3rd, 1891.

INDIA AND THE INTERNATIONAL CONGRESS OF HYGIENE.

To the Editors of THE LANCET.

SIRS,—With reference to the complimentary remarks you were good enough to make in your last issue under the above heading, will you permit me to mention that arrangements have been already made with a well-known authority to read a paper on the alleged shortcomings of the Indian factory regulations? It is hoped that the Bombay Millowners' Association, following the example of many other important bodies in India, will nominate delegates, and thus ensure a hearing for both sides.

Your readers will, I feel sure, be interested to learn that we have to-day received from the Dewan of Baroda a draft for £100 as his Highness the Gaekwar's contribution to the Congress funds. We are not without hope that other enlightened Indian princes will evince a similar practical interest in the Congress.

I am, Sirs, your obedient servant,

S. DIGBY,
Hanover-square, W., June 2nd, 1891. Hon. Sec. for India.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The British Gynæcological Congress at Newcastle-on-Tyne.

A MEETING of the local committee to promote the objects of the British Gynæcological Congress, to be held in Newcastle on the 18th and 19th of this month, took place at the College of Medicine on the 28th ult. It was stated that a large number of both metropolitan and provincial Fellows had announced their intention of being present, as well as foreign professors, including M. Pozzi and M. Auvard from Paris. At the opening, at which Dr. R Barnes of London will preside, a discussion will take place on the surgical treatment of diseased uterine appendages. On Friday papers will be read, and on the Thursday a public dinner will be held. An influential local committee has been formed, including the professors and lecturers of the College of Medicine and the staff of the Royal Infirmary. Dr. R. C. Benington of this city is the general local secretary for the Congress.

Meeting of the British Dental Association at Darlington.

The Midland Branch of the British Dental Association met at Darlington last Thursday, when Mr. A. Fothergill of that town was elected President. The proceedings on Thursday were of an informal character. Friday was devoted to the business of the meeting, followed by the usual conversazione. Saturday was taken up with excursions, and fortunately, after a very unsettled week in the north, the weather was fairly good for the purpose.

Ambulance Work in Carlisle.

Surgeon-Major Leckey last week inspected the second ambulance class of the three Carlisle companies of the 1st Volunteer Battalion of the Border Regiment. The men were put through the stretcher drill and a course of bandaging, and they underwent the numerous tests to which they were subjected so satisfactorily that Surgeon-Major Leckey informed Brigade-Surgeon Hall that he would make a favourable report, and he believed the whole class would get their certificates.

An Honourable Record.

Mr. Gilbert Ward, F.R C.S., of Blyth, has written to the Tynemouth guardians resigning his position of medical officer for the Blyth district owing to the increasing infirmities of age. Mr. Blyth stated that he felt he could no longer discharge with satisfaction to himself the duties of medical officer, public vaccinator, and registrar of births, marriages, and deaths, which he has held since the formation of the union in 1836, a period of fifty-five years. The chairman moved the acceptance of Mr. Ward's resignation, and in doing so said that they could not allow him to sever his connexion with them without publicly acknowledging the fact that he had been a most dutiful servant of the authority, and gave notice that, in accordance with the provisions of the Act, he would move that a superannuation allowance be granted to Mr. Ward.

Banquet to the Medical Officer of Jarrow.

A complimentary banquet has been given at Jarrow by members of the profession there and other friends to Dr. G. W. Weir, the new medical officer of the borough.

Middlesbrough: The late Dr. McCuaig.

At the Middlesbrough Police-court last week the stipendiary magistrate feelingly referred to the death of Dr. McCuaig, police surgeon, and expressed his deep regret that one so well known to them all should have fallen a victim to the prevailing epidemic. Dr. McCuaig, in his frequent attendance at the court, he said, showed marked ability, and his fairness and honesty in the witness box were conspicuous.

Newcastle Charities: The Robson Trust.

Newcastle is well endowed with ancient charitable

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foundations, and of late years these have been increased by the benevolent bequests of its citizens. The latest is the Robson Trust, through the liberality of Mr. and Mrs. James and Elizabeth Robson, who left a large sum of money to be devoted under certain conditions to the widows or elderly daughters of Newcastle or Gateshead tradesmen who might be in necessitous circumstances. The Attorney-General has prepared a scheme which will come into operation next month. The fund consists of about £11,000, and it is expected that by it about twenty persons will be annually relieved. The trustees are not at liberty to build houses or to purchase property, but they can rent furnished apartments for the relatives of poor shopkeepers, and in other ways contribute to their wants.

Death under Chloroform at Hartlepool.

An inquest has been held at Hartlepool upon a man aged twenty-five, who was put under the influence of chloroform preparatory to an operation for empyema following pleurisy. The evidence showed that the patient was in a very weak state, but wished to have the chance of an operation, to which he was unwilling to submit without the chloroform, to which he succumbed in about four minutes. A pint of pus was found in the pleural cavity. The jury found without hesitation that "the chloroform was skilfully administered, and deceased died from syncope."

Sunderland and the County Asylum Question.

The dispute between the Sunderland guardians and the Durham County Council may be said to have reached the acute stage by the refusal of admission of a violent lunatic to the Sedgefield Asylum. The Home Secretary and the Lunacy Commissioners have been written to, and it is said that the dispute is to be carried to Parliament.

The Influenza in the North.

The influenza appears to have subsided to a very great extent in the north Yorkshire towns, while in the Wolds and the district between Knaresboro', Malton, and York city, it is still very rife in the villages. I hear that there has been a severe outbreak at the Clergy Daughters' School at Casterton, near Kirkby Lonsdale.

It is said that the late Mr. Charles Watson of Providence House, near Halifax, left £11,000 and the residue of his estate for charitable purposes.

Newcastle-on-Tyne, June 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Edinburgh.

THE mortality last week was 89, making the death-rate 17 per 1000. Diseases of the chest caused 35 deaths, and zymotic diseases 7, of which 4 were due to whooping-cough. The intimations for the week were: Typhoid fever, 3; diphtheria, 5; scarlatina, 5; measles, 74. The number of deaths in Leith during the week was 26, making the death-rate 19·80 per 1000.

Influenza in Edinburgh.

A considerable number of cases of influenza have been observed by the city practitioners, and in some instances whole families have been affected. It is not very severe in type, and it is not associated so much with complications referable to the respiratory system as was the epidemic last year.

The recent Fever Scare and Inhumanity in Mull.

In April last a most revolting story of panic and inhumanity came from the island of Mull, in connexion with an outbreak of typhus fever, of which, as of most epidemic diseases, the Celt seems to have a most inordinate fear. In one case, which occurred in Kinloch, no one could be got to attend the patient except a man named Mitchell, who, with his wife and granddaughter, went from the village of Bunessan for this purpose. Shortly after Mitchell himself sickened and died in Bunessan. A general panic resulted. No one could be found to render the poor people any service whatever. No one would undertake to prepare Mitchell's body for burial. Even the sanitary inspector refused to render any aid. Ultimately the medical attendant, aided by a travelling pedlar, put the body in its coffin. Even then the boycott was not relaxed. The wife and granddaughter, together with a relative who had arrived from Glasgow, had to leave the place, but in this some difficulty was experienced; they were denied any conveyance by road, and those in command of the local steamer refused to take them on board. To reach Oban they had first of all to walk thirty-two miles to Craignure, and even on this journey, made in most inclement weather, assistance and shelter were everywhere denied. At Craignure they were refused admission to the inn, and had to be content with what comfort they could obtain under an upturned boat on the beach. They were not allowed to enter any house, and such food as they got was put for them on the road, their money being placed on the stones and afterwards taken by those selling the food. They reached Oban ultimately in a boat sent by their friends. The plight of the poor pedlar was worse. He toiled on from place to place, being everywhere refused help and shelter, and was found in a gravel-pit, dead from exposure. Here again the sanitary inspector proved incompetent, and refused to have anything to do with the man's burial—in fact, an inspector had to be sent from Oban to do so. The sanitary inspector, rather than do his duty in the circumstances, telegraphed his resignation to the Board of Supervision, but this was not at the time accepted. The official report on this almost incredible story has just been issued by Mr. Alex. Campbell, inspecting officer, who corroborates generally the accounts given of the incidents at the time they occurred. The following is an extract minute giving the decision of the Board of Supervision in the case: "The Board, having considered Mr. Campbell's report respecting the recent outbreak of typhus fever in Mull, dismissed Mr. Alexander M Gregor from the office of sanitary inspector of Kilfinichen; but, in respect of the medical certificate as to the state of his health which had been lodged by Mr. Macdougal, sanitary inspector of Torosay, they consented to accept the resignation which he had tendered."

Small-pox in Glasgow.

A sharp outbreak of small-pox has occurred in Glasgow, six cases having been removed to hospital on Monday, June 1st. The cases occurred in the Sailors' Home, near the docks. Mr. William Dewar, superintendent of that institution, aware of the unusual risk of introduction of infectious diseases through the "home," which is frequented by sailors recently arrived from all parts of the world, watches carefully all his boarders who complain of being in any way unwell. On Monday he suspected one of the inmates, and had him examined by Dr. Hardie, of the Marine Police, who at once pronounced the case one of small pox, but in its early stage. Dr. J. B. Russell was soon on the spot, and found four more cases, and also a sixth, a servant, who resided outside the premises. They were all removed at once to Belvidere Fever Hospital. The superintendent and all the servants were vaccinated, and the home thoroughly disinfected. It is hoped that these prompt measures will suffice to stamp out the disease. Much credit is due to Mr. Dewar, the superintendent, for his promptitude in recognising the illness and communicating with the authorities. When such an outbreak is grappled with in its earliest stages, the chances of success are much greater.

Contrast between the Effects of Influenza and of Cold Weather on Public Health.

The minutes of the Health Committee of Glasgow for the fortnight ending May 16th contain some interesting statements on the above subject. In that fortnight, as compared with the corresponding fortnight of last year, there had been less mortality from infectious diseases, but a considerable increase in the deaths from pulmonary and miscellaneous causes, showing the prevalence of general ill-health at present. In view of the recognised prevalence and fatality of influenza in most of the large towns of the south, and in the absence of any recognised epidemic in Glasgow, Dr. Russell gave statistics comparing the temperature of the air and the causes of death during two periods—the six months ending in April, 1890, and a similar period this year. In the first period the mean temperature was 42°, and the deaths—influenza, 20; bronchitis, 1029; pneumonia, 662. In the second period (1891) the mean temperature was 39°, and the deaths—influenza 21, bronchitis 1221, and pneumonia 658. Thus, then, (1) the number of deaths from influenza may be said to have been the same in both periods; (2) those from pneumonia may also be said to have been the same; (3) the

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deaths from bronchitis were over 18 per cent. higher last winter and spring than in the previous year. This agrees with the facts laid down by the Registrar-General of England, based on the experience of London, that influenza and excessive cold both raise the mortality from diseases of the lungs, but that while influenza did so by producing an excess of fatal pneumonia, cold did so by producing an excess of fatal bronchitis. It is highly probable from these data that influenza has been unobtrusively prevalent during the past six months, and this, combined with the colder winter, has produced a pulmonary mortality quite abnormal to the prevalent climatic conditions in themselves. The continued influence of the "influenza" element is indicated by statistics up to date in May, in which seven deaths are ascribed to influenza, one of a child aged one year, two between twenty and forty, and four above sixty. In these sixteen days, therefore, there had been more fatal cases of influenza than in any month in 1889–90 or 1890–91.

New Small-pox Hospital for Kilmarnock.

The Kilmarnock Town Council has unanimously agreed to transmit to the Board of Supervision for their approval plans for the erection of a small-pox hospital at Bellfield, with accommodation for twelve beds, at a cost of £900.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons.

THE annual elections for President, Vice-President, Secretary, and Council took place on Monday, the 1st inst. Mr. Croly was re-elected President without opposition, and Mr. Carte was re-elected Vice-President; while Mr. Colles was again elected Secretary. All the outgoing Council were re-elected, and in addition Mr. Stoker was selected to fill the vacancy occasioned by the candidature of Mr. Stack for the Vice-Presidency. The Fellows who voted numbered 201, being a decrease of 41 as compared with last year. The report of the Council for the year ending April last shows that the income of the College for 1890–91 has fallen short of that of the previous year by £449, a reduction chiefly to be attributed to a decrease in the number of Fellowship Examinations, due to the fact that the Army Medical Department no longer recognises the Fellowship of any College as the equivalent of the examination requisite for promotion in the Army Medical Service. There has, however, been an increase in the fees from the conjoint scheme of examination, and an increased demand for the diplomas in public health arising from the passing of the English Local Government Act, which requires all medical officers of health in England to obtain a diploma in that subject. A good deal of the annual report is taken up with the recommendations of the General Medical Council in reference to the fifth year of professional study, and these recommendations are detailed at length. The Council have resolved to establish in the College a small laboratory for the study of bacteriology, which will be placed under the supervision and management of the curator, Dr. M'Kee. The exclusion of Irish diplomates from hospital appointments in England, the grievances of army medical officers, and the Midwives Registration Bill, 1891, also occupied the attention of the Council during the year.

Vaccination Defaulters, Cork.

From recent returns of the medical officers of the city dispensaries, it appears that nearly 1000 children under three months old have not been vaccinated in Cork. The medical officers blame the relieving officers, and they in return state it is not their business; so the dispensary committee have passed a resolution requesting the guardians to strictly enforce the orders of the Local Government Board with regard to the Vaccination Act, and that the clerk of the union be called upon to define the duties both of the relieving officers and the medical officers.

Irish Medical Association.

The annual meeting of the Association was held on June 1st in the Royal College of Surgeons, presided over by Mr. W. J. Wheeler. The report of the Council stated that the Midwives Registration Bill, objectionable in many points, had been withdrawn; also Clause 19 of the Factories and Workshops Bill, which dispensed with medical certificates, through the action of several medical associations in England and in Ireland. Mr. Balfour had been requested to receive a deputation in connexion with the position of Poor-law Union officers in respect of superannuation, but was unable to grant the request, at the same time stating that he feared no useful purpose would be gained if he had consented, and that he could hold out no prospect of being able to legislate with regard to it, at all events in the present session. Dr. Jacob having issued a statement to the members of the Association, the Council have expressed their disapproval of the circular. The following resolutions were adopted: "That the Council are hereby requested to take such steps as may appear to them expedient, with a view to have passed a Bill giving to union officers superannuation as a matter of right; that, in the event of this proving impossible, they are hereby requested to use every advisable effort to secure such beneficial amendments in order that as many as possible of the abuses of the present system—under which the Poor-law medical officers and the sick poor so grievously suffer—may be removed." "That the thanks of this Association are hereby gratefully tendered to the professional and general press for their constant advocacy of the fair claims of the medical profession, as well as for having given publicity to the proceedings of the Association." "That the thanks of this Association are hereby given to our late President (Dr. George L. Mackesy of Waterford) for the manner in which he has filled that office, as well as for the great interest he has always evinced in the welfare and objects of the Association."

Health of Provincial Town Districts in Ireland for March Quarter.

One death from small-pox—that of an unvaccinated person—was registered in Belfast during the quarter, being the only death from this disease recorded in any of the fifteen districts since the end of 1887. No fatal case of measles occurred, but scarlatina caused seventeen deaths, and fever sixty-nine. To whooping-cough seventy-five deaths were ascribed, to diphtheria eighteen, and to diarrhœa and dysentery eighty-five.

The Royal Hospital, Belfast.

At the quarterly meeting held on May 25th, it was reported that in the past three months there had been 637 intern and 4632 extern patients. The total receipts for the year up to April 30th, from all sources, had been £5984 8*s.*; the total payments for the same period amounted to £5981 15*s.* 3*d.* The receipts had exceeded the expenditure by £2 12*s.* 9*d.*, but as the donation of £1000 cannot be used for current expenses, the receipts were reduced to £4984 8*s.*, showing a deficit of £997 7*s.* 3*d.*, which, added to the debt of last year, makes the total indebtedness £2604 11*s.* 6*d.*; active measures are being made to reduce this. Hospital Saturday was held on May 23rd, when £263 12*s.* 11*d.* was realised.

Death from Chloroform.

On May 25th an inquest was held in the Belfast Royal Hospital in reference to a man aged forty-four years who died in that institution on the same day while chloroform was being administered for the purposes of a surgical operation. The house surgeon, in his evidence, stated that the deceased was admitted into hospital on Feb. 21st, suffering from an abscess of the right thigh and disease of the thigh bone, and remained under treatment until his death that morning. The man had been brought into the operating theatre to have a portion of dead bone removed by the surgeon on duty. He (the house surgeon) had commenced to administer chloroform, and this had gone on for something less than five minutes when the deceased began to struggle. His face became dark and congested, when the administration of the anæsthetic was at once stopped. At that time he could not have had more than a drachm of chloroform. He and the surgeon on duty did all they could to restore him, but without success, and death ensued in from fifteen to twenty minutes after witness commenced to administer the chloroform. The same man had been operated upon on March 12th for a similar condition, when eight drachms of chloroform were administered over a period of about three-quarters of an hour. He showed no bad symptoms at that time. In his opinion, he died from the effect of the chloroform on his lungs, and then on his heart, through the nervous system, which seemed to have been weakened by excessive drinking. The jury returned the following verdict: "That the deceased came to his death from the effects of chloroform by misadventure, and the jurors do further

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say that the said chloroform was being administered previous to an operation being performed."

The Football Charities Cup Donations.

The matches for the Belfast Charities Challenge Cup (Football Competition) have resulted in an increase over any previous year, and the trustees have made the following allocations:—Royal Hospital, £60; Ulster Hospital for Women and Children, £30; Belfast Hospital for Sick Children, £30; Mater Infirmorum, £30; Consumption Hospital, £25; Lying-in Hospital, £25; Nurses for Sick Poor Society, £20.

The Ulster Medical Society.

The seventh meeting of the session was held on May 20th. The secretary brought up a report from the Council recommending, among other matters, the establishment of an Infectious Hospital in Belfast. This was approved of, and the secretary was instructed to send the recommendation to the Public Health Committee of the Corporation. Dr. Dempsey (President), Dr. O'Neill, and Dr. Byers were appointed delegates from the Ulster Medical Society to the International Congress of Hygiene and Demography. Dr. Calwell read notes of a case of leprosy, and showed a photograph of the case and a microscopic slide of the bacillus. The man who is the subject of the disease had been in India, but at present he resides at Hillsborough, about ten miles from Belfast. Dr. Calwell also read a short paper on the Etiology of Eczema. An interesting discussion followed. Dr. Byers then opened the adjourned discussion on Puerperal Fever by giving a short *résumé* of his paper read at the last meeting in April, when a very animated debate ensued, in which the following members also took part:—Professor Dill, Dr. Strahan, Dr. Kevin, Dr. Alexander, and the President (Dr. Dempsey). Five new members were elected.

The Belfast District Lunatic Asylum.

The sixty-first annual report of this institution (comprising the city of Belfast, co. Antrim, and the county of the town of Carrickfergus) for the year ending Dec. 31st, 1890, has just been issued by the resident medical superintendent, Dr. A. S. Merrick. The total number of patients under treatment has been 853; 161 were discharged during the year, and there have been 39 deaths; 200 cases were admitted during the year, and of these, 155 were cases of first attack. The number of admissions are decidedly above the average of the admissions during the past ten years. Attention is drawn to the urgent necessity for increased accommodation; and the outcome of the deliberation of the Board of Governors on this matter is that an asylum is to be erected in the county of Antrim for the insane of the county district, while the present asylum is to be retained for the reception of the insane poor of the city of Belfast. The estate of Holywell, near Antrim, containing about 100 acres, has been selected as the site for the new asylum, and the Inspectors of Lunatics have approved of this situation. The report for the year 1890 of the Inspectors, Drs. G. P. O'Farrell and E. Maziere Courtney, is appended, in which they say that it is needless for them to refer to the overcrowded state of the institution, which makes itself apparent in every department, and especially in the male wards, laundry, and stores. They also suggest the advisability of erecting a detached hospital for the treatment of the sick, infirm, and acute cases.

The East and South Tyrone Coronership.

I understand that, for the vacant coronership of the East and South divisions of co. Tyrone, Mr. Burgess, medical officer of the Coagh dispensary district, and Dr. R. Bell, dispensary medical officer, Pomeroy, are candidates.

The Influenza.

During the past ten days cases of influenza have been met with in various parts of Belfast, but not to the same extent as last year. In the Deaf and Dumb Institution, however, there has been an extensive outbreak. So far no fatal cases have occurred, and the epidemic has not been severe.

An Infectious Hospital for Belfast.

At a meeting of the City Council, held on June 1st, this subject came up again for discussion, when, by a majority, it was decided to postpone the erection of such an institution. The Poor-law Guardians decline to join the City Council in the matter, as they have a large infectious hospital with a great many beds never occupied; but the reply to this is that the better classes decline, and cannot be compelled, to enter such a place, and that without such a new hospital it is impossible to adopt the Notification of Diseases Act. It has been decided to remove the Carrick Hill slums, a very insanitary part of the city.

Extraordinary Growth of Belfast.

The census of Ireland has just been published, and from the returns it is clear that the increase of Belfast is quite phenomenal. In 1881 the population of the city was 208,122, while in 1891 the numbers have grown to 273,055, showing an increase of 64,933, or 31·2 per cent. The population of Dublin is returned as 278,896, being an increase of 5614, or 2 per cent. If the rate of increase be maintained by each city till next April (and, as far as Belfast is concerned, from its present prosperity the rate will probably be greater), the population of Belfast will be more than 500 ahead of the population of Dublin.

Deputy Surgeon-General W. Collis has been appointed Principal Medical Officer at Cork, in the room of Deputy Surgeon-General Landale. Deputy Surgeon-General Collis has recently been principal medical officer at Meerut, and has seen a good deal of service in India.

At a recent meeting of the friends of the Cork Hospital for Women and Children an opinion was expressed in favour of the amalgamation of the city hospitals, provided the work of that institution was not neglected.

Mr. Robert Saunderson, L.R.C.S.I., has been presented with a purse of sovereigns and an illuminated address on leaving Rhode Dispensary for Edenderry district.

June 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Pathogenesis of Flat-foot.

THIS painful affection, which is but too commonly met with amongst that numerous confraternity, the *garçons de café*, has evoked a mass of literature in which divers theories are advanced to account for its occurrence. Yielding of the ligamentum longum plantæ and of the inferior calcaneo-scaphoid ligament, weakness of the muscles of the sole of the foot, paralysis of the peronei muscles—all these phenomena have been in turn adduced as causes of the malady. Whatever may be its true pathology, over-fatigue of the foot from prolonged standing during the period of growth is undoubtedly a potent cause of the morbid changes. In this connexion the recent communication of MM. Féré and Demantké to the Société de Biologie is interesting, as calling once more attention to the danger of subjecting growing children to undue pedal fatigue. These observers find that, under the influence of rest, the degree of arching of the foot may increase so that the breadth of the plantar impression at the level of the arch is diminished by a fourth, or even a third. Walking, as also prolonged standing, on the contrary, have the effect of enlarging the plantar arch in the majority of subjects. In very young children the normal convexity of the arch is very small, the articulations being loose, the bones flexible, and superincumbent weight of the body quite disproportionate to the resisting power of the foot. These data enable us to easily comprehend the deplorable effects of the common practice of keeping infants standing for prolonged periods in go-carts or other similar apparatus. *A propos* of this subject, M. Laveran informs us that flat-footed citizens are no longer, as was formerly the case, exempted from military service in the French army.

Therapeusis of Locomotor Ataxy.

At a meeting of the Société de Biologie held on the 23rd ult., M. Depoux communicated a case of locomotor ataxy successfully treated at the Val de Grâce military hospital by injections of testicular juice after the method of Brown-Séquard. The symptoms noted were incoördination of movement, absence of patellar reflex, enfeeblement of sexual power, loss of muscular sense, slight amblyopia, and lightning pains in the lower limbs. After having been subjected without benefit to the usual methods of treatment—electricity, suspension, thermo-cauterisation, large doses of potassium iodide, &c.—Brown-Séquard's famous juice was tried and the symptoms all disappeared. Even

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the knee-jerk reappeared, and the man is reported to be now strong and well. In criticising the conclusions of M. Depoux, M. Dejérine doubted the existence in this case of actual sclerosis of the posterior columns, believing that we had to deal rather with pseudo-tabes of peripheral or dynamic origin. M. Babinski reminded the Society of the occasional occurrence of recovery from tabes, and he cited the case of a woman, ataxic for twenty-three years, who for five years before death had lost her lightning pains, gastric crises, atrophy of the optic nerves, &c. At the necropsy the accuracy of the diagnosis was amply confirmed. It is to be noted, however, that in this instance the knee-jerk remained permanently suppressed. M. Dejerine recalled the observation first made by Benedikt, that when tabes dorsalis commences with amaurosis, ataxic symptoms rarely manifest themselves, atrophy of the disc appearing to exercise an inhibitive influence on the spread of the sclerotic process in the posterior columns.

Phrenic and Pneumogastric Paralysis consecutive to Sore Throat.

The profession is becoming more and more alive to the importance of the tonsils and the neighbouring regions as *portes d'entrée* for micro-organisms, which, finding in the crypts abounding in those parts a suitable nidus, may be carried to distant organs, therein to excite disturbances of different kinds. In this connexion M. Rendu (Soc. Méd. des Hôpitaux, May 22nd) relates the case of a woman aged forty-seven who, affected with sore-throat accompanied by œdema of the sides of the neck, and bogginess of the supra-hyoid region, was seized a few days after admission with a fit of coughing, culminating in the expulsion of about a tablespoonful of pus. Contrary to expectation, this event was not productive of permanent relief, but was followed in a few hours by severe pains in the diaphragmatic and epigastric regions. The diaphragm was paralysed—a fact rendered evident by the rising and falling of the epigastrium at each expiration and inspiration respectively. At the bases of the lungs there were detected—first râles, then a souffle indicating pulmonary congestion. The diagnosis was formulated as follows: abscess of the periœsophagean cellular tissue, determining by propagation neuritis of the phrenic and pneumogastric trunks. The implication of the latter nerve was proved by the supervention of cardiac failure and incessant vomiting. Thanks to the exhibition of caffeine and alcohol, and energetic applications of sinapisms and blisters, the above alarming symptoms disappeared, the phrenic paralysis, however, persisting for six weeks, despite the employment of the continuous current. At present the patient may be considered cured, although the entire muscular system is atrophied, as after a severe illness of six months. The urine remained, during the whole course of this strange malady, free from albumen.

Pseudo-Alopecia and Occipital Bedsores in Infants.

According to M. Variot, pseudo-alopecia is a very frequent condition in infants brought up by hand, who lie almost continuously in the supine position. The baldness occupies mostly the occipital, more rarely the parietal region. M. Variot regards this condition as the first step in the production of occipital erythema and bedsore. The erythema is sometimes complicated with impetigo (from pediculi?), while the bedsore, limited to the occiput, marks in weakly children the terminal phases of an acute or chronic disease. The chief cause of pseudo-alopecia is pressure, the head being, during the early months of extra-uterine existence, disproportionately heavy.

Presentation of a Testimonial to Dr. Liébault of Nancy.

A number of admirers of the gentleman who enjoys the distinction of being the founder of the Nancy school of hypnotism, as distinguished from the Paris school, repaired to that city on the 25th ult. to offer him a testimony of their esteem. At a banquet at which the *savant* was entertained congratulatory speeches were delivered by such well-known students of hypnotism as MM. Bernheim and Liégois of Nancy, Dumontpallier of Paris, Mathias Roth of London, and other specialists hailing from Switzerland, Belgium, and Holland. The *pièce de résistance* of the *réunion* was the presentation to Dr. Liébault of a valuable *objet d'art*, with an album containing the photographs of the subscribers.

Paris, June 2nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Koch's Institute for Infectious Diseases.

ON the ground between the Charité and the City Railway, seven barracks for patients, two for attendants of both sexes, a building for disinfection and another for necropsies, a coal-shed with an ice-cellar, and a house for administrative purposes, have been erected. This group of buildings is Professor Koch's Institute for Infectious Diseases. The patients' barracks are built on three different plans, in order that the various groups of diseases may be distributed according to their frequency. Of two of these barracks each contains only one ward with eighteen beds; of two others each has one ward with fourteen beds, and two rooms with two beds each; while each of the other three barracks contains two wards of six beds each, divided by an unbroken partition wall—one for one group of disease, the other for another. The size of the wards is determined on the principle of allowing nine square and forty cubic metres per bed. Besides the necessary waiting-rooms, tea-kitchens, bath-rooms, &c., each of the larger barracks has a sitting-room for convalescents. All the barracks have cellars, and are protected against noxious influences of the soil, which consists of alluvial sand, by concrete flooring. The barracks are of framework, filled outside and inside with plaster-of-Paris planks seven and five centimetres thick, which are bad conductors of heat. The ceilings and floors are laid with such planks, and the floors have a coating of asphalte besides. In the roofs the layer of plaster planks is threefold. The spaces between the plaster planks in the walls, ceilings, and floors are used for ventilation. The walls are painted inside with oil-ground and vitrifiable pigment, so that they can be washed with disinfecting fluids. Special care has been devoted to the arrangements for heating and ventilating the wards.

The German Public Health Society.

The German Society for the Care of the Public Health will hold its annual meeting this year at Leipsic from the 17th till the 20th of September. The Committee will bring in a proposal to petition the German Government to order investigations concerning the self-cleansing of rivers—such as have recently been made in the Isar below Munich—to be made in a number of other German rivers. The engineer, Meyer of Hamburg, will state the reasons for this proposal. Another subject of discussion will be the Duties of the Sanitary Police as regards the Use of Dwellings. Professor Von Ziemssen of Munich will speak on Sanatoria for Pulmonary Patients, and their importance for the successful treatment of consumption. Professor Soxhlet of Munich will lecture on the Demands of Public Health as regards the Quality of Milk, and Professor Hofmann of Leipsic on the Preservation of Provisions on a large scale, with special reference to cooling rooms for meat &c. The last lecture will be that of Herr Hermann of Brunswick, Inspector of Gymnastic Instruction, and its theme will be the School Games of Young People in Germany. The secretary of the Society is Dr. Spiess of Frankfort-on-the Maine.

Berlin, June 3rd.

Obituary.

JOHN HICKMAN HIRON, M.R.C.S., L.S.A.

MR. JOHN HICKMAN HIRON, of Studley, Warwickshire, near Redditch, died from pneumonia, after a short illness, at his residence, on Whit Monday, the 18th ult., aged forty-five years. He was the second son of the late John Franklin Hiron, Esq., of Chipping Camden. He received his professional education at the old Sydenham College and General Hospital, Birmingham, and finished his studies at St. Bartholomew's Hospital, London. He took the qualifications of M.R.C.S. Eng. and L.S.A. Lond. in 1869; shortly afterwards he settled in Studley. He was medical officer and public vaccinator for the Studley district of the Alcester Union, and certifying factory surgeon. Mr. Hiron was respected by a wide circle of patients and friends, and he leaves a widow and five children. The interment took place in the churchyard at Studley on the 21st ult., amid

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general expressions of regard and sympathy from the public and the public bodies with which he was connected, who were officially represented at the funeral.

RICHARD A. D. ROBB, M.B.

DR. RICHARD A. D. ROBB died on the morning of Monday, May 18th, at his residence, 8, Carlton-place, Glasgow, and by a very wide circle of friends, both lay and professional, the intelligence of his death was received with the keenest regret. The immediate cause of death was a sarcomatous infiltration of the lungs. During the time Dr. Robb was absolutely confined to bed—a period of less than two months—he suffered from an irritating, and almost incessant cough, and towards the end from extreme and painful breathlessness. These sufferings—for the alleviation of which every effort was made—were endured with much resignation, and without complaint, and, with characteristic unselfishness, Dr. Robb, during the last days of his life, was concerned lest he should be troubling too much those whose privilege it was to wait by his bedside. Dr. Robb will be remembered as a man of strong and generous impulse, and as one who was ever ready to forget his own comfort in an unselfish consideration for that of others. Dr. Robb was only thirty-five years of age.

Medical News.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of this Society will take place at the Criterion Restaurant on Wednesday, June 10th, at 7 P.M., the President, T. Gunton Alderton, Esq., in the chair.

EPSOM COLLEGE.—At a meeting of the Council, held immediately after the annual general meeting, Sir Joseph Fayrer, M.D., K.C.S.I., and the Rev. E. W. Northey, M.A., were elected chairman and deputy chairman respectively of the Council.

ROYAL BERKS HOSPITAL, READING.—At a special Court of the Governors, held on the 26th ult., a resolution was adopted, approving of the recommendation of the Board of Management that additional accommodation for nurses be provided, giving eight rooms, with space for fourteen beds, bath-room, &c., and that the old laundry be suitably adapted as a dining room for the nurses.

THE AFTER-CARE ASSOCIATION.—The annual meeting of this Association, established for the benefit of poor and friendless female convalescents on leaving asylums for the insane, will be held at 83, Lancaster-gate, W., on Monday, June 15th, 1891, at 3 P.M. The Earl of Meath will preside. Tickets may be obtained from H. Thornhill Roxby (secretary), Church House, Dean's-yard, Westminster, S.W.

MEDICAL DEFENCE UNION.—At a meeting of the members of the East Anglian and Midland Division, to be held in a room at the New Theatre of Anatomy and Physiology, Cambridge, on Thursday, June 18th, at 2 30 P.M., after the delivery of the president's address and the reading of the report and the transaction of other general business, C. E. Abbott, Esq. (Braintree), will propose: "That members of the division be requested, in event of any legal difficulty arising, to forward at once a statement of the facts either to the divisional president, a county president, or the divisional secretary, as most convenient to them, and are advised to take no steps personally, unless they have been advised thereon."

MEDICAL BENEVOLENT SOCIETY, BIRMINGHAM.—The annual meeting of the Medical Benevolent Society was held in the Medical Institute on the 29th ult., Mr. Bennett May (vice-president) being in the chair. Dr. Rickards moved the following resolution in reference to the death of the president of the Society, Mr. T. H. Bartleet: "That this Society desires to record its deep sense of the loss it has sustained in the death of Mr. T. H. Bartleet, and to convey to Mrs. Bartleet and family its sympathy with them in their bereavement."—Dr. Morgan of Lichfield was appointed president, and Mr. Garner president-elect for the ensuing year. Mr. Herbert Bracey and Mr. Hartill were appointed vice-presidents, Sir James Sawyer and Dr. Savage treasurers, and Mr. Haslam secretary.

THE SWISS FEDERAL DIPLOMA IN MEDICINE.—We understand that Dr. Tucker Wise has obtained the above diploma after examination. It may be mentioned that the examination is conducted in French.

BEQUESTS.—The late Mr. Thomas Talma Hodgkin, of Horsegate, Leeds, and Lindhead Lodge, Cloughton, bequeathed £100 each to the Royal Northern Sea-bathing Infirmary, Scarborough, the Scarborough Hospital, and the Dispensary and Cottage Hospital, Scarborough.—The late Mrs. Margaret Platt, of Stalybridge, who died in August, 1888, left a sum of money to her executors for distribution, at the expiration of three years from her death, amongst certain charities she named. The Devonshire Hospital and Buxton Bath Charity is one of these, the treasurers of which have just received £500 from Mrs. Platt's executors.

QUEEN'S COLLEGE, CORK.—The following prizes have been awarded in the Faculty of Medicine:—Practical Anatomy, second year: W. H. Garde, 1st; J. Reid, 2nd. Third year: Wm. Scott, 1st; W. Rountree and Wm. McMath, equal. Anatomy and Physiology, second year: W. H. Garde, 1st. Third year: W. A. Rountree, 1st; Wm. Scott, 2nd. Histology: W. Rountree and W. A. Scott, equal 2nd; Wm. McMath, 3rd. Practice of Medicine: William Scott, 1st; William McMath, 2nd. Surgery: William Scott, 1st. Midwifery: C. M. Corkery, 1st; W. C. Sullivan, 2nd; D. O'Driscoll, 3rd. Materia Medica: W. H. Garde, 1st; John Dundar, 3rd. Medical Jurisprudence: D. J. Collins and P. T. O'Sullivan, equal 1st; C. Corkery and W. C. Sullivan, equal 2nd. Exhibition in Practical Medicine: P. T. O'Sullivan.

UNIVERSITY COLLEGE, LIVERPOOL.—At a meeting of the College Council on Wednesday the hon. treasurer read a letter from Mr. George Holt enclosing a cheque for £10,000 for the endowment of a chair of physiology. It was unanimously resolved: "That the Council return their cordial thanks to Mr. G. Holt for his generous gift of £10,000 for the endowment of a chair of physiology, which they accept with special gratitude, warmly appreciating the object of his benefaction, in which they recognise an added guarantee for the completeness and stability of the College in strengthening the medical department and creating a new bond of union between it and the College as a whole." It was also decided to request Mr. Holt to permit his name to be permanently attached to the professorship. The present holder of the chair (Dr. Caton) sent a letter resigning the position in consequence of increasing work of other kinds, and rejoicing that the munificent gift of Mr. Holt would realise his long-cherished hope of securing a highly qualified professor to devote the whole of his time to the duties. The committee expressed their gratitude and obligation to Dr. Caton for his services.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual general meeting of the Society was held at 20, Hanover-square, on Thursday, May 28th, at 5 P.M. The president, Sir James Paget, Bart., took the chair. From the report read by the secretary it was shown that the members of the Society were 324, against 333 last year; seven only had been elected and sixteen had died or resigned. The number of widows receiving relief was sixty-four, fifteen orphans were receiving grants, and three orphans were on the Copeland Fund. Two widows and four orphans had been added to the list, and only three orphans had become ineligible through age for further grants. The grants for the year amounted to £3151 10*s.*, including a sum of £360 given as a present to the widows and orphans at Christmas. The expenses of the year were £255 15*s.* 6*d.* A legacy of £1500 had been received from the executors of Miss Carpue, and one of £500 from those of Edward Robson Jones, Esq. The funded property had been increased by the purchase of £3100 stock. The total grants and expenses for the year amounted to £3407 5*s.* 6*d.*, and the receipts available for payments to £3248 13*s.* 10*d.*, leaving a deficit of £158 11*s.* 8*d.* on the transactions of the year, due to the Christmas present. The following gentlemen were elected to fill the vacancies in the court of directors:—Dr. Russell Reynolds, Dr. Church, Dr. Ogle, Mr. Durham, Mr. Vasey, Dr. Hickman, and Mr. G. Keele. A vote of thanks was passed to the editors of the medical journals for their kind assistance in making known the objects and working of the Society. A special grant of £26 was made to a widow. A vote of thanks to the chairman for his kindness in presiding at the meeting closed the proceedings.

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EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.—The Earl of Strafford, the president, occupied the chair at the annual Court of Governors, held last week. It was stated that the total number of patients under treatment during the eight months ended December last was 18,426, an increase of 2675 on the number in the corresponding months of 1889. The income for the same period was £3855, against £4634. An eligible site had been obtained for the new buildings to be erected for out-patients and for the accommodation of the nursing staff. The building fund amounted to £5760, leaving £1500 still to be collected.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN. The annual report for the past year, just issued, states that, owing to the increased demands on the institution, an extension of the building was required. The tenancy of an adjoining house has been secured, and a waiting-room for out-patients erected at the back of the hospital. Beds can now be provided for eighteen in-patients. During the past twelve months 107 women were admitted, the out-patients numbered 1981, and the total attendances were 9084. As compared with 1890, the income shows an increase of £236 9*s.* 8*d.* The extension fund at present amounts to £658 4*s.* 2*d.*, but to rebuild the hospital at least £16,000 will be needed.

THE METROPOLITAN HOSPITALS INQUIRY.

UNIFORM HOSPITAL ACCOUNTS.

THE Committee of the Lords' Committee appointed to inquire into the condition of the Metropolitan Hospitals resumed its deliberations on Monday last, after the Whitsuntide recess. There were present the Earl of Sandhurst, Chairman of the Committee, who presided; and the other members of the Committee present were Earl Spencer, the Earl of Kimberley, Lord Sudley, Lord Saye and Sele, the Earl of Lauderdale, Lord Thring, Earl Cathcart, Lord Monkswell, Lord Lamington, and Lord Zouche of Haryngworth.

The first witness to be examined was Mr. J. W. Gordon, barrister, 4, Plowden-buildings, who appeared on behalf of THE LANCET to offer evidence in support of a uniform system of keeping hospital accounts. The principal points on which he wished to criticise the existing system would be dealt with in order. His first point was that the various hospital accounts were presented to the public in a most bewildering diversity of form, so that it was impossible to establish any satisfactory comparison between the accounts of the different institutions. I do not think he could do better than illustrate that point by drawing the attention of the Committee to some accounts which he had before him. I have made a list of those accounts, and perhaps it would be convenient to refer to them not under the names of the various institutions, but by numbers.

The Chairman: It would be more convenient if you would give the names, in case the institutions referred to should wish to give explanations.—No. 1 (London Hospital) is a hospital account which presents in the form of one account a complete statement of receipts and expenditure. From this account it appears—to draw attention only to one point in this connexion—that this institution received £21,500 odd as legacies last year, and those legacies are duly brought into the account.

The Chairman: Was there a particular heading "legacies"?—There is a particular heading "legacies," my lord, and the legacies are entered under two heads—£6664 6*s.* 2*d.* under legacies simply, and under the heading "ditto received in stock as *per contra*" £14,919 7*s.* 3*d.*, making a total of £21,585 13*s.* 5*d.* As to the first item, £6664 6*s.* 2*d.*, it was in no way distinguished from other receipts; and as to the second, it is entered as "*per contra.*" Credit is taken for the amount of stock as for stock purchased, so that the £14,919 7*s.* 3*d.* appears as an item of expenditure. St. George's Hospital is an institution which has in point of fact received a larger sum in legacies, but they are dealt with differently. There is also here a heading "legacies," and the various legacies are set out in detail, the value being also shown. They amount to £21,602 9*s.* 2*d.*, but there is added to that a note against one of the legacies that in addition to these—that is, to the amount entered as paid upon legacy—in addition to these the sum of £26,371 10*s.* 1*d.* at 2¾ per cent. was transferred in the names of the trustees of the hospital, and that sum does not appear in the account at all. It is not brought to account at all. It is simply identified in the way I have alluded to.

The Chairman: That sum goes, I presume, permanently to increase the endowment?—I imagine not, my lord. If I understand your lordship's question, I do not think it is to be dealt with in a way that would prevent its being used for the purposes of the institution; but, as a matter of fact, I think it did go to increase the investments of the institution, for this reason, that the income, apart from that, shows a balance over the expenditure brought to account. So that there was no occasion to draw upon that.

The Chairman: Are they of the nature of temporary investments?—I suppose that the investment is temporary—in other words, that it may in some future time be necessary to draw upon it; but I imagine that the investment does not differ in character from other investments of the institution. Another sum to which I need not make any special reference is a sum of £4200, which is exactly on the same footing to that to which I have referred. Taking these two statements of account, which appear to be parallel to one another, supposing that one desired to compare these two institutions in respect of their yearly accounts, one would get an impression that the London Hospital had received substantially the same amount in legacies as St. George's Hospital, the fact being that St. George's Hospital had received more than double the amount of legacies, but has only brought a proportion to them—less than one-half the amount received—into its account. The Middlesex Hospital is an institution which has received a much larger sum than in either of the previous cases. It has received in legacies the sum of £83,433 9*s.*, but no part of this has been brought into the account, and consequently the comparison of income and expenditure account of these three institutions would produce upon the mind of the reader who went no further the impression that the London Hospital and St. George's Hospital had received substantially the same sum in legacies, and that the Middlesex Hospital had received no sum at all, the fact being that the London Hospital had received the least, St. George's Hospital rather more than double that of the London Hospital, and the Middlesex Hospital more than double that of St. George's Hospital. The magnitude of these items shows how difficult it is to form any just conception of the magnitude of the financial operations of the hospital from a mere inspection of its public accounts. The next institution to which I desire to call your lordships' attention is the Charing-cross Hospital, which has pursued a different course. The outcome of the accounts in this case is that there is no general account in the ordinary sense in which there is a general account in the institutions to which I have already referred. There is what is called the general account here, and it is an account which comprises the greatest part of the income and expenditure of the institution, but it is supplemented by seven other accounts. Two of them are accounts which are incorporated by the carrying of several of their balances to the general account, but five of them are accounts which are totally distinct from the general account, and in order, therefore, to get a complete view of the finances of this institution during the year one has to refer to and mentally and manually to incorporate the results of six different accounts. As to some of those, the reason is perfectly obvious, and perhaps it may be said that they are substantially the accounts of affiliated and subordinate institutions, and therefore rightly kept separate. One is a convalescent home account; another is the Samaritan fund account; and there are probably very good reasons indeed for keeping these accounts separate. One of these is called the "extension" account, and as a matter of fact to that account all legacies above £100 are carried, and all payments on what may be called capital expenditure are carried on the other side. Now that, as your lordships will imagine, is a very substantial sum; it amounts to nearly £6000 on this particular occasion.

Lord Spencer: A year?—Witness: It amounts to £5518 in this particular year, but if some particular accounts to which I have already directed your lordships' attention had been treated in the same way, the sum would be very much larger. Now, my lords, in order therefore to get what is a substantially correct view of the accounts of this institution for the year, it is obviously necessary to incorporate that account, and in order to get an accurate view it is absolutely necessary to incorporate the smaller accounts. It would be impossible to establish any strict comparison without the great labour of incorporating all these various accounts. Now the next case to which I will refer is the London Lock Hospital and Asylum, which is somewhat different from the one to which I have already referred in this respect, that there are three affiliated institutions substantially one institution. There are two hospitals and an asylum which are worked together, and the accounts of these are kept separately. There, again, the total result is shown in one account, because a general balance is kept, and a debit balance arising upon the one account, or credit balance arising upon another account are both carried to the general balance sheet, and in that way all the accounts are incorporated in substance by a bookkeeping operation at the end of the year. At the end of the year the balances are distinguished, and presented as a statement of account or of expenditure. It shows only the balances of income and expenditure shown by the separate accounts, and therefore, in order to get at the result of the financial operation, it is necessary to incorporate several different stages or phases of this account. The next illustration I have is from the report of the Deaconess's Institution and Hospital, Tottenham. It exhibits a peculiarity in a singular way—a condition of hospital accounts which is not easily exhibited by a comparison of separate accounts—viz., in some institutions the annual statement is a statement of income and expenditure; that is to say, of cash (money or money's worth), incoming or expended during the year. In other cases the corresponding account is a cash account of money received and money paid, and of course these two things are not identical. Money received and money incoming is probably the same, but money paid is by no means the same thing as money expended, because there are outstanding accounts in any case at the end of the year. Now, very singularly, in the case of this institution we have both the accounts presented. There is a cash account, which is an account of money received and money paid, and there is an income and expenditure account, which is an account of money incoming and expended. It hardly needs to be said that the explanation of these two accounts is very perplexing, because they appear to be inconsistent the one with the other. They appear to cover precisely the same period, but, as your lordships will see, in a different way. The one shows money received and money spent, the other shows money receivable and money expended during the year. Why the two accounts should be present in that form I confess I have not an idea. But the same is the case with a number of other institutions, to which I need not more particularly refer. It need hardly be said that if one institution presents two accounts like this, it is practically certain that other institutions which present only one account, the account presented, will sometimes be a cash account of money received and money paid, and sometimes an account of money receivable and money expended, and so far as I know there is no means of saying by a mere inspection of the account. The Miller Hospital affords another illustration of the same thing. The next illustration is taken from the East London Hospital for Children and Dispensary for Women, and is an example of a statement of account which to me is very perplexing and difficult to understand. In the statement of account I find a very elaborate statement of all the various items of expenditure set out with the minutest detail, as indeed is customary in hospital accounts, and among these items of expenditure which are accredited to architects. There is a payment of £500 and another payment of £50 on account of architects, and I can find no commensurate expenditure in the buildings account, and it is perfectly obvious, therefore, that, although in the case of this account, which appears to be a complete and full statement, there must be important items which for some reason or another have not been brought into this account. Now, my lord, those are illustrations, I submit, of the perplexing diversity there

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is between the various accounts, which makes anything like a comparison between two accounts in different hospitals impossible. Another point which I propose to make, and I have already illustrated, is that many of these accounts are exceedingly defective. There is another aspect of hospital accounts to which I should like to refer, and that is that in comparatively few cases is any statement of the total amount of property held by these institutions made public. What is ordinarily known as the balance sheet in the strict and full sense of the word is very rarely included in the accounts. I caused an examination to be made in order to ascertain what the fact was upon this point, and the result of that examination was that of sixty-seven statements of account fifty-one of them did not appear to have published a balance sheet at all; in fifteen cases the balance sheet was more or less complete, but of these balance sheets not more than seven were complete, if they were; and the remainder were quite obviously incomplete balance sheets. I should like to call the attention of your lordships to some of the statements which are published in this connexion. The first of these incomplete statements is issued by the London Hospital, in which there is a statement under the heading "balance sheet." It comprises, on one side, "Liabilities and Estate," and, on the other, "Assets." I understand there is included no statement of value of the land and fabric which is occupied by the hospital. There is no entry in the statement of the expenditure under the heading of rent. Therefore it is perfectly clear that the institution occupies its fabric substantially free; but there is apparently no entry in the balance sheet of the annual total value of this land and fabric, and I conclude therefore that that has happened in this case which happens in a good many cases—that the only balance sheet published does not include the value of the freehold land or buildings or leasehold land or buildings, which are occupied for the purposes of the institution. The next illustration makes it clearer still, and is the case of the Charing-cross Hospital. There the balance sheet, which is published is professedly a statement of liabilities, including outstanding accounts, the amount of an overdraft, and the amount of a loan, and the immediately available assets comprising rents outstanding cash in hand, and a balancing entry, which is entered as "balance to be provided for." Now, my lords, that, of course, does not include any part of the properties held in trust for the institution, either the value in land or securities in stock, from which dividends amounting to £302 have been received during the year. Then the next case to which I desire to refer is the Lock Hospital and Asylum, and there, as your lordships will see, the balance sheet is a statement substantially of the balances brought from the various separate accounts, and contain no statement of property at all. Then, my lord, the next balance sheet is that of King's College Hospital, and in that case the balance sheet is called "capital account"; it includes capital and properties, and the stock held for the purposes of the institution, but it also includes income derived from legacies, because certain legacies are carried to that account instead of being included in the receipts and expenditure account; so that the balance sheet, therefore, is in part a statement of income. There are a great many others which I hold in my hand here, but I do not think any useful purpose would be served by alluding to them; they would simply be repeating the same characteristics to which I have called your lordships' attention. I desire, then, to submit to your lordships' consideration a form of statement of accounts with a view of its being imposed, either by agreement or by Act of Parliament, upon the hospitals, so that any hospital receiving charitable contributions from the public should be called upon to render its annual statement of account in this form or in some modified form. The exact suggestion is that such hospital should be required to make the annual return, either to one of Her Majesty's Secretaries of State, or to the Charity Commissioners, or to some other body which might be suitable for the purpose, in this form or of some such modification of this form as may be approved. [The proposed schedule of hospital accounts (see following page) was handed to their lordships.]

The Chairman: Is this the same as the present form that the Hospital Sunday Fund sent out?—No. This is a form of account which has been prepared for a purpose, slightly different from that prepared by the Hospital Sunday Fund. That is drawn up for the purpose of awards which the Hospital Sunday Fund makes. It may be convenient for me to say a word which I should wish to say in that connexion before my evidence concludes. The Hospital Sunday Fund award is made upon a basis of systematic analysis of hospital accounts, and the system pursued is, as I understand it, this: It first of all takes the expenditure of an institution to be the original basis upon which the award is to be made. From that expenditure there is written off by way of deduction the income of the institution from legacies and realised property. There is then, by way of further deduction, the expenses of management, corresponding to what one might call expenditure upon the non-effective forces of the institution. The result so arrived at forms, apart from special considerations, the financial basis upon which the award is made. Now, my lords, I think it should be pointed out to your lordships that that probably is the reason why in many of these accounts to which I have called your attention legacies either are not brought into account, or if they are brought to the account they are brought to account on both sides. If the legacies are to be written off the expenditure by the Hospital Sunday Committee, it is quite clear that they must be shown in it if they are written off expenditure, because it is the expenditure of the institution, which they take as the original basis for their award. They must first of all be included in the expenditure, as otherwise it is clear that a hospital would be prejudiced. Look at the hospital, for instance, which received £3,000; if that had been written off its expenditure when the expenditure had not been swollen by the inclusion of that amount originally, there would have been no basis on which the award could have been made. I think that is the reason for what seems to be the regular way of presenting accounts; it is perfectly legitimate for the purpose, but it is an exceedingly inconvenient way for more general public purposes, under which we are dealing with this point. This, my lord, as your lordships will see, is arranged from a totally different point of view. I assume that it is desired to bring the test and stimulus of comparative statements to bear on the management and administration of the hospitals, and this statement has been prepared with a view of exhibiting them in an aspect under which they can be rigidly compared. In its preparation one heading is made to exhibit the income and the expenditure which go on regularly and systematically from year to year, and another represents the income and expenditure which arise or occur only occasionally, and which may be wholly peculiar in that particular year. These two it is proposed to call renewable and non-renewable income and expenditure, and so the main division here is between renewable and non-renewable income, renewable expenditure and non-renewable expenditure. That, I take it, in attempting to form an appreciative estimate of hospital statements, is the first thing to which one's attention will be directed—viz., to eliminate from the statements anything so wholly accidental or exceptional—as, for instance, the occurrence of a very large sum in legacies in the income of the year. Then, my lords, the next point to which one's attention is naturally directed is the distinction between charitable and proprietary income. Your lordships will see that on the left-hand side of the various headings there are reference letters put. These are for the purpose of the auditors' certificate, to which I will presently refer. The charitable income comprises annual subscriptions and donations, and it may perhaps be said that donations are in their nature occasional, and ought not to be said to be a strictly renewable source of income; but I think it is legitimate to put them here for this reason, that there is a certain aggregate amount which is as a matter of fact annually received by way of donations, and therefore the income from that source, although in a sense occasional, although their individual payment is an occasional payment, the aggregate sum is an average sum, and practically a renewable source of income. Then there are donation boxes and collections, and then there is a division representing a short cast, which will be entered in the second column. The interest of that is that it will enable one to tell on the instant how much charitable income of the institution is derived from what I may call the personal efforts of its friends. All that income is more or less derived from supporters of the institution. Then follows a group of three more items — the Hospital Sunday Fund, the Hospital Saturday Fund, and a certain proportion of legacies passed to renewable income account. As for the first two, they speak for themselves; but in the third, a question will probably arise. The dealing with legacies in hospital accounts presents a question of some difficulty. Your lordships have seen the various ways in which different institutions deal with their legacies; and there is not only a question of bringing them to account, there is also the question of dealing with the sums received, should they be carried to capital, should they be expended upon the ordinary and renewable expenditure of the institution. Now, so far as I can understand from various accounts, many various methods are followed. The method which receives most favour is one followed by the Hospital Sunday Fund. The Hospital Sunday Fund accounts distinguish between legacies of less than £100 and legacies of more than £100, and though they do not say so, I have no doubt that the idea is that in a somewhat rough and approximate way that indicates the proportion of legacies which may fairly be brought to the year's account and the proportion of legacies which should be on a wise administration carried to capital account.

The Chairman: One thing surprises me. You have not in your suggested schedule one heading for the total amount of legacies received.—The Witness: No. It would have to be derived from two items (*g*) and (*o*), and I think it would no doubt be convenient to have it shown in one form for some purposes; but inasmuch as it is necessary to sacrifice something—that one would desire for some purposes—I thought that the inconvenience of dividing these two items was worth incurring for the sake of getting a clear statement of still more interesting points which this table actually does bring out. As a matter of fact, in many institutions a larger sum than the amount received from legacies under £100 is carried, for the ordinary purposes of the institution, to the current account, and it is obviously quite right that it should be so. Many hospitals derive a very large sum annually from legacies, and it would not only be unnecessary, but would even be improper to carry the whole, or anything like the whole, of such sums to the capital account, when they find that they get in the regular way a substantial income from legacies, which never falls, say, below £3000. It is obvious that it would be perfectly right to pass at least that sum into their ordinary expenditure, and therefore I have assumed that upon some such basis as that, or upon some basis which commends itself to the committee of management of the institution, the total amount received from legacies is apportioned between renewable income and non-renewable income. The next division is that of proprietary income. It includes dividends and interest, and the items "rents," which is one concerning which it will be necessary to come to a clear understanding. In the case of institutions occupying freehold or leasehold property, it is not usual to bring the annual value to account as rent received. But institutions which occupy the freehold or leasehold buildings for the purpose of its work should obviously bring that annual value into account, because it is exactly in the same position as if it had not occupied that building, but paid its rent by letting it. I propose that that item of rent should in every case include the annual value of land occupied by the institution for which no rent is paid. The other items do not call for comment. I now come to the expenditure side of the suggested form of account. Here I propose to introduce a feature which, so far as I know, is not present in any of the accounts which are made public. These accounts for the most part are substantially statements of cash, and are transcripts from the bookkeeper's books, and consequently they go into such details as the baker's, the butcher's, or the dairyman's bills—items that have no significance at all from our present point of view. These accounts do not bring out any distinction between the various departments of the institution. I propose a heading, "Supplies to ordinary patients"; that comprises two subheadings, "food" and "coal." To take the first of these as it appears in an ordinary statement of account, it is food supplied for the purposes of an institution in all its departments. That includes food supplied to the patients, to the nursing staff, to the domestic staff, and to any other part of the staff to which allowances of food are given. There is no means of discriminating between these various items. The suggestion I make is that such discrimination should be introduced.

The Earl of Kimberley: How do you deal with hospitals where the patients pay something and not the whole of the charge?—I should treat the patients who pay something as paying patients, or perhaps I should have a third class.

The Earl of Kimberley: It would be necessary in some way to make a clear discrimination.—It would certainly be desirable to discriminate in the case of part-paying patients. It is to meet a case like that that

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PROPOSED SCHEDULE OF HOSPITAL ACCOUNTS.

Statement of Receipts and Expenditure for the Year (Illustrated with hypothetical figures).

RECEIPTS.

RENEWABLE INCOME.

Charitable.

a.	Annual Subscriptions	£2000		
b.	Donations	1500		
c.	Donation Boxes	100		
d.	Collections &c.	100		
			3700	
e.	Hospital Sunday Fund	1000		
f.	Hospital Saturday Fund	250		
g.	Proportion of Legacies passed to Renewable Income account	3000		
			4250	
				7950

Proprietary.

h.	Dividends and Interest	1500		
i.	Rent, less annual value from Building	1750		
j.	Fees from Pupils	800		
k.	Fees from Patients	100		
l.	Payments from Private Nursing	350		
m.	Sale of Waste &c.	100		
n.	Refund of Income Tax	50		
			4650	4650
	Total Renewable Income			12,600

NON-RENEWABLE INCOME.

Charitable.

o.	Proportion of Legacies passed to Non-renewable Income Account	7000		
			7000	

Proprietary.

p.	Investments realised	3750		
q.	Loans contracted	1000		
r.	Overdrafts:			
s.	On Treasurer	*nil.*		
t.	On Bankers	*nil.*	4750	11,750
	Miscellaneous Items (to be particularised)			
	Total Income			24,350
	Balance from last account			500
	Balance to next account			
	Grand total			£24,850

EXPENDITURE.

RENEWABLE EXPENDITURE.

Supplies to Ordinary Patients.

1.	Food	£3250 0			
2.	Coal	360 0			
				3610 0	
	Remedies:				
3.	Drugs	550 0			
4.	Instruments	450 0			
5.	Dressings	100 0			
6.	Miscellaneous	400 0			
				1500 0	
	Upkeep.				
7.	Utensils	50 0			
8.	Furniture	150 0			
9.	Bedding	100 0			
10.	Laundry	700 0			
11.	Gas	500 0			
12.	Water	100 0			
13.	Miscellaneous	50 0			
				1650 0	
14.	*Samaritan Fund*	150 0		150 0	
					6910 0
	Maintenance.				
15.	Rental (annual value of freehold)	1600 0			
16.	Insurance	75 0			
17.	Rates	300 0			
18.	Repairs	700 0			
19.	Depreciation	100 0			
				2775 0	
20.	Interest on Loans	50 0		50 0	
					2825 0
	Services.				
21.	Chaplain and Organist	100 0			
				100 0	
	Medical and Surgical Staff:				
22.	Salaries	350 0			
23.	Allowances	140 0			
				490 0	
	Secretarial Staff:				
24.	Salaries	600 0			
25.	Allowances	150 0			
				750 0	
	Nursing Staff:				
26.	Salaries	820 0			
27.	Allowances	550 0			
				1370 0	
	Domestic Staff:				
28.	Salaries	600 0			
29.	Allowances	900 0			
				1500 0	4210 0
	Cost of Collection and Management.				
30.	Collector's Commission	80 0			
31.	,, Salary	*nil.*			
32.	,, Allowances	*nil.*			
33.	Printing	250 0			
34.	Advertising	500 0			
35.	Stationery	50 0			
36.	Postage	50 0			
37.	Audit	10 10			
38.	Law Charges	100 0			
39.	Pensions and Gratuities	7 0			
40.	Petty Expenses	20 0			
41.	Miscellaneous	...			
				1067 10	1067 10
	Schools &c.				
42.	Medical School	600 0			
43.	Nursing School	100 0			
44.	Cost of Paying Patients	80 0		780 0	780 0
	Total Renewable Expenditure.				15,792 10

NON-RENEWABLE EXPENDITURE.

45.	Building	8000 0		
46.	Investments made	*nil.*		
47.	Loans and Overdrafts Repaid	1000 0		
			9000 0	9000 0
	Total Expenditure			24,792 10
	Balance from last account			
	Balance to next account			57 10
	Grand total			£24,850 0

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those accounts might be modified. This scheme in its present form would be applicable only where there are paying and nonpaying patients.

The Chairman: Those figures represent, do they not, the money paid for food, drugs, dressings, and instruments for all the patients of the hospital, whether out- or in-patients?—Yes, that is so.

The Chairman: Would it not be almost impossible with this account to make out the relative cost of a bed, because you would have to deduct the cost of the out-patients?—That had not occurred to me, but it strikes me that it is so, and for that reason it would probably be necessary to elaborate this statement a little more for the sake of bringing out the cost of the out-patient department separately.

Lord Thring: We have often been told that the Samaritan Fund is a totally distinct arrangement.—I propose in all these cases to incorporate all the subordinate accounts in this general account. As to the subheading "Upkeep," I do not think any point is raised upon that. As to "Maintenance," no better word occurred to me to express what I meant.

The Earl of Kimberley: With regard to depreciation, is that to include all buildings belonging to the hospital?—I imagine so.

The Earl of Kimberley: That would be rather a serious matter in some hospitals.—I am afraid I have fallen into error. That depreciation would not come here. Again, I think that repairs relating to the estate would not come under that heading of repairs, because this is renewable expenditure, and really means expenditure upon the objects of the institution. I imagine that those payments would come under the non-renewable expenditure.

The Earl of Kimberley: You cannot take credit for rents and not debit yourself with the cost of getting those rents?—That is so.

The Earl Cathcart: I expect the rents would be entered less the cost of repairs.

The Earl of Kimberley: There are a great many cases where the repairs are done by the landlords. In Essex, for instance, where St. Thomas's Hospital has property, I have no doubt that the repairs are done by the landlord. You might for hospital purposes only state the net rent, unless you want to show how the property is managed. That, perhaps, would be going too far. I only mention this for the consideration of the witness. Would you explain exactly what the items "repairs" and "depreciation" refer to?—Repairs and depreciation in this account mean only repairs and depreciation relating to the fabric occupied for the purposes of the institutions. The repairs and depreciation which are incidental to the holding of landed property for the benefit of the trust of the institution should, I think, not be included in this account at all.

The Earl Cathcart: "Rents less expenses" would be the proper heading.

The Earl of Kimberley: Yes, that would do.

The Earl of Lauderdale: You have a heading here "Interest on loans." The loans themselves are entered as non-renewable income, but the interest is entered as renewable. Thereby you assume a perpetual loan.—That is so, because loans, so long as they subsist, give rise to renewable expense.

The Earl of Lauderdale: But surely the proper place would be under non-renewable expenditure?—In that case a loan which ran over for several years would not be represented in the ordinary expenditure of the institution. Very commonly the cost of the secretary and the secretarial staff is included in the cost of management. It seems to me that the better distribution of the cost is the distribution here given, and that the secretary's services are just as much services rendered to the objects of the institution as the services of any part of the staff. I am unable to appreciate the distinction that is drawn. When the renewable expenditure is totalled up it is possible to see at a glance whether the ordinary income of the institution has covered its ordinary outgo or not. As to the non-renewable expenditure, I think there is nothing that calls for remark. Your lordships will now see that a statement of this sort would enable the reader to make exactly those comparisons which are probably necessary in the interests of the institutions themselves for their most effective management, and which are desirable in the interests of the public.

The Earl Cathcart: You assume a paid audit. We are told there are many cases where there is no paid audit.—I think there ought to be a paid audit, and I propose to make a suggestion on the subject. My impression is that at the present moment the audit of hospital accounts is not usually a very complete or satisfactory audit. As matter of fact, I do not think that hospital accounts differ very much from other accounts. The auditing of accounts generally is a difficult task, and one which is often very incompletely performed.

Lord Thring: I do not doubt the great benefit of proper accounts, but when you impute to the hospitals the keeping of bad accounts, I presume you will admit that they do it, not for the purpose of fraud, but for the purpose of attracting the public?—I do not impute to the hospitals the keeping of bad accounts. I have not the smallest reason to do that. All I have imputed to them is that the form in which they present their accounts is not suitable.

Lord Thring: You say that legacies exceeding £100 or £200 ought to be carried to the capital account?—Might I just say that was not my proposition? What I say is that the transfer should be made upon some approved principle. It does not occur to me that that is a right principle to adopt.

Lord Thring: I will put a general question to you. Have you sufficiently considered whether your new form of accounts would be equally attractive to the public, by which I mean would be equally advantageous for hospitals in the matter of getting money out of the public? Or are you simply putting it forward, as I have no doubt it is, as a very much better form of account?—That I have not considered otherwise than quite incidentally, and as a matter outside my present object.

Lord Thring: It seems to me that the hospitals have extremely bad accounts, but it appears to me that they keep them bad not for the purpose of cheating anybody, but for the purpose of persuading the public that they are extremely poor, and that they get more money in this way.—I have no doubt that that consideration does come in. The way in which the accounts are made misleading is chiefly by their being caused not to include legacies. There is practically no other way in which they are misleading

The Earl of Kimberley: Are there many of the hospital accounts that give no statement of their legacies?—In one sense it is universally so. I will take for instance the case of the London Hospital. They bring to account legacies to the amount of £21,585. On the other side of the account they write off as expenditure legacies to the amount of £14,921, on the ground that those legacies were not received in the form of cash, but were received in the form of stock. It was the same thing if they had received the cash and gone into the market and bought the stock. The effect of that is that the expenditure for that year is swollen by that sum of £14,921, which is not, in the ordinary sense of the word, expenditure, because money is no more spent when it has been invested in stock than it has been spent when put into bank. But the effect of this arrangement is to bring out a balance on the wrong side of the account.

The Earl of Kimberley: Do you think that is a dishonest statement?—I think it is a misleading statement, but I do not think it is a dishonest statement. I believe it to have been necessary for the purposes of the Hospital Sunday Fund to put the legacies in that way.

The Earl of Kimberley: In one sense it is correct to say that there is a deficit on current account, because they leave their current account deficient of so much, and I do not know that that could be called misleading—I think it would be misunderstood. I think the statement would lead, at any rate, the incautious reader to suppose that the hospital had gone through a period of financial adversity, while, on the contrary, the hospital had gone through a period of financial prosperity, which had enabled it to add something like £20,000 to its investments.

The Earl of Kimberley: In that particular case I understand you to say that it was caused by some requirement of the Hospital Sunday Fund?—I spoke as matter of inference and conjecture. From my knowledge and examination of the accounts I conclude that that is the reason why legacies are treated habitually in some such way as this.

The Earl of Kimberley: But the managers of the Hospital Sunday Fund would not be misled?—No, certainly not. And if they did it for that reason, no blame can be attached to them, and for that reason I say it is an honest statement.

The Earl Cathcart: Speaking generally, it would be a very poor compliment to the public to say that they like to be humbugged.—Yes, certainly.

The Earl Cathcart: It is a fact that a great many people give donations instead of subscriptions because they can stop donations when they please and cannot be sued, whereas they can be sued upon a subscription.—I have no doubt that many donations are renewed from year to year.

Lord Thring: A person cannot be sued for a subscription to a hospital.

The Earl Cathcart: It is understood that if you subscribe you are bound to give notice, and if you don't give notice, you are liable for the subscription for the following year. To avoid this people write "donation" upon their cheques.

The Earl of Kimberley: And to avoid the disagreeableness of having to decline to subscribe.

Lord Thring: Would it not be necessary, in order to make your form of account really workable, that it should be made compulsory by law, because if you did not do so the hospital that adopted it would be at a disadvantage?—Yes, certainly.

Lord Thring: I suppose you are aware of the fact that it is unusual to put any compulsion whatever upon voluntary institutions? Endowed institutions are bound to render accounts.—That is so, but probably it is not my province to express an opinion.

Lord Thring: But you are aware that it is so?—Yes, it is so. It seems to me that the compulsion would probably best be exercised in this way: that any institution which receives the support of voluntary subscriptions should be compellable to give a copy of its accounts, prepared in the prescribed form, either to anyone who chose to pay for a copy or to subscribers.

Lord Thring: Would it not be difficult to define what a hospital was for the purpose of these accounts?—I think there might be a difficulty, but I think, in the first place, that the hospitals have been defined for the purpose of your lordships' inquiry; and, in the next place, a proper definition would be any charity affording medical relief which receives charitable subscriptions from the public.

Lord Cathcart: Or, rather, which appeals to the public for charitable subscriptions.

Earl Spencer: You think it should be done by law? Could it not be done as in the case of the Hospital Sunday Fund?—The difficulty of that is, however great the inducement is, it might be in a particular case, which would probably be a bad case, worth the while of an institution to forego the inducement in order to evade the publicity.

Earl Spencer: Has that been done in any case?—I am not able to speak to that. This certainly has happened in connexion with the Hospital Sunday Fund—grants have been refused in more than one case to institutions.

Earl Spencer: Because they have not adopted particular forms of accounts?—There, again, I am not able to speak from personal knowledge. So far as I am aware it has never appeared exactly upon what ground grants have been refused, but probably it was not because of the form of the accounts, but of their unsatisfactory nature. The way in which the published accounts are authenticated is by means of an exceedingly meagre certificate. Perhaps I shall make my meaning clear by beginning at the other end. I shall call attention to a form of certificate which appears to be very exceptionally complete. The certificate runs in these terms—viz.: "Report. I, the undersigned chartered accountant, have examined the above accounts, which I have compared with the books and vouchers of the hospital, and find to be correct. I also certify that the letter of the Chief Accountant of the Bank of England has been laid before me, stating that on the 1st January, 1890, the following stock was standing in the names of the trustees of the hospital." Then follow a list of securities. "And also the letter of the Manager of the London and Westminster Bank, Limited, stating that on the 1st January, 1890, the following stock was standing in the names of the Trustees of the Hospital in the books of the bank. . . . I have examined and found correct the certificates of stock of the following sums belonging to the General Fund of the Hospital, standing in the names of the Official Trustees for Charitable Funds. . . . I have also examined and found correct the certificates of the following stocks, . . . and also the bond and certificate of £100 6 per cent. mortgage debenture stock of the Oamary (Otago, New Zealand) Harbour Board Loan." That is a very complete statement. It shows to a very large extent not only that the accounts have been vouched in a manner satisfactory, but also enables the reader to ascertain what is the kind of inquiry the auditor has made. It also shows that he has assumed the books and vouchers of the hospital to be the authority for the purpose of his audit. But the most ordinary certificate is such as this: "I have

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examined and found correct." No one can tell what that means. There is one instance to which I might call attention. It appears from this account that two items have been entered thus: A charge for the board of medical residence, £587 17*s.* 19*d.*; and a charge for gas, £818 18*s.* 13*d.* Those are not misprints, because the column casts 19*d.* and 13*d.* With this account we have the certificate: "We have examined the foregoing abstract of income and expenditure, the account of the Special Appeal Fund, and the accompanying statement, and compared them with the books and vouchers presented to us, and found them correct." Now, it is impossible that these accounts could have been carefully examined. They are the accounts of Guy's Hospital. I now submit to your lordships a suggested form of auditors' certificate and auditors' report.

AUDITORS' CERTIFICATE.

We have examined the accounts and account books of the Hospital, and have verified the securities mentioned in the annexed balance sheet, and we hereby certify that we have satisfied ourselves that the accounts are correctly kept, and truly set out the financial condition of the institution as at the and its income from all sources and expenditure on all accounts during the year which ended on that date. The abstract statement of income and expenditure, and the balance sheet annexed hereto, and to which we have appended our signatures, are correctly made up from the books of the institution, and truly represent the contents of the same.

We have adopted in our audit of the accounts the tests mentioned in the accompanying report, to which also we have appended our signatures.

A. B. of .....

C. D. of .....

AUDITORS' REPORT.

We have in the course of our audit examined and ascertained the income of the under its various items, as enumerated in the accompanying statement of income and expenditure, by means of the following tests:—

Item *a.* Annual subscriptions, tested by (say) the collector's receipt book.

" *b.*

" *c.* &c.

We have in like manner examined the expenditure by means of the following tests:—

Item 1. Food supplied to patients tested by (say) the Steward's accounts.

The total amount for which credit is taken in the Steward's accounts in respect of Food and Coal is vouched by tradesmen's receipts to the amount of £ . The balance of £ unpaid at the date of closing the accounts is duly entered in the Balance Sheet.

We have also verified the statement of liabilities contained in the balance sheet, and have ascertained that the amount set down to Hospital Estate agrees with the amount so entered in the balance sheet issued last year, making allowance for the depreciation and additions shown on the Statement of Income and Expenditure.

For Convalescent Hospital Fund, &c. &c.

As to the securities enumerated, we have relied for the value of the freehold property on the report of Mr. , the hon. secretary to the Institution; and as to the title under which they are held, we have been advised by Mr. , the solicitor. As to the various stocks and consols, we have seen the certificate in the custody of Mr.

&c. &c.

A. B. of.....

C. D. of.....

Witness then explained how each of the items in the statement of receipts and expenditure which he had drafted might be authenticated.

The Chairman: Would it not be advisable in the auditor's certificate to make the opening sentence run thus: "We have examined all the accounts and account books"?—The difficulty about saying "all" is that the auditor cannot say whether he has seen all the accounts and account books. An audit such as I have sketched would involve very considerable labour, and that would give rise to serious difficulty as matters now stand. It would be sufficiently obvious, however, that such an audit would be of a much more searching character than the audit ordinarily in use at present. There probably would be a difficulty of this sort. If the auditors were required to make a report of this description, an unprofessional auditor would, in some cases, feel himself unequal to the task, and a professional auditor would only be able to undertake it at the cost of a considerable fee. It might, therefore, be necessary to supplement the scheme which I have submitted by some provision that a public officer might be called upon to make this audit, and if returns of this description were made to some public authority, that public officer might very naturally be some officer in the employ or service of the public authority. If it were known that the public officer might insist upon a repetition of the audit when he considered it necessary in the public interest, it is perfectly plain there would be the strongest interest in securing not only a sufficient audit, but a manifestly sufficient audit in the first instance.

The Earl of Kimberley: What is the reason why there should be a compulsory audit for hospitals and not for other voluntary institutions?—I am not able to give any differential reason. It appears to me that in every case where it is necessary or desirable to publish accounts at all it is equally necessary and desirable that those accounts should be fully authenticated.

The Earl of Kimberley: But is that not an affair for the subscribers?—I do not perceive how it is unfair to the subscribers.

The Earl of Kimberley: Upon what do you base the right of the public to step in and put in those requirements as regards money, and which the public—I mean by that the State—does not contribute?—I assume, in the first place, that it is right that complete accounts should be made public, and if it is right that complete accounts should be made public, it appears to me to follow as a necessary inference that these published accounts should be duly authenticated.

The Earl of Kimberley: Does it not amount to this: that the State should interfere to see that the management of these institutions is good?—It does not appear to me that the propositions I have made involve any interference with the management of the hospitals. The extent to which I am prepared to carry my suggestion is merely this, that if these institutions which receive and administer public charity should make a full financial statement of the amounts which they so receive and disburse, that the statement should be authenticated in such a way that there can be no reasonable doubt that it is a correct statement.

The Earl of Kimberley: But surely the auditing of the accounts is part of its management, and an important part. If that part of the management is to be secured by Act of Parliament, upon what ground can you refuse to secure also that the patients are well treated in the hospital by Act of Parliament? Why limit your interference to a portion of the management?—The limitation is based upon this. It is not as a part of the hospital management that I propose to impose a particular form of audit at all. It is only as being a process in the production of a public record to which the hospitals have contributed. If they are to contribute this public record I propose that they should be called upon to authenticate it in a manner satisfactory to the Legislature.

The Chairman: You have examined these accounts at different times. Have you formed any opinion as to the amount per cent. of variation there is as regards management?—Not as the result of my own examination. I think as matters stand that that is very difficult to ascertain, and for my own part I should not like to put a figure upon it, for this reason—that so many diversities obtain in the preparation of the accounts. For instance, in some cases there is rent paid to the hospital in the account, and in others there is no rent. For my own part, I think that any conclusion drawn from the accounts as at present published would be apt to be very mistaken.

The Chairman: Have you ever had any chance of forming an opinion as to the cost of collection of money for the hospitals?—Yes, I have.

The Chairman: What are your views?—I think that that varies very much; but there, again, it is very difficult to ascertain from the accounts as at present drawn what the resulting figures should truly be, for this reason: that the cost of collection is really directed only to a part of the income. The collector deals with only part of the income of the institution. He no doubt collects voluntary annual subscriptions, and probably a certain proportion of the donations, but he does not deal with the collections made in the boxes and other parts of the income. My impression is that in the case of a well-administered institution which has a large income from annual subscriptions and donations, the collector's poundage spread over the whole of that sum would come to something like 4 or 5 per cent. In cases where his activity is limited to the getting of new subscriptions it would come to a great deal more than that.

The Chairman: Do you consider that, having no common basis, the estimates of cost per bed are practically valueless?—I have never attempted to verify those estimates because I have never had at my disposal the requisite material.

Earl Spencer: With regard to the audit, without going into the question whether it is practicable to enforce it, is there not, besides the necessity of verifying the correctness of accounts from vouchers and books, also the necessity to show whether the different moneys have been received and treated in accordance with the rules and regulations of the hospital?—In some cases there are such rules, and in some auditors' certificates I have noticed comments to the effect that the rules require such and such a disposition to be made.

Earl Spencer: Do you consider it part of the duty of the auditor to see that those rules are properly carried out?—I am not at all sure that the auditor is the right person. In the audit I have submitted I did not contemplate the auditor going into any matters of that kind.

Lord Sudley: If this compulsory form of accounts were carried out, would it in your opinion lead to better support to the hospitals on the part of the public?—It is very difficult to say. I am much in doubt as to what its effect would be in that direction. I am inclined to think that it would be so, because I think when all the facts are brought before the public they would have fuller confidence in the institutions and a better appreciation of their work than they have at the present moment. But I am not able to support that opinion by facts.

Lord Sudley: Would it lead to improved management?—I think, on the whole, it would lead to improved management. The excellent working of hospitals, as the excellent working of any other institutions, can best be secured by comparisons with different institutions which enable those which are not so well worked as others to see the points in which they are capable of improvement. I think that by tending towards a strict and exact comparison in respect to income and expenditure a general statement of this kind would do a great deal towards levelling up the administration of hospitals.

This concluded Mr. Gordon's examination.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 2nd, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	182	55	4	24	..	265	442
North-Western Hospital	115	28	...	10	..	153	443
Western "	140	15	..	14	1	170	224
South-Western "	157	26	..	8	..	171	340
South-Eastern "	123	17	..	16	1	157	462
Northern "	164	10	..	..	..	174	480
Totals	861	151	4	72	2	1090	2397

SMALL-POX.—*Atlas* hospital ship, 26.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABRAM, J. HILL, M.D. Lond., L.R.C.P. Lond., has been appointed Pathologist to the Liverpool Royal Infirmary, vice A. Barron, resigned.

ASHWORTH, W. RUSHTON, L.R.C.P. Lond., M.R.C.S., has been appointed, *pro tem.*, Medical Officer for the Colsterworth District of the Grantham Union, vice C. T. Heaven, deceased.

ATKINSON, WALTER A., M.B. Durh., has been appointed Medical Officer of the Camberwell Provident Dispensary, vice H. R. Oswald, M.D., resigned.

BICKERSTETH, R. A., L.R.C.P. Lond, M.R.C.S., has been appointed Honorary Assistant Surgeon to the Royal Infirmary, Liverpool.

BARLING, H. GILBERT, M.B. Lond., F.R.C.S., has been appointed Honorary Surgeon to the General Hospital, Birmingham, vice T. H. Bartleet.

BIRD, JAS. B., M.B., C.M. Edin., has been appointed Senior House Surgeon to the Cumberland Infirmary, vice Powers.

BLAYNEY, J. H., L.F.P.S., L.M. Glasg., has been appointed Medical Officer of Health for the Rural Sanitary District of the Prestwich Union.

CARGILL, L. VERNON, M.R.C.S., L.R.C.P., L.S.A., has been appointed Clinical Assistant to the Royal South London Ophthalmic Hospital, vice J. L. Jaquet, M.D., resigned.

CUNNINGHAM, C. L., L.R.C.S., L.M. Edin., has been reappointed Medical Officer for the Port of Newhaven.

DAUNT, FRANCIS ELDON H., L. & L.M. R.C.P. Irel., L.R.C.S. E., L.A.H. Dub., has been appointed Medical Officer for the No. 4 District of the Holborn Union.

DILLON, L. G., M.D., M.Ch. Irel., has been appointed Medical Officer for the Dawdon District of the Easington Union.

DOYLE, HENRY MARTIN, M.R.C.S., L.R.C.P., L.S.A. Lond., formerly House Physician at the London Hospital, and late Medical Officer of the invalid ship *Sobraon*, has been appointed Medical Superintendent of the Newcastle (New South Wales) Hospital.

ELLIS, W. MCDONOGH, M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Eastern Dispensary, Bath, vice Walker, deceased.

EVANS, J. DURANCE, L.R.C.P. Edin., M.R.C.S., has been appointed Surgeon to the Victoria Ironworks and Collieries, Ebbw Vale.

GANGE, F. A., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Faversham Rural Sanitary District.

GRANT, FRED., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer to the Market Harborough Union.

JOYNT, H. NOBLE, M.A., M.D., D. State Med. Dub., has been appointed Medical Superintendent of the Bradford Fever Hospital.

LATHBURY, CHAS. JOHN, L.R.C.P. Lond., L.R.C.P., L.R.C.S., L.M. Edin., L.S.A. Lond., has been appointed Resident Medical Officer to the Dunstable Friendly Benefit Societies' Medical Association.

MACKENZIE, WM. L., M.B. C.M., D.P.H. Aberd., has been appointed Medical Officer for the Upper District of Wigtown.

MEREDITH, JOHN, M.D., L.R.C.S. Edin., has been appointed Medical Officer for the First District of the Wellington (Somerset) Union.

RIDLEY, WALTER, M.B., M.S., F.R.C.S., has been appointed Surgical Registrar to the Royal Infirmary, Newcastle-on-Tyne.

SAUNDERSON, ROBT., M.D., C.M. Glasg., has been appointed Medical Officer to the Royal Constabulary in Edenderry, Esker, and Clonculogue.

SHAW-MACKENZIE, J. A., M.B. Lond., M.R.C.S., has been appointed Pathologist to the Chelsea Hospital for Women.

SMITH, GEORGE, M.B., C.M. Edin., has been appointed Medical Officer for the Grey's District of the Henley Union.

TOVEY, R. N., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Leigh District of the Martley Union.

TWIGG, F. G., L.S.A., has been appointed Deputy Medical Officer for the Mexborough District of the Doncaster Union, and also Medical Officer to the Local Branch of the Railway Servants' Mutual Provident Society, Mexborough.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House Surgeon for one year. Salary £40 per annum, with board, lodging, and washing.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House Surgeon for six months. No salary, but a bonus of £10 is given, and board and washing.

DORSET COUNTY ASYLUM.—Assistant Medical Officer at the Second Asylum. Salary £120 per annum, with board and furnished apartments.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, lodging, and washing.

HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons for five years.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer. Salary £109 per annum, lodging, board, and washing.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Temporary Assistant Medical Officer to act as Locum Tenens for two or three months. No salary. Board, lodging, and washing provided in the Asylum.

PARISH OF ST. LEONARDS, Shoreditch.—Clinical Assistant for the Infirmary, Hoxton-street, N. Salary £40 per annum, with rations, furnished apartments, and washing.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant to the House Surgeon. No salary. Board and rooms provided.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, St. George's-circus, Southwark, S.E.—Honorary Assistant Surgeon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Several Professors and Lecturers for the ensuing year.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board and lodging.

VICTORIA UNIVERSITY COLLEGE, Liverpool.—Holt Professorship of Physiology. Salary £375 per annum, plus share of students' fees.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon for twelve months. Rooms, with board and washing, also honorarium of £25 at the expiration of the year.

YORK COUNTY HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

BATTEN.—On May 27th, at Notting-hill-square, W., the wife of Rayner D. Batten, M.D., of a daughter.

BODILLY.—On May 24th, at Grove-road, South Woodford, Essex, the wife of Reginald Thos. Hacker Bodilly, L.R.C.P. Lond., M.R.C.S., of a daughter.

COX.—On April 19th, 1891, at Gloucester House, Cape Town, S. Africa, the wife of J. Herbert Cox, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

DAVIES.—On May 28th, at Gothic Lodge, Woolwich, the wife of Sidney Davies, M.A., M.D., of a son.

JAMES.—On May 27th, at 45, Wigmore-street, Cavendish-square, the wife of Coram James, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

MAKEHAM.—On May 23rd, at New-cross-road, the wife of H. W. Payne Makeham, M.R.C.S., L.R.C.P. Lond., of a daughter.

ROBERTSON.—On May 29th, at Ilchester gardens, W., the wife of John R. S. Robertson, M.B., late of the Army Medical Staff, of a son.

SMELT.—On May 30th, at Holloway-road, N., the wife of C. A. Casterton Smelt, M.B., C.M., of a daughter.

STIELL.—On May 18th, at Elms-road, Clapham-common, S.W., the wife of Gavin Stiell, M.B., of a son.

STRUGNELL.—On May 20th, at Brixton-hill, the wife of Walter T. Strugnell, M.B. Lond., M.R.C.S., of a son.

WILSON.—On May 27th, at Coates-crescent, Edinburgh, the wife of Charles Blair Wilson, M.D. Florence, of a daughter (stillborn).

MARRIAGES.

DUNCAN—GENGE.—On June 2nd, at the Parish Church, Croydon, P. T. Duncan, M.D. Lond., Fellow of Univ. Coll. Lond., of Park House, Croydon, to Gertrude, eldest daughter of the Rev. E. H. Genge, M.A., of Croydon.

CUFFE—BRANDE.—On June 1st, at the Church of St. John the Baptist, Woking, Alexander Cuffe, L.R.C.S.I. &c., youngest son of the late George Cuffe, of Killasser House, co. Mayo, Ireland, to Florence, second daughter of Frederic Robert Brande, Priory Villa, Woking.

GOSTLING—RAY.—On June 3rd, 1891, at the Parish Church of St. John the Baptist, Buckhurst Hill, by the Rev. Prebendary Gordon Calthorpe, of St. Augustine's, Highbury New Park, assisted by the Rev. T. W. Peile, Rev. T. Lankester, and the Rev. Leonard Coulter, Thomas Preston Gostling, M.R.C.S., L.R.C.P., Worcester, to Margaret McCall, daughter of H. H. Ray, Esq., of Ibrox, Buckhurst Hill.

HANSON—COUSINS.—On June 1st, at All Saints', Paddington, Arthur Stephen Hanson, M.R.C.S., L.R.C.P., to Kate Jeannette Cousins.

HOLT—KNIGHT.—On June 1st, at St. John's, Torquay, Arthur Knight Holt, M.D., second son of Geo. Wells Holt, of Lloyd's, London, E.C., and Jutland, Forest-hill, S.E., to Mary Ethel, eldest daughter of Joseph Knight, of Hartshill, Stoke-upon-Trent, and Newcastle-under-Lyme, Staffordshire.

VINCENT—WOOLLETT.—On May 29th, at St. Nicholas's, Plumstead, Herbert Edmund Vincent, M.D., B.S. Lond., to Dora Margaret, daughter of John Cresswell Woollett, of Old Charlton, Kent.

DEATHS.

ALLEN.—On June 3rd, at Regency-square, Brighton, Thomas Allen, M.D., in his 81st year.

BROOKES.—On May 27th, at his residence, 137, Westminster-bridge-road, S.E., Charles Brookes, M.R.C.S., L.S.A., in his 71st year.

COOPER.—On May 21st, at 12, Albion-street, Hull, Henry Cooper, Knt., M.D., J.P., aged 84 years.

CORCORAN.—On June 1st, at Victoria-street, Loughborough, Lizzie, wife of Thomas Corcoran, L.R.C.S.I., Surgeon.

FULLER.—On May 25th, at Marah House, Plympton, Deputy Inspector-General Charles Henry Fuller, R.N., aged 90.

GRAY.—On May 28th, at Edgbaston, Birmingham, Albert W. Gray, L.R.C.P. Irel., M.R.C.S.

LOMAS.—On May 28th, at Ferrybridge, Yorkshire, Wm. Roby Lomas, Surgeon, aged 81.

MEEHAN.—On May 30th, at his residence, Taunton-place, Regent's-park, William Meehan, M.R.C.S., L.R.C.P., aged 75.

PEARSE.—On May 28th, at his residence, Bessborough-gardens, S.W., Dr. W. E. Grindley Pearse, in his 73rd year.

ROPER.—On May 29th, Harold Kennaway Roper, M.B. Lond., of Belvedere-road, Upper Norwood, second son of the late C. H. Roper, Esq., of Exeter, aged 28.

STEAVENSON.—On June 1st, at Mansfield-street, Portland-place, William Edward Steavenson, M.D. Cantab., M.R.C.P., second son of the late Rev. Joseph Steavenson, M.A., Vicar of All Saints', Newmarket, aged 41.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, June 8.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Angel Money: Selected Medical Cases from the Out-patient Department.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. Wm. Lang: Diseases of the Iris.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Wm. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes.

Tuesday, June 9.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyslop: Alcoholic Insanity and Syphilitic Insanity.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: Secondary Syphilis.
ROYAL COLLEGE OF PHYSICIANS (Examination Hall, The Savoy, W.C.)—5 P.M. Dr. Burdon-Sanderson: On the Progress of Discovery relating to the Origin and Nature of Infectious Diseases during the last Twenty-five Years. (Croonian Lecture.)
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Dr. G. Thin and Dr. F. J. Wethered: Symptoms and Pathology of a case of Acute Inflammation of the Mucous Membrane of the Ileum from Climatic Causes.—Dr. G. N. Pitt and Mr. W. H. A. Jacobson: A case of Pancreatic Cyst successfully treated by Laparotomy and Drainage.—Dr. Alfred Parkin: The Causation and Mode of Production of Pes Cavus.

Wednesday, June 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Mr. Rickman J. Godlee: Surgery of the Thorax.—Royal London Ophthalmic Hospital: 8 P.M., Mr. J. B. Lawford: Toxic Amblyopia.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Wm. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes.

Thursday, June 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Abercrombie: Chorea.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Beevor: Locomotor Ataxia.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. Ed. Law: Perforation of the Membrana Tympani.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M.—Dr. Bronner (Bradford): On Fifty Cases of Advancement of the Recti Muscles in cases of Squint by Schweigger's Method.—Mr. Story (Dublin): (1) Detachment of the Choroid; (2) Sequel of a case of Lesion of the Optic Chiasma.—Mr. Jessop: (1) The Consensual Pupillary Reflex in cases exhibiting the Argyll-Robertson Pupil Symptom in one Eye; (2) Two cases of Complete Blindness with good Pupillary Light Reflex; (3) On the Symptoms following Section of the Optic Nerve.—Mr. Scott (Cairo): Perchloride of Mercury in Conjunctival Disease.—Mr. Stephenson: Peculiar Form of Retinal Pigmentation. Card Communications:—Mr. Treacher Collins: Epithelial Implantation Cyst. Mr. T. Thompson: Emphysema of Conjunctiva.—Mr. Stephenson: Peculiar Form of Retinal Pigmentation (two living specimens).
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Lawson Tait: Perineorrhaphy. Specimens.

Friday, June 12.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Mr. Rickman J. Godlee: Surgery of the Thorax.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof Crookshank: Leprosy (Sections of Leprosy).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Nervous System.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Wm. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contraction of the Fingers and Toes.
WEST LONDON HOSPITAL.—5 P.M. Dr. T. Lauder Brunton: Eliminatio and its Uses in Preventing and Curing Disease. (Cavendish Lecture.

Saturday, June 13.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. Hyslop: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 4th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 29	29·79	S.W.	54	50	112	64	47	·03	Raining
,, 30	29·79	S.W.	54	53	101	68	51	·12	Raining
,, 31	29·94	S.E.	60	53	115	75	46	·05	Bright
June 1	29·91	S.E.	63	57	118	74	52	..	Bright
,, 2	29·89	N.W.	58	54	107	67	54	·15	Cloudy
,, 3	29·87	N.W.	60	57	103	74	57	·06	Overcast
,, 4	29·75	E.	58	57	98	68	56	·10	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

HOSPITAL SUNDAY.

WHILST thanking the rev. gentlemen who have furnished us with information in respect of the subjects on which they intend to discourse on Sunday next, we think it would be opportune to utilise that information in connexion with our report of the amount of the offertories next week.

A. C.—Patients will occasionally transfer their confidence from one medical man to another. This liberty of patients should be recognised by medical men. It should make no difference between medica neighbours so long as no dishonourable or undignified methods are practised.

Mr. Charles Ward (P. M. Burg.)—The person our correspondent names is a notorious advertiser. He is not a qualified medical man, and we certainly do not recommend the articles.

Young Practitioner will find a useful form of income-tax return in THE LANCET of Dec. 6th, 1884.

Mr. Mansell Moullin's paper will appear shortly.

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Referring to your note, "Clinical Instruction in Infectious Diseases in London," which appears in your issue of May 23rd, kindly permit me to say that I have given two courses of such instruction, the first of which commenced on Nov. 27th last. The one to which you refer is the third. Fourteen students attended the first two courses, none of whom contracted any fever.

I am, Sirs, yours faithfully,

The Metropolitan Asylums Board Eastern Hospitals, Homerton, E., May 29th, 1891. ALEX. COLLIE

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COLD WEEK IN MAY, 1891.

To the Editors of THE LANCET.

SIRS,—Respecting the unusually cold weather experienced lately, it may be mentioned that it commonly recurs every year about this time, sooner or later, and is known as the "cold week in May." It is probably due to the floating off of the icebergs and floes from the Greenland seas by the north-westerly winds, and from the Norwegian seas by the north-easterly winds into the open Atlantic Ocean. The winds that blow over ice seem peculiarly chilling, as they are not the dry Polar winds from land, but the Polar winds carrying frigid moisture along with them from the surface of the ice in the Arctic regions. This ice vapour seems to be different from the heat vapour of the atmosphere at ordinary temperatures, and is probably created by friction and diffusion by winds. It is recognised experimentally by the loss in weight and bulk sustained by ice when freely exposed to the cold wind both day and night. The effects of the impression of this frosty vapour on the human frame may be readily discounted, and may suffice to account for many of the chills and colds prevailing so plentifully at this season. The temperature of the sea is also found to fall rapidly at the same time as the air, and it descended at Tenby lately from 53° on the 13th to 47° on the 18th, or 6°. This showed the proposed effect of the irruption of cold sea currents driven south from the melting icebergs and floes by the north-westerly and north-easterly winds into the British seas. The specific gravity of the sea at Tenby also diminished at the same time, notwithstanding its extra coldness, from 1025 on the 10th to 1022 on the 23rd; owing also probably to the cold water from the melted iceberg being fresh water and not salt water, which would have diluted its saline density. In order to guard against this extraordinarily cold weather recourse should be had to winter clothing, and the surface of the body must be shielded by a flannel dress next it, and the dieting must be as substantial as in winter. It may also be borne in mind that already the corporeal heat has become unusually diminished by the long winter season just passed, and that the vital powers have become less able to withstand any fresh attack from the frigorific enemy. The cold weather of May seems to originate here from a different source or direction than the cold of this winter, as the latter came from the continent of Europe from the land, while the former comes probably from the frigid oceans of the Atlantic and Arctic regions.

I am, Sirs, yours faithfully,

May 30th, 1891. OBSERVER.

TABLE OF SEA OBSERVATIONS.

Date.	Sp. gr. Sea.		Therm. Sea.		Temp. Air.
May 12	1024	.....	53	.....	58°
,, 13	1023	.....	53	.....	63°
,, 14	1023	.....	53	.....	54°
,, 15	1023	.....	51	.....	52°*
,, 16	1023	.....	48	.....	46°
,, 17	1024	.....	49	.....	49°
,, 18	1024	.....	47	.....	42°*
,, 19	1023	.....	48	.....	40°*
,, 20	1024	.....	49	.....	50°
,, 21	1023	.....	51	.....	53°
,, 22	1024	.....	49	.....	46°
,, 23	1022	.....	50	.....	57°
,, 24	1022	.....	49	.....	48°†
,, 25	1022	.....	49½	.....	50°

Hour—7 A.M., North Beach, Tenby, May, 1891.
* Snow storms, Britain and Europe. † Gale.

THE EXAMINATIONS FOR THE DIPLOMA IN PUBLIC HEALTH OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF LONDON.

To the Editors of THE LANCET.

SIRS,—Last January—and, I suppose, prior to that time also—the two examinations for the above-named diploma were held in two separate weeks—the first part, Monday to Wednesday or Thursday of one week; and the second part, Monday to Thursday of the following week. Now, as most candidates take both parts together, and as most candidates are general practitioners, this, I know, proves a highly inconvenient arrangement, especially to practitioners residing some distance from London; for it involves their being away from their practices nearly a fortnight right away, or making two long special return journeys to London. Can it not be arranged that both parts should take place and conclude in one and the same week, as at Cambridge University, where the first part begins on Tuesday, and the second part continues and concludes not later than the Saturday of the same week? Such an arrangement is surely possible, and would certainly be much more convenient to all candidates. Present arrangements debar me and others I know from being candidates at all, because we cannot afford nearly a fortnight away from our practices. This is disappointing, to say the least of it. I trust others thus inconvenienced will, with your permission, support my complaint in your columns, and that more considerate and convenient arrangements will be made for the approaching July examinations.

I am, Sirs, yours faithfully,

June 1st, 1891. YORKSHIRE SHUT OUT.

Mr. James Cullen Wilde is referred to the author of the paper for the information he desires.

Dr. Wallace (Colchester).—Short notes of the more interesting cases would be acceptable.

THE MISERICORDIA IN FLORENCE.

THE best account of the origin and development of this confraternity is that of Placido Landini, Florence, 1843. It is a thin quarto, beautifully illustrated, and is entitled, "Istoria dell' Oratorio e della Venerabile Arciconfraternità di Santa Maria della Misericordia della Città di Firenze." There are many passages in the book of deeply touching, as well as of strong dramatic, interest.

South America.—1. It will be necessary for even an M.B. Cantab. to pass an examination at the University of Montevideo in order to be allowed to practise in Uruguay. He must produce proof of his degree, which must be verified by the British Consul, and a short State examinatio must then be passed, the difficulty of which it is impossible to gauge. It may be remarked, however, that for natives a preliminary examination, quite equal probably to that for the Cambridge B.A., has to be passed, and a six years' medical course gone through subsequently; so that in some respects the Uruguay medical regulations are more stringent than our own.—2. With regard to books of reference, the only Spanish-English medical vocabulary we are aware of is contained in Maxwell's "Terminologia Medica Polyglotta." A large and expensive Spanish translation of Littré's "Nouveau Dictionnaire de Médecine" is in course of publication, and we believe Gould's New Medical Dictionary is being translated. As to pharmacopœias, probably the Spanish translations of Jeannel's *Formulaire* or of the French *Officine* would be as useful as anything else.

L. A. Delesirned.—Our correspondent has, we think, a legal claim. It is always a matter for consideration whether it is worth while to push it in a court of law. It depends on the circumstances of the case.

NEWSPAPERS AND QUACKERY.

To the Editors of THE LANCET.

SIRS,—I have been reading an annotation in THE LANCET entitled "Quackery in Brussels," and it reminds me of an opinion I have held—namely, that newspapers are very much to blame for inserting quack advertisements. A newspaper editor would hesitate to write a leading article recommending what he knew to be false or had not good grounds to know to be true; and yet, because he is paid to do so, a publisher will put in a quack's advertisement, the object of which is to gull the public. In fact, the publisher may be said to be a sort of partner of the quack. To a very considerable extent I think that the publisher of a newspaper is responsible, from a moral point of view, for the truth of any advertisement he allows into his paper. The editor would certainly be responsible for the truth, or at least for his belief in the truth, of a leading article. Now, why because he has received money for it should a publisher be free from all responsibility for the truth of an advertisement? It is surely rather the other way. What I chiefly allude to is the insertions of all kinds of advertisements of quack remedies. Many papers have heaps of them, and the publishers cannot believe they are generally true.

I am, Sirs, yours truly,

May 27th, 1891. M.D.

Cyclops.—1. A principal who allows an unqualified assistant to vaccinate for him and to sign vaccination certificates acts falsely, and violates the Vaccination Act, which requires vaccination to be done by qualified persons, and each such person to certify his own work. 2. Such a case differs from the ordinary case of covering, and has not yet been brought to the notice of the Medical Council. One somewhat similar, but where the principal resided hundreds of miles away, has been considered by the Council at its recent meeting. In this case the name of the practitioner has been erased.

Mrs. Smith.—An intimation might be made with propriety, if confined strictly to former patients and sent as a private letter.

Dr. Barrs (Leeds).—The paper has been received, and will be published shortly.

Dr. Samson's communication shall receive attention next week.

EXAMINATIONS OF THE APOTHECARIES' SOCIETY.

To the Editors of THE LANCET.

SIRS,—Would you kindly allow me through your columns to draw attention to what I think is a legitimate grievance on the part of candidates at the Primary Examinations of the Apothecaries' Society—i.e., that the bodies used at the anatomical portion of those examinations are uninjected. This considerably enhances the difficulty of the test, and is not the case under any other examining board.

I am, Sirs, yours faithfully,

June 2nd, 1891. STUDENT.

Ex fumo dare lucem.—Our correspondent should ascertain from the leading practitioner the custom of the district, and follow that. There is no invariable rule in the matter.

J. W. M.—There is not, so far as we are aware, any English translation of Laveran's "Du Paludisme et de son Hematozoaire."

Mr. Chas. R. Clark might make his wishes known by means of an advertisement.

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"THE VALUE OF THE TONGUE AS A RESPIRATOR."

To the Editors of THE LANCET.

SIRS,—Dr. Scatliff's theory is to my mind somewhat amusing, and has, to say the least, the charm of novelty. When facing the east winds I close my mouth, and advise everybody to do the same. Good protection may be had by using a small umbrella, thus protecting the face. In my school days we were reminded that a gentleman "breathes through his nose," and a vulgar man "through his mouth." Possibly, since then ideas have considerably altered.

I am, Sirs, yours faithfully,

Brighton, June 1st, 1891. C. WELCH, F.R.C.S. Edin. &c.

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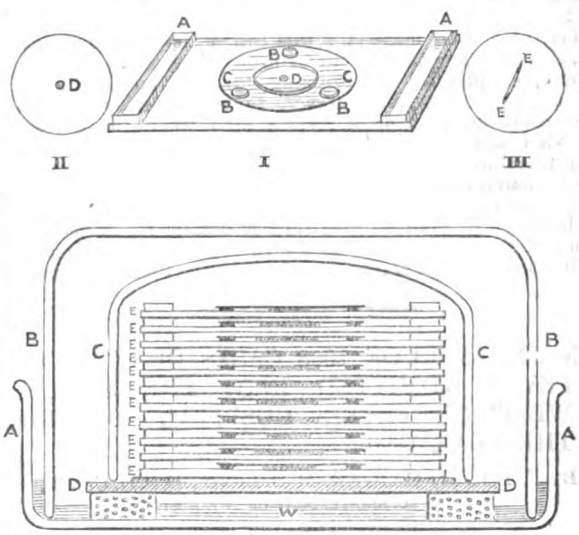
Remarks
ON A
NEW METHOD (INTERLAMELLAR FILMS) OF STUDYING THE DEVELOPMENT OF MICRO-ORGANISMS AND THE MUTABILITY OF THEIR CHARACTERS & PROPERTIES.

BY SHERIDAN DELÉPINE, M.B., C.M. EDIN.,
LECTURER ON PATHOLOGY, ST. GEORGE'S HOSPITAL.

THOSE who have followed the discussions which have taken place between the partisans of the constancy (Koch, Zopf) and those of the mutability of pathogenic bacteria (Davaine, Naegeli, Pasteur, Buchner) know what stress has been placed on the impurity of cultivations the pathogenic properties of which seemed to have altered. It is evident that one of the simplest ways to solve this vexed question would be, instead of studying the mixed products of the germination of a number of spores, to isolate one spore, and follow its development through all its stages, and the development of successive generations of organisms all derived from the same original spore, and cultivated in various media. If it were possible to follow thus the history of one spore and its progeny, it would only be necessary, in order to obtain definite results, first to study the complete series of morphological changes which occur, when the descendants of the same individual are cultivated severally in various media, then to connect certain physical and chemical alteration of the various media with stages of development, modified and unmodified, and finally to find how the properties of the organism at each developmental stage are or are not modified by external circumstances. I had already attempted to carry out this plan by means of a dilution method, such as that used by Brefeld and others since, early in 1881, when working at the organisms of suppurating mucous membranes, a work which I gave up owing to the failure of the methods I was using then, and the special difficulties connected with the subject. I was, however, already then able to satisfy myself that phenomena analogous to those of karyokinesis were of constant occurrence in multiplying bacteria, and gave rise to many appearances which have been observed by others, though not explained fully yet.

About the middle of last year, whilst studying the development of certain pathogenic moulds and other parasites, I felt again the need of following closely the development of single organisms. I failed by plate and drop cultivations to obtain the results I wanted, partly owing to the effects of liquefaction of certain media or of the mobility of others, partly also owing to the form assumed by drops. I was then led to adopt a new mode of cultivation which, although not perfect in many of its details, has yielded results which so far have been satisfactory, and some of which have been exhibited this year at a meeting of the Pathological Society (May 5th). The principle of the method is to enclose a thin layer of the nutrient medium between two parallel plates, so as to force the organism to grow in definite directions. Owing to the effects of capillarity the most fluid nutrient media become, so to speak, fixed, provided evaporation be prevented, and they become as available as the solidified ones. The method can, of course, be varied in many ways; but one of the simplest plans, and one of those which I have used with satisfactory results, is the following. At each end of a glass slide (1½ in. by 3 in.) a narrow slip of glass is fixed (A A). This, as will be seen later on, is to act as a support. (The surface of the slide on which these slips are fixed will be called the upper one hereafter.) Three small drops of sealing-wax are dropped on the upper surface of the heated slide (any other thick cement, solid and emitting no antiseptic vapours, at the temperature of the body, may be used instead of sealing-wax). These drops will be used to support a cover-glass (C) an inch and a quarter in diameter at a certain distance above the slide, and therefore must form the apices of a triangle capable of being inscribed in the circumference of such a cover-glass. Before placing the drop of fluid on it, the slide must be thoroughly sterilised in the flame of a Bunsen burner, or otherwise (the sealing-wax does not interfere with this process). Then the slide is inverted or placed under a thoroughly sterilised plate. A cover-glass (C) one inch and a quarter in diameter is sterilised also, and the surface which is to be next to the slide is carefully protected from the access of any germ or dust. On this surface a very small drop (D) of sterilised material may be placed, and this drop touched with a wire charged with a few organisms. A number of cover-glasses being prepared in this way, they may be examined over a sterilised plate with a pretty high power, inoculated surface downwards, and not in contact with the supporting slide, which must also be thoroughly sterilised, until a drop is found to contain the number of organisms wanted. Instead of a drop a streak (E E) can be used, according to the nature of the organism investigated. On the upper surface of the sterilised slide a drop of sterilised nutrient or other medium is deposited by means of a perfectly sterilised pipette. The size of the drop depends on the thickness one desires to give to the preparation or the surface one intends to cover. The diameter of the enclosed film should, in order to prevent contamination, never be more than three-quarters of an inch when the cover is not more than an inch and a quarter in diameter. (I often use larger covers and slides, but this in most cases



I.—A slide with interlamellar film, ready for incubation. A A, Side rests. B B, Drops of sealing-wax supporting the cover. C C, Cover-glass compressing a drop of nutrient material. D, Very small drop of gelatine or other material containing a few spores. II.—A cover-glass with very small central drop inoculated (D). III.—A cover-glass with a small central streak (E E) containing micro-organisms. IV.—Diagrammatic representation of eleven interlamellar cultivations in a moist chamber, showing the disposition which I have adopted both for this method and for other forms of film or plate cultivations. A, Outer basin containing a thin layer of water (W) at the bottom. B, Covering basin with a flat bottom, allowing a series of moist chambers to be piled one above the other in the incubator. C, Inner bell preventing condensed water falling upon the slide. D, Plate supported by pieces of cork. E's, Slides.

has no advantage.) The centre or the side of such a drop may now be inoculated (in case the cover has not been previously inoculated). Then the cover is placed over the drop. It should be well supported by the three drops of sealing-wax, and should not at this stage flatten much the drop underneath. A heated rod is then applied successively over the three drops of sealing-wax until the inoculated fluid has spread evenly over a certain surface under the central parts of the cover; the preparation is then ready for the incubator. It has, however, to be kept in mind that, owing to the free access air has to the surface of the inoculated fluid, it is necessary to keep the preparation in a moist chamber. The extremely small size of these inoculated slides allows of a large number being packed in an extremely small space. Before incubating the preparation it is necessary to select out of the micro-organisms which have been sown into the fluid one or several, the position and relation of which are carefully noted. For this purpose divided cover-glasses or

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slides, or, as I prefer, a finder, can be used. I have in this way followed the development of bacteria and spores of pathogenic Pyrenomycetes for days and weeks. I have devised many improvements for regulating the thickness of the enclosed film and making its thickness perfectly even, but these are not necessary to the success of the method, and their description would obscure its main object.

Now it will appear to many that this is nothing else than a drop cultivation, and to others that it is a film or a plate cultivation. It is all this, but I claim that it is something more; for by using an "*interlamellar film*," as I feel inclined to call it, the free surface of the medium is limited to the space existing between the two glass lamellæ used, whilst in ordinary plate, film, or drop cultivations the surface in contact with the air is very extensive; by the interlamellar method a side view, so to speak, of the cultivation is obtained; by the drop method a surface view. By the interlamellar method organisms placed at various distances from the free surface of the medium can be followed in their development step by step,[1] a thing utterly impossible in drop cultivation. By the interlamellar method it is possible to follow certain chemical changes occurring along a growing filament or colony extending in a direction which can always be determined;[2] this is impossible to the same extent in drop cultivations. By the interlamellar method it is possible to follow for weeks the development of the same individual, or group of individuals, even in the midst of a fluid material; this cannot be done for any considerable length of time in drop cultivations. I feel, therefore, justified in claiming for the method some advantages. I wish, however, to state clearly that it has disadvantages of a serious kind when the objects in view are not those which I have tried to explain, and therefore I do not offer this new method as anything more than a help to those who may try to solve some of the questions to which I have referred. On some future occasion I hope to be able to give further details regarding the modifications which have been suggested to me by circumstances and the general nature of the results I have obtained.

AN ANALYSIS OF 1008 CASES OF SCARLET FEVER ADMITTED INTO THE SOUTH-WESTERN FEVER HOSPITAL DURING THE YEAR 1890.

BY F. FOORD CAIGER, M.D. LOND., D.P.H. CAMB.,
MEDICAL SUPERINTENDENT OF THE HOSPITAL.

(*Concluded from page 1260.*)

Albuminuria was recorded in thirty cases. This small number does not pretend to include all cases in which faint and transient traces were present at one time or another. Those showing a faint cloud during the pyrexial stage of the attack and those cases in which a faint haze with picric acid was observed for not more than three consecutive days are not included in the list. Such cases, for the most part showing no signs of renal products on careful microscopical examination, and no tendency to recurrence before leaving the hospital, I believe to be of no pathological significance. Whether they will afterwards become the subject of renal disease is of course impossible to determine; but the fact that in almost every instance they were not sent home until the urine had been for several weeks entirely free from albumen is in itself ground for the hope that such will not be the case. In a large proportion of cases these faint and passing clouds were found on further investigation to have been due to the presence of mucin. Another source of error lies in the fact that the urines, unless albuminuria had been detected, were only examined twice a week, and in very young children it was only possible to collect a specimen but rarely. However, despite these sources of error, it was hardly possible for a case of albuminuria of marked degree to have escaped detection; and the record, without pretence to accuracy, is, I think, of practical value. The fact therefore remains that the incidence of albuminuria on these cases, even allowing a wide margin for fallacy, was but small. This is in marked contrast to the results noted by Dr. Astley Gresswell on 375 cases of scarlet fever treated in this hospital in the months of October, 1887, to January, 1888. In his able and exhaustive monograph, entitled "A Contribution to the Natural History of Scarlet Fever," Dr. Gresswell states that he found albumen in the urines of 93 per cent. of his cases, and in the months of October and November in every one, the urines usually being tested every other day, and a neutral saturated solution of picric acid the reagent employed. Difference of season and epidemic type may doubtless, in some degree, account for the discrepancy; moreover, the individuality of the observer and the nature of the test he employs are not without their influence. The cases were treated in the same wards, and with practically the same environment. The only variation lay in the matter of treatment. The diet *scale* remained the same in the two series. Dr. Gresswell's ordinary cases appear to have been kept on "low diet," consisting of beef-tea, milk, and two eggs (in the case of children over ten years four eggs) for a period of three weeks, during which time no baths were given. In the cases under discussion in this paper the patients were put on a meat or fish diet with no eggs (in the case of children over ten one boiled egg), and were ordered baths on the day following that on which the temperature had reached the normal. This usually occurred about the end of the first week. Both series of patients were kept in bed for three weeks after admission. Their treatment, therefore, during the second and third weeks differed in this respect. Dr. Gresswell's cases were taking a diet rich in highly diffusible albumen without any baths; my own a much less proportion of easily diffused albumen and frequent baths, and it was during the first three weeks that Dr. Gresswell found albumen in 100 per cent. of his October and November cases. If I am right in my conjecture that these are the two essential factors causing the disparity, it will be interesting to watch the result in cases once more placed under the former conditions. As far as I have been able to judge, from the number of cases yet experimented on, the result has lent confirmation to this view.

With the exception of a slightly higher rate during the October and November cases, the albuminuria has been spread nearly uniformly over the year. Young children were effected in larger proportion than their elders; 93 per cent. occurred in children under ten, the relative admissions for that age period being 75. Cold weather *per se* seems to have had no influence in producing albuminuria, but I have frequently noticed its apparent connexion with dampness of the air. Days which might be described as "damp cold" or even "muggy" being marked by the coincidence of several fresh cases, which, if the albumen were only present in slight degree, rapidly cleared on the appearance of bright weather. Observations made during the years 1887 to 1889 on the urines of over 5000 cases of scarlet fever during convalescence frequently showed an association between the appearance of albuminuria and a high degree of atmospheric humidity often coupled with a low barometer. Bright, frosty weather is frequently characterised by a marked absence of albuminuria. Mr. R. D. Sweeting has recently adduced evidence pointing to the fact that the frequency of albuminuria in scarlatinal patients is directly related to the aggregation of acute cases in hospital wards. This, of course, has a very direct bearing on the question of cubic space and freedom of ventilation.

Ulcerative stomatitis occurred in twenty-seven cases. They varied in severity from the mildest form of surface ulceration on the lips, tongue, and buccal surface of cheek, arising in connexion with spongy gums and carious teeth, to a rapidly necrotic form of deep ulceration, attended with extensive sloughing of cheek and gum. In this latter form

[1] In this way the branching of many bacilli can be demonstrated. This branching, which is supposed by most authorities not to exist among the schizomycetes except in a spurious form, can by this method be easily demonstrated. I had, it is true, been led to believe in its existence from the study of organisms grown differently, but by this method branches can be seen to arise from definite filaments. Dr. Slater, who has kindly made many observations with me for the study of this point, has obtained results confirming entirely my views.

[2] By using media containing substances capable of forming insoluble compounds with the products of the metabolism of micro-organisms, the gradual formation of these metabolic products can be followed and demonstrated. Thus I have lately been able to demonstrate the formation of oxalic acid out of various substances, such as gelatine, starch, gum Arabic, and possibly cellulose. I have been able to show that the formation of this acid begins only when growing filaments have free access to air—a fact of great significance in connexion with Pasteur's teachings

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the teeth soon become loose and fall out. Cases of all degrees of severity are attended with a distinctive fetor of breath, a dirty coated tongue, and rapid incrustation of the teeth with a black putrefactive deposit. The temperature in such cases may be raised several degrees; in others, the patient being usually of an ill-nourished type, the temperature may be unaffected or even subnormal. Only three of these cases were of sufficient gravity to deserve the name of "noma." Under suitable treatment, and, in the severe cases, very radical treatment, all recovered. I have had to do with several hundreds of such cases, some of a very bad type, and am convinced that if taken early the disease may be stopped. Half-measures are of no use. If the disease does not almost at once yield to mild measures, fuming nitric acid, if necessary under chloroform, should be freely applied to the whole of the diseased surface. Within thirty-six hours the whole process will have changed. Instead of a foul sloughing surface with great fetor, there will be produced a healthy ulceration, quite free from odour, which will rapidly heal, with great improvement of the general condition. If neglected for even a few hours, irreparable mischief may ensue. A second application of the nitric acid may be required should any part of the surface have escaped destruction. The affection is contagious, and great care is necessary that any cup, feeder, or spoon, &c., used by the patient should be reserved for him alone. Convalescents from measles are also subject to this affection, but it is chiefly in children who have recently been run down by one disease and then take another that it is most frequently seen. I have never seen it in an adult or in a child over ten years of age. The disease is probably associated with the presence of some specific micro-organism, but the isolation of any such entity has, owing to the crowds of various organisms present in the mouth in such cases, been hitherto unattended with success.

Nephritis supervened in twenty-six cases. Though nearly equally distributed throughout the year, they were relatively slightly more frequent during the summer months. Twenty-three of these cases occurred within the first three weeks of illness. As before stated, patients were allowed to get up on the twenty-second day; so that in only three instances did the affection develop after getting up. One case showed a relapse of the kidney affection. Dropsy was not a prominent symptom, and showed itself in the form of surface œdema, mainly in the face and legs. All cases presented hæmaturia in greater or less degree. Convulsions occurred in two instances, one of which was fatal. All cases, with this exception, recovered, the urine being free from albumen for several weeks before discharge from the hospital. The incidence of nephritis was therefore very small—viz., 2·7 per cent. This is in marked contrast with the statement which appears in the article on "Scarlet Fever" in Roberts' Theory and Practice of Medicine, 1890—viz., that the most frequent and important complication and the one that requires special notice is acute nephritis and its consequences. For my own part I have ever been struck with the relative infrequence of acute nephritis in scarlet fever patients if treated under favourable conditions; 85 per cent of these cases occurred in children under ten years of age, the percentage admissions for which age period being 75.

Rheumatism of sufficient distinction to cause a rise of temperature, and obvious joint tenderness was seen in twenty-six instances. Cases in which transient pains were complained of, but which were unaccompanied by fever or objective signs of joint affection, are not included in the list. In two instances the pericardium was affected, in two an apparently valvular murmur developed, but one of these had probably been the subject of antecedent endocarditis. Pleurisy in connexion with rheumatism was seen in only two instances. The joints most frequently affected were those of the extremities, the arms more frequently than the legs, and the wrists, elbows, and ankles, than the shoulders, hips, or knees.

Scarlatinal rheumatism most frequently occurs at the end of the first or beginning of the second week, at a time when the rash is just disappearing and the temperature reaching the normal. There seems to be a greater liability in patients who have had a copious rash, followed by profuse desquamation. It is comparatively more frequent in adults and in older children, and shows but little tendency to affect the heart, pericardium, or pleura. Its incidence seems to be independent of season. I have found it relatively as frequent during the summer and autumn as during the colder months.

Bronchitis occurred in twenty instances. It was mild in character, and almost invariably appeared during the febrile stage. It was relatively more frequent during the cold weather.

Conjunctivitis of a mild muco-purulent type occurred in thirteen instances. It was mainly an affection of convalescence, and readily yielded to treatment. No case terminated in corneal ulcer or serious eye mischief.

Secondary tonsillitis sufficient to cause a rise of temperature occurred in twelve cases. They all made a rapid recovery.

It is satisfactory to note that in no instance did diphtheria, either faucial or laryngeal, make its appearance among the scarlatina convalescents. The occurrence of this affection, with its attendant high mortality, is well regarded as the most grave complication to which scarlet fever patients aggregated in the wards of some hospitals are liable. I am convinced from careful observation during some years, that, assuming the drainage is good, and that due care has been taken to avoid infection from cases of diphtheria treated in the same hospital, it is mainly a matter of locality and ward hygiene. Dampness of soil and air appear to be potent factors, and their noxious influence becomes aggravated when the heating, and therefore also the drying, provisions of the ward are such as to preclude the possibility of maintaining the air of sufficient temperature and dryness, and at the same time to permit of their thoroughly free ventilation. The conditions in both these respects are very favourable in this hospital. The building is situated on a sandy soil, which rapidly dries; and the wards, while capable of very free ventilation, are furnished with an efficient system of hot-water pipes, in addition to large open fireplaces.

Relapse or recrudescence of the disease was seen in six instances. Great care should be taken in recording such instances to eliminate all cases in which there exists any reasonable doubt as to the genuineness of either attack, as it may be suggested that either the initial or the second one may not have been an instance of true scarlatina. In four cases out of the six the symptoms in each attack were so distinctive that if their genuineness be in dispute it can only be urged that we have, then, no reliable criteria of an attack of scarlatina. Rash, throat, tongue, the course of the temperature and peeling were in each instance characteristic of the disease. Three of the relapses occurred during the second and third week of illness—viz., on the twelfth, fourteenth, and seventeenth days; two in the fifth week, and one in the seventh week. In three of them — viz., those occurring on the twelfth day, fifth week and seventh week respectively, the relapse, in one case complicated with nephritis, was of greater severity than the primary attack. This I believe is the reverse of what usually occurs, but I have met with two instances in which the relapse was fatal. Whether these cases be viewed in the light of a recrudescence of the virus—that is, a reinfection from within—or whether they be regarded as instances of a reinfection from without, the distinction would not seem to be one of any moment, but appears to be directly related to the idiosyncrasy of the individual in regard to the period of acquired immunity. The difference between these and the acknowledged "second attacks" would appear to be simply in reference to the time of their development.

VII.—DESQUAMATION.

The period and extent of desquamation varied in different cases within wide limits. In some instances, mainly in adults and very young children, it was completed in less than six weeks. In others it was prolonged to twelve, or even sixteen weeks. With the exception of a few in whom a condition of xeroderma was natural, no case was sent home until all sign of peeling had disappeared, discharges from mucous cavities and sores had ceased, and the urine been for several weeks free from albumen. In infants, as is usual, peeling was but slight and transient. The average detention in hospital was slightly over nine weeks.

VIII.—TREATMENT.

In the large majority of cases no special treatment was indicated, symptoms being dealt with as they arose. In those with severe throat and glandular affection, frequent syringing out of the fauces and nares with a solution of chlorine or boracic acid was most useful as serving to

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clear away offensive secretions and lessen discomfort. In such cases the frequent application of hot poultices was of great service. In restlessness and sustained pyrexia cold and tepid spongings were useful to promote sleep, and sulphonal in some instances proved a valuable hypnotic. The cases were treated in bright and well-ventilated wards, maintained at a temperature of 56° to 60° F., the average cubic space per bed being about 2000 ft. The diet during the pyrexial stage consisted of milk, beef-tea, eggs, and ice, after which a more solid diet of milk pudding, bread-and-butter, with fish or meat, was given, and at the same time baths were ordered on alternate days. Stimulants were only employed in severe cases, usually in the form of brandy or champagne. Uncomplicated cases were allowed to get up at the end of the third week, and, except in wet weather, sent out of doors for several hours usually each day, due care being taken that flannel was worn next the skin and the clothing otherwise warm and generally sufficient. Complications were dealt with as they arose, and, with the exception of otorrhœa, were rarely seen after the third week.

With reference to the treatment of scarlatinal nephritis, I am not in the habit of withholding eggs as an article of diet when the secretion of urine has become fairly established, especially if there be much loss of albumen and consequent anæmia. Although the employment of eggs would be condemned by many on theoretical grounds, I can only say that I have followed the practice for several years with the best results. Though milk should be the staple food, patients will more rapidly put on flesh, lose their albumen, and gain colour if not withheld from a light solid diet, including boiled eggs. With the exception of perchloride of iron and the free use of purgatives, I am not in the habit of using drugs in ordinary cases. A death from scarlatinal nephritis is an event of the greatest rarity. In this series of over 1000 cases of scarlatina only one death occurred from that cause, the child being admitted with nephritis, and dying a few days after in convulsions.

A PROBLEM IN THE ELECTRICAL REACTIONS OF MUSCLES.

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WHATEVER controversy there may be as to the usefulness of electricity in the treatment of nervous diseases, there can be no doubt that it has a considerable sphere in diagnosis, and from that point of view is well worthy of study. The emancipation of medical electricity from degraded uses and its dedication to the purposes of science may be said to date from the establishment as a proximate and partly understood truth of the broad principle underlying what is known as the reaction of degeneration. This principle, however, by no means covers all observable facts. In the scientific order facts precede theories, and they may have a practical value of their own independently of their explanation. I desire to call the attention of others to an appearance which has engaged mine for some years, and to which, rightly or wrongly, I have come to attach some practical significance. There is a phenomenon which is familiar to everyone who employs electric currents for the treatment of paralysis, and whose opportunity and resource supply him with sufficient variety of material. To take as an example a case of paralysis from lead poisoning. When a fairly strong faradaic current is applied to the extensors in the forearm, other muscles, usually including the more accessible of the flexors, respond, and with a vigour proportionate to the intensity of the current. This may be shown in almost any case where the anatomical distribution of the paralysis enables one to cause an efficient stimulation of more distant muscles while those beneath the exciting electrode remain inert. It is usually said that the current is "conducted through." The fact, of course, is significant and invariably watched for. I have seen a distinguished physician point to it as if it indicated a more than usually desperate state of things. In point of fact, I believe it can always be elicited where the reaction of degeneration exists if there are healthy muscles near, and that it indicates nothing but a certain strength of current—an indication more satisfactorily provided by measuring instruments.

There are cases, however, which present an appearance very similar to this, invariably, I believe, confounded with it, and yet, if I mistake not, essentially distinct from it. I will take for illustration another case. A boy had been sent to me to be treated for infantile paralysis. I will speak of the disease as such because it had been so named by three eminent surgeons who had it under observation at an earlier period than I. Moreover, it would be difficult to assign the case to any other of the recognised clinical groups. At the same time there were in its history and in other particulars certain things to arrest the attention, if not to suspend the judgment. The boy had broken his arm about the lower epiphysis of the humerus, and it remained deformed. When the splint was removed he was found to be paralysed. I saw him between two and three months afterwards. The pectorals, trapezius, sterno-mastoid, and scapular muscles were much wasted. Of the deltoid there was scarcely any substance left, and the head of the humerus was widely separated from its cavity. The vertebral border of the scapula was tilted backwards, probably from paralysis of the serratus magnus. The rhomboids were affected. It was impossible to raise the point of the shoulder or the arm, or to draw the arm across the front of the body, and to flex or supinate the forearm. Extension of the wrist was very feeble. The electrical reactions were remarkable. In the first place, they varied in the same part at short intervals, almost from day to day. This was particularly so in the rhomboids and the deltoid. When the latter muscle was stimulated with a galvanic current it was found that parts of it which one day gave no response contracted readily the next, and distinct portions would for a time assume a healthy action, though a short time before they had given an evident reaction of degeneration, and the next day perhaps would do so again. The inner head of the triceps was somewhat atrophied and inert to all stimuli; the outer and long heads reacted normally, showed increased excitability, and were in a state of feeble tonic contraction. The supinator longus was directly excitable. When with a faradaic current the exciting electrode was placed over the supinator longus that muscle contracted, but the triceps did so much more energetically. If the electrode was applied, not over the supinator longus but over the extensors in the forearm, the same thing occurred, and the force of contraction in the triceps seemed to vary with the distance of the electrode from a point about the middle of the supinator longus. When the triceps contracted the anconeus did so too. Now, there are some facts which serve to distinguish this contraction in the triceps and anconeus from that which occurs in the flexors of the wrist when a current is said to be "conducted through," as in lead palsy. 1. A very weak current sufficed to produce it—such a current as would cause no contraction in the apparently healthy supinator. 2. The effect on the triceps was appreciably delayed, and when both the supinator longus and the triceps were made to contract the former did so first. 3. No such effect as that on the triceps occurred in other muscles much nearer than it to the exciting electrode. It occurred to one of course that the over-excitability of the triceps and its spastic state might account for the events. This is not my belief, and I would offer the following reasons: 1. The stimulus applied to the supinator longus was more efficient than that applied directly to the triceps. 2. The same effect was simultaneously produced in the extensors of the wrist, which directly were hardly excitable at all. In other words, the motor point for the entire group—triceps, anconeus, extensors, and supinator longus—was situated in the latter. 3 I have frequently observed this "reflected" stimulus in other cases, and I have not found it associated with spasms or increased excitability. The stimulus is not simply conducted through the tissues. It is necessary to seek for some special cause determining its path. In doing so one is, of course, struck by the fact that the whole train of events is concerned with the distribution of a single nerve, the musculo-spiral. I may at once mention that in every case which has come under my notice I have observed a similar and more or less immediate anatomical relation as to nerve-supply between the muscles illustrating a "reflected" stimulus. I adopt this word "reflected" for brevity's sake, and I do so with deference to the physiologists, having no desire to imply a

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theory, as I have no intention of formulating one. I might suggest, indeed, that there is between this event and those which are known in physiology as the "paradoxical contraction" and "secondary tetanus from a nerve" (Landois and Stirling, third edition, p. 562) a certain analogy. We hear a great deal of functional diseases of the nervous system, but nothing, so far as I know, of functional disorder of a nerve fibre. We know that a nerve fibre can conduct impressions in either direction; we assume that as a fact it does so in one only. It is thought that the guiding influence resides in the end organ, and may be said to be its function. Dr. Waller, in the very admirable paper recently submitted to the Neurological Society, has shown that the motorial end plate may manifest fatigue, while the remaining elements in the neuro-muscular chain keep their energy unimpaired. If the motorial end plate, when fatigued, can temporarily block the path of volitional impulses, it may do this permanently under other circumstances. In view of such a possibility, it is well to keep an open mind, and not to assume too hastily that in the case of the nerve fibre there is no condition intermediate between absolute integrity on the one hand, and, on the other, total destruction, either actual or impending,—a destruction in which the terminal muscle fibre will certainly be involved. The peculiar reaction which I have described seems to prove that in a given nerve, or part of it, the cause which limits the effect of an induction shock to the muscle at its peripheral extremity may be suspended. Observation will show that under these circumstances the muscle may retain its function for many months while its electrical reactions are perverted and voluntary power is lost, and this condition may, and does often, occur side by side with degenerations due to organic disease. It is most apt to take place in neurotic subjects. I have seen it in crutch paralysis and in paresis of the upper extremity from pressure of a splint. In a case of spinal hæmorrhage sent to me by Dr. Broadbent, where paralysis of the sphincters and of certain muscles of the leg persisted, and probably still persists, the reaction was obtainable during two years, and disappeared gradually as the muscles manifesting it regained something of bulk and strength. It may be met with most often in infantile paralysis, and there, as elsewhere, it is *pro tanto* a favourable indication for treatment. It seems to me to represent a large part of the recoverable element in that disease, and so long as it persists there is ground for abundant hope that the judicious use of galvanism and other measures will be productive of benefit, though not of course of cure.

Welbeck-street, W.

THE CURE OF "INTERNAL DERANGEMENT" OF THE KNEE-JOINT BY MANUAL OPERATION.

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A CENTURY has passed since that eminent surgeon, William Hey, of Leeds, drew attention to an "Internal Derangement of the Knee-joint," for which he devised a remedy by manual operation. Another Leeds surgeon, Samuel Smith, following upon the same lines of observation, also found many similar cases, and succeeded in obtaining the same curative results by the same remedial method. After William Hey, besides Samuel Smith, we find Samuel Hey, grandson of William Hey, Sir Astley Cooper, Syme, Sir Benjamin Brodie, and others publishing similar cases treated successfully by Hey's method. In the present age of brilliant and successful operative surgery these facts are sometimes forgotten, and it has even been suggested that a cutting operation which involves the opening of the joint is the only means of relieving the disabilities which accompany this troublesome and often severely painful affection. That opening of the joint may be justifiable in some exceptional cases may certainly be conceded, but it has been abundantly proved that a large majority of the patients who suffer from these "derangements" can be absolutely and permanently cured by manual operations alone.

Into the question of the exact nature of the abnormal conditions which pertain it is not, I think, necessary here to enter. Several abnormal conditions have been shown to exist in cases which have been subjected to the knife, either during life or after death; suffice it here to state that displacement of one or other of the semilunar fibro-cartilages, generally the internal one, seems commonly to have been the chief or only derangement in the cases which have answered the description first given to the accident by Hey. Eight years ago I published a series of cases which had come under my care for derangement of the knee-joint, in all of which Hey's plan of manipulation had perfectly succeeded. From time to time since then similar cases have come before me, the histories of which go to confirm the statements of the older writers and my former experiences. The question arises as to whether this manual reduction is permanent in its effects, or whether a tendency to relapse does not render the more severe operative procedure justifiable and desirable. Hey refers to one case of relapse in four cases recorded, the accident recurring two years after reduction, but it was very easily put right. Samuel Smith states that he had been surgeon to the Leeds Infirmary for thirty-two years, and he thought he had rarely passed a year without seeing a case, and he was sure that he had seen as many as four or five cases in a year. He refers to Hey's mode of "cure," but he also describes some relapses. One young lady stated that she had suffered from this derangement at least six times in four or five years, and on each occasion (excepting the first) Mr. Samuel Smith had been at hand to give her relief.

After consideration of these cases of relapse I thought that the displaced cartilage probably became changed in form from pressure in its unnatural position, and that, although reduced, it would have a tendency to work its way out again unless retained in its normal place sufficiently long for it to regain its natural shape. Acting upon this theory, I insisted upon the importance not only of reducing the displacement in the first instance, but of repeating the manipulation daily for a few days, and then once every two or three days for a fortnight or more, according to circumstances, with a view to keeping up the good position until the parts had quite recovered their normal condition. This plan has proved remarkably successful, and I have practically met with no relapses after adopting this treatment in cases where I have once succeeded in effecting a reduction. I am now able to give the subsequent history of the cases which I recorded eight years ago, as well as to refer to other instances of permanent cure.

CASE 1.—Mrs. C. M——. The displacement first occurred at the age of fifty-eight, in the year 1880. There were many relapses during the first six months, each of which was reduced at the time, but treatment was not followed up as above described. The displacement recurred a great many times during the first few weeks, but the tendency gradually lessened, so that during the second six months it only occurred once. From that time up to the present (August, 1890), nine years, no relapse has taken place.

CASE 2.—Miss W——, aged seventeen, seen in August, 1881 (three years after the first accident). The displacement had never been thoroughly reduced until this time. I followed up the passive movements for nearly three weeks, for the first fortnight daily. The result was excellent, and two years afterwards the patient wrote to me from Boston, U.S.A., informing me that she was perfectly well and could dance and use the leg without the least difficulty. The knee had remained sound since the treatment by complete reduction, whereas during the three previous years she had been continuously lame.

CASE 3.—Mr. H——, aged thirty, came to me in 1881. He had been crippled by his bad knee continuously for four years, and occasionally for the preceding six years. He had not been able to place the leg in a straight position for the five years before I saw him. It took half an hour to reduce the displacement, but when accomplished the patient felt perfectly sound. I repeated my manipulations at intervals of a few days for about three weeks, and when I saw him about a year ago he had remained quite well the whole time, a period of eight years.

I have treated many cases since then, all with good results. I will describe the most severe case.

Miss H——, aged forty, consulted me on Nov. 11th, 1882. She first injured her knee by a fall in the Alps in 1867. She had to be carried down the glacier to Chamouni. She suffered extreme pain, but this was suddenly relieved during her transit by a second fall, caused by her carriers slipping and upsetting her. This seems to show the nature of the

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injury, as it is not very likely that any other condition than a subluxation could be so suddenly relieved by a second accident. The second accident probably partly reduced the displacement which had occurred at the time of the first fall. The patient was unable to move for several months. Rest as complete as possible, and the application of a great variety of local remedies, were employed with very little effect, and it was not until the following April, nine months after the injury, that the patient began to walk about again. The subsequent history was that of repeated injury from trivial causes, and a continual state of weakness of the joint, with discomfort or pain during movement. The same kind of treatment (rest and local applications) was always prescribed, and in the course of weeks or months after each accident the patient would gradually recover sufficiently to be able to get about again, but always with difficulty and in danger of falling from slight causes. In 1878, eleven years after the first accident, the joint seems to have been very violently moved (flexed and extended); she felt some alteration take place in the joint, and it felt for a time comparatively well. Soon after, from a slight accident, the cartilage again slipped out of its place, and surgical advice was again sought. The treatment consisted, as before, in emollient local applications, and rest of the joint as complete as possible. This treatment was continued for several months, but the knee did not improve.

When I first saw this lady in November, 1882, she hobbled into the room with much difficulty; she was wearing a stiff leather knee-cap which was laced up the side, and which prevented almost all movement of the joint. The knee was slightly flexed, and could not be moved without pain. I could feel the internal semilunar cartilage of the left knee projecting beyond the upper border of the tibia. Upon pressing on this part with the thumb of one hand, while I flexed and extended the leg with the other hand, the cartilage slipped back into its place and the patient then walked round the room perfectly naturally, and stated that the knee felt quite well, and that she felt relief which she had only once experienced since the occurrence of her first accident, more than fifteen years before. I strapped a pad over the place where the cartilage had protruded, and prescribed a stimulating liniment. In a few days, as I had expected, there was a slight relapse; this was soon relieved by a repetition of the passive movements, and pressure upon the protrusion. For a few weeks this tendency to relapse continued, but was counteracted by perseverance with the treatment. The joint was gradually worked into a natural condition. I further had an apparatus made which allowed flexion and extension of the leg, but prevented lateral motion and twisting; it also enabled me to apply pressure over the place at which the cartilage was inclined to protrude. Walking exercise was recommended. This patient remained absolutely well for the next eight years, until July, 1889, when she had a severe fall and twist of the same knee, again *slightly* displacing the cartilage. A few manipulations of the joint again restored it to its normal condition, and she has remained well since.

Doubtless we ought to be careful in forming a diagnosis of cases of injury to the knee-joint before proceeding to use these passive movements. When, however, the nature of the injury is that of dislocation of one of the semilunar cartilages, the result of the treatment devised by Mr. Hey of Leeds is remarkably effective and highly satisfactory. It is probable that somewhat similar symptoms may be produced by subluxation of the leg itself, as suggested by Mr. Knott, but such a condition ought not to be very difficult to distinguish. The symptoms of a loose cartilage in the joint may also be mistaken for those of displaced semilunar cartilage. The pain, however, in the case of a loose cartilage is more vacillating, as the cartilage is likely to shift its place.

As to the nature of the accident, Hamilton describes five varieties of this condition, which he imagines might occur. Bonnet of Lyons experimented upon a dead body. By flexing the leg and giving it a sudden twist he produced a displacement of the inner cartilage. It was produced by "the passage of the inner condyle of the femur behind the semilunar cartilage, which was accordingly pushed forward on the internal glenoid cavity of the tibia, but without any laceration of the internal lateral or capsular ligament of the joint. On the outer side the condyle had undergone no considerable displacement; it was carried a little forward from its normal position, but still lay in the glenoid cavity formed by the external semilunar cartilage. On extension of the limb with a little effort this peculiar luxation was at once reduced. The experiment was frequently repeated with a similar result." I quote from a paper read by Mr. J. F. Knott, of Dublin, before the University Biological Association in May, 1882. Mr. Knott considers that the injury consists in a partial dislocation of the tibia, and with it the fibro-cartilages upon the femur; he writes with authority, for he has studied his own case, he being a frequent sufferer from what he considers to be the so-called Hey's internal derangement of the knee-joint. He is probably correct as far as his own case is concerned, and perhaps with regard to some other cases, but those that I have seen I believe to be displacement forwards of the internal semilunar cartilage alone.

From the foregoing I would urge that by careful manipulation, persistently repeated at short intervals for a few weeks, these cases may be permanently cured, and that a cutting operation involving opening of the knee-joint is not necessary except in some rare and exceptional cases, and that the latter operation can always be resorted to when the comparatively simple and absolutely safe procedure devised by Hey has failed in producing the desired result.

Queen Anne-street, W.

FIBROID PNEUMONIA.

BY A. G. AULD, M.D.

UNDER the term "fibroid pneumonia" it is here intended to describe, define, and endeavour to establish an affection of the lungs which has only within recent years begun to be recognised. Unsettled and conflicting are the opinions which have emanated from its investigators as to its origin, its affinities, and its essential nature. Formerly, it was no doubt comprehended under the pulmonary cirrhosis of Corrigan, the grey induration of Andral, the fibroid phthisis of Clark, the genuine desquamative pneumonia of Buhl, and the chronic pneumonia of Grisolle. It is now known under the designations chronic lobar pneumonia (Charcot) and parenchymatous pneumonia or primary interstitial pneumonia (Heitler, Wagner, and others). By some it is regarded as a sequel of acute pneumonia, while others—and those the more recent exponents—altogether deny such a sequence, affirming the disease to be a *bonâ-fide* affection, independent from its commencement, and having at no time any connexion with a genuine pneumonia.

To my investigation of "chronic lobar pneumonia," published in THE LANCET, April 12th, 1890, I have now to add the results of a fresh research, and trust that hereby a clearer light will be shed over this very important subject.

At the outset it may be stated that what are known as chronic broncho-pneumonia, chronic pleurogenous pneumonia, pneumokoniosis, as well as phthisis pulmonalis, have nothing whatever to do with this affection.

First, it will be necessary to make specific allusion to certain of the deductions made in my former paper. It was therein held that a chronic lobar pneumonia (*a*) might succeed to the acute affection, and (*b*) that its chief anatomical characteristic was the early organisation of the intra-alveolar exudation. The former proposition was supported by the clinical histories of the cases adduced and by the anatomical disclosures. Histological intra-alveolar changes similar to those described have been observed, and held to ensue after undoubted acute pneumonia, by Rokitansky, Barth, Charcot, Marchand, and Marchiafava. "The red inflammatory product," says Rokitansky,[1] "becomes grey and compact and indurated. The air cells contract over the granulations, coalesce with them round their circumference, and become obliterated, their tissue being changed into a fibro-cellular structure, in which, from the similarity of their organisation, the granulations are most probably also merged." Nothing could be more explicit than this. Charcot[2] regarded the development of a chronic pneumonia from an acute to proceed in one or other of two methods. After the subsidence of the acute symptoms, the physical signs persisted, and induration ran a chronic course, or else there were recurrences of acute attacks over the same area,

[1] Path. Anat.
[2] De la Pneumonie Chronique, Paris, 1800.

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ultimately leading to induration. He also distinguished such cases from those in which dulness persisted for a time but ultimately cleared up. The indurated lung after a few months showed under the microscope polypoid vegetations of fibrous tissue in the alveoli, and not infrequently it contained non-tubercular cavities. Bronchiectasis was conspicuous by its absence. Barth[3] remarks that "chronic pneumonia may come on after one or several attacks. The alveolar exudation acts as a foreign body, to which the walls react by embryonic proliferation. Microscopically one sees polypi of fibrous tissue. There is cough, with tenacious mucus and bronchitis, then hecticity. Late tuberculosis is developed in such lungs in hospitals"—which, he is careful to observe however, is accidental by reason of "the tubercle bacillus attacking the ground injured by the pneumonia." These quotations, to which others might be added, show how well grounded is the contention of a chronic pneumonia succeeding to an acute. But this position has been assailed not only by Wilks, Buhl, and others, on clinical grounds, but also, as has been stated, by the more recent investigators of "parenchymatous pneumonia," and especially by Wagner.[4] Dr. Wilks held that dulness, deficient breathing, &c., remaining after an acute pneumonia, was due to a local empyema. "I could not imagine," he remarks, "what this half-recovered lung was like, or what the results of an acute pneumonia could be, since I had no knowledge of such condition in the post-mortem room."[5] In a private communication lately received from Dr. Wilks, which I have his authority to quote from, he expresses himself somewhat differently as follows: "Whilst working in the post-mortem room, I failed to get good proof of a chronic pneumonic condition succeeding to an acute, and the clinical facts were better explained by other causes. But a few cases for clinical considerations made me *believe* in the possibility of such an occurrence, and which I was bound to admit on the authority of good observers." Elsewhere he says: "I have no doubt whatever that what I was taught was in the main wrong; that is, that chronic diseases succeeded to the acute. What I really know is, that these chronic diseases are different in kind, they are chronic in their nature from the very first day they start."

It may no doubt be argued with show of reason that such chronic cases are in reality of a different type from their commencement, and lacked at that period certain of the essential characters of the genuine acute disease. If this view be carried out, it will, however, necessitate the elimination of a large number of cases from the category of acute pneumonias, which at present are undoubtedly recognised as such, as I shall now show. It occurred to me that this question might be tested by instituting minute observations on red and grey hepatised lungs. As many specimens as possible were obtained for this purpose, and for some of these I have to thank Dr. J. Lindsay Steven of the Royal Infirmary. A careful examination of the fibrous framework of the lungs and the pleural matrix revealed the important fact that in not a few cases at all advanced the fixed connective tissue corpuscles in these situations show division of their nuclei. It was not so easy in these cases to *demonstrate* a similar phenomenon in the fixed cells of the alveolar walls, but of which there can be little doubt. In one of the specimens examined, however, a fine demonstration was obtained of such interstitial changes. The alveolar walls were pervaded by a great number of large, bright, kidney-shaped and oval nuclei, which were also to be found in considerable numbers in all stages of division in the midst of the fibrinous exudation. The proliferated epithelial cells could in no respect be confounded with these cells. In a few of the alveoli the cells were spindle-shaped and new tissue was commencing to be formed. Now the lung in which this was taking place had the appearance of, and was described as presenting "typical grey hepatisation." It is therefore evident, that in ordinary acute pneumonia, interstitial changes are in some cases to be observed, just as is known to occur in many cases of acute nephritis. The result of these and the previously recorded observations is to show beyond cavil that cases of undoubted acute pneumonia may lapse into the chronic condition, becoming "fibroid pneumonia."

I now turn to the consideration of the rare affection termed "parenchymatous pneumonia," or "primary indurative pneumonia," and which is claimed by those—and they are few—who have described it after their own fashion, to be constantly an independent disease.

In the year 1872 Dr. Ludwig Buhl[6] described an affection of the lungs for which he invented the designation "genuine desquamative pneumonia," to distinguish it from the condition, or rather combination of heterogeneous conditions, to which he applied the term "consecutive desquamative pneumonia." The genuine desquamative pneumonia had in his opinion characteristics which sharply distinguish it as an independent affection of the lungs, and he denied that it ever succeeded to an acute pneumonia. The disease was lobar in distribution, commonly proved fatal after a duration of about six weeks, and could be distinguished clinically from phthisis and other pulmonary affections by the abundant desquamated pulmonary epithelium to be discovered in the sputum; hence the name applied to it. Anatomically there was found a diffuse consolidation of the pulmonary tissue having a granular character, which differed from that of croupous pneumonia inasmuch as the granulations were caused by "a remarkable swelling and infiltration, which is bound up with the throughout thick and indurated interalveolar parts." Also, "while the infiltration, as we have said, appears fast bound to the tissue, there is a spare quantity of gelatinous flux obtainable on scraping the cut surface." Further, he remarks that "the exudation of genuine desquamative pneumonia is of a plastic and productive character." Microscopically, abundant fatty epithelium was to be found in the alveoli mingled with the albuminous exudation referred to. The disease, according to Buhl, issued either in cirrhosis of the lung or in caseous phthisis. Now, although the morbid appearances described by Buhl have been, as a rule, interpreted by succeeding pathologists in a manner contrary to his conception of their significance—namely, that they merely indicated the ordinary chronic catarrhal pneumonia of Niemeyer,—nevertheless, reading between the lines, it becomes manifest that Buhl had at any rate *incluaed* in his description cases of the disease under consideration. This becomes the more certain when it is considered how short was the duration which he ascribed to certain cases, and in which, post mortem, tubercle was awanting.

As fitting in with the description of Buhl in its primary aspects, Dr. M. Heitler[7] of Vienna gave in 1884 a detailed account of five cases under the title "parenchymatous or primary interstitial pneumonia." In opposition to Jurgensen, Oppolzer, and Eichhorst, Heitler sought to establish that the disease he described was "a primary affection of the lung parenchyma, independent of any other affection of the lung or other organs." At the same time he did not deny the possibility of it succeeding to an acute attack, but of such he had no experience, while the observations of others had not satisfactorily shown it. The cases observed by Heitler were subacute or chronic. The disease began more or less suddenly with pain, cough, and much dyspnœa. Expectoration was entirely absent in one of the cases, in three it was abundant and purulent, and in another it soon became fetid. Sanguineous frothy sputum had also been observed at the beginning, which, according to Eppinger, was derived from the new intra-alveolar capillaries. Dulness and mucous *râles* were to be heard over a considerable extent of one or both lungs. Frequently signs of cavities were after a time developed. The subacute variety generally terminated fatally in about six weeks. The temperature, as a rule, ranged from 38° to 39° C. (about 101° F.), and the respirations numbered from 30 to 50 per minute. Dropsy was a constant symptom, even with healthy kidneys. The duration of the disease was: in two cases, one month and twenty days; in one case, two months and eight days; in one, six months, four days; and in one, nine months nineteen days. The subacute cases ran a course not unlike that of acute phthisis, but with lower temperatures. Post mortem the lung was greyish, tough, smooth on section, and marbled with pigmentation. Walnut-sized cavities were not uncommon. The microscope revealed proliferation of the connective tissue of the alveolar walls and adventitious structures. Some alveoli were filled with large polyhedric or round epithelial cells; others by a fibrinous exudation enclosing red blood-cells and proliferated epithelium; while in the more advanced parts the alveoli were thickened by the growth of fibro-cellular tissue and "the alveoli almost completely filled by an outgrowth from their

[3] Dict. des Sci. Med., art. Pneumonie.
[4] Deutsch. Arch. f. Klin. Med., vol. xxxiii.
[5] rit. Med. Jour., vol. i. 1879, p. 928.
[6] Lungenentzundung, &e.
[7] Wien. Med. Wochen., 1884 und 1886.

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walls. ..... The walls and contents formed an interdependent mass and showed the same construction." Gangrenous cavities were sometimes present. There was no bronchiectasis. Tubercle when present was limited, and a later accident of the disease. Heitler holds the affection essentially to consist in "a diffuse inflammation of the entire connective tissue of the lung, with further consecutive alterations of the lung parenchyma." In essential agreement with these observations are those of Eppinger, Wagner, and Talma. As I shall show, Heitler and also Talma included cases which cannot be admitted as examples of "fibroid pneumonia."

In English medical literature isolated cases of this disease are to be found. Reference may be made to a case described as chronic pneumonia by Dr. John Popham [8] It was that of a woman who had been suffering for six or seven weeks from cough and expectoration. There was dulness over the right lung in front, and other physical signs of phthisis were present. Post mortem this lung was firmly adherent and shrunken, and contained a cavity at the apex. Its substance was firm and of fleshy consistence, and slate-grey in colour. No tubercles were found. The apex of the left lung was hepatised. "It differed from Corrigan's cirrhosis, in which dilated bronchi is a principal feature, and, again, by the presence of an abscess here." Osler[9] describes another such out of 100 post-mortem examinations of pneumonic cases. It began with cough and pain and a temperature of 101° F., pulse 106, and respiration 26. Expectoration not bloody. Signs of consolidation over the right lung, except at the apex. Expectoration continued muco-purulent, and death occurred on the twenty-seventh day. Post mortem "the right lung was uniformly solid and greyish in colour. In certain regions the air-cells could be seen with their fibrinous plugs. Secondly, there were small localised areas, densely infiltrated with pus, and breaking down into definite abscesses. In several areas of the lung were spots which had a very translucent aspect, firm, smooth, and homogeneous. In these areas a fibroid change was going on in the lung, the alveolar walls were thickened, and the fibrinous plugs filling the air-cells were undergoing transformation into a new growth of connective tissue." Dr. T. Harris[10] gives a good account of a chronic case with profuse purulent sputa and with a normal temperature in which after death "the exudation in the alveoli was changed into fully formed fibrous tissue." There was also "the presence of typical tubercle elements in the affected part," but "the other healthy lung and the rest of the organs were perfectly free from any tuberculous deposit." Saundby[11] describes a typical case chronic from the beginning; temperature 101°, respiration 24, and pulse 120. The illness lasted eleven weeks, and death resulted from hæmoptysis. On post-mortem examination the left lung was adherent, smooth on section, and pale grey in colour. Dotted over the cut surface were small soft yellow spots surrounding minute bronchi. There was an aneurysm of the aorta at the junction of the arch with the descending aorta, the size of a duck's egg. Microscopically "there were tracts of connective tissue in which were many dilated vessels full of clot. The interalveolar stroma was much swollen and infiltrated with leucocytes. The alveoli themselves were small and generally filled, some with remains of hæmorrhagic exudation, some with desquamated epithelium, and others, perhaps the majority, with a myxomatous connective tissue formed by interlacing stellate cells. The clot and epithelium underwent fatty degeneration, while the round cells became organised." Dr. Saundby asks the question whether aneurysm played a part in producing the pneumonia by pressure on the vessels and bronchi at the root of the lung, causing congestion and the insufflation of the bronchial secretions into the alveoli. Lastly, I note two cases by Dr. P. Kidd,[12] one of which has a suspiciously acute origin, while the second fails to conform to the affection under discussion.

After a considerable period of waiting, I have had the good fortune to meet with two excellent examples of this affection, as also with one or two other cases, which throw a sidelight on the matter. These will be narrated in the concluding part of this paper.

(To be concluded.)

[8] Dub. Jour. of Med. Sci., vol. x., p. 321.
[9] Montreal General Hospital Reports.
[10] Journal of Anatomy and Physiology, vol. xv., p. 502.
[11] Birm. Med. Review, 1885, p. 26.
[12] THE LANCET, vol. i. 1890, p. 740.

OVARIAN CYST:

IN A WOMAN AGED THIRTY-FIVE, WHO HAD NEVER MENSTRUATED UNTIL PROBABLY THE CYSTIC CHANGE HAD BEGUN IN THE OVARY.

BY JAMES OLIVER, M.D., F.R.S.EDIN., F.L.S.

ELLEN M——, aged thirty-five and married fifteen years, has never been pregnant. Up till eighteen months ago she had never been "unwell." She then—that is, at the age of thirty-three years and a half—began to lose blood for the first time. This discharge lasted four days. Thereafter for a period of twelve months menstruation recurred regularly every fourteen days, and continued for the same number of days as at first—viz., four. During the last six months the hæmorrhagic discharge has been constant; the patient loses more or less every day. She complains now of "swelling of the stomach," which she noticed first eleven months ago. It began on the left side. For one month before she detected any enlargement of the abdomen she had experienced sharp cutting pain in the left iliac region. Ever since she first noticed the swelling she has complained of pain all over the "stomach" and at the top of the left thigh. The abdominal swelling has gradually increased, and during the last eleven months the patient has been sick, once at least, every day. There is neither bladder nor rectal trouble, but the urine contains nearly one-third albumen. Physical signs: The abdomen is occupied by a large and regular swelling, located centrally, and extending from the pubis to four inches above the umbilicus. The skin of the abdomen is dilacerated extensively, in a manner similar to that usually associated with pregnancy. Fluctuation is readily elicited except at the very lowest part of the tumour. As the patient lies on her back, the right flank is dull and the left resonant, and these physical signs are not affected by altering the position of the patient. The girth at the level of the umbilicus measures 44½ in. Vaginal examination: The uterus is detected lying posteriorly to that portion of the abdominal swelling which is located in the pelvis. Operation: The abdomen was opened in the usual manner. There was no free fluid in the peritoneal cavity. The cyst, multilocular in character, was adherent in front extensively to the parietal peritoneum. The bladder was drawn up in front of the tumour, and had to be stripped off. The cyst which had developed from the left ovary had insinuated itself between the layers of the left broad ligament. It was removed by enucleation largely, but that portion next the left horn of the uterus had to be laced by a silk ligature. The peritoneum was drained, and the patient made a good recovery. The contents of the cyst were fluid, with much broken-down blood. The walls of the uterus were exceedingly thin.

This case is one of very great interest. The patient, although thirty-five, and married fifteen years, had never evinced anything like an attempt at menstruation until eighteen months ago—i.e., until she was nearly thirty-four years of age. The fact that for twelve months she had had a hæmorrhagic discharge every fourteen days for four days, and that during the remaining six months the hæmorrhage was constant, is in favour of a direct dependence of this manifestation upon the change which was detected in the left ovary. It is more than probable, too, that the change in the ovary began about the time that the discharge of blood from the vagina was first noted. I have occasionally observed that when ovarian cysts develop between the layers of the broad ligaments there is a correlative disposition either to a simple increase in the amount of the monthly flow or to a constant discharge of blood. This association I attribute to a disturbance by pressure of those nerves which, located in the region of the Fallopian tubes, regulate the functions of the uterus. In the case just recorded the condition of the uterus was such apparently that the normal impulses transmitted to it failed to produce any effect. When, however, the impulses became greatly augmented in consequence of a tense cyst developing in the structure of the broad ligament, the uterus, although apparently ill-developed, responded to the mechanical stimulus. This same phenomenon is seldom noted in the case of true cysts of the broad ligament; this is most probably due to the fact that these cysts are usually less tense than ovarian

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cysts, and that they are less likely to disturb the nerves which govern the functions of the uterus, but why I am not yet in a position to affirm.

Gordon-square, W.C.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

GOUT, MELANCHOLIA, AND HIGH ARTERIAL TENSION.

By H. WILLOUGHBY GARDNER, M.D. LOND.

THE following case may be deemed of sufficient interest for publication.

W. W——, first seen on March 3rd, 1891, when suffering from a mild attack of acute gout in the left foot. He had had many previous attacks, and had been troubled with gouty dyspepsia. After two or three days the local manifestations disappeared; the patient considered himself to be well, and proposed to return to work at the beginning of the next week. On the morning of March 9th he was found to be suffering from acute melancholia, chiefly of a religious type. The day before (Sunday) he had attended three long religious services, and had taken no exercise. A note which he wrote to his sister contained accusations and misstatements which were apparently due to delusions, and, in addition, threats of suicide. When seen in the evening he wore an expression of settled melancholy. When questioned, he confessed to wishing to commit suicide, but said he knew it to be wrong. On examining his radial pulse, it was found that the beat was very weak, the wave being easily stopped by the finger; the artery, however, remained full between the beats, though it could easily be flattened out by pressure. On listening over the cardiac area the first sound at the apex was found to be short and weak, while the second sound in the second right intercostal space was loud and of a peculiar ringing character. It was thus seen that he presented the condition of "virtual tension" so well described by Dr. Broadbent. There was great peripheral resistance, and with it signs that the left ventricle was flagging and becoming unequal to meet fully the increased work thrown upon it. The probable consequence was that the movement of blood in the brain was extremely sluggish, and hence its cortical cells were not receiving a due supply of oxygen for healthy action. A mercurial purge was at once given. A strong mustard plaster—pushed so as to cause a blister—was applied to the nape of the neck, and his feet were put into a hot bath of strong mustard and water. He states that the mustard plaster caused very great relief in less than half an hour. In the middle of the night he was seized with a slight attack of gout in the left foot. At once all depression completely disappeared. It was replaced, indeed, by a certain amount of irritability, but this in its turn wore away as the pain in the foot ceased. When seen on the evening of the 10th the patient was in excellent spirits, and said he felt perfectly well. The radial artery could no longer be felt between the beats, and the pulse wave seemed considerably stronger. On listening over the cardiac area nothing abnormal about the heart sounds could be detected. The accentuated ringing character of the second sound had completely disappeared—indeed, it was not so loud in the right second intercostal space as in the left,—while the first sound at the apex seemed in every respect normal. With a view as much as possible to prevent the recurrence of undue tension, or, it may be said, of gout, careful directions were given as to diet and regimen, special attention being devoted to his mode of life on Sundays. These directions have, I am told, been carried out. The patient has kept in excellent health since, and states that his spirits have been better than they had been for some years.

Grenville-street, W.C.

TREATMENT OF SARCOMA BY PYOKTANIN, OR METHYLENE BLUE.

By FREDERICK A. HESLOP, L.R.C.P. & L.R.C.S. EDIN.

I WISH to draw the attention of the profession to the use of pyoktanin in the treatment of sarcomata. Some few weeks ago Professor von Mosetig of Vienna cited a few cases that had been treated with success by hypodermic medication. Recently I have had a patient with a large ulcerating sarcoma of the breast, sixty-three years of age, and unmarried. I first injected one sixth of a grain hypodermically into the mass. I also dressed the breast with a saturated solution on lint, and let it remain for forty-eight hours; the pain was less, the patient more comfortable, and on removing the dressing I found a more healthy surface. I then administered a three-grain tabloid by the mouth. Unfortunately the patient vomited, and, seeing the peculiar colour, refused to take any more, so I was forced to content myself with dressing the breast as described. I have since thickly dusted the pyoktanin powder over the breast. My patient being worn out by the long-continued drain on the system, and of a very eccentric disposition, there has been great difficulty in carrying out this plan of treatment with sufficient accuracy to obtain the best results. I have certainly obtained a diminution in the size of the tumour, which has assumed a more healthy appearance. From these results it may be fairly assumed that as the sarcomata spread along the planes of cellular tissue the cellular growth is arrested, and it is within reason that cases of carcinoma might be benefited by this treatment. In cases where patients will not submit to operative measures, as well as in those that do not admit of surgical interference, and these are many, the early use of pyoktanin hypodermically would be of great benefit in diminishing the cell growth, and so causing a shrivelling of the tumour. My object in writing is the hope that some hospital surgeon might be induced to try the pyoktanin and give the profession his clinical experience. The dose of pyoktanin is from three to ten grains three times a day.

Blackpool.

DEATH FOLLOWING THE ADMINISTRATION OF CHLOROFORM.

By THOS. A. DODD, M.R.C.S. ENG., L.R.C.P. ED.

A DEATH occurred in my practice on Sunday, May 31st, under the following circumstances:—The patient, a man aged fifty-eight, suffered from an empyema of the right chest. He had previously been a healthy man, and his present illness had lasted about five weeks. I advised him to have his chest incised and a drainage-tube introduced, which he consented to on condition that he had chloroform. There was no cardiac murmur. On the day named my assistant, Dr. Leech, proceeded to give him chloroform in the usual way—namely, by sprinkling a few drops on a piece of lint. The patient had not inhaled more than from thirty to sixty drops, and was not nearly completely anæsthetised, when his breathing suddenly stopped. Artificial respiration was at once resorted to, with the result that the breathing was quite re-established. No more chloroform was given. The chest was opened and a drainage-tube inserted. Nearly a quart of pus was discharged, and all was apparently well, the only cause for anxiety being that his pulse was feeble, though regular, and there was no sign of return to consciousness. Brandy was given by the mouth, and freely swallowed. His pupils were dilated, but sensible to light. He continued in this condition for about an hour and a quarter, and gradually sank, evidently from cardiac syncope, never having regained consciousness. Unfortunately we had no ether with us; it was sent for, but before the messenger returned the patient was dead.

Newcastle-on-Tyne.

TWO CASES OF FOOT-AND-MOUTH DISEASE IN THE HUMAN SUBJECT.

By GILBERT A. BANNATYNE, M.B., C.M. GLASG.

AS this disease in the human subject is not very common, I think the following two cases are worthy of being recorded.

While in Switzerland some time ago I saw two children, aged respectively fourteen and ten, who were suffering from foot-and-mouth disease. The symptoms were slight rise in temperature, pain in the mouth, and difficulty in swallowing. The buccal mucous membrane, soft palate, gums, and lips were covered with vesicles containing a yellowish fluid. Although there was much inflammation of the pharynx and tonsils, there were no vesicles on them. The

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disease ran a definite course of about one week, when the vesicles were found to have dried up, and caused no further trouble. The treatment consisted in an iron tonic and a gargle and mouth-wash of chlorate of potash. Of course nothing but fluid food was given. On inquiries being made, it was found that some of the cows supplying the dairy from which these children received their milk were suffering from this disease. It is curious to note, however, that no one else in the house, nor, as far as could be found out, in the village, was affected, although there were numbers of children of the same age and in the same hygienic conditions supplied with the same milk.

Paris.

RUPTURE OF THE UTERUS DURING LABOUR.

By HENRY LOVE, M.B.

THE following case may not be uninteresting, as rupture of the uterus is of very infrequent occurrence.

F. S. T——, aged forty-nine, sent for me to attend her in her fourteenth confinement. She had been attended by me previously, and her labours were invariably natural, with speedy delivery. Her thirteenth child was a breech presentation, and in that case labour was prolonged, and much difficulty was experienced in delivering the head. Since then she had a miscarriage, but was not attended. When I saw her, at 10.30 P.M., she stated that she "would not require my services just yet, and that the waters had broken the night before." I examined, and found the presenting head impinged against the sacrum, the prominence of which seemed unduly large. I remained in the room about two hours and a half, by which time the os had become entirely dilated. I fully expected that with pains of an expulsive character delivery would not be long; but such pains as she had were of an irregular, infrequent, and by no means severe character, the patient getting off the bed and walking about several times. About 1.30 A.M the pains became more frequent and very violent, but still lacking any characteristic expulsive effort. Finding that the head did not advance and that the patient could not be kept in the obstetric position, nor even restrained upon the bed, I decided to deliver by the forceps; but, owing to the patient's movements, had difficulty in placing the lower blade, and rather than risk any injury, I withdrew it and sent for assistance to administer chloroform. Within the interval of about half an hour the patient was seized with three similar pains, the last being accompanied by a short sharp shrill cry, and followed by the patient falling into a semi-comatose condition. On examination I found the presenting head had receded, and, passing the arm into the uterus, discovered that it had ruptured, and that the limbs and body of the child had been projected into the cavity of the peritoneum, the head alone remaining in the uterus. I secured the head by placing the thumb under the symphysis of the jaw, and the first two fingers upon the malar bones. Assisted by manipulation over the abdomen, I then made traction and brought the head down towards the pelvic brim, when I let go and sought for a foot; this was found with difficulty, and I then turned, delivery not being completed till the greatest difficulty was experienced in manipulating the head. The placenta was soon expressed, hæmorrhage was slight, the uterus remaining firmly contracted; the patient all the while remained collapsed. Stimulants, sedatives, and light nourishments were administered, until twenty-four hours later, when vomiting ensued; this resisted all treatment, internal and external, and the patient succumbed forty-eight hours after the rupture had taken place. I obtained permission for a necropsy, and found the rupture extended along the left side of the uterus for about three inches and a half, commencing at the cervix. The edges of the rent were jagged and torn, and the uterine wall on that side was attenuated and softened, presenting a bruised, pulpy appearance, quite degenerated as compared with the rest of that organ. Peritonitis was extensive, but there was very little hæmorrhage in the peritoneal cavity. The adjacent organs were healthy. There was no warning evidence that the forceps were earlier required, and the severe pains lasted so short a time that no opportunity was afforded to prevent the calamity.

Mitcham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

A CASE OF INTUSSUSCEPTION; LAPAROTOMY; RECURRENCE OF INTUSSUSCEPTION; DEATH.

(Under the care of Mr. PICK.)

THIS case is worthy of being placed on record as showing the difficulties the surgeon has to contend with in dealing with cases of intussusception. The diagnosis of this affection is, as a rule, by no means difficult, and the symptoms which attend it—viz., the presence of signs of intestinal obstruction, with tenesmus and the passage of blood and mucus per anum, and the sausage-shaped tumour to be felt through the abdominal wall—render the diagnosis pretty certain. Undoubtedly in this case there could be no question as to the nature of the disease. The treatment, however, is involved in difficulty. It is true that the invagination can always be reduced, at all events in the early stages of the disease, by the operation of laparotomy; but this operation is attended by such a large percentage of mortality when undertaken in infants, that the surgeon shrinks from performing it until all other means have been tried and have failed. It is possible, however, that this mortality is largely dependent on the period of the disease at which the operation is performed. We have published many successful cases of laparotomy for intussusception during the last few months,[1] and the disease can be treated with greater certainty in no other manner. And in comparing it with other methods of treatment, we should remember that they are far from being as satisfactory as one would imagine from the way in which their advantages are placed before the profession by those who favour them, nor are they devoid of considerable risk. We drew attention to this in our columns some months ago,[2] and again more recently.[3] So far as we can ascertain, this is one of the first cases in which laparotomy has been required a second time for a recurrence of the disease.

E. B——, aged fifteen months, was admitted into St. George's Hospital on March 2nd, 1891. Both the grandfather and father suffered from strangulated hernia, and were operated on in this hospital. One brother died from strangulated hernia. The child was born at the full time, but was always puny. It has had no fevers or any serious illness, except in August of last year, when it had an attack somewhat similar to the one from which it is now suffering—i.e., there were frequent motions, with passage of blood and slime from the bowel. A fortnight before admission the child suddenly vomited whilst apparently in perfect health, and soon began to look ill. As the bowels were rather confined, a dose of castor oil was at once given (Feb. 17th). Much green slime, mixed with blood, was passed, and the bowels remained loose. There was some vomiting at first, but this did not persist. The symptoms continued until the day before admission, when the child was seen by a medical man, who ordered it a dose of opium, since which it has been very quiet and slept. On admission, the child was noticed to be very drowsy, and its pupils were mere pin points. It was very thirsty, and had a sunken look about the eyes. It was apparently not in any pain. Rather to the left and a little below the umbilicus was a typical sausage-shaped swelling. By the rectum an intussusception could be felt. An attempt was first made to relieve the intussusception by filling the bowel with water by means of gravitation. An enema tube was introduced into the rectum, and connected by elastic tubing with a can of warm water suspended some height above the child's bed, the patient being at the same time inverted. This was persevered in for some twenty or twenty-five minutes, but

[1] THE LANCET, vol. ii. 1890, p. 1158, Mirror of Hospital Practice.
[2] Ibid., vol. i. 1889, p. 171.
[3] Ibid, vol. i. 1891, p. 1144, Mr. Mortimer.

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without success. Massage was now resorted to, and efforts made to reduce the invagination by manipulation of the abdomen, but without any effect. Finally, inflation of air was tried, but this attempt was also unsuccessful. As it seemed improbable that reduction would be effected without operation, laparotomy was determined upon. At 8 P.M., the child having been placed under the influence of chloroform, an incision, about three inches in length, was made in the linea alba, and the peritoneal cavity opened. There was found to be an invagination of the small intestines into the large at the ileo-cæcal valve, the invaginated portion of bowel extending as low as the anus. It was reduced without difficulty. After its reduction the coats of the descending colon were noticed to be much thickened and œdematous. The reduction was effected without the escape of any of the intestines from the abdominal cavity. The wound was closed and dressed.

The next morning (March 3rd) the child was found to have passed a good night and to have slept soundly. It looked quite well, and seemed free from pain. There had been no vomiting, and it had taken food freely. Two motions had been passed during the night of fairly natural consistence. Previously to this, however, and shortly after the operation, it had passed a little blood and mucus. The temperature was 99°; the pulse 140; respiration 40.

Early on the following morning (the 4th), until which time the child had been apparently going on well, it awoke with much crying, and seemed in great pain. The bowel was found to be protruding from the anus. Mr. Pick reopened the wound and reduced the intussusception a second time. The wound was found to be in a satisfactory state, and there was no evidence of peritonitis. There was much collapse at the time of the operation and incessant vomiting afterwards. A little slime was passed during the day, but no fæces or urine. The child died at 11.55 P.M.

Necropsy.—The body was well nourished. Rigor mortis was present. There was an incision between the umbilicus and pubes. The intestines were distended; the omentum covered a little blood-clot opposite the laparotomy wound. There was no peritonitis; no intussusception. The cæcum was distended; the vermiform appendix free. The small bowel was normal. The large bowel showed patches of congestion in the ascending colon. No evidence of constriction on the mesentery. The stomach contained dark fluid. The liver was pale and fatty, but firm. Gall-bladder full; bile-ducts pervious. Spleen, pancreas, testes, bladder, and kidneys normal. There was a large mesenteric gland near the cæcum. The pleuræ were normal. The lungs showed numerous dark-purple broncho-pneumonic patches, least marked in the right lung. The bronchi and trachea contained similar material to that found in the stomach. There was no tubercle. The larynx, thyroid, bronchial glands, heart, and pericardium were normal.

Remarks by Mr. PICK.—In this case it was not until a thorough and patient trial of other means of reduction had been resorted to and failed that laparotomy was performed; and the operation on the following day seemed likely to prove successful. The child seemed quite well, and free from pain and sickness; it took its food well, and the bowels acted twice naturally. Of course, in considering the question of the recurrence of the intussusception, the idea suggests itself to one's mind that the invagination was not completely reduced at the first operation. But the condition of the child on the day after operation seems to preclude this idea; the absolute cessation of all the previous symptoms of obstruction and the healthy action of the bowels seem to prove that the intussusception was really reduced. Even after the reopening of the wound and the second reduction there seems no reason to doubt, from the post-mortem evidence, that the child might have recovered had it not been for the unfortunate accident of some of the vomited food finding its way into the air passages, which was the immediate cause of death.

VICTORIA HOSPITAL FOR CHILDREN.

A CASE OF INTUSSUSCEPTION; REDUCTION BY INFLATION; CONTINUANCE OF SYMPTOMS; SUBSEQUENT LAPAROTOMY; DEATH.

(Under the care of Mr. PICK.)

TO a considerable extent the editorial remarks prefixed to the case of intussusception treated by laporotomy (and again by laparotomy when the disease returned), recorded above, which was also under the care of Mr. Pick, apply to this case. In a large number of instances the return of symptoms or their continuance after the use of inflation or injections into the bowel is due to incomplete reduction of the intussusception. How frequently the abdominal tumour seems to disappear under treatment, only to show itself a few hours later. We seldom meet with the condition of bowel after intussusception which was found at the operation on this patient, and it is of considerable importance a record of such instances should be made. More can be learnt from the account of such a case than by the perusal of many uncomplicated cases, where inflation or injection treatment has been used with success.

A. R. D——, aged six months, was admitted into the Victoria Hospital on Oct. 26th, 1887. The child was reported to have been always strong and healthy. It had been fed at the breast and on nursery biscuits, and had had no illness of any kind. Its bowels had always acted regularly, and it had never been troubled with sickness, diarrhœa, or constipation. The family history was good; no history of syphilis or of phthisis. The child had been fretful for three weeks past, but seemed otherwise well until the 23rd, when it vomited after taking the breast and then refused it. The mother took it to a medical man, who said it was suffering from flatus, and prescribed for it. On the following morning the child was worse, and evidently in great pain; the mother accordingly gave it a teaspoonful of castor oil, which produced a bloody motion, containing slime. The sickness continued and the pain seemed to increase, the child writhing and kicking its legs about. It seemed now willing to take the breast, but the mother was advised not to put the child to it, and accordingly abstained from giving it any food until the next morning. On the 25th (the day before admission) the child was constantly sick, and evidently in great pain; there was constant tenesmus and passage of blood and mucus per anum. Very little urine had been passed since the illness began. On admission the child was found to be well nourished and healthy-looking. Temperature 99°; pulse 100. It lay on its back perfectly quiet, and apparently free from pain, except that every now and then it cried in a moaning fashion and writhed, drawing its thighs up on to the abdomen as if in a paroxysm of pain. The pain only seemed to last about half a minute. The tongue was moist. There was no distension or dulness of the abdomen, and its walls were lax and could be easily palpated. On the left side was a distinct sausage-shaped tumour, feeling about three to four inches long, movable, and running in a direction obliquely to the outer side of the umbilicus. It did not appear to be tender. On examination by the rectum nothing abnormal was to be felt. Shortly after admission the child passed a small quantity of blood, merely sufficient to stain the napkin. At 6 P.M. it was sick after taking milk. At 10 P.M. it was reported to have been sick twice. At 1 A.M. on the morning of the 27th the child was placed under the influence of chloroform, and, having been inverted, air was forced up the bowel by means of a pair of bellows. As the air was introduced it could be felt distending the colon by the hand placed upon the abdomen. Suddenly the sausage-shaped tumour seemed to melt away from under the fingers and the air rapidly diffused itself over the whole of the abdomen. The child was now sent back to bed, and an enema of one drachm of starch with two minims of tincture of opium administered. This was partly returned, streaked with blood. The child slept for two hours, and was then sick after taking a little milk. There was no action of the bowels. At 9 A.M. the child looked worn and anxious. Pulse 130. Abdomen hard and tense on palpation; no swelling to be felt. No action of the bowels. A poultice was applied to the abdomen, and the child was ordered to have nothing by the mouth but half a teaspoonful of raw meat juice, with two drops of brandy, every two hours. An oil enema was given, but it was returned with slimy mucus and blood. At 4 P.M. the pulse was 140, temperature subnormal. The child seemed to be in more pain; it had not been sick since it began the meat juice. Bowels not acted.

Oct. 28th.—At 11 A.M. the child was manifestly worse; there was a drawn and anxious expression of countenance, and it was constantly moaning and tossing about, as if in pain. The bowels had not been opened, but there had been passage of some blood and mucus. The face was slightly flushed, pulse quick, tongue moist and clean. The abdomen was still hard and tender, and slightly distended, mani-

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pulation evidently causing pain. At 2 P.M. the child was evidently worse, and appeared to be sinking. As the symptoms seemed to point to the fact that the intussusception had not been completely reduced, it was determined to perform laparotomy. This was accordingly done under chloroform, with strict antiseptic precautions. After the abdomen had been opened in the linea alba the small intestines were found to be distended with air and congested, but there was no marked sign of peritonitis. On tracing this part of the bowel a piece was found about six inches long, which was completely contracted and empty, and looked as if it were paralysed. There was a slight constriction at each end of the contracted portion, and the bowel below was empty and collapsed; but there were no signs of previous strangulation, neither congestion, change of colour, nor roughness of surface. The large intestine seemed healthy, and no intussusception was found. Nothing further being discoverable, the peritoneal cavity was washed out with a solution of boracic acid, closed, and dressed. The operation lasted twenty-five minutes.

The result of the operation was therefore unsatisfactory; for, assuming that the contracted portion of small intestine represented the seat of intussusception and that the entire colon was unaffected, it remains unexplained why the inflation should have been attended with such a marked and sudden disappearance of the tumour, and why, with such a slight amount of constriction and inflammation, the symptoms should have continued unchanged. The child bore the operation well, but suddenly became collapsed, and died about three hours afterwards.

Remarks by Mr. PICK.—This case is a good example of the success which attends inflation with inversion, as far as the reduction of the intussusception is concerned, and it seems difficult to understand why the child was not permanently relieved. It would seem probable that the intussusception was one of the small intestine, and that the portion of the bowel which at the subsequent laparotomy was found to be contracted and empty was the part which had been invaginated, and that it had been so long confined that after its release had taken place it was unable to recover itself, and therefore the symptoms continued unchanged. The question which presses itself upon one's mind is whether the bowel might have eventually recovered itself, and whether it would have been wiser to have left the infant alone, and not have resorted to operative interference. But at the time this was undertaken the child was manifestly worse and appeared to be sinking, and had apparently derived no benefit from the supposed reduction of the intussusception. It was therefore believed that the invagination had not been completely reduced, or that there was a second intussusception or some other cause of obstruction, and therefore the operation was undertaken. It is to be regretted that no post-mortem examination could be obtained.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Acute Inflammation of the Mucous Membrane of the Ileum from Climatic Causes.—Pancreatic Cyst treated by Laparotomy.—Causation of Pes Cavus.

THE last ordinary meeting of this Society for the present session was held on June 9th, the President, Mr. TIMOTHY HOLMES, being in the chair.

Dr. GEORGE THIN and Dr. FRANK J. WETHERED communicated a paper on the Symptoms and Pathology of a case of Acute Inflammation of the Mucous Membrane of the Ileum from climatic causes. The patient whose case was described in the paper was a man with strong constitution, and in the enjoyment of excellent health. Whilst travelling in the north of China in the autumn, he became, after a chill, subject to a moderate but obstinate diarrhœa. After several months, the tendency to diarrhœa increasing, he became subject to febrile attacks, and after three months of the combined moderate fever and diarrhœa he had lost forty pounds in weight, and was sent to Europe. The condition became aggravated on his way home, his journey being broken for six weeks on account of a very acute illness, of which the leading features were diarrhœa, retching, nausea, and fever, his condition for three weeks of that time being critical. After a comparatively rapid convalescence, during which time he regained his normal weight, he enjoyed three months of good health and appeared perfectly well. A chill brought on another acute attack, the general symptoms of which were fever, nausea, abdominal uneasiness, thirst, entire loss of appetite, and complete incapacity to digest food. During the whole of his illness there was diarrhœa, the intestinal discharge consisting of a dark-coloured fluid with an apparent absence of any fæcal element. Death took place at the end of five weeks from the seizure. A necropsy was made by Dr Sidney Martin. The mucous membrane of the ileum presented a worm-eaten appearance along its whole course. There were superficial ulcerations not extending deeper than the mucous membrane, and in some places there were discrete erosions of the size of a split pea. The ulceration increased as it descended the ileum, and the mucous membrane seemed somewhat thickened. At the entrance of the vermiform appendix into the cæcum the mucous membrane was thickened and slightly eroded. In the whole of the large intestine there were only about ten superficial ulcers, all of which were close to the cæcum, five being grouped together, this gut being otherwise healthy. The stomach and jejunum were unaffected, and there was nothing remarkable in the liver or spleen. Dr. Wethered prepared specimens of the viscera, and on microscopical examination the authors of the paper found the following morbid appearances in the ileum. No traces of the villi were observed. Lieberkühn's crypts in the least diseased parts were not affected at their deep ends, but were indistinct towards the free edge of the mucous membrane, and lost in a finely granular substance which covered the whole of that part of the gut. At some parts, whilst the epithelium of the crypts could be recognised as much altered at their deep ends, atrophy and destruction had occurred at a short distance from their base, a mucoid-looking material distending the lower part of the crypt. In some parts the whole crypt was disintegrated, its position being indicated by the broken-down remnants of the epithelial cells. At the seat of the erosions the epithelium had entirely disappeared, the free surface being covered with a layer of granular material similar to that which covered the less affected parts of the gut, and below this substance there was a thick mass of small cell infiltration in the whole of the submucous layer. The muscular and subperitoneal coats were comparatively unaffected. The mucous membrane of the large intestine as a whole, and all the upper parts of the intestinal canal, were normal. The authors had not been able to find any record of a case of acute inflammation of the mucous membrane of the intestine limited to the ileum and involving the whole of its surface. Clinically it was shown in the paper in what respects the symptoms differed from typhoid fever and dysentery, the two diseases in regard to which questions of differential diagnosis could arise. Special attention was called to the apparent absence of fæcal elements in the intestinal discharge, and of the suspension of the digestive functions, notwithstanding that the stomach, duodenum, jejunum, and liver were comparatively healthy. Milk and raw egg, when not rejected by vomiting, passed in the motion entirely unaltered, and it was suggested that this suspension might at least partly have been due to a reflex effect from the inflamed mucous membrane of the ileum.—Dr. SCRIVEN said that during his thirty years' practice in India he could call to mind a few such cases, attended by diarrhœa and fever. He asked if the authors had any record as to the food and kind of water the patient had consumed while in China. He thought the affection was more attributable to alimentation than to climate.—Dr. JOHNSON said that the patient had been well known to him during his career in the East. He was very robust for his age, and he was struck, when he met him later in London, to see how greatly his physique had changed. He had attended him abroad for two attacks of malarial fever, for the latter of which he had been invalided home. While in China he had lived well, though he had not been guilty of excess. Though he was not actually suffering from sprue, yet his mucous membrane was undergoing changes which were leading up to that disease. Long residence in a malarious country brought about an insidious change in the intestinal mucous membrane which might develop at any time into an acute disease. It was rare to see the processes of nutrition suspended in even acute attacks of malarial disease.—Dr. SQUIRE said that the

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case appeared to him to fall under the general heading of malarial disease. He had seen a large number of cases in the Eastern Soudan which, in their symptoms, length of illness, and post-mortem appearances, resembled that under discussion. He pointed out that ulceration of the small intestine was not uncommon in many malarial affections, and he had several times noted the presence of small ulcers with hæmorrhages and patches of congestion in this part of the digestive tract.—Dr. THIN, in reply, said that there was no reason to believe that the patient had had food and drink other than that taken by the majority of Europeans living in the north of China. He was inclined to think that the affection was not malarial, and Dr. Manson had confessed that in his experience the case was perfectly unique. It was worthy of note that it was only late in the course of the disease that the symptomatic fever set in.

A paper by Dr. G. NEWTON PITT and Mr. W. H. A. JACOBSON on a case of Pancreatic Cyst successfully treated by Laparotomy and Drainage was then read. The patient, a man aged twenty-one, was kicked in the abdomen in 1886, since which he had been liable to attacks of abdominal pain. He was admitted in May, 1889, with jaundice and severe abdominal pain and vomiting. On examination, a globular tumour was discovered in the epigastric region, over part of which the note on percussion was dull; but this area of dulness was variable. In June the tumour was aspirated, and half a pint of alkaline, opaque, greenish fluid, of sp. gr. 1015, and containing albumen, was drawn off. The jaundice diminished and the patient improved sufficiently to be able to go home. At the end of July the patient was readmitted, the pain, the jaundice, and the tumour having all recurred. The globular tumour now occupied the umbilical and epigastric regions, extending rather to the left of the middle line, moving with respiration, and lying behind the stomach, as shown by the varying note on percussion, and by the disappearance of the dulness when the stomach was distended artificially with gas. On Aug. 17th the tumour was again aspirated, and eight ounces of alkaline fluid, sage-green in colour, were removed. This contained 11 grm. of albumen per litre, a large amount of tyrosin crystals, no copper-reducing substance, and no bile. It was therefore clear that the tumour was a pancreatic cyst. The patient was very emaciated, the cyst rapidly refilled, and the patient's condition became so critical that Mr. Jacobson performed laparotomy on the 22nd. An incision three inches long was made over the tumour one and a half inches to the left of the middle line. The stomach was with some difficulty pushed up under cover of the liver, the greater portion of the omentum was pulled out and removed, and the rest was sutured round the edges of the wound. The two layers immediately below the stomach were scraped through, and a very thin tense cyst was exposed. Thirty-six hours later the patient's pulse was very rapid and feeble, and his condition most precarious, owing to hæmorrhage into the cyst, which made it so tense that it was necessary to lay it freely open. He steadily improved from this time, and was able to get up a month later, being discharged cured. With the exception of Annandale's case, this was the first instance in Great Britain in which the correct diagnosis had been made previous to operation. Senn's papers in 1886 and 1887 were the foundation of all our knowledge about these cysts. The symptoms of these cases were discussed, some surgical points of interest were noted, and a *résumé* was given of the cases published since Senn's papers.—Mr. PEARCE GOULD said that he had had under his care two cases of pancreatic cyst. In the first the cyst was situated near the head of the pancreas, and in June, 1887, he opened it and stitched it to the abdominal wall. The fistula which resulted had never closed, and at the present time a malignant growth was forming round the track of the fistula. In the second case the cyst was situated in the tail of the organ, and the patient suffered so much pain that, though she had been recently confined, it was considered desirable to operate. The transverse colon and omentum were turned up and the cyst presented below them, a large vein crossing its surface. This latter was tied and divided, and the cyst then aspirated. The puncture was enlarged, and a finger passed in could be made to project below the left twelfth rib, behind where a counter-opening was made and a drainage-tube introduced. The patient ultimately made a good recovery, and she was exhibited to the Society.—Mr. JACOBSON, in the course of a brief reply, expressed his indebtedness to Professor Senn of Milwaukee, without whose able and original work on the subject he would probably have been unable to attack this case successfully.

Mr. ALFRED PARKIN contributed a paper on the Causation and Mode of Production of Pes Cavus. This deformity, by no means uncommon, was described as consisting of an increased height of the plantar arch, corresponding concavity of the dorsum, and shortening in the length of the foot of from half an inch to one inch and a half. Associated conditions were: (1) Contraction of plantar fascia; (2) prominence of the balls of the toes; (3) deformity of the toes; (4) projection of the dorsal tendons; (5) contraction of the tendo Achillis, apparently a constant feature. The literature of the subject was sparse and of little value. The following had been the suggestions offered as to causation: (1) Paralysis of the interossei muscles (Duchenne); (2) weakness of the peronei muscles (Mr. Golding-Bird); (3) wearing of tight boots; (4) combined pull of tendo Achillis and extensor longus digitorum; (5) contraction of plantar fascia. These, considered *seriatim*, all showed a want of accuracy, and did not explain the condition at all. Consideration of the normal foot when supporting weight of the body led to the following conclusions: The weight of the body was supported by the arch of the foot in contact with the ground at the heel and at the metatarso-phalangeal joints, so that the weight of the body was split up into two oblique components, of which the posterior or heel portion was the greater. In cases of talipes equinus the weight of the body was transmitted along the anterior part of the arch only, and the posterior portion of the force was free to act, and was counteracted only by the tarsal ligaments, dorsal and interosseous, and adapted shape of the bones; hence there was a tendency to curving of the longitudinal pedal arch. The greater the talipes equinus the less was the tendency to curvature of the arch, and conversely. Hence the mechanism was compensatory, tending to bring down the heel and restore equilibrium as soon as talipes equinus had developed. In position of rest there was no tendency to production of cavus, only in active positions. Displacement of the toes was due primarily to position of talipes equinus; then when subluxation had taken place, the interossei could not act, or acted only in the reverse direction from displacement of their lines of action. The position was secured by alteration of joint surfaces and adaptation of muscles and ligaments. Contraction of tibials and plantar fascia was secondary to these changes—adaptive measures. The following statistics from the Guy's Hospital Surgical Reports supported these views:—Of 53 cases of talipes equino-varus with or without pes cavus, 38 were acquired, 15 were congenital. Congenital cases: 11 of talipes equino-varus below three years of age; 3 of talipes equino-varus with pes cavus aged seven, twelve, thirteen years; 1 of talipes equino-varus without pes cavus aged seven, but in this the presence of equinus was very doubtful indeed. Acquired cases: 4 of talipes equino-varus below four years of age; 1 of extreme talipes equinus, hence no pes cavus; 2 of pes cavus simply, with special mention of contracted tendo Achillis in one; 16 of talipes equino-varus with pes cavus, the ages of which were: Four and a half years, 2; six years, 2; seven years, 1; eight years, 3; twelve years, 2; fifteen years, 2; above fifteen years, 4. Conclusions: (1) Pes cavus was a secondary deformity engrafted upon talipes equinus or equino-varus; (2) pes cavus was not congenital, though it might follow on congenital talipes equinus or equino-varus; (3) that it was the direct result of transmission of body weight through a foot in the equine position; (4) that the changes in the soft parts and toes were adaptive or consecutive.

THE ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held on May 25th, Sir William Turner, President, in the chair.

Professor THANE showed two Abnormal Muscles in the Leg.—Mr. LAWRENCE showed Abnormalities of the Aortic and Pulmonary Valves.—The PRESIDENT read a paper on the relations of the Dentary Arcades in the Crania of Australian Aborigines, pointing out that in these skulls the upper teeth, instead of overlapping the lower, fitted accurately upon them. This feature is the rule in the higher apes, but is not present in the higher races of man.—

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The SECRETARY for Professor Cleland read a paper on the Value of Burial in Sand for Cleaning Bones of the Fat which fills the Cancellous Tissue.—Dr. HERBERT SPENCER read a paper on Ossification in the Head of the Humerus at Birth, showing that this was not by any means so rare an occurrence as was generally thought, and that many different dates were ascribed by different anatomists to the appearance of this nucleus.—Dr. WARDROP GRIFFITH read a detailed account of a case of Transposition of Viscera, with many Abnormalities in the Heart and Great Vessels.—Mr. LOCKWOOD and Dr. ROLLESTON showed specimens of Abnormal Vermiform Appendix, and read a statistical account of the position of the organ in a hundred consecutive cases in which no evidence existed of disease in that region, showing that, while in most cases it lay to the left of the cæcum, it was found in others under, over, or to the right of this viscus, and with various degrees of freedom or attachment to it and to the surrounding peritoneum.

Reviews and Notices of Books.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D., F.R.C.P.Edin., F.R.S.Edin., Assistant Physician to the Edinburgh Royal Infirmary. Vol. i., Part 1. Edinburgh: T. and A. Constable. 1891.

THERE are many things to admire in this the first part of what promises to be one of the most important and most valuable of modern contributions to the study of clinical medicine. Attention is at once attracted by the style, no less than by the matter. Dr. Bramwell has conceived the idea that clinical instruction may be conveyed usefully by a series of well-executed coloured plates, lithographs, and wood-blocks, and in carrying out this idea he has spared no expense, and has been equally lavish with wealth of material. This part deals with myxœdema, sporadic cretinism, and Friedreich's ataxia; the first is illustrated by three coloured portraits, two of the three cases having been under Dr. Byrom Bramwell's care, the third having been contributed by Dr. Donaldson of Londonderry. In the accompanying text a very full account of myxœdema is given; this is based upon a brief report of the first case, from which the author glides by easy and almost imperceptible stages into a valuable account of the history of this disease. He notes that although myxœdema was first publicly described by Sir William Gull in 1873, and subsequently elaborately studied both by Dr. Ord and by a committee of the Clinical Society, it had nevertheless been recognised by many different physicians before that date. Then taking the most obvious and striking features of the disease, and drawing largely from the account given by Drs. Hun and Prudden in the *International Journal of the Medical Sciences*, the clinical picture is rendered more complete. Due stress is laid upon the impaired activity of the cerebral and probably of all the nervous tissues, which in great part accounts for so many of the puzzling symptoms frequently noted. The association of this disease with degenerative atrophy of the thyroid gland is treated with moderation, even though at the outset the author declares his conviction that the myxœdematous condition is the result of the abolition of the function of the thyroid gland. Still it is admitted that uncertainty shrouds the exact manner in which this abolition of function produces myxœdema, since the physiological work of the healthy gland is still a matter of conjecture and dispute. What is said of treatment is not encouraging; the author admits that he has no practical experience of his own to offer, and he points out that the condition or conditions which produce, or help to produce, the thyroid lesion have yet to be found. The three coloured plates which illustrate myxœdema are extremely well executed. Without reference to the text it is perfectly easy to pick out the case with renal changes, even though Dr. Byrom Bramwell makes a point of the difference from the pallor which characterises the swollen face in Bright's disease. The colouring is faithful, and the pictures are not overdrawn. There is no undue insistance upon special characteristics, although it is perfectly clear that the artist was guided somewhat in his indications of the particular features of the disease. In each case he appears to have drawn from the patient before him, without attempting to beautify in the style of the modern portrait painter, and at the same time without exaggeration, which so readily passes into caricature. The plates are followed by a description giving the clinical history of each case. The further study of this most interesting disease will be facilitated by the valuable suggestions offered on page 16.

Sporadic cretinism, the infantile form of myxœdema, is next passed under review. It is curious to note that this disease, which is rare, was first described more than twenty years before Sir William Gull wrote of myxœdema. The work of Fagge receives due credit, his paper on "Sporadic Cretinism," in 1871, being regarded as having paved the way for the discovery of myxœdema. The congenital absence or arrested development of the thyroid gland is mentioned as an almost invariable feature; and as regards etiology, Langdon Down's view of "alcoholic conception" is carefully investigated, though it is felt that the balance of probability is against it. The figures in the two plates illustrating sporadic cretinism are from various sources, some being already familiar, but they well bear reproduction in this connexion. The contrast between the symptoms of myxœdema and those of exophthalmic goitre is extremely interesting, though the ultimate pathology, the primary cause, is equally obscure.

The article on Friedreich's ataxia is based upon remarks made at the author's clinique, and the arrangement of material is somewhat different. The matter is cast in the form of a clinical lecture, and the notes seem to have been taken in shorthand at the time of delivery; still there is no difficulty in realising the clinical picture of the case, "the living illustration of the text," though it may be questioned whether any particular advantage is gained by printing in full the suggestions made by students. Dr. Byrom Bramwell certainly has, however, the leading facts connected with this disease at his "finger-ends," and he makes good use of all that has recently been written upon it. His range of reading has been extensive, and he annexes freely the figures of Rütmeyer and others, supplementing them by original figures. This article is extremely full and very well written; an able summary at the end gives due prominence to the more important facts, and the clinical aspect is rendered more complete by notes of three additional cases of Friedreich's ataxia.

Dr. Byrom Bramwell has commenced a work involving immense labour and considerable expense. This first instalment is in every way so praiseworthy that little anxiety need be felt about the remainder. We have been favoured with advance copies of many of the coloured plates, and the vast majority are as carefully executed as those belonging to the first part. The Atlas of Clinical Medicine will, it is safe to predict, take a very prominent place in the annals of medicine. It is luxurious in appearance, but its intrinsic value renders its acquisition a necessity rather than a luxury.

Bakteriologische Diagnostik. Von JAMES EISENBERG. Hamburg und Leipzig: Leopold Voss. 1891.

DR. EISENBERG'S bacteriological tables are now so well known that, under ordinary circumstances, a review of the third edition would resolve itself into the mere mention of

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the fact; but as this present edition is more than double the size of the second, and as much new matter has been added, both in kind and quantity, it becomes necessary to indicate the nature of the additions.

A list of the non-pathogenic organisms is first given, then of the pathogenic, and of the ordinary fungi. The author then gives a second table in which the various organisms are arranged according to the materials or positions in which they naturally occur; those found in water being grouped together and divided into pathogenic and non-pathogenic species; those in the air being similarly treated; and so on, through earth, air, milk, cheese, plants and their infusions, beer, putrefying substances, and the fluids and tissues of the body; these being again more minutely subdivided. Many corrections and additions have been made in the descriptions of organisms previously contained in the work, and the number of these organisms has now been more than doubled. In the appendix a short account of the various methods now in use in a bacteriological laboratory are given, so that altogether this work will form a capital laboratory handbook. What strikes one, however, in going over these methods, is that although almost every method described at any time and by every author is given, there is little to enable the beginner (especially) to discriminate between the methods that are really useful for general work and those that are required only for special purposes. There is plenty of information given, but until the reader gets accustomed to the book he will find some little difficulty in getting at it all. We see from the preface that an English edition of this work is to appear shortly.

Spinal Concussion. By S. V. CLEVENGER, M.D. Pp. 350. Philadelphia and London: F. A. Davis. 1889.

THE book before us is intended, as the author points out, not merely for the medical, but also for the legal profession, and from internal evidence we should imagine still more directly for a damages-seeking public. It is written with the avowed object of giving an account of the symptoms observed in what is usually known as "railway spine" (which the author proposes henceforth to call "Erichsen's disease"), and to emphasise his own views of the pathology of the affection. With regard to the symptomatology, which occupies the first part of the volume, nothing is given that is new or helpful, and, in fact, almost the whole of it is taken up by transplantations, *verbatim et literatim*, from the works of Erichsen, Page, Bramwell, Oppenheim, and other writers on the subject. On the question of differential diagnosis, the author mainly contents himself with giving a catalogue of leading symptoms from each disease, and leaving the reader to work out the problems for himself. But it is in the chapter on Pathology that we are treated to Dr. Clevenger's own views, although here also eighteen out of the forty pages are between quotation commas. He considers it proved that these cases are due to lesions of the sympathetic chain (lacerations, hæmorrhages, &c.) which not merely cause peripheral (e.g., vaso-motor) paralysis, but also cause central disturbances. The evidence brought forward in support of this contention is extremely slight, and rests almost entirely on the works of writers on the probable functions of the sympathetic ganglia, in the days when neurology was in its infancy, and the writer hardly raises his theory above the level of an ingenious guess. The author concludes with a chapter on medico-legal considerations, which have little interest for English readers, the conditions fortunately being entirely different.

The style of the book is slovenly, and the author's way of speaking of his *confrères* is at times most injudicious. For instance, in giving an account of a legal case, after mentioning more than enough to identify the medical man referred to, he says sarcastically that he formed a certain opinion "in spite of its being coincided in by the other surgeon, who, though skilled, enjoys the reputation of being a society intrigant, politician, and facile swearer for the side that engages him." Altogether, we do not think the book can be commended either as a contribution to neurology or as a medico-legal guide.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following circular has been addressed to all the Fellows of the Royal College of Surgeons of England by the Association of Fellows:—

To the Fellows of the Royal College of Surgeons of England.

In furtherance of the policy of the Association of Fellows of the Royal College of Surgeons for the reform of that institution, and particularly of its method of government, the Committee of the Association beg to remind you that the points of reform which were originally proposed are the four following: (1) That it would materially conduce to the welfare of the College if the Fellows and Members were invested with a larger share of its management; (2) that it is desirable that no alteration in the constitution or relations of the College shall be effected without the consent of the Fellows and Members convened to discuss such alteration; (3) that there shall be an annual meeting of the Fellows and Members, at which the annual report of the Council shall be presented, received, and adopted; (4) that at such meeting the president for the ensuing year shall be elected by the majority of the Fellows present. These are still, in the main, inoperative (as is proved in the case of No. 2, by the revised scheme of the University of London not having been submitted to the corporate body until after it had been formally accepted by the Council in the name of the College).

Our experience since the foundation of the Association has brought under consideration some additional subjects to which, in our opinion, the combined action of the Fellows should also be directed. (*a*) Since the schools of Liverpool, Leeds, Manchester, Birmingham, Newcastle, Sheffield, Bristol, Oxford, and Cambridge yearly furnish a large and increasing proportion of candidates, and thus contribute considerably to the income of the College, the committee are strongly of the opinion that there should be a fair proportion of provincial examiners appointed by the Council of the College of Surgeons. (*b*) The term for which a Member of Council sits, now averaging about eight years, might with advantage be shortened. (*c*) Meetings of the Fellows ought to be summoned apart from the Members, as is now authoritatively declared to be legal, and a common room for the Fellows ought to be provided in the College. These points were urged lately upon the Council by a deputation of this Association. The consultation of the Fellows of the College by the Council is the most important of all the measures of reform, and would raise the present constitutional status of the Fellows to the level of that of the Fellows of the College of Physicians and other professional Colleges. If the Fellows of the College are really desirous that such measures of reform should come into operation, it is necessary that they should support those candidates for seats on the Council who will, if elected, use their efforts to secure them.

Signed, on behalf of the Committee,
GEORGE POLLOCK, President.
T. HOLMES, Vice-President.
H. PERCY DUNN, Hon. Sec.

P.S.—Fellows of the College who do not already belong to the Association, and who are in sympathy with the objects set forth in this circular, are invited to communicate with the Hon. Sec., Mr. Percy Dunn, 2, Henrietta-street, Cavendish-square, London, W., and to allow themselves to be proposed as members of the Association.

PHARMACEUTICAL SOCIETY OF IRELAND.—The following have obtained the licence to act as registered druggists:—Alexander Andrews, Richard Barry, James Clancey, Patrick Dromgoole, Richard Ellis, Thomas Lorell Harte, Fanny Pierse, and William C. Spencer.

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THE LANCET.

LONDON: SATURDAY, JUNE 13, 1891.

IT is impossible to escape the conviction that in declining to accede to the request of the promoters of the British Institute of Preventive Medicine the President of the Board of Trade has deliberately sacrificed the legitimate and beneficial aspirations of science at the altar of political expediency. His reply to the overwhelming arguments adduced by Sir JOSEPH LISTER, Sir LYON PLAYFAIR, Professor DEWAR, Professor RAY LANKESTER, and Sir JAMES CRICHTON BROWNE was a striking illustration of the total want of sympathy which our public men have for scientific objects, in the promotion of which this country is so lamentably behind all other civilised nations of the world—including, be it said, with regret, some of Great Britain's own colonies. We shall deal presently with the legal aspect of this decision, which, by the way, affects the whole range of associated undertakings in the furtherance of objects unconnected with personal profit to their promoters; but we will first consider what the aims of the proposed Institute really are, and to what extent this refusal of the Board of Trade (supposing it to be insisted on) will affect these objects.

The projected British Institute of Preventive Medicine would have for its scope the widest field of research that has been opened up to scientific investigation. Our conceptions of the nature of disease have been profoundly influenced by the light shed many years ago through the genius of PASTEUR on the processes of fermentation; and that same root discovery can be applied in untold measure to the whole range of chemistry as well as largely of physiology. Whatever may be the position ultimately assumed by bacteriology, there can be no question as to the practical fruits already reaped from its pursuit, which also promises so much in the future. We believe that this branch of science contains within it the solution of many of the problems of disease, and that the progress of medicine, particularly in respect to the prevention of disease, is indissolubly bound up with its study. But, as was well pointed out by the deputation, the work of such an institute will be by no means limited to bacteriological inquiry and the minimal degree of "vivisection" that such researches involve. One has only to glance through the records of the Imperial Hygienic Institute at Berlin or those of the Pasteur Institute at Paris to learn how much wider is the field that lies open to those who are seeking to benefit humanity in tracking disease to its sources and gaining a clearer insight into the conditions of its spread. It is quite true that, owing to the enlightened spirit of some of our scientific bodies, there do exist certain laboratories in this country where some of these researches are now being carried on, and it may not be out of place to remind the President of the Board of Trade that other Government departments which, unlike his, are more concerned with the well-being of man and animals than with the interests of commercial undertakings, largely avail themselves of the work conducted in these institutions.

It is not easy to understand the state of mind which has led Sir MICHAEL HICKS-BEACH to place himself in such a singular position as he has in fact taken up with reference to the British Institute of Preventive Medicine and the Royal British Nurses' Association. Both these institutions have applied under the Companies Act for a licence which will enable them to be registered as associations not formed for profit, without the word "limited" as a part of their respective titles. The Act which gives to the President of the Board of Trade jurisdiction to issue such a licence, gives by that very enactment the right to the company in a proper case to get the benefit of this provision; and the case which is to be considered a proper one is not only sufficiently obvious from the effect of the licence, but is also indicated in precise terms by the definition included in the section of the case, which its promoters are to prove to the satisfaction of the President of the Board of Trade. That case has respect only to the pecuniary commitments and powers of the company. If it is intended that it shall devote any profit that it may realise or other income to the advancement of its objects, and if it is formed to promote commerce, art, science, religion, charity, or any other useful object, and will prohibit the payment of any dividend to the members of the Association, then the Board of Trade may issue the licence asked for. The effect of such a licence is that the official title of the company does not contain the word "limited," that its name need not be painted up outside its place of business or otherwise published in accordance with the Companies Act, and that it is not called upon to furnish the registrar of Joint Stock Companies with a list of its members, directors, or managers. That a company satisfying the condition prescribed, as to its working for the advancement of a cause and not for the profit of its members, should be denied the benefit of these purely commercial advantages on any collateral ground seems unintelligible. But this is what Sir MICHAEL HICKS-BEACH has undertaken to read into the Act of Parliament. He says to the promoters of the Institute of Preventive Medicine: "I cannot approve your project, because you contemplate experiments on living animals calculated to give pain, and I cannot issue the licence for fear of being thought to have approved your undertaking." To the Royal British nurses in the same strain he writes, that "after careful consideration of the objects of the Association and of the representations made in opposition thereto the Board of Trade are unable to satisfy themselves that the means which the Association propose to adopt are either adequate to carry out their objects satisfactorily or so free from objection as to warrant the Board of Trade in the issue of a licence." Not VIVIEN'S robe was more transparent than this garment of official zeal in which the President has dressed out his antipathy to these two institutions and his determination to use his jurisdiction to prevent them from attaining their objects. Does he, we wonder, consider himself committed to approval of all the objects of the sixteen companies which he so licensed in the year 1889, dealing with matters as diverse as the raising of sheep and the incorporating of solicitors? Did he satisfy himself when he

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licensed the Midwives' Institute that the means which it proposed to adopt for obtaining a Bill to compel the registration of midwives were adequate to that object? The thing is absolutely preposterous, and Sir MICHAEL HICKS-BEACH does himself less than justice when he puts forward such trumpery arguments. The truth is that he means in this matter to play the autocrat. But we think that he will find his duty more exacting than his conscience. The law stands even above the Minister, and we shall be much surprised if it does not turn out that the President of the Board of Trade has greatly misunderstood the law. If he can upon capricious grounds deny these licences, he can on similar grounds refuse a licence to hold more than two acres of land; and religious, personal, or other irrelevant considerations may become the determining factors in the exercise of any part of his jurisdiction. If the law be so, it must be altered; but until it is judicially declared we shall decline to accept any such construction of the section under which Sir MICHAEL HICKS-BEACH affects to act. We do not believe that the Legislature, by a couple of short enabling clauses, has created a censorship so irresponsible and so odious as the Board of Trade is now claiming to exercise.

It is not too late for Sir MICHAEL HICKS-BEACH to reconsider a decision which is likely to be fraught with serious consequences to the community, besides opening up a prospect of contentions in all kinds of subjects which can be of no service to the cause of progress. In the month of August there is to meet in the metropolis a great international assembly of men devoted to sanitary science. It is humiliating to reflect that England, the pioneer in this great work, will be bound to confess before the world that her statesmen of to-day are so short-sighted as to wish to handicap her in the place which future generations will assign her by their ill-considered concessions to aggressive sentimentalism.

FIVE candidates have been nominated for the three vacant seats in the Council of the College. These candidates (with the dates of their acquirement of the Fellowship) are: Mr. SEPTIMUS SIBLEY (1857), Mr. WALTER RIVINGTON (1863), Mr. T. R. JESSOP of Leeds (1868), Mr. LAWSON TAIT (1870), and Sir WILLIAM MAC CORMAC (1871). Two of the five, Sir WILLIAM MAC CORMAC and Mr. SIBLEY, are seeking re-election, and therefore there is only one absolute vacancy, for which one London and two provincial Fellows are contending. Of course, it is by no means certain that the constituency will re-elect the two retiring councillors, and it would be very undesirable that this should be done as a matter of course, and without a satisfactory account being given of their stewardship. If the constituency is in favour of reforms in the constitution which these candidates have not supported, and are not likely to support, the only course is to elect fresh men in their room. There would be no hardship in this, for the retiring Councillors could come forward on another occasion after their views of constitutional questions had been amended and refreshed by contact with the Fellows, just as ANTÆUS gained strength by touching Mother Earth. It is clearly of the greatest importance for the Fellows of the College to utilise the opportunities presented to them to place in the Council men who may be relied upon to promote those moderate changes which would make the Council faithfully reflect the opinions of the constituency, and not to allow any other considerations to interfere with the one supreme object. The position of the Fellows of the Royal College of Surgeons is one of conspicuous inferiority to that of the Fellows of the other professional Colleges, and the Council takes little heed of the opinions entertained by either the Fellows or the Members; so little that, in the case of the scheme for the reconstitution of the University of London, they consulted the Fellows and Members after they had finally adopted the scheme, and when it would have been too late to amend it. This may not have been contemptuous indifference, but it was open to that interpretation. Placed in this humiliating position—a position which ought to be intolerable to educated men—what remedy do the Fellows possess other than filling the vacant seats on the Council with men who will use their utmost efforts to obtain for the Fellows the privileges now withheld? As it is, when the elections come round, Fellows of the College suffer themselves to be beguiled from allegiance to their opinions on medical polity, and give their votes far more readily on grounds of secondary import than on fixed principle. The considerations which secure votes are professional distinction, the school with which the candidate is connected, personal popularity, canvassing and private recommendation, sentiment, and views on constitutional questions. The last is too apt to be set aside through the rivalry between London and provincial candidates and between one school and another, and letters asking for votes for a personal friend, or applications at dinner parties, prove far too strong for many Fellows, whose political sympathies may be all in favour of constitutional reform, to resist. At the last election canvassing was carried to an unwonted length, and the contagion extended so far that Fellows of the College of Physicians descended into the arena like the gods of old to fight for their favourite warriors.

What we desire now to emphasise is the importance of Fellows of the College knowing definitely the views of candidates, whether seeking primary election or re-election, and of voting in accordance with their convictions. Of the five candidates now in the field the views of two only are a fixed and definite quantity. Mr. RIVINGTON and Mr. LAWSON TAIT, who have been asked to become candidates by the Association of Fellows, whose reasonable, sensible, and moderate programme will be found in another column, are standing for the very purpose, if elected, of securing for the Fellows that consideration and that position which they ought to possess under an amended constitution. If the other candidates have any views we invite them to make them known; and if they abstain from expressing them it may be taken for granted that, if elected, they are likely to trim their sails to catch the prevailing winds in the Council Chamber.

OUR readers, especially such of them as occupy positions in the public medical services, will have perused with keen interest Mr. STANHOPE'S letter to Sir ANDREW CLARK

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published in our last number. A decision has at last been arrived at in regard to the matters affecting army medical officers, and a real attempt has been made to remedy their grievances and to define their military rank and status. "The following substantive ranks to be granted, such ranks to carry precedence, and other advantages (except military command, as laid down in present regulations) attaching to the rank indicated by the military portion of the title."

Mr. STANHOPE, it will be seen, adopts the plan of compound titles recommended by Lord CAMPERDOWN'S Committee. It is a long time ago since the ill-advised step of abolishing relative rank was taken by the War Office. Up to that period the medical department was attracting an excellent class of men into its ranks, and had been brought to a state of high efficiency. The publication of the warrant during the late Sir WM. MUIR'S *régime* had contented the medical service, and army medical officers had probably no substantial grounds for dissatisfaction with their position—at any rate, they had expressed none. The agitation once begun, however, speedily developed, and as Mr. STANHOPE declared that relative rank was simply a term with no significance, medical officers naturally concluded that they were deprived of any semblance of rank they ever had, and consequently possessed none. It was a curious anomaly, however, that what was declared to be a meaningless title in the army remained in force in the navy, and that the rank of medical officers of the latter service is still defined as relative, and works satisfactorily. Seeing that the duties of the army medical officer are of a very varied, mixed, and responsible character, and not of a purely professional kind, it was clear that an army surgeon's rank required to be a properly defined and well-recognised one. In military life everything depends upon military rank. Responsibility and power should go hand-in-hand; and medical officers alleged that—in war especially—their power was altogether incommensurate with their responsibility; the latter was occasionally overwhelming. There were other matters, too, which certainly demanded to be redressed in order to level up the position of the medical to that occupied by other branches of the military service—matters which prejudicially affected the medical department. Mr. STANHOPE appointed a committee, probably to act as a temporary buffer to protect him against the pressure brought to bear upon him. The members of Lord CAMPERDOWN'S Committee, as it was called, were qualified to give an impartial opinion: they discovered that medical officers had several well-founded grievances, and, after careful inquiry, they realised the need of some change of title which should indicate the rank of medical officers and properly define their position. For our own part, it is our duty and privilege to attempt to guard jealously the interest and dignity of the medical profession. We have always striven to uphold that dignity, and have never ceased to contend that those members of it who were employed in the public service were entitled to high consideration and an assured position commensurate with the responsibilities of their calling, which are certainly second to none. For that purpose we held that the medical service should be a unified and independent service, organised as one of the scientific corps of the army, with full powers and sufficient status to control and manage its own affairs. That view we put forward many years ago—even before the regimental system was abolished. It has always seemed to us that a substantive but strictly limited military rank was a practicable thing, and had this view been taken, the old titles with the corresponding military rank might have been adopted long ago, and the titles of medical officers would have been much simpler than they now are, while they would have carried all the advantages of the present ones. Be this as it may, Lord CAMPERDOWN'S Committee made several important and very reasonable recommendations; Mr. STANHOPE did not, however, see his way to carry these out. The subject was subsequently introduced into the House of Commons in the autumn of last year, in connexion with the debate on the Army Estimates, when the War Minister promised that he would give the subject his best consideration. We have always contended that what is best for the State is best for the profession too. So long as a military organisation is considered essential, as it is, for the army medical service, the status of the army medical officer should be beyond dispute, and he should share equally with all other officers in the rewards and distinctions bestowed by the nation. We think Sir ANDREW CLARK has done a great service to the medical department and the profession generally by the prominence he has given to these points. Lord CAMPERDOWN'S Committee recommended the compound titles, which Mr. STANHOPE has now conceded with corresponding substantive rank. Mr. STANHOPE has no doubt had a very difficult task to perform, considering the hostile attitude of his military advisers; but he has had the moral courage to carry out the recommendations of his own Committee, and the department is to be congratulated on the concession. We have reason to know that Sir ANDREW CLARK, whose labours on behalf of the medical officers must be gratefully recognised, is satisfied with the results that have been attained.

IN a recent article in *The Times* the London County Council was censured in unusual terms for its administration of the Housing of the Working Classes Act. The Metropolitan Board of Works had in its application of CROSS'S Acts to London expended a sum of £1,611,000, and it had rehoused 30,500 persons. *The Times* had been led by the report of Sir JOHN LUBBOCK'S annual address to the Council to understand that the London County Council had been responsible for the acts of its predecessor. A letter from Sir JOHN LUBBOCK, which was subsequently published, cleared up this point; and we need not refer to it further; but other observations made in *The Times'* article on the proceedings of the Council in preparing a scheme for the unhealthy area in Bethnal-green deserve comment, because it is evident that the intention of Part I. of the Housing of the Working Classes Act is not generally understood.

The opinion was expressed that, as preliminary to carrying out a scheme, this area should be dealt with by closing houses. "It would then have had to pay nothing but compensation for the necessary setting back of the new buildings." The argument evidently is that if the houses are closed no compensation at all is to be paid for them,

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or, at any rate, that the compensation would be very different from what it would be if the houses were still occupied. Setting aside such questions as compensation for trades, it ought to be considered very carefully whether proceedings for closing houses would diminish the amount of compensation to be paid for the houses themselves, supposing that a magistrate would be prepared to order them to be closed. In this connexion it needs to be recollected that the step antecedent to appealing to a magistrate for a closing order is the issue of a notice calling upon the owner to make the house fit for human habitation. Now there is much evidence that insufficient air space in the rear of a house is a condition prejudicial to the health of the inmates, but seeing that the law now allows the building of back-to-back houses—i.e., houses without air space in their rear, and without through ventilation,—a magistrate would not be likely to keep a house permanently closed if it were faulty in this particular, but would be satisfied it was fit for habitation if it were in fair state of repair. Any owner under these circumstances would at once proceed to comply with the requirement of the Council to make the house fit for habitation, and would expend money on its improvement, for which London ratepayers would have eventually to compensate him when the house came to be purchased for the purposes of demolition. If the course proposed in the article referred to were adopted, the Bethnal-green Improvement Scheme would cost, not the £300,000 which is estimated, but a much larger sum.

The Times speaks of the "pretext" of the Council that it was necessary to widen the streets as well as to renew the buildings leading to the whole of the burden being lifted off the shoulders of the owners. It appears to be forgotten that the widening of the streets and the provision of sufficient air space about the houses is a condition essential to an improvement scheme when the houses are crowded together, or so arranged that they cannot be properly ventilated. For this purpose the area must be cleared, and Parliament has decreed that the premises within it must be purchased subject to certain conditions as to the amount to be paid. Under the new Act these conditions are more favourable to the purchaser than before, and it may be hoped that the sum of £300,000, which was, we believe, estimated before the Act of 1890 was passed, will prove to be excessive. Under any circumstances, we think the County Council was in honour bound to give the new Act a trial; and it is for Parliament to further amend the law if it is found that the cost to the ratepayers is greater than it should be.

The London County Council has been loudly condemned for adopting this course; why it is difficult to say, for we have not observed that a single word of objection has been uttered against exactly similar proceedings instituted by the corporations of Manchester, of Salford and other authorities, who are engaged in precisely similar operations for improving a considerable number of unhealthy areas in those cities. This attack upon the London Council is to be regretted, because it may in the future lead to London abandoning work which is an absolute necessity if disease and death are to be lessened in its midst. If the Metropolitan Board of Works had been less active in its administration of CROSS'S Acts, there is a probability that London would not have been free from typhus fever as it has been for a number of years. This disease, year after year, had its beginning in the courts and alleys of Drury-lane, now, thanks to Dr. LOVETT of St. Giles and to the Metropolitan Board, long since removed. Objection has been taken to the Act that it has not rehoused more than a limited number of persons; but the intention of the Act is not to rehouse people; this is a mere incident in its operation. Its chief intention is to remove unwholesome conditions from large towns, and if this can now only be effected by a large expenditure, it may be hoped that the terms of purchase will be made easier for the ratepayers, but the work itself must go on.

London owes much to *The Times* for the encouragement it has given to sanitary administration, and we have therefore thought its observations on this question deserving of comment. We would submit for the consideration of that influential journal a subject that is well worthy of its attention—the prevention of unhealthy areas in the future.

London is now engaged in the business of paying for shortsighted legislation—for building Acts which offend against important health laws, and for the licence to crowd houses upon space which has been granted to the landowner. This, it is now known, is not only to the detriment of the inhabitants, but to the detriment of the ratepayers, who have to reclaim the land at enormous cost. Thanks to Mr. RITCHIE, London at last has a fair prospect before it of relief from these circumstances. The admirable Bill relating to the public health which he has prepared amply demonstrates that our legislators are not backward in designing a measure calculated to confer immense benefits upon the metropolis. It may be anticipated that Mr. RITCHIE has discerned the need for the amendment of the Building Acts, and that he has recognised the willingness of the County Council to administer effectively the health laws with which it is entrusted. It will therefore probably not be long before he has conferred upon the body which he has created all the power which is necessary to make the London of the future as free from unhealthy conditions as any city in the kingdom.

Annotations.

"Ne quid nimis."

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE Committee of the Association of Fellows of the Royal College of Surgeons of England has recently been considering the steps which should be taken to further its policy, in view of the approaching election of three Fellows to the Council of the College. It was resolved that a circular should be issued to the Fellows for the purpose of calling special attention to the points of reform which it seems desirable to press at the present juncture, and a subcommittee, consisting of the President (Mr. Pollock), the two Vice-Presidents (Mr. Holmes and Mr. Rivington), Mr. Richard Davy, and the Hon. Secretary (Mr. Percy Dunn), was appointed to draw up a circular for the consideration of the committee. The circular drawn up by the subcommittee on May 28th was amended, and as amended

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approved by the committee of the Association on Thursday, the 4th inst. We publish it in another column. It will be seen that it urges four points upon the Fellows:—(1) The desirability of giving to the nine Provincial schools a fair representation on the examining boards at the College, now composed almost exclusively of teachers from the eleven metropolitan schools; (2) shortening the term of office of councillors from eight to four years; (3) the provision of a common room in the College for the use of the Fellows; and (4) summoning meetings of Fellows separately from the Members, in accordance with the powers now legally shown to be possessed by the Council if they think fit to exercise them. The committee, having considered the vacancies in the Council of the College which will have to be filled at the July election, passed a resolution asking Mr. Rivington and Mr. Lawson Tait to stand as candidates for the Council. Both these gentlemen are on the committee of the Association, and have taken an active part in pressing upon the Council of the College those main points of constitutional reform which would render the College more useful to the constituency, and make the Council reflect more representatively the state of opinion amongst the Fellows of the College. Members of the Association will be apprised by post-card of the resolution of the committee asking Mr. Rivington and Mr. Tait to become candidates. The annual general meeting of the Association was fixed for Thursday, June 25th, at 5 P.M., and will be held at 20, Hanover-square. The committee will meet on the previous Wednesday to arrange the business of the meeting.

SHEFFIELD AND THE FACTORY BILL.

IT is a matter of regret and of surprise that no energetic effort has been made to introduce the modifications necessary in the Factory Bill now before Parliament so that its provisions may be applicable to so important an industrial centre as Sheffield. The nature of the work done in Sheffield and the local customs of trade are so peculiar, that laws which would be practical and useful in many parts of the country are not only inapplicable to Sheffield, but sometimes even mischievous. For instance, a child must not be employed in a factory unless it obtains a medical certificate of fitness; but it may be employed in a "workshop." Now a workshop is defined as a place where no steam or other mechanical power is used. In Sheffield there are any number of such "workshops," and they are the most insanitary work places of the town. The "factories," on the contrary, are comparatively well looked after: they are visited by inspectors; the hours of labour, where females are employed, are limited; there is some provision for ventilation and for the prevention of accidents &c. The law has therefore this effect, that healthy children may work in comparatively healthy factories, but the unhealthy children can only obtain work in the unhealthy workshops. We could point out many cases in Sheffield where a child has applied for work in a healthy well-ventilated factory, and has been refused such work because the medical certificate of health was not forthcoming. Consequently these children have been forced to work perhaps twelve hours a day in the garret of a sweating tailor or down in some dark, damp cellar at file cutting. In the one case they would be constantly using the sewing machine, in the other manipulating all day long a hammer of from 1 lb. to 2 lb. weight, in both cases the physical effort being greater than an unhealthy, undeveloped child can bear. Thus the law has made matters worse, and, instead of preventing unhealthy children from working, has compelled them to work in the most unhealthy places. Evidently, so far as the interests of public health are concerned, no distinction should be made between factories and the so-called "workshops," or if any distinction is made, then it should be not in favour of "workshops." On the contrary, the "workshops" should be inspected more frequently and controlled more rigorously than the factories, for they will be found to present by far the greatest sanitary defects. Again, with respect to Sheffield, the rendering the "occupier" responsible for the carrying out of the Factory Act is most impracticable. In the various branches of the cutlery trade the workers are piece-workers. A factory consists of innumerable subtenancies. Each worker has his own tools; he rents the shop or bench where he works, and pays so much per week for the use of the power to turn his grinding-stone &c. Hence the workman becomes, in the eye of the law, the "occupier." There are said to be 20,000 such "occupiers" in Sheffield, very many of them illiterate, improvident, rough workmen. They often employ as assistants young persons or females. They are really not competent to keep the registers of the persons they employ according to the stipulations of the Factory Act. If this practice is to be continued, the register should be simplified and brought within the very limited powers of understanding displayed by the blade and scissors grinders, upon whom the Act places the heavy responsibilities of an "occupier." Again, a portion of the shafts &c. for the transmission of power—indeed some of the most dangerous parts of the factories—are quite without jurisdiction under the Act; for here there is often no "occupier"—no one, in fact, who can be made responsible if an accident occurs. Evidently to meet this case it is necessary to add the words "or owner," so that when it is not practicable to make the "occupier" responsible, then the "owner" would have to see that the stipulations of the Factory Act are properly carried out. This, so far as Sheffield is concerned, would remove the responsibility from some 20,000 workmen and place it on the shoulders of their more competent employers. These are all conditions so special to Sheffield, that the local public bodies, such as the Town Council, the Cutlers' Company, and the Sheffield Chamber of Commerce, might, with advantage, have sent deputations up to London, or have sought in some other way to enlighten Parliament. It is still, perhaps, not too late to act, for the facts we have adduced are so conclusive and so important as to commend themselves to the close attention of our Legislature.

INJURIOUS COLOURING MATTERS IN FOOD.

ACCORDING to a contemporary, the Prefect of Police, Paris, acting on the advice of the Council of Hygiene, has recently modified the regulations concerning the use of colouring matters in articles of food. The circumstances, however, under which a conviction may be gained do not appear to be stated. The Sale of Food and Drugs Act here enacts that the person is liable to heavy penalty who mixes, colours, stains, or powders an article of food with the intent that the same may be sold in that state, so as to render the article injurious to health. But Section 4 provides that no conviction can take place if the person accused did not know of the article of food or drug sold by him being so mixed, coloured, stained, or powdered, or if he were able to show that he could not "with reasonable diligence" have obtained that knowledge. It is evident, according to this ruling, that a prosecution stands very little chance of success except it be supported by very exceptional evidence. In Paris, quite recently, as it would now seem, the use of pigments of metallic origin, like the compounds of copper, lead, arsenic, and mercury, are all prohibited. The same applies to barium compounds, chrome yellow (chromate of lead), ultramarine, gamboge, and alkanet, while many of the coal-tar colours, though not in ordinary articles of diet, may be tolerated in small quantities in the tinting of candles, liqueurs, ices, &c. It is also directed that tinfoil, when used as a wrapper,

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must not contain more than a half per cent. lead, or more than one part in ten thousand parts of arsenic, and the purity of the metal of utensils used in the cooking or handling of food is to be controlled by a similar regulation. Legal toleration of the use of coal-tar colours calls for comment, inasmuch as white arsenic as a reducing agent is often employed in the preparation of these dyes, and there are instances on record in which poisoning from this cause could be traced to arsenic in the coal-tar pigment. If, however, a similar stipulation be made that the vendor did not know, or could not have known, "with reasonable diligence," of the sophistication, the new regulation in Paris will be no more formidable in character than that of our present Act, which has been in force since 1875, seeing that articles of food containing any substance whatever, so long as it is known to be of a nature injurious to health, come distinctly within the meaning of the English Act. If no such stipulation has been made, then the progress of the new enactment should be watched with interest by those who may be concerned in the legislaton of this all-important subject.

TREATMENT OF ENURESIS.

DR. SÄNGER of Leipsic recommends a course of systematic dilatation of the urethra in cases of enuresis both in women and female children. His plan is to introduce a metal catheter well into the bladder, keeping the thumb over the aperture. The instrument is then firmly pressed backwards and to each side from eight to a dozen times. It is, of course, useless to make any pressure anteriorly, as the pubes lies immediately in front. Ten or twelve sittings are usually sufficient. During the treatment the patient is desired to control the sphincter as much as possible by means of the will, to take but little to drink and to keep the abdomen warm. The good effects of this mechanical system of treatment are to be ascribed to increased power gained by the sphincter in consequence of its contractions after dilatation and stimulation. This method is useful where the paralysis is of central as well as where it is of peripheral origin. Where, however, the neck of the bladder and the whole urethra are of very large calibre, it is useless, and in such cases a plastic operation is required.

EPIDEMIC PNEUMONIA AND THE INFLUENZA.

AT the last meeting for the season of the Islington Medical Society on Tuesday evening, the members gave a brief account of their experience of the epidemic. The typical attack was liable to many variations, Dr. Stokes and most of the members insisting on the element of pyrexia and the suddenness of the onset. The complications were various. The most common were in the form of affections of the mucous tract of the respiratory system or the gastro-intestinal canal. Great physical and mental depression were not uncommon. Among the less frequent complications mentioned were hæmoptysis, orchitis (two cases), mumps, delusions, insomnia, melancholia, and in one case a semi-cataleptic condition. Mr. King mentioned a case in which extreme head pain, with acute vomiting and constipation, were followed by squint, dilated pupils, stupor, and an epileptic attack. All passed off, and the boy is now quite well. Three cases of patients, aged ninety-two, eighty-nine, and ninety-one respectively, were mentioned, and all recovered. This is an interesting fact in connexion with a remark of Sir Thomas Watson's: "The only fatal cases I have seen have been in persons advanced in life, or in persons whose lungs were previously known to be unsound." In connexion with the last remark, it is noticeable that, at least in the Brompton Hospital for Consumption, though many of the patients have been attacked, they have not suffered greatly from the disease or its complications. On the subject of remedies, there was a general disposition to laud antipyrin in moderate doses for the relief of head pain and pain in the limbs, but not to give it in large doses as an antipyretic. Some of the members trusted to diaphoretics, and a dose of three or four grains of quinine twice a day. A chief feature of the meeting was an account by Dr. Ballard of some recent outbreaks of pneumonia in an epidemic form, beginning with that of Middlesbrough in 1888, in which there was distinct evidence of its communicability from the sick to the healthy, of inoculability, and of the presence of a bacillus in the sputum, capable of giving the disease when swallowed or inoculated, and to which Klein has given the name of the "bacillus pneumoniæ." Dr. Ballard was not prepared to aver the same facts with regard to the late fatal epidemics of Sheffield, Driffield, Leeds, &c., but he expressed a strong suspicion that, if similarly investigated, similar conclusions would be reached. It was too soon yet to determine the relation of this bacillus to influenza pure and simple, but this was a problem to which attention should be carefully directed.

THE KASHMIR MISSION HOSPITAL.

THE annual report of the Kashmir Medical Mission, just to hand, bears witness to the continued efficiency of that excellent institution. During the year 1890 more than 3000 operations were performed, of which 759 may be classed as serious. In only three cases was the result fatal. In one of these the superior thyroid arteries had been ligatured on account of an enormous goitre, and a few days afterwards typhus fever developed itself, so that the death cannot be ascribed to the operation. Another fatal case was that of a feeble and anæmic old man who had been operated on by clamp and cautery for external and internal hæmorrhoids. The third fatal case was one of litholapaxy in a man with renal disease. As the main part of the hospital was built in 1874, and as Kashmiri houses are only roughly put together with timber, plaster, and mud, a good deal of reconstruction has been absolutely necessary; but, as £100 will build a ward for ten patients, and as £3 3*s.* will support a bed for a year, this rebuilding is a somewhat less costly proceeding than in this country. There are a good many lepers in the valley, and advantage has been taken of the present wave of interest in them to persuade the State Government to establish a leper asylum for thirty inmates. This has been put under the charge of the medical missionaries—one of whom, by the way, Mr. Arthur Neve, F.R.C.S.E., is at the present time in England endeavouring to interest medical students and others in the cause of medical missions, of which he is so able a representative. Mention is made in the report of the Zenana Medical Mission in Kashmir, which is now under the charge of Dr. Edith Huntley. This work is, however, in its infancy.

THE ACTION OF SULPHUROUS ACID ON THE ECONOMY.

THE importance of a knowledge of the effects of sulphurous acid on the human organism has been of late very much increased by the frequency with which this agent is now employed for the preservation of wine and vegetables. It is known that after animals have been poisoned by breathing air impregnated with sulphurous acid the highly irritating properties of the gas are manifested by the injected state of the bloodvessels of the mucous membrane of the respiratory tract where the sulphurous acid has come in contact with it, the blood of the viscera being found dark and coagulated. Also that animals that are not killed recover very rapidly, but after a few days show signs of bronchitis and pneumonia, and die. The subject has recently been examined by Dr. L. Pfeiffer, who in some experiments employed sulphurous acid in the form of neutral sulphite of sodium, and not in the

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free state, so as to avoid the caustic action. He found that both warm and cold-blooded animals recovered very rapidly from an almost moribund condition, which showed that there must be either very rapid elimination or a chemical change into some harmless substance. Experiments instituted with the object of elucidating this point showed that 96·5 per cent. of the sulphite was eliminated by the kidneys as sulphate, the remaining 3·5 per cent. only as sulphite. When a large quantity of sulphite had been administered it was nearly all eliminated in five hours. Dr. Pfeiffer believes that when vegetable feeders are made to breathe air containing free sulphurous acid for some considerable time a reduction of the alkalinity of the blood is induced. In animals breathing air containing from one to three parts of sulphurous acid per thousand intense inflammation of the tracheal and bronchial mucous membrane was produced, also inflammatory foci in the tissue of the lungs, the blood in the capillaries becoming black and coagulated. Injections of a 5 per cent. solution of sulphurous acid into the stomach set up very extensive and severe gastritis, not only all the coats of the stomach itself being affected, but also the superficial portions of neighbouring organs, as the liver and the diaphragm, death occurring in from three to five minutes. It is suggested that this rapid and far-reaching action may be due to the disengagement of the gas by the heat of the stomach, so that it diffuses itself much more rapidly than a liquid could do. Dr. Pfeiffer finds that in some wines there is as much as eight parts of sulphurous acid, probably as bisulphide of lime, in 100,000, and that in preserved vegetables, such as are used in the army and on board ship, there is often a very appreciable quantity either free or combined with alkalies, this being especially the case with preserved asparagus.

BERKHAMPSTED SEWAGE AND WATERCRESS.

THE little town of Berkhampsted has for some time past been under a cloud, for an occurrence of diphtheria disclosed its need for proper drainage and sewerage. And there are some members of the community who, for some reason or other, do all they can to put off from month to month a decision as to the means of sewerage to be adopted. First came objection as to the area to be included, then as to the body to carry it out; and at the last meeting of the parochial committee, under whose auspices a scheme has been at last prepared, amongst other new proposals, which would involve a reconsideration, and hence postponement of the scheme, it was suggested that the Berkhampsted sewage might be taken on to the watercress beds. The proposer was warned that his proposal might lead to the watercress being "burnt" up by the sewage; but he maintained that sewage-irrigated watercress beds at Berkhampsted fetched as much as £120 an acre. Probably those who now give Berkhamsted the cold shoulder because of its lack of decent sewerage will also do their best to avoid Berkhampsted watercress.

THE METROPOLITAN PROVIDENT DISPENSARIES ASSOCIATION.

THE meeting at Lord Brassey's in support of this Association was disappointing in one respect—Lord Derby, who was advertised as the principal speaker, did not attend. Lord Brassey presided, and well stated the case for the dispensaries. Sir Thomas Fowell Buxton eulogised the spirit of independence in the working-classes shown in these and similar institutions, and in the great friendly societies. There is such a spirit in the working classes. But it has been nowhere more poorly displayed than in relation to the medical profession, the only profession which is at the service of the poor man and his family by night and day. Even the provident dispensaries pay their medical officers most inadequately, and Colonel Montefiore, at a recent branch meeting, when highly complimenting the medical officers, expressed "regret that they should have to do so so much work for so little pay." Some very easy talk passed at the meeting in praise of what was vaguely called the provident principle as recognised by the metropolitan hospitals. The petty charge from out-patients at Guy's Hospital was eulogised, with very doubtful propriety. It is a cheap way for the hospital authorities to salve their consciences for the abuses of the out-patient department. Such payments are in no sense providence or thrift. They do not reward medical practitioners, and do not teach the patients the value of medical service. On the contrary, they lead them to undervalue it, and supply help on contemptible terms to many who are able to help themselves.

A DEFENCE OF MEDICATED LOZENGES.

HAVING recently (May 23rd) remarked in adverse terms upon the place of medicated lozenges in the Pharmacopœia, it is only fair to state that we have received what purports to be a defence from one who would "be sorry to discard them altogether, especially in a number of affections of the throat and voice." This defence, however, does not materially benefit the case. It claims that they should be employed merely as "adjuvants to other methods of treatment," and should be regarded as "local" rather than as general remedies, and there the defence ends. Though much more is said by our correspondent it resolves itself practically in an attack upon the opponent's attorney. The case of the medicated lozenge is not improved by the assertion that tabellæ and lamellæ ought with equal reason to be discarded. Tablets of compressed drugs may undoubtedly be dangerous if left within reach of children; but they are ordinarily regarded as more serious and more potent than the lozenges, and are therefore less liable to be carelessly left about. And the same holds good with pills, however attractive in taste or appearance. On the other hand, the lozenge looks so innocent and familiar, that it is difficult to impress upon the lay mind the idea that there may be any particular danger about its employment; and our remarks were intended to call attention to this danger, in view of a recent case of poisoning.

PROFESSOR JOSEPH JONES ON TUBERCULIN.

AN interesting correspondence has taken place between his Excellency the President of the United States and the distinguished Professor Joseph Jones of New Orleans on the question of the Koch fluid. The President through his secretary sent to the Professor a vial of tuberculin containing about seventy-six drops of a dark, brownish-red liquid, accompanied by directions for its use, and signed by Dr. A. Libbertz of Berlin, for such use as he might deem wise to make of it. After careful study of the cases under his care in the Charity Hospital, assisted by his chiefs of clinic, Drs. Stanhope Jones and J. M. Elliott, Professor Jones decided, for various strictly defined reasons, not to use the fluid in treatment, but to subject it to microscopical and chemical analysis, and also to physiological trial. By this examination he was led to the conclusion that the active principles of the fluid appear to reside in a colloid nitrogenised compound, coagulable by absolute alcohol, and in living germs—micro-organisms, spores, and bacilli—similar to those of the bacillus tuberculosis, and capable of multiplying within and without the living organism. The potent effects of the fluid when introduced into living organisms may, he believes, be referred, in part at least, to the rapid multiplication and action of micro-organisms similar to, if not identical with, the bacillus of tuberculosis, and the results of the

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chemical and microscopical examination of the specimen led him to exclude it from the list of remedial agents. In closing his reply to the President, with thanks for his generous consideration, Dr. Jones remarks that he has endeavoured to discharge what appeared to him to be his duty, so as to serve the art and not the trade of medicine, believing that honourable legitimate medicine has no secrets to conceal, and holds no remedy which is not the common heritage of the republic of science.

THE HEALTH OF BRITISH TROOPS IN INDIA.

WE learn from the twenty-sixth annual report of the Sanitary Commissioner with the Government of India that the general health of the European army serving in that country was less satisfactory in 1889 than in the previous year. The admission, daily sick, death, and invaliding rates were all higher, the daily sick and death-rates being unusually high. The total loss from death and invaliding amounted to 43 per 1000, 16·6 representing the death and 26 per 1000 the invaliding rate. The chief causes of mortality were enteric fever, heat stroke, hepatic abscess, and cholera. Enteric fever caused 37 per cent. of the total mortality, against 25 per cent. in the preceding year. In the European army serving in Bengal the cholera mortality had diminished, but the daily sick and death ratios were unusually high during the year under review. Enteric fever caused no less than 42 per cent. of the total mortality in 1889, against 27 per cent. in the preceding year. In the Madras Presidency the total loss from deaths and invaliding amounted to 50 per 1000, 20 per 1000 being the annual death-rate. Enteric fever caused about 22 per cent. of the total mortality. Venereal diseases and ague caused 54 per cent. of the total sickness. The total loss from invaliding and mortality in the European army of Bombay was 42 per 1000, 14·7 being the death-rate. Enteric fever caused 40 per cent. of the total deaths. There has been a considerable increase in the prevalence of venereal diseases of recent years amongst the European troops.

THE BRITISH MEDICAL ASSOCIATION.

THE fifty-ninth annual meeting of the Association will be held at Bournemouth on July 28th and three following days. The President-elect is Dr. J. R. Thomson, consulting physician to the Royal Victoria Hospital, Bournemouth. Addresses in Medicine, in Surgery, and in Public Medicine will be given by Dr. Lauder Brunton, by Dr. John Chiene, and by Dr. E. C. Seaton respectively. The scientific business will be conducted in nine sections, presided over by distinguished members of the profession. The exhibits at the animal museum will be arranged in five sections. At the dinner of the Metropolitan Counties Branch of the Association the treasurer of the Association, Mr. Butlin, expressed the hope that the annual meeting would be held in London in the year 1894.

ACONITINE IN TRIGEMINAL NEURALGIA.

DR. SEGUIN, in his lectures on the treatment of neuroses, strongly recommends the use of this alkaloid in cases of tic-douloureux. His opinion is that cases are either cured by this drug, or that, at least, it is possible to give long intervals of freedom from pain; but it must be pushed, and its administration is not without danger. The form which he recommends for its administration is in a pill containing $\frac{1}{100}$ of a grain of Dusquenel's crystallised aconitine. These pills are given to the patient in gradually increasing quantity until numbness is felt all through the body with chilliness, and, in some cases, even nausea and vomiting. At first he gives one pill twice a day to females, and three times a day to males, and it is not unfrequently necessary to give as many as twelve pills daily. After the dose is found which is both efficacious and tolerable the treatment is kept up for several weeks after the pain has ceased, and the patient is directed to take a large dose—two or three pills—on the least return of the characteristic sharp pain. Even if no syphilitic history is given, and although there should be no reason to suspect it, this treatment is continued with the administration of the red iodide of mercury in doses increased from one-twentieth to one-fifth or one-sixth of a grain, and iodide of potassium from twenty to forty-five grains, largely diluted with water, after each meal. This medication is continued for two or three months steadily, and a course of a month of it is subsequently given every few months. Along with those drugs the patient must have an abundance of nutritious food, and it is advisable to administer cod-liver oil as well.

DEATH OF DR. H. G. SUTTON.

WE record with deep regret the death from influenza of Dr. Henry Gawen Sutton at the comparatively early age of fifty-five. This is not the time to refer in detail to the valuable services rendered to scientific medicine by this highly esteemed and cultivated physician; but we may venture to express our deep sense of the loss which we have sustained in the removal of one of the ablest, most original, and thoughtful of English physicians. His contributions to pathology, to the pursuit of which he was devotedly attached, have been of permanent value, and amongst them may be especially mentioned his studies on fibroid disease of the lung, and the philosophical conception of "arterio-capillary fibrosis" formulated by him in conjunction with the late Sir W. Gull. His published lectures on "Medical Pathology" abound in original ideas, and are characteristic of the man. Retiring and modest, singularly amiable and placid in temperament, Dr. Sutton was greatly beloved and his loss will be much deplored.

ST. BARTHOLOMEW'S HOSPITAL.

WE are asked to state that the alterations which are being made in the drainage of this hospital involve no material interference with clinical work, whilst the lectures and demonstrations in the medical school are entirely unaffected. One of the blocks is at present closed for improvements in regard to the drains and lavatories, and for new flooring in the wards, and similar changes will be made in other blocks of the hospital in succession.

DEATH UNDER CHLOROFORM.

AN inquest was held on June 2nd at Newcastle upon John Baister, a cartwright aged fifty-seven, who died after inhaling chloroform. The evidence showed that the deceased had been taken ill some weeks ago with pleurisy, which had culminated in an empyema. It was considered necessary to open the chest to evacuate this, and by the patient's request chloroform was administered, the patient dreading the pain incidental to the operation. It is stated that before a drachm had been inhaled the breathing became embarrassed and failed, but by the employment of artificial respiration this was restored, and the operation was completed and a drainage tube inserted. From the time of the operation gradual cardiac failure supervened, and the patient died without resuming consciousness. The medical attendants regarded the death as resulting from the depression caused by chloroform acting upon an already enfeebled circulation. It does not appear that respiratory trouble again came on, but gradual sinking with failure of heart. The operation was one of necessity, and both it and the administration of the anæsthetic appear to have been carried out carefully and skill-

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fully. It is a well-recognised fact that removal of any large tumour or accumulation of fluid either in the thorax or abdomen leads to very considerable shock, and probably this was an additional factor in determining indirectly the loss of life in this instance. Taken at the best, these cases are always most anxious ones alike for operator and chloroformist, and need all the courage and skill that can be brought to bear upon them.

THE PUBLIC HEALTH (LONDON) BILL.

THE Public Health (London) Bill, as amended by the Standing Committee on Law, is now published, and will shortly be under the consideration of the House of Commons. The result of its passage through the Committee has been that its provisions have been improved, and we should regard as a public calamity the failure of this Bill to become law. It contains nothing that ought not to receive the support of all sides of the House, for it promises to give London what has long been wanted—an administration which is able to provide for the wants of this vast city. It cannot be denied that in some districts the existing sanitary law has been well enforced, but this is not universally true, and the institution of a central local authority such as the County Council will serve to encourage work in those districts where it is most wanted. The apportionment of the duties of administration between the Council and the several sanitary authorities has been skilfully done, and there is no reason why there should be friction between these bodies. The final appeal is always to the ratepayers, and London will eventually be able to settle its own affairs. There ought not to be any opposition to the adoption of the Bill by Parliament. London has so long been left at a disadvantage that the more thoughtful members of the community would not look kindly upon those who might attempt to hinder it or to divest it of its best provisions. Fortunately, the public health is not held to be proper fighting ground for rival factions, and their rivalry may well be forgotten in the endeavour to give London the benefit of the law which Mr. Ritchie has so well designed.

OVERWORKED PUPIL TEACHERS.

WE may probably accept as illustrations of a more widely prevalent evil the evidence of mental and physical overpressure which lately induced a medical practitioner to condemn somewhat strongly the present system of educating pupil teachers. In the case of two young girls who lately consulted him the periods actually spent at work each day amounted to 9¼ and 10½ hours respectively. A break of an hour at midday and another hour in the early evening afforded the only opportunities for recreation or needful refreshment between 8 or 9 o'clock in the morning and the same time in the evening. It is not surprising that both girls appeared thoroughly broken down in consequence. Under those conditions, that chief essential of health, the maintenance of a just balance between the output of mental and of bodily energy, was clearly impossible. Muscular exercise, the safety valve of nervous strain, was out of the question where meal-times were barely allowed for. Some part of the responsibility for the final breakdown was perhaps attributable to constitution, part perhaps to indiscretion in study, and part undoubtedly to the influence of age—fifteen years in each case. After making all such allowances, however, a large measure of discredit must remain to be borne by a system of study which, in seeking to cram and overwork the mind, so blindly ignores every law of healthy life. It is tolerably certain, in the first place, that the voluntary work of the pupil teacher should often be curtailed—a matter for personal arrangement; but it is also at least open to question whether the present school hours might not with advantage be more concentrated. A period of five or six hours devoted to study—say, from 9 A.M. till 3 P.M.,—with brief intervals of rest, would leave half of each afternoon to be occupied in much-needed physical recreation. Home lessons in the evening would then be a pleasant exercise. This plan has worked well in days gone by. Should it not be revived?

THE TRINITY COLLEGE, DUBLIN, TERCENTENARY DINNER.

THIS being the tercentenary anniversary of the foundation of the University of Dublin the graduates resident in England will dine together on Wednesday, June 17th, at the Middle Temple, at 7 P.M., under the presidency of the Lord Chancellor of Ireland. Dr. Phineas Abraham (2, Henrietta-street, Cavendish-square) and Mr. J. Gordon McCullagh (Goldsmith Building, Temple) are acting as hon. secretaries.

A HOME FOR THE DYING.

WE are very glad to find that an effort is being made to supply a known want in the medical charity of this country by founding a home in which mortally afflicted people may peacefully end their days. By none is the need for such a home more felt than by the physicians and surgeons of the hospitals, who from time to time have to discharge from their wards patients for whom medical art can do no more, and who are unable to secure in their homes the comfort and attention that are sorely needed. It appears to us that the cases needing such a home as it is proposed to found are those that comply with two conditions. On the one hand, they are those whose cases are not eligible for further stay in a hospital, and are yet not of such a chronic nature as to fit them for admission to an incurable asylum: such are many cases of phthisis, of heart disease, and of cancer. On the other hand, their social position is such as to render them unsuitable for admission to the parish infirmaries: such are governesses, superior servants, and clerks. The managers of this new home must be very careful not to trench upon the work now done by hospitals and infirmaries; and if it is careful only to care for those who are not suitably provided for by these institutions, it will form a most valuable addition to the medical charities of the country. The names of the members of Council are a guarantee of the care which will be exercised in framing all rules and regulations, and we very cordially support the appeal of the Council to the generous consideration of our readers.

SMALL-POX INDICATIONS.

IT seems very clear that the metropolis has been recently passing through one of those experiences which have so often been the precursors of epidemic small-pox. Between the end of March and the middle of May the number of small-pox cases under treatment in the small-pox hospitals for the metropolis increased from 7 to 35. Then, however, an abatement set in, which has been maintained up to Saturday last, when the number had diminished to 16. In this respect small-pox has followed its usual seasonal course, and the urgency of the recent experience lies, not so much in the increase during the past spring as in the fact that such increase, though followed by an abatement, may foretell a second increase when the seasonal activity of the disease again takes place in November next. Whether this will occur or not depends largely on the activity of our sanitary authorities during the next four months in preventing the occurrence of cases which might form a link connecting the past with a future extension. Never has the metropolis been more fitted to prevent

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such an occurrence, in so far as measures of isolation and disinfection are concerned, than at the present moment. The sources of information should be prompt and complete, the means of isolation are readily available, and our metropolitan sanitary organisation has in most districts been made more thorough and perfect than heretofore. In one respect only are there indications of failure, and that is as to vaccination, which at the present time is not being applied to our infant population with the same promptitude as formerly. The Local Government Board have, by issuing a letter to the several London sanitary authorities, urged activity in all these several respects; and if the counsel given be followed, and care be taken that modified small-pox shall not spread under the name of chicken-pox, we shall probably be able again to avert any prevalence of small-pox in our midst.

THE INFLUENZA.

IN the metropolis the cases of influenza have not appreciably abated during the past week, and the Registrar-General reports that in the week ending June 6th the deaths primarily attributed to this disease amounted to 303, almost the same as in the week preceding. It is satisfactory to find that the rate in Sheffield has fallen to 18·9, but we note a rise in Blackburn to 48·5 from 39 8, and in Wolverhampton of 35 9 from 27·7. In all other important towns of the kingdom last week's returns show for the most part more or less diminution in death-rates.

THE MANAGEMENT OF LIFTS.

HOWEVER perfect and automatic the action of machinery may seem to be, experience abounds with proofs which assert the necessity for its constant control by human intelligence. In this respect the lessons taught us by two recent accidents incurred by the mismanagement of lift apparatus afford no exception to the rule. That by which an *employé* at the General Post Office lost his life was the consequence of mere recklessness, and the only rational conclusion to be drawn from it is a full justification of the warning issued by the authorities against the improper use of the lift—a warning which might well be enforced, as suggested by the coroner's jury, by placing the lift in charge of a competent attendant. In another case, in which a patient at Queen's-square Hospital was fatally injured, the absence of due supervision was more noticeable. There was evidence of wear and tear in the machinery, which rendered a descent of the platform unusually easy. The man in temporary charge, though not a mere novice, was deficient in experience, and admitted losing his presence of mind. The ambulance stretcher, being too long for the platform, tilted against the shaft at a critical moment, and the patient's life paid the penalty. Here, again, the need of skilled supervision is apparent. The primary responsibility must rest, though indirectly, upon the board of management, and it is therefore to be hoped that the hospital governors will in future appoint an intelligent official to travel with the lift and order all freight and other arrangements. A further improvement would be the simplification, if possible, of a somewhat complicated arrangement of hand ropes by which the lift is worked.

FOREIGN UNIVERSITY INTELLIGENCE.

Agram.—Although arrangements for creating a medical faculty are being made, it is not expected that they can be completed for another four or five years.

Berlin.—Dr. Hans von Steinau-Steinrück has been appointed to the post of Directing Medical Officer of the Medical Department of the Bethanien Hospital, vacant by the death of Dr. Goltdammer.

Brussels.—Dr. Thiriar has been promoted to an extraordinary professorship.

Buda-Pesth.—Professor F. König, of Clausenburg, has been elected to fill the chair of Physiology vacant through the death of Dr. Jendrassik. Dr. Dollinger has been promoted to an extraordinary professorship of Orthopædics.

Christiania.—Dr. Uchermann has been recognised as Lecturer in Ear and Throat Diseases.

Innsbrück.—Dr. Gabriel Anton has been appointed Extraordinary Professor of Mental Diseases.

Jena.—Dr. Richard Semon has been promoted to an extraordinary professorship of Anatomy.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Manuel Moreno de la Torre, editor of the Crónica Médico Quirúrgica of Havana.—Dr. Bisping of Mülheim.—Dr. L. Jacoby, the eminent Breslau otologist, at the age of seventy-four.

ROME, on a small scale, had her Hospital Sunday on June 7th, when King Humbert made a visit in State to the Ospedale della Consolazione to witness the success of the surgical treatment of the wounded in the late gunpowder explosion. To Captain Spaccamela, whose heroic adhesion to his post till the whole *personnel* of the magazine had got clear off to warn the neighbourhood, the saving of thousands of lives is due, His Majesty presented the gold medal decreed for brave conduct, and another to Corporal Cattaneo for services on the occasion, only less honourable. The others of the wounded King Humbert addressed in the kindly manner congenial to His Majesty, and took leave after speaking in highly appreciative terms of the care and skill with which the surgical staff had treated the sufferers. The King's munificence to the hospital is well known.

THE reappearance of cholera in the Red Sea has evoked in Italy an appeal to the Government to revive Signor Crispi's proposal for collective action on the part of the European Powers to institute a sanitary surveillance of those waters. In the present state of tension, however, between France and Italy, to say nothing of the chronic supineness of the Porte, the proposal is less likely than ever to meet with a favourable response. What is more to the purpose is an urgent recommendation to the Italian Government to improve the sanitary condition of Massowah.

A SCHEME for the training of probationers at the Kensington Infirmary has been accepted by the Local Government Board, which provides that at the expiration of three years each probationer upon passing the prescribed examinations will receive a certificate of nursing. They will be instructed in theoretical and practical nursing by the medical staff. It has been found that any period of training short of three years is unsatisfactory.

THE report on the London water-supply for the month of April states that throughout the month of April the condition of the water-supply to the metropolis continued to be entirely satisfactory, in respect alike of freedom from turbidity, from colour tint, and from excess of organic matter.

DR. BEDFORD PIERCE, M.B. Lond., L.R.C.P., has been appointed one of the Casualty Physicians to St. Bartholomew's Hospital.

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THE ORIGIN OF INFLAMMATION.

By Dr. THEODOR LEBER.

A LARGE and very valuable treatise on the important subject of inflammation has just been published by Professor Leber, who has succeeded Becker as professor in the chair of ophthalmology in the University of Heidelberg. The researches of the learned professor extend over a period of no less than eleven years, and though some points have been incidentally mentioned in reviews and referred to in extracts, yet no general account of them has been given, and we propose to lay before our readers a brief account of the contents of a work that will exercise considerable influence on the theory of inflammation.

These researches were commenced owing to Dr. Leber's desire to ascertain the action of the *Schimmelpilze* or Mucorinæ, or blue moulds (which include such fungi as the penicillium glaucum and aspergillus glaucus), on the eye, and quickly extended to the action of various *Spaltpilze* or Schizophytes (including the bacteria named staphylococcus, and those appearing in the process of putrefaction), and to the effects of the introduction of various organic and inorganic substances into the eye. Finally, his attention was directed to the escape of leucocytes from the vessels, the formation of pus and other products of inflammation, and to the objects fulfilled by these processes. His researches were chiefly made on the eyes of rabbits, but were supplemented by some on guinea-pigs and frogs. He divides his work into five parts, of which the first is devoted to the inflammatory processes caused by the mucors. It has generally been accepted that these rather highly developed fungi only appear on the dead or diseased parts or morbid secretions of living animals, though it was acknowledged that they might be found in the respiratory passages of birds, and even, as Virchow showed, of man, and occasionally also in the human meatus auditorius externus; whilst admitting these cases, however, the best botanists and pathologists doubted the possibility of the fungi growing in healthy tissues. The first experiments that were made on the injection of the spores of aspergillus and penicillium were contradictory, Grohé and Block finding that such injections led to numerous colonies in various parts of the body, whilst Grawitz's experiments had only negative results. After the lapse of some time, however, Grawitz, on repeating the injection experiments, arrived at the same results as Grohé, and discovered that some preliminary treatment of the plants was requisite, as growth in alkaline solutions, and at higher temperatures, under which altered conditions the spores appeared to acquire deleterious properties and the capability of developing in the body. A case that fell under Professor Leber's care attracted his attention strongly to this subject. A field labourer, a few days after injuring his cornea with some part of an oat, suffered from necrotic keratitis, and the cornea was found to be penetrated in all directions near the surface with the mycelium of a species of aspergillus with greenish spores, a species afterwards named "aspergillus fumigatus" by Fresenius. This growth might of course have occurred after the injury by the alighting of the spores on the dead or dying tissue, but it seemed probable, as only ten days elapsed between the injury and the discovery of the freely growing mycelium, as well as from other circumstances, that it resulted from the inoculation of the cornea with the spores of the aspergillus at the time of the injury. To settle the point, Leber inoculated the eyes of rabbits with pure cultures of this fungus, and found that it speedily and certainly established violent inflammation and suppuration in the cornea. The pure cultures were made on conserves of fruit, and these experiments showed that the preliminary measures advocated by Grawitz, to which reference has just been made, were unnecessary, and that, at all events, the particular form of aspergillus experimented with by Leber needed no special education to render it active and capable of growing on the healthy tissues of animals. Experiments made with penicillium glaucum showed that the cornea is a fairly good soil for the development of the spores of this fungus, and that it grows on the cornea readily after death. Its development is, however, greatly dependent on temperature, so that if the two corneæ of the same rabbit be inoculated immediately after removal from the body and one be kept at a low temperature, the fungus flourishes; whilst, if the other be kept at a temperature of 34° or 38°C., only a few spores germinate, and their progeny lose their power of development at ordinary temperatures. The spores of aspergillus fumigatus, however, in general grow vigorously—and herein lies their danger—at the ordinary body temperature. The conidia, or spore-bearing organs, fortunately for us, require air, and hence, when introduced into the blood, or serous cavities or tissues, as a rule are placed in conditions unfavourable to their development. Schütz has demonstrated that if the spores of aspergillus fumigatus are inspired into the lungs of birds acute mycosis unfailingly occurs, leading to secondary pneumonia, gangrene of the lung, and death. The relatively great frequency of pneumono-mycosis in birds and the epidemics of lung mycosis that have been observed in pigeons and geese are thus satisfactorily accounted for, and nodes in the lungs of mammals containing atrophied mycelium can be produced by blowing into their air-passages the spores of aspergillus fumigatus through a tracheotomy wound.

Let us now proceed to the consideration of the effects of the inoculation of the very carefully selected and purely cultured spores of aspergillus fumigatus as recorded by Leber. If such greenish coloured uncontaminated spores floating in a ¾ per cent. saline solution be introduced by puncture with a needle into the centre of the cornea of a rabbit there may be observed on the following day the first signs of a commencing mycotic keratitis; a moderate degree of conjunctivitis is set up, and the orginally slender, slightly discoloured line caused by the puncture is converted into a broader greyish streak, to the orifice of which a little mucous secretion often adheres. On the third day the haziness of the cornea has become larger, has a striated border, and there is some loss of epithelium. The limbus corneæ is slightly cloudy, and not unfrequently the pupillary border of the iris presents here and there delicate striæ of fibrinous exudation, and is attached by delicate synechiæ to the capsule of the lens. In the course of the few following days the infiltration of the cornea rapidly increases, and an oval opaque spot appears, around the point of puncture, to the surface of which, destitute of epithelium, the muco-purulent secretion of the conjunctiva adheres, and the margin of which is striated and punctated, owing to the presence of the mycelium of the growing fungus. Then there rather suddenly appears about the fourth day, between the puncture spot and the now somewhat widened hazy border of the cornea, a semilunar or circular streak, which soon forms a perfect ring of purulent infiltration. This ring is slightly elevated, yellowish white, very opaque, and at first has a breadth of from ½ to 1 mm., increasing gradually to 2 mm.; the internal margin is sharply, the outer less clearly, defined. The cornea in the interval between the puncture spot and the ring of suppuration is at this time still clear, though radiating striæ of opacity may extend between them. The epithelium covering the ring of suppuration is intact, but it afterwards also disappears. Whilst these changes are taking place in the cornea abundant exudation is taking place in the anterior chamber. Even during the first day or two oblique illumination renders visible a layer of coagulable lymph on the posterior surface of the cornea opposite the puncture. The striæ of exudation on the iris increase, the area of the pupil becomes filled with the same material, and a hypopyon, which may rise to one-third of the height of the anterior chamber, appears. The further extension of the aspergillus colony is limited by the suppurating ring in the cornea, and, after the process has in the course of five or six days reached its maximum, the more strongly marked features of the inflammatory process, as the hyperæmia and chemosis of the conjunctiva and the discharge of muco-purulent secretion, begin to diminish. The margin of the cornea becomes highly vascularised, and the vessels may even extend to the outer border of the ring of infiltration. The infiltration ring, it is now evident, constitutes the defining limit of the necrotic pus-infiltrated tissue surrounding the original puncture. The suppurative process penetrating deeper and deeper till it has affected the whole cornea, a groove appears, and either the central spot, being dead, is thrown off, or an ulcer without perforation is formed, and healing takes place with the formation of a leucoma.

After careful observation of the pathological phenomena of mycotic infection, the next step was the investigation of

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the anatomical changes that presented themselves in the injured part and in the surrounding tissues. Professor Leber found that as soon as the day after the puncture a luxuriant growth of the mycelium had commenced, causing the cloudy aspect of the wound. In some instances the mycelial filaments had penetrated the cells of the corneal epithelium. A day or two afterwards they had extended over an area of five or six millimetres in diameter, and had penetrated every layer of the cornea. It was remarkable that each mycelial thread made its way with apparent ease through the tissue without causing any softening or cloudiness in that part with which it was in contact. Where the epithelium was lost the mycelium reached the surface and projected therefrom, so that fragments of the mycelium were to be found in the conjunctival fluid; on the other hand, on reaching Descemet's membrane the coarser filaments stopped, and only very fine filaments gradually penetrated its substance, though they subsequently formed a close plexus in it. The extension outwards of the fungal growth, however luxuriant it might be, was invariably stopped by the infiltration ring, and never passed beyond it, though striæ or radial prolongations of the mycelial growth might extend to and enter the ring itself.

In regard to the pathological changes in the eye as seen under the microscope, the loss of epithelium is immediately apparent, the epithelial cells adjoining the wound being loosened from their attachments, swollen and rounded, and pus cells being found scattered amongst them. The pus cells, which contain small bright bodies in their interior, are particularly abundant in the immediate vicinity of the puncture. The corneal substance presents in its superficial layers pus cells also, which are most numerous at the margin of the mycelial growth, whilst few or none are found in the centre. The pus cells are for the most part irregularly distributed, but some are arranged in radiating lines, and probably accompany nerves or surround mycelial filaments. The faint haziness of the periphery of the cornea is also due to the presence of pus cells. In correspondence with the loss of the external epithelium is a circumscribed detachment of the endothelium lining the membrane of Descemet, its place being supplied by a delicate network of fibres, which is soon infiltrated with pus cells. The true or fixed corneal corpuscles disappear in the central area of mycelial growth, though they can be brought into view by appropriate means in the adjoining region. The aqueous humour is cloudy from suspended pus-corpuscles and an increased amount of albumen, and it may coagulate on standing owing to the presence of fibrin. The "infiltration ring," as Professor Leber terms it, which has by this time formed is an area containing large numbers of pus-corpuscles, which on the side towards the centre of the cornea are so closely compressed that their outline cannot be traced, and their presence can only be ascertained by their numerous nuclei indicating the strength of the force of current driving them towards the mycelial region and jamming them together. Between the well-defined inner border of the infiltration ring and the mycelial area is a region of completely transparent cornea, in which, however, no corneal corpuscles are visible, and which must therefore be regarded as necrosed. In the mycelial regions the pus cells gradually invade the superficial portion, but such cells are as yet comparatively few. The conjunctiva around the cornea is infiltrated with fibrinous exudation, the filaments of which admit of easy recognition. The iris is covered with a thick coagulum of a puro-fibrinous nature, which also occupies the area of the pupil, the pus cells being much more numerous in the anterior part. The same puro-fibrinous exudation is found on the posterior surface of the iris and forms a coating to the ciliary processes, whilst the interspaces of the fibres forming the ligamentum pectinatum are crowded with pus-corpuscles not only at the lower part, where they may have gravitated, but in the upper part, showing that there must have been a true exudation. No evidence could be obtained that the pus cells in the anterior chamber proceeded from the endothelium, none of the endothelial cells exhibiting signs of proliferation. In the later stages, at about at the close of a week, the mycelium, which has ceased to grow, is no longer capable of being stained with hæmatoxylin, and shortly afterwards can no longer be distinguished amongst the pus cells. The formation of the ring greatly interested Leber, since it afforded an opportunity, in a transparent and non-vascular tissue, of following the changes by which the demarcation of an inflamed part is effected by suppuration, and the mode in which a dead portion of tissue is thrown off, apparently by the action of leucocytes. It is to be remarked that in some cases, owing to various causes, the effects above related did not follow the puncture with the spores of aspergillus fumigatus.

Experiments made with the spores of penicillium glaucum and of aspergillus niger failed to produce any more than transient effects, owing to the incapacity of the spores of these fungi to develop at the temperature of the body. The only phenomena observed after punctures and injection of the spores into the conea were slight conjunctival congestion, and scarcely perceptible haziness of the canal of the puncture. Examination of the region of the puncture on the fifth or sixth day showed that many of the spores had been ingested by lymph corpuscles. In the case of the aspergillus niger the spores at the same period appeared swollen and enlarged, with just commencing budding of mycelium.

Professor Leber's next series of researches consisted in the injection of the spores of aspergillus fumigatus suspended in a ¾ per cent. solution of sodium chloride into the anterior chamber of the eye and into the vitreous. He found that very soon after the injection violent keratoiritis was established; small collections of pus formed on the posterior surface of the cornea, especially at its lower part, with fibrinous exudation on the iris, leading to the formation of synechiæ, and finally free suppuration in the anterior chamber. To his surprise, however, he was unable at first to find any traces of the fungus. Sections of the cornea in these cases showed that the slightly projecting spots were collections of pus situated in the deepest layers, just in front of the membrane of Descemet; and further examination soon showed that each minute abscess corresponded to the presence of a small mycelial development on the inner or iridal surface of this membrane, the processes of the mycelium penetrating the substance of the membrane and extending towards the collection of pus cells, so that they resembled the termination of a nerve in muscle. The examination of the anterior capsule of the lens exhibited the same growth, penetration, and figures. The surface of the iris was covered with a very thick layer of finely fibrillated exudation, the meshes of which contained multitudes of pus-corpuscles. The spores were occasionally met with, and it seemed to Professor Leber that they had been deposited on the surface of the iris, and had there acted as strong excitants, causing in proportion to their number either small spots of exudation of fibrin and pus or extensive masses of the same, which in part remained attached to the iris and in part disseminated themselves into the aqueous humour. It is interesting to find that the cornea was also impregnated with the same fibrinous exudation. When the injection of the spores was driven into the vitreous humour conjunctival congestion and chemosis followed, and after one or two days suppuration occurred in the vitreous, and there was also an abundant development of mycelium from the spores. Anatomical examination showed that the vitreous contained a plexus of fibrin filaments, pus-corpuscles, and mycelium of the aspergillus. The retina was charged with pus, and a purulent mass covered the posterior surface of the iris, and in some instances the ciliary processes. No mycelium was visible in the exudation filling the area, the pupil, or in the pus taken from the anterior chamber. It hence appears that the spores of aspergillus fumigatus injected into the anterior chamber only germinate and form a mycelium in the non-vascular parts which bound that chamber; that when they develop, as in the membrane of Descemet, they excite suppurative inflammation, and induce diffused infiltration of a fibrinous exudation in the adjoining region of the cornea, with a disposition to vascularisation of the part. They do not germinate on the iris, but excite suppurative iritis with fibrinous exudation.

(To be continued.)

CHILDREN'S HOSPITAL, PADDINGTON GREEN.—On the 28th ult. the annual meeting of this charity was held at the hospital, Mr. Hanbury, the treasurer, presiding. The report stated that the number of in-patients admitted during the past year was the largest yet recorded. The increase was attributed to the advantageous arrangements existing between the hospital and the convalescent home at Wembley. The out-patients treated numbered 27,624. An extension of the building is proposed as soon as the necessary funds are provided.

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CHURCH AND HOSPITAL.

DURING the Queen's sojourn in Florence, some three years ago, Her Majesty was peculiarly interested in the institution of the Misericordia, a brotherhood, dating from 1244, devoted to the care of the sick and the transport of the dead. Its members recognise no distinction of class or occupation, but hold themselves in readiness to repair to the sick room or the scene of accident, and render whatever aid the special circumstances demand. As a product of the intimate alliance, having its roots in the first Christian centuries, between the Church and Medicine, the Misericordia yields to none of the characteristic features of Florence in interest, whether humanitarian or æsthetic. Frocked from head to foot in linen of the same colour, the face covered all but the eyes, its little companies thread the thoroughfares by night or day on their philanthropic errand, inspiring the most careless bystander with reflections, never inopportune, on the precariousness of life and the certainty of death, on the equality shared in both respects by mankind and typified in the passing company itself, which includes the prince and the artisan, the genius and the mediocrity, undistinguishable in the uniform of the Misericordia.

For six centuries this miniature army peculiar to Tuscany has been on the march, keeping time to "the still, sad music of humanity"; but it is not difficult to trace its genesis to an epoch far anterior. Organisations, indeed, for the relief of the sick or the disposal of the dead are almost contemporaneous with the healing art—coeval, that is to say, with humanity itself. Medicine is an outcome of the self-preserving instinct, manifested, as Celsus has told us, in the most savage tribes, and even, as Lucretius has finely imagined, in prehistoric man, seeking in rudest fashion to repair the wounds received in conflict with wild beasts. Side by side with this primitive attempt at cure developed the endeavour after prevention—the solicitude to appease the offended deity whose anger took the form of corporeal or mental visitation. Hence the priesthood, the ministers of the Unseen, became the mediators between the afflicted creature and the offended Creator, and, as at the same time the sole depositories of such knowledge as was then possible, they were the dispensers of relief, whether in the guise of natural remedies or of manual interference. With the advent of the Greek medicine under Hippocrates the power of the priest-physician, already on the wane, passed away, to give place to the study of nature and her laws, under which disease, as well as health, was seen to occur. The instinct of self-preservation expanded from the individual to the community, and State medicine reached its culmination in antiquity under Imperial Rome, whose sanitary legislation, including drainage, water-supply, the universal diffusion of public baths, and the planting of waste or marsh lands, is still in some respects a rebuke to our modern civilisation. The practice of medicine was itself severely regulated in Rome, and the Lex Cornelia, in satisfaction for the errors of the practitioner, was followed by more stringent enactment, till the whole rights of the patient, mental or corporeal, were elaborately safeguarded under Justinian.

But all this practice and legislation was in obedience to the lower self-preserving instinct, and to that alone. Hospitals there were under the Pagan system, but it is not difficult to trace their inspiration and genesis. Taking Imperial Rome as the highest development of that system, we find her *Valetudinaria* in full and well-diffused activity—hospitals, that is to say, for the care and cure of the soldier, and even, on patrician estates, for treatment of the slave. But how was the soldier regarded? Merely as an instrument of conquest or repression—an instrument which, on the most obvious grounds of economy, it was wise to keep in as effective a condition as possible. And the slave? Simply as one among the many goods and chattels connected with real property—an asset to be given up in satisfaction of creditors or an heirloom to be bequeathed in terms of will. No wonder that we find the houses for the accommodation and treatment of these subjects so well appointed and maintained that it was to his observation, if not practice, in them that the patrician amateur Celsus acquired that knowledge of disease and its remedies which has given him the name of the "Roman Hippocrates." The whole government and the life that prevailed under it were in those times the expression of a sublime selfishness, of an estimate of man's duty to his neighbour so perverted or abased as to count for the central cause which incurred the collapse of the "Mistress of the World."

The success of Christianity during the first centuries becomes in great part intelligible when its essential antagonism to the Pagan dominion is considered. Rome represented the apotheosis of Self, in its most egotistic, most inhuman aspect. The new power which was to displace and submerge it had its watchword in the counter motive of love to one's neighbour. Humanity, which had long groaned under the former, now saw—through a higher instinct of self-preservation—the deliverance that awaited it from the latter. In no respect was the contrast more appreciable or more striking than in the treatment vouchsafed under the new system to the slave, the poor, and the sick. The casual, occasional short-lived gleams of philanthropy to which the Pagan world was not quite extraneous were now caught up, absorbed, and concentrated in the diffused glow of the new religion; isolated kindness became organised benevolence; the love that announced itself in compassion and relief, from being a mark of the individual, was now a master power of the community. All the scattered impulses that made for good had taken collective form and expression in Christianity. The Christian preacher dwelt on the duty owed by the strong to the weak; on the blessedness of giving more than of receiving; he urged the sanctity of distress—"*res sacra miseriæ*"—and the ineffably "sweet sense of providing," till under his doctrine the rich denuded themselves of their wealth to succour the poor, and patrician-statesman and even Empress became humble ministrants to the wounded or the plague-stricken. The hospitals—the *Valetudinaria*, the *ἰατρεῖα*, the *ξενοδοχεῖα* already existing—were converted into Christian institutions, and took in the whole community; while the Fathers of the Church, who, as Puccinotti has proved, preserved the scientific traditions of Greece and Rome, applied these with the skill of cultured intellects, inspired by benevolent impulse, to the cure of their inmates. If we were asked to name an early hospital in the Christian as contra-distinguished from the Pagan sense, we should point to that opened in Cæsarea by St. Basil in the fourth century, where the Saint himself and his brother monks not only tended, but treated the sick with the best knowledge the times could command. Not only so, but lay brethren were employed to supplement the work for which the rapidly extending wards became undermanned, and physicians and non-professional helpers like those of the Tuscan Misericordia bore a hand, carrying the sick or injured from town and country, often on their shoulders, to the hospital. Many are the epistles from St. Basil to Eustachius Medicus (son of Oribasius, physician to Julian the Apostate) in which the Greek medicine receives its due meed of praise, and in which the transition of the Greco-Latin therapeutics to the *medicina monastica*—the lineal parent at Salerno and other schools of the modern practice—is clearly set forth.

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We need not go down the noble list of such Christian hospitals as St. Basil's, given with surpassing interest of detail by Puccinotti. More to our purpose is it to point out how the service vouchsafed by early Christianity to Medicine was reciprocated by that of the later Medicine to Christianity, and how both institutions—the Medical and the Christian—have reacted upon each other for good. For the second time in its history the healing art broke away from its religious connexion, now become unnecessary; and having regained the sound traditions of Hippocrates, it pursued its independent career, not antagonistic to Christianity, but as a humanitarian force in alliance with it. The Church, by the admission of its best apologists, had before the Renaissance become corrupt and (unable to continue in its degenerate course) had to take a fresh departure. By this time Medicine, with the apparatus of the hospital system in full working order, was rapidly putting to flight the superstitions, the belief in charms, and the spiritual exorcism which the Church, thanks to it, was outgrowing in turn. Each having disencumbered itself of an outworn superfœtation, they join again, on a higher plane, to continue with combined forces their fight for the elevation of humanity. It is this alliance that is celebrated with yearly recurring solemnity on "Hospital Sunday," an institution which typifies all that is best among the dominant forces of civilisation. Church and Hospital, the two can never ignore each other without mutual loss. If "the great physician is a great artist," seeking, while rehabilitating the individual, to regenerate mankind, his most natural and helpful ally can be no other than the apostle of that faith whose function it is to remind him that his ideal is the "image of God."

SANITARY DEFECTS OF THE HOSPITAL LA PITIÉ AT PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

FROM time to time complaints have reached us concerning the insanitary condition of the celebrated Parisian hospital La Pitié. This institution, founded in 1613, has nevertheless had a distinguished history in the records of modern progress. Here was established one of the earliest and best schools for the training of hospital nurses, and many of the most distinguished physicians and surgeons of France, and indeed of several other countries, owe their success to the excellent clinical school of La Pitié. Yet this hospital, like many other hoary institutions, is in a very insanitary condition. Whatever may be taught here, it is evident that the lessons given in hygiene are theoretical rather than practical. The building had formerly been a poor asylum, then a home for foundlings, and in 1809 it became an annex of the Hôtel Dieu. New wings have been at various times added to the original structure, and some old portions were pulled down to give more yard space, and thus secure more light, air, and ventilation. Also the present director of the hospital is to be warmly congratulated for having succeeded in substituting syphoned-trapped and well-flushed closets for the abominations which formerly infected all the wards.

Generally speaking, in seeking for defects in sanitation, it is necessary to look to the less frequented parts of a hospital. At La Pitié it is just the reverse. Some of the worst features of the building are those which are most evident, and are seen by the greatest number of people. Thus the office at the entrance of the hospital is a wretched little chamber where three clerks are crowded together, surrounded by dusty shelves loaded with musty papers. Such portions of the wall as remain visible are dirty, and have not been whitewashed for the last three years. A little window opens into one of the receiving rooms for out-patients, and from this room, where persons suffering from so many different maladies daily congregate together, germs may pass through the window to sojourn among the clerks and rest in the dust and dirt on the rafters and amid the books, papers, reports, and accounts. In the out-patient receiving room there is a library, whence books are taken to lend to patients, and here the tile pavement of the floor is worn out, and sand and dirt have filled the crevices. In the morning crowds of people come together in this most insanitary room, and wait to see the physician. During the rest of the day any sick person brought to the hospital is deposited in this room and left there on a stretcher till all the formalities have been accomplished and a bed allotted to the patient in one of the wards. Thus this room is constantly invaded by the suffering sick poor, and though infectious cases are not admitted into the hospital, still they sometimes are brought here by mistake or through ignorance of the true nature of the malady, and have to remain in this most unsuitable room till they can be sent to a hospital where there are infectious fever wards. We need hardly point out that a room where crowds of sick people come and wait every day should be kept scrupulously clean, should be well lit and ventilated, and there should be no corners, ledges, cracks, or crevices where dust and germs may accumulate.

Close by there is another room for the surgical patients. Down the centre of the ceiling of this room there is a huge rafter borne up by a wooden pillar, which is not even painted, so that the pores of the wood can readily absorb the exhalations of the patients. At angles with this large rafter there are fourteen smaller rafters. The ceiling between these rafters is deeply stained with dirt. Angles, corners, and sombre recesses abound on all sides. In one corner of the room there is a bed, not for the patients, but for the night porter, who sleeps here, near to the door, and is ready to turn out at any moment of the night to admit cases of accidents &c. Thus the waiting-room, where scores of surgical patients arrive every day, is also a bedroom. The light and ventilation are most defective. All the light admitted is through one small window. Nor have the rooms the advantage of the ventilation an open fireplace can give, but is warmed in winter by a porcelain stove, which largely contributes to vitiate the atmosphere. The furniture also is not in any way antiseptic; but there are, on the contrary, straw-bottomed chairs that readily accumulate and retain the dust. This part of the building is probably some centuries old, and is in every respect absolutely unsuitable to the purpose for which it is employed. If there be any truth at all in the germ theory, the attendance of so many patients in rooms so badly lit, and so full of dark corners, must be injurious and dangerous. It would be far better to erect a simple tent in the yard than to allow the patients to wait under the old rafters that bear up the ceiling of the surgical receiving room. These offices and receiving rooms are immediately to the left of the main entrance to the hospital. On the right a large amount of valuable space is occupied by the huge and ugly church of the hospital. This church can seat 600 persons. Formerly people from outside the hospital were allowed to attend service here. Now this is no longer the custom, nor is it in any way necessary. There are plenty of other churches in the neighbourhood where the congregations are anything but numerous. At the Church of La Pitié Hospital we were assured that the average congregation amounted to only fifteen persons. Even if it were twice or three times that number, there would be no need to preserve a building capable of seating six hundred persons. As it is, a great portion of the church is converted into a sort of lumber-room for flower-pots, small trees, that are wheeled in during the winter months, and various other objects. When the other day the census was taken at the hospital, it was found that there were, including attendants, nurses, children &c., 951 persons sleeping on the premises. It is urged that if out of such a population the church fails to attract a congregation of more than a score of persons, the time has come when, in the face of the present urgent need of space, a small chapel should be built in its stead. There would then be ample space, and this conveniently situated just at the entrance of the hospital, for the construction of handsome and model receiving, waiting, and consulting-rooms for medical and surgical patients, offices for the administration &c.

With regard to the wards of this hospital there is nothing very special to be said. They have windows on both sides, therefore good light and through draughts might be established, if the authorities could only be persuaded to open the windows facing each other. Some of the wards are of

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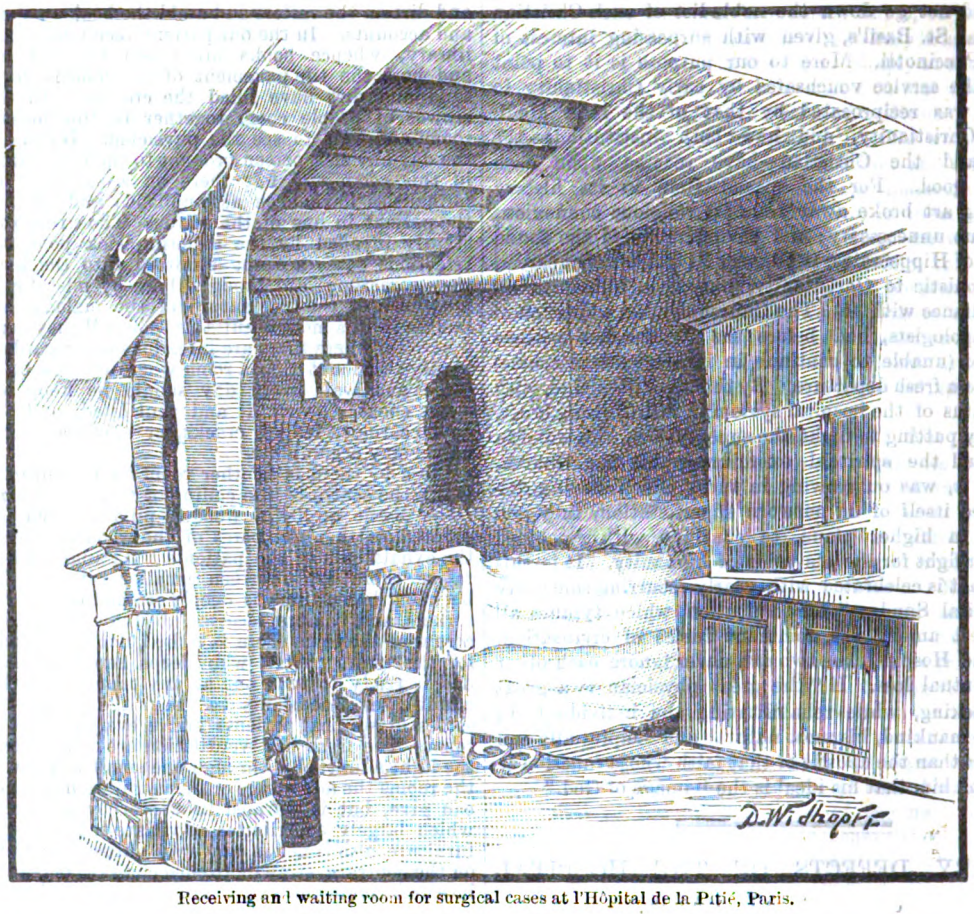
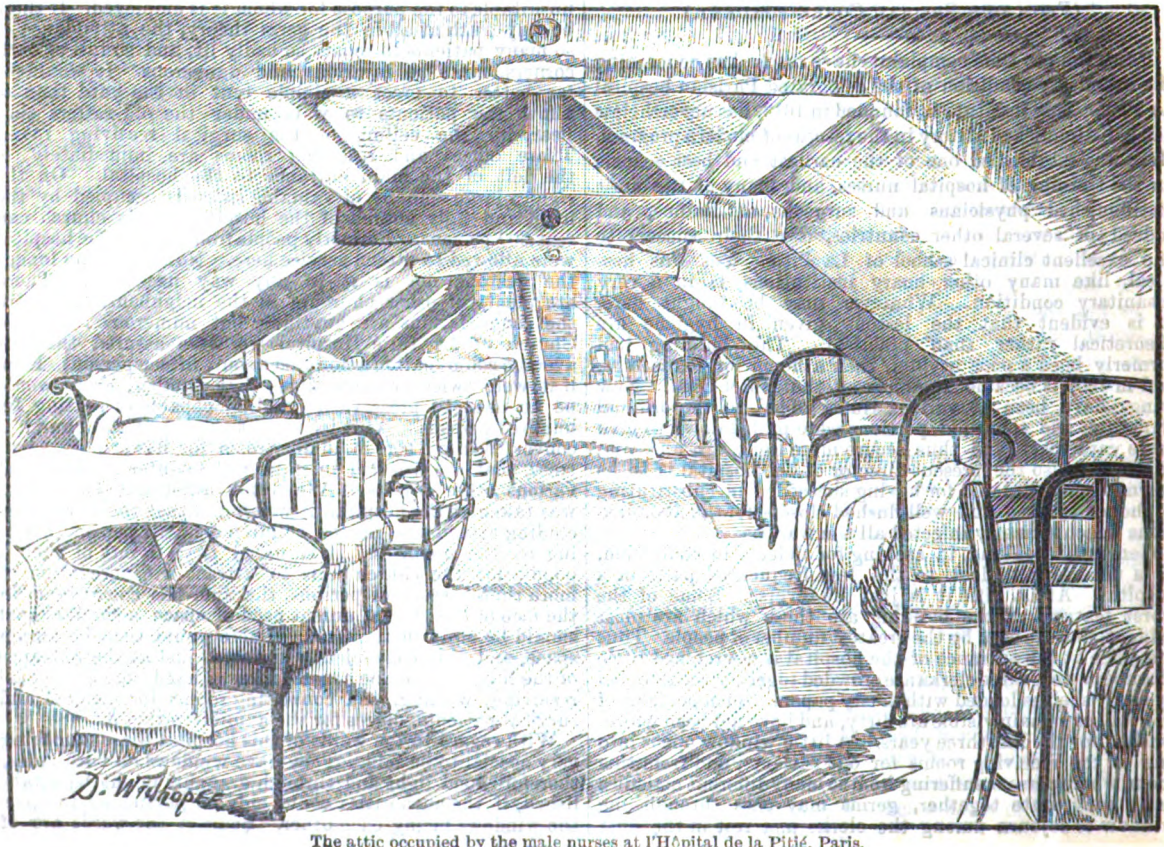


Receiving and waiting room for surgical cases at l'Hôpital de la Pitié, Paris.



The attic occupied by the male nurses at l'Hôpital de la Pitié, Paris.

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more recent construction, and are loftier and brighter; but there are no special means of ventilation, and it is well known how little trust can be placed on the mere opening of windows. The lack of uniformity in the management of these wards is very remarkable. In some wards the beds are surrounded by the traditional white curtains, so dear to the Frenchwoman's heart. These curtains are changed and washed every four months. In other wards the surgeon or physician in charge may be under the influence of more modern notions, and has ordered all the curtains to be removed. In the same manner the treatment of the patients varies. In one ward the greatest precautions are taken, while in another the most extraordinary neglect prevails. Thus in a ward I noticed a patient suffering from enteric fever, and asked the nurse what was done with the dejections of this patient. They were, it appears, simply thrown down the drain. Precautions were taken, the dejections were disinfected before they were allowed to reach the public sewer when an epidemic prevailed: but when there was no epidemic no precautions were taken! In other words, the stable door is only closed after the horse has been stolen.

The wards on the first floor are lofty; those on the second floor are fairly well disposed, but those on the third floor are very low, so low and tunnel-shaped that they recall the aspect between decks on board an emigrant ship. It might have been thought that the less serious cases would be put in the wards that are not so well disposed. This is not, however, the case; the patients are allotted to the different wards without taking into consideration the hygienic condition of these wards. Some of the wards also, and this is a grave defect, have laboratories annexed, where the examination with the microscope of pathological specimens brought from the post-mortem room is done.

The bath-rooms also are very badly disposed—very small, crowded, and some of them placed under a sick ward, where they must help to maintain a condition of dampness prejudicial to the health of the patients. The place for douches &c. is not large enough for the successful application of hydropathic treatment; the want of air, light, and space is altogether deplorable when we consider what are the requirements of so large a hospital.

The post-mortem room, the dissecting-room, and the dead-house are situated side by side in a sort of cellar. This basement is dark, damp, sinister—in every respect unsuited for the purpose. Here also there are any number of rafters. In the dead-room, over fifteen bodies, I counted thirty rafters, which were too high up to be cleaned. It must be prejudicial to the health for students and professors to meet constantly in such places; but they are not the only sufferers. The accommodation afforded to the male and female nurses is a perfect scandal. It is very much to the credit of the professors at this hospital that they have succeeded in training nurses when these postulants receive such poor treatment. One of the rooms occupied by the women nurses is under a sloping roof. There is one window about a yard square, which gives but little light, and this not only because it is so small, but because there is opposite and close to it the high wall of a house. In the nurses' room there was no cupboard for their clothes, there is only one small straw chair for each person, then by the side of some of the beds there is no mat, so that the nurses on rising have to step on the bare floor. Beyond this room there is yet another or inner room which has no window whatever, and its light is only the borrowed light from the outer room. It is never light enough in this inner room to read even in the brightest summer day, yet in this dark hole two female nurses have to sleep every night. It was justly observed by several persons at the hospital that prisoners in a State gaol have much better accommodation than the free, trained, professional nurses at the Hôpital de la Pitié. The men are for the most part huddled together in an attic, where the roof is so low that the beds can only be reached by stooping, and a man cannot stand upright except in the very centre of the dormitory. There are rickety small iron bedsteads, with bent legs, and altogether insufficient bedding. There is no furniture whatever, no lockers, no cupboards, no means of washing. The men have to dress here, then go down into the sick wards, and wash in the lavatories provided for the patients. There also they may keep a change of clothes or of linen. Thus they have no privacy. They are compelled to wash in common with the patients, and to sleep in a garret where there is no provision whatever made for their comfort. The garret being immediately under the roof, its occupants are exposed to the extremes of heat and cold. The accompanying sketch may give some idea of the great discomfort which the male nurses at La Pitié Hospital have to endure. Below them are three floors of wards full of patients, so that, when sleeping, the nurses must breathe some of the exhalations from these patients, which percolate upwards through the floors and ceilings.

This is assuredly a very serious grievance, which affects the general interests of the public as well as the individuals who are thus so badly treated. It must be felt that nurses, whether male or female, deserve every respect and consideration. Everything should be done to give them a due sense of the dignity and responsibility of their work. They should therefore be treated with respect, and not left to herd in unfurnished garrets or in dark recesses where there are no windows, and where their health must be injured. Such treatment of hospital nurses is a remnant of former ignorant prejudices, which are altogether unworthy of so civilised a city as that of Paris. The members of the Municipal Council cannot be aware of the state of affairs that prevails at the Hôpital de la Pitié, otherwise this energetic and progressive body would have taken the matter in hand long ago. Perhaps, however, after the publicity which we trust will now be given to these facts this matter will not remain in abeyance much longer. The Municipality and the Administration of Public Assistance will take measures to reconstruct some portion of the hospital, so that the nurses may have proper sleeping rooms, and the hospital administration suitable offices and receiving rooms for the patients. The numerous other improvements necessary could be accomplished at the same time, so that the hospital may be placed on a level with the requirements of modern sanitary science.

THE PROPOSED ALBERT UNIVERSITY OF LONDON.

THE proposals of the Royal College of Physicians of London and of the Royal College of Surgeons of England for powers to grant an M.D. degree, and the scheme of the University of London to adapt itself to become in part a Teaching University for London, have failed, and the Privy Council has asked the authorities of University and King's Colleges to present their case as the third alternative for the promotion of a Teaching University in London. We understand that the counsel who are instructed in support of or against this proposition must be ready by the 22nd inst. There is a suggestion of pleading for delay on behalf of the Royal Colleges and of some of the medical schools; but it seems doubtful to us, as the question is now of so many years' standing, whether this is a wise procedure, and whether it will be granted by the Privy Council. We append a *précis* of the principal clauses relating to the Medical Faculty in the proposed Draft Charter. The complete draft was published by us on Aug. 6th, 1887. It is of grave importance to the London medical schools that they should recognise that there is no provision for their direct representation on this Council, and that they should take every means to secure a fair share in the government of the University. University and King's Colleges have other interests to protect on the part of arts and science, but from the medical side there is no reason why they should have anything but a proportional representation in the control of a new University for London. It would be regrettable if a want of organisation on the part of the London medical schools should place them at a disadvantage before the Privy Council.

EXTRACTS FROM DRAFT, ADOPTED BY THE COUNCILS OF UNIVERSITY COLLEGE, LONDON, AND KING'S COLLEGE, LONDON, FOR THE CONSTITUTION OF PROPOSED NEW UNIVERSITY.

THE INSERTION OF THE PASSAGES IN SQUARE BRACKETS [ ] IS CONTINGENT UPON THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND ROYAL COLLEGE OF SURGEONS OF ENGLAND BEING ASSOCIATED WITH THE UNIVERSITY.

Foundation of the Albert University.

There shall be and there is hereby constituted and founded a University, in and for London, with the name of the Albert University of London.

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Colleges in the University.

University College, London, and King's College, London, shall be and are hereby constituted Colleges in the University. Other Colleges may from time to time be admitted as Colleges in the University in the manner and subject to the conditions in this our Charter prescribed.

[*Association of the Royal College of Physicians of London and the Royal College of Surgeons of England with the University.*

The Royal College of Physicians of London and the Royal College of Surgeons of England shall be associated with the University in the manner in this our Charter prescribed.]

Medical Schools in the University.

The Medical Schools of University College, London, and King's College, London, shall be Medical Schools in the University. Every other Medical School in London which is recognised as efficient by any body having power to grant a qualification for registration under the Medical Acts may claim to be admitted as a Medical School in the University in the manner and subject to the conditions in this our Charter prescribed.

University Degrees and Certificates.

The University shall have power to confer Degrees in the Faculties of Arts, Science, and Medicine, and in such other Faculties corresponding to the provinces of study and educational work occupied by the University as shall from time to time be determined by the Council of the University, on all persons, male or female, who shall have pursued a regular course of study in a College or Medical School in the University, and shall submit themselves for examination. Provided that no ordinary medical degree shall be conferred on any person who shall not previously have obtained a qualification for registration under the Medical Acts. The University shall also have power, in the case of students of the University who shall have been resident students of any other University in our dominions, to accept the examinations and periods of residence and study passed by them at such other University as equivalent to such examinations and periods of study in the University as the Council constituted by this our Charter shall from time to time determine. Provided that the Council shall not allow a Degree to be conferred on any such Student unless such Student shall have pursued a course of study in a College or Medical School in the University during such final portion of the period of study as may be determined by the Council, and shall have passed the final examination of the University in that course of study.

Authorities of the University.

The authorities of the University shall be the Chancellor of the University, the Vice-Chancellor of the University, the Council, the Assemblies of the several Faculties in the University, the Boards of Studies of the several Faculties, and the Convocation of the University.

The Council.

The Council shall consist of the persons following—namely, first, the Chancellor; secondly, persons appointed by this our Charter, and their successors appointed by the Lord President of our Council and by the Convocation of the University, as in this our Charter provided; thirdly, persons representing the several Colleges in the University; [fourthly, persons representing the Royal College of Physicians of London and the Royal College of Surgeons of England]; fifthly, persons representing the several Assemblies of the Faculties in the University. The persons in the Council representing University College, London, shall be three persons chosen by the Council of the College. The persons in the Council representing King's College, London, shall be three persons chosen by the Council of the College. On the admission of any College other than University College, London, and King's College, London, as a College in the University, the number of its representatives, not exceeding three, shall be determined by the Council. [The persons in the Council representing the Royal College of Physicians of London shall be three persons chosen by the Fellows in comitia of the College. The persons in the Council representing the Royal College of Surgeons of England shall be three persons chosen by the Council of the College.] The persons representing each of the Assemblies of the Faculties of Arts, Science, and Medicine shall be four persons appointed by the Assemblies of such Faculties respectively. If any other Faculty shall be established by the University the persons representing such Faculty in the Council shall be such number of persons to be elected by the Assembly of such Faculty not exceeding four as shall on the establishment of the Faculty be determined by the Council.

Powers of the Council.

The Council shall be the governing body of the University, and shall direct the form, custody, and use of the common seal, and shall have the management and control of the affairs and property of the University, and shall appoint a registrar and any other officers necessary for conducting the business of the University. The Council shall have full power to make and alter or revoke statutes for regulating all matters concerning the University, and may exercise and do all powers and things by this our Charter granted or authorised to be exercised or done by the University.

The Assemblies of the Faculties.

The Assemblies of each of the Faculties of Arts and Science, and of any other Faculty that may hereafter be established by the University, shall consist, in the first place, of such persons doing professorial work in the colleges included in the University in respect of that Faculty as shall be designated by the governing body of each college, and for this purpose University College, London, and King's College, London, shall, at the constitution of the University, be deemed to be included therein in respect of the Faculties of Arts and Science. The Assembly of the Faculty of Medicine shall consist, in the first place, of such of the professors, physicians, surgeons, and lecturers of the medical schools in the University as shall be designated by the governing body of each school. The persons whom a college or medical school shall be entitled to designate as members of the Assembly of a Faculty shall be such as are giving regular instruction to classes in the college or medical school in one or more of the subjects included in the Faculty. Provided that, except in the case of the persons designated as aforesaid before the first election of the Council by the Assemblies of th Faculties, the designations of persons to be members of the Assemblies of the Faculties shall not take effect without the approval of the Council, or on appeal to the Chancellor, his approval of the same. The Assembly of each Faculty shall consist, in the second place, of such of the examiners of the University in subjects included in the Faculty, not being otherwise members of the Assembly, as the Council may appoint members of the Assembly, provided that such examiners shall not vote in the Assembly of the Faculty on the election of members of the Council. It may consist, in the third place, of such persons engaged, or who have been engaged, in university teaching in London in subjects included in the Faculty as shall be nominated in that behalf by the Assembly of the Faculty and approved by the Council.

Powers of the Assemblies of the Faculties.

The Assembly of each Faculty shall have the following powers—viz.: Of prescribing the mode of conducting the proceedings of the Assembly and of registering the same, and of reporting the same to the Council; of electing members of the Council, and of the board or boards of studies of the Faculty; of discussing and of declaring an opinion on any matter whatsoever relating to the University, including any matter referred to the Assembly by the Council; of delegating from time to time to the board or boards of studies of the Faculty the power of making recommendations and reports to the Council.

Admission of Colleges and Medical Schools.

A medical school admitted to the University shall be admitted in respect of the Faculty of Medicine. If any medical school shall apply to be admitted to the University in respect of any Faculty other than the Faculty of Medicine, the claim shall be considered and decided in the same manner, and subject to the same conditions as in the case of a college claiming to be admitted to the University, except only as regards the condition that it is under the independent control of its own governing body. In case the Council refuse any such application, the college or medical school applying may appeal to us in our Council against such refusal.

Definition of London District.

The London district for the purposes of the University shall mean a radius of fifteen miles from Somerset House.

THE IRISH CENSUS.

THE official abstract of the Irish Census for 1891 shows that the population on April 5th last consisted of 4,706,162, of whom 2,317,076 were males and 2,389,086 females. This shows a decrease, as compared with the census of 1881, of 468,674 persons, or 9·1 per cent. The decrease in the males was 8·5 per cent., and in females 9·5. This decrease of nearly half a million during the past decade was mainly due to emigration; the natural increase in the population during the past ten years was 267,653, but 768,105 emigrants left Ireland during the same period. This would show a decrease in the population of 500,452, instead of 468,674, and the difference (31,778) may be accounted for by defective registration of deaths in the earlier years and incomplete returns of emigrants. There was a decrease of 81,271, or 6·5 per cent., in Leinster; 161,121, or 12·2 per cent., in Munster; 125,198, or 7·2 per cent., in Ulster; 98,084, or 11·9 per cent., in Connaught. There was a decrease in the population of every county with the exception of two—viz., Dublin, which gained 2·4 per cent., and Antrim 1·4 per cent. As regards the religion of the inhabitants, 3,549,856 were returned as Roman Catholics, being a decrease of 411,035, or 10·4 per cent.; 602,300 as Protestant Episcopalians, being a decrease of 39,344, or 6·2 per cent.; 446,687 as Presbyterians, or a decrease of 24,047, or 5·1 per cent.; 55,235 as Methodists, being an increase of 6396, or 13·1 per cent. Or taking members of the Church of Ireland and other Protestant denominations together we have a total of 1,104,222, as compared with 3,549,856 Roman Catholics, and 52,084 belonging to other religions. With regard to Dublin city and suburban townships it appears that the population of Dublin was 249,602 in 1881 and 254,709 in 1891, or an increase of 5107; while the total for the city and townships was ten years since 339,161, and this year 350,559, or an increase of 11,438, or 3·3 per cent. In Belfast the population this year was 273,055, or an increase of 64,933, or 31·2 per cent. The population of Londonderry also has increased from 29,162 to 32,893, or 12·8 per cent.; Dundalk from 11,913 to 13,207; Lurgan from 10,755 to 11,477; while the population of the following towns has decreased—viz., Cork, Limerick, Waterford, Galway, Newry, Kilkenny, Drogheda, Wexford, Sligo, Lisburn, and Armagh. The population within the Dublin Metropolitan Police District increased since 1881 by 12,203, or 3·5 per cent.

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METROPOLITAN HOSPITAL SUNDAY FUND, 1891.

WE have received returns from a number of metropolitan places of worship giving the amounts collected last Sunday in aid of the Hospital Fund. As the returns are necessarily incomplete, we only publish particulars of the larger amounts collected—i.e., sums ranging from £15 upwards. The total sum received at the time of our going to press on Thursday evening amounted to £19,000.

Donations.	£	s.	d.
Duke of Cleveland, K.G.	5000	0	0
Delta (a further)	200	0	0
Thos. Wakley, Esq.	100	0	0
E. A. H. (a further)	500	0	0
E. H. F. (a further)	50	0	0
S. C. K. (a further)	10	10	0
Thankoffering (M. J. Marsden)	25	0	0
A. Lichtenstadt, Esq. (a further)	26	5	0
Ludwig Mond, Esq.	100	0	0
Percy Ricardo	25	0	0
Lady Tilson (a further)	50	0	0
Henry Bruce, Esq.	20	0	0
C. H. T. Hawkins, Esq. (a further)	21	0	0
Major Jones	20	0	0
F. G. Dalgety, Esq.	25	0	0
F.	50	0	0
H. A. Soames, Esq.	25	0	0
Messrs. Reid & Co., Limited	200	0	0
Box outside Mansion House	19	5	0
Church of England.			
St. Jude's, South Kensington, Rev. Preb. Forrest, D.D.	1291	7	3
St. Michael's, Chester-square	1200	17	6
The Temple Church, Dean Vaughan	175	8	9
St. Paul's, Westbourne-grove	70	0	0
St. Marylebone Parish Church	110	17	2
Christ Church, Marylebone	46	2	9
St. Stephen's, Westminster	47	5	0
St. James's, West Hampstead	203	2	1
St. George's, Tufnell Park	45	15	4
St. James's, Norlands	59	17	6
St. Paul's, Paddington	30	0	0
Curzon Chapel, Mayfair	209	8	0
St. Stephen's, South Dulwich	142	13	0
St. Saviour's, Pimlico	75	6	3
Holy Trinity, Knightsbridge	54	3	6
Bromley, Kent, Parish Church	57	14	6
Bromley Chapel of Ease	23	19	4
St. James's, Piccadilly	112	0	6
Ewell Parish Church	30	0	0
Great Stanmore Parish Church	36	2	0
Barnet Parish Church	47	17	11
St. Saviour's, Paddington	65	6	0
St. Mark's, Myddleton-square	28	13	5
St. Mary's, Kilburn	107	19	2
Christ Church, Wanstead	30	13	3
St. Stephen's, Hampstead	36	18	6
United parishes of St. Mary, Aldermary, St. Thomas Apostle, and St. John Baptist upon Walbrook	81	12	1
St. Mary's, Brookfield	32	12	6
St. Mary Magdalene, Enfield	29	6	3
Christ Church, Streatham-hill	90	0	0
St. Saviour's, Clapham	37	7	0
Christ Church, Crouch-end	63	13	7
St. James's, Garlickhithe	29	18	7
St. Peter's, Streatham	62	12	10
Christ Church, Newgate-street	28	1	6
St. James's, Camberwell	31	15	0
Holy Trinity, Lyonsdown, and St. James's, New Barnet	27	0	4
Trinity Presbyterian Church, Hampstead	23	6	5
Elstree Parish Church	29	4	7
St. Mary's, Boltons	58	5	0
St. Andrew's, Thornhill-square	21	16	2
St. Stephen's, Canonbury	22	12	4
Tooting Graveney Parish Church	24	0	0
Holy Trinity, Woolwich	20	2	6
St. Andrew's, Islington	21	16	2
Highbury-quadrant Congregational Church	24	19	2
Holy Innocents, Hornsey	41	5	10
Old Malden Parish Church	27	4	4
All Saints', Lower Clapton	20	6	6
Holy Trinity, Kilburn	43	14	9
Granard Presbyterian Church, Putney	21	13	0
Crouch-hill Presbyterian Church	34	12	0
St. Paul's, Great Portland-street	52	0	0
All Saints', Upper Norwood	32	17	6
St. George's, Westcombe-park	26	0	0
Merton Parish Church	22	10	6
St. George's Chapel, Albemarle-street	71	8	0
Reformed Episcopalian Church, Harlesden	24	0	5
St. Peter's, Dulwich Common	52	10	9
Christ Church, Southgate	35	8	3
St. Andrew's, Leytonstone	85	6	7
Holy Trinity, Lee	38	1	4
St. Margaret's, Westminster	274	10	3
St. Marylebone Parish Church	110	17	2
St. Matthew's, Brixton	102	4	6
St. Mary's, Shortlands	36	0	0
St. James's, Clapham-park	130	9	5
Bickley Parish Church	75	15	8
St Pancras Parish Church	48	7	6
St. Luke's, West Norwood	24	0	0
St. Mary Magdalen, Peckham	25	1	0
Victoria-park Lecture Fund	20	16	10
St. Mark's, North Audley-street	176	6	5
St. Luke's, West Holloway	40	0	0
St. Mark's, Tollington-park	30	16	9
Church of the Ascension, Blackheath	31	10	7
Hampstead Parish Church	56	12	9
St. Saviour's, Southwark	26	17	9
St. George's Parish Church, Beckenham	46	16	3
Mitcham Parish Church	27	9	2
All Saints', Friern Barnet	31	10	11
St. Stephen's Church, Hounslow	15	11	9
Magdalen Hospital Chapel, Streatham	32	14	6
St. George's, Bloomsbury	39	1	7
St. Mark's Chapel of Ease	23	19	4
All Saints', Clapham	45	9	5
St. Peter's, Islington	15	16	2
St. John the Evangelist, Finsbury-park	20	0	1
St. Mary the Virgin, Primrose-hill, N.W.	47	10	3
St. Nicholas Parish Church, Tooting-Graveney, Surrey	23	0	0
St. Luke's, Bromley	16	13	7
St. Andrew's, Leytonstone	35	6	7
London Hospital Chapel	14	8	6
St. Mary Abbot's, Kensington	506	3	8
St. Paul's, Camden-square	59	10	0
Chapel of Ease, St. Mary's Hospital, Ilford	48	5	6
Westminster Abbey	174	8	10
Chapel Royal, Hampton Court	95	3	11
St. Paul's, Wimbledon-park	48	3	6
Willesden Presbyterian	32	5	0
St. Paul's, Balls-pond	43	0	0
St. John Evangelist, Penge	81	0	0
New College Chapel, Upper Avenue-road	20	16	0
St. Barnabas', Addison-road	133	2	4
Willesden Parish Church	22	10	0
Holy Trinity, Sydenham	236	12	11
Christ Church, Gipsy-hill (morning collection)	66	0	8
St. Andrew's, South Streatham	33	14	2
St. James's, Hatcham	36	19	1
St. Augustine's, Queen's-gate	109	4	2
Chapel of The Boys' Home, Regent's-park-road	21	0	0
St. Paul's, Mill Hill	21	2	8
Christ Church, Woburn-square	30	0	0
St. Cuthbert's, West Hampstead	24	0	0
Lyndhurst-road Church, Hampstead	57	6	3
Christ Church, North Brixton	48	5	8
Royal Military Chapel, Wellington Barracks	50	7	9
St. Bartholomew's, with St. Matthew's, Sydenham	138	3	5
St. Stephen's, Castle Hill, Ealing	106	9	0
St. Michael's, Highgate	41	17	8
All Souls', Langham-place	125	18	0
St. Paul's, Kilburn	28	10	9
St. Anne's, Soho	33	11	6
Christ Church, Hampstead	203	18	10
St. Matthew's, Bayswater	139	14	1
St. Paul's, Wimbledon-park	48	3	6
Dulwich College Chapel	65	10	0
St. Nicholas', Chislehurst	270	4	8
St. Philip's, Sydenham	36	16	0
St. Giles's, Camberwell	97	10	2
St. Mary's (New Parish Church), Stoke Newington	70	19	4
St. Philip's, Buckingham Palace-road	33	2	3
St. Matthew's, Denmark-hill	58	9	2
St. Mary's (Old Church), Stoke Newington	31	14	4
Congregational.			
Abney Congregational Church	20	4	0
Quebec Chapel	166	2	7
Horbury Congregational Church, Notting-hill	28	10	0
Horbury Chapel, Notting-hill	28	10	0
Finsbury-park Congregational Church	31	0	1
Unitarian.			
Brixton	56	15	5
Wesleyan.			
Clapton High-road	22	10	0
St. John's-hill, Wandsworth, and Putney	28	1	5
High-street, Clapham	18	5	5
Brixton Wesleyan Circuit	108	8	11
Baptist.			
Regent's-park	62	12	

[Other subscriptions have been received, and will be announced in our next list.

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THE INSTITUTE OF PREVENTIVE MEDICINE.

ON Friday last Sir Michael Hicks-Beach received at the Victoria Hotel a deputation consisting of some of the leading medical and scientific gentlemen of the day, to urge upon the Board of Trade the necessity of reconsidering its decision to refuse to incorporate the Institute of Preventive Medicine under the Companies Act, with the omission of the word "limited." Letters were read from Professors Tyndall and Huxley supporting the object of the deputation, which was introduced by Sir Henry Roscoe, M.P. He said he had no need to go into the question as to the national importance of an institution of this kind, as there was no civilised country in Europe in which this subject had not claimed attention.

Sir Joseph Lister said the object of their deputation was to request Sir Michael Hicks-Beach to reconsider his decision and to grant the licence under the Board of Trade, which was really, as it would seem, almost essential to the prosperity, if not indeed to the very existence, of the institute. It was essential, in order that they might hold money in trust, that they should be incorporated. They had been promised a large sum of money, the receipt of which would be essentially dependent upon their incorporation, and if they were incorporated as a limited liability company they would not be able to appeal to the public for funds with any success. On the other hand, if the licence were granted there could be inserted by the Board of Trade a condition that the funds of the institute should be used only for scientific and charitable objects, and in that way their position would be perfectly secured. The only practical alternative, if it was still thought right to refuse their request, would be that they should be incorporated by Act of Parliament, a process which would involve very great loss of time and also very serious expense. He referred to the enormous importance of such an institute in this country, and hoped that no department of the Government would oppose any unnecessary obstacle to an enterprise which had for its sole object the welfare of humanity.

The claims of the deputation were also urged by Sir Lyon Playfair, M.P., Professor Dewar, Dr. Ray Lankester, and Sir James Crichton Browne.

Sir Michael Hicks-Beach, in reply, said in differing from so many eminent gentlemen he had considered that the section of the Act upon which his licence was asked for only empowered the Board of Trade to act, and left it to the Board of Trade to decide whether the licence should be granted or not; and, if granted, whether any conditions or regulations should be imposed and inserted in the memorandum and articles of association. It therefore seemed that the Board of Trade could hardly grant such a licence without expressing approval, by the mere fact of the grant, of the association to which it was granted. He said: "In your case I think I have no right to express such an approval, because if I rightly interpret Clause 3A of your memorandum I understand 'that experiments on living animals calculated to give pain,' to quote the words of the Act of Parliament, are included among your objects—in one word, that vivisection would be part of your work. Now, this is a subject which the Legislature, by the Cruelty to Animals Act, 1876, has placed under the control, not of the Board of Trade, but of the Home Office. By that Act, as you know, vivisection is made illegal except by licence from the Home Office, and under the most stringent regulations, including inspection by inspectors of the Home Office. I assume that when you had established this institution, supposing my licence were granted, an application would be made to the Home Office for a licence or licences for vivisection on the premises of the institute for some one or more of its members. It seems to me that the Home Secretary would have fair ground to complain of my action if in a matter of such admitted difficulty, rousing as it does the strongest feelings of both sides, I did anything which would enable you to go before him, to whom Parliament has entrusted this subject, with the stamp of approval, as it were, from another Government Department which has nothing to do with the subject at all. I have endeavoured to put to you the difficulty which I feel, and I will carefully consider what has been said to-day; and any documents which the promoters of the Association wish to place before me to enforce the views which have been expressed I shall be glad to receive."

Sir John Lubbock moved a vote of thanks to the President, and the deputation withdrew.

ANNUAL DINNER OF THE ARMY MEDICAL STAFF.

THE annual dinner of the Medical Staff was held in the Whitehall Room of the Hôtel Métropole on the 8th inst, Surgeon-General J. Sinclair, in the much regretted absence of the Director-General through indisposition, presiding. The following army medical officers were present:—Sir Thomas Crawford, K.C.B, LL.D. Surgeons-General: R. Bowen, J. G. Faught, S. Fuller, C. D. Madden, H. H. Massy, C.B., W. H. Muschamp, J. B. C. Reade, C.B., and J. Sinclair. Deputy Surgeons-General: S. Archer, Professor H. Cayley, O. Codrington, W. G. Don, C. H. Giraud, G. L. Hinde, C.B., J. H. Jeffcoat, C. M. Jessop, E. MacGrath, W. Sly, H. R. L. Veale, F. Wade, and J. Watts. Brigade-Surgeons: J. A. Anderson, J. F. Beattie, M. Cogan, T. S. Cogan, E. Footner, G. C. Gribbon, J. Hector, J. B. Kelly, J. G. Leask, W. T. Martin, H. S. Muir, A. B. R. Myers, W. Nash, T. F. O'Dwyer, T. W. Patterson (D.S.O.), A. F. Preston, W. B. Ramsbotham, S. K. Ray, W. F. Ruttledge, F. B. Scott (C.M.G.), F. P. Staples, E. D. Tomlinson, W. W. Tomlinson, J. Wilson, W. J. Wilson, T. Wright, and T. W. Wright. Surgeons-Major: W. B Allin, J. M. Beamish, W. A. Carte, S. H. Carter, J. Coats, W. Creyk, J. D. Edge, T. J. Gallwey, W. C. Gasteen, J. J. Greene, A. Hayes (D.S.O.), W. Johnston, T. Ligertwood, N. MacCreeney, E. V. MacSwiney, E. A. Mapleton, Professor J. L. Notter, E. A. Roe, W. F. Stevenson, and W. E. Webb. Surgeons: C. J. Addison, W. Babtie, W. H. Bean, W. G. A. Bedford, J. R. A. Clark, A. M. Davies, R. H. Firth, J. G. Harwood, J. P. S. Hayes, F. W. C. Jones, J. J. Lamprey, T. H. Parke, J. M. Reid, and J. Riordan; Professor G. F. Duffey and F. Kyle, Esq.

The banquet was a great success, and a most enjoyable evening was spent—a result due largely, we understand, to the exertions of the hon. secretary of the Dinner Committee, Mr. James Hector, M.S.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6098 births and 5102 deaths were registered during the week ending June 6th. The annual rate of mortality in these towns, which had been 30·5 and 30·9 per 1000 in the preceding two weeks, declined to 28·3 last week. The rate was 27·0 in London and 29·4 in the twenty-seven provincial towns. During the first nine weeks of the current quarter the death-rate in the twenty-eight towns averaged 28·4 per 1000, and considerably exceeded the mean rate in the corresponding periods of the ten years 1881-90. The lowest rates in these towns last week were 16·5 in Norwich, 17·4 in Bristol, 17·8 in Hull, and 18·0 in Brighton; the highest rates were 38·2 in Birmingham, 39·4 in Salford, 39·7 in Manchester, and 48·5 in Blackburn. The high rates in the last-mentioned towns were due to the fatal prevalence of influenza. The deaths referred to the principal zymotic diseases, which had declined from 461 to 357 in the preceding five weeks, further fell last week to 359; they included 152 from whooping-cough, 85 from measles, 38 from diarrhœa, 35 from diphtheria, 25 from "fever" (principally enteric), 23 from scarlet fever, and 1 from small-pox. No deaths from these diseases were recorded in Wolverhampton or Derby; in the other towns the zymotic rates ranged upwards from 0·4 in Sunderland and 0·5 in Norwich, to 2·9 in Preston, 3·7 in Manchester, 3·8 in Huddersfield, and 4·0 in Liverpool. The greatest mortality from measles occurred in Portsmouth and Bristol; from scarlet fever in Huddersfield and Halifax; and from whooping-cough in Oldham, Preston, Huddersfield, Manchester, and Liverpool. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. The 35 fatal cases of diphtheria included 24 in London and 3

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in Sheffield. One death from small-pox occurred in London, but not one in any of the twenty-seven provincial towns; 16 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 885, against 927 and 916 at the end of the preceding two weeks; the patients admitted during the week were 66, against 66 and 88 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding three weeks from 620 to 591, further fell last week to 547, but were more than double the corrected weekly average. The causes of 95, or 1·9 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Wolverhampton, Derby, and Birkenhead; the largest proportions of uncertified deaths were recorded in Liverpool, Preston, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding three weeks from 24·1 to 23·3 per 1000, rose again to 25·3 during the week ending June 6th, but was 2·7 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 17·1 in Leith and 18·6 in Perth to 28·7 in Greenock and 30·4 in Paisley. The 651 deaths in these towns showed an increase of 44 upon the number in the preceding week, and included 27 which were referred to measles, 25 to whooping-cough, 10 to diarrhœa, 4 to diphtheria, 3 to scarlet fever, 3 to "fever," and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against 84 and 67 in the preceding two weeks. These 72 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·8 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 34 and 23 in the preceding two weeks, rose again last week to 27, of which 18 occurred in Glasgow and 5 in Paisley. The deaths from whooping-cough, which had declined from 32 to 22 in the previous three weeks, were 25 last week, and included 13 in Glasgow, 5 in Dundee, and 3 in Leith. The 10 fatal cases of diarrhœa exceeded the numbers recorded in recent weeks. The 4 deaths from diphtheria showed a slight increase upon the number in the preceding week, and included 2 in Glasgow, where 2 of the 3 fatal cases of scarlet fever were also recorded. The 3 deaths from "fever" showed a marked decline from recent weekly numbers, and included 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 141 to 173 in the preceding three weeks, declined again last week to 142, but exceeded by 37 the number in the corresponding week of last year. The causes of 75, or nearly 12 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding four weeks from 26·4 to 18·8 per 1000, rose again to 20·1 during the week ending June 6th. During the first nine weeks of the current quarter the death-rate in the city averaged 24·1 per 1000, the rate for the same period being 27·8 in London and 20·9 in Edinburgh. The 136 deaths in Dublin during the week under notice showed an increase of 9 upon the number in the preceding week, and included 2 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, scarlet fever, diphtheria, or diarrhœa; thus only 3 deaths resulted from these principal zymotic diseases, against numbers declining from 7 to 1 in the preceding three weeks. These 3 zymotic deaths were equal to an annual rate of 0·4 per 1000, the rate from the same diseases being 2·0 in London and 1·2 in Edinburgh. The fatal cases of whooping-cough, which had declined from 7 to 0 in the previous three weeks, were 2 last week. The death referred to "fever" was certified as typhoid fever. The 136 deaths in Dublin last week included 20 of infants under one year of age and 37 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a slight increase upon the numbers recorded in the preceding week. Two inquest cases and 3 deaths from violence were registered during the week, and 55, or more than a third, of the deaths occurred in public institutions. The causes of 13, or nearly 10 per cent., of the deaths last week in the city were not certified.

THE SERVICES.

Surgeon-Major Arnott, M.D., has been appointed Physician of the European General Hospital, and Surgeon H. P. Dimmock to be Physician at the J. J. Hospital, in succession to Surgeon-Major Arnott.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeon Richd. J. Barry to the *Australia* (dated June 4th, 1891).—Surgeons: John J. Dinnis, M.D, to the *Phaeton*, Horace Elliott, M.D., to Malta Hospital, and Edward J. Morley, to the *Tyne* (all dated June 4th, 1891); Hugh W. Macnamara to the *Pembroke*, and Chatworth L. Nolan, M B., to the *Excellent* (both dated June 5th, 1891); Edward Cuffey, M.B., to the *Starling* (dated June 18th, 1891). In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Alex. Blood Trousdell, M.D., has been placed on the Retired List of his rank at his own request.

MILITIA MEDICAL STAFF.—Surgeon-Major C. Brook, 3rd Battalion, the Lincolnshire Regiment, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated June 6th, 1891).

VOLUNTEER CORPS.—2nd Volunteer Battalion, the South Wales Borderers: Honorary Assistant Surgeon E. P. King resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated June 6th, 1891).

Correspondence.

"Audi alteram partem."

ASPARAGUS AS A DIURETIC.

To the Editors of THE LANCET.

SIRS,—The letter on the above subject in your last issue has decided me to send my own experience on the matter. On three occasions (the last being in May this year) I indulged rather heartily in this, a very favourite vegetable of mine. The result was not only the characteristic odour of the urine, but also an increased frequency of desire for micturition, though the actual amount of excretion was considerably diminished. The attack on each occasion woke me up in the early hours of the morning with deep cutting pains in the perineum and in the glans penis, while the desire for micturition forced me to rise from bed every few minutes for about an hour; after that I fell asleep and was no more troubled. It seemed to me as if the urine were highly concentrated, and hence irritating; while the peculiarly unpleasant cutting pain suggested the passage of gravel, or of some kind of crystals. I remember wondering whether it was due to a great amount of sparteic or succinic acid, possibly in a crystalline form. Need I say I have for the future foresworn asparagus.

I am, Sirs, yours faithfully,

London, June 10th, 1891. M.B. CANTAB.

To the Editors of THE LANCET.

SIRS,—Dr. Wilks asks a question which circumstances have led me to investigate with great care during the past month—viz, "Has asparagus a stimulating or inhibiting action on the kidneys?" At any rate in one case where every detail has been within my personal knowledge, I reply, "a very marked inhibiting action." Its action in this respect is, however, not uniform; but very carefully conducted observations show the inhibiting action to occur in at least five cases out of six. I may trouble you at some other time with details of experiments as to the nature of

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the chemical bodies found in the urine after asparagus has been eaten. I remain, Sirs, faithfully yours,

C. MEYMOTT TIDY.

Mandeville-place, Cavendish-square, W., June 6th, 1891.

To the Editors of THE LANCET.

SIRS,—In reply to Dr. S. Wilks's query as to the action of asparagus on the kidneys, I would say that I have always been a free eater of this vegetable, and, with the multitude, for a long time believed it to be a diuretic. But on careful examination I have come to the opinion that this conclusion has been reached simply on account of the characteristic odour which it conveys to the urine a few minutes after it is eaten. Circumstances led me to doubt its diuretic action, and a careful estimate has shown me that, after two good meals of asparagus in the day, the quantity of the urine will be reduced quite one-third of the average—the same quantity and kind of drink being taken as usual. The urine becomes high-coloured, and deposits, chiefly lithates, are usual. The watery element appears reduced. The vegetable, when freely taken, has also a decidedly calmative effect on sexual feeling. An old friend of mine, who has for years eaten freely of the vegetable in the belief that its action on the kidneys was beneficial, describes the effects upon himself as lessening the quantity of urine and thickening it, and producing a feeling of heaviness and fulness.

I am, Sirs, yours faithfully,

June 9th, 1891. F.R.C.S.

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Wilks' question as to the diuretic action of asparagus, I beg to say that I have had ample opportunity, personal and otherwise, of testing the fact. In Russian Poland during May and June enormous quantities of asparagus are consumed, the favourite kind being the "Hanover colossal," or what is known here as the "giant" asparagus. They are only eaten when white, and are always cut under ground. The green ones, such as we eat here, are given to the pigs. The diuretic action is marked, but the quantity consumed of course considerably affects this. In Poland a person would perhaps eat a bundle of sixty at a meal, while here ten or twelve pieces are about the average eaten by one individual, I should think. I always heard it spoken of there as diuretic.

I remain, Sirs, your obedient servant,

FREDERIC VICARS, M.R.C.S., L.R.C.P.

Cadogan-street, S.W., June, 1891.

"THE NATURE AND NAME OF INFLUENZA."

To the Editors of THE LANCET.

SIRS,—In your last issue Dr. T. Glover Lyon invites discussion as to the nature and name of influenza. I think, however, he attaches undue importance to the primary affection of the central nervous system as distinguished from local irritation. That the disease is characterised by intense nervous prostration I admit, but this I believe to be secondary to the irritation of poisonous germs on the peripheries of the nerves. A far more appropriate and scientific name for influenza would, I submit, be "epidemic pneumonia," for a transient, although often severe, congestion or hepatisation of the lungs is an almost constant concomitant of an attack of the real disease. This peculiar pneumonia is characterised by the suddenness of its invasion and the rapidity of its disappearance; it seldom passes into the second stage, there is often little or no expectoration, and not infrequently no cough; but one rarely fails to find well-marked dulness at the base of one lung, usually the right. I doubt whether this transient hepatisation be true inflammatory exudation—nay, whether it be true inflammation at all. I believe it to partake more of the nature of an exudation, analogous to the rash of urticaria &c. That the contagium of influenza is an air-borne germ there can, I think, be no doubt; the sudden invasion, the large number of persons simultaneously attacked, the fact that ships far out at sea are suddenly invaded, all point to an atmospheric influence, an atmosphere laden with pathogenic germs. I venture to submit that the exciting cause of influenza may be analogous to that of hay fever; at any rate, the action of pollen in exciting hay asthma gives us a clue to the influence of some, possibly closely allied, pathogenic spore in causing influenza. We know from the experiments of Schütz that breathing an atmosphere impregnated with the minute spores of aspergillus fumigatus (a fungus common in brown bread and diseased barley) causes pneumonia in the lower animals, and would probably do so in man. It is surely no very far-fetched hypothesis to assume that some similar or closely allied germs may act as irritants to the air passages and peripheral nerves, and excite the peculiar pneumonic exudation and nerve prostration so characteristic of influenza. It is noticeable that there has been an unusual spasmodic cough prevalent this year which closely simulates whooping-cough, and is unaccompanied with any detectable lung mischief, which is, to my mind, strongly suggestive of irritating particles in the atmosphere. The symptoms and sequelæ of influenza, as described by different writers, are so numerous and heterogeneous that it seems impossible, or at least unscientific, to ascribe them all to any one disease. It seems to me more rational to attribute them to some all-pervading atmospheric poison, be that what it may, which profoundly modifies and aggravates all existent illness, but seems to exert a specially noxious influence on the respiratory tract, and which causes all and every illness to assume a graver and more adynamic type. This is, I believe, the explanation of the intense nervous prostration and the protean and often contradictory symptoms of influenza. The effects of remedies, the success which has everywhere attended the administration of salicylate of sodium in the first stage and quinine (both germicides) in the second, point strongly to a germ rather than a central nerve origin of influenza. I quite agree with Dr. Glover Lyon that "influenza" is an unsuitable and unscientific name for the present epidemic, but I venture to submit that "transient" or "epidemic pneumonia" would be a more appropriate name than "centro-neural fever."

I am, Sirs, yours faithfully,

CHAS. EGERTON FITZ-GERALD, M.D.

Folkestone, June 7th, 1891.

THE PROPOSED TEACHING UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—There is a question in connexion with the proposed Teaching University for London which ought to be considered early. It is in reference to denominational colleges. Should they be admitted to affiliation and, if, admitted, what should their standing be? The powers of a college at Oxford or Cambridge in the matter of so-called religious tests have been defined by legislation, and it would certainly be desirable in any new University which may be founded that these questions should be settled before starting, otherwise they might give rise to distracting disputes, and very possibly to ruinous litigation; there is no need to dwell on the evils of postponing the settlement of the matter. In view of how important a part the medical faculty must play in any future University, it would be desirable that the opinion of the profession on an issue that must touch it nearly should find expression in the columns of THE LANCET.

I am, Sirs, your obedient servant,

Lambeth Palace-road, June 6th, 1891. WALTER EDMUNDS.

THE RECENT FATAL FIRE AND ITS WARNINGS.

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of June 6th the advice is given that water should always be kept at hand where mineral oil lamps are in use. Will you allow me to draw attention to the fact that, serviceable as water is in extinguishing other burning materials, dry sand or earth is the best means of putting out blazing oil. Fortunately it is not difficult to keep a supply in every room. Fashion impels people nowadays to decorate their houses with porcelain vases of varied shape, and often of ample dimensions. All these should be kept full of sand; they are thus both rendered much less liable to be upset and made to fulfil a more than merely ornamental purpose by storing just where it is wanted a ready means of extinguishing that conflagration which may at any time arise where oil lamps are used. This simple device adds greatly to the safety of the house, which at present seems to depend largely on the

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daily carefulness of the housemaid who trims the lamps—a *quantité négligéable* according to many.

While I am on the subject of fires and suffocations, I should like to draw attention to a letter which appeared in one of the daily papers lately, recommending the use of compressed oxygen in the treatment of asphyxia or poisoning by gas. The case related was as follows. During some experiments at one of the royal arsenals a balloon burst, and, falling on a man, lay upon him for a time, suffocating him with gas. He was taken out blue, pulseless, and apparently dead. The officer in charge (a colonel whose name I am sorry I forget), with most praiseworthy readiness of wit, at once fetched a tube of oxygen, which he knew was lying in an adjoining office, and, inserting the nozzle into the man's mouth, blew up his lungs with the pure gas. The effect was rapid and permanent; the pulse returned, the blueness passed away, and in a little time recovery was complete. I was so struck with this case, and the proceeding seemed to me so reasonable, that I straightway ordered a supply of oxygen for the Halifax Infirmary. I cannot but think that in cases of suffocation, drowning, gas poisoning, and possibly also in chloroform syncope, where from the absolute flaccidity of the muscles artificial respiration is at best but a slow means of changing the residual air, the inflation of the lungs by pure oxygen might be of great service in starting afresh the processes of life. Nor do I think that danger need be feared from the proceeding. It would be next to impossible to hold the lips so tightly round the tube as to allow of the development of such pressure as to injure the lungs; the flabby lips would always form sufficient safety valve. But if any danger of this sort were anticipated, it would not be difficult to devise a form of safety mouthpiece by which it should be rendered impossible. The sale of oxygen in a portable form, compressed in steel tubes so that the mere turning of a tap will deliver it at any required pressure, opens out many possibilities as to its use; for example, in case of sudden death during the performance of tracheotomy, what more simple than to pass a small catheter through the mucus-laden trachea down to the bifurcation, and thus introduce pure oxygen below the obstruction, instead of working at the difficulty from above.—I am, Sirs, yours truly,

Halifax, June, 1891. SOLOMON C. SMITH, M.D.

THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—The advocates of the two respective phases of the chloroform question—i.e., those who maintain that the risks and dangers of chloroform as an anæsthetic are best avoided by careful observation of the pulse, and those who hold that the more reliable safeguards are to be found in watchful care of the respiration as offering the first and more readily relieved danger-signals—have reached a point when apparently each section considers its theories of the toxic action of chloroform as fairly settled. The representatives of the Hyderabad Chloroform Commission, after a most careful, accurate, and exhaustive series of scientific experiments, which were supervised and reviewed by a most distinguished and impartial physiologist, Dr. Lauder Brunton, F.R.S., came to the conclusion "that there is no risk of giving a patient an overdose of chloroform if the respiration is properly attended to." This seems definite and positive enough in the way of declaring not only a demonstrated fact, but a firm and substantial belief in its absolute genuineness. Can it be wondered at that men who honestly realise all the responsibilities of their position and the terrible penalties and dangers involving human life in the administration of chloroform, by a disregard or an imperfect appreciation of what they believe and know to be a sure preventive of fatal consequences, when they have arrayed their experiences and supported their theories by thousands of facts, when they have boldly proclaimed from the housetops, so to speak, that the advocates of the opposite camp find it impossible to sustain their theories by similar experiences and facts, and in the sacred name of Science and in the nobler interests of humanity, call upon their brethren to compare notes and relinquish a course that is daily fraught with danger and death for one that is devoid of both—is it to be wondered at, I say, if such men finally reach a state of mind that compels them to feel that they are, like John of old, "crying in the wilderness" to a stiff-necked generation; that there is no hope of the conversion of their opponents, and that they almost deserve to be called by hard names? History repeats itself in medicine nearly as frequently as it does in politics. In 1850 Professor Syme lectured thus on chloroform and its two sections of advocates:—"I would say respecting our brethren in London that they have not been so fortunate as to get into the right way in the first instance, and I would urge upon them to banish all previous notions, and to keep in view the essential points to which I have alluded; then if, unfortunately, there should still be fatal cases, I shall not presume to speak further on the subject." It is needless to say that Syme taught his students to be guided as to the effects of chloroform entirely by the respiration, from which alone warnings could be derived in time to avert danger. The disciples of Syme to-day accord their hearty approval to the soundness of these teachings. Dr. Lawrie, while Professor of Physiology at the Calcutta Medical College, taught these same truths. His own personal experiences, and they are worth a good deal, have more than verified their correctness, while Dr. Lawrie's own pupils throughout India—and I am proud to rank among them—are a host of witnesses to substantiate the soundness of Professor Syme's teaching, "that there is no risk of giving a patient an overdose of chloroform if the respiration is properly attended to." I have given chloroform during fourteen years to over 14,000 patients of both sexes, of varying ages down to infants three days old, and I have *never* bothered my head for a moment about the pulse, always looking carefully to the respiration, and I have never had an unpleasant experience. I therefore unhesitatingly affirm my belief in the absolute truthfulness and soundness of the late Professor Syme's "doctrines" regarding chloroform.

I am, Sirs, yours truly,

JAMES R. WALLACE, M.D.,
London, May 23th, 1891. Editor, *Indian Medical Record.*

*** We have omitted a portion of our correspondent's letter, which has no material bearing on the question, and which is couched in language more vigorous than polite. Surely the battle of science can be waged without the use of such weapons as "hard names" and other regrettable personalities.—ED. L.

"SERIOUS CHARGE AGAINST A MEDICAL MAN."

To the Editors of THE LANCET.

SIRS,—Respecting a paragraph which appears under the above heading in THE LANCET of June 6th, I, unfortunately being the defendant in the case, wish to give you a few facts. No communication was made by the complainant to me from the birth of the child, May 7th, 1890, until April of the present year, 1891; then a summons was served just as I was about to leave the district, my wife having been ordered away by Dr. Page, 1, Savile-place, Newcastle-on-Tyne. The complainant had been attended by me for mitral regurgitation, hence making it a most unlikely and hazardous proceeding to attempt to administer chloroform, more especially alone; also the chloroform was said to have been given by holding a small bottle to the nose and taking two or three inspirations. At the same time this alleged seduction was supposed to have taken place a small bottle (two drachms), produced in court, was supposed to have been given, with instructions to take one teaspoonful three times a day; this bottle contained ergot. liq. ext. (B.P.). A male catheter was produced in court, and I was supposed to have suggested the use of such an instrument. Who supplied the catheter produced? Nothing had been mentioned by the complainant to anyone about either bottle or instrument until after the summons was served on me (nearly two years). The second seduction was alleged to have been attained by force. I indignantly repudiated all knowledge of the affair, and placed it in my solicitor's hands. When the case ended at the police-court I immediately gave notice of appeal. This notice was not recorded in the newspapers, and a most imperfect, one-sided statement was inserted, all my evidence and that of my assistant being suppressed.

The case will be reheard at Durham Quarter Sessions, June 30th and July 1st. You will imagine it improbable for the offence alleged to be committed in any such manner, and a girl to return and have a similar offence committed, then never mention the circumstances for nearly two years. As upon this case will depend all my future prospects as a

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medical man, I should be glad of a little advice on the following:— 1. Do recent authorities recognise ergot as an abortive? 2. What is an extreme dose of ergot. liq.? 3. Is it possible to anæsthetise a person by a few inspirations of chloroform from the neck of a small bottle? 4. How long will ext. ergot. liq. keep fresh in a corked bottle?

Hoping our medical brethren will withhold judgment until the case is retried, when I hope to clear myself of this most dastardly charge,

I am, Sirs, yours faithfully,

F. A. ROBSON, M.B., B.S.

Newcastle-on-Tyne, June 7th, 1891.

DEATH UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—In your report of the death of a man during chloroformisation in Belfast there is no mention of the method employed to give the anæsthetic, nor of the means employed for the patient's resuscitation. From the published account I consider that the inhalation of oxygen gas would have been useful. Was it tried? Elsewhere I have drawn attention to its value. As the liquefied gas can now be readily obtained, I think a bottle of oxygen with a suitable inhalation apparatus attached should be in the operating theatre of every hospital.

I am, Sirs, yours truly,

Dublin, June 10th, 1891. GEORGE FOY, F.R.C.S.

"THE SEQUEL TO A CASE OF OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—Mr. Jordan Lloyd's intervention in this discussion is doubtless well meant, but it is unfortunate. I did not say that *all* abdominal sections were stopped at the Queen's Hospital, nor did I say that *everybody* was stopped doing them. I do not know whether the word in the original resolution of the committee was "ovariotomies," but the resolution had the effect of stopping "abdominal sections," and I think it is a pity that the original policy intended by the resolution was not rigidly followed, as it probably will be now that Mr. Lloyd has again raised the question.

I am, Sirs, yours faithfully,

Birmingham, June 8th, 1891. LAWSON TAIT.

*** In justice to Mr. Tait we insert the above explanation, but, as we intimated last week, we are unable to find space for further discussion of the original matter in dispute.—ED. L.

CARBOLISED OIL INUNCTION IN SCARLATINA.

To the Editors of THE LANCET.

SIRS,—While attending a case of scarlatina, I was astonished at the early and extensive peeling which occurred, and could scarcely make out the cause, till one day, noticing the patient listless, with dry, brownish tongue, I began to try and fathom the meaning. The urine I found on examination to be smoky, and it then occurred to me the symptoms might possibly be due to carbolic acid poisoning. Upon questioning the nurse I found she had been using the ordinary carbolised oil (1 in 40), and therefore I immediately ordered it to be stopped, and plain oil, for the time being, at any rate, to be used instead. The symptoms quickly abated, and the patient made a good and quick recovery. Upon reviewing the case I cannot help thinking it would be a good plan to use the ordinary carbolised oil, as in this instance, and stop it immediately any untoward symptoms occurred. I am, Sirs, yours faithfully,

Surbiton, June 9th, 1891. F. P. ATKINSON.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Murder and Mutilation of a Boy.

AT an early hour on the morning of May 19th a seaman's bag was found near one of the docks, and was recovered by two dock gatesmen and a police constable. It was found to contain the dead body of a boy, with the throat cut and both legs severed below the knee, presumably for the easier packing into the bag. Later on in the day it was identified by his parents as that of Nicholas Martin, aged ten. At the request of the coroner, Mr. Paul, Professor of Forensic Medicine at the Liverpool University College, made an external examination, and on the following day a post-mortem examination was made by him and Mr. Lowndes, surgeon to the Liverpool police. The cause of death was found to be hæmorrhage from the wound of the throat. Later on the police obtained a clue which enabled them to discover the scene of the murder—an upper room in a house, the floor of which was stained with blood. They arrested a man named Conway, against whom the coroner's jury returned a verdict of wilful murder on the 29th ult., and on the 5th inst. he was committed for trial on a similar charge by the stipendiary magistrate, Mr. W. J. Stewart. Much credit has been given to the local police for their promptitude in what at first appeared to be a most unpromising inquiry.

The Weather and the Influenza.

There was a sudden outburst of fine warm weather about the end of May, and cases of influenza became fewer. But the weather again became cold and wet, and the general appearance of the suburbs and the country around is not what might be expected in the month of June, and one still hears of cases of influenza of greater or lesser severity. Even "the oldest inhabitant" can scarcely remember so protracted a continuance of cold weather.

The Lock Hospital.

The building erected in 1834 for a lock hospital was used as temporary medical wards during the building of the new infirmary, and is now being got ready before being reopened for its original purpose. A matron has been chosen out of a number of candidates, and a resident medical officer is to be appointed shortly. There is one male and one female ward, each to contain twenty beds, and adjoining each a small ward, in each of which it is proposed to place three beds, making forty-six in all. It is expected that the hospital will be ready for reopening in July.

The Royal Infirmary.

The contest for the election of an assistant surgeon to the Royal Infirmary was a very close one, Mr. George G. Hamilton being only twenty-nine votes behind Mr. R. W. Bickersteth, who was elected. This is in all probability the last occasion on which the election will be by the trustees, elections in future being left to an elective board or committee.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

New Hospital or Infirmary Extension?

THE unfortunate deadlock between the Infirmary authorities and those of the Owens College still continues; in the meantime, correspondence in the public press appears almost daily. In addition to the members of the medical staff of both institutions, members of the governing bodies have published their views as to the best means of arriving at some satisfactory *modus vivendi*. It is to be feared that in the minds of a large number of the public the impression produced is that which "an old subscriber to the Infirmary" expresses in a published letter—i.e., that the whole trouble has arisen from professional jealousy between the medical staff of the two bodies, whilst another anonymous writer, signing himself "An Infirmary Trustee," asserts, what has been frequently stated before, that the *fons et origo* of the whole dispute was the appointment made a year or two ago to a chair in the College. Dr. Leech, who has warmly championed the Owens College side, has come forward with a practical suggestion. He proposes that a committee, consisting of the Bishop of Manchester, the Mayor, and ten leading citizens, should be asked to act as a court of reference, to hear the evidence on both sides, and thereupon issue a report to guide the trustees and the public at large in their judgment; because it is to be borne in mind that, whether the Infirmary be extended upon the present site, or whether the College proposal to erect a new hospital in Oxford-road be adopted, the final tribunal must be the public, as from them must come the funds to carry into effect either scheme.

Influenza and Deaths of Public Men.

The epidemic of influenza through which we are passing has apparently been much more fatal than in last year's

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outbreak. Upwards of 200 deaths have been recorded from it, whilst the deaths from respiratory diseases have been 100 per cent. in excess of the normal numbers at this period of the year. Amongst the victims has been Mr. W. Scott Brown, who a few years ago, as a member of the City Council, the governing body of the Royal Infirmary, and other charitable institutions, took an active share in the public work of the city. Another old Manchester man, in the person of Dr. Samuel Crompton, has also lately passed away. Although at the time of his death he was living in the South of England, his life's work was all done here. More than half a century ago he was a student at the old Manchester School of Medicine; he afterwards became connected with several of our public charities, but his name is chiefly associated with the prominent part he took in the affairs of the Blind Asylum at Old Trafford and the sister institution for the deaf and dumb.

Victoria University.

At the recent meeting of the University Court one or two important matters pertaining to the granting of degrees were considered. In the faculty of medicine it was resolved that in future honours be granted in medicine and surgery at the second and final examinations for the degrees of M.B. and Ch.B. The lists will therefore now contain the names of candidates classified into first-class honours, second-class honours, and simple "passes." It was also resolved that five years be the minimum period of study for a medical degree. At the same court it was decided to establish degrees in music. Degrees cannot be granted at this University in any subject which is not taught in one or other of its colleges. Musical instruction has long been given in its higher branches at Owens, and its students will now be able, under proper regulations, to obtain the degrees of Mus.B. and Mus.D. from their own *alma mater*.

The Census.

The census returns for both Manchester and Salford are now to hand, and show one or two curious results. Thus in Manchester, with a population of more than half a million, the estimate upon which the mortality &c. has been calculated is singularly near the truth, and shows a discrepancy with the census returns of less than 150; whilst in the much smaller community of the adjoining borough of Salford the population has been over-estimated by more than 50,000, so that its death-rate, which has usually been considered below ours, is in all probability quite as high, if not higher. This is another illustration of the need for a census of our large towns being taken oftener than once in ten years.

Increase of Lunacy.

It is reported from our County Asylums that they are full to overflowing, and patients have had to be refused from Manchester. The guardians upon whom the responsibility falls of making provision for poor persons of unsound mind are placed in considerable difficulty in dealing with this question, and one of the boards last week had a lengthy discussion upon it. It was suggested that the County Council ought to make all needful provision for lunatics, and it appears that that body has at present a Bill before Parliament to obtain powers to deal with the whole question as it affects Lancashire. Whether the proportion of lunatics to population is actually increasing, or whether it is merely the normal increase due to increased population, appears somewhat uncertain.

International Hygiene Congress.

More than fifty gentlemen have been appointed as delegates from various parts of this district to the forthcoming Congress in London. Amongst the bodies represented are the Corporations of Manchester and Salford, the various Medical Societies, the Victoria University, the County Council, &c.

June 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death under Chloroform at Newcastle.

A CASE of sudden death under chloroform took place at Newcastle last week under somewhat similar circumstances to the one at Hartlepool which I noted last week. The case was one of empyema, and fatal syncope took place under the operation. An inquest has been held, and the jury found that the deceased died from syncope while under the influence of chloroform, which had been carefully and properly administered.

Cumberland.

Within the past week influenza is reported to have spread with great rapidity in Maryport and the surrounding district, and the medical men are very busy there.—An inquiry was held at the Court House, Keswick, on last Wednesday, into the alleged pollution of the river Greta by sewage from the town of Keswick, and from the lead mines at Threlkeld. It was stated that Maryport and district, numbering a population of 19,000, derived their water-supply from a mill-race on the river Derwent, which was joined by the Greta, so that Maryport was deeply interested in any pollution of the rivers which might take place. Samples had been taken by the Maryport health officer, and had been analysed by Dr. Frankland. The results gave evidence of serious pollution, and his report showed that the water was very dangerous and quite unfit for drinking or dietetic purposes. All the sewage of Keswick and the refuse from the pencil works were discharged into the river.

Durham University Honours.

The announcement that, at a convocation to be held at Durham University on Tuesday, June 23rd, amongst others down to receiving degrees, it is proposed to confer the new degree of D.Hg. (Doctor in Hygiene) on Mr. H. E. Armstrong has given general satisfaction to the profession here. Mr. Armstrong's work as a sanitarian is well known, while his position as medical officer of health for this city and as lecturer on Sanitary Science at the Durham College of Medicine has afforded him opportunities of which he has fully availed himself for the cause and advance of public health.

British Gynæcological Congress in Newcastle.

The attendance at the Congress of the following professors has been announced: Professors Engelman of St. Louis, U.S.A.; Johnstone of Cincinnati, U.S.A.; Maunsell, Professor of Surgery in Otago University, New York; and Thompson of Rome; and other distinguished foreigners have promised to be present, and have offered papers. At the end of the week an excursion has been arranged to the Roman Wall, which will be conducted by Dr. Hodgkin, after which the party will be entertained by Dr. William Murray of this city at his seat, Swinburne Castle, on the North Tyne.

A New Convalescent Home at Hexham.

The Newcastle Cathedral Nurse and Loan Society, finding their convalescent home at Shotley too small for the requirements of their poorer patients, have taken steps to erect a new one at Hexham. The house will stand within its own grounds, and will accommodate twelve patients.

Fatal Accidents in the Durham Mining District.

Mr. Thomas Bell, the Government inspector of mines for the Durham district, has issued his annual report. The Durham district comprises the southern part of the county of Durham, the county of Westmoreland, and the North Riding of Yorkshire. The summary of deaths resulting from fatal accidents shows that the number of deaths caused by the giving way of the roof and side in coal mines has been thirty, which is nine less than last year, and six less than the average of the preceding five years. The deaths from this cause in the Cleveland ironstone mines have been eight, and are nearly the same as the average of the preceding five years. The number of deaths from miscellaneous causes underground in coal mines were twenty-two, which is six less than the average of five years. As to the metalliferous mines, the inspector says that they have been remarkably free from serious accidents, and no death has taken place during the year, which is the first time since they came under inspection that so long a period has elapsed without a fatal accident. Metalliferous mining in the north of England is now at a low ebb, and would appear to be gradually dying out. Foreign competition has cut down the price of minerals to such an extent that the mines are unremunerative, even when the miners are working at starvation wages.

Newcastle-on-Tyne, June 10th.

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EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

The Edinburgh Medico-Chirurgical Society.

AT the meeting of this Society last week Dr. Allan Jamieson showed a whole family which had been affected with favus, and which he had treated successfully. The origin of the affection was not known. Dr. Andrew Smart showed a woman who had been trephined, when nearly dead, for what he believed to be basal hæmorrhage. He claimed it as the first instance of successful trephining for basal hæmorrhage. Dr. Boddie read a paper on Relapse or Recrudescence in Scarlet Fever, illustrated by two cases, and with references to the literature of the subject. It gave rise to considerable discussion, and the general opinion was that the kind of cases referred to were really cases of reinfection. The author of the paper was not, however, disposed to agree with this view. Dr. Lundie read the account of an interesting case of "Spontaneous Pneumothorax and Pneumopericardium," which had recovered without any treatment beyond rest. The next meeting of the Society on the 17th inst. is to be devoted to the exhibition of patients and pathological specimens.

Inebriates and Habitual Criminals.

A public meeting was held in Edinburgh last week and presided over by the Lord Provost to consider how best to deal with the habitual criminal and the inebriate. Sir Douglas Maclagan had charge of the first resolution expressing the urgent need for more effective legislative means in dealing with these cases. Other motions in the same direction were carried, and a committee was appointed to wait on the Lord Advocate and the Secretary for Scotland to lay the views of the meeting before them, and generally to watch over the whole matter. This is an important move in a much-needed direction, and there is no doubt that medical opinion is gradually but surely moulding Scottish public opinion in favour of legislative restriction for inebriates.

St. Bernard's Well, Edinburgh.

As a result of the measures being taken for the purification of the water of Leith by laying a pipe track, the necessary excavations have so affected the springs supplying the well that it has dried up. The observations made during the operations seem to leave no room for doubt on the part of even the most sceptical that the water of the well was a genuine mineral water. It is expected that steps will be taken to save the water and restore the supply to the well.

Death of Dr. Struthers of Leith.

By the death of Dr. James Struthers, one of the oldest and best-known practitioners in this neighbourhood has been removed. He was a pupil of Alison, and graduated at the Edinburgh University in 1843. Soon after graduation he commenced practice in Leith, and for over forty years has had the leading practice both there and in the adjoining districts. He was much trusted and valued as a practitioner, and greatly respected as a man. He took no forward place in public affairs, and although one of the senior Fellows of the College of Physicians, and one who might have occupied the presidential chair some years ago, he did not do so, as it was understood that it was a distinction he was not prepared to accept. He died at the age of sixty-nine, and was unmarried.

Health of Edinburgh.

The mortality last week was 116, making the death-rate 22 per 1000. Diseases of the chest caused 48 deaths and zymotic diseases 6. The intimations for the week were—typhoid fever, 1; diphtheria, 3; scarlatina, 7; measles 126. The death-rate in Leith was 17·50 per 1000.

June 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Medical Benevolent Fund Society of Ireland.

THE annual meeting was held last week, presided over by the President of the Royal College of Surgeons. From the forty-ninth annual report of the central committee, it appears that the income of the Society for the eleven months ending April 30th was £1081 4*s.* 9*d.*, of which £986 10*s.* was granted to applicants and £29 was invested, the expenses of management amounting to £124 6*s.* 3*d.*, a sum which seems higher than it might be. The committee state that they cannot but feel disappointed that so great a number of their professional brethren, both in the large towns and throughout the country, still turn a deaf ear to applications for assistance which are repeatedly made to them by the local honorary secretaries. This year eighty-one applications for assistance were received by the committee, of which ten were new. They consisted of six from medical men, sixty-eight from the widows, and seven from the orphans of medical practitioners. Mr. Croly, President of the College of Surgeons, having handed in a subscription of twenty guineas, the proceedings terminated.

National Eye and Ear Infirmary.

During the past year 404 persons were admitted to the wards, and at the extern department there were 2460 new patients. The committee are desirous to enlarge the infirmary, so that the accommodation (thirty beds) may be doubled, and a sum of £7000, it is estimated, will be required to erect a new building. Negotiations are proceeding in reference to the amalgamation of the institution with St. Mark's Ophthalmic Hospital, and it is considered probable that a satisfactory solution of the matter may result. The union of the two hospitals would, however, require a large sum for the erection of a proper hospital to contain over 100 beds, and a considerable time must necessarily elapse before the required contributions could be obtained.

Cruelty to Children.

The Cork Branch of the Society for the Prevention of Cruelty to Children has been of much service since its formation, and last week a prosecution instituted by the Society shows what good can be effected. A person named Connell beat his boy aged six years—for going to see his mother, from whom Connell was separated—with a horse whip, inflicting fifteen severe wheals on his body. The boy was exhibited in court, and the prisoner, who had five convictions against him, was sentenced to go to gaol for three months with hard labour, and in default of bail, at the termination of his sentence to serve an additional three months.

Galway County Infirmary.

It is stated that Mr. Balfour intends to introduce a small Bill before Parliament for a grant towards the maintenance of this institution as a general hospital, and it is believed that it will become law before the close of the present session. In the meantime subscriptions are being asked to keep the hospital open until the grant towards its maintenance is conceded, and about £50 have already been contributed by the governors of the infirmary.

Address and Presentation to Mr. Henry Pentland.

An address, together with a purse containing 100 sovereigns and a secretaire, have been presented to Mr. Henry Pentland, L.R.C.S.I., by his patients and friends residing at Mohill, co. Leitrim, where he has resided for the past ten years. After the presentation the company were entertained by Mr. and Mrs. Pentland at their residence in Mohill.

Trinity College Annual Athletic Sports took place on Monday. The races were not particularly good, only one competitor obtaining a standard prize.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The Elimination of Carbon Monoxide.

AT a recent meeting of the Academy of Sciences, M. de Saint-Martin recorded the results of some interesting experiments which he had undertaken on the lines laid down by Claude Bernard, with a view of testing how far and in what manner carbon monoxide may be capable of elimination from the blood when inhaled in quantity sufficient to cause poisonous symptoms, but insufficient to bring about actual death. These experiments demonstrated clearly the fact which was constant, that in a mixture of blood partly oxygenated, partly charged with CO, and preserved from contact with the outer air at a temperature of 38° C., a certain quantity of the carbon monoxide disappeared. This result was in all probability brought about by

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the conversion of the carbon monoxide into carbonic acid. At first sight this would appear to be in direct opposition to the experience of Donders, who on passing a current of oxygen over blood already impregnated with CO was unable to find the slightest trace of carbonic acid; but the contradiction in results was only apparent, for Donders' experiment lasted for one hour only, and at the end of this time M. de Saint-Martin himself was unable to detect any diminution in the amount of carbon monoxide, the diminution, however, being very appreciably marked later on. Claude Bernard taught that blood charged with CO was unalterable, but according to M. de Saint-Martin this opinion cannot be held too absolutely. Schutzenberger has shown that blood well oxygenated and preserved from further impregnation in a tube at 37° C. loses three to four cubic centimetres of its oxygen per hour. M. de Saint-Martin's experiments have led him to the conclusion that in blood partially and feebly charged with carbon monoxide the loss per hour is about seven or eight times less.

An Unrecorded Symptom of Pertussis.

Amongst the premonitory symptoms of whooping-cough authors mention conjunctivitis with excessive lacrymal secretion; but according to Dr. Huguin of Tourteron, to these ocular symptoms there should be added photophobia, with dilatation of the pupil, which he has observed pretty constantly in cases under his care, and that in the absence of all medicinal treatment, by belladonna or otherwise. M. Huguin's attention was first drawn to these hitherto unrecorded signs by the cases of two children, aged six and eight years respectively, in whom were present, in addition to the cough, not yet characteristic of the catarrhal period of the disease, marked dilatation of the pupils, with photophobia. Some time afterwards, while still in professional attendance on the children, a servant girl aged eighteen, in the same household, in whom there was as yet no suspicion whatever of the ordinary symptoms of whooping-cough, was found to be affected with photophobia and dilatation of the pupils. Pertussis was, however, diagnosed, and this diagnosis was subsequently proved to be well founded by the supervention of the characteristic cough of a typical whooping-cough.

Statistics of the Pasteur Institute in 1890.

During the year 1890 1546 persons were submitted to the antirabic treatment. Of these, eleven died of hydrophobia after the conclusion of the inoculatory treatment, thus giving a total mortality of 0·7 per cent. A further distinction is drawn in that, of the foregoing eleven fatal cases, six succumbed within fifteen days after cessation of the treatment, and five at a later period. In judging the efficacy of the inoculations, it is considered by the authorities at the Institute to be hardly fair to include the six deaths that took place within the fortnight following the treatment, for it is argued that, from experiments which have been made on dogs, one is justified in assuming that the six patients in question had their nervous centres invaded by the virus during the treatment. The authors of the statistics therefore claim, while giving the total mortality as 0·7 per cent., that the percentage of deaths should really be put down as 0·3 only. But in either case it will be generally admitted that the record is an excellent one.

A Danger of Telephones.

An operator at the central telephone office recently met with a somewhat serious accident, which goes to show that the use of the telephone may not be unattended with a certain amount of danger. Desiring to correspond with a distant station, he sounded the alarm in the usual way, and, the signal of attention being given from the other side, he placed the receiver to his ear. He had no sooner done so than he received an electric shock which caused him to stagger and fall violently to the ground, with the instrument still in his hands. In his fall he was cut about the eye and forehead. Luckily he escaped without the serious consequences which a little more force in the current might have entailed.

The Difficulties of Abbreviations.

The custom which obtains in England of indicating distinctions or titles by letters following the name of the holder or possessor is a sore puzzle to the understanding of the average French compositor. An amusing example of this little difficulty may be seen in the list of members of the forthcoming Hygienic Congress, which was recently given by some of your Gallic contemporaries. For instance, the following gentlemen enjoy the distinctions, whatever these may be, indicated by the letters affixed to their names: Sir J. Fayrer, K.C.J.S.M.D.F.R.S.; G. B. Longstaff, F.C.S E.D.; Mapother, F.R.C.S.J.E.J.; Professor "Henri" Robinson, M.J.N.S.T.C.E.; D. P. Poore, J.L.I.R.C.P.; and so on. Doubtless the average French reader will be much enlightened, if not overawed, by the formidable array of talent which this modest alphabetical instalment portends.

Paris, June 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The late Sir Francis Murphy.

BY the death of Sir Francis Murphy at the ripe age of eighty-two years the College of Surgeons of England has lost one of its oldest members. Sir Francis Murphy was born in Cork in 1809, was early apprenticed to the medical profession, pursued his studies at Trinity College, Dublin, and was admitted a Member of the College of Surgeons in the Reform Year. After taking his diploma he emigrated to New South Wales, arriving in Sydney in June, 1836. Shortly after his arrival the then governor of the colony, the great Sir Richard Bourke, appointed Mr. Murphy colonial surgeon of Argyle County. Four years afterwards he married, gave up the practice of his profession, and took to pastoral pursuits. In 1847 he went south to the Port Phillip settlement, took up land in the Murray district, and on the foundation of the colony of Victoria he entered public life as Member of Parliament for his district. He was immediately chosen by the Legislative Assembly as its first Speaker, an office which he filled with rare dignity and firmness. He assisted at the foundation of the University of Melbourne, and was for many years a member of the University Council and a trustee of the Public Library. It was for these and many other public actions that the honour of knighthood was conferred on him.

More Chloroform Deaths.

Since my last letter there have been two deaths announced from chloroform. One was at the Melbourne Hospital, the other in private practice. The hospital case was that of a man admitted for very severe injuries. He died during the administration of the anæsthetic, and the medical evidence went to show that death was due to the chloroform accelerated by severe internal injuries, and that, if the man had not died under the anæsthetic, he would have succumbed to his injuries within twenty-four hours. In answer to the coroner (Dr. Youl), Professor Allen stated that he was in favour of the appointment of a teacher of anæsthetics. Dr. Youl said he had suggested such an appointment over and over again, but that the hospital staff and the committee had ignored his remarks. He hoped they would pay more attention to Professor Allen. Last year there were two deaths from chloroform, and in the first quarter of this year there have been two, if not three, in the same institution. According to the secretary, the Melbourne Hospital average is *one death in a thousand.* The other death recorded was that of a leading railway contractor of New South Wales. He was a man of middle age, in fairly good health, but suffered from anal fistula, and it was during an operation for the cure of the fistula that death occurred. From the medical evidence it was not quite clear whether the patient died from chloroform, or ether poisoning, or shock. He had shown great anxiety, and had expressed much fear of the operation, and was no doubt in a very depressed state. The jury, however, acting on the medical evidence, gave a verdict of death from chloroform. Out here the use of chloroform as an anæsthetic is the rule, the use of ether the exception; and, whatever the reason may be, there seems to be an excessive number of deaths under chloroform. Some put it down to impure drugs, others to the idiosyncrasy of the patients, and others to that unknown factor "mere chance." It is a question that requires looking into.

Strychnine in Snake-bite.

The success of strychnine as an antidote to the virus of venomous snakes seems to be considered no longer a matter of doubt. Numerous cases have been recorded of late where this remedy was used hypodermically, and all but a few got well in a very short space of time. Those cases where

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death resulted were in most instances not seen until many hours after being bitten, so that the strychnine treatment was of no avail. But almost at the same time that the virus of the snake seems to have been overcome a death is announced from the bite of the "Kalipo," or *Latrodectus scelio*, a brown or black-brown species of spider, with red spots on the upper part of the body. The Hon. Dr. Cockburn of South Australia records a dozen cases of poisoning by the bite of this red-spotted spider. The symptoms in all the cases were well-marked and lasted two or three days. They consisted of acute pains in the body and limbs, with profuse sweating, and, in some cases, paralysis of the lower extremities. Dr. Cockburn treated his cases successfully with strychnine internally.

April 27th.

Obituary.

JAMES R. LANE, F.R.C.S.

WE regret to announce the death of Mr. James Robert Lane, F.R.C.S., for many years surgeon to St. Mary's Hospital, Paddington, and to the London Lock Hospital, to both of which institutions he subsequently became consulting surgeon. Born in 1825, and educated privately, he entered the Grosvenor-place School of Medicine in 1843, and, after a distinguished career as a student, became a Member of the Royal College of Surgeons in 1847. He was demonstrator and subsequently lecturer on anatomy at the Grosvenor-place Medical School, surgeon to the Pimlico Dispensary, and house surgeon to the Lock Hospital. In 1850 Mr. Lane obtained the Fellowship of the College of Surgeons by examination, and upon the foundation of St. Mary's Hospital was appointed assistant surgeon to that institution, where he subsequently held the posts of lecturer on anatomy, practical surgery, and surgery. He was also surgeon to St. Mark's Hospital for Fistula. His connexion with the Lock Hospital enabled him to obtain a profound knowledge of venereal diseases, and his interest in this subject was demonstrated by the active part which he took in promoting the Contagious Diseases Act. His evidence before the Commission was of the greatest value to the profession and to the community at large, and assisted in no small measure in the passage of the Act, the repeal of which in a later year was a source of the greatest regret to him. Closely associated both in hospital work and in private practice with his great uncle, Samuel Lane, James Lane was greatly influenced by the conservative principles which guided his illustrious relative. Thus, though his practice might perhaps be considered by a younger race of surgeons as not sufficiently "advanced," it had the overwhelming merit of being absolutely free from rash and speculative interference. If James Lane advised that such-and-such an operation should not be performed, there might perhaps be some little doubt still lingering in restless minds; but, on the other hand, if he declared in favour of operation, every one in the theatre or at the bedside felt satisfied that the proceeding was amply justified. By this the writer wishes to convey a well-merited and respectful compliment. There should be on the staff of every hospital such a man—not merely someone who is ready to apply the brake, as it were, to the too rapidly revolving wheels of contemporary surgery, but one whose extensive and ripe experience can command regard. As a surgeon, Lane was not only good, but excellent in every department; it was, however, in connexion with operations in the pelvic region that he distinguished himself. Those who watched his long and slender fingers dealing with a difficult case of vesico-vaginal fistula could not fail to be impressed by his manipulative skill. He delighted in these plastic operations, and though possibly his equals in the art might have been found, it is quite unlikely that his superiors would be forthcoming. In rectal surgery, too, he greatly excelled, and had his health been better he would doubtless have held a leading position in this branch of practice. In connexion with the treatment of vesical calculus, Lane should specially have been seen. Lateral lithotomy upon a straight staff (to which he had added a short rectangular beak) was the only cutting operation that he performed, and this he did to perfection. The writer—who is no stranger to lithotomy—has seen many surgeons cut for stone, but he never met with such a master of the art as Lane. As the writer looks back into his memory he sees that he will be doing Lane as an operator scant justice unless he makes reference to the skill and precision with which he would ligate an artery in its continuity. He had a splendid working knowledge of anatomy, and a very delicate touch. His hands, indeed, seemed intended for the fine operations in which he took so much delight. For the removal of large tumours, of joints, or of limbs, they were far less suited. Indeed, these operations and others which should be done in the standing position he would often pass on to a junior colleague. In the prime of life, and when his success in the field of surgery seemed assured, he commenced to develop symptoms of locomotor ataxy, which advanced slowly but insidiously, compelling him gradually to give up his appointments, so that in 1880 he was forced to sever his connexion with St. Mary's Hospital. For the last twenty-five years he was a martyr to the acute sufferings inseparable from his malady, but continued notwithstanding to interest himself in all matters relating to hospital administration. His friends were wont to say, "What a surgeon Lane would have been but for his locomotor ataxy!" The foregoing remarks show, however imperfectly, what an excellent surgeon he was in spite of that tremendous disadvantage. Strong in health and limb, nothing could have prevented his taking one of the very foremost places in our profession. As it was, his infirmity made him diffident at times and almost shy. The difficulty which he experienced, even years ago, in getting about the wards prevented his becoming a great clinical teacher. He preferred going his rounds on the arm of his house surgeon, with his dressers and a few students. Yet his teaching was always sought for and keenly appreciated. He was a man with splendid courage. So long as it was practicable he fought against his calamity and stuck to his hospital work. No one ever worked at greater disadvantage. Patiently and pluckily he worked on, without grumble or resentment. Conservatism was, as already remarked, one of the chief characteristics of his practice and teaching. With this *fin de siècle* restlessness, aggressiveness, and push Lane had no sympathy. Shams, advertisements, and quackery he hated with great bitterness. His character might be briefly summed up in the statement that he was a refined and honest surgeon, and a true English gentleman. The esteem in which he was held at St. Mary's Hospital was evidenced by the presentation to him in 1880 of a valuable testimonial subscribed by the past and present students. In his student days Mr. Lane was an active member of the St. George's Hospital Boat Club, which in those days was a prominent feature in the rowing world, and was on two occasions in the winning crew of the Ladies' Plate at the Henley Regatta. Mr. Lane died on Saturday last, at the age of sixty-five, of acute pneumonia. The funeral took place on Thursday at the Fulham Cemetery.

WILLIAM HAINING, M.D., L.R.C.P. EDIN.

THE demise of this well-known medical practitioner at Chester took place on the 2nd instant, at his residence, Foregate-street. He was born in the district of Annan, Dumfriesshire, some forty-seven years ago. He obtained his medical qualifications in 1868–69, and in the latter year became house surgeon to the General Infirmary, Chester. After five years' work there, he established himself in a general practice in the city, which he conducted until his death. He held several local medical appointments, was surgeon-major of the 1st Cheshire and Carnarvon Artillery Volunteers, and had he lived for another year would have occupied the presidential chair of the Chester Medical Society. He was a contributor to the medical journals of several valuable articles.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the College held on Thursday, the 11th inst., the minutes of the ordinary meeting of the Council of May 14th were read and confirmed.

The following resolutions, dated May 15th, of the Board of Examiners in Dental Surgery were read, approved, and adopted:—

1. That the Practical Examination for the Licence in

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Dental Surgery be held at Guy's Hospital Medical School so soon as the necessary arrangements are complete, and thenceforth in turn with other recognised Dental Schools.

2. That Clause 8 of the Regulations be altered so as to permit a student to obtain the necessary instruction in Mechanical Dentistry from a competent practitioner, or under the direction of the superintendent of the mechanical department of a recognised dental hospital, where the arrangements for teaching mechanical dentistry are satisfactory to the Board of Examiners in Dental Surgery.

The Council then proceeded to the election of the examiners in various subjects.

First Professional Examination under the Scheme.

Elementary Anatomy: Messrs. J. Stanley Boyd, W. F. Haslam (Birmingham), J. Ernest Lane, C. Barrett Lockwood, and Bilton Pollard.

Elementary Physiology: J. Rose Bradford and W. G. Spencer.

Second Examination under the Scheme.

Anatomy: William Anderson, J. N. C. Davies-Colley, Howard Marsh, and G. D. Thane.

Physiology; W. Dobinson Halliburton, Vincent D. Harris, and B. Thompson Lowne.

Third Examination under the Scheme.

Midwifery: Drs. W. Spencer Griffiths, G. Ernest Herman, Peter Horrocks, and J. Baptiste Potter.

First Professional Examination for the Fellowship.

Anatomy: W. H. Bennett, W. Bruce Clarke, A. Pearce Gould, G. H. Makins, and Frederick Treves.

Physiology: John Barlow, C. W. Mansell Moullin, D'Arcy Power, and Gerald F. Yeo.

Diploma in Public Health: Drs. Thomas Stevenson and R. Thorne Thorne.

A letter of the 29th ult., from Sir C. Lennox Peel, K.C.B., was read, stating that, in consequence of the rejection by Convocation of the Scheme for the Reconstitution of the University of London, the Lords of the Council now propose to take into consideration the petition of King's College and University College praying for the grant of a charter for a Teaching University for London, and will hear counsel on the matter at some date shortly to be fixed, and requesting that, in the event of the Royal Colleges desiring to be heard by their lordships, twenty-five copies of a joint case may be lodged at the Privy Council Office on or before the 22nd inst. This was referred to the delegates of the College on the University of London question, who were authorised to confer with the delegates of the Royal College of Physicians on the subject.

A letter of the 8th inst. from Dr. Liveing was also read, inviting the Council to join the College of Physicians in making a common or separate representation to the Privy Council in the sense of the following resolution adopted by the University committee of that College—viz.: "Considering the gravity of the questions at issue, and the variety and importance of the interests concerned, in respect to medical education, examination, and the granting of degrees in medicine, in the proposals for the constitution of a new University for London, this College (the Royal Colleges) would respectfully urge on the Lords of the Council that more time should be allowed for the preparation of a (joint) case than is proposed in their communication of May 26th last."

It was agreed to make a joint representation with the Royal College of Physicians in the plea for more time to consider the question. A letter from Mr. A. Milman, Registrar of the University of London, was read, and laid before the Council. In it he stated that the Senate, although unable to proceed with the Scheme for the reconstitution of the University in consequence of its rejection by Convocation, have by no means abandoned the idea of making such an arrangement as will maintain the essential principles which have been agreed to, and that they believe that, under the provisions of the existing Charter of the University and of the Medical Acts, closer relation between the University and the Royal Colleges and Medical Schools, which has been so earnestly desired on all sides, may be brought about.

Letters from Dr. Henry Barnes and Mr. Roderick Maclaren of Carlisle were read, and laid before the Council. To the letter from Dr. Lediard requesting the intervention of the Council in the case of William Kerr, the Council replied that it was not in their power to take action in the manner suggested in regard to the case to which his communication relates.

A letter of the 16th ult. from Dr. Liveing was read, reporting the proceedings of the Royal College of Physicians in reference to the report of the Committee of Management on the scheme for a five years' curriculum, and the communications from this College respecting the same.

A letter of the 8th instant was read and entered on the minutes from the President, reporting the proceedings of the General Medical Council at their late session.

The best thanks of the Council were given to the President for his services as representative of the College on that Council.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on June 4th, Professor Foster was appointed the representative of the University on the Council of the Marine Biological Association. Also the following degrees were conferred:—

Doctor of Medicine.—Francis Frederick Schacht, Trinity.

Bachelor of Medicine and Bachelor of Surgery.—Cyril Henry Cayley, Pembroke.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, were at an ordinary meeting of the Council on Thursday, June 11th, admitted Fellows of the College:—

Pronger, Charles Ernest, L.R.C.P. Lond., South Kensington; Diploma of Member dated Jan. 27th, 1876.
Morley, Edward John, L.R.C.P. Lond., Chatham; Jan. 21st, 1879.
Nance, Henry Chester, L.R.C.P. Lond., Norwich; May 18th, 1880.
Turton, James, L.S.A., Brighton; July 29th, 1880.
Wallace, F. C., M.B. Cantab., St. James-street, W.; Jan. 25th, 1883.
Hughes, A. W., L.R.C.P. Lond., Musselburgh, N.B.; July 23rd, 1885.
Rayner, Herbert Edw., L.R.C.P. Lond., Maida Vale; Oct. 23rd, 1885.
Herbert, Herbert, L.R.C.P. Lond., Bombay Army; April 19th, 1886.
Stocks, William Percy, L.S.A., Salford; Nov. 10th, 1887.
Heaton, George, L.R.C.P. Lond., Birmingham; Feb. 9th, 1888.
Lucas, Albert, L.R.C.P. Lond., Bedford; Feb. 9th, 1888.
Teichelmann, Ebenezer, L.K.Q.C.P.I., Birmingham; Feb. 9th, 1888.
Roberts, John Lloyd, L.R.C.P. Lond., Colchester; May 10th, 1888.
Housman, Basil Williams, L.R.C.P. Lond., Taunton; Aug. 2nd, 1888.
Campbell, John, M.D. R.U. Irel., Belfast; Nov. 8th, 1888.
Macgregor, Jos. Johnstone, M.B. Lond., Royal Orthopædic Hospital; May 9th, 1889.
Cobbett, Louis, L.R.C.P. Lond., Weybridge; Feb. 13th, 1890.
Blacker, Geo. Francis, L.R.C.P. Lond., Blackheath; July 28th, 1890.
Johnstone, James, M.B. Aberd., Manchester; July 28th, 1890.
Kellock, T. H., L.R.C.P. Lond., Lambeth Palace-road; Feb. 12th, 1891.
Ross, Daniel McClure, Upper Berkeley-street, W.; not a Member.
Dyall, Thos. James, M.B. Lond., Hackney-road, N.E.; not a Member.

Seven other candidates passed the examinations, but not yet having attained the legal age (twenty-five years) will receive their diplomas at future meeting of the Council. Thirteen candidates were referred.

The following gentleman having passed the necessary examinations, and having conformed to the by-laws and regulations, was at the same meeting admitted a Member:—

Bates, James Curling, L.R.C.P. Lond., West Norwood.

The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, were admitted Licentiates in Dental Surgery:—

Allin, Charles James, St. Albans.
Badcock, Christopher Frampton, Tottenham-court-road, W.
Birkett, William, Morecambe, Lancs.
Blaaberg, Charles Jens, Argyle-square, King's-cross.
Breese, Frederick, Crouch Hill, N.
Coysh, Thomas Arthur, Brixton.
Forsyth, Harry Arthur, Claverton-street, S.W.
Gask, Arthur Cecil, West Kensington.
Harrison, Richard Malcolm Crowther, Camden-road, N.
Haynes, Frederick, Southsea.
Headridge, David, Manchester.
Hopson, Montagu Frank, Newbury.
Jones, David Richard, Swansea.
Longhurst, Percy Augustus, Barnes Common.
Stocken, Leslie Maury, M.R.C.S. Eng., Uxbridge-road, W.
Walker, Frederick Vincent, Doncaster.
Welham, George William, Brixton-road, S.W.

Seventeen candidates were referred to their professional studies for six months.

SUPERANNUATION GRANT.—Mr. Edward Pope, M.R.C.S., lately Medical Officer for the Aldbury District of the Berkhampstead Union, has been granted a superannuation allowance of £50 per annum.

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ROYAL METEOROLOGICAL SOCIETY.—On May 20th the offices and library of the Society were removed to more commodious rooms at 22, Great George-street, Westminster.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The President and Fellows of the Society will hold a conversazione at their House, 20, Hanover-square, on Tuesday, June 23rd, at 9 P.M.

HOSPITAL FOR ACCIDENTS, POPLAR.—The Hon. Sydney Holland presided at the thirty-sixth annual festival, held at the Holborn Restaurant last week. The chairman, in proposing "Success to the Poplar Hospital and Medical Staff," made a sympathetic allusion to the loss the institution had sustained by the death of their treasurer and trustee, Sir Robert Fowler. In speaking of the success the hospital had attained, he regretted that the accommodation was limited to thirty-six beds for men and eight for women and children. Exertions would be made to accommodate seventy people—fifty men and twenty women and children; then they would be able to cope with every accident occurring in Poplar. Subscriptions were announced amounting to £3887.

FUNERAL REFORM ASSOCIATION.—The thirteenth annual meeting was held by permission of the Duke of Westminster at Grosvenor House, Park-lane, on the 2nd inst. The Bishop of London, in the absence of the Duke, occupied the chair. The annual report presented recorded the receipt of a letter from the Prince of Wales approving of the objects of the Association. The Council again urge the imperative need of further legislation. The control over all burial grounds should be centred in that department of the executive which has for its primary object the conserving of the public health. Such concentration is, at present, the Society's chief aim. Having failed to induce the Government to institute an inquiry by Royal Commission into the whole question of burial, the Society has itself entered upon an inquiry into the extent to which burial grounds are harmful.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Goldsmiths' Livery Company has made grants of £50 each to the Westminster Ophthalmic Hospital and the Royal Hospital for Diseases of the Chest, City-road.—The late Rev. T. Myles (Aberlemno) bequeathed £50 to the Edinburgh Royal Infirmary.—The late Mr. P. Stewart Macliver by his will left £1000 each to the Bristol Royal Infirmary, the Bristol General Hospital, and the Bristol Hospital for Sick Children and Women.—The late Miss Hart, who was for many years sextoness of St. Bartholomew the Great, West Smithfield (amongst other charitable bequests), left £100 to the City of London Hospital for Diseases of the Chest, Victoria-park.—Messrs. T. A. de la Rue and Co., of Bunhill-row, London, have sent a donation of £105 to the Royal Hospital for Diseases of the Chest, City-road. — The Corporation of London has granted 100 guineas to the Evelina Hospital for Sick Children and 250 guineas to the Royal Free Hospital. — The Grocers' Livery Company has sent a donation of £50 to the North-Eastern Hospital for Children, London.—Under the will of Miss Mary Ann Eastwick, late of Keynsham, the following institutions will each benefit to the extent of £580—namely, the Bristol Royal Infirmary, Bath United Hospital, and the Hospital for Sick Children (Tyndall's Park) —The executors of the late Miss J. G. Harrison have sent a donation of £500 to the Great Northern Central Hospital, Holloway-road.—The Queen has forwarded a special donation of £50 to the Royal Hospital for Children and Women, Waterloo Bridge-road.—The late Mr. Peter Carmichael, of Arthurstone, bequeathed £3000 to the Dundee Royal Infirmary, and £1000 each to the Dundee Convalescent Home, Barnhill, the Glasgow Eye Infirmary, and the County and City of Perth Infirmary and Dispensary.—The late Mr. W. J. Edwards, of Essex-street, Islington, bequeathed £1000 each to the East London Hospital for Children and Dispensary for Women, the Royal Free Hospital, the Royal Hospital for Diseases of the Chest, and the Children's Hospital, Great Ormond-street, London; and £500 each to the Royal Westminster Ophthalmic Hospital and the Great Northern Central Hospital; also £200 to the City of London Truss Society, and £100 to the Islington Dispensary.—The late Mr. Thomas Walker, J.P., Doncaster, bequeathed £500 each to the Leeds Infirmary and the Doncaster Infirmary and Dispensary.

CUMBERLAND INFIRMARY.—It is proposed to enlarge the accommodation for not less than ten private nurses in this institution, and an appeal has been publicly circulated to raise £2000 to meet the initial expenses.

ST. MARY'S HOSPITAL.—The Prince and Princess of Wales will visit this hospital at the end of July to lay the foundation-stone of an important and extensive block of buildings about to be erected in Praed-street, completing the hospital in accordance with the original plan of the founders.

HOSPITAL FOR CONSUMPTION, BROMPTON.—For the past fifty years this valuable charity has been in existence, and continues to carry on its useful and beneficent work. The demands upon its resources, and the benefits it bestows, have uninterruptedly shown a large yearly addition. The total receipts from all sources for the past year were £32,533, and the disbursements £24,495. The committee are desirous that the Hospital Jubilee should be marked by some suitable memorial.

THE Children's Flower Service at St. Jude's, South Kensington, on the afternoon of Hospital Sunday, was again a great success, and some hundreds of children were present prepared with baskets of flowers and fruit. Their precious burdens were given to the vicar, who was waiting at the altar ready to receive the gifts of the little people. It would be difficult to imagine a more beautiful sight than was presented in the church at this time. After a short service several ladies whose carriages were in attendance conveyed the flowers and fruit to be distributed amongst the sick of the neighbouring hospitals. The children's offertory amounted to £96.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The next examination in England for the certificate in Psychological Medicine will be held at Bethlem Hospital, London, on July 16th, at eleven o'clock in the morning. The examination for the Gaskell Prize will take place on the following day at the same place. Examinations will be held in Scotland—on July 14th, at the Morningside Asylum, Edinburgh; on July 16th, at Gartnavel Asylum, Glasgow; and on July 25th, at the Royal Asylum, Aberdeen. Candidates are requested to give fourteen days' notice to Dr. Urquhart, Murray's Asylum, Perth, if they wish to be examined in Scotland, and to Dr. Fletcher Beach, Darenth Asylum, Dartford, if they wish to be examined in England.

CHARGE OF STEALING SURGICAL INSTRUMENTS.—Before Mr. Marsham, at the North London Police-court, on Tuesday, a well-dressed, superior-looking man, who gave his name as Arthur Roberts, twenty-six, was charged with stealing a case of surgical instruments, value £10, the property of Dr. H. Warneford Thomson, of 57, Queen's-road, Brownswood Park, N. The police believe the prisoner is the man referred to in the various warnings which have appeared in the medical papers. There were other charges against the prisoner. In Dr. Thomson's case the prisoner had been admitted into the consulting-room on pretence that he wished to consult the doctor on behalf of a friend. After he had gone the case of instruments was missed. The prisoner showed a great desire to get the case settled, and he admitted that he had pledged the case of instruments, and he gave every information to the police in that respect. Mr. Marsham remanded the prisoner.

METROPOLITAN HOSPITAL, KINGSLAND-ROAD. — The Princess Louise (Marchioness of Lorne) recently visited this institution, to aid the committee in freeing it from debt. Her Royal Highness walked through the wards, and subsequently the secretary made a statement to the effect that, though there was ward accommodation for 160 beds, the financial position only justified the opening of eighty. During the year under review there had been a large addition to both the in- and out-patients. In the provident department the attendances were 43,208 The income amounted to £6132, and the disbursements to £7528. The committee had borrowed £6000, on mortgage of the buildings and site, in order to close up the accounts connected with the building of the hospital. Situated in the midst of a poor and dense population, little local pecuniary aid was to be obtained, whilst the demands for medical relief were daily increasing. A programme of music was contributed.

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CENTENARY OF THE BIRTH OF MICHAEL FARADAY. H.R.H. the Prince of Wales has fixed 4 o'clock on Wednesday, June 17th, for the delivery by Lord Rayleigh of the first of the two lectures at the Royal Institution in connexion with this centenary; and Friday evening, June 26th, at 9 o'clock, has been appointed for the second of these lectures, which will be given by Professor Dewar.

DEACONESSES' INSTITUTION AND HOSPITAL, TOTTENHAM.—The twenty-fourth annual meeting of this institution took place on the 6th inst., in one of the wards of the building. Fresh work had been undertaken at Woodford, Barrow-in-Furness, Killearn, N.B., Rochdale, and Pimlico. The total number of sisters was 70, 39 being deaconesses, and 29 probation sisters. During the year they had admitted 17 sisters; 37 were in the parent home, and 13 in Sunderland Infirmary. The number of patients who had benefited by the ministration of the nursing sisters during the past year was 13,587.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The ninth annual dinner of this Society was held at the Criterion on Wednesday, June 10th, T. Gunton Alderton, Esq., the President, in the chair. The attendance of members was not large, but otherwise a very successful evening was spent. After the usual loyal toasts, "The West London Medico-Chirurgical Society" was proposed by Mr. Howard Marsh, and responded to by the President. "The Health of the Visitors" was proposed by Mr. Keetley, and Sir Thomas Crawford, K.C.B., and Dr. Watt Black, President of the Obstetrical Society, responded. "The President of the Society" was proposed by Dr. Pope. The toast of "The Officers of the Society" was proposed by Dr. Thudichum, and replied to by Dr. Wells, treasurer, and Mr. Leonard Mark and Mr. Eccles, the secretaries, to whom the Society is largely indebted, not only for the excellent arrangements of the evening, but also for its satisfactory position.

MEDICAL NOTES IN PARLIAMENT.

Sanitation of Egyptian Towns.

In the House of Commons on Thursday, June 3rd, Sir George Campbell asked the Under Secretary of State for Foreign Affairs whether, in view of Sir E. Baring's very unfavourable report of the sanitation of Egyptian towns, and the prevailing high mortality there, it was contemplated to allow the application to sanitation and other local purposes of the local town duties, which had hitherto been appropriated either to the central treasury or as part of the fund set aside for payment of the bondholders? And whether Her Majesty's Government would urge the adoption of an arrangement such as prevailed in all civilised countries, so that the local taxation should be applied to local purposes.—Sir James Fergusson: The Egyptian Government have just addressed a circular to the Powers parties to the Convention of 1884, asking their consent to the application of half the amount of the octroi duty to the improvement of the sanitary condition of Cairo, as this arrangement would entail an addition to the annual sums fixed by the Convention for the administration of Egypt, the consent of the Powers is required before it can be carried out.

The British West African Settlements.

Mr. Summers asked the Under Secretary of State for the Colonies whether his attention had been called to the insanitary condition of many of the towns and stations comprised within the limits of the British West African Settlements.—Baron H. de Worms said: "The Secretary of State is well aware that the sanitary conditions of many of the towns and stations in the British West African colonies are not by any means all that could be desired. Measures for their improvement are constantly being carried out, but these are limited by (1) the amount of funds at the disposal of the different colonial Governments, (2) by the difficulties of supervision caused by the climate, and (3) by the opposition frequently manifested by the natives themselves to sanitary improvements. A perusal of the reports sent home by the colonial governors and presented to Parliament will show that much, however, has already been done."

Ventilation of the House.

On Thursday, June 11th, Mr. Robert Reid asked the First Lord of the Treasury whether, in view of recent complaints as to the ventilation of the House, and especially the Committee Rooms, and in view of the fact that the Committee appointed in 1885 to report on the drainage and ventilation of the House was interrupted after the successful completion of the first half of its labours, he would reappoint a Committee to consider and report on the ventilation of the House.—Mr. Plunket, who replied on behalf of Mr. W. H. Smith, said he had no objection to the appointment of the Committee. For himself he should be very glad indeed to have the advantage of a Committee.

THE METROPOLITAN HOSPITALS INQUIRY.

Westminster General Dispensary.

On Monday, the 1st inst., the following evidence was given:—

Dr. W. Culver James, senior physician of the Westminster General Dispensary in Soho, examined by the Chairman, said that the patients who were treated in the dispensary must either have a subscriber's letter or pay one shilling. Exception was made in urgent cases and in cases of coloured persons. He believed that the latter exception came into force in "the slavery days." Occasionally he found the dispensary competing with the local practitioners, although everything was done to prevent such competition. The blame lay at the door of the subscribers, who distributed their letters too freely. He did not think that the charity was much abused. The staff of the dispensary consisted of three physicians, three surgeons, and a resident medical officer. By Earl Cathcart: The cost per letter was estimated at about 2s. 6d., and each patient visited the hospital on an average five times.

Mr. J. J. Johnson, secretary of the dispensary, stated that the institution was founded in 1774. Part of its work was to visit patients in their own homes. The home visiting was done throughout a radius of half a mile. Patients treated at the dispensary came from all parts of London.

The Royal General Dispensary.

Mr. John Faulkner, General Secretary of the Royal General Dispensary in Bartholomew's-close, said that this institution was founded in 1770. Its patients on an average cost 8s. 4d. each. He considered that the officers of the dispensary were in a position to devote more time to patients than the officers in the out-patient department of St. Bartholomew's General Hospital. The system of subscribers' letters prevented the dispensary being overcrowded. Twelve letters were given for a guinea. They had no paying patients. Their medical staff objected to paying patients on the ground that they should go to the local practitioners for treatment. The only students they had were pharmacy students.

The Committee then adjourned.

The Committee met again on Thursday, the 4th inst., Lord Sandhurst presiding.

The London Homœopathic Hospital

Mr. G. A. Cross, secretary to the hospital in Great Ormond-street, said, in reply to the Chairman, that the institution was founded in 1849. They had a capacity of ninety beds, and their working average would be about sixty-five beds. Want of funds as well as the necessity for providing room for the nurses accounted for the large margin between the working average and the capacity of the hospital. The administration of the hospital was practically in the hands of the board of management. The hospital was practically a free hospital. They did not insist upon a subscriber's recommendation, and they asked for no payment from patients. They had about 30,000 attendances per annum in the out-patient department, patients paying one shilling for a monthly ticket. There was an arrangement by which their lady dispenser checked the patients as they came in, and she had authority to make any inquiry she thought fit as to the circumstances of the patients. The medical staff were also told by the board to stop any patients who offered signs of being able to pay for treatment, and to defer consideration of their cases for inquiry. If necessity arose he should not hesitate to suspend an officer pending inquiry by the board. They had a plan of the drains of the hospital, which was carefully kept up to date. Their expenditure, according to the last statement of accounts, amounted to £4579, and their income to £4706. They were constantly appealing to the public for funds. They were about to rebuild their hospital. The work would require £30,000, of which they had already collected £27,000. The nursing department last year showed a profit of £650, which went to the funds of the hospital. At present they had no pensions for nurses, but the matter was being considered by the board. The accounts were audited by a firm of chartered accountants.—By Earl Spencer: He did not think that the number of persons requiring homœopathic treatment was increasing, but on the other hand it did not decrease. Theirs was the only homœopathic hospital in London. Sometimes, however, they suspected that patients were treated homœopathically in other hospitals, though not perhaps in the fashion they treated them. It was their practice to fund all legacies over fifty guineas.—By Lord Monkswell: They did not insist upon the shilling payment in the out-patient department. Many patients were treated free of charge; he should think about 5 per cent. of the patients.—By Lord Cathcart: Their drugs practically cost them nothing, but their appliances and other things a good deal.

Miss Brew, the lady superintendent of the hospital, gave evidence as to the nursing arrangements. There were, she said, fifty-five nurses, of whom thirty-four were engaged in private nursing. Certificates were granted them after three years' service.

The General Question.

Mr. Lawson Tait of Birmingham, in answer to the Chairman, said he did not practise in London, but had had some experience of hospitals in the north, in Edinburgh, and elsewhere. He was strongly opposed to large hospitals, which he considered much less efficient than those of moderate size. He considered any hospital with more than 200 beds to be a large hospital. It was impossible to do without out-patient departments in connexion with general hospitals, but they should be very much curtailed. The development of the provident dispensary system would lead to such a curtailment. He should like to see the out-patient departments of the general hospitals made consulting institutions for serious cases. At present the treatment of patients in out-patient departments was ridiculously hurried. He thought there should be some, central organisation for hospitals, and even a system of inspection. What was wanted more than anything else was community of management.—By Earl Spencer: He was aware of cases where eminent medical men in London had been compelled, owing to the regulations of the general hospitals, to start hospitals of their own. They were shut out from the general hospitals. He thought the appointments in London should be open to every one as in Paris.—By the Earl of Kimberley: He did not think that sufficient attention was paid to the sanitary arrangements of hospitals.—By Lord Zouche: The more successful a school became, the more difficult it was to obtain instruction, for the simple reason that there was lack of material for teaching. The experience of Edinburgh illustrated what he said.

After examining other witnesses the Committee adjourned.

The Select Committee of the House of Lords on the Metropolitan Hospitals met again on Monday, the 8th inst. Lord Sandhurst presided.

Workhouse Nursing.

Miss Louisa Twining, representing the Workhouse Nursing Association, examined by the Chairman, said it was forty years since her connexion with nursing at the Strand Union Infirmary in Cleveland-street

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commenced. The matron of a workhouse infirmary was appointed by the guardians, quite irrespective of any nursing qualification. She was responsible to the medical superintendent, who in his turn was responsible to the board of guardians, and ultimately to the central board. In her opinion the matron should have more undivided authority over the nurses, and she saw great evil in the medical officer being the supreme authority. As a matter of courtesy they gave way to the matrons in many things, but they were not legally bound to do so, and the present arrangement gave every opportunity for friction. Some years ago a deputation from the Workhouse Nursing Association waited upon Sir Charles Dilke, who was then President of the Local Government Board, and urged upon him that none but hospital-trained matrons should be appointed to workhouse infirmaries; but that recommendation, which recently had been endorsed by Dr. Bridges, had never been carried out. She would like to see probationers trained from the beginning in the workhouse infirmaries. She did not consider that the hours of the nurses in the London workhouse infirmaries were too long. She would like to see outside medical men admitted to the infirmaries, and she also recommended the admission of students. The guardians objected to this, but there was not the slightest objection on the part of the poor. It was a complete delusion that the poor felt themselves neglected if they were attended by students.—The Chairman: It has been said that the patient is the prouder the more medical men he has around his bed.—Witness: I have heard it said, and speaking from my own experience I believe it is the case. The supervision of the hospital work carried on by the guardians was very poor; the guardians knew nothing about the work.—By Lord Cathcart: She was strongly of opinion that ladies should serve upon boards of guardians. She would not think much of the matron who objected to the supervision of ladies. Women were more sharp-sighted than men. A woman could make gentlemen believe anything. (Laughter.)—By the Chairman: The health of the nurses on the whole was very good. She thought it of the utmost importance that this inquiry should be extended to the country, where there was much more requiring reconsideration than in London. She thought that the infirmaries should not be associated with the workhouses.

The Hospital Saturday Fund.

Mr. Reginald Acland, chairman of the Hospital Saturday Fund, examined by Lord Sandhurst, said that this fund was intended to be a working man's fund. It was intended to interest working men in the management of the hospitals and to induce them to raise funds towards their maintenance. With two or three exceptions those in charge of the fund belonged to the working class. Last year the fund was incorporated under the Companies Act as an association not for profit. When the fund started in 1874 they collected £258 in the streets and about £5000 in the workshops, while last year they collected £5096 in the streets and £15,237 in the workshops. He considered that the street collection had almost reached its limit, but the workshops' collection had almost infinite capacity. They took subscriptions from clubs, but they were very small in amount. The largest sums came from the printers. The Board of Delegates appointed by the men in their workshops was the supreme authority. It had about 400 members and met quarterly. They had Distributing, Finance, Surgical Appliances, Workshops, and Street Collection, and Executive Committees. In the ordinary course of things the meetings of the board were attended by between eighty and ninety members. They had also about thirty local committees in different parts of London. There were 4301 firms who contributed at present to the fund. Each year a return was sent out to the hospitals. The whole amount for distribution was divided into three parts. The witness then described the way in which the fund was distributed. The Hospital Saturday Fund absolutely refused to give any grant to an institution which was not governed by a committee elected by the subscribers. Such cases had occurred occasionally. Last year he acted as secretary of the Distribution Committee, and he was very much struck at the time with the excessive cost of the small hospitals for management as compared with the large hospitals. He had taken nine of the largest hospitals, and he found that they expended in management 7 per cent. of the cost of maintenance. He had also taken nine average small hospitals, with less than thirty-five beds, and he found that they expended in management something like 30 per cent. of the cost of maintenance. The Hospital Saturday Fund paid no commissions, but in order to extend the work they had been advised to pay very considerable salaries. The expense in this direction had, however, been very much reduced, and they hoped that at the end of this year they should have reduced the expenditure, at all events, to about 10 per cent. of the total receipts. If the work went on extending at its present rate, they would soon be able to reduce it to 5 per cent. Last year they spent £750 upon surgical appliances. It was now proposed, by way of experiment, to supply teeth, and to undertake the removal of patients to hospitals. He considered that the working men of London generally had unbounded confidence in the hospitals. Whether their confidence was well applied was a question which their lordships in this committee might determine. They aimed at getting £100,000 a year. Personally he did not think they would reach that figure, but he hoped to see the sum of £50,000 reached in the course of a few years. This year the board hoped to receive £20,000 from the workshops. Among the aims of the fund were evening attendance at hospitals and representation of the working classes upon the boards of hospitals. He should like very much to see a universal system of hospital accounts.—By Lord Cathcart: He hoped the Hospital Saturday Fund would be as permanent as the Hospital Sunday Fund. The hospitals entitled to special consideration received special grants from the fund.—By Lord Monkswell: They had attempted to discriminate between the cost of the treatment of the various types of disease, but it would be of great advantage to them to have some standard of cost laid down by some undoubted medical authority.

Miscellaneous.

Mr. R. J. Newstead, secretary of the Royal London Ophthalmic Hospital, gave evidence as to its constitution and working. It was founded, he said, in 1805, and was intended entirely for diseases of the eye. The accounts were made up once a month, an arrangement which he considered very satisfactory. Last year the expenditure amounted to £6349, and the net income to £5496.

Mr. Daniel, honorary secretary of the British Hospital for Skin Diseases, gave evidence as to this institution, and Mr. Fitzroy Benham as to the Queen's Jubilee Hospital, Richmond-road, South Kensington.

The Committee then adjourned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 9th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	183	55	4	28	..	270	442
North-Western Hospital	123	31	..	13	..	167	445
Western ,,	134	18	..	14	1	167	224
South-Western ,,	135	23	..	8	..	166	240
South-Eastern ,,	124	19	..	14	1	158	462
Northern ,,	151	11	..	..	..	162	480
Totals	850	157	4	77	2	1090	2393

SMALL-POX.—*Atlas* hospital ship, 15.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERTON, J. E., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the New Mills Urban District.

BLAKISTON, A. A., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Glastonbury.

BRYANT, W. A., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Blackburn and East Lancashire Infirmary.

BUNTING, W. HARTLEY, M.B., C.M. Edin., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary, vice Dr. Wheatley, resigned.

CAMERON, JOHN, L.R.C.S. Edin., has been reappointed Medical Officer for the Parish of Kintore, Aberdeenshire.

CHAPMAN, CHAS. WM., M.B. Durh., M.R.C.P. Lond., has been appointed Honorary Physician to the Farringdon General Dispensary.

COONEY, JOHN EDWIN, L.R.C.P. Edin., L.F.P.S. Glasg., D.P.H. Camb., has been appointed Medical Officer of Health for Fulham.

DAWES, G. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Central District of the Sheffield Union.

DENNING, W. C., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Honorary Surgeon to the Royal South London Dispensary.

FORDE, T. A. M., L.R.C.P., M.R.C.S., has been appointed Resident Clinical Assistant to the South-Western Fever Hospital.

FORD, FRANK CHUBB, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

FRANCE, WM. I., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Deputy Medical Officer for Bury, vice Fletcher.

GORDON, J., M.D., C.M. Aberd., has been reappointed Parochial Medical Officer, St. Nicholas, Aberdeen.

GRAHAM, WM., M.D., M.Ch. Irel., has been reappointed Medical Officer of Health for Middleton.

HARDYMAN, GEO., M.B., C.M. Edin., has been appointed Honorary Medical Officer to the Eastern Dispensary, Bath.

JONES, H. P., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Mansfield Union.

LAWSON, JOSEPH, M.B., L.R.C.S. Irel., has been reappointed Medical Officer for the Todmorden Rural Sanitary Districts.

LITTLEJOHN, H. HARVEY, M.B., C.M., B.Sc. Edin., has been appointed Medical Officer of Health for Sheffield.

MARRIOTT, C. W., M.D. St. And., M.R.C.P. Lond., M.R.C.S., has been appointed Physician to the Royal Berkshire Hospital.

MAYNARD, EDWD. F., M.B., C.M., has been appointed House Physician to the Sussex County Hospital, Brighton, vice W. D. Calvert, resigned.

MORRIS, F. H., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Wellingborough Rural Sanitary District.

ORTON, JOHN, M.B., L.R.C.S. Irel., has been appointed Medical Officer and Public Vaccinator for Beeston and Woolaton, Notts.

PIGOTT, F. K., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the St. Chad's District, Shrewsbury.

REYNOLDS, E. S., M.D. Lond., M.R.C.S., has been appointed Visiting Physician at the Crumpsall Workhouse, and Medical Officer to the Receiving and Casual Wards, New Bridge-street, Manchester.

ROBERTSON, D. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Pickering Sanitary District.

ROBINSON, A., M.D. Durh., M.R.C.S., has been appointed Medical Officer to the Workhouse, Rotherham.

ROWLAND, F. MORTIMER, B.A. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Sussex County Hospital, Brighton, vice E. F. Maynard, resigned.

SCROGGIE, J. G., M.B., C.M. Aberd., has been reappointed Parochial Medical Officer, St. Nicholas, Aberdeen.

SHORT, THOS. S., M.B. Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the General Hospital, Birmingham.

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TAYLOR, JAMES, M.D., C.M. Irel., has been appointed Medical Officer for the Second District of the Andover Union, vice Elliott, deceased.

THURSFIELD, W. N., M.D. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the combined Rural Sanitary Districts, Salop.

TWAMLEY, H. J., L.R.C.S. Irel., has been appointed, *pro tem.*, Medical Officer for the Sible Hedingham Sanitary District, Essex.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRADFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—Resident Surgeon. Salary £100 per annum, with apartments, board, and washing.

COUNTY OF ABERDEEN.—Medical Officer, whose services may also fall to be made available as Chief Medical Officer of the eight Districts of the County. Salary as County Medical Officer £400 per annum.

COUNTY OF CAITHNESS.—Medical Officer of Health. Salary £300, with £50 for travelling and other expenses, except forms and official stationery and postage. (Apply to the County Clerk, Thurso.)

DORSET COUNTY ASYLUM.—Assistant Medical Officer at the Second Asylum. Salary £120 per annum, with board and furnished apartments.

EAST LONDON HOSPITAL FOR SICK CHILDREN, Shadwell, E.—House Surgeon. Board and lodging provided.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Assistant Physician.

GENERAL HOSPITAL, Birmingham.—Assistant Surgeon for three years. Honorarium £100 per annum.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary. Residence, board, and washing provided.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary £100 per annum, with board, washing, and lodging.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary £100 per annum, with board, washing, and lodging.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, lodging, and washing.

GUY'S HOSPITAL, S.E.—Five Assistant Dental Surgeons.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

LUNATIC ASYLUM, The Coppice, Nottingham.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, attendance, and washing.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £120 per annum.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Temporary Assistant Medical Officer to act as Locum Tenens for two or three months. No salary. Board, lodging, and washing provided in the Asylum.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Junior Resident Medical Officer for six months. No salary. Board and residence provided in the Hospital.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—Clinical Assistants for six months.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, W.—Obstetric Physician.

TUNBRIDGE WELLS GENERAL HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, furnished apartments in the hospital, gas, firing, and attendance.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—Physician to the In-patients.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician to the Out-patients for five years.

VICTORIA UNIVERSITY COLLEGE, Liverpool.—Holt Professorship of Physiology. Salary £375 per annum, plus share of students' fees.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Second House Surgeon. Salary £50 a year, with board and residence.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon for twelve months. Rooms, with board and washing, also honorarium of £25 at the expiration of the year.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance.

YORK COUNTY HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and residence.

YORKSHIRE COLLEGE, Leeds.—Lecturer on Sanitary Engineering. Stipend £200, and certain fees.

Births, Marriages, and Deaths.

BIRTHS.

COX.—On May 16th, at Falmouth, Jamaica, the wife of J. Leslie Cox, L.R.C.P., of a daughter.

DALZELL.—On June 4th, at The Mount, Totland Bay, Isle of Wight, the wife of Arthur J. W. Dalzell, M.B., of a son.

GULLAND.—On June 8th, at Malvern-hill House, Cheltenham, the wife of Surgeon-General Gulland, M.D., of a son.

LANGRAN.—On June 4th, at Castlemount, Axminster, Devon, the wife of Wm. Langran, L.R.C.P. Edin., of a daughter.

OWENS.—On June 6th, at Long Stratton, Norfolk, the wife of Charles Arthur Owen Owens, M.D. Brux., of a daughter.

RICE.—On June 10th, at 36, Banbury-road, Oxford, the wife of Edward Rice, M.D. Lond., of a son.

THOMPSON.—On June 3rd, at Dover-street, Hull, the wife of Staff-Surgeon Wm. Thompson, H.M.S. *Audacious*, of a daughter, stillborn.

MARRIAGES.

BROOK—WORTHAM.—On June 3rd, at St. Margaret's Church, Uxbridge, W. H. B. Brook, M.D., B.S. Lond., F.R.C.S., of Lincoln, to Katherine, fourth daughter of the late James Raymond Wortham, and granddaughter of the late James Wortham, of Royston, Cambs.

CROOK—KILLICK.—On June 4th, at the Parish Church, Hornsey, Herbert Evelyn Crook, M.D., B.S. Lond., F.R.C.S. Eng., of Margate, younger son of John Evelyn Crook, M.D., of Upper Norwood (late of Northfleet, Kent), to Ethel, youngest daughter of the late Samuel Killick, Esq., of the Court Lodge, Fawkham, Kent.

DANE—WEBSTER.—On June 2nd, at St. Michael's Church, Bournemouth, Harold Dane, M.R.C.S., L.R.C.P. Lond., son of the late Thomas Dane, Surgeon, South Hampstead, to May, elder daughter of Augustus Webster, the Holme, Bournemouth.

HOGARTH—DIAMOND.—On April 23rd, at Brixton, and on June 1st, at St. James's, Piccadilly, Dr. Christopher Whewell Hogarth, Brixton-road, son of C. Whewell Hogarth, Esq., Morecambe, Lancashire, to Juliet Gonville, daughter of Dr. Warren Diamond, Streatham-place, S.W., and granddaughter of the late Sir E de Gonville Bromhead, Bart., and Hugh Welch Diamond, M.D., F.S.A.

SIMPSON—GIBBON.—On June 6th, at St. Stephen's Church, Castle Hill, George A. Garry Simpson, M.R.C.S., of Acton, third son of the late Rev. Henry Trail Simpson, Rector of Adel, Yorkshire, to Ethel Maude, daughter of Henry Gibbon, Esq., of Kent House, Ealing.

SNAPE—HALM.—On June 3rd, at Marylebone Church, Ernest A. Snape, L.R.C.P. Lond., of Welbeck-street, W., to Mary, only daughter of the late F. Halm, of Mexico, and of Mrs. Halm, York-terrace, Regent's-park.

VERNON—DENCE.—On June 4th, at St. Mary's, Shortlands, Arthur Heygate Vernon, F.R.C.S., of Boscombe, Bournemouth, to Elizabeth Agnes, eldest daughter of Thomas Dence, Esq., of Shortlands, Kent

DEATHS.

ANDREW.—On June 7th, at 173, Chorley Old-road, Bolton, in his 27th year, Francis (Frank) Charles Andrew, M.R.C.S. Eng., L.R.C.P. London, third son of the late Henry Andrew, of Whalley Range, Manchester.

BOURNE.—On June 8th, at Abbey End, Kenilworth, Thos. Skeffington Bourne, M.R.C.S., third son of the late Edward Bourne, M.D., of Coventry, aged 67.

HAINING.—On May 12th, at 82, Foregate-street, Chester, William Haining, M.D., in his 47th year. (No cards.)

HARPER.—On June 8th, at Addison-road, Kensington, Henry Lewis Harper, M.D., aged 61.

KEMP.—On the 21st ult., at Worksop, Notts, of influenza, the wife of G. Lajus Kemp, M.R.C.S. Eng., L.R.C.P. Lond.

LANE.—On June 6th, at Matheson-road, West Kensington, James Robert Lane, F.R.C.S., Consulting Surgeon to St. Mary's Hospital, Paddington, aged 65.

MACK.—On June 8th, at 28, St. Paul's-road, Canonbury, Robert Mack, aged 61. No flowers, by request.

MINCHINTON.—On June 4th, at Bournemouth, Henry Jas. Minchinton, M.R.C.S., L.R.C.P. Edin., of Snodland, Kent, fourth son of the late Mark Minchinton, Esq., of Milborne, Port Somerset, aged 31.

SISSON.—On May 3rd, at 39, Groombridge-road, S. Hackney, of diphtheria, Herbert, second son of William John Sisson, Borras Gresford and student at the London Hospital, aged 28.

STRUTHERS.—On the 6th inst., at 39, Charlotte-street, Leith, James Struthers, M.D., F.R.C.P.E., aged 69 years. Friends will kindly accept this the only) intimation.

SUTTON.—On June 9th, at Highland, Sevenoaks, of influenza, Dr. Hy. G. Sutton, Physician to the London Hospital, aged 55.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

APPLETON, D., & Co., New York.
Transactions of the Twelfth Annual Meeting of the American Laryngological Association, held at Baltimore, May, 1890. pp. 131.

BAILLIÈRE, J. B., ET FILS, Paris.
Clinique Chirurgicale. Par U. Trélat. Tomes I., II. 1891.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
On Stertor, Apoplexy, and the Management of the Apoplectic State. By R. L. Bowles, M.D., F.R.C.P. Lond. 1891. pp. 125.
The Maybrick Case: a Treatise. By Alex. W. MacDougall, Barrister-at-law, Lincoln's-inn. 1891. pp. 606.

COX, HORACE, Bream's-buildings, Chancery-lane, London.
The Science and Art of Training. A Handbook for Athletes. By Henry Hoole, M.D. Lond. Second Edition. 1891. pp. 124. Price 1s.

ENGINEERING AND BUILDING RECORD OFFICE, Fleet-street, London.
Plumbing Practice. By J. Wright Clarke, Plumber. Second Edition. Illustrated. 1891. pp. 356.

EYRE & SPOTTISWOODE, London.
University of London General Register. Parts I. and II.: 31st Dec., 1890, and 31st March, 1891, respectively.

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FORDER, R., Stonecutter-street, London.
Disease and Marriage. By Henry A. Allbutt. 1891. pp. 80.

GRIFFIN, CHAS., & Co., Exeter-street, Strand.
The Surgeon's Pocket-book. By Surgeon-Major J. H. Porter. Revised and edited by Brigade-Surgeon C. H. Y. Godwin. Fourth Edition. 1891. pp. 274.

KEGAN PAUL, TRENCH, TRÜBNER, & Co., London.
Modern Cremation; its History and Practice. By Sir H. Thompson, M.B. Lond. Second Edition, revised and enlarged. 1891. pp. 163.
Carlsbad, its Thermal Springs and Baths. By J. Kraus, M.D. Fourth Edition. 1891. pp. 139.

LEDGER SMITH & Co., St. Mary Axe, London.
The Medical Digest. By Richd. Neale, M.D. Lond. Third Edition. 1891. pp. 794.

LEWIS, H. K., Gower-street, London.
Plain Talks on Electricity and Batteries, with Therapeutic Index. By H. R. Bigelow, M.D. 1891. pp. 85.
Notes on the Additions made to the British Pharmacopœia, 1890. By F. T. Roberts, M.D., B.Sc., F.R.C.P. 1891. pp. 22.
Minor Surgery and Bandaging. With an Appendix on Venereal Diseases. By Edward Martin, A.M., M.D. Illustrated. 1891. pp. 166.
Lewis's Pocket Medical Vocabulary. Second Edition. 1891. pp. 314.
Diphtheria; its Nature and Treatment. By Robert W. Parker, M.R.C.S. Third Edition. 1891. pp. 184.
Intubation of the Larynx. By Jas. P. Ball, M.D.Lond., M.R.C.P. Illustrated. 1891. pp. 54.

LIVINGSTONE, E. & S., Edinburgh.
Botany Notes, for Students of Medicine and Science. By A. Johnstone, F.G.S. pp. 116. Price 2s.
Zoology Notes for Students of Medicine and Science. By Alex. Johnstone, F.G.S. pp. 136. Price 3s. 6d.

LONGMANS, GREEN, & Co., Paternoster-row, London.
On Varicocele: a Practical Treatise. By W. H. Bennett, F.R.C.S. With Tables and a Diagram. 1891. pp. 105. Price 5s.

MACMILLAN & Co., London.
Lessons in Elementary Biology. By T. Jeffery Parker, B.Sc., F.R.S. Illustrated. 1891. pp. 408. Price 10s. 6d.

OLIVER & BOYD, Edinburgh.
An Introduction to the Diseases of Infancy. By J. W. Ballantyne, M.D., F.R.C.P.Ed. Illustrated. 1891. pp. 242. Price 10s. 6d.

STANFORD, EDWARD, Cockspur-street, Charing-cross, London.
Transactions of the Sanitary Institute. Vol. XI.: Congress at Brighton, 1890. pp. 352.

SCOTT, WALTER, Warwick-lane, Paternoster-row, London.
Bacteria and their Products. By German S. Woodhead, M.D. Edin. With Photo-micrographs. 1891. pp. 459.

THE NIGHTINGALE PUBLISHING COMPANY, New York.
Massage: a Primer for Nurses. By Sarah E. Post, M.D. Second Edition. With Photo-plates. 1891. pp. 47.

Koch's proposed Cure for Consumption, with Suggestions on the Prevention of Consumption; by C. Candler; reprinted from *The Argus*, Melbourne (G. Robertson & Co., Melbourne, 1891); price 2s.—Port St. Mary, Isle of Man, as a Health Resort; by A. Haviland, M.R.C.S. (Brown & Son, Douglas, Isle of Man, 1891).—Annales de l'Institut Pasteur, publiées sous le Patronage de M. Pasteur; par M. E. Duclaux. No. 5, Mai, 1891 (G. Masson, Paris).—Pathogénie du Choléra Morbus; par le Dr. L. Druzylowski (G. Steinheil, Paris, 1891).—Notes on the Midwives Registration Bill, prepared under the direction of the Midwives Bill Committee of the Midwives' Institute (The Midwives' Institute, London, 1891).—St. Paul's School in London, and its Scandals Past and Present; by James Beal (Pite and Thynne, Chelsea, S.W.); price 6d.—Étude sur l'Adénie, ou Pseudo-Leucémie (Maladie de Hodgkin); par Jean Crocq Fils (H. Lamertin, Bruxelles, 1891).—Annual Report of the Gordon Technical College, Geelong, for 1890 (H. Thacker, Geelong, 1891).—Woldingham as a Health Resort; by Wm. Gilford (Sutton & Son, Redhill, Surrey); price 6d.—Rhyming and Mnemonic Key to Materia Medica (Conjoint Examination); by M.D. (L. & J. Parnell, London); price 3s.—Revue Internationale de Bibliographie, Médicale, Pharmaceutique, et Vétérinaire, No. 5, Mai, 1891 (Jacques Lechevalier, Paris).—The Housing of the Poor; by F. H. Millington (Cassell & Co., London, 1891).—Corrosive Sublimate as a Disinfectant against the Staphylococcus Pyogenes Aureus; by A. C. Abbott, M.D. (Reprint from the St. John's Hospital Bulletin, No. 12, April, 1891).—Our Unseen Foes and how to Meet them: Plain Words on Germs in relation to Disease; by A. Wheeler (J. Wright & Co., Bristol, 1891).—Proceedings of the Society for the Study of Inebriety, No. 28, May, 1891 (H. K. Lewis, London); price 6d.—The Action of Prismospheres and Decentred Lenses; by A. Percival, M.A., M.B. Camb. (Reprint from the Archives of Ophthalmology, Vol. XX., No. 2, 1891).—The Dental Record, No. 6, June, 1891 (Published by the Dental Manufacturing Company, London), price 6d.—The Asclepiad, Second Series, No. 30, Vol. VIII.; by B. W. Richardson, M.D., F.R.S. (Longmans, Green, & Co., London); price 2s. 6d.—Report of W. M. Smith, Health Officer of the Port of New York, to the Commissioners of Quarantine of the State of New York, 1891 (J. B. Lyon, Albany).—The Public Health: Leprosy and Vaccination; by William Tebb (E. W. Allen, London, 1891).—Magazines for June: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister), Boys' Own Paper, Girls' Own Paper (Religious Tract Society), Scribner's, The Strand.

Medical Diary for the ensuing Week.

Monday, June 15.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M. Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Voelcker: Pathological Demonstration.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. M. Gunn: Diseases of the Orbit.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Reginald Harrison: Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture.
PUBLIC HEALTH MEDICAL SOCIETY (101, Great Russell-street, Bedford-square, W.C.).—6 P.M. Annual Meeting.

Tuesday, June 16.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: General Paralysis of the Insane.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: The Treatment of Lupus.

Wednesday, June 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Alcoholic Phthisis, with Clinical Cases.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Quarry Silcock: Retinal Affections.
ROYAL INSTITUTION.—4 P.M. The Right Hon. Lord Rayleigh will deliver the Faraday Commemoration Lecture.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Reginald Harrison: Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture.
ROYAL METEOROLOGICAL SOCIETY.—7 P.M. Mr. Alfred Hands: A curious case of Damage by Lightning.—Mr. William Ellis: Mean Temperature of the Air at the Royal Observatory, Greenwich.—Mr. W. F. Stanley: Phonometer.—Mr. Alex. B. MacDowall: Some Suggestions bearing on Weather Prediction.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M.

Thursday, June 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. R. M. Gunn: The Common Eye Diseases of Children and their Treatment.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. R. Brudenell Carter: Ocular Symptoms in Nervous Disorders.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. Geo. Stoker: Laryngeal Growths.

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Friday, June 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Clinical Demonstration in Graves' Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Erysipelas and Suppuration (Streptococci).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Heart and Circulatory System.
BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—General Meeting.
ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Reginald Harrison: Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture.

Saturday, June 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 11th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
June 5	29·90	W.	60	56	118	74	52	·07	Cloudy
,, 6	29·96	E.	58	55	106	68	53	..	Cloudy
,, 7	29·94	N.E.	52	48	92	59	49	..	Cloudy
,, 8	29·90	N.E.	55	50	109	65	48	..	Cloudy
,, 9	29·91	N.E.	56	52	104	62	53	..	Cloudy
,, 10	29·98	W.	57	51	112	71	49	..	Hazy
,, 11	30·13	N.E.	52	46	106	60	48	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

A FORTNIGHT'S HOLIDAY FOR POOR CHILDREN.

WE gladly respond to a request to give publicity to the wish and scheme of the Ragged School Union to give a fortnight's holiday in the country to the poor children attending its 200 schools and missions. Subscriptions should be addressed to the secretary, Mr. Kirk, Ragged School Union, Exeter Hall, Strand, W.C. No object could be more Christian or commendable.

"ETHNOLOGY."

To the Editors of THE LANCET.

SIRS,—I would suggest to "Inexpertus" to commence his study of ethnology by reading Tylor's "Anthropology" (Macmillan & Co., 1881) and "Primitive Folk," by Elie Reclus (Walter Scott, 1891) These books not only contain much valuable information agreeably told, but a knowledge of them greatly enhances the interest in ethnology.

I am, Sirs, yours truly,
Dublin, June 3rd, 1891. GEORGE FOY.

To the Editors of THE LANCET.

SIRS,—If "Inexpertus" will refer to Section 4:2 of the "Medical Digest," the third edition of which is just published, he will find all he seeks for.

I am, Sirs, yours faithfully,
Boundary-road, N.W., June, 1891. RICHD. NEALE, M.D. Lond.

THE RENTOUL FUND.

WE have received from Dr. Hugh Woods, secretary of the fund which is being collected in aid of the testimonial to Dr. R. R. Rentoul, a list of the subscriptions already received. The amount subscribed has reached £37 15*s.* 6*d.*

THE INFLUENZA AS AN ADVERTISING MEDIUM.

"*Dr. G. M. Lowe, C.M., M.D.*," late county analyst, Lincoln, issues a handbill with the startling heading, "Influenza Epidemic!!" The burden of Dr. Lowe's advice is the virtues of Bouillon Fleet, which he has analysed. An early riser is to take it before he leaves his room. At 11 A.M. two teaspoonfuls, with an equal quantity of sherry or brandy; this to be repeated at 4 P.M. and on going to bed. We are not sure about either the wisdom or the taste of such a pronouncement. Dr. Lowe should leave the public to advisers of its own choice, and not publish unasked-for opinions.

OPERATION UNDER DIFFICULTIES IN A CASE OF STRANGULATED HERNIA.

To the Editors of THE LANCET.

SIRS,—I send you a report of a case of strangulated hernia, which came under my treatment last voyage in this ship during heavy weather.

Called to see a man in the forecastle at 4 P.M. W. S——, A.B., a coloured man, age forty. Found an irreducible hernia, which had been down for four hours. Had him removed to a cabin. Hot bath, opium, taxis under chloroform, &c., having been tried without success, and symptoms of strangulation coming on, at 7 P.M., after a consultation with Drs. Holman and Ireland, two of our passengers, we decided to operate. As the ship was eased down, and a heavy sea running from a strong north-easterly gale, we were doing some heavy rolling. With the able assistance of Drs. Holman and Ireland, we got through the operation in about two hours and a half. Having stitched the pillars of the ring, on our arrival in Southampton the man was sent to the South Hants Infirmary, and was doing well sixteen days after the operation.

I am, Sirs, yours faithfully,
E. G. BYRNE, Surgeon.
R.M.S. *Atrato*, off the Azores, Dec. 26th, 1890.

SANITARY CONDITION OF KELLS.

Dr. Sparrow, medical officer of health for the urban and rural districts, Kells, county Meath, Ireland, writes to contradict a statement in a recent number of the *Irish Times*, in which it is reported that some medical man in the neighbourhood had discovered that a fever resembling "dengue" has existed in the locality for years, and had been specially studied by him. Dr. Sparrow "can safely say that the town of Kells is one of the healthiest and most cleanly in Ireland, and the rural portion of his district is in an equally healthy state."

A WARNING.

To the Editors of THE LANCET.

SIRS,—May I, through the medium of your columns, hasten to warn the members of our profession against another impostor who is preying upon us. He is a well-dressed young man, rather more than six feet in height, with reddish hair, and clean shaven. His plan is to call and make inquiries towards securing a locum tenens for his father. He gives the name of a respected medical gentleman living some twenty-two miles from London, who is naturally indignant at the use which is being made of his name, and who tells me of another West-end resident having been victimised about the same date as myself. Nothing seems to come amiss to the young man I have endeavoured to describe. In my own case, an overcoat; in the one of which I have been told, a case of bottles; in a third which I suspect, an umbrella—all have vanished, and he has not even sent us back the pawn-tickets!

I remain, Sirs, yours truly,
Great Marlborough-street, W. M.D.

To the Editors of THE LANCET.

SIRS,—It may be well to warn your readers against a tall young man, about twenty-five, with red hair, and clean shaven, who professes himself to be the son of Sir Charles Cameron, of Dublin, in search of Lord Ebury's medical attendant, and subsequently, wishing to get to Dublin, and finding himself without money to do so. He is likely to be calling on other medical men. He did not obtain anything from me.

I am, Sirs, yours faithfully,
Brook-street, W., June 10th, 1891. J. B. NIAS.

"THE FEVER SCARE IN MULL."

To the Editors of THE LANCET.

SIRS,—Seeing in your issue of June 6th, under the heading of Scotland, an account of the recent fever scare at Mull, I beg to be permitted to say that on April 28th we sent Nurse Mary Reid, and on May 2nd Nurse Christie, from this institution to nurse the typhus fever cases. They are residing in Kinloch, and do everything—even the washing—for their patients. We took care to ascertain that both nurses had already had typhus fever and had also nursed it, so that the poor Highlanders might have the skill, and the nurses run less risk of catching the disease. We were asked specially to let one be a midwife, which we were able to grant.

I am, Sirs, yours truly,
Glasgow Sick Poor and Private Nursing Association, June 6th, 1891. RUTH WOOD, Lady Superintendent.

ADVERTISING IN HANLEY.

THE following is taken from the *Staffordshire Sentinel*:—

"Hanley Dispensary.—The above will open Monday next, June 2nd, at 42, Hope-street, Hanley. Hours: 9 to 12 A.M., 6 to 9 P.M.; Sundays, 10 to 12 A.M.—Dr. Robinson, Physician and Surgeon."

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THE MEDICAL MISSIONARY SOCIETY OF CHINA.

IN the report of the Medical Missionary Society in China for 1890, the headquarters of which are at Canton, a tabular statement of fifty-four lithotomies is given, with six deaths. The largest stone weighed 3½ oz., and was said to have existed six years. The patient recovered. There were thirteen cases of lithotrity, all but one being successful. Two of these were females. Considerable progress has been made in the training of native students, and the lady physician attached to the mission is training a class of Chinese women, one of whom has already proved herself very skilful.

Mr. Towers-Smith.—The matter appears to be one on which a solicitor might be consulted.

ERRATUM.—In our leading article last week on the proposed Teaching University a very obvious misprint occurred. In the sixteenth line of the article, on page 1263, for "Senate" read *graduates*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. F. P. Atkinson, Surbiton; Mdme. Assinelli, Switzerland; Messrs. Allen and Hanburys, London; Dr. Althaus, London; Messrs. Benger and Co., Manchester; Dr. Bennington, Newcastle-on-Tyne; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. Blair, Leeds; Messrs. Bush and Co., London; Mr. Brims, Thurso; Mr. L. Browne; Dr. Butler, Hoyland Netten; Dr. Bielby, Beverley; Mr. Brennan, Preston; Messrs. Battle and Co., Paris; Dr. T. R. Bailey, Bilston; Mr. Bullivant, Mansfield; Mr. Bury, Wrexham; Mr. Bush, London; Sir A. Clark, London; Mr. D. Campbell, Glasgow; Mr. Campian, Northampton; Dr. W. J. Collins, London; Rev. W. F. Cobb, London; Mr. Watson Cheyne, London; Rev. H. Cooper, Norwood; Dr. Michell Clarke, Clifton; Mr. Dodd, Newcastle-on-Tyne; Messrs. Dodd, Eyton, and Co.; Mr. Dobbs, Southgate; Dr. Davids, Banbury; Dr. Davies, Ebbw Vale; Dr. W. Edmunds, London; Dr. Eccles, London; Miss Edmonds, London; Dr. Ferrier, London; Mr. G. Foy, Dublin; Dr. Fitzgerald, Folkestone; Mr. Ferguson, Caerswys; Mr. Frost, London; Mr. Foulerton, Chatham; Mr. Gurner, London; Messrs. Griffin and Co.; Mr. Howard, London; Dr. Horrocks, London; Rev. T. Hill, Finchley; Mr. P. E. Hill, Crickhowell; Mr. Huish, Lordship-lane; Messrs. Hopkinson and Co., Nottingham; Mr. Hornibrook, London; Mr. M. Judge, London; Mr. W. Judd, London; Dr. Jepson, London; Dr. Kühner, Frankfurt; Mrs. Knott, Stalybridge; Mr. E. Kard; Dr. R. Lee, London; Dr. Love, Mitcham; Mr. Logan, Glasgow; Messrs. Lloyd and Co., Leicester; Dr. MacPhail, Montreal; Messrs. Mitchell and Co., London; Dr. McMunn, London; Messrs. Ledger, Smith, and Co., London; Dr. McLeod, Calcutta; Messrs. Mackey, Mackey, and Co., London; Mr. MacMahon, Cork; Dr. Maynard, Erith; Dr. More Madden, Dublin; Dr. T. J. Mays, Philadelphia; Messrs. May and Co., London; Dr. McDougall, North Berwick; Mrs. Merryweather, Willesden Junction; Dr. Neale, London; Dr. Nias, London; Mr. Neech, Tyldesley; Mr. Norton, London; Mr. Nichols, Boston; Mr. E. Owen, London; Messrs. Oliver and Boyd, Edinburgh; Messrs. Orridge and Co., London; Surg.-Major Peacocke; Dr. Philip, Belfast; Mr. J. A. Philips, Cardiff; Mr. H. W. Page, London; Dr. Percival, Newcastle-on-Tyne; Mr. Potter, London; Mr. G. Pollock, London; Mr. Perrins, Worcester; Dr. Robson, Newcastle-on-Tyne; Messrs. Richardson and Co., Leicester; Mr. J. A. Raye, Whitburn; Dr. M. A. Ruffer, London; Dr. Ridge, Enfield; Dr. Sainsbury, London; Messrs. G. Street and Co., London; Mr. Scott, co. Durham; Mr. Swan, Iowa; Messrs. G. and G. Stern, London; Rev. B. Senior, London; Messrs. W. H. Smith and Son, London; Dr. Squire, London; Dr. S. C. Smith; Messrs. Swain and Son, London; Dr. Sparrow, Kells; Dr. H. Stern, New York; Mr. Towers-Smith, London; Dr. C. M. Tidy, London; Mr. Lawson Tait, Birmingham; Dr. Tate, Nottingham; Mr. Taylor, Birmingham; Rev. J. H. Thomas; Dr. Valude, Paris; Rev. M. Villiers; Dr. Wild, Cleveland, U.S.A.; Mrs. R. Wood, Glasgow; Dr. Wire, Chicago; E. F.; W. F.; Fara; F.R.C.S.; Theta, London; Secretary, Yorkshire College, Leeds; Secretary, General Hospital, Birmingham; Liquor Carnis Co., Holborn; S. S., Leeds; M.D., Bradford; *Staffordshire Sentinel*, Hanley; Golf, London; Plexus, London; Secretary, Bedford General Infirmary; Bruges, Worthing; F. T. Y., London; Northern Hospital, Liverpool; J. W. R., Ealing; Secretary, County Asylum, Dorset; Secretary, St. Mungo's College, Glasgow; Hon. Sec., Borough Hospital, Bootle; Planta, Geneva; Clapham; Medicus, Stockton-on-Tees; M.B.Cantab.; G. P.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Brown, Tredegar; Dr. Burnett, Manchester; Mr. Birchall, Liverpool; Mrs. Chubb, Malmesbury; Dr. Cooke, Bury; Rev. Mr. Cooper, Lancaster; Mr. Cochrane, Wigtonshire; Mr. Clegg, Bolton; Mr. Diver, Dunmow; Mr. Day, Bristol; Dr. Dickey, Colne; Mr. Davies, North Walsham; Dr. Erskine, Glasgow; Mr. Earle, London; Mr. Draper, Almondbury; Mr. Fiske, Tunbridge; Messrs. Godfrey and Cooke, London; Mr. Hugh-Jones, Wrexham; Messrs. Heywood and Co., Manchester; Mr. Judd, London; Mr. Kemp, Worksop; Mr. King, Yorkshire; Dr. Kite, Sheffield; Mr. Lockwood, Huddersfield; Mr. Meier, Redhill; Mr. Mahon, Cork; Messrs. Meredith Bros., West Hartlepool; Mr. Macdonald-Clarke, Tuxford; Mr. Milne, Aberdeen; Mr. Mack, London; Nurse Nicholson, Notting-hill; Mrs. Osborne, Stockport; Mr. O'Meara, Loughborough; Mr. Parnell, London; Mr. Paul, Brighton; Mr. Pollard, London; Dr. Roberts, North Wales; Dr. Ritchie, Otley; Mr. Rowlands, Merioneth; Dr. Rice, Oxford; Mr. Ross, Belfast; Dr. Sinclair, Durham; Messrs. Sutton and Son, Redhill; Mr. Sampson, York; Mr. Speirs, Cumberland; Dr. Stewart, Clifton; Dr. Savage, London; Mr. Townend, Sydenham; Mr Town, Halifax; Mr. Tyte, Minchinhampton; Dr. Twyford, St. Helens; Mr. Tomlinson, Meldon; Mr. Tully, Hastings; Messrs. Vanderpump and Son, London; Dr. Warner, Sheffield; Dr. Watson, Newbury; Alpha, Sheffield; Cricketer, London; Beta, London; A. B. C., London; Secretary, General Infirmary, Macclesfield; Class Rooms, Edinburgh; M., London; K. G., London; Matron, Essex and Colchester Hospital; J. W. R., Ealing; Hon. Sec., Newcastle-on-Tyne Dispensary; Secretary, Royal Asylum, Dundee; Secretary, Cottage Hospital, Bromley; Secretary, Royal Hospital, Portsmouth; Hard Worked, London; X., London; R. O., London; Secretary, East Suffolk Hospital; Medico-Psychological Association, Dartford; Secretary, General Hospital, Suffolk; A. P. D., London; Alpha, Newcastle-on-Tyne; Invicta, London; M.D., Halifax; Gordon, Ripley; Janitor, London; E. P. P., Hull; Scalpel, London; Surgeon, Somerset; Zeta, London; Manager, Canterbury; Peter, London; Major P., Eastbourne; C. H. W., Worksop; Durham, London; Mulon, Tunbridge Wells; Branch, London; Medicus, Crewe; Manchester Hospital for Consumption; J. H. F., London.

NEWSPAPERS.—*Yorkshire Herald, East Anglian Times, Liverpool Courier, Midland Evening News, Leicester Post, Dundee Advertiser, Sheffield Telegraph, Manchester Guardian, Glasgow Herald, Birmingham Daily Gazette, Le Temps (Paris), Yorkshire Post, Newcastle Leader, Leeds Mercury, Scottish Leader, Irish Times, Liverpool Daily Post, Bradford Observer, North British Daily Mail, Bristol Mercury, Manchester Examiner, Financial News, Reading Mercury, Evening News (Portsmouth), Sussex Daily News, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, National Bulletin, Windsor and Eton Gazette, Insurance Record, Hertfordshire Mercury, West Middlesex Standard, Windsor and Eton Express, Mining Journal, Builder, West Middlesex Advertiser, Halifax Guardian, Newbury Weekly News, Madras Times, Melbourne Argus, Invention, Scotsman, Statesman (Calcutta), Daily Oracle, Penrith Observer, Malvern Advertiser, Waterloo Times, Norwich Mercury, Rugby Advertiser, Rochdale Times, Ulverston Advertiser, Cornishman, Nottingham Daily Guardian, &c.*, have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

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Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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METROPOLITAN HOSPITAL SUNDAY FUND.

THE LANCET SECOND SPECIAL SUPPLEMENT.

Published in aid of the Appeal made on Hospital Sunday, the 7th June, 1891.

The circumstances amid which the collection in aid of the Hospital Sunday Fund was taken in the metropolis on Sunday last were in many respects unpropitious. In the first place, the prevalence of influenza caused a very appreciable depletion of the congregations, a result to which the unseasonable coldness and threatening aspect of the day contributed. The sudden loss of the accustomed facilities of locomotion consequent upon the omnibus strike was also a factor in the success or non-success of the special services devoted to this object in some of the more centrally situated places of worship, such as St. Paul's Cathedral and Westminster Abbey. The illness of many ministers, themselves sufferers from the prevailing epidemic, must also be mentioned in this connexion. All these disturbing influences have undoubtedly had a prejudicial effect upon the Collection, and there is reason to apprehend that unless a very special effort be made the result will this year be not only wholly inadequate to the pressing needs of the hospitals and medical charities of the metropolis, but will even show a falling off as compared with previous years. With the object, if possible, of counteracting these adverse influences and preventing the calamity—for it would be no less than a calamity—of any serious falling off in the sum placed for distribution in the hands of the Mansion House Committee, the Editors of THE LANCET have resolved on this occasion to issue a Second Supplement, containing extracts from special sermons which were last Sunday preached in support of the Collection. This Supplement, to the number of 25,000 copies, will be gratuitously distributed, in the hope that some of those to whom last Sunday did not afford an opportunity of contributing to this Collection in the ordinary way will be stimulated by the appeal made by the ministers of religion, and induced (following the munificent example set by the Duke of Cleveland) to send their contributions, whether great or small, either to their own ministers or to the Lord Mayor at the Mansion House, for inclusion in the current year's accounts of the Hospital Sunday Fund.

*** In making a selection of sermons for the purpose of this Supplement we have endeavoured, by means of a large staff of reporters, to secure a representative body of discourses from such as are available for the purpose. Some preachers, including, for example, Cardinal Manning, Mr. Spurgeon, and Dr. Newman Hall have postponed their sermons until next Sunday or some later date, and the necessary limits of our space have compelled us to omit other reports, which we should much have liked, if possible, to include.

SERMONS PREACHED IN LONDON IN AID OF THE FUND.

ST. MARTIN-IN-THE-FIELDS.

THE BISHOP OF BEDFORD delivered an eloquent discourse, taking for his text II. Kings v., 3: "And she said unto her mistress, Would God my Lord were with the prophet that is in Samaria! for he would recover him of his leprosy." He made a most able appeal to the congregation on behalf of the Metropolitan Hospital Fund. At the outset, his lordship said it was indeed a remarkable fact that the vicar of the parish (the Rev. J. F. Kitto) was unable to plead for the Fund, according to his intention. The vicar's absence was to be regretted not only on account of the cause of it, though they greatly rejoiced to know that he was so much better, but from the fact that there was no man in the ministry of the Church of England in the whole metropolis who was better qualified to plead on behalf of the metropolitan hospitals. The vicar of the parish had been so many years associated with the work of one of the largest hospitals (the London Hospital), and was so intimately acquainted with the work of other hospitals and dispensaries throughout the metropolis, that it was a matter much to be regretted that he was unable with his eloquence to plead on behalf of the Sunday Hospital Fund that morning. He (the reverend Bishop) had been called upon to fill his place, and although he had some experience of hospital work, it was nothing as compared with that of the vicar. The Bishop then discoursed upon the application of his text to the subject, and explained that the object of his discourse was to move people to Christian benevolence and Christian charity. The Founder of Christianity came to establish that which was laid down from the very beginning. The hospitals and dispensaries were the necessary refuges of those who could not be treated and nursed in their own perhaps squalid homes; and even when those homes were not squalid—and the home of every poor man was not a squalid, dirty home—there were homes which were exceedingly clean, homes indeed that it was delightful to visit in times of health, but which it was painful to visit in times of sickness or distress, because there was not there of necessity that light and air and accommodation which the sick and the afflicted so much needed; and those who were thus circumstanced, when they became stricken down by accident or disease, found in the hospitals not only a home but loving hearts to minister to them. Thus the hospital was a composite institution. Of whom, he asked, whatever the circumstances and condition in life, could it be said that he would never occupy a bed in a hospital; would never lie upon one of those neat, clean white beds that were ranged along both sides of the wall? Were it not for the hospitals it would be impossible to obtain that skilful attention and knowledge which had been acquired in what he should call those medical schools. The gifts they were asked to bestow were therefore not only gifts of charity, for in giving they were actually assisting in providing for themselves and those near and dear to them that which no wealth could possibly purchase, and which could not exist were it not for the medical schools and surgical schools associated with our great metropolitan hospitals. But let, he implored, their thoughts that morning be rather thoughts of charity, and let no self-interest intrude itself. Referring to statistics, his lordship pointed out that during last year about 6200 beds were daily occupied in the wards of the metropolitan hospitals, and during last year as many as 79,000 patients were received, who occupied for a shorter or for a longer time those beds or those cots in which the little sufferers were found; whilst considerably above a million visits were made to out-patients. On the work of the hospitals was expended more than £606,000, and yet their hospitals and dispensaries were not only in debt, but they were compelled continually to refuse applicants for admission because, although the beds were there and the men and women were there to minister to the wants of sufferers, the funds of the hospitals would not admit of more being received. He therefore appealed with all the earnestness of which he was capable, feeling convinced that there was no work more Christian, no work more after the heart of Jesus Christ, than that work which was carried on through the instrumentality of their hospitals and dispensaries; and, in conclusion, he prayed God that the response which they might make would gladden the hearts of their homes.

ST. MARGARET'S CHURCH, WESTMINSTER.

Archdeacon FARRAR preached at this church from the text "I was sick, and ye visited me" (Matt. xxv., 36). He reminded the congregation that they were not on that day called upon to give special thought to any single truth in

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the manifestation of God to man, but by the united action of all religious bodies an opportunity was offered to them of considering one universal factor of human life, of taking part in one general work of Christian charity. Could they remain untouched by the appeal of sickness? They had recently been told that there were no less than 1088 definite forms of disease to which our mortal bodies are liable. Was it strange that an instrument such as the human frame, a harp of a thousand strings, so delicate, so wonderfully complex, so liable to disorder, so sensitive to the myriad troubles of the mind, so wildly swept by the gush of the passions, was it strange, he asked, that an organism, so helpless in childhood, so unconscious during the long hours of sleep, so wearied and out-worn in age, should sometimes be ruined and unstrung? Was it not rather strange that it should keep in tune so long? They were all more or less familiar with the sight of anguish, and they knew that the dark hour would come in its turn to every one of them. Life itself was like that battle of Roncesvalles, of which the poet sings:—

"In the gloomy Roncesvalles' Strait
There are helms and lances cleft,
And they who moved at morn elate
On a bed of death are left.
There is many a fair young face
Which the war steed hath gone o'er,
At many a board there is left a place
For those who shall come no more."

When therefore they saw the sick lingering for weary hours, weary days, and weary weeks, hearing time flow through the midst of sleepness night—in the morning sighing, "Would God it were evening"; in the evening, "Would God it were morning," if pity did not touch them, if nothing else moved them to smooth the weary pillow, to brighten the long days, to dry the rising tears, to console the darkened heart, would at any rate not move them to remember that all of them, they knew not how soon, might need that alleviating sympathy and be left helplessly dependent on those ministering hands. Humanity was a sacred thing, and nowhere had that lesson been learnt better than in our great hospitals, with their clean wards brightened with flowers, their faithful, untiring medical staff, the Christian ladies who so kindly visited them, their devoted nurses so full of love and tenderness and patience; these were institutions which were above all things after the teaching of Jesus Christ, and it was, therefore, their duty to war against all sin and to relieve all misery. On Hospital Sunday many, even of the mean, were generous, some, even of the niggardly were open handed, but he knew that the congregation he was addressing, of whose large heartedness he had had many proofs, would do their duty, and like the Israelites of old so far from regarding the call as a burden they would rejoice at the opportunity of contributing with a willing and a perfect heart. The appeal to all religious denominations on Hospital Sunday was a material aid to them. Was, he asked, the response generally adequate? The few did their duty, but whether London did it adequately might be judged from the fact that the offertory of the whole of London on the previous Hospital Sunday fell far short of what was often realised in a single day's sale of china, pictures, or furniture, and amounted on the income of the City only to the sixteenth part of a penny per head. On that he would dwell no further. In conclusion he said: "In the sacred name of those who suffer; by the awful mystery of human anguish; by the withered strength and the throbbing nerve; by your own dear children whom you love so tenderly that the winds of heaven should never visit too roughly their little faces; by those other little ones, the shorn lambs of Christ's flock, who need that the icy winds of pain and poverty should be tempered to their suffering feebleness; by the strong man's agony, by the brave man's tears; by the hectic flush upon the young man's cheek; by all the sacredness of these human sympathies, and far more in the name of Him who was once a child at Nazareth, and for our sakes dropped the awful plummet of the Godhead into the fathomless abyss of woe and pain—in His name, for His sake, I ask you now and ever to be quickened to the call and generous to the relief of human misery. I summon into your presence the poor, the diseased, the destitute; the aged, the poor lame boy, the little deformed girl. From ten thousand homes which are not homes I summon these. I bid you look on those pale, thin faces, to listen to the mute appeal of those uplifted hands, to hear the sighs of that multitudinous agony, like the melancholy wind amid the autumn woods; and lo there comes among them the vision of your Saviour and a voice from the fields of Galilee. Shall it say to us, "I was an hungered, and ye gave me no meat: I was a stranger, and ye took me not in: sick and in prison, and ye visited me not"? Nay, rather let it say, "Inasmuch as ye did it unto one of these least ye did it unto me."

ST. MICHAEL'S CHURCH, CHESTER-SQUARE.

CANON FLEMING preached from the text: "And as ye go, preach, saying the Kingdom of Heaven is at hand. Heal the sick, cleanse the lepers, raise the dead, cast out devils; freely ye have received, freely give." This, he said, was a home mission text, and the charity which pleaded for assistance that day throughout London was distinctly a home mission charity. It was a charity for those who were nearest their doors and living all around them. The world was always full of sickness and death. All this sorrow and trouble might be traced back to sin. Yet it was not fair to charge all this sin upon individuals. They knew that sin would meet with its reward and bring its punishment, but it was not right for them, when they saw suffering, to plead that it might have been avoided, and that it was the result of the sins and the habits of the people. They had no right to look upon suffering humanity in that way. It was quite true that a great deal of this suffering was preventable or removable, or, if not removable, it was certainly controllable. They were placed in a world where they were always to learn. They were to learn God's laws and ways, and to learn those things for their mutual profit and advantage, and therefore if men would only learn to pay more attention to the condition of the laws of health—he would not say to the laws of nature—a great deal of suffering might be prevented, and if not removed, at any rate controlled. Let medical science, let all knowledge, go hand in hand with religion, for they could not separate them. He was pleading the cause of religion to-day because all those things must go in attendance with those great laws of God. Next to the salvation of souls the great mission of Christianity was to relieve the sufferings and necessities of mankind. The great cause which was pleaded to-day was for the sickness and disease of their poorer brethren upon all sides of them. They had been taught this year in a very remarkable manner by the epidemic the scourge of influenza which was raging still, that there was nothing in this world, after all, which was so uncertain as human life. No man among them dared to say to day, "If I take care of my life I shall keep it. If I observe these conditions of the laws of health I shall preserve my health." Since last Sunday the influenza smote him (Canon Fleming) down with pleurisy, which came on in half an hour, as he was sitting at a committee, and it was only by God's blessing, the skill and kindness of his doctor, and careful nursing, that he was able to appear in the pulpit to-day and plead this cause. Therefore it was sickness to which they were all liable that pleaded with them on Hospital Sunday. Everything in London was on a scale of magnitude. Its miseries as well as its mercies. It was sad to be poor; it was more sad to have sickness added to poverty. It was sad for one, both poor and sick, to know that the highest medical or surgical skill was close at hand and that it was not available for want of means, and it was to dispel those sad thoughts that the hospitals existed, ready to give to the very poorest of their suffering neighbours the highest skill, the very best treatment, and the most careful and tender nursing that money could procure. In all the London hospitals this year there were something like 8000 beds, and through those beds there passed in the course of the year something above 75,000 in-patients, the greater majority of whom were remitted to their homes convalescent, and likely to become strong again. Of out-patients there were treated no less a number than 1,000,000. In administering those institutions there are engaged nearly 6000 persons. Nearly 2000 were physicians and surgeons of the highest eminence who, without fee or reward, devoted themselves to the treatment of sickness and disease. This figure included about 100 chaplains who administered the consolations of religion. There were nearly 2000 matrons and nurses, who carried on their work by night as well as by day. The other 2000 were made up of dispensers of medicine, servants, and *employés* of various kinds who were required in the administration of those vast institutions. This congregation had for many years reached or exceeded £1000 in its contributions. If they did so to-day this would be the tenth successive year

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in which St. Michael's had contributed either up to or more than £1000. Other churches had followed them lately. For seven years they held the "blue ribbon." Then others awoke, and though one had passed them they wished that a dozen might pass them. No matter who might pass them—they were not one of the largest or one of the wealthiest in London—they would always remember that they gave the inspiration to others and led all the rest. He did not stand there to beg for the hospitals, but rather to point out to them their high honour and privilege of helping in this Christ-like work, in this great fight against sickness, disease, and even death. It was not for him to beg for the hospitals; it was for the congregation to determine what they would do, determining it as those who knew and felt something of what they owed to God, determining it as those whose very homes, as such a congregation as this bespoke, were literally bristling with comforts and luxuries, to which they were returning in health and strength, determining it as those who when life was done and opportunity past would give all they possessed and a million times more to hear that gracious benediction fall upon them, "Inasmuch as ye did it unto one of the least of these my brethren you have done it unto me."

WESTMINSTER ABBEY.

The Rev. Canon FURSE preached to a large congregation, including the Lord Mayor and the other civic functionaries, from the text, "My son, regard not lightly the chastening of the Lord," &c. (Hebrews xii., 5, and some of the following verses). He said: The appeal which London makes this day to the Christian churches for large and liberal contributions to its hospitals is an appeal which this great city makes with the sanction and personal sympathy of its highest civic authority. The Christian preacher could only approach the subject in the light that all sickness and suffering has its Christian aspects. If in the dark places of the world there was one problem more perplexing than another, it is the mystery of suffering and sickness which is added to the burden of the poor. Philanthropy can mitigate it, science can in a measure relieve it, art and charity can soothe the anguish, but it cannot explain the mystery of suffering. If anywhere in the wide world of darkest England the sympathetic explorer proved the truth of the Psalmist—"in Thy light shall we see light,"—it is among the silent and suffering in the weary homes of the sick poor, and even in the well-furnished ward and bright avenues of beds in our splendid hospitals. The Christian aspect of all suffering which the Apostle sets forth in the text, and which was taught by Solomon before him, whose words he quotes, is "the Fatherhood of God;" when thou art rebuked of Him it is for chastening—the fatherly discipline of the child—"that ye endure." "God dealeth with you as sons." The means which the highest science puts forth for the healing of chronic or acute diseases, for the excision of plague spots, and the cure of internal wounds, which the less perfect art of surgery could never have attempted in our father's day for the repair of shattered limbs, can in these days be brought within the reach of the poorest sufferer in London. The London hospitals serve as a marvellous illustration of the preciousness of human life. In these words, "the preciousness of life," what a gospel is proclaimed! It is the preservation of life which is the idea of the hospital. Over the portals of a hospital might be placed as a superscription our blessed Redeemer's account of His own mission to mankind: "I came that they might have life and might have it abundantly." Is not that the very secret of all the science and art and wealth that is expended upon them? Every manager of a public hospital must be a man of breadth of mind and with a due sense of proportion if he is to resist the pressure made upon him, and preserve in the conduct of the hospital the Christian idea of human suffering. The trembling spirit and the silence of the inarticulate soul may be disregarded, and the chaplain was there at the bedside to lift up his soul in sympathy with it. What does it profit a man to gain the whole world and to forfeit his life—for what should a man give in exchange for his life? So far as he was aware, little was said in public, but a good deal in private, about the chaplain's ministry in the hospitals. A sick, suffering, and dying man wants something more than the music of a hymn and the ritual of a liturgical service. A sufferer trembling between life and death wants the comfort and the strength of the presence of a man who knows the human soul; he wants a brother who has compassion and sympathy with his spiritual infirmities. "It would be interesting to know how many present in this national Abbey are regular subscribers to any hospital. I am here to ask you for gifts to be given on the spot. Before you make that gift is it too late to ask you to consider why the Mansion House Committee has a claim to your liberal contributions? The surgical achievements of the present day would not have been possible without hospitals, and you were bound in gratitude to do honour to the hospitals, the skill of medicine, and the highest art of surgery. The progress of civilisation implies more accidents even in spite of the very greatest prudence and skill, and thus an aggravation of the burdens and a continual straining of the energies of the hospital." He knew from his own experience that in hospitals, a wise economy, impartial justice, and tender considerateness of each special claim secures the benefit of the deserving with the least possible encouragement of the undeserving.

ST. JUDE'S, SOUTH KENSINGTON.

The Rev. Prebendary FORREST preached from the text: "Let your light so shine before men that they may see your good works and glorify your Father which is in Heaven." He pointed out that the text seemed contradictory to the warning against ostentation contained in the next chapter, but explained that the apparently inconsistent passages referred to two totally different classes of people, and it was the motive which made the difference. The light was a "derived' light. "Our illumination, if we have any, must come from the supreme source of light. 'Ye are the light of the world,' says Jesus (the very words used about himself), 'let your light shine'—not light in the abstract. Our notions about religion were, generally speaking, too abstract, and required to be vitalised. The light is of necessity light-giving, it cannot choose but shine, and if our character be truly Christian we often shine more and best when we are unconscious of the fact. In fact, the highest type of greatness and goodness is that which is unconscious of itself; and that is true both in the intellectual and other spheres. There must be in the shining of the light all absence of self-display. 'Let your light so shine.' It is your light and not yourself that is to shine. Self is the sinister shadow that falls upon our works, and blots its beauty far too often. There were various obstructions to the light shining besides 'self.' There is a 'reserve' which is habitually practised. There were people who, like a dark lantern, never shed their illumination on any path or person. Christians who lock up their light were indeed guilty of a grave dereliction of duty. Our own imperfections and inconsistencies formed sad obstructions. The very light within us revealed the dark spots in blemishes in our characters and actions, to the eyes of a scrutinising and unfriendly world. Then how often we say second thoughts are best? Do you think that that is always so? I do not believe it for one single instant. Second thoughts best! Where judgment comes in that may be so; but where duty is in question. I am convinced that first thoughts are best. You, for instance, see a case of wretchedness and misery described in the newspapers, and your first impulse is to give what you know perfectly well you can afford to relieve that case. But second thoughts! Oh, yes! Second thoughts often—I do not say always—simply mean selfishness. You may think it is an imposture, or that it is a trumped-up case, or you may say you will make application to the Charity Organisation Society. Dear me!—in order that you may add to the hard, the very hard facts of the case! Brethren, let your light shine before men without any obstruction or obscuration. I do trust and hope and long and pray and believe that your light as a congregation will shine this day before men, not to glorify us, not to glorify you, still less to glorify me, but to glorify your Father which is in heaven. I am privileged once again to plead with you on behalf of the hospitals and the medical charities of London. I should find it no easy matter to do so, I can assure you, with any force or freshness after the number of years that have passed in which I have made exactly the same appeal for the very same objects, if it had not been for the unfailing help of my good friend the Proprietor of THE LANCET, who has worshipped in this church almost since its consecration, and who, not content with his costly contribution—a Supplement of the paper he so admirably conducts—has given what will probably prove to be one of the largest, if not the largest, personal contributions to the offertory of this day.

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Now, my brethren, following the guidance so freely given me, I should like to mention a few facts. First, the immensity of the work done by these hospitals. It has been calculated, and no doubt that calculation is correct, that the patients in the London hospitals in the course of one year are equal in number to the whole population of the town of Wolverhampton, and that there are no less than 6000 people—men, women, and children—under treatment at one time in our metropolitan hospitals. I am not talking of spiritual results—there are spiritual results which follow—but I have specially to-day to talk of temporal results. Stating the case in the simplest manner, the results are absolutely splendid. And, then, remember that the hospital system is so organised, so elaborated, so extended, that it is in the closest touch with the tremendous mass of misery to be found amongst the millions of this metropolis. Wherever there is suffering or disease, in whatever spot or corner of London, there, contiguous to it, is a hospital, throwing open its doors, as it were extending its arms, to be a refuge for all who are in need—imminent need—of help and succour. I called your attention last Sunday to the special work that is done in the treating of accidents by the hospital, as set forth in that Supplement I referred to which has been circulated through the pews. It is not very long ago, in fact only a few weeks, since a distinguished dignitary of the Church met with an accident—was struck down in the streets—and no doubt it is a wonder that more of us do not meet with wounds and bruises, if not sudden death, as we pass through the streets of London. By his own desire that gentleman was carried to an adjacent hospital, and now he can hardly speak in language strong enough to express his gratitude for the treatment and benefits that he has received, and he has become, I believe, a generous subscriber to its funds. There are, of course, certain drawbacks under which we labour in making this appeal; there are certain disadvantages this year. I am not alluding to the criticisms which had been passed upon the administration of hospital funds, nor of the instances of, apparently, at all events, mismanagement in the case of one or two hospitals. These matters I pass without further notice; they do not affect our case as a whole; they are isolated instances; but I may mention that there is a committee of the House of Lords at this moment dealing with the question of the financial arrangements of our hospitals; and in future, as a result of the work of that committee, we may hope that any defects which may exist in the administration of these institutions will be removed, and that the hospitals will be obliged to publish a uniform system of accounts." In conclusion, he referred to certain disadvantages under which the fund laboured this year. The weather had been ungenial, the plague of influenza had removed one who, with burning and unrivalled eloquence, was to plead the cause of hospitals at the Mansion House—Archbishop Magee,—and many large-hearted and liberal-handed friends of the congregation. "Give then," he said, "my brethren, grandly, nobly, magnificently to-day. That is only to ask you to do what you have done for long years; it is to act like yourselves, whom the head of the Church in this pulpit has described as one of the most generous congregations in England."

ST. PAUL'S CATHEDRAL.

At St. Paul's the Rev. Prebendary BERNARD REYNOLDS preached from St. Matthew xxv., 36: "But I was sick, and ye visited me." He said: "One of the most obvious characteristics of our Master's life upon earth was the battle that He waged against suffering and pain and sickness. It is often more noticeable than His warfare against sin. In chapter after chapter we read how He healed those that were brought to Him. There is no instance of His refusing anyone. Good and bad alike were the recipients of His mercies. He heard the agonised moan of the afflicted, He marked the hopeless stare of the lunatic, the mocking irony of useless limbs, the frightful misery of life-long pain, and those things were abhorrent to Him, for His heart was love itself, and all suffering fled at the touch of His beneficent hand, and at His life-giving voice all tears were dried. And is not the great fight against suffering being waged still? Ay, and successfully waged. Is not medical science ever improving, ever working upward and higher to the perfect day? Is not pain being mastered? Is it not less than it was? Have not wonderful inventions been discovered in our own day to destroy pain? Science is tracing suffering more and more to sin, and at the same time is getting more and more control over pain. It is necessary that these gifts should be exercised by godly men recognising from whom their skill comes. Our Master knows of the agony that we endure just as He did when He was amongst us, and it is contrary to His will now as it was then. We have thought of all the pain and misery hidden behind the walls of our hospitals. Look at the other side of the question. Think of all the deeds of mercy that are being performed there. In how many instances is disease being successfully grappled with and pain made less painful? How many are restored to health and strength whose cases would have been hopeless a few years ago? And what are we doing to relieve the misery of which there is so much? Surely no better reason for helping can be given than that put before us in our text, that our Lord takes a kindly act done to His suffering ones as though it were his own hunger and thirst and pain they were assuaging. If you have yourself experienced any blessings from the skill of the medical man, do your utmost for those who are now crying to you from the valley of the shadow of death. Help those whom your Saviour helped and is still helping. I plead earnestly for your offerings to-night because the offertories to-day in this cathedral have been considerably below those of last year. Nay, it is not I who plead, but Christ Himself—He who when you have been gathered into the land where all tears shall be wiped away and there shall be no more death, neither sorrow nor crying, neither shall there be any more pain, it is He who shall greet you with that welcome salutation, 'Come ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world.'"

ST. MARY ABBOT'S, KENSINGTON.

After the morning service at this place of worship, a sermon was preached by the LORD BISHOP OF LONDON, who took for his text "Who went about doing good" (Acts x., 38). His lordship said that this was the work of the Saviour when he was upon earth, summing up the dealings of God from Heaven to man, and giving the example to Christians of the fulfilment of the whole law in active love. Tracing our Lord's works of mercy to the healing of the sick and the ministering to the diseases of humanity, the Bishop then made an earnest appeal for our practical sympathy in the great work of the London hospitals, as shown in their medical skill and work of healing the sick poor. His lordship pressed on his hearers that as followers of Christ, who went about doing good, it was their duty as "stewards of the good things of this world" to seek to minister to the sick and suffering, and that in no direction could our alms be better or more safely bestowed, with less fear of misuse, than by contributing liberally to the support of our hospitals. In the evening the sermon was preached by the vicar (the Hon. Rev. E. C. Glyn) from Hebrews xii., 4th and 5th verses: "My son, despise thou not the chastening of the Lord, nor faint when thou art rebuked of Him." The sermon was intended to show the nature and use of suffering in the divine economy, and that while some sins brought their rebuke in the suffering that they entailed, other dealings of God were chastisements to discipline us in this life, as in the time of childhood preparing us through God's loving wisdom for the life beyond. Under this suffering, we might either despise it by not recognising it as from the hand of God, or, on the other hand, faint under it by cowardly giving way. This right use of suffering was seldom to be experienced, except under the most favourable circumstances, and, in the poverty of a wretched home, the sufferer might altogether miss the object of his trial. The value of hospitals was thus enhanced as affording the best conditions under which pain and suffering could be endured, and often as a consequence of this suffering the inmates of the hospitals were led to better lives.

CHRIST CHURCH, LANCASTER GATE.

In the morning the Rev. C. J. RIDGEWAY preached to this congregation from the text, "They brought unto Jesus all sick people, and He healed them" (Matt. iv., 24). The cry of the sick and suffering had been ringing throughout the world ever since the days of man's first sin, and the human yearnings had not been satisfied until Jesus had come. It was not the rich, the great, or the strong ones of this world that Jesus gathered around Him, but the sick and suffering. "Come unto me all ye that labour and are heavy laden and I will give you rest." Why did Jesus thus

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deal with men in a fashion so different from all who had ever come before Him? Because He was the Good Shepherd, and all men were His sheep. He does not care only for the healthy ones of His flock, but seeks to tend the sick ones. Because He was the Son of man, and because He was a true man, the sympathies of Christ were as wide as humanity itself; all men were His brethren, and therefore He cared for all. Not only so, but He cared for each. Each in the crowd before Him must have His healing. He cared for man as a whole, and did not separate, as we do, that which God had joined together in the threefold being—the body, mind, and spirit. The health of the body as a whole was, in the mind of Jesus, of equal importance. Surely it was not for nothing that the word "health" we use for the body is the same as the word "salvation" that we use for the soul. Christ's mission was to bring salvation both to body and soul, because He would use the body as the avenue of the soul, and make man's lower needs a ladder whereby to bring greater blessings to his soul. It was the man whose eyes were opened by a miracle that had his heart drawn to the service of Jesus. What Christ was the religion of Christ must be. "A new commandment give I unto you, that ye love one another." He who loves God must love his brother also, and the Church that does not deal with mankind as Christ dealt with them in the days of His flesh is not a part of the Church that Christ established. And yet in past ages the Church had failed to carry out her dealings with mankind as Jesus had done. Again and again it used ease and comfort, had wrapped its cloak about it and kept itself warm, regardless of those who were famishing and cold. Whenever a church prides herself on her privileges and forgets that those privileges are given to her that she may give them to others, then that church will always fail in her dealings with man. In the past the Church had been untrue to humanity and narrowed in her sympathies, and had acted as if she were a sect and not a church, because she had lost sight of the value of the bodies of men, and thought that her work was only to save the souls of men. She had forgotten that the body was the avenue to the soul. Sickness softens the heart of man and brings him into the attitude of receiving the best blessings of God. When sickness has gone and health is restored it begets gratitude, and a man who is grateful is a man who need never be despaired of. There never were times, perhaps, than the present, when more was being done for the spiritual needs of mankind. In the East-end of London there are now more clergy in proportion than in any other part of London. He wanted to appeal for the means of supplying bodily health and recreation. Hospital Sunday carried them back to the days of Christ, when there was no such thing as a hospital, when men who were sick were left to die, and none cared for them except those who were akin to them in the flesh—to the day when one hospital had to supply the needs of London; and it tells us now of the 75,000 in-patients treated during the last year in the hospitals that are helped by the Hospital Sunday Fund, and of upwards of one million of out-patients who had had the advantage of the best medical advice in our hospitals. It tells us of 1300 honorary medical officers who give their time and their skill for nothing. It tells of 2000 nurses; of £600,000 spent last year upon our hospital system in London. In the face of all this, looking upon the splendid character of the work that has been done in our city hospitals, it behoves us to ask ourselves what we have been doing. It is the work of Christ and of the Church of Christ, and if I am a Christian it is work that Christ commits to my care, and on such a day as this He wants to know whether you and I are taking an active part in caring for our sick-poor brethren. The preacher eloquently urged the congregation to make their giving on behalf of the fund more in proportion to the blessings which they had received.

WEST NORWOOD PARISH CHURCH.

The Rev. HENRY W. COOPER preached from the text: "Jesus said, I have compassion on the multitude" (St. Matthew xv., 32). It was a characteristic utterance of Him who was the friend of publicans and sinner, and it breathes the spirit of His mission. He voluntarily cast in His lot with the "multitude," that he might sanctify the estate of poverty and ennoble the vocation of labour He knew the narrow circumstances and limited opportunities of the poor, the poverty that hedges in their homes, and blunts their better feelings, and he had compassion on them. Christ knew no exclusiveness, for He came to save not only the upper ten thousand of mankind, but the millions who will one day throng the judgment seat of Christ. He pitied their infirmities and healed their diseases. Was He not moved with compassion for the leper in his unspeakable misery, for the blind man sitting by the wayside, and for the weeping widow at the gates of Nain? And is His love less tender now towards the multitude? When we contemplate this characteristic of our Lord our hearts will expand under its influence. Compassion for the multitude should be a distinguishing mark of us his organised brotherhood, the Church—for we are members of each other with Christ our Head. On no other basis can there be a brotherhood of the human race. It is better than French Communism, better than German Socialism! Christianity places all men morally on an equal footing, though God has wisely arranged that they shall fill different stations of life. Each one is nevertheless a living atom in the large Mosaic of human society. The spirit of Christian compassion is an essential of Christianity. This is exemplified in the institution of hospitals. We should have looked in vain for one amongst the palatial buildings that adorned Babylon, or Rome, or Athens, or any of the cities of olden time. Our hospitals, then, are standing memorials of Jesus Christ's words. To support them is a work of mercy. And more than this. We are reminded, in those leaflets issued by THE LANCET, that it is also a work of duty to assist those members of our community who have been injured by risks incurred in the pursuit of those occupations which they carry on for the common good. Let us to-day embrace this opportunity of showing our compassion for the sick and suffering, and help them, as we ourselves have been helped by God.

ST. PHILIP'S, GRANVILLE-SQUARE.

The Rev. J. S. JONES, vicar, preached from the text: "Lift up the hands which hang down and the palsied knees" (Hebrews xii., 12, revised version). "An expressive rendering, for it suggested that in things physical and spiritual neglect makes bad worse, and therefore was criminal. I have undertaken to say something about the Hospital Sunday number of THE LANCET. Both texts implied that Christianity and the medical science of Christian nations were concerned, not only with the survival of the strong, but with the salvation of the weak. This Hospital Sunday number was the record of a whole army of workers and a whole mine of facts, having to do with lifting up drooping hands and feeble knees, the workers and the facts owe much of their power to the hospitals of London. Here are 136 pages which as a bound octavo would make a good volume. THE LANCET Supplement showed that as God revealed to Hagar and to Samson unknown springs in the desert, there are everywhere in nature hidden forces of healing invisible angels to which it only needs that our eyes be opened. 'What a piece of work is man!' was a consideration not only physical and intellectual, but ethical and spiritual, a Bible question and a LANCET question. The consideration of what would arise if this work were not done, modern life being what it is, appals one, and some at least of the lessons are obvious. Let us only now add this one, that London Hospital Sunday surely wants translating into National Hospital Sunday. Our great lake of suffering and need is fed from the whole land. Thousands of people who have no hospitals in their own neighbourhoods and do nothing for ours—numbers of country congregations, for instance, which have to-day included many wealthy people, and many less wealthy, but not less willing if taught, —not only owe a Christian duty to their fellow men, but owe a personal debt for the medical skill and knowledge on which their own lives depend, acquired in the hospitals of London. One more lesson and the last: The Bible points us to a time when there shall be 'no more pain.' THE LANCET, and the work of which it is the symbol, resemble the Baptist, preparing the way for that time, and, like the Baptist, bidding us 'repent, and do works meet for repentance.'"

ST. LUKE'S, NEW KENTISH TOWN.

The Rev. W. F. COBB, B.D., preached from the text: "God saw everything that He had made, and behold it was very good" (Gen. i., 31). This statement has been adopted in the creed of the Church which has from the beginning taught

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her members to say, "I believe in God the Father Almighty, Maker of heaven and earth." Things material as well as things spiritual are the creation of God, and therefore are very good. The Bible and human reason concur in their estimate of the character of all created things. The Bible says that "the heavens declare the glory of God," and that "marvellous are His works," while reason says that the beauty of nature spread before us with such lavish generosity, and the clear marks of design shown in the adaptation of means to ends, all appeal to a rational nature to declare the goodness of their Author. The care of the bodies of men had always been the honourable distinction of the Church. The only difference between her action in ancient times and modern is that then her beneficence was the spontaneous outflow of individual charity, and now it is organised. Then Lazarus was cast at the gate of the rich man, and was neglected if no Christian chanced to pass by; now he is taken into a hospital and cared for till cure or death ends his troubles. Hospitals are the outcome of the organised charity of the Christian Church. Their praise is in all the churches, and their work may be to some extent gauged by the fact that in London, with a population of 4,200,000, the hospitals relieved in 1890 78,000 in-patients and 1,100,000 out-patients, or more than *one in four* of the whole population. One fact may just now bring home to us all more clearly the beneficent work done by hospitals—viz, that in 1890 they treated about 6000 cases of influenza, and received 170,000 cases of accident. To support this good work the Hospital Sunday Fund was started in 1873 by the late Dr. Wakley, Editor of THE LANCET, since which year the amount annually collected has risen gradually from £27,700 to £42,800. In these days when there is more, not less, of Christian charity than of old, when its operations are more widely extended and more skilfully controlled, when the solidarity of our human nature is more accurately understood, the Church appeals, and will not appeal in vain, to all who profess and call themselves Christians to tread in the footsteps of the Son of Man, who went about doing good, and healing the diseases of the bodies as well as souls of men.

KENTISH TOWN CONGREGATIONAL CHURCH.

The Rev. J. WAYMAN preached from Job v., 7: "Man is born unto trouble, as the sparks fly upward." He said that the text contained the statement of an important truth. He did not know whether the original speaker of it had realised its significance. He (the preacher) thought not. The theory he seems to have held was that all affliction or trouble come through sin. Suffering and sin were regarded as synonymous. That was not the true view, nor the view on which the Bible insisted. Its most important truth was that which showed God in sympathy with struggling humanity. A Father who knew its sorrows and heard its cries, and who was eternally working out the methods of deliverance. The trouble unto which men were born was the great educator alike of the individual and of the race. In God's unfolding of human lives there was nothing worth the getting, but the getting implied trouble. All noblest things were born in agony. Upon their own lives the influences of being "born to trouble were palpable." They had been made more human, and consequently more unselfish. Nothing grew up more rapidly than selfishness. It was, therefore, a merciful provision which the loving Father had made when He appointed trouble as the heritage into which we had to come. Whatever else suffering did, it certainly made us sympathetic. It produced a truer social spirit. He (the preacher) knew that the world was full of suffering, but he did not see, under the conditions that existed, a path of progress possible without it. The Hospital Sunday afforded the opportunity to teach this doctrine of sympathetic influence. They lived in a vast community. Greater London was fast attaining to 6,000,000. They were all bound together by closest ties. The population labouring among the shipping, the hands kept employed by a hundred varied industries; the mighty host that poured itself over street and pavement every day were all liable to be overtaken by accident and to find a need for friendly aid. They were all exposed to disease, and while some were more fortunate in this world's goods than their fellows, yet, if they were Christian, it was all the more reason that the less fortunate should be remembered. From so gigantic and so exposed a population there was always going up a crying need for help. He would not weary with statistics, but he would emphasise the fact that the loftiest character was attained when the nearest approach was made, in temper and disposition, to Him who gave Himself in love for all mankind. Instinctively humanity felt the teaching of Christ as given in the parable of the Good Samaritan. He for whom the honour was reserved was the Samaritan who, when he saw a man in trouble, went to him to bind his wounds and to bear him to the place where he would be carefully tended. We were born to trouble and we might be trained to goodness.

ST. PAUL'S, KNIGHTSBRIDGE.

The Rev. H. MONTAGUE VILLIERS preached to an overflowing congregation from Matthew xii., verse 15: "Great multitudes followed Him and He healed them all." He said he thought people were beginning to understand the sin of foolish and indiscriminate almsgiving, the result of which was that in Great Britain we had a rough average of 800,000 paupers who are fed by the State, and about half a million more supported by charity; but people were beginning to understand that charity had been so dispensed as to incite thousands of men and women to a life of wretchedness and degradation. After touching upon some of the social problems which he hoped that this generation would solve by thought and prayer, he pointed out that there were two main divisions under which charity to the necessitous may be classed, one including all that may be called "want" and the other all that comes under the head of Sickness; and he called the attention of his hearers to a fact often overlooked—that our Lord did not deal with these two classes in the same way; that twice, and twice only, did our Lord employ His miraculous power for the relief of want—namely, when He fed the thousands; but when it was a question of sickness the words of the text were continually finding fulfilment: "And He heeded them all." Had He freely fed the hungry continually, commanded that the stones be made bread, doubtless He would have been followed by an eager throng, surrounded by an admiring multitude, but He would have been at once one of those social reformers who drew off the people from the useful employments by which they gained their bread. Who could doubt that such would have been the result? Instead of which, on the exceptional occasions when He fed them, we expressly read that "He sent them away." They were not to live the life of mendicants. The preacher here begged that he might not be misunderstood. He did not forget that a bag was carried by the little company for the relief of exceptional distress, that the relief of the poor is a Christian duty, but that all such giving should be conducted with a strong sense of the responsibility of giving and the imminent danger of doing permanent harm. He then contrasted with this the object to which they were asked to contribute that day. He showed that the relief given to sickness in our hospitals has no tendency to make men sick—that they were not pauperising but saving from poverty. He then animadverted strongly on the conduct of rich people who always sent off a sick servant to a hospital, and to whom it was a comfort to know that they could do so, and yet gave no adequate subscription to the support of the hospital. He asked his congregation to remember what such a sight as Hyde-park-corner presented any day in the season *meant*, and then to compare it with the offerings made to the grim hospital which looked down upon them. That sight at Hyde-park-corner was only one expression of our enormous, our incalculable wealth, and yet the hospitals of all London asked for £100,000 and could not get it. In conclusion he urged his congregation to give with the unmeasured liberality of Jesus Christ.

CONGREGATIONAL CHURCH, EAST-HILL, WANDSWORTH.

The Rev. JOHN PARK preached from Leviticus xiv., 35: "It seemeth to me there is as it were a plague in the house." The preacher had three main ideas: 1. That as a plague has ever its own definite and deadly origin, so has sin. Physical disease of any sort told a tale of the false and foreign element which had entered the blood. Sin was the same, an unnatural thing in the soul, which, like a plague, came when a man was off his guard or was "run down" in faith or deteriorated in devotion. 2. The preacher observed that a plague in the house could never be overcome

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unless by employment of means and instrumentalities, and neither could sin. Men who leave "simple nature" to recover them in disease mostly died, and deserved to die; and never in the whole accumulated history of humanity had the plague-stricken soul been healed by God apart from the will and effort and labour of the sinner himself. 3. The preacher observed that as a plague was democratic and even communistic in its aggressiveness, so was sin. There was only one soul that ever tabernacled in flesh that the moral contagion of evil had not reached—even Jesus. All else had caught the awful infection, and "The trail of the serpent was over us all." An appeal followed on behalf of the Hospital Sunday Fund.

BAYSWATER SYNAGOGUE.

At the Bayswater Synagogue the Rev. Dr. Adler, Chief Rabbi, preached a hospital sermon on Saturday. He expressed his gratification at the fact that the first public function of his Rabbinate consisted in pleading on behalf of the medical charities of the metropolis. He hoped that this circumstance might be regarded as evidencing how dear to his heart was the cause of the sick and the poor, and how highly he valued the privilege of at all times coöperating with his fellow citizens in every work that might conduce to the welfare of our dear land. The subject of his sermon was "Health, and its Preservation." He took as his text Proverbs xi., 17: "The merciful man doeth good to himself; he that is cruel troubleth his own flesh." The various rules in the Hebrew Scriptures which aimed at the preservation of physical vigour were analysed. There was but little mention of disease; the one great scourge of the East was leprosy, and the most stringent regulations were given for preventing the spread of this malady by contagion or infection. The rule of conduct thus divinely indicated should govern us. Every child should be taught the laws of personal health—should be taught the structure and functions of the various organs of our frame, so wonderfully and fearfully made. The divergence of opinion concerning the obscure malady which had recently made such ravages proved the ignorance which still prevailed concerning our mortal bodies—those harps of a thousand strings—and the ills to which they were subjected. The preacher hailed with satisfaction the establishment of the Institute for Preventive Medicine and the forthcoming Congress for Hygiene, and, in proceeding to plead for the metropolitan medical charities, gratefully availed himself of the facts and statistics abundantly furnished in the two last numbers of THE LANCET. The aggregate collection in the Jewish synagogues will probably not fall short of £1000. Among the contributions received by the Chief Rabbi was a donation of £25 from Mr. M. J. Marsden of Paris, "in grateful recognition of the Guildhall meeting on behalf of the persecuted Jews of Russia."

ST. PETER'S, EATON-SQUARE.

The Rev. G. W. GENT, Principal of St. Mark's College, Chelsea, dwelt upon the value to any congregation of being confronted, at least on one day in the year, with the fact of suffering in the world. It was important that in that suffering they should find a moral and spiritual worth, yet not less important that they should note how much of our Lord's work here upon earth was concerned with the alleviation of physical suffering and disease. They could not work miracles now, but they could at least minister to the sick and supplement the resources of medical science. That was Christ's lesson for Hospital Sunday, and, acting so, they would walk most closely in the steps of Him "Who Himself took our infirmities and bore our sicknesses."

CLAPHAM CONGREGATIONAL CHURCH.

At the forenoon service at the Clapham Congregational Church, the Rev. J. GUINNESS ROGERS preached from the last part of the 12th verse of the 47th chapter of Ezekiel: "And the fruit thereof shall be for meat, and the leaf thereof for medicine." The sermon commenced with a reference to the symbolism amid which the text is found. The stream of water from the sanctuary, purifying, beautifying, and enriching the landscape wherever it went, was regarded as typical of the work of the Gospel and of the Church as the preacher of the Gospel in the world. Food and medicine were the two great necessities of the world. The one was necessary for all men; the other only for those on whom disease had fixed as its victims. It was a sign that there was disorder where medicine was required. The man with sound constitution and robust health who kept a supply of drugs only laid himself open to ridicule. As with the individual so with the world. If the world were good and pure there would be need still for food, for that which would repair waste, administer strength and nerve force; but for medicine there could be no occasion. The world, alas! was full of sickness and unrest, the head faint and the heart sick. What it needed first and above all was a great Healer, and this was the great message of the Gospel, "There is balm in Gilead, and there is a physician there." The Church, which had received a commission from its Lord, had a twofold work—the work of character building, of teaching to minister food which should nourish all that was strong and righteous and noble in the heart; and the ministry of healing, both for the bodies and the souls of men. The weak sentimentalism which expended itself in efforts for the degraded, or rather in the expression of compassion for them, and did nothing to remove the influences which served to push and keep them down did not answer to the Christian ideal, and did not correspond to the example of Christ. At the bedside of the sick He ministered succour and healing; in the Temple He proclaimed the truth which unmasked the hypocrisies and falsehoods of the world, and set forth the laws of the heavenly kingdom. The world needed the one as much as the other, and so to-day it needed food for spiritual thought and resolution. It needed that men should be nurtured in the principles of righteousness and in the firm determination to carry them out, but it needed also that sorrow should be comforted and that the sickness and the sorrow of men should find succour and healing. To the ministry of healing, therefore, their attention would be chiefly drawn, and as appropriate to the special occasion it was restricted to the healing of bodily sickness. Sickness played a not unimportant part in human life. Men might resolve to resist its influence, but it had a power by which it asserted itself, and asserted itself even at the most unexpected and undesirable times and in the most inconvenient forms. A young man full of vigour and promise, buoyant in spirit, suddenly arrested in his course by that disease which was regarded as especially the trial of our climate!—the very sight was touching! The hectic flush, the brilliant eye, the sign of nervous excitement in almost every movement,—all told of the sudden interruption of a life on which so many hopes had been built. But everywhere sickness impressed the imagination and touched the heart, especially so when to the languor and feebleness which it induced, and to the agony of pain, it might be there were added the pinchings of penury and poverty. In these pathetic aspects is the appeal to the sympathy and help of the church. There was no art which could be more truly called a divine art than the art of healing, and there was no profession which was more entitled to the admiration and the confidence of men than those by whom this art was exercised. It was not easy to overrate the value of the medical profession to a community, and it was for those who were unable to take part in this work themselves to show the reality of their sympathy by a kindly and generous contribution which would secure for the poor and the afflicted the aids and appliances which otherwise would be inaccessible. The training of men and fitting them with high principle and noble resolve was in itself one of the noblest of services; but let it not forget this other, which might seem more humble and commonplace: the fruit of the tree might be for food, but let its leaf be also for healing.

WOOD-GREEN CONGREGATIONAL CHURCH.

The Rev. W. GARRETT HORDER discoursed on Sunday morning last on "The Healing Forces of Nature," basing his remarks on Psalm ciii., 3: "Who healeth all thy diseases." In the first place the preacher grappled with the difficulty felt by so many on account of the presence of disease in the world, which they regard as a sign of the indifference or even malevolence of the Creator, in some cases making it a ground for disbelief in a Creator at all. In answer to this difficulty the preacher maintained that there would be ground for such positions if disease were normal to the human frame, but that if it be due to the

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folly, or carelessness, or sin of man, the difficulty vanishes. For the abnormal nature of disease the following argument was advanced. Many diseases are distinctly traceable to impurity, either physical or moral. Others arise—especially those of a nervous type—from the unnatural conditions of modern life. Is it too much to conclude that fuller knowledge would show that *all* disease has a similar origin? It may be asked, Why could not man's body have been rendered impervious to disease? Such a state would have had corresponding disadvantages. For it to have been thus man's nature must have been of a harder and therefore less sensitive type. Man must have been less highly endowed, less capable of high delights. A stone is impervious to disease, but how much less than man is a stone. We cannot have the benefits without the defects of our qualities. Then disease plays a moral part in our life. It is corrective, disciplinary, drawing away from evil by its painful results. The real hardship is that we so often have to suffer from the errors and sins of others. This, however, could only be corrected by complete isolation—each individual being a separate creation. Would not the gain be greater than the loss? Would it not render impossible the tender ties and associations in which so much of the joy of life is found? But whilst disease exists there are great forces which are ever working against it, and in favour of wholeness—health. Amongst these may be noted:—(1) The recuperative powers which exist wherever there is life. Hack a stone, and it remains defaced. Hack a tree, an animal, a man, and nature at once begins to heal the mischief. On this all medical skill depends, and but for this all drugs, all operations, all the healer's efforts would be in vain. (2) Nature abounds with remedies which assist this healing tendency. For every disease there is an antidote, or at least a palliative. Some of these are known, probably more are as yet unknown. (3) Pain is a coöperant in such healing. It is an evil in which good preponderates, since it calls attention to disease; it makes a demand for rest, and calls aloud for the healer's help. (4) Then there is the healer's skill, which is essentially a divine endowment. All the faculties employed by the physician or surgeon are of God. They, as certainly as the minister, may say, "We, then, as labourers together with God." All these are parts of the great healing system of nature, which is only another name for God. Man is constituted in a way that tends to health of both body and spirit. In the former the doctor is the coöperant, in the latter the minister. In Jesus Christ both were combined. He was at once the healer both of the body and of the spirit. To continue His work both the physician and the minister are necessary. Once both these functions were united. Now, they are usually severed and carried on by different persons. In an ideal ministry they would, and perhaps one day they will be again united. The preacher concluded by showing that in efforts for the health of men all, no matter what their special religious views, might combine, and on this founded an appeal for the hospitals of London.

UNION CHAPEL, ISLINGTON.

The Rev. HENRY ALLON, D.D., in making an appeal on behalf of the Hospital Fund selected for his discourse "Christ's Physical Ministry." On such an occasion, and it was seldom they did justice to it, they instinctively turned to the physical ministry of our Lord, who ministered to all human ills; who became the centre of a kind of moving hospital, and before whom came almost every form of ill that man was heir to, all of which attested a divine art of love more than a divine power over physical nature. There was no process that so softened and refined and sanctified our human character so much as benevolence. Even on selfish principles there was no greater mistake than to think that self was benefited by selfishness. A man refused charity and retained his guinea. Could he get as much happiness out of it as an additional accumulation of his wealth as he could get out of it as a benevolence? If it kept a fellow man from perishing, if it restored a sick man to health, if it healed a widow's broken heart, if it provided bread for orphans, if it brought a perishing soul to Christ, if it put the Bible as a guide and comforter of life into the hands of men,—the knowledge that his sovereign had done this, the intensity of the feeling of deep satisfaction inspired by benevolence was a far better sovereign's worth of happiness than the mere sense of accumulation. He felt sure that no church would do much spiritual work if it did not abound in temporal beneficences. Our care for the poor, the strong helping the weak, suffering with those who suffer, were the very cardinal principles of the religion they professed. If these principles be lacking, the religion itself was manifestly without credentials and power. It was the true solution of the great problem of the social classes of life, a problem that was ever convulsing society. No legislation could solve it; strikes could not harmonise it. It was only by the practical realisation of human brotherhood and of ministering benevolence, the wealth used as a stewardship, and by the services rendered in all fidelity, that they could hope in England to avoid the disastrous reprisals that had been seen in some nations. The reverend gentleman concluded by urging that there would be a liberal response for the hospitals, the money for which was always wisely distributed.

ST. MARY'S, LEYTON, ESSEX.

The Rev. JOHN KENNEDY, senior curate of the parish, in the course of his appeal impressed his hearers with the noble work that was being done at our hospitals. The needs were obvious, he said, to everyone, and appealed to all sorts and conditions of men. Quoting the statistics of the Fund, he commended the new departure which had been made in the disbursement of 5 per cent. of the Fund to the purchase of surgical appliances for the relief of the deserving poor. He as a clergyman had long felt this a pressing want. He was convinced of the inestimable amount of good done by the movement, and he felt he could not speak too highly of the medical profession and the whole staff attached to the hospitals. No Christian work demanded more support than this; no other charity more richly deserved it, and none of whatsoever creed could refuse to contribute towards an institution like this, the object of which is to alleviate the suffering and misery of our fellow men. In the evening the subject was again forcibly alluded to by the Rev. H. A. Bull, M.A. Recognising the hospital institution as a grand work for the alleviation of pain and misery, he trusted that God would move their hearts to take full advantage of the high and sacred privilege of contributing towards a pre-eminently Christian work of this kind. Some of his hearers had loved ones, who had been spared suffering; while others perhaps had passed through the pains of various ills. Would not both be glad to give a thank-offering? He, as curate of the parish, had had full opportunity of appreciating how manifold were the mercies bestowed on the poor by the free distribution of tickets for admission to the hospitals for relief.

MERCERS' CHAPEL.

The Rev. ARTHUR VEYSEY, chaplain to the Mercers' Company, preached at Mercers' Chapel, Cheapside, in the evening only, taking for his text St. Matthew xxv., 31–46. Quoting from THE LANCET Special Report, he gave particulars of the vast amount of work and good done by the various hospitals, and of the large amount of money required to carry them on efficiently. He specially dwelt on the thoroughly Christian nature of the work, emphasising the fact that hospitals are the outcome of Christian teaching and practice, and exist and are helped and supported for Christ's sake.

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The Cavendish Lecture

ON

ELIMINATION AND ITS USES IN PREVENTING AND CURING DISEASE.

Delivered before the West London Medico-Chirurgical Society, June 12th, 1891,

BY T. LAUDER BRUNTON, M.D.,

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MR PRESIDENT AND GENTLEMEN,—It seems to me that one of the most marvellous definitions ever given is that of dirt as "matter in the wrong place." The matter need not be in itself objectionable; it may be, on the contrary, exceedingly valuable and useful, provided it be in its proper place and fulfilling its proper function, and yet it becomes dirt at once when put in the wrong place. The pipeclay which is used to keep the soldier's belt clean at once becomes dirt when it gets upon his uniform, and the blacking which lends lustre to our boots and is used "to keep them clean," as it is termed, at once assumes the character of dirt, and exceedingly objectionable dirt, if we put up those boots on a chintz-covered sofa, leaving a black smudge on the fair surface of the fabric. The utility of things which most people would agree to call dirt is shown by the care employed in sifting cinders, and in separating rags and bones from the contents of our dustbins; but the dust contained in these bins is a most unmitigated nuisance to the unfortunate householder who cannot get it removed. I do not know any topic more calculated to excite a lively conversation, amongst householders in London at any rate, than those of dustbins and drains. The mere mention of either of these words has an effect quite different from that of the "apple of discord," for its effect is a most wondrous concord, everyone having the same tale to tell of the neglect of the dustmen and the iniquities of plumbers. My own experiences in the way of dustbins appear to be exactly those of everyone else I meet, and we all agree that although we pay heavy rates, and are still further mulcted by the necessity of having to tip the dustman at every visit, we cannot get our dustbins emptied regularly, and our complaints receive no attention whatever. So much is this the case that one medical friend of mine threatened to empty his dustbin into the street, and let the vestry sue him as a nuisance. Drains are, if possible, an even greater cause of complaint. The difficulties of getting them put right are almost insuperable, and although Mr. Teale of Leeds has done good service to sanitary science by making the "Dangers to Health," of which his book treats, visible to the eye, some people still believe that the only way to eradicate the dangers of badly made cesspools and defective pipes is to hang two or three plumbers as an example to others. The dustbins are the receptacles for the solid refuse of our houses—the dust, the ashes, the cinders, the odds and ends of dry material which, accumulating in our rooms, would render them dirty and disagreeable; but the drain-pipes are the channel by which the soluble and liquid refuse of our houses is carried away, and any interference with them is still more serious than the non-removal of our dust. It is only in highly complex communities that the difficulty of removing refuse, either solid or liquid, is felt to an extreme degree. A single individual travelling all by himself in the country has no difficulty whatever. In villages the difficulties are but slight, and even in large camps they may be overcome in a very simple manner, as is shown by that hygienic law of Moses: "Thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee."[1] But in cities like London, Paris, Berlin, or Vienna the difficulty of eliminating the refuse is very great, and enormous expenditure is required to effect it. Each unit in the population contributes to the total amount, and as the population grows the difficulty increases. But in large towns the whole refuse of a house does not at once find its way into the dustbin or the sink. The worn-out furniture, the cast-off clothes, and disused utensils which are lumber and rubbish in the houses of the rich, find their way as useful articles into those of the poor, and after a further period of service descend still lower in the scale of society, passing perhaps through many grades before they are thrown away as absolutely worthless. Even after their fragments have found their way into the dust-heap they are again picked up by scavengers, conveyed to mills or factories, and after being there transformed into a different shape, are again employed for other purposes.

Now there is a wondrous unity in life and living beings, and the same process which we find going on in towns and villages occurs also in the living beings which compose their population. Nay more, it exists in the tissues and cells of which these living bodies are composed; and even in the unicellular organisms which constitute the simplest form of life on the surface of this globe. These unicellular organisms are now attracting much attention, for they are the earth's scavengers, who tear up the old clothes, crush up the old bones, and burn off the ashes of the world, which would otherwise accumulate and render life impossible. But these lowly organisms are not content with breaking up dead matter; they magnify their office, and by attacking living beings they produce diseases which may lead to the death, dissolution, and ultimately to the complete disappearance of the man or beast they attack. Such unicellular organisms as a rule have no difficulty in getting rid of the products of waste which are formed by them as well as by the higher animals. As a rule they live and grow in some fluid, and their own movement through the fluid brings them in contact with fresh layers of it, from which they obtain new nutriment, and which also washes away their refuse. Should this refuse accumulate to too great an extent, as it does when the fluid is too crowded by the presence of an enormous number of microbes, the refuse products will kill these microbes, just as the unfortunate persons confined in the Black Hole of Calcutta were suffocated by the products of their own respiration. But just as the broken victuals and old clothes of the rich, regarded by them as simply rubbish, can be utilised by their poorer neighbours, so the fluid in which one class of microbes can no longer grow forms a most suitable soil for others. Thus the liquid in which yeast can no longer grow forms a most suitable soil for the acetic bacillus, and when this in turn has ceased to grow its place is taken by putrefactive bacilli, and these in their turn are succeeded by moulds. When unicellular organisms become agglomerated together, as in sponges, the difficulty which each organism has in getting rid of its waste material, and in obtaining new nutriment, is increased, and those cells which are unfavourably placed would probably die very quickly, either from lack of nutriment or from suffocation by their own waste, were it not that this untoward issue is provided against by a peculiar arrangement. Some of the cells become furnished with cilia, which keep up a constant current of water through the interstices of the sponge and thus bring the fixed cells into a similarly favourable condition as their free-swimming congeners, with this difference, that, in the case of the free-swimming cell, it moves through the fluid in which it lives, while in the case of the fixed cell the fluid flows over it. This latter arrangement is the one which exists in most of the cells of the higher organisms, such as man. Although some cells, like the leucocytes of the blood, swim freely through the fluid which nourishes them, all the fixed cells, of which the tissues are formed, are nourished by the lymph which flows around them or between them. A constant current is kept up in this lymph by the mere pressure due to exudation from the capillaries on the one hand, and to absorption by the veins and lymphatics on the other, aided by pressure on the tissues caused by movements. Only in one place—the central canal of the spinal cord, where the delicacy of the tissues requires a constant flow of nutrient fluid, and yet demands an absence of pressure which might injure the nervous structures—is the current of lymph kept up by ciliary motion, as it is in sponges. As Claude Bernard well puts it, the cells of which our bodies are composed do not live in air. They live in a liquid internal medium, which at the same time supplies nutriment and oxygen, and removes waste products. So long as this nutritive medium continues to fulfil its functions, the cells of which our bodies are composed live and grow with

[1] Deut. xxiii., 13.

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perfect indifference to our external surroundings; and so long as a man holds his breath, so that the fluid medium is unaltered, it is a matter of indifference whether he has his head in a bag of oxygen or in a brewer's vat filled with carbolic acid. But the fluid medium or lymph very quickly becomes altered by the living cells which drain it of its oxygen and pour into it their waste products, and in the course of a few minutes it would become quite unable to support their life were it not gaining supplies from without of oxygen and nutriment, and eliminating or destroying the waste products poured into it. I say destroying, because when the lymph passes into the blood the waste products appear, to a certain extent at least, to undergo oxidation, just as the sewage of villages high up the Thames becomes oxidised or destroyed before it reaches the mouth of the river or the open sea. But various conditions may tend to interfere more or less with the discharge of the sewage of the cells, as well as with their supply of nutriment and oxygen, and it is with this discharge of sewage or elimination of waste products from the cells which compose our tissues, into the blood and its excretion from the body as a whole, that we have particularly to do to-day.

It is not merely the elimination of the natural waste products of our tissues that we have to consider, but the elimination of waste products formed within our bodies by disease germs which have entered them. These disease germs, consisting as they do chiefly of bacilli or micrococci, resemble the cells of our bodies in the fact that they also may be destroyed by their own waste products; but when they enter our bodies, the substances they produce, harmful though they might be, if in excess, to the bacilli themselves, are usually still more harmful to the cells of the tissues, and so weaken them as to give the microbes a better chance of success in the struggle between them and the organism into which they have entered. Though opinions may differ as to the exact mode in which the organism destroys intruding microbes, or intruding microbes destroy the organism, there is no doubt about the fact that a struggle does exist between them, and the recent experiments which have been made on such a large scale with Koch's tuberculin have shown that this fluid, although sometimes useful and productive of benefit to patients, not unfrequently has an opposite action, and appears to assist the development and growth of the tubercle bacilli present in the lungs or elsewhere. The apparently contradictory results obtained by the use of tuberculin seem to be explained by the observations of Brieger and Fraenkel in regard to diphtheria. These observers have discovered that the diphtheritic bacilli produce two substances, one of which is toxic to an animal and the other of which is protective. These substances differ in their power of resisting heat, the toxic substance being destroyed at a temperature of 55° C. to 60° C., while the other resists a temperature not much below the boiling point. These substances appear closely allied, and it is just possible that one may be transformable into the other. What their relationship to one another is we do not at present know, but if we look at the vegetable kingdom we find that in numerous instances poisons closely allied chemically to one another are present in the same plant, but have an antagonistic action to one another. Thus in Calabar bean we have physostigmine and calabarin, of which the latter stimulates and the former depresses the spinal cord; and jaborandi contains two alkaloids, pilocarpine and jaborine, having entirely different actions, and indeed jaborine antagonises the action of pilocarpine. Many alkaloids contained in the same plant seem to have a simple relation to one another; either the one contains the elements of water more or less than the other, or an atom of hydrogen in the one is replaced by an atom of methyl in the other. Whether some such simple relationship exists also in the product of bacteria we do not yet know, but there is little doubt that further researches will soon throw much light on the chemical nature of bacterial poisons. One noticeable point in regard to the resistance of animals to such poisons is that an abundance of glycogen in the liver increases its power to destroy the action of such poisons as pass through it. This power diminishes as the glycogen disappears, and what is true for the liver is probably true for other parts of the body. At any rate, we know that when animals are starved the glycogen disappears both from the liver and the tissues, and starvation greatly increases the liability of an animal to succumb to infection.

But putting aside the question of neutralisation of bacterial poisons by the lymph or tissues, it is evident that if the toxic products of any bacillus can be washed out of the organism, that organism will have a better chance; and experience confirms the theoretical view that free elimination, both by the kidneys and bowels, is useful treatment in infective diseases.

Turning again to the normal products of tissue change, we note that probably the most important part of a cell are its nitrogenous components or proteids. The chief products of nitrogenous waste are urea and uric acid, and these vary in relative quantity in different classes of animals. The urea forms the chief product of waste in the amphibia, but in the reptilia and in birds the waste appears almost entirely in the form of uric acid combined with bases. In man we have a mixed condition, as the waste occurs partly in the form of urea and partly in the form of uric acid, the proportion of acid to that of urea being about 1 to 33. It is usually supposed that there is a greater tendency in some persons to the formation of uric acid than in others, and that this tendency is associated with a gouty or rheumatic diathesis. In a number of exceedingly interesting and valuable papers, Dr. Haig has shown that the excretion of uric acid is greatly influenced by the comparative alkalinity[2] or acidity of the blood, and that the amount of acidity may be made to vary within very considerable limits by the kind of food, by the process of digestion, and by the use of various drugs. There are certain parts of the body in which the uric acid, wherever it may be generated, has a tendency to become stored up, and this is especially the case in the spleen and the joints, which may be regarded as dustbins for uric acid. Whenever the blood becomes more strongly alkaline than usual, it tends, like an active housemaid, to sweep up the uric-acid dust out of these bins, with the result of causing great discomfort to the organism generally; for the uric acid thus sent on its travels attacks the nerve centres and the vessels, producing headache and depression of spirits, so that gouty people will frequently object to the use of alkalies because, as they say, they are very lowering. Acids, on the contrary, prevent the blood from taking up the uric acid and lead to its being concentrated in the dustbins already referred to, so that they relieve the depression, remove the headache, but, at the same time, tend to cause pain in the joints and accumulation of uric acid in the spleen. Here it lies without producing any inconvenience for the time, but may possibly be stored up to such an extent as to cause great discomfort, or even danger, when this large dustbin comes to be cleared out.

A year or two ago I had a very striking case illustrative of Dr. Haig's view. A gentleman, who had suffered from chronic malaria, had an enormously enlarged spleen. That organ began to contract, and simultaneously the patient began to suffer from repeated attacks of renal colic, due to small uric-acid calculi, at intervals of two or three weeks. So frequent were these attacks that I thought he must have an accumulation of small stones in his kidney, for I did not fancy he could form the concretions sufficiently rapidly to cause such frequent recurrence of the renal colic. Post-mortem examination, however, showed that I was mistaken, for there was no calculus whatever in either kidney. Retention of uric acid in the spleen, according to Dr. Haig, is accompanied by its absence from the blood, and consequently by a feeling of well-being and jollity, which may, however, pass into an entirely opposite condition when the uric acid, which has been stored up during the period of retention, again finds its way into the circulation. Thus, while a glass or two of champagne, by increasing acidity, drives the uric acid out of the blood and consequently give rise to hilarity and happiness in the person who has taken it, it will give a gouty man twinges in his joints, by causing the uric acid be lodge in them, and may cause much subsequent headache and depression when its first stimulant effect has passed off and the imprisoned uric acid again enters the circulation. Even more serious consequences than depression and discomfort may, according to Dr. Haig, be produced by the rapid removal of uric acid from its chief dustbin or storage place—viz., the spleen—into the circulating blood; for, instead of only affecting the mental faculties, it may attack the heart, with fatal results. As an instance, he gives the death of the late Canon Liddon, who had recovered from an attack of gout in the head, and was feeling fairly well, even after the fatigue

[2] The blood is never acid, but diminished alkalinity may for the sake of convenience be spoken of as comparative acidity.

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of a railway journey, but suddenly fainted shortly after breakfast, and died. Dr. Haig's explanation of this is that during the period of comparative well-being the uric acid had been stored up, and when the blood became more alkaline, as it does during digestion, and dissolved a part of it out, the liberated uric acid contracted the arterioles, thus raising the tension so that the heart was unable to overcome it, and causing fatal syncope.

Dr. Haig's theory of the storage of uric acid is that this substance is formed in the kidneys out of waste products derived from the nitrogenous tissues generally or from the liver. Part of it is at once excreted, but part of it may return from the kidneys, and either circulate in the blood or get stored up in the spleen. If we return to our analogy of the dust in the house, it is as if the ashes, crumbs, and waste vegetables were thrown together into an ash bucket to be emptied, but if this emptying were imperfectly done, the remnants would be thrown into a dustbin within the house, and could not be cleared directly to the outside, like the ash-bucket, but would require to be emptied by bringing the dust through the passages of the house, which would lead to much discomfort. The alkaline constituents of the blood are the natural solvents of uric acid, and anything that increases their proportion in the blood renders the uric acid more soluble, so that it is more readily removed from its place of storage and brought into the general circulation, where it produces manifold discomforts. Thus it is that alkaline remedies in gouty patients are so apt to give rise at once to the complaint of their being lowering, not because they have a depressant action of their own, but because they withdraw the uric acid from its lurking place and allow it to act upon the nervous system, thus producing depression. The alkalinity of the blood is increased when the materials of gastric juice are withdrawn from it during digestion, and at this time not only is the urine frequently neutral or alkaline, but the gouty man may suffer from the discomfort due to the circulating uric acid, and falls asleep over his paper after breakfast or feel stupid and drowsy after lunch, when he ought to be attending to his business. On the other hand, anything that diminishes the alkalinity of the blood, such as acids or wines, and condiments containing acid, nux vomica, opium, and iron, tends to drive the uric acid out of the blood into its store houses, and so produces a feeling of well-being which may, however, be only temporary and illusory, as the uric acid is not eliminated from the body but only stored away within it, and when the blood becomes alkaline after another meal, or after a dose of soda, all the uncomfortable feelings produced by uric acid may again torment the patient.

Again, returning to our illustration, if the contents of our dustbin were carried through our passages it would be flying about and great discomfort would ensue; but if we took care to wet each bucketful with a deodorising solution, there would be neither flying dust nor disagreeable smell, and the clearing out would be done with a minimum of trouble. In the gouty man's body salicylic acid seems to have a similar effect to wetting the dust; it accelerates the elimination of uric acid while preventing its disagreeable action, and Dr. Haig advises a prolonged course of this drug as a means of permanent cure in gouty patients. It is hard to say at present what the natural solvent of uric acid is in the body, for it is quite clear that people generally have not got salicylic acid regularly circulating in their blood. Sir William Roberts considers that the pigmentary substances which one finds in the urine probably have a solvent action, and it had occurred to me that possibly a body, pyrocatechin, which is almost constantly present in the urine, and is nearly related chemically to salicylic acid, may be one of the natural solvents, but I have not yet been able to test this idea experimentally.

I have entered thus fully into Dr. Haig's views of the pathology of gout and the elimination of uric acid because I regard his work as one of the most important contributions which have been made for many years to our knowledge of gout and rheumatism. I do not myself think we have yet got to the bottom of this question. In all probability we shall find that the proteid waste which yields the raw material for uric acid is quite as important, or more important, than the uric acid itself; but Dr. Haig has, at any rate, supplied us with a useful working hypothesis, which may enable us both to foretell the results of certain indiscretions in diet or regimen in gouty people, and to supply us with the means of alleviation or cure. Besides the salicylate of soda, upon which he lays so much stress, we find that gouty people are accustomed to trust to baths and watering-places of all sorts for relief; and no doubt a visit to Homburg, Aix-les-Bains, Carlsbad, Marienbad, Brides-les-Bains, Baden-Baden, Wiesbaden, Harrogate, Bath, or Strathpeffer will all greatly improve the health and often protect patients from gouty symptoms for many months or even years afterwards. In visiting all these watering-places one is struck by the diversity of the constituents of all these world-famed springs and the constancy of one ingredient—namely, water. In watching the patients one sees that people, who at home never touch a drop of water pure and simple from year's end to year's end, taking it only in the form of wine, beer, tea, or coffee, will at a spring drink tumbler after tumbler of water containing common salt with minute traces of other things, as at Wiesbaden or Baden-Baden, or the same constituent with rather more lime salts at Homburg, sulphate of soda and carbonate of soda at Carlsbad or Marienbad, or sulphurated hydrogen, as at Aix-les-Bains, Harrogate, or Strathpeffer. I do not mean to say that the saline or gaseous ingredients of these springs are without effect upon the organism—far from it, but at the same time I feel quite convinced that very many people would never require to go to watering-places if they would drink more water at home.

Water is the most universal solvent in the world. It is not only useful to wash out our closets and flush our drains, it has a similar effect in our bodies, and tends to wash away the waste products from the cells of which our organs are composed, to clear out the uric acid, urea, and phosphates through our kidneys, and thus prevent renal or vesical calculi, and also to wash out our liver and prevent gall-stones, while it helps to keep the bowels in action. The liver especially is an organ which suffers much from want of water, and I never see a gall-stone without asking the patient, "How much water do you drink!" Almost invariably the answer is, "I hardly ever touch water. I am not a thirsty person;" and on one occasion a lady called for a particular teacup, which held little more than a thimbleful, in order to show me how much she drank. On reckoning how much water she took in the twenty-four hours it came, as nearly as I could calculate, to sixteen fluid ounces. What wonder then that she had a gall-stone! The poor liver had not a chance to make decently fluid bile, and naturally there was a deposit. By making such people drink a big tumbler of water, and especially hot water, every morning, with or without some Carlsbad salts added to it, and, if necessary, repeating the hot water once or twice more in the day, the renewed formation of gall-stones may frequently be averted, and symptoms of biliary colic, to say nothing of so-called "biliousness," may be prevented for many years, or perhaps entirely. But some patients will not do this at home, and if you were to tell a fashionable lady to get up at six o'clock in the morning and walk round Grosvenor-square with a tumbler of hot water in her hand, taking a sip at every three steps, to go on doing this for an hour together, and then to buy at a confectioner's a penny roll, and eat this without butter to her breakfast, with a small cup of coffee and nothing more, she would probably laugh in your face or apply to someone else for advice. But all this and more you secure by simply advising her to go to Carlsbad. There she finds everybody else doing the same thing, and instead of marching round and round all by herself, or accompanied only by little boys who might point the finger of scorn at her, she finds herself in the company of all the fashionable visitors to the bath, and marches to the music of a brass band. The company of others enables her to carry through the tiresome process and to comply with the troublesome restrictions, while the benefit she is sure to derive from it probably makes her feel so strong and happy that she swears by the place ever after, and returns to it again and again. For people who can afford it, a visit to such places supplies the best means of cure; but for those who cannot, an excellent substitute may be found in the daily consumption of hot water, if they will only have patience and perseverance in its use. The process of washing out is not only useful in biliary calculus, it is of the utmost value in preventing renal gravel and calculi. The process may be carried on at home by means of hot water either alone or with the addition of a small quantity of some saline, such as bicarbonate or nitrate of potash. In cases where the patient dislikes hot water alone, a slice of lemon thrown on the top of it gives it a slightly agreeable taste, and may overcome the patient's

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repugnance. The two watering-places where patients with renal calculi chiefly go are Wildungen and Contrexéville, with its neighbours, Vittel and Martigny-les-Bains. What strikes one in the waters of these places is that in addition to other salts they contain a very minute trace of iron, which appears certainly to be beneficial to the patients. It is supposed to act by astringing the mucous membrane of the pelvis of the kidney, and so allowing calculi to slip down more easily.

There are several other methods of cure which I believe owe their virtues to the fact that they produce pretty complete elimination of waste products by causing the patient unconsciously to imbibe a large quantity of water. These methods are the grape cure, the whey cure, and the milk cure. For the grape cure the patient resorts to some warm, sunny place, where the grapes grow well, and there eats many pounds in the course of the day, while other articles of diet are correspondingly diminished. The ripe grapes contain an enormous proportion of water and very little solid matter, so that the grape cure really comes to be a combination of water drinking and semi-starvation, greatly resembling the Carlsbad cure, to which an additional likeness is given by the laxative effects of the alkaline tartrates contained in the grape juice. The whey cure is very much the same, with the exception that instead of eating grapes people drink whey, and that the climate where the cure is carried out is usually a high and bracing subalpine one, instead of being soft and sunny. The milk cure is one frequently used in this country with great advantage, more especially in cases of typhoid fever, in chronic diarrhœa occurring in persons who have come from tropical climates, in glycosuria, albuminuria, and some cases of heart disease. Its advantage in typhoid fever is so universally acknowledged that one need hardly say anything about it; but I think it is possible that its efficacy may not be due merely, as is usually supposed, to the milk supplying a bland and non-irritating diet, but may possibly be due also to the waste products of the organism being washed out by the large amount of water which is either contained in the milk itself or added in the form of lime-water or soda-water to it. The results of an exclusively milk diet in chronic diarrhœa are sometimes quite astonishing, and a few months ago I had a letter from a patient who had been suffering from it for ten years, had taken all sorts of medicine in vain, had just come back from Carlsbad worse than he went, and had nearly given up all hope of cure. I saw him only once, and told him that the medicine I gave him might do him good or might not, but that if he did not get well his only hope was to put himself on milk, and milk only. This treatment, as he informed me by letter months afterwards, cured him as if by a charm.

In diabetes, the milk cure requires to be used with care, and the cases for its use must be selected, for some patients may be injured by the insufficient nutriment which it affords, while others are greatly benefited by it. The cases in which it answers best are, I think, not those of pure diabetes, but rather those of gouty glycosuria, and more especially those in which glycosuria is attended by albuminuria, and where the low specific gravity of the urine, after fermentation, leads to a suspicion of contracted kidneys. In such cases, and also those of gouty kidney, where the urine is free from sugar and has a low specific gravity with a trace of albumen, a diet in which milk forms the chief or only ingredient tends to ward off spasmodic dyspnœa or the uræmic condition which so frequently occurs from imperfect elimination in old gouty cases.

But we must turn now to another channel of elimination—namely, the bowels,—and this channel is little, if at all, less important than the kidneys, and indeed, in the popular mind, it is more important. There is a great deal of truth in the two rules of long life, "Keep your mind easy and your bowels open;" and indeed, easiness of mind depends very much upon the state of the bowels. I remember reading many years ago a story relating to this subject, by Norman McLeod, in *Good Words*, but I have been unable to verify the reference. It was to the effect that a certain Lady Margaret sent a message down late one night to an old clergyman who lived in the manse not far from her castle to say that she was in great distress about her soul. "And how are Lady Margaret's bowels," asked the old gentleman. He learned the bowels were remiss in their duty. "Here are two pills," said the old man to the messenger; "let Lady Margaret take them to-night, and I will come and talk to her about her soul to-morrow morning." On going up next day the old man found that there was little for him to do, for the bowels had done their work and, as far as Lady Margaret's feelings went, had restored health to her soul as well as to her body. There is hardly a room in the house but will become dirtier if you cannot get your dustbin emptied, and there is hardly an organ in the body that does not suffer if the bowels become constipated. Not only the brain, but the heart, liver, lungs, stomach and kidneys have their functions impaired when the bowels cease to do their duty. Napoleon's disaster at the battle of Leipzig is popularly set down to his having eaten a bun in a hurry, and so brought on dyspepsia; but it would be a very curious page of history if we could learn how many wars, how much bloodshed, and how much cruelty, have had their origin in imperfect action of the bowels. Washington Irving, in his "Lives of the Caliphs," tells of a certain emir named Al Hejagi, who suffered for many years from dyspepsia and abdominal pains, and this wretched man distinguished himself, perhaps above all other rulers who have ever lived, in the enormous number of people whom he sentenced to imprisonment and death. He is said to have caused the death of no less than 120,000 persons, besides those who fell in battle, and to have left 50,000 in prison when he died himself. How much of all this misery might possibly have been averted by the judicious use of mild aperients, it is as impossible for anyone now to tell, as it is to estimate the debt of gratitude which Europe owes to the physician of Louis XIV. for the care he took of the bowels of that august monarch.

In mitral disease and in dropsy, either cardiac or renal, the benefit derived from the free use of compound jalap powder is very great, and in his work on "Purgative Medicines" Dr. Hamilton describes most forcibly the advantages he obtained from purgatives employed in such a way as merely to clear out the bowels, but not to produce violent purging, in typhus fever, scarlet fever, marasmus, chlorosis, hæmatemesis, hysteria, chorea, and tetanus. Like all good plans, that of purgation has been carried to great excesses, and its use has frequently degenerated into its abuse, so that it has fallen too much into neglect, and been replaced by the feeding-up system. This, too, is good in its way, but we must always remember that if we want a fire to burn brightly, we must not only pile on the coals, but also ply the poker to remove the ash. Neither the coals nor the poker alone will do—we must combine them, and neither the feeding-up system nor the purging system alone will do, but we must combine them in such measure as is necessary for the welfare of our patients. Now Nature has herself provided a certain regulating mechanism to attain this end, for, as my friend Dr. Cash has shown, each time that food enters the stomach, the bowels receive a certain impetus, which is sufficient in healthy people to carry the refuse out, and produce an evacuation once a day, the final impetus being usually given by the breakfast, which is sometimes followed by a cigar. In some people, however, the stimulus given by the food is not sufficient, and in these people it may be necessary to give a laxative daily. It is no doubt better to do without this, if possible, and by strict attention to regularity and soliciting nature at a regular hour every day, whether there be any desire to defecate or not, the bowels may at length become quite regular. Exercise in many cases is an adjunct, and the mechanical compression which the intestines undergo from the action of the abdominal walls stimulates them to increased contraction. More especially is this the case if the exercise be of the nature of climbing or riding, for in both of these the abdominal muscles contract with considerable power, while in an ordinary constitutional walk along the level road the bowels receive hardly any compression whatever. Where exercise cannot be obtained, abdominal massage, either by rubbing with the hand or by rolling a cannon ball covered with chamois leather over the abdomen, may be useful. A draught of cold or hot water in the morning or before going to bed at night, by supplying moisture to the contents of the intestines, may have the desired effect. The hard, indigestible residue of food-supply is a healthy mechanical stimulus to the bowels, and I think that in our efforts to save the stomach we sometimes disregard this need of the bowels and give food which is too soft, too mucilaginous, and too unirritating. Stewed prunes or stewed pears, by the indigestible cellulose which is present in them in the

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forms of skins or gritty grains, figs either raw or stewed, raspberry or strawberry jam—by the indigestible seeds which they contain—and marmalade by its orange peel, as well as brown or bran bread by its indigestible husks, all supply a mechanical stimulus to the bowels. But even these sometimes fail, or we find that the stomach objects to them, although the bowels may need them, and we must have recourse to so-called aperients. Frequently when I prescribe a dinner pill, patients say to me, "But, doctor, it is not natural that I should take medicine every day." I say to that, "Quite true. Nor is it natural that you should keep a cook, and if your cook removes from your food everything that is stimulating to the intestines, you must take something to replace what your cook has taken away. If you will go back to the manners and customs of the ancient Britons, live in the green wood, and eat acorns and pig nuts, you will not want any dinner pills."

Now the dinner pill supplies a very useful stimulus, and I know a man who has taken one every day of his life for forty years, apparently with great benefit to himself. But there are some people who do not seem to thrive on dinner pills, and they either do not get any action at all or they get too much. In such cases, instead of giving the intestines one great push once a day by the dinner pill, one may give them a series of gentle jogs by adding to each meal a minute quantity of a purgative, and I find one-tenth of a grain of aloin, given with each meal, sometimes succeeds when other means fail, and even these small doses appear sometimes to be too much.

Now our bodies are like houses in more than one respect, and it is usually found that although each room may be dusted out once a day, there is a regular cleaning up with extra sweeping once a week, and, in addition to this, there is the spring and autumn cleaning of the whole house. Dinner pills and stimulating diet are like the ordinary daily dusting, and while they may answer for some persons, others find that, in addition, they require a weekly clear out; and if this be not given to them by means of a cholagogue purgative, they have a regular sweep out about once a month by getting a violent migraine with bilious vomiting, and generally they are obliged to fast for at least one day during the continuance of the headache. Besides this, our forefathers used to have a regular clearing out in the spring and autumn, not from the bowels, but from the blood-vessels directly, and they were accustomed, as they said, "to be let blood" in the spring and autumn. The effect of a cholagogue purgative, such as a mild mercurial—e.g., small doses of calomel, of blue pill, or of grey powder, followed by some saline—is sometimes very remarkable. I have seen a quarter of a grain of calomel with a seidlitz powder next morning change as naughty a little girl as you would not wish to see into a perfect little angel, and I well remember a little experience which I had some years ago at a friend's house. One morning at breakfast a little boy was very troublesome, and instead of taking his oatmeal porridge, as he ought to have done, he was nudging and bothering his little sister, who was sitting beside him. I said to my friend, "I think your boy's digestion is out of order." "Oh, no," he said, "it is only naughtiness"; but the naughtiness increased so much that the little boy had to be forcibly removed from the table. As soon as the expulsion was effected my friend said, "You are quite right. His breath does not smell right." In such cases as this I do not know any medicine that is better than some Gregory's powder, because it has both a moral effect and a physical action. Its nasty taste, when administered as a punishment, is wholesome morally, while its action upon the liver and digestion is most useful physically.

Not unfrequently adults suffer from nervous irritability, depression, weakness and inability to do anything, and this is put down on the part of their friends, and frequently of their doctors, to neurasthenia and hypochondriasis. They are treated with nervine tonics, nervine sedatives, change of scene, change of air, baths, waters, advice or scolding, and all to no good. Nervous and depressed they still remain. In some of these cases one may notice a large amount of mucus in the motions, and sometimes there appear to be actual casts of the intestine, long membranous looking shreds, apparently tubular in their nature. This condition has been described by the late Sir James Simpson under the name of "membranous enteritis," and it is not only usually said to be associated with hypochondriasis, but often it is looked upon as the consequence rather than the cause of the nervous condition, which is certainly its usual concomitant. But it is of no use here to treat the nerves. If you wish for any good result you must treat the bowels. In some, probably in many, cases it depends upon the partial constriction of the intestine near the junction of the sigmoid flexure with the rectum. The motions, lodging here, tend to cause an inflammatory condition of the mucous membrane, and profuse secretion of mucus, which either simply coats the fæcal masses or forms a kind of false membrane. This condition may be due to actual constriction of the lumen of the gut, or to a diminution in its calibre from pressure. In children prolapse of the rectum is a very common thing. In adults it is comparatively rare, but in them a tendency remains, not to prolapse of the rectum externally, but of the sigmoid flexure into the rectum, and this condition may give rise to great nervous disturbance, lasting for years, and perhaps indefinitely, unless its existence be suspected and the proper treatment adopted. One useful remedy, strongly recommended by Mr. Cripps, is the injection of from two to four ounces of cold water immediately after a motion. This is to be retained, and has, as he expresses it, the tonic effect of a cold bath upon the intestine, increasing the contractile power and lessening the tendency to prolapse. I once saw a case of this sort at intervals for two or three years without ever suspecting its nature. It occurred in a man from New Zealand, who had been accustomed to a great deal of horse exercise, frequently riding forty miles a day. He began to suffer from neurasthenia, hypochondriasis, loss of appetite, failing strength, and emaciation. In fact, he presented almost the typical aspect of the hysterical girls who are so well treated by the Weir-Mitchell plan, and, in consequence of this, I advised him to undergo a course of massage. This he did two or three times, with very little good, until by my advice he went to Dr. Eccles, who discovered the real cause of his illness, and by the judicious application of massage to the intestines completely restored him to health. But it is not only in the upper part of the intestine and in the sigmoid flexure that hindrances to elimination exist. Even when the fæcal masses have reached the rectum there may be difficulties in the way of their expulsion. It is usually imagined that nothing can be simpler than to empty the rectum, and yet one of the most grateful letters I ever had in my life from a patient was for giving instruction in this matter. As the poor lady said, she had for many years had great difficulty in emptying the bowels, and no one had ever taken the trouble to instruct her as to the mode of overcoming it. The fact is, one often forgets that the pressure of the abdominal muscles acts in the same direction in defecation as in parturition, tending to drive the fæcal mass towards the coccyx, and in order that it may be evacuated, its course must be finally directed somewhat forward. This change in direction is effected by the muscles of the pelvic floor, but if those are lax, as frequently occurs in persons of sedentary habits, and more especially in women who have had large families, the fæces, instead of being expelled, may accumulate in and distend the rectum. This accumulation is greatly favoured by the construction of waterclosets, as in sitting upon them the spine is usually at a right angle with the thighs, the legs are close together, and the pelvic floor is not put upon the stretch. When the body is inclined at an acute angle forward, the pelvic floor becomes tighter, and this is still more the case when the crouching or squatting attitude is adopted, which is naturally assumed when emptying the bowels in the open air. In cases where defecation is difficult this attitude is to be recommended, and a very low commode, pan, or chamber utensil should be used in place of the ordinary closet. Should this be insufficient, pressure with the hand close under the coccyx will tend to force the fæcal mass forward and to greatly facilitate its expulsion.

In relation to the complete evacuation of the bowels I have received a very interesting communication from my friend Dr. Batten. "Mr. R—— suffered from pruritus ani, with slight eczema and a small pile. On examining the rectum a small piece of fæces the size of a flat bean was found just inside the anal orifice, not only on one occasion, but whenever an examination was made. If the fæces were removed before going to bed (the pruritus occurred more at night) the irritation did not occur. Remembering your plan of treatment with administration of small doses of aloes I gave them, but without any success. On inquiry I found that Mr. R——'s bowels were moved with great regularity every morning, and that the motion was not a formed one—at all events not the last portion of it. Upon

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this I reasoned that Mr. R——'s failure to entirely empty the bowel was due to the want of solidity of the motion not giving the bowel anything to contract upon. I therefore ordered him occasional doses of lime water, to be taken sufficiently often to cause a formed motion. The result was very satisfactory. The bowel contracted on and expelled the *solid* motion completely. I think, in our desire to keep the bowels regular, we overlook the disadvantages of fluid instead of a solid motion."

Before concluding this lecture, I will mention a plan which I have found of very great service either in cases of cardiac disease, in fevers, or in conditions of extreme weakness where the feebleness of the heart made it very advisable that the patient should use as little exertion as possible. It frequently happens that patients strongly object to use a bed-pan, and assert, sometimes with a considerable amount of truth, that they are unable to empty the bowels satisfactorily in the recumbent posture. A great deal of the risk connected with the use of a commode arises from the fact that when they use it they generally have to get out of bed and into it again. In these cases I adopt a plan, which I suppose many others have used also, but which I have never seen described. It is to have a strong platform made of rough wood, of such a height that the commode, when placed upon it, is level with the bed. A large, strong packing-box, sawn to the proper height, may answer, or, if this is not at hand, any carpenter can put together a rough but strong construction of the kind needed. If nothing else is at hand, the drawer of a wardrobe turned upside down will do, but it must be supported from below by books or pillows piled up within it, so as to prevent the bottom of it from breaking through, as usually it is not strong enough to support the weight. The commode being pushed close to the bedside, the patient has simply to slew himself round upon it. The body is raised, and the legs are allowed to hang down. After the bowels have been evacuated, he is rolled round on his side into bed. During the whole process no change is ever made in the level of the patient, the only alteration being in the relative position of the trunk and legs with reference to his pelvis. Perhaps some of the new devices for raising the patient bodily from the bed might be better than this, but generally they are not at hand, and the plan which I have mentioned can always be followed, as some kind of platform sufficiently strong to serve the purpose can be made with boards, boxes, or footstools in every house.

In this lecture I have not attempted to go over anything like the whole field which its title would cover, because I found this to be impossible in the course of the time at my disposal. I have therefore attempted to deal only with such points as have more of a practical than a theoretical interest. In concluding it, I thank you most sincerely, Mr. President and gentlemen, for the great honour you have done me in asking me to deliver this lecture, and to beg you to forgive the deficiencies in it, of which no one is more conscious than myself.

SOME CASES OF BONE ABSCESS.

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THE five cases which follow are examples of suppuration commencing in the interior of bones. In two it was necessary to let out the pus from the interior of the bone by an operation, and in three the pus had already partly escaped from the bone under or beyond the periosteum before operation was performed. They are interesting from the contrast which they present, one to the other, in their symptoms, from the difficulty in diagnosis and treatment, and because it is not often that we are able to compare a similar series. The amount of pain to which the presence of the pus gave rise varied in the individual cases; it was not dependent upon the size of the abscess, but upon the structure of the bone in which it commenced, and the ease or otherwise with which it was able to escape from the bone—in other words, on "the tension." For permission to treat and publish the notes of the cases which were in St. Thomas's Hospital I am indebted to Mr. Sydney Jones. I desire also to thank Mr. Barrow for permission to use the notes of the case which was admitted under his care at the Royal Free Hospital.

CASE 1. *Abscess of upper end of the tibia; operation; recovery.*—H. M——, aged fourteen, at school, was admitted into St. Thomas's Hospital June 6th, under the care of Mr. Sydney Jones, and discharged Aug. 1st, 1888. Three weeks before the patient got wet through. The following day the inner side of the right knee became painful. He went about for a week, but a fortnight before admission he was in bed suffering from severe pain in the leg, which prevented sleep. Between five and six years ago he says that he had an abscess on the bone in his right leg, which was operated on, some dead bone being removed. About two years afterwards an abscess recurred in the same situation, which was again operated on in the Shadwell Children's Hospital, some more dead bone being removed. The patient, a thin delicate-looking boy, complained of pain in his leg. There is a white scar six inches long over the upper half of the outer side of the right tibia, resulting from previous operation. Over the inner head of the same bone there is a hard, tender swelling measuring from three to four inches. Two inches below the patella on the right side the circumference is about two inches greater than at a corresponding point in the opposite limb. There are increased heat, great tenderness, and pain much worse at night. A Macintyre splint was applied and an ice-bag over the knee.—June 14th: The affected limb gives much pain at times, chiefly at night, the patient being very restless with it. Lead lotion was applied. Last night a morphia injection was given, but he slept only half an hour. He is frequently found to be crying with the pain.—*Operation:* On June 20th an incision about three inches long was made in the upper part of the leg on the inner side, another across the upper part of that, and the periosteum, which was much thickened, incised. On dividing this towards the inner side pus sprang into the wound, showing the excessive tension at which it had been kept. There was a large cavity which occupied most of the head of the tibia and was bounded with hard bone, the inner surface being filled in with dense fibrous tissue. To expose the cavity fully it was necessary to chisel away some bone. There was no granulation tissue in the cavity, which was washed out with chloride of zinc (40 gr. to 1 oz.) carbolic solution (1 in 40), and plugged with strips of lint soaked in carbolic oil. There was a good deal of pain at the earlier dressings, but on July 2nd the wound looked better and a fair amount of pus came away; the quantity was slight on the 11th, and the wound gradually closed, but on the 25th was reopened to some extent. Temperature on the 24th 99·6°. On the 26th only slight discharge was coming away and the wound was closed firmly by Aug. 1st.

The history of this patient is one not infrequent in bone abscess, there having been previous attacks of ostitis followed by necrosis. The suppuration was more acute than is usual in central abscess of bone, and the pain extremely severe, so that from want of sleep and inability to take food the boy was becoming pale, worn, and thin. It illustrates the effect of the tension of fluid confined in dense resisting structures in the production of pain, for although the wall of the abscess was not completely formed of bone, the fibrous tissue which completed the cavity was of such extreme thickness and density that, although it probably permitted of the somewhat unusual size of the abscess, it gave so slowly that the tension was very high. Of course in saying that the abscess was of somewhat unusual size for one which had not nearly reached the periosteum of the bone in which it began, I do not mean that it enters into the same category as the large expanded cavity mentioned by Stanley,[1] which contained over sixteen ounces of fluid, and which the patient emptied at regular times of the day by the removal of a plug of wood and tow, which blocked an opening into it.

CASE 2. *Circumscribed abscess of lower end of tibia; trephining; primary union; recovery.*—J. M——, aged sixteen, a tailor's apprentice, sent to me from Bedford, was admitted to the Royal Free Hospital on May 11th, 1889. His mother states that he had suffered from pain in the leg for from five to six years, and had hurt it three times: once a man trod on it, once it was struck by a hockey stick, and once an iron spike ran into it. He himself said that it had been worse since he knocked it against a tree about four years ago, two or three days after which it became very

[1] Illustrations of the Effects of Disease and Injury of the Bones, 1849.

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painful, but there was no swelling of the limb or redness. During this time he has had attacks of pain at intervals of two or three weeks of a severe character, so that he has been unable to eat or sleep, but has stayed, crying, in bed, unable to bear the bedclothes to touch it. There has occasionally been pain between these attacks, worse in damp weather, but as a rule he is able to walk about without any inconvenience. About twelve months ago he first noticed the left ankle was larger than the right, and this swelling has increased slightly. The lower end of the left tibia was found enlarged from the tip of the malleolus upwards for a distance of one inch and a half to two inches. The surface is smooth, the skin over it normal in appearance, but hotter than elsewhere. Tenderness is complained of on deep firm pressure, especially on the anterior aspect. The circumference of the limb at the most prominent part of the internal malleolus is about three-eighths of an inch greater than on the right side. The tibiæ are equal in length and the movements of the ankle-joints equally free and painless.

As the symptoms were so very slight on admission it was decided to keep him quiet in bed and administer iodide of potassium and syrup of the iodide of iron, and apply tincture of iodine locally. The general temperature was normal, excepting during a short attack of tonsillitis, but the surface temperature over the swelling above the left ankle was found to be two degrees higher than over a corresponding point on the opposite limb. Sometimes this difference was more marked. May 31st: Right, 81°; left, 88·5°.—June 6th: Right, 84°; left, 89·5°.—7th: Right, 91°; left, 93·5°.—8th: Right, 82·5°; left, 88°. On the morning of June 3rd he awoke complaining of a jumping pain in the left ankle, shooting up the leg; it kept him awake for an hour. The ankle, increased about a quarter of an inch in circumference, became hot and tender, but there was no rise in the general temperature. On June 8th the limb was rendered bloodless in the usual way, and the area of operation again carefully washed with antiseptics. The position of the supposed abscess was marked on the skin. A longitudinal incision was then made behind the more prominent part of the swelling on the inner surface of the tibia, and another from the centre of this forwards. Flaps were raised, including the greatly thickened periosteum, the bone exposed, and the trephine applied. After sawing for a depth of nearly half an inch the removal of the circle of bone opened an abscess cavity, in which lay a quantity of pus surrounded with soft granulation tissue. The lower boundary of this extended to the epiphysial line; upwards a probe passed for some distance. The incision was prolonged upwards, more bone removed with a chisel, and the whole length of the cavity exposed fully. It was about two inches in length, was narrow, and bounded by hard, dense bone. It was scraped out with the sharp spoon, mopped out with chloride of zinc, forty grains to the ounce, and perchloride of mercury solution. The edges of the periosteum and skin were respectively brought together with catgut sutures. One small bloodvessel required twisting on removal of the Esmarch; the cavity was allowed to fill with blood-clot, perchloride dressings were applied, and the leg and ankle fixed with an anterior plaster-of-Paris splint. The temperature rose to 100·4° on the evening of the 9th, and there was some pain on the evenings of the 8th and 9th, but this did not recur, and the temperature was afterwards always normal. The first dressing was changed a fortnight after the operation, when the wound had closed excepting for a small granulating surface in the upper part about half an inch long. This soon healed, and he left the hospital on July 9th quite well. The surface temperature was taken before he went, and was a degree higher over the scar than on the other side. Microscopical examination of the granulation tissue removed from the cavity showed the ordinary structure of granulation tissue with some scattered nodules of closely packed cells surrounding a giant cell. No tubercle bacilli could be found. This boy has not had any attack of pain since he left the hospital, and is in good health.

This abscess presented the signs which we are accustomed to look for in chronic circumscribed abscess of bone, localised paroxysmal pain of long duration, marked tenderness and some enlargement of the area affected. Further, there was the increased local heat, as proved by the surface thermometer, quite independently of any general rise of temperature. So far as I have been able to discover, we have few, if any, accurate records of the actual differences of temperature which may be met with in chronic abscess of bone, and it is possible that in this there is a means of rendering a more accurate diagnosis possible between the various localised bone inflammations and circumscribed abscess. The mode of treatment of the abscess cavity after evacuation of its contents is an advance on that in which the drainage-tube is used. After the wound is closed, healing commences at once between the opposed soft structures, and the aseptic clot which fills the cavity commences to organise. Time is saved, for the tube may cause suppuration.[2] It would be out of place to discuss here the question whether Bloomfield or Brodie is entitled to credit for our instruction in the diagnosis and treatment of chronic abscess of bone, I would refer those interested in the question to Mr. Bryant's lectures on "Tension."[3]

CASE 3. *Small abscess in shaft of tibia.*—J. B——, aged twenty-two, a brushmaker, living at Chesham, was admitted to St. Thomas's Hospital May 17th, and discharged July 24th, 1886. His mother died from phthisis; six brothers and sisters died as infants. He had always been strong and healthy. Six years ago the man noticed a slight thickening over the upper part of the right tibia. This remained stationary, causing some pain at intervals, preventing work at times, until five months ago, when it began to increase in size and cause more pain, so that he was unable to work at all. Three months ago he noticed that the bone over the centre of the swelling was quite soft. There was no breaking of the skin. He had been in a country hospital, but nothing had been done. From there he was sent to a convalescent home. At the convalescent home he was unable to get about like other patients, but used to lie on the sofa all day, on account of the pain in his leg. This pain, of an aching character, had been worse at night time. On admission, he complained of a swelling over the upper third of the right tibia. At the centre of the swelling there was a circular depression to be felt in the tibia as large as half-a-crown, bounded by a sharp edge of bone. There was not much tenderness round this aperture. Limited fluctuation could be felt; skin somewhat discoloured over this. General health good. Evening temperature 99·6°.—May 20th: Under ether an incision was made into this swelling. A cavity in the bone was scraped out with a sharp spoon, the use of a chisel being required to open it up. The sinus ran into the medulla and terminated in a small deposit of granulation tissue surrounded by hard bone. Pus of a caseous character was found on incising the skin. The cavity gradually closed by granulation, and when the patient was heard of some months later he was in good health and able to work, having lost his pain.

Temperatures.

	23rd.	24th.	25th.	26th.	27th.
Morning	98·6°	98·6°	100·2°	98·8°	98·6°
Evening	99·0°	99·8°	100·0°	99·8°	—

Afterwards normal.

Circumscribed abscess of the shaft of the tibia is a much less frequent disease than abscess of the extremities of the bone. The mischief in this case was so limited that it was a subject of remark at the time of operation. For years the man had been unable to do his work on account of the attacks of pain in the bone, which compelled him to rest. There is a great resemblance between this case and one described by Hey of Leeds.[4] A young lady had a feverish attack, followed by severe pain in the shaft of the tibia. She came under his care six weeks later, and at the operation pus was found under the periosteum, bone was removed, and the cavity afterwards cleared out with a strong knife.

CASE 4. *Abscess in the lower end of the femur, producing effusion in the knee-joint; operation; recovery.*—A boy, aged eleven, was admitted to Marsden ward of the Royal Free Hospital, under the care of Mr. Barrow, on July 21st, 1889, suffering from caries of the right os calcis of nine months' duration. He had always been a delicate child, and there was a strong history of phthisis on the father's side. Mr. Barrow operated for the disease of the os calcis on Aug. 9th, and the cavity was afterwards dressed so as to heal from the bottom. On the 30th the patient complained of pain in the left knee, and when closely questioned said that he had pain in it for the first time in June, and had had it on two or three occasions since; once it was so bad he could hardly walk. The pain of which he complained was dull and aching, but not severe. I found the knee enlarged, and

[2] J. Lloyd, Provincial Medical Journal, 1890, p. 198.
[3] THE LANCET, vol. i. 1888, p. 1235.
[4] Practical Observations in Surgery, third edition, London, 1614.

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this enlargement was due to effusion in the joint, the measurement being half an inch more than that of the opposite side. There was tenderness on pressure just above the inner condyle, but this was not very marked. He was perspiring freely at night time, but was otherwise doing well. A back splint was applied to the limb and tincture of iodine to the joint. The temperature was rather higher at night about this time, and rose to 102·2 on the 10th of September. The effusion in the joint was now almost gone, but he complained of pain behind the knee when an attempt was made to fully extend the limb. On the 11th it was possible to feel thickening over both condyles, especially behind, with fulness in the popliteal space. These parts were also tender. A Macintyre splint with evaporating lotion was applied. Being in charge of the case at this time, it was my opinion that the boy had a tubercular centre in the popliteal space about the epiphysial line, and that the effusion in the knee-joint was due to the spread of inflammation from that. It was decided to explore the popliteal space; for, although there was no fluctuation in the thickening to be felt there, the rise in temperature occurring at the time of the effusion in the knee, taken together with the increasing evidence of disease in the popliteal space, made it appear desirable to provide a way of escape for inflammatory products other than towards the knee-joint. The effusion had subsided, but measurement showed an inch larger on the left side on Sept. 18th, when an insision was made into the popliteal space from the inner side of the thigh just above the internal condyle. The incision was carried down to the bone, and a director pushed under the periosteum to the popliteal surface of the femur, when pus welled up by the side of it. The thickened periosteum was raised with the elevator from the popliteal surface, and the pus was found to be escaping from an opening at the line of the epiphysis about the centre of the space. A probe passed through this went into the condyles. The opening was enlarged, and access more readily obtained for the finger, by chiselling a groove in the lower end of the diaphysis of the femur. The finger was then passed into a large cavity in the condyles, which contained some pus and granulation tissue, which was scraped or washed away. This cavity was of very large size, appearing to be bounded only by the more compact tissue of the bone, and the forefinger in the condyles seemed to be separated from the thumb over the joint only by a thickness of tissues of about a quarter of an inch; a mere shell of bone appeared to remain. The whole was washed out with chloride of zinc (forty grains to the ounce), a drainage-tube inserted, the wound partly closed with sutures, and an anterior plaster splint applied to the front of the flexed limb over perchloride dressings. In the evening he complained of severe pain, and tincture of opium was given. On Oct. 30th Mr. Barrow scraped out the sinus in the os calcis again, and removed more tubercular material. On Nov. 8th the sinus above the left knee remaining from the drainage-tube had healed, and there had been no further effusion in the knee-joint. In consequence of the granulating cavity in the os calcis taking a long time to close he did not leave until Jan. 27th, 1890. The sinus above the knee remained closed, but during the year after he left reopened for a time. There has been no further trouble with the knee, and he is able to run about.

It is probable that the operation for this patient saved the limb, for had the contents of the abscess found their way into the knee-joint, nothing short of amputation would have been possible, the almost complete destruction of the interior of the articular end of the femur would have prevented the trial of conservative treatment. Abscess in the lower end of the femur is rare, but is sometimes met with when operation is performed for disease of the joint, and primary disease of the bones entering into this articulation is not uncommon. We can, however, rarely meet with the case at a stage sufficiently early to make operation on the bone likely to be of much use in arresting the disease of the joint. There has been considerable advance made during the last few years in the treatment of diseases of the articular ends of the long bones. It is recognised that occasionally better results are obtained by the performance of an operation which appears adequate to the removal of the disease, than in the completion of one of the set operations of the text-books. In no part of the body is this better exemplied than in the upper end of the femur. In the discussion at the Clinical Society on some cases brought forward by Mr. Symonds[5] this was fully exemplified. In a girl with suppuration in the hip-joint dependent on tubercular abscess of the neck of the femur, which had given way into the joint, I was able to scrape out the abscess cavity through the anterior incision, and obtain primary union. The operation took place more than eighteen months ago, and the joint continues perfect.[6] In Case 4 it did not seem advisable to attempt primary union, for there was a fear that if much exudation took place it would, if unable to escape externally, force its way into the knee, and so establish a communication between the joint and the large cavity, a complication not unlikely to render the operation useless.

CASE 5. *Abscess of the os calcis.*—It is not necessary to detail this case at any great length. The patient, A. B——, aged seventeen, was brought to me at the Royal Free Hospital on March 30th, 1889, with a large swelling of the left foot. This had been noticed for nine months, and had slowly increased, with absolutely no pain from the commencement. She knew of no cause. There was a large chronic abscess occupying the inner aspect of the posterior part of the os calcis, and extending from that for some distance along the inner border of the tendo Achillis. A curved incision into this gave exit to a quantity of cheesy pus, and on the surface of the bone was a circular opening about the size of a threepenny piece, with smooth rounded edges from which more caseous pus came. A gouge easily cut away the wall of a cavity, which was then found to be about the size of a chestnut, situated between the epiphysis and the body of the bone. A small caseous sequestrum, about the size of a hazel nut, was lying loose in the cavity. This was removed, the cavity scraped out with a sharp spoon, washed out with chloride of zinc and with perchloride solution, silk stitches were passed, the cavity plugged with strips of gauze which had been dipped in iodoform and glycerine emulsion, lint and wool applied, and a plaster splint to keep the foot still. About thirty-six hours after the operation the plugs were removed, the stitches tied, and a tube inserted. The wound slowly filled up, and the patient left on April 26th. There was still some œdema of the scar, but no pain. She returned in the following July with some pain in the foot, but it subsided under treatment, and until a month ago she did not present herself again, having been able to do her work as a servant; she then came with pain below the inner malleolus, rather worse at night; the signs were not, however, very definite, and quickly subsided under treatment. The unusual thing about this case was the complete absence of pain, although much of the os calcis was destroyed and the place of the bone taken by pus and caseating products. The only evidence of disease of the bone before operation was the widening of the bone, which was apparent in comparing the two sides. The process was a tubercular one, and the formation of the abscess took place in a part composed of cancellous bone tissue.

Harley-street, W.

CAN INJURY PRODUCE LOBAR PNEUMONIA?

BY JOHN A. MACDOUGALL, M.D., F.R.C.S.E.,
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THERE is, perhaps, no disease which has a more broadly written etiology than pneumonia, and certainly none whose probable causation has so widened and grown with advance in the science of medicine. Certain causes there are which, so far as clinical observation can guide us, stand as fairly well determined; but there are others to which doubt still attaches, and regarding which widely different opinions have been expressed. The number of surgeons is small, judging from contemporary literature, who have any doubt as to the direct relationship which injury bears to pneumonia, and some physicians of high standing appear to hold a similar opinion; but there are others, likewise men of light and leading, whose strong belief is that injury to the chest cannot produce lobar pneumonia. In illustration of this present position I quote the opinion of two writers who may justly be regarded as reliable exponents of surgical and medical

[5] THE LANCET, vol. i. 1891, p. 1102
[6] Ibid., vol. ii. 1890, p. 820.

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beliefs. Mr. Erichsen[1] writes: "Pneumonia is an invariable sequence of wound of the lung, and constitutes one of the great secondary dangers of this injury; the inflammation necessary for the repair of the wound in the organ having frequently a tendency to extend to some distance around the part injured, and, not uncommonly, to terminate in abscess. Traumatic pneumonia resembles in all its symptoms, auscultatory as well as general, the idiopathic form of the disease. ..... It differs, however, from the idiopathic form in having less tendency to diffuse itself throughout the lung, and in being limited to the neighbourhood of the part and to the side that is injured. ..... Traumatic pneumonia is also usually more sthenic than that which arises from constitutional causes, and is attended by more acute and active febrile disturbance." While the late Dr. Hilton Fagge[2] states his opinion thus: "True pneumonia is not set up by local injuries of the chest, wounds of the lung, foreign bodies in bronchi, or any other cause. Traumatic inflammation of the pulmonary tissue is chronic and interstitial, or it may be acute and caseous, but it is not hepatisation. ..... It is impossible to induce the affection experimentally in animals." Widely different opinions these, and yet each is the unquestioned judgment of a master of his art. What, then, is the explanation of this difference? Is it that the surgeon sees with other eyes and hears with other ears than those of the physician, or is it that the local pulmonary manifestation marks different morbid conditions? As it has happened to me to have seen and to have notes of a considerable number of chest injuries, followed by secondary harm, and as I possess, in common with the majority of men whose retrospect of active work is a somewhat lengthened one, a fair knowledge of the clinical history and aspects of lobar pneumonia, it has occurred to me that the consideration of a selected and short record of some of those traumatisms and the forms of their sequelæ may, perchance, throw some little light on an important but vexed question. Our field of inquiry must, however, extend beyond that of wounds of the lung, because pneumonia is believed to supervene on contusions of the chest walls, or upon violent strains, unattended, so far as can be judged, by any gross injury to the pulmonary tissue. With a view to the consideration of these various forms of injury, it may be well to arrange the notes under three heads:—1. Contusion of chest wall without injury to the lung. 2. Contusions, with pulmonary laceration. 3. Penetrating wounds involving lung structure.

CASE 1. *Contusion of chest wall without injury to the lung.*—J. J——, a workman in middle life, while employed upon a somewhat high scaffolding, fell, and, falling, pitched upon his left side. Seen within a short time of his injury, he was found to have a large ecchymosis over the left thorax, but there was no crepitation or other evidence of fractured ribs. He had a good deal of dyspnœa and pain, with imperfect respiratory movement on the injured side, and he was said to have expectorated some blood immediately after his fall. On the following day he was still suffering much pain over the left chest; this was now, however, moving with greater freedom and with distinct increase in the respiratory sounds. The dyspnœa, too, was much less, and the right lung presented on careful examination, beyond exaggerated respiratory murmur, no abnormality. In the evening his temperature rose somewhat suddenly to 103°, and the next morning there was discovered at the *right* base a patch of crepitating râles, with slight dulness on percussion, and there was present some rusty sputum and slight increase in the dyspnœa. Morning temperature 103°, evening 104°; pulse 100 to 110; respiration 30. This pneumonia ran a normal course and terminated on the fifth day, but the dulness over the involved area was never pronounced or the respiratory bruit very loud. There was little expectoration, and the consolidation was never extensive. Eight days after his accident all symptoms had disappeared, and the lung was in process of resolution.

CASE 2. *Contusions, with pulmonary laceration.*—A. H——, a strong, muscular man, had the wheel of a heavily loaded cart "backed" across his right chest. Five at least of his ribs were fractured, the third included. He had considerable emphysema, some pneumothorax, pretty profuse hæmoptysis, and painful dyspnœa. This latter symptom passed away considerably, and for twenty-four hours he did well. When visited on the following morning he was found to be very feverish (temperature 103°), with a hard and full pulse, to be worried by an incessant short cough, and to be breathing with great difficulty. That a good deal of this was "felt" dyspnœa was evident. It was impossible to examine satisfactorily the anterior part of the chest, but behind, over a wide area—over, indeed, the whole upper and middle lobes—there was found very decided dulness on percussion, with harsh respiration and bronchial râles. Owing, perhaps, to the short jerky nature of his breathing no sub-crepitation was audible. He was bled very freely from the arm, with great and immediate relief. That evening his temperature had fallen two degrees; on the following morning it was still lower, and in little more than twenty-four hours from the venesection it had become normal. For two or three days afterwards there remained evidence of a certain degree of consolidation of the lung, but it was certainly not that attendant upon true hepatisation.

CASE 3. *Contusions, with pulmonary laceration.*—An athletic, vigorous man of thirty-two was, in a destructive railway collision in which several lives were lost, thrown with much violence against a wooden projection, which caught him under the angle of the scapula on the left side. He was for a time profoundly collapsed; had great dyspnœa and intense pain in the region of the injury. Examination gave no evidence of fractured ribs, but over the tender area the percussion note was dull. The left lung moved languidly in respiration, and the breath sounds were feebler than those on the right. When he rallied he began to expectorate fresh frothy blood, and this expectoration, growing gradually darker, continued for nearly a week. For many hours he was in imminent peril of his life from threatened asphyxia—a condition which was in a measure brought about by feeble and inefficient cardiac action. When this condition was overcome and his chest examined, it was found to be clear for full two inches at the base and over the whole upper third. Between these two points, over the area of injury, there was nearly complete dulness on percussion, with absence of breath sounds. It was believed that he had a pulmonary apoplexy, the probable result of a rupture of the lung. His temperature three days after the accident began to rise gradually, until on the sixth day it had reached 103°. The local condition was now dulness over the whole middle and lower lobes, tubular breathing with much bronchial rhonchus, and the constant expectoration of dark, shreddy clots. On the eighth day the temperature began to fall, but did not become afebrile for nearly a week, during which time the dulness was very slowly clearing, while the bronchial râles and coarse crepitation disappeared. He made, however, a slow and tedious recovery, and, at the end of nearly three months from the date of his injury, it was thought by some who examined him—and these were well able to judge—that there existed distinct evidence of interstitial changes, probably cicatricial, in the left middle third.

CASE 4. *Penetrating wounds involving lung structure.*—J. H——, aged fifty, a man in vigorous health, stabbed in a quarrel, was admitted into the Cumberland Infirmary under my care. He was suffering from considerable shock, and presented an incised wound nearly three inches long in the sixth left intercostal space, just in front of the angle of the ribs. There was free hæmorrhage, the source of which was an incision in the lung. This incision could be easily seen, as the organ rose and fell in respiration. There was a certain amount of pneumothorax and some dulness at the base, due doubtless to blood in the pleura. The wound was dressed with a thin antiseptic veil; he was turned well over on the wounded side to favour drainage, and means were taken to preserve, if possible, a low condition of vascular tension. Twenty-four hours afterwards, when the bleeding had ceased, the wound was closed. On the following day he had pain in the side, a little rise in temperature (100°), some rusty expectoration, and râles, audible in the larger bronchi, in the lower lateral area of the left lung. All these signs pointing, as I believe they did, to some pneumonic condition in the immediate neighbourhood of the pulmonary wound, passed away in three days, and when he was dismissed from hospital, three weeks after his admission, the chest condition was quite normal.

(To be concluded.)

[1] Science and Art of Surgery, seventh edition, vol. i., p. 627.
[2] Principles and Practice of Medicine, second edition, vol. ii., p. 142.

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CASES OF INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY.[1]

BY THOMAS JONES, M.B.LOND., F.R.C.S.ENG., &c.,
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CASE 1. *Intestinal obstruction; adhesions around the vermiform appendix; laparotomy, with removal of appendix and liberation of cæcum; recovery.*—Mr. G——, aged thirty, seen with Dr. Rhodes on Feb. 20th, 1889. The patient had been ill for two days, suffering from pain referred to the cæcal region, vomiting, some abdominal distension, and no action of the bowels. A history of an acute attack of peritonitis thirteen years previously was obtained. Since then, with the exception of milder attacks of pain on several occasions, he has been in the enjoyment of good health, and is a very active athlete. For several months prior to the present illness he had been troubled with constipation, with an increasing difficulty in obtaining an action of the bowels. Has occasionally had colicky pains over the cæcum. The usual treatment was resorted to—enemata, rectal feeding, and opium to relieve the pain. Some relief was obtained by washing out the stomach. The symptoms of obstruction, however, continued, and assumed a more aggravated form. Stercoraceous vomiting appeared about the tenth day. Laparotomy was performed on March 2nd, the thirteenth day from the beginning of the attack. Incision made in the right linea semilunaris. Directly the abdomen was opened extensive firm adhesions, due no doubt to the old attack of peritonitis, were found in the cæcal region. The ileum was attached to the cæcum, and the latter fixed down firmly. The appendix vermiformis was jammed down in the pelvis, where it was held by strong bands. These were separated, the appendix brought up into the wound, a ligature placed round it near the cæcum, and some three inches of it removed; its lumen being completely obliterated, no special precautions were taken to turn and stitch its peritoneal covering. After careful cleansing the abdomen was closed. The after-history of this case is very simple. The bowels acted freely the same day some eight hours after the operation. The symptoms of obstruction were immediately and completely relieved, and the wound gave no trouble. Now, after the lapse of twenty-one months, Mr. G—— expresses himself as being in the enjoyment of excellent health. He has resumed his athletic exercises, and is able to ride a bicycle with ease and comfort. He is careful with his eating and drinking, and although his bowels are still somewhat sluggish, a regular daily action is generally secured.

CASE 2. *Intestinal obstruction; knuckle of intestine found adherent to the mouth of an old femoral hernia; laparotomy; recovery.*—Elizabeth G——, aged fifty-five, was admitted to the infirmary on July 25th, 1890. For three months she has occasionally had attacks of vomiting, accompanied with severe pains in the abdomen. The attacks have come on very suddenly, usually lasting about half an hour. The last attack commenced a week prior to her admission, with severe pain in the lower part of the abdomen. Vomiting set in almost at once, and became stercoraceous six days later, the day before she entered the infirmary. Constipation was absolute, but there never was complete obstruction, as flatus was passed up to the time of operation. Her condition when admitted was very serious; the eyes were sunken, and the vomiting was almost incessant; her state reminded one very forcibly of a patient suffering from strangulated hernia. At this time she was on the medical side, where belladonna was freely administered, and the vomiting checked for eighteen hours. Enemata were also given, bringing away some scybala. When seen a few days after admission, her state was most critical; the abdomen was very distended, and everywhere tympanitic. A swelling the size of a walnut was discovered in the right femoral region. This the patient stated had existed for years, and caused no inconvenience. It was dull on percussion, and gave no impulse on coughing. It was thought that possibly a piece of bowel had become strangulated at the upper part of the femoral canal; but as the local symptoms referable to this region were so indistinct, it was thought advisable to open the abdomen in the median line. This was done while the patient was under the influence of chloroform. As soon as the abdominal cavity was opened the fingers were introduced and passed down in the direction of the right femoral region. Here a small knuckle of small intestine was readily found adherent in about half its circumference. The adhesions were carefully separated, and the portion of gut so detached brought up into the wound and examined. There was some oozing from the surface which had been attached; otherwise it was healthy, so it was returned, and the wound in the abdominal wall completely closed, the peritoneum being separately sutured with catgut. The wound was dressed with carbolic gauze and wood wool pads. About three hours after the operation the patient passed a very copious motion. At first alimentation was effected by the rectum, fluid food being administered by the mouth on the third day. The wound was not dressed for a week, when it was found practically healed. Twenty-five days after the operation she left the infirmary, wearing a truss and an abdominal belt.

CASE 3. *Intestinal obstruction; laparotomy; death.*—J. W——, aged thirty-eight, seen in consultation with Dr. Edward of Rawtenstall and Dr. Stewart of Bacup on April 23rd, 1890. The following history was obtained. The patient has suffered for years from a right oblique inguinal hernia, and has worn a truss. The rupture has not been down for a long time, and never when he has the truss on. On April 17th he felt great uneasiness in the right inguinal region, which became worse towards evening, when he was sick once or twice. He retired to bed early, but had to get up again, owing to the increasing discomfort. After being up and moving about for an hour or so, he went to bed again, but felt very uneasy all night. The next day he remained the same, employed some domestic remedies, but obtained no relief. Sickness now became persistent, and remained so until the end; it was attended with distressing and almost constant hiccough. Enemata, repeatedly tried, brought little or no fæcal matter away. A couple of pints of fluid could be easily thrown up. When I saw him he was lying propped up in bed, and had the facial expression of one suffering from obstruction. Tongue dry in centre; pulse 90, small and inclined to be thready; no fever. He was violently sick while he was being examined. Abdomen pretty uniformly distended and everywhere resonant; no tenderness, not even in the vicinity of the hernial sac, which was empty, and the finger could be easily passed up the inguinal canal. Diagnosis: Intestinal obstruction, probably connected with the old hernia, possibly adhesions about the neck. The condition of the patient was most unfavourable, still we deemed it our duty to give him the only possible chance by immediate operation. Abdominal section was therefore performed by a median incision. On opening the abdomen distended small intestine protruded, and on passing the left forefinger towards the right inguinal region some coils were found heaped up. On examining more carefully an opening was found, the anterior edge of which was exceedingly sharp, and attached to it was a loop of small intestine. The opening corresponded with the internal ring, and we concluded that the gut had become strangulated immediately on its entrance into the canal. I attempted to pull up the coil of intestine, but feared to use much force lest the bowel should give way. Any attempt to divide the stricture from the inside would be too hazardous, so I decided to cut down on the sac. This was not an easy matter, as it was empty, and the light very indifferent. However, I succeeded in opening it, and found that it contained a very small quantity of clear serum. Now, by fixing the internal ring and dilating it somewhat with the finger in the abdominal cavity, and pressing the coil with the fingers in the sac, I reduced it after a considerable amount of trouble. The internal ring was so movable that it, together with the knuckle of intestine strangulated within it, could be pulled up a considerable distance into the abdominal cavity. After reducing the gut it was examined, and found to be deeply congested, but free from any deposit of lymph. The sac was isolated from the neighbouring structures, transfixed with carbolised silk, tied in a Staffordshire knot, and the portion below the ligature removed. This wound was cleaned with a perchloride solution, dusted over with boracic powder, and closed entirely with a continuous silk suture. The abdominal wound was also closed with four silk sutures passed through skin and parietal peritoneum on each side, and three superficial silk sutures. Unfortunately, the shock of

[1] A communication made to the Clinical Society of Manchester on Dec. 16th, 1890.

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the operation proved too much for the patient in his then exhausted condition; he was very collapsed, and did not respond to the medicaments employed. He died about three hours afterwards.

(To be concluded.)

FIBROID PNEUMONIA.

BY A. G. AULD, M.D.

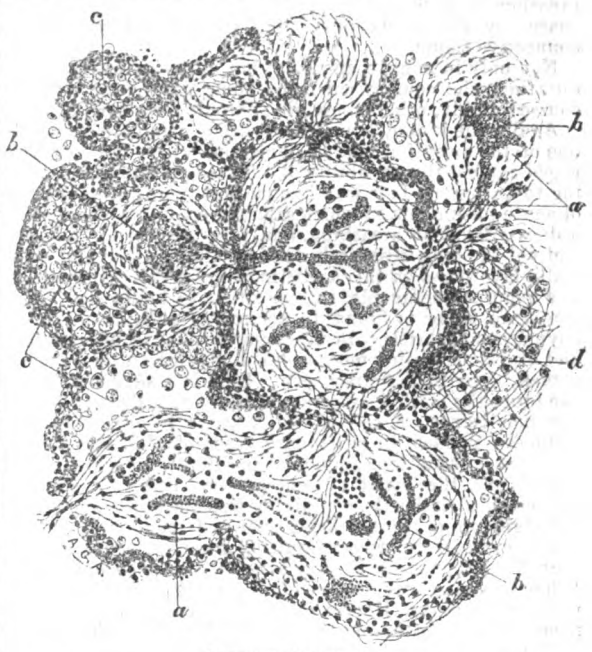
(Concluded from page 1310.)

I NOW submit the following cases of primary fibroid pneumonia, the clinical notes of which I have obtained through the kindness of Drs. Finlayson and Coats, under whose care they respectively were.

CASE 1.[1]—Alex. C——, aged forty, grocer, enjoyed good health till three weeks before admission to Glasgow Western Infirmary. Illness began with a chill, which gradually became worse, with cough and expectoration. Examination revealed signs of consolidation at the right apex and râles at the bases of both lungs. Morning temperature 101·2°; evening, 103°; falling to 101° on the evening of the third day. After the fifth day it fell to 99·4° in the morning and 100° in the evening, and averaged this rate till death. Respiration 26; pulse 120. After a few days there were signs of extensive consolidation in both lungs. The expectoration was greenish-yellow and considerably abundant; the urine was free from albumen. The diagnosis was acute phthisis. The patient died three weeks after admission, making in all six weeks in which the disease ran its course. Dr. Coats conducted the post-mortem examination. It was therein found that both lungs in their lower two-thirds were consolidated. The consolidation was generally red, and somewhat resembled ordinary hepatisation, the cut surface being granular, but the lower lobe of the left lung was smooth on section and of a slate-grey tint, and this lung was somewhat shrunken. The right lung was of normal bulk. Both apices were crepitant. The bronchi were throughout filled with thick yellow pus, and in the lower part of the left lung were generally somewhat dilated; elsewhere of normal calibre. Not a single tubercle was anywhere to be found. The other organs were normal. After hardening pieces from all parts of both lungs in Müller's fluid, and afterwards in alcohol, I mounted and examined forty sections. The left base contained areas of dense connective tissue, formed by the fusion of intra-alveolar masses with the fibrous walls of the alveoli. The remaining condensation in both lungs had the following characters. In some areas the alveoli were filled with fibrin and large epithelial cells. Occasionally the fibrin was replaced by a gelatinous exudation like frogs' spawn. Encroaching on these areas, and occupying much the greater extent of the consolidated parts, was the characteristic induration of the intra-alveolar products—globular pedunculated masses of fibrous tissue, very vascular, and showing frequent extravasations (see illustration). The alveolar walls were also somewhat thickened by the nuclear growth. White and red blood cells and proliferated epithelium in exceeding abundance occupied such space of the alveoli as was unoccupied by the fibrous tissue, and side by side with the tissue-containing alveoli were not a few which were exclusively occupied by the former products. Neither the pleura nor interlobular septa showed any thickening, but the sheaths of the smaller bloodvessels and bronchioles participated in the new growth. The bronchial mucous membrane was crammed with lymph cells and its surface stripped of its epithelial layer, but at rare intervals a few ciliated columnar cells derived from this source were to be found in an alveolar cavity. A drop of the bronchial pus was examined by Dr. R. Buchanan and found to contain the capsulated diplococcus pneumoniæ of Fränkel. Both the muscular and inner coats of the pulmonary artery were thickened.

CASE 2.—John M——, aged sixty-three, shoemaker, began to suffer six months before admission to hospital from a cough and difficulty of breathing and swelling of the feet and legs. He had been asthmatic for some years. Three weeks ago the chest symptoms got so bad that he was forced to remain in bed. He was emaciated and sallow; temperature normal, and occasionally subnormal; pulse 98; respiration 32. Cough slight, and attended by little or no expectoration. Mucous râles in both lungs. Great dyspnœa, which amounted at times to orthopnœa. Death took place two days after admission. Post-mortem examination: The left lung was adherent at the extreme apex. It was highly œdematous throughout, with partial condensation, while at the extreme apex and beneath the adhesions there was a darkly pigmented cicatrix, with cretaceous matter in the midst. The right lung was more extensively adherent; it also contained cicatrices with cretaceous matter, and a small ragged cavity. There was no appearance of active or recent tubercular condensation. Otherwise this lung was œdematous and partly condensed. The heart was found to be considerably enlarged, and the muscular walls at the extreme apex of both ventricles were very thin. There was extensive atheromatous disease of the arteries. The kidneys were granular, and the surface of the liver highly granular. The condensation of the lungs was chiefly of the lower lobes. It was red on section and slightly granular, and had not caused any shrinking; there was no bronchiectasis. Microscopically, it presented features in every respect similar to those described in the first case. The fibrous masses in the alveoli, however, were herein more dense and homogeneous, resembling the sclerosed glomeruli of contracted kidney. Large swollen epithelial cells, often bi-nucleated, were in considerable abundance. Many of the alveoli also contained a fibrino-hæmorrhagic exudation. Their walls could hardly be said to be at all thickened, and the septa were in a like condition. The bronchial mucous membrane was perfectly normal, but some columnar epithelium was in this case also to be found in a few of the air-cells, although it is just possible that this was brought about in the cutting of the sections. A very marked feature, and one of considerable interest from another point of view, was the extreme atrophy of the muscular coat of the bronchial and pulmonary arteries. Sometimes the muscle existed only as a series of dots along the walls of the smaller vessels, in the midst of the fibroid tissue, and was well brought out in mahogany-red by picro-carmine in a light-pink ground.[2]

The first of these cases is very striking, and in some respects unique. The second was associated with fibroid changes in other organs; it is evident, however, that the pulmonary consolidation was recent.



FIBROID PNEUMONIA.

a, Masses of connective tissue developed within the alveoli; in some places fusion with the alveolar walls has taken place. *b*, Bloodvessels of the new tissue; in two alveoli considerable extravasation is seen. *c*, Desquamated and fatty epithelium mingled with some leucocytes and red blood-cells. *d*, Alveolus filled with a fibrinous exudation. × 120, considerably reduced.

[1] Only a brief summary on the clinical side can be given here.

[2] This phenomenon conclusively shows that the observations of Gull and Sutton on the muscular coat of the arteries in Bright's disease were in some cases, at any rate, perfectly correct; but which some have been unwilling to concede.

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From the consideration of these two cases, together with the indications afforded by those previously mentioned, it is plain—(1) that there is pneumonic lobar affection of the lungs, insidious in its origin, and subacute or chronic in its course, characterised essentially by induration of a creeping fibrinous exudation, and by interstitial changes, and accompanied by proliferation and fatty degeneration of the alveolar epithelium, and also not unusually of the bronchial epithelium; (2) that anatomically the disease is in every respect identical with chronic pneumonia succeeding an acute attack (see my previous paper for the histological appearances of the latter[3]); and (3) that the morbid anatomy of the disease has in its earlier stage such distinctive and unequivocal features as to give the affection an assured position, and to permanently exclude the possibility of confounding it with any other chronic affection of the lungs. Inasmuch as this disease—whether preceded by an acute pneumonia or being chronic from the first—has as its leading feature the development of a nuclear fibrous tissue in, with, and about a pneumonic exudation, it is most fitly termed "fibroid pneumonia."

An excellent comparison can be drawn between this affection and parenchymatous nephritis. It is well recognised that the latter disease—often termed "large white kidney"—may succeed to an acute nephritis, or may be chronic and insidious from the beginning. In it, likewise, there is found, in whichever way arising, both interstitial fibrous growth and desquamated fatty epithelium. Nay, the comparison may be drawn yet closer. There can be no question that the capillaries of the glomerular tuft bear to the glomerular cavity a relationship almost identically similar to that which the pulmonary capillaries bear to the alveolar cavities; and, further, it is remarkable that the epithelial lining of both capsule and tuft, but especially of the former, approximates in character very closely to the pulmonary epithelium. Now, when acute nephritis has lasted for some time, when it has become subacute or chronic (and this is by no means confined to scarlatinal cases), a great many of the glomerular cavities are filled by a new growth of connective tissue. With Cornil I hold this as certain, notwithstanding the opposition of Ziegler and others. Further, I have obtained good evidence that in some cases at least this fibrous tissue is produced by the invasion of a fibrinous exudation in the periglomerular space, by fibroblasts proceeding from the intercapillary connective tissue.

Not only in minute anatomy, but likewise in respect of duration, the comparison holds, some cases running their course quickly, others remaining chronic for a long time.

Again, the kidney supplies us with a complete answer to one of the most formidable objections which has yet been urged against the possibility of a fibroid pneumonia succeeding to an acute. It is well known that there are many cases of acute pneumonia in which after the crisis or pseudo-crisis, dulness, deficient breathing, and râles persist for months, and yet the lung ultimately recovers itself. Wagner[4] especially lays stress on this as distinguishing the chronic issue of a genuine pneumonia, in opposition to induration. But the same thing is found in connexion with acute parenchymatous nephritis. It is common to have albuminuria and dropsy persisting more or less for months after an acute attack, with ultimate recovery. In this case, as in that of the lung, the morbid condition must be regarded as due to the persistence of *epithelial*, as apart from interstitial, changes; in fact, in pulmonary cases of this sort I have observed post mortem abundant proliferated epithelium in the alveoli, the walls of which were lined by spindle-shaped epithelial cells, containing two and three nuclei.

Judging from what I have seen and read, it is chiefly, if not exclusively, when resulting from an acute attack, that fibroid pneumonia may assume a very chronic form. When it commences subacutely, it usually runs its course in about six weeks. Herein lies its chief diagnostic distinction from chronic broncho-pneumonia, which is invariably of long duration. But anatomically there is herein a danger to be specially guarded against. In cases of chronic broncho-pneumonia with thickened septa and alveolar walls it occasionally happens that towards the termination of the disease parts of the lung break down, and circumscribed areas surrounding such ulcerations become the seat of an acute fibrinous exudation, which quickly undergoes fibrous changes. Hence, if a limited microscopical examination were made, it might be concluded that the case was one of fibroid pneumonia. I have reason to believe that Heitler has fallen into this error with respect to one or two of his cases, and a case of Talma's seems to have these features; true primary fibroid pneumonia is invariably lobar. Again, there is a pneumonic condition of the lungs, usually circumscribed in extent, which may arise under special circumstances, and which may undergo the fibroid change. I allude to that destructive form of pneumonia described by Sir William Gull and others,[5] which succeeds to compression of the structures at the root of the lung, causing congestion and the insufflation of bronchial products from the bronchial paralysis. It corresponds to the "foreign-body pneumonia" of Friedlander. In these circumstances the lung undergoes a destructive pneumonic consolidation. This may arise in another way, by the contents of a gangrenous cavity which communicates with a bronchus being sucked into the lung. In a case of this sort which lately came under observation spots of intense broncho-pneumonia were seen scattered throughout the lungs, resembling tubercular consolidations. Microscopically, the central area of such lobules was reduced to an abscess, surrounding which was a dense exudation, partly purulent and partly fibrinous, and at many points new fibrous tissue was growing in the alveolar walls and throughout the fibrinous exudation. That the fibroid induration may overtake such cases as Sir W. Gull describes is rendered probable by the above case, as also by that of Dr. Saundby, formerly alluded to.

Lastly, as this disease has been adequately established from the standpoint of pathological histology, it remains that it receive due clinical recognition. The chief obstacles to this are its rarity and the similitude in general of its physical signs and symptoms to those of phthisis. There are, however, already not a few indications, both positive and negative, on which a diagnosis might be based, and with the advancement of our knowledge the remaining difficulties will doubtless disappear.

[In the prosecution of this research my grateful thanks are due to Dr. Joseph Coats, pathologist to the Western Infirmary, who has permitted me free access to all the material in the pathological laboratory, and of whose valued advice and encouragement I have invariably been the recipient.]

Glasgow.

[3] Loc. cit. THE LANCET, vol. i. 1890, p. 792. [4] Loc. cit.

NOTES OF A CASE OF LYMPHANGIOMA CAVERNOSUM.[1]

BY W. DALE JAMES, M.R.C.S. ENG., L.S.A.

CASES of this disease are of sufficient rarity to make it worth while to place on record such as can be carefully noted and examined.

John T——, aged five, came under observation in October, 1890. He was an ill-fed, anæmic child, but without organic disease other than the tumour complained of. There was no tubercular evidence or history, no trace of nævus anywhere on the skin, nor was there any noticeable point in his family history. He presented at the left scapular angle a smooth, semi-elastic tumour, having on its surface four vesicular elevations about the size of a large pin-head. These were so tense that I thought they were horny, having failed to break them between the finger-nails. On puncture, a minute jet of fluid spirted from each. The tumour had been noticed only for six months, was smooth, slightly mottled on its surface of a bluish tint, not greatly involving the skin, but largely subcutaneous, and freely movable over the subjacent structures. Its contents could not be removed by pressure. In this state the boy was shown to the Society, and diagnosis invited. There was much difference of opinion as to the nature of the tumour, my own leaning to cystic disease. Subsequent aspiration with a fine needle showed that consecutive spaces could be emptied of small quantities (from one drachm to two drachms) of lymph, some straw coloured and some tinged with blood. Aspiration was followed by immediate rapid increase in size and deepening in colour. As the tumour was constantly getting knocked and thus giving rise to much pain,

[5] Guy's Hospital Reports, 1879. See also papers by Irvine, THE LANCET, vol. i. 1879.

[1] Being the abstract of a paper read before the Sheffield Medico-Chirurgical Society.

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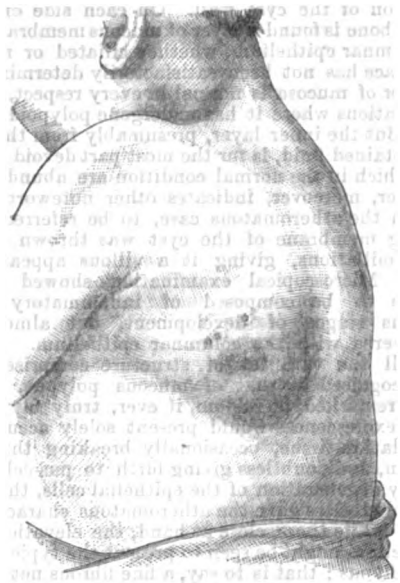
I removed it on Dec. 5th; the growth peeling from its bed quite easily, showing that it had no histological connexion with anything below the skin. A naked-eye examination showed a multitude of small spaces deep in the corium, increasing in size, without definite relation to their position in the skin, until the largest would admit the tip of a finger. The smallest contained straw-coloured lymph; the largest,

FIG. 1.



what looked like venous blood. Dr. Arthur Hall kindly undertook the microscopical examination, and has reported as follows:—

"*Morbid anatomy and pathology.*—With the naked eye the under surface was seen to be composed of a great number of cysts of all sizes, some looking blue, others not.

FIG. 2.

Section of tumour.

They varied very much in size and tenseness, the size not apparently having any very definite relation to the depth from the surface. The growth was somewhat circular, and the largest cysts, which would be as big as an ordinary marble, were situated chiefly in the central part. With the microscope, under the low power, the surface of the epithelium appears quite natural (Fig. 3), as does the dermis beneath, down as far as the level of the sudoriferous glands; but as soon as the subcutaneous fatty layer is reached, there are seen to be amongst and between the lobules of adipose tissue large and small irregular spaces, some containing granular-looking contents, consisting of shrunken lymph-corpuscles. Some of the spaces have collapsed and appear quite empty. They are surrounded by very definite cyst walls composed of dense fibrous connective tissue, separating them entirely from the groups of fat

FIG. 3.

cells. (Fig. 4.) In some of these cysts a faint indication of an endothelial lining is present. From the thickness of the fibrous walls it would appear that we have here something more than a mere dilatation of the lymph spaces. But whether the overgrowth of the fibrous tissue has preceded the dilatation of the lymph spaces by obstructing the exit of lymph from them, or is secondary to the dilatation of the lymph spaces, there is no evidence to show. It seems hardly likely that the overgrowth of the fibrous tissue should start the process, as the anastomoses of the lymph spaces are so extensive that the lymph would probably find another means of exit without any difficulty. In some of the spaces there are septa projecting into them, showing that

FIG. 4.

in all probability the walls of two adjoining cysts have broken down, and so made the two smaller into one larger space. The bloodvessels can be seen in very close contact with the spaces, in some parts being only separated from them by one or two connective tissue fibres. That these spaces are dilated lymphatic channels there can be no doubt. They are probably not the definite lymphatic capillaries, but those lymphatic spaces some of which are lined with large endothelial cells, and which Prof. Michael Foster, in his work on Physiology, speaks of as existing between the bundles of connective tissue, the contents of which bathe the tissues they surround with the lymph which they have

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received direct from the bloodvessels. In a section taken from the edge of the growth the enlarged spaces are seen in an earlier condition, and here some have a definite, moderately thick wall, while others are represented by merely enlarged openings between the meshwork of fibrous tissue. It would seem that this growth has not been due to obstruction at any of the lymphatic glands, as it is so circumscribed and rounded, and does not continue up to the nearest lymphatic gland. It differs from the lymphangioma described by most authors, as being situated, not in the papillary layer of the dermis, but more deeply, and is probably due, not to an obstruction, but a congenital hyperplasia."

In this opinion Dr. Hall is supported by no less an authority than Dr. Louis Torok, now of Paris, who has recently analysed all the known cases, and published his conclusions in the *British Journal of Dermatology*. He finds in the dilatation and hypertrophy an analogue to that which takes place in congenital elephantiasis preceding the leathery thickening, which characterises that disease. Like it, too, it would seem to be congenital. Alteration in the quality of the lymph cannot account for so purely local a disease, nor does accidental occlusion of a lymph channel seem sufficient to cause the rather involved processes of dilatation with absorption of some septa, together with the marked hypertrophy of others which accompanies it.

As a question of treatment merely the case does not possess any great interest. Its rarity entitles it to careful mention.

Sheffield.

ON CYST AND ABSCESS OF THE MIDDLE TURBINATED BONE.

BY GREVILLE MACDONALD, M.D. LOND.,
PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE THROAT.

THE cases comprised under the above heading are of sufficient rarity to raise doubts in the minds of even the most experienced as to their real nature. Consequently it may be considered not inopportune to give some account of their origin, pathology, diagnosis, and treatment according as the observation of five cases of cyst and one of abscess have instructed me. So far as I am aware, the only reference to them to be found in the literature dealing with diseases of the nose is a case related by Dr. P. Macbride in a communication to the Medico-Chirurgical Society of Edinburgh on November 7th, 1888, besides a brief and partly erroneous account, detailed from the observation of two cases in my treatise on Diseases of the Nose, pp. 84 and 95. In the former reference bilateral osseous cysts were described as containing air, one of which was redistended after crushing with forceps; in the latter it was attempted to show that the development of such structures might be analogous to that of similar tumours of the long bones, a view which will be presently shown to have been hasty and incorrect. The pathological etiology of cysts involving the middle turbinated is simple enough. The process in all probability begins in an osteophytic periostitis, a condition common enough in this region, and resulting in a general increase in the size of the bone in every diameter. The free margin of the bone being incurved upon itself, the extension inwards of this border, from the pathological process just mentioned, will bring it in contact, and ultimately in union, with the body of the bone. Thus a cavity may become enclosed and sealed at all points by a similar process occurring at the two extremities. Adhesions in various localities are by no means uncommon in the nose, and are fully exemplified in the further history of these cysts. To express it in other words, this bone hypertrophy may result in the production of a cavity, lined with mucous membrane, and generating mucus, which from the lack of outlet gradually distends the cavity into which it is secreted. Thus are acquired the extreme thinness of the cyst walls, and the enormous size sometimes attained, with adhesions to, and distortion of, neighbouring structures. Moreover, as must be well known to those making a special study of nose pathology, an osteophytic periostitis is not infrequently associated with the development of mucous polypus, structure which is in certain quarters recognised as no more than an expression of a peculiar development of inflammatory products, due to special local conditions. Thus also is accounted for the fact that these cysts are often, perhaps generally, associated with polypi, which may be found studding the external surface of the tumour, or more or less completely filling the interior. So that these cysts might be defined as accidental occurrences in the development of inflammatory disease affecting every tissue of which the middle turbinated body is composed.

That the above is the correct explanation of the remarkable neoplasms is proved by microscopical examination of any portion of the cyst wall. On each side of the thin lamina of bone is found a layer of mucous membrane covered with columnar epithelium, whether ciliated or not on the inner surface has not been satisfactorily determined. The outer layer of mucosa is normal in every respect, except in those situations where it has undergone polypoid metamorphosis. But the inner layer, presumably from the pressure of the contained fluid, is for the most part devoid of mucous glands, which in the normal condition are abundant. The inner layer, moreover, indicates other noteworthy alterations. In the atheromatous case, to be referred to again, the lining membrane of the cyst was thrown into rugæ and mammillations, giving it a villous appearance and texture. Microscopical examination showed these excrescences to be composed of inflammatory products in various stages of development, but almost everywhere covered with the columnar epithelium. They presented all the varieties of structure comprised in the tissue recognised as that of mucous polypus, which, it must be remarked, is seldom, if ever, truly myxomatous. Here the excrescences would present solely accumulations of granulation-tissue, occasionally breaking through the epithelium, and doubtless giving birth to pus-cells as well as to fatty degeneration of the epithelial cells, the presence of which doubtless gave the atheromatous character to the contents; while there, close at hand, the elevation beneath the epithelium might be seen to present the typical appearance of polypus; that is to say, a fine fibrous network with wide spaces enclosing sparsely scattered cells of an inflammatory origin, varying in size and shape, being more or less spherical or spindle-shaped. The breaking down of the epithelium and its substitution by granulation tissue may suggest that the case should be considered rather one of abscess than of cyst. But this surface ulceration appeared to be exceptional rather than the rule; while, after washing out the cavity, when only a small portion of the walls had been removed to gain access to the interior, there was at no time any evidence of suppuration. Doubtless the cyst might readily have been converted into abscess, a contingency not infrequent with similar neoplasms in other regions; and the rare cases of abscess of the middle turbinated possibly originate in a cyst produced by retained secretion.

The cysts are found of varying size, in my cases varying from that of a filbert to such as would probably contain half an ounce of fluid. When very large they may form adhesions to the septum, inferior turbinated body, and even the floor of the nasal fossa. They invariably produce deviation more or less pronounced of the septum to the opposite side, and sometimes induce a certain amount of flattening of the bridge of the nose from separation of the nasal bones and nasal processes of the superior maxilla. This distension and flattening are more or less symmetrical, the deviated septum on the other side from that containing the cyst being there the immediate cause of the pressure. The contents of the cysts are usually mucus, with more or less polypous growth attached to the inner wall; but, as has already been remarked, they may be atheromatous. In the instance mentioned of the latter there was, as might be supposed, no development of polypi in the interior, although these were found to a small extent on the outside. In the case of abscess of the middle turbinated the pus had found an outlet into the cavity of the maxillary sinus, presumably after adhesions had been formed between the cyst wall and the outer wall of the middle meatus. From the antrum the pus reached the interior of the nasal fossa, apparently through the normal opening, as there had at no time been any evidence of retention of the discharge in the form of swollen face &c. On opening the cavity of the middle turbinated abscess it was found more or less completely filled with pendulous masses of granulation tissue.

The symptons differ in no way from those due to other forms of obstruction, pressure, or irritation within the nose. Thus we find the not uncommon consequences of stenosis in the form of chronic inflammation of the pharynx and

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larynx, and the further respiratory passages; besides which there may be various auditory troubles due to Eustachian obstruction. As consequences of the pressure in five of the cases referred to external disfigurements, adhesions to neighbouring structures, and intense trigeminal neuralgia were developed, and, as resulting from the irritation, there were sneezing and rhinorrhœa. Only in the case of abscess was there a purulent discharge, and other symptoms referable rather to the coexistent empyema of the antrum.

The diagnosis presents no difficulty. Whenever an osseous tumour presents itself in the middle meatus of such a size that it is obviously something further than a simple osteophytic periostitis, whether presenting an osseous surface covered only by mucous membrane or whether it is concealed partially or entirely by polypoid growths, the probability is strongly in favour of cyst. When, moreover, these appearances are accompanied by a purulent and fœtid discharge, one may safely surmise that he is dealing with a suppurating cyst or abscess of the middle turbinated. The diagnosis is finally substantiated by the removal of a portion of the walls of the tumour by snare or forceps. The treatment is simple enough in cases where the tumour has not attained enormous dimensions. The simplest way of effecting removal is to throw a strong snare round the mass and remove as large a portion as possible. The remaining portion of the walls may afterwards be broken away with forceps. When the cyst is very large, and adhesions have formed to neighbouring structures, the adhesions must be severed in the manner most easy of accomplishment—that is to say, with the knife or electric cautery. In some cases possibly a saw might be necessary. Then, a sufficiently large hole having been made, a pair of strong forceps is introduced, and the walls torn away piecemeal.

Harley-street, W.

A CASE OF RECOVERY FROM ACUTE INFECTIVE ENDOCARDITIS.

BY EDMUND CAUTLEY, M.B. CANTAB, &c.

REFERRING to one of the latest text-books on the Practice of Medicine I find it stated, in reference to the disease known as "malignant" or "infective endocarditis," that "it is doubtful if any well-marked case of the typhoid or pyæmic form has ever recovered" (Taylor). The patient whose case I here record has undoubtedly recovered; and seeing that it is now more than nine months since he left the hospital and that he was seen on Feb. 2nd to be in perfect health, except as regards a permanent tricuspid murmur, the cure may be justly considered a permanent one. Consequently I think the case well worth recording; and, thanks to the kindness of Dr. Andrew, under whose care it was, I am permitted to make it public. Naturally the diagnosis at first was somewhat doubtful; pyæmia, malaria, and typhoid fever being also suggested as possible causes. It was eventually based on the extraordinary character of the temperature, the rigors, the cardiac murmurs and their variability, the enlargement of the spleen, the profuse sweating, anæmia and progressive emaciation. There was no evidence of anything which might cause pyæmia, no history of exposure to malarial poison and a complete absence of some of the most diagnostic features of typhoid fever, such as rose spots and diarrhœa. The case accords very well with the clinical picture of the pyæmic variety of the disease; rigors were very frequent and severe, the temperature very high, intermittent and irregular, and the right side of the heart was the one mainly, if not independently, affected. There was never any diarrhœa, rather constipation, which was pretty constant and a little troublesome, and on one occasion only was a trace of albumen found in the urine. I would point out further that the cardiac murmurs at the lower end of the sternum and at the apex were present on admission, that these varied in intensity, and that at times a systolic murmur was heard over the base; that the two latter disappeared during convalescence and are absent at the present time, so in all probability they were purely functional, and the actual inflammatory process never extended to the left side of the heart.

At one time it was thought that the attacks of pain in the sides were due to infarction of the lung, but there was no confirmation of this view in subsequent occurrence of blood-stained sputa. The treatment is mentioned in the notes, and does not appear to have materially influenced the course of the disease, unless the perchloride of mercury had a beneficial effect. From June 18th to June 26th quinine was given in large doses, previous smaller doses having produced no result; apparently the temperature fell a few hours after the fourth dose, and did not again go up very high until the 24th, after which the drug did not in the least influence the temperature or the rigors. From June 28th to July 9th aconite was given in small, frequent doses, and certainly a lower level of temperature was maintained, but on July 8th 104·6° was reached in spite of nineteen successive doses previously, and the rigors being much less frequent and severe. From July 12th to 24th liquor hydrargyri perchloridi was given, and the temperature maintained an almost normal level, except for a temporary rise on the 21st and 22nd. Unfortunately it had also been normal for a day and a half previously to the exhibition of this drug. There was a further rise on the 31st to 104·8°, and the drug was again administered; next day it reached 105·2°, but on the following day it remained normal, and there was no subsequent rise of importance. Undoubtedly the disease had been going on for a long time, five weeks from the time of admission, when the perchloride was prescribed, so it may possibly have run its course; still I think the result sufficiently satisfactory to warrant its trial in other cases. I may mention that the blood was examined for micro-organisms, and none found either microscopically or by cultivation; it was curiously difficult to obtain even a drop of blood by the usual method, perhaps on account of the anæmia. The following are the notes of the case.

William B——, aged twenty-one, harness maker, was admitted to St. Bartholomew's Hospital on June 9th, 1890, and discharged on Sept. 6th of the same year. He has no family history of phthisis, heart disease, ague, or neurosis. Has always lived in the Old Kent-road, and has never been laid up; he is a teetotaler, has no heavy work, has never suffered from shortness of breath, and there is no history of syphilis. Three weeks ago he suffered from nausea and vomiting for two days. He got a little better, but could take no solid food. For two weeks he has had attacks of shivering once or twice a day, lasting for three-quarters of an hour to two hours, and followed by a feeling of heat, but no sweating. A week ago he was seen in the casualty department, and there complained of frontal headache, shivering attacks twice a day, and pain all over, chiefly in the joints. There was no joint swelling. Spleen felt. Since then he has had restless nights and variable rigors, sometimes one in the night, sometimes both in the day. Anorexia; no diarrhœa. The patient was rather thin and looked ill. He shivered on admission; the cheeks were flushed; lips dry, good colour. Pupils moderately dilated. Slight central streak on tongue and rather dry. Pulse 108, fair volume, regular, very soft; respiration 80, regular, fair depth; temperature 104° three hours after admission. Heart apex and impulse natural; blowing systolic murmur at apex and a more marked systolic murmur at lower end of sternum. Chest a good shape. Lungs natural. Abdomen rather full; no tache cérébrale; no rose spots; spleen very firm and easily felt an inch and a half below the ribs. Nothing else abnormal found. He was put on milk diet, and no solid food allowed, and small doses of hydrochloric acid.—June 10th: Rigor yesterday on admission; cold stage three hours, hot stage two hours, then perspired freely. Rigor to-day; shivering from 1 to 3 A.M., hot from 3 to 6, perspiring freely until 12.30. Scarcely slept. Much thirst. Spleen a little larger.—11th: Another rigor last night; not much sweating. Only a systolic murmur at left lower end of sternum. Tongue clean. Ordered two eggs and half a pint of mutton essence. Sulphate of quinine powders, four grains, as required, for six doses.—June 12th: No further rise of temperature. Slept well. Perspired a little. Spleen rather smaller and systolic murmur rather more marked.—13th: Soap enema.—15th: Two grains of quinine every six hours.—17th: Rigor last night. No sweating. Spleen larger. Murmurs the same. Two grains of quinine every four hours.—18th: Two more severe rigors, followed by sweating. Several times a little sick. Headache. Looks worse; rather blue. Pulse 132, regular and soft. Spleen much larger. Systolic murmur louder and heard faintly at base. Five grains of sulphate of quinine every hour for four hours.—19th, 20th, and 21st: Five grains of sulphate of quinine every hour for three hours, on

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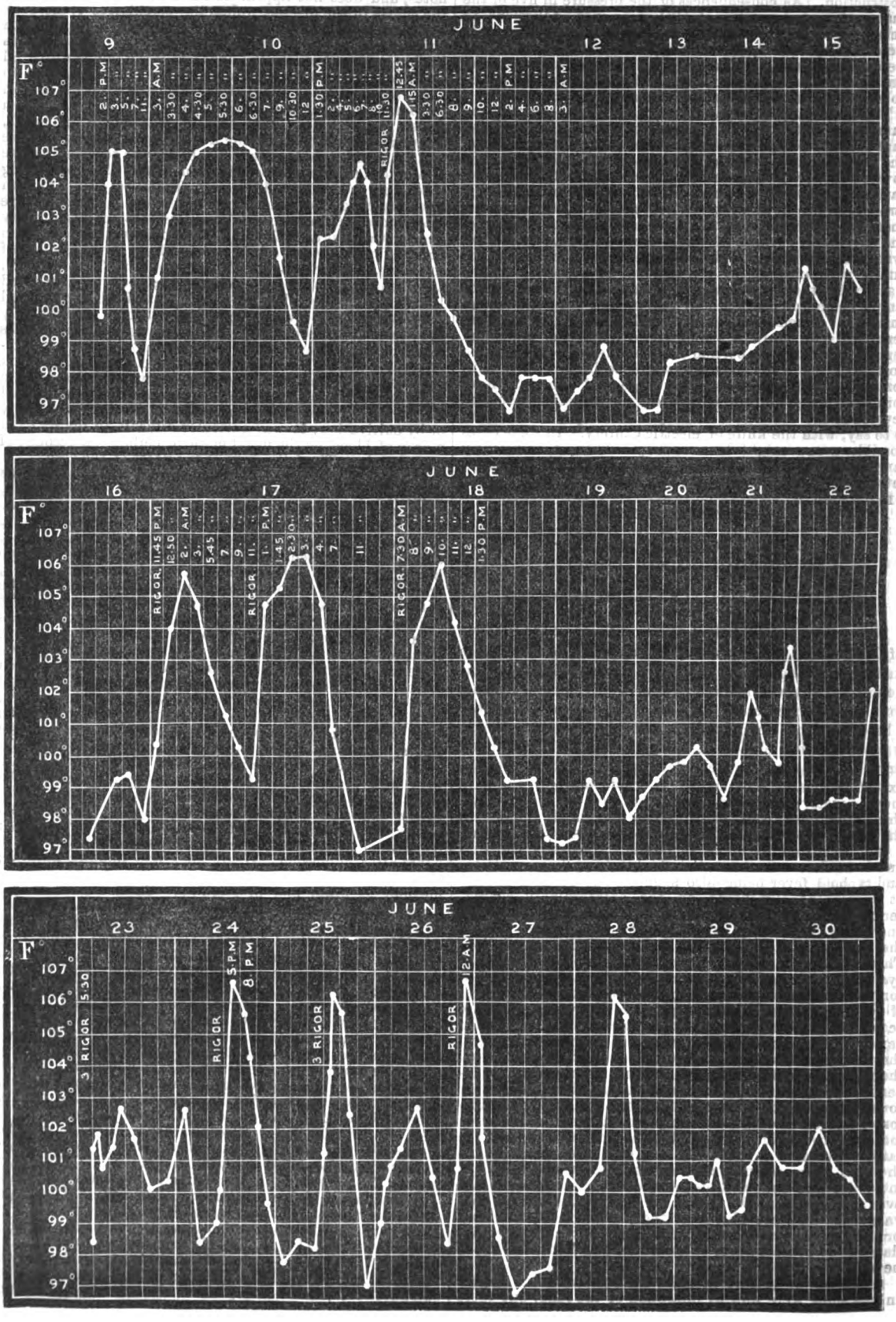
CHARTS.



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each day.—22nd: Ten grains of calomel and colocynth pill this morning. Compound senna draught, one ounce and a half.—23rd: Temperature irregular last few days, but not so high. Slight rigor this morning, but no rise of temperature. Sweated profusely all night. Taking quinine at intervals. Spleen still large. Systolic murmur the same. Sulphate of quinine powder every two hours for two doses.—24th: Sulphate of quinine powder every four hours.—25th: Bad rigor for one hour and a half yesterday afternoon. Vomited four times. Began to sweat at 5 P.M., and sweated profusely until 7 A.M. to-day; colour bad. No pain except headache. Had only two doses of quinine in consequence. Spleen and murmur unaltered. This morning his headache is better. Has had five grains of quinine. 2 P.M.: Severe attack of pain in lower part of right axilla. No impaired resonance and no abnormal auscultatory sounds discovered. Followed by rigor. Colour bad. Pain not relieved by one ounce of brandy. Pulse 100, feeble and wiry. Given five grains of quinine. Effervescing tartrate of soda three times a day.—26th: Slight attack of pain in right side, relieved by poultices. Another severe attack at 10.45 A.M., not affected by poultices. Rigor began at 10 A.M., and pain came on in the course of it. Respiration short and catchy. Colour fairly good. Pulse good volume, but a little irregular. Morphia injection (one-fifth of a grain), given at 11 A.M., soon relieved the pain; caused a little vertigo. Draught of effervescing tartrate of soda, with three minims of liquor strychniæ, every six hours.—June 27th: Two slight rigors last night. Temperature 106·8° ten minutes after the second. Pain in right side during the night. Given morphia, one-fifth of a grain, subcutaneously at midnight; he complained of things swimming before his eyes. Systolic murmur heard at lower end of sternum and over second right and left intercostal spaces near sternum, loudest on left side.—28th: Passed a good night; no sweating; no thirst; slight rigor this morning; a little pain in both sides and great thirst. Bowels not opened four days. Tincture of aconite, one minim, every six hours; ten grains of calomel and colocynth pill to be taken immediately; one ounce and a half of senna mixture.—29th: Passed a good night; less thirst; takes food well; bowels opened freely; no headache. Pain between the shoulders, and for the last half hour in the left side; this pain is severe, stabbing in character, and he feels unable to draw his breath. Some impaired resonance and feeble breath sounds at extreme base; no friction or râles. One-fifth of a grain of morphia subcutaneously at 11.45 A.M.—30th: Twelve doses of aconite, the last at 3 P.M. Slept until 2 A.M., and then awoke with pain in the left side, and he has been rather troubled with it since. Skin hot; tongue clean and moist; takes food well. Friction in lower part of left axilla. Aconite recommenced at 12.30 noon.—July 1st: Only one dose in the night. Feels better. Still pain in left side. Heart as before. A little impaired resonance at right apex in front, and both bases behind; a few moist râles at bases. Spleen very much smaller. Slept until 2 A.M., then pain in left side for about two hours, and has hardly slept since. No pain now. Taking food badly. Ten-grain pill of calomel and colocynth.—3rd: Temperature keeps down. No pain; looks better. No aconite for two days.—4th: A little sweating last night. Had six doses of aconite. Taking food better.—6th: Temperature almost normal for two days. Felt chilly half an hour ago, but did not shiver. Slight frontal headache. Temperature now (12 40 noon) 101°; evening, 103°.—7th: Poor night. No rigor or sweating. Pain came on quite suddenly in right side at 10 A.M.; not relieved by poultices; getting worse since. Is evidently in pain. Respiration frequent and shallow; pulse small. Much thirst. Has had twelve doses of aconite and one-fifth of a grain of morphia injected at 12 noon.—8th: Nineteen doses of aconite. Much pain in right side last night relieved by an injection of one-fifth of a grain of morphia, after which he had severe vertigo, could not see, and was delirious. Slept well for about two hours after, and has been dozing since. No shivering. Temperature going up steadily. Sweated in the early morning. More pain now and shortness of breath. Spleen again large. Pulse 130, full and soft. Cardiac murmurs louder. Systolic murmur at apex conducted outwards.—9th: Bad night; refuses food. Nausea and nasty taste in month. Spleen smaller. Has lost flesh, and is more anæmic. Looks worse. Aconite, twelve doses; last at 3 A.M.—10th: Good night. Some pain in head at first. Takes food better.—12th: Has been taking peppermint water since the 9th. Ordered to-day one drachm of liquor hydrargyri perchloridi three times a day; colocynth and hyoscyamus pill, ten grains.—16th: Normal temperature since 10th. No pain or rigor. Sleeps and takes food well; hungry. Heart apex just inside nipple line; feeble impulse; no increased dulness. Systolic murmur at apex conducted outwards. Systolic murmur at base; rather rough and conducted into neck; loudest over second right space. Loud rough systolic murmur at lower end of sternum; spleen still felt. Fish and potatoes.—17th: Colocynth and hyoscyamus pill, ten grains.—22nd: Colocynth and hyoscyamus pill, ten grains. Another rise of temperature last night. Frontal headache, and felt hot. Aortic murmur louder. No pain in the side.—23rd: Heart apex just felt in fifth space nipple line; no murmur at apex or in axilla. Systolic murmur at lower end of sternum is unaltered, conducted outwards to apex, and lost there. No aortic murmur; dulness natural; lungs natural. Sweated a good deal last night; gums spongy and receding, and one tooth loose; coppery taste in mouth. Liquor hydrargyri perchloridi, half a drachm, three times daily. Gargle of alum.—24th: Nitro-hydrochloric acid three times daily. Omit mercury.—27th: One ounce and a half of compound senna mixture. Still a tooth loose; no coppery taste; gums recovered; gaining flesh.—28th: A little headache, bad in the night; feels hot; temperature going up.—29th: Two drachms of compound liquorice powder every morning.—30th: Temperature still up; no rigor; sweated a good deal in the night and this morning; no headache; spleen felt; takes food well; loud systolic murmur over aortic and pulmonic areas, and on each side of the lower end of sternum; lost as one approaches the apex.—31st: Acute attack of pain in left side at 10 A.M.; feeling of cold water running down spine before the attack came on; felt cold; looked cold and pinched; pulse 128. Pain relieved by three leeches. Friction rub heard on expiration. Frontal headache before the attack, and still present. 2.45 P.M.: Leeches took well; not much bleeding into poultices after. Sweated at 12.15 noon. Temperature 104·8° at 1 P.M. Continues sweating profusely, soaking sheets and pillows. One ounce of liquor hydrargyri perchloridi three times a day. Two lemons.—Aug. 1st: Temperature again high last night. One-fifth of a grain of morphia given subcutaneously was again followed by vertigo and delirium. Fair night. Much sweating. Looks better.—2nd: Temperature 105° yesterday; profuse sweating; subnormal now.—6th: No further rise. Looks very comfortable. Gums spongy. Teeth rather loose. Coppery taste in mouth. Spleen felt. Apex inside nipple line; murmurs the same. No evidence of hypertrophy. The patient to have half meat diet, two eggs, two lemons, two ounces of wine, a pint of milk extra; nitro-hydrochloric acid with sulphate of quinine every six hours.—8th and 9th: Slight rise of temperature.—13th: Looks better. Systolic murmur at right border of sternum, left of sternum, and less distinctly at apex.—19th: To have citrate of ammonia and iron with four minims of liquor arsenicalis, three times daily. Gets up.—20th: Gain of one pound since admission. Soft systolic murmur at apex, and heard very faintly in axilla; murmur at lower end of sternum as before. The patient to have full diet, two eggs, two ounces of wine, and the draught and powder to be repeated.—27th: Gain of seven pounds in a week. Large appetite. Up most of the day. Apex just inside nipple line.—Sept. 2nd: Gain of four pounds. Loud systolic murmur at lower end of sternum, rapidly lost on approaching apex, and not heard in the axilla. Went to a convalescent home for a month. Feb. 2nd, 1891: Says that he was ill for a few days after returning from the home, and had some slight shivering. Since that has been quite well and strong, and not short of breath. There is no evidence of cardiac hypertrophy; the apex is just inside the nipple line in the fifth interspace, and dulness is normal. A loud rough systolic murmur is heard at the lower end of the sternum, conducted an inch and a half to the right of the middle line, and fades away rapidly to the left of the middle line, almost entirely lost at the apex, and not heard outside it; conducted upwards as far as the third costal cartilage on each side. No venous pulsation in the neck. General condition excellent.

Upper Brook-street, W.

WALSALL COTTAGE HOSPITAL.—The honorary treasurer of the hospital has just received from the executors of the late Mrs. Annie Adams, Fillougley Lodge, a legacy of £1000, free of legacy duty.

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TREATMENT OF GOITRE BY PARTIAL EXCISION, WITH FOUR CASES.

BY LOUIS E. STEVENSON, M.B., B.C. CANTAB.,
LATE HOUSE-SURGEON TO THE CUMBERLAND INFIRMARY, CARLISLE.

GOITRE in the young seems more liable to be followed by serious symptoms than in those who have reached adult life. The trachea of youth is naturally less adapted to resist pressure, and the presence of a goitre would appear to excite spasm of the glottis more readily in youth. A rapidly growing goitre in a young person is a serious subject for contemplation to the practitioner under whose care the case comes, as it is liable at any time to cause serious danger either by direct pressure or by exciting spasm of the glottis. These growing goitres kill swiftly and suddenly on occasion, and I know of several instances where the doctor on arrival after a hasty summons either found his patient dead, or so far gone as to be beyond medical skill. The amount of stridor does not always give an adequate warning of the impending danger, and for this reason also these goitres are justly dreaded. I hope the recital of four cases we have recently had in the Cumberland Infirmary under Dr. Lediard's care (and to whose kindness I am indebted for permission to publish them) may be of interest to the profession. I shall briefly narrate the cases and deal with the general question afterwards. The procedure adopted in all of them was excision of half the growth. The first case was very alarming, as the girl was breathing with the utmost difficulty, and had been several times unconscious for a few moments before she was placed on the operating table. The idea at first was to remove the isthmus of the thyroid, but this failed to relieve, as will be seen from a narrative of the case.

CASE 1.—Isabella N——, aged sixteen, admitted on Oct. 11th, complaining of difficulty of breathing. For two years has noticed that her neck was large in front, and during the last fortnight has had great difficulty in breathing. On admission she had a large goitre, the right lobe being especially hypertrophied. Breathing markedly stertorous. She improved a little during the day, but towards evening her breathing became greatly embarrassed and loudly stridorous; cyanosis of face was well marked, with occasional loss of consciousness for a few moments at a time. Patient was placed on the operating table, and under chloroform the thyroid isthmus was cut down upon, and, after being ligatured firmly in two places, was excised. No relief of the breathing followed. After a little difficulty the right half of the growth was now removed, the operation being necessarily hurried, as the patient was *in extremis*. The right superior thyroid artery gave a little trouble, but was soon tied. The trachea was deflected to the right side, and very small indeed. After removal the breathing rapidly improved. The wound was stitched and a drainage-tube inserted. A light antiseptic dressing was applied and a bronchitis kettle set in operation.—Oct. 12th: Temperature rose to 102°; breathing much easier; some mucous rattling in throat.—17th: Has done well. Stitches removed. Very little discharge. Temperature normal. No mucus in air passages now. Feels very easy.—On the 29th the wound was quite healed, and the patient was discharged on Nov. 5th. Her breathing was perfectly normal, and the left lobe had diminished to a quarter the size it was on admission.

CASE 2.—John E M——, aged ten, was admitted on Oct. 8th. He complained of swelling in the neck. On admission the patient had goitre, the left lobe being larger than the right. Has occasional stridor. He was put on five-grain doses of iodide of potassium and kept in bed, but breathing gradually became worse, but never became so bad as in Case 1. On Oct. 20th the left lobe was excised; the method adopted will be detailed afterwards. He made a rapid recovery, and on his discharge on Nov. 8th breathing was perfectly normal and the right lobe had diminished remarkably in size. This was not a large goitre, but gave rise to a marked degree of discomfort.

CASE 3.—George S——, aged fourteen, was admitted on Aug. 27th, with well-marked goitre, the right lobe being the larger. Has had the growth about a year, and it is increasing. For six weeks after admission he was kept in bed, and put on low diet and iodide of potassium in doses of from fifteen to thirty grains thrice daily ordered. On Nov. 12th, the goitre not having diminished, and it being probable that should the patient get up and resume work the stridor (from which he suffered, especially at night) would increase, it was determined to excise the right lobe, and this was accordingly done. The trachea was found to be very small, displaced on the right side, and embraced by the goitrous growth, necessitating careful dissection to free the windpipe. The patient suffered a little from shock. His temperature never rose beyond 99·8°. On the 19th the stitches were removed, and by the 27th the wound was healed. No return of stridor. On his discharge on Dec. 3rd his breathing was quite quiet, and the left lobe had diminished considerably.

CASE 4.—George L——, aged seventeen, was admitted on Nov. 28th, 1890. Goitre began six months ago, and is rapidly increasing. Shortly before admission he began to have trouble with his breathing, and had been taking iodide of potassium without benefit. The right lobe was larger than the left. Great stridor at night. This patient was operated on, under chloroform, on Dec. 1st. The trachea in this case was fairly large and firm, but the goitre was firmly adherent to and surrounding the windpipe. Some superficial veins gave some trouble in this operation, but were securely ligatured before excising the right lobe. Patient suffered from tracheitis, but not severely. The wound in this case healed rapidly except at its lower end, where some exuberant granulations gave some trouble. He was discharged on Jan. 7th, 1891, with perfectly normal breathing. In this case also there was a remarkable diminution of the left lobe before discharge.

These last three cases were treated without the bronchitis kettle after operation. I have seen all these cases recently, and they all continue well.

These, then, are the salient points in the cases, and their success is undoubted. We have here four patients, one of whom would certainly have died (Case 1) but for operative interference, and it is probable Case 4 would have soon died also. The other two cases were not so urgent, but it is possible that danger has been averted from them by operation. The operation of excision of half the growth is not a new one, but the points in its favour are many. In the first place, it cures the patient of his troubles once and for all, as in all these cases it was found that the stridor &c. disappeared after operation, and normal breathing was restored. Now in an urgent case no doubt we should think of tracheotomy or intubation first for relieving the symptoms; but, if the trachea be as small as it was in Cases 1 and 3, it will be found difficult, if not impossible, to introduce a tube. There is also the difficulty of getting beyond the point of pressure, or the trachea may be so covered up by goitrous growth that even if it be found—and it may be displaced,—the introduction of a tube may be extremely difficult. It is alleged by some writers that some of these stridorous attacks are allied to asthmatic seizures, in which case one would expect the inhalation of chloroform to relieve; but in our first case I especially noticed that the anæsthetic did not relieve the breathing in the slightest degree. I do not think intubation has been much used in goitre; but whether tracheotomy or intubation be resorted to, the relief they might bring can only be temporary; the cause of the danger is still there, and is ready to give trouble again at any moment. It is possible that at a second attempt these measures might meet with scant, if any, success; whereas should the disease be attacked by removal of half the gland, as has been done in the above cases, anxiety and danger are removed for ever. For the country doctor, alone with his struggle with death, the operation of course will not be easy; but if a case of goitre come under his observation before very serious symptoms have developed, he could then obtain help to have this operation done, should he deem it advisable. Another point in favour of this operation is that in cases where the trachea is surrounded and embraced by the growth, the windpipe is defined and the goitre is entirely dissected away from it. Another point is that in all these cases excision of half the growth has been followed by a remarkable diminution of the remaining half; and even granting the possibility of further hypertrophy, it is extremely unlikely, I think, that the trachea will again be in danger, as it will have more room now to be thrust aside and accommodate itself to altered circumstances.

Another and very important point in favour of this pro-

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ceeding is that it is practically certain that none of these cases will be followed by that curious disease, myxœdema. Professor Kocher of Berne, who writes on the subject of goitre, and who has performed numerous operations for the relief of the disease, says that in none of his cases of partial excision whose after-history he was able to trace was there any deterioration of the general health observable; whereas in his cases of total extirpation, the after-history of which he was able to trace in sixteen instances, more or less marked signs of derangement of general health were manifest. This derangement, he says, was of a progressive character, being more noticeable in the oldest, and least so in the more recent cases that had been operated upon. The cases, as he describes them, develop gradually into a condition which is identical with myxœdema. With these points in its favour, I think the operation is the best for all purposes. Excision of the isthmus, recommended by Sydney Jones, has undoubtedly been a successful operation in many cases, but in Case 1 it failed. If the trachea be not central in position, and if it be embraced and surrounded by the goitrous growth, it is obvious this operation cannot be of much avail. It will be useful where the trachea is central, and where the goitre can easily be freed from the windpipe, otherwise excision of half the gland is preferable. Ligature of the thyroid arteries as a cure for goitre is not satisfactory, as the blood can gain access to the growth by other channels for its nourishment and increase. I have seen one case of cystic goitre treated by incision of the cyst and drainage, but in this case there were no respiratory troubles. The case ultimately did well, and the goitre was greatly diminished, but there was a good deal of inflammatory action; and if inflammatory trouble were added to a goitre already causing difficulty of breathing, the result might be very serious indeed.

With regard to the method of operation adopted in these cases, it resembles that of Heron Watson. An incision was made in the middle line of the neck from the upper to the lower limit of the tumour, cutting through the fascia; the delicate fascia lining the goitre itself was not interfered with. The next proceeding was to define the outer edge of the offending lobe, which is found usually well under the inner edge of the sterno-cleido-mastoid muscle. The outer edge being defined, the superior and inferior thyroid vessels were tied separately after passing a threaded needle, including the vessels and their fascial investment. The advantage of including the fascia is that the vessels are quickly growing and friable, increasing as they do quickly to supply the increasing demand for blood in the enlarging gland, and by including this fascia in the ligature the vessels are less liable to be cut through. When the vessels are tied and cut through on their distal side, the growth is dissected carefully with scissors, snip by snip from the underlying parts. If the growth be adherent to the carotid sheath, greater care of course must be practised. In this way, by careful dissection, the growth is gradually separated from underlying parts, including the trachea. When the windpipe is free and the middle line reached a ligature is passed round the isthmus on the side where the remaining lobe lies, and the gland is cut away. The treatment then is on ordinary surgical principles, free drainage being essential, as the wound-cavity is irregular. There was no trouble with bleeding after any of the operations.

With regard to the after treatment little need be said. Some advise the bronchitis kettle, and I used it in Case 1, as the trachea had been handled a good deal; the objection to the use of the kettle is that it increases the mucous secretion, which is undesirable where rest to the trachea and surrounding parts is required; still the patient in Case 1 was quite comfortable during the time the kettle was in use. The other cases did not have it; in each case there was some trouble with mucous secretion, but not much. There is no doubt the trachea should be handled as little as possible during the operation. It will be noticed that all these cases occurred in young people.

Carlisle.

A NEW ISOLATION HOSPITAL.—Notwithstanding the failure of the negotiations for a joint isolation hospital for Tottenham, Edmonton, Enfield, Wood Green, and South Hornsey, the Enfield Local Board are about to erect a hospital upon the site which had been obtained for the proposed joint hospital. Patients suffering from infectious diseases (except small-pox) will be received from South Hornsey upon payment of an agreed sum.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF SENILE CHOREA; MANIA; RECOVERY.

(Under the care of Dr. FERRIER.)

THOUGH chorea is essentially an affection of childhood or youth, it occasionally occurs, with all the features of the juvenile type, in advanced age (from seventy upwards), and runs the usual course in a few weeks or months. Such cases are, as a rule, uncomplicated by symptoms of mental aberration. Very frequently, however, chorea in the aged is associated with mental symptoms, either mania or dementia (primary or secondary), and is of a chronic and incurable character. From an inquiry into the relative frequency of chorea among the inmates of the asylums in America, Diller[1] estimates the percentage to be 1 in 425. The following case is worthy of record as a typical example of hemichorea occurring in advanced life, in which, however, notwithstanding the association of acute maniacal symptoms, complete recovery ensued. When chorea occurs in advanced life it is not unusual to find a history in other members of the family, and is really hereditary, and recently Drs. Suckling,[2] Foerster,[3] Dadge,[4] and Sollier[5] have recorded examples of this senile chorea. In the paper by Dr. Diller, several cases are alluded to in which chorea at an advanced age was followed by mental aberration of some sort or other, but none of them recovered from the mental disease.

Susannah G——, aged seventy, was admitted into King's College Hospital, under the care of Dr. Ferrier, on Jan. 23rd, 1891. She had previously enjoyed good health. Though she had suffered occasionally from rheumatic pains, she had never had acute rheumatism. One brother had suffered from rheumatism, but there was no history of chorea or rheumatism among any other members of the family. Two of her sisters died of phthisis. In February, 1890, she had an attack of chorea on the left side, which came on gradually and lasted altogether two months. This attack was not accompanied by any mental disturbance. The present attack commenced a few days before Christmas with a "severe bilious attack," followed by spasmodic jerkings of the right arm and leg, which came on gradually and increased in intensity. These symptoms were accompanied by great irritability of temper and sleeplessness.

On admission, the patient presented typical choreic movements of the right side of the body, face, arm, and leg. Examination of the heart, lungs, and abdominal viscera revealed no abnormality. On the night of admission she was sleepless, and next day became very excited, imagining that people were going to poison her, and shrieking "police," "murder," &c., and struggling with the attendants. She became so violent and noisy that she had to be removed to an isolation ward and put into a strait-jacket. She altogether refused food and medicine, and required to be fed by nasal tube. The administration of large doses of bromide of potassium and chloral hydrate considerably moderated her excitement, but she continued more or less in the same state until Feb. 16th, when she was removed to her own home by her friends. The choreic movements of the right side had in nowise subsided at the time of her removal. She remained at home under the care of Dr. Prickett, and was seen by Dr. Ferrier again on March 13th, at which time the choreic movements were still well marked, and the patient was exceedingly excited and talkative. On April 8th the choreic movements were much less marked and the excite-

[1] American Journal of Medical Sciences, December, 1889.
[2] THE LANCET, vol. i., May, 1889.
[3] New York Med. Journal, Feb. 1889.
[4] Medical News, July 28th, 1889.
[5] Bull. de la Soc. Anatomique, May, 1888; and Annual of the Universal Med. Sci., 1889, vol. ii., B. 56.

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ment had almost gone. The choreic movements of the right leg caused her to walk somewhat unsteadily. On April 25th she was quite clear and rational, and the choreic movements had practically disappeared. The treatment consisted mainly in the administration of bromide of potassium, arsenic, and quinine.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

RENAL CALCULI; LEFT NEPHRO-LITHOTOMY; USELESS RIGHT KIDNEY; SUBSEQUENT PYONEPHROSIS AND NEPHROTOMY; DEATH FROM URÆMIA.

(Under the care of Mr. PAUL SWAIN.)

RENAL CALCULUS in children is well known as an occasional occurrence, but the cases in which it has caused symptoms of sufficient severity to induce a surgeon to operate on the kidney for its removal are few and far between. It may be met with at almost any age, but is generally found post mortem in some cases where its existence was not suspected. The extensive disease of the kidneys found in the following case, where the presence of tubercle in other parts might have biased the diagnosis in favour of tubercular kidney, is interesting. There are several points in the case which merit attention. For the subjoined notes we are indebted to Mr. W. Gifford Nash, house surgeon.

W. C——, aged seven, was admitted on Sept. 12th, 1889. He had had symptoms of disease of the right hip-joint for two years. On examination, the right leg was flexed, considerably fixed, and could not be extended without producing great lordosis. A weight extension was applied.

Nov. 4th.—There has been vomiting after breakfast for three days, without apparent cause.

13th.—The urine contains one-tenth albumen. Under the microscope are seen pus cells and phosphatic crystals. Micturition frequent and painful.

23rd.—The prepuce, which was adherent, was stretched.

24th.—The urine contains one-eighth albumen.

28th.—The child sweats profusely if kept waiting when he wishes to micturate. The urine contains pus, but no crystals.

Dec. 9th.—Was sounded under methylene; nothing found.

12th.—Weight extension omitted.

25th.—He has had abdominal pain and a rise of temperature for a few days. To-day he passed a round worm.

Jan. 2nd, 1890.—He still pulls the penis about. Passed a second round worm.

6th.—There is no pus in the urine.

10th.—The urine contains hedgehog crystals.

20th.—Urine now acid; still contains pus.

March 13th.—He gets screaming fits at night, apparently due to cramps in the left leg.

April 23rd.—Urine contains about one-twentieth pus.

May 31st.—Attack of cramp in the left leg last night.

July 25.—Methylene. Sounded; no stone or other cause for pyuria found. Circumcised.

Aug. 6th.—Less pus.

14th.—No crystals.

Oct. 6th.—There is a diffuse doughy swelling over the back of the right carpus. Wrist-joint not affected.

Nov. 5th.—He complains of pain in the abdomen. Has been vomiting occasionally during the last three days.

7th.—Considerably more pus in urine.

12th.—The appetite is poor. No change in carpal swelling; no hip symptoms.

26th.—Last night he had a great deal of pain in the region of the left kidney (renal colic). He was sick several times. There is tenderness over the left half of the abdomen. Testes much retracted. About one ounce of urine passed in fourteen hours, loaded with muco-pus.

27th.—Abdomen still distended. Has passed eight ounces of urine in the twenty-four hours. There is dulness in the left flank behind.

28th.—Abdomen less distended. Dulness has disappeared. Passed thirty-seven ounces of urine in twenty-four hours.

29th.—Thirty ounces of urine. No tenderness in the left groin.

30th.—Urine forty-two ounces. Boy complains of pain in left loin, which is extremely tender on the slightest pressure. Temperature 100·4° last night.

Dec. 1st.—Urine thirty ounces. Great deal of pain in left loin, where a rounded lump can be felt below the ribs. In the left ilio-costal space is a distinct bulging elastic swelling, dull on percussion. The child lies with the left thigh flexed. Aspirating needle inserted three inches into swelling, but nothing but blood escaped.

2nd.—Methylene was administered, and the left kidney exposed by the lumbar incision. It appeared pale and enlarged. The finger was passed along its posterior border, and some thin watery pus escaped, apparently from a post-nephritic abscess. A small stone was felt lying in the pelvis of the kidney. The overlying tissue was scratched through, and a stone about the size of a pea removed. Four other smaller stones were found. A drainage-tube was inserted, and the wound stitched up.

3rd.—Nineteen ounces of urine passed from bladder. It contained less pus.

On Dec. 4th 19 oz. of urine passed per urethram; on the 5th, 18 oz.; on the 6th, 14 oz.; on the 7th, 18 oz.; on the 8th, 17 oz.; on the 9th, 22 oz.; on the 10th, 18 oz.; on the 11th, 3 oz. (there is no pain, tenderness, or swelling in position of right kidney); on the 12th, 5½ oz; on the 13th, 5 oz.; on the 14th, 16½ oz.; on the 15th, 16½ oz.

It seems that the right kidney is either absent or almost completely destroyed; for on the three days, the 11th, 12th, and 13th, only 13½ oz. of urine were passed, containing a lot of pus, some of which probably came from the left kidney. No kidney can be felt in the right loin.

On the 16th the patient passed 5 oz. of urine; on the 17th, 8 oz.; on the 18th, 1½ oz.; on the 19th, 6 oz.; on the 20th, 1 oz.; on the 21st, none; on the 22nd, 1 oz.

Jan. 8th, 1891.—No urine passed from the bladder since Dec. 26th. There is considerable enlargement of right kidney, and the temperature rises above 100° at night, suggesting suppuration.

14th.—No urine from bladder. The enlargement of the right kidney increases.

19th.—He rapidly gets worse as the kidney enlarges.

21st.—The child was very ill throughout yesterday. Had great pain on the right side of the abdomen, and was constantly sick. Had a rigor at 10 A.M., and at 2 P.M. the temperature was 102°. Since then he has passed very little urine from the left loin. Methylene was given, and an incision made in the right loin below the last rib. The kidney was found about a quarter of an inch from the surface. It looked pale, and bulged into the wound. Pus came through a cannula introduced. The opening was enlarged and the abscess washed out. About two or three ounces of pus escaped, and in it were numerous small calculous masses. Several small abscess cavities communicated with the one opened.

22nd.—At 6.30 A.M. and 7.30 A.M. he had left-sided convulsions, after which he was several times generally convulsed.

23rd.—12.15 A.M.: Death from uræmia.

Post-mortem examination (Jan. 23rd).—The body was emaciated to an extreme degree, not an atom of fat anywhere. Lungs and heart not diseased. Kidneys were both much enlarged and adherent to the overlying colon. There was an opening into the pelvis of each from the loin. The right kidney was about three times the natural size. On section very little if any renal tissue remained. The kidney was studded with abscesses, each of which contained a calculus or some mortary matter. The pelvis was completely blocked with calculous material, and the ureter contained a calculus. The left kidney was also about three times the natural size. The pelvis and some of the calyces contained purulent urine and calculi. There was a little secreting tissue left. The upper end of the ureter was blocked by a calculus. The calculi, of which there were fifty or sixty present, varied in size from a millet seed to a large pea, and consisted of amorphous phosphates with a few concentric rings of uric acid. The bladder was empty, contracted, and thickened. Right hip-joint: The head of the femur was very carious, and much of it absorbed. Acetabulum carious. The joint contained purulent fluid. The kidneys were sent to the Middlesex Hospital museum, where Mr. Henry Morris and Dr. Sidney Martin very kindly examined them, and reported that the changes in the kidneys were entirely due to the calculi, and no tubercular disease was present.

Remarks by Mr. W. G. NASH.—The interesting points in this case were the coexistence of renal calculi and tubercular disease of the hip and carpus, and the fact that such very extensive destructive calculous disease of the kidneys should have occured without more definite symptoms. Sixteen months before death the only symptoms of renal

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calculus were pus and crystals in acid urine, frequency of micturition, sweating before and after the act, rarely vomiting, and cramps in the legs. Although for a year the existence of a renal calculus was suspected, it was not until Nov. 26th, 1890, when there was a well-marked attack of renal colic and swelling of the left kidney, due to blockage of the ureter, that the existence of a calculus in the left kidney was made certain. Nor was there any evidence that the right kidney was useless until after left nephrotomy. The quantity of urine passed from the bladder gradually diminished, and gradually ceased on Dec. 26th. After this the right loin was freely palpated, with a view to prove the absence of the right kidney, and then (possibly from this manipulation) the suppuration in the right kidney rapidly increased, necessitating the nephrotomy, which was performed two days before death. It is a question when the destruction of the right kidney occurred, and when its pelvis and ureter became blocked. Possibly the symptoms were masked by those due to the hip disease. During the sixteen months' stay in hospital there was never any blood in the urine, nor, although there were so many small stones in the kidneys, was one passed.

Medical Societies.

EPIDEMIOLOGICAL SOCIETY.

A MEETING of this Society was held on May 20th, Dr. EWART, President, in the chair.

Measles, an Epidemiological Study.—A. CAMPBELL MUNRO, M.B., D.Sc., medical officer of health to the county of Renfrew, read a paper on the above subject. Measles, he said, was, with the doubtful exception of diphtheria, the only infectious disease that had not only proved unamenable to sanitary measures, but had actually increased within the last fifteen years, the mean death-rate from this disease throughout England and Wales having risen from 277 per million of the population for the decennium 1871-8 to 422 in that of 1881-90. At Yarrow, with a marked decline in the general and the zymotic mortality, the deaths from measles had risen from 274 per million in the former period to 927 in the latter. The most careful inquiry had convinced him of the evident connexion between the spread of measles and school attendance, and of the absence of any other special cause. The school attendance, which in 1871 was only 52 per 1000 of the population, rose from 68 in 1874 to 162 in 1882, or from a mean of 95 in the decennium 1871–80 to 164 in 1881–90. Dr. Ransome's theory of the production of epidemics was the proximity of susceptible persons, and Dr. Munro found in the infant department of a Board school—i.e., among those of the age most liable to measles—sixty-nine children writing on slates in a space of fifteen feet by nine, or on less than two square feet per head. No such crowding was possible in the streets or at home, while the conditions of mental fatigue and foul atmosphere were infinitely more conducive to infection than those of play and exercise in the open air. Chemical and microscopical examination by Prof. Carnelly in Edinburgh of the air of schools, of single room dwellings at night, and of bedrooms in a better class, gave the mean respective proportions of cubic centimetres of CO_2 in a litre of 18·6, 11·2, and 7·7, and the number of bacteria 151, 58, and 8·5. In one school the number of bacteria was not less than 600 per litre! In towns with a less exclusively working-class population there was a proportionately less aggregation of children in public elementary schools and a less marked tendency to epidemicity of measles. This was well seen in the adjacent borough of South Shields, where the school attendance per 1000 of population rose only from 96 in 1874 to 122 in 1882, an increase of 26 per 1000, against 94 in Jarrow. In Jarrow, as in many other towns, there was a striking biennial recurrence of epidemics; the vast majority of the cases were children attending the infants' school, and their mean age was 4·2 years. In 1887, with no data beyond those afforded by the deaths and a very imperfect voluntary notification, Dr. Munro's attempts to check the progress of the epidemic by closure of infant schools were far from successful, but in 1889 the compulsory notification had come into force, and the results of his action, which were exhibited in a diagram, were most satisfactory. Taking the day of the eruption as the date of the "occurrence," and noting only the first case in each family, on the assumption that subsequent cases were infected by this one at home, it appeared that while in no previous week had there been more than two cases, in that ending April 5th there were thirty-six, or 1 per 1000 of the entire population. Of these thirty-six children, twenty-nine were attending school, and twenty-eight the infant department of the Grange Board School. These belonged to different grades of society, and lived in different quarters, so that their mixing much in the streets was unlikely; but it was ascertained that just a fortnight previously an infant had been sent to school with the rash fully out. She was at once sent home, but had already attended for three or four days, during which she had been capable of infecting others. The school was promptly closed Dr. Munro found that in the third week from this—i.e., at the end of the incubation period—but one *new* case was notified among children usually attending this school; this particular outbreak was stamped out, only a few sporadic cases occurring at irregular intervals during the rest of the epidemic period. In the Catholic school it did not appear till the week ending May 24th, when there were twenty-two cases, and fifteen in that following. It was closed, and only a few isolated cases occurred afterwards, though the children belonged to very poorest class. Outbreaks appearing in each of the other public elementary schools, the authorities closed them all on June 7th for five weeks, anticipating the usual holidays, so that when they were reopened on July 26th there were no measles in the town. At South Shields, where measles was not notified and the schools were not closed, no such speedy extinction of the disease was observed. The cases not being known, the deaths furnished the only data for comparison. These were for the twelve months of the year 1889 in Jarrow: 0, 0, 0, 4, 3, 15, 2, 1, 0, 1, 1, 1, and in South Shields 0, 1, 1, 0, 2, 2, 15, 6, 9, 9, 2, 1. Measles broke out again in the Dunn-street school in September and October, and in Grange-street school in November. There being little or no measles elsewhere, Dr. Munro, instead of closing the schools, kept it from assuming the proportions of an epidemic by close personal supervision, excluding all children from the infected houses so long as any danger existed, and instructing the teachers to watch for the earliest febrile or catarrhal symptoms, sending home and reporting to him any that seemed in the least degree suspicious. The success attending this procedure convinced him that could such medical supervision be exercised over all schools actual closure would rarely if ever be necessary. The diagrams showing the prevalence of measles in each of the seven schools, and in the rest of the population, proved that the outbreaks in the former were not parts of a general epidemic, but independent of, and not synchronous with, one another—each arising from a single focus, as was seen most clearly in the Grange school. The tendency to a biennial recurrence of epidemics of measles was probably never so unequivocally manifested as at Yarrow, where it had prevailed in every alternate year from 1881 to 1889 inclusive, the deaths per mille having been, from 1883 to 1890, 2·9, 0·1, 2·4, 0·03, 1·4, 0·0, 0·9, and 0·0. In Sweden, on the other hand, the tendency for the past hundred years had been, as Dr. Ransome pointed out, to a septennial recurrence, the explanation being doubtless that in a sparse population a longer period was necessary for the accumulation of material in accordance with Dr. Ransome's law of epidemic periodicity. "That these disorders can only become epidemic when the proximity between susceptible persons becomes sufficiently close for the infection to pass freely from one to the other." Depending on sociological, not on meteorological conditions, these biennial exacerbations were to a great extent developed in each centre of population independently, in different degrees, and not necessarily in the same years. Generally the odd numbers in the north of England and the even numbers in the south were those of the epidemic years, though there were exceptions in each case, and in some few towns the periodicity was erratic. These local differences tended to obscure the biennial curve for the entire kingdom, which nevertheless was distinctly recognisable in the mortality returns. There was also a seasonal curve, a higher wave in the spring and a lower in the autumn, although some as yet ill understood factors accelerated, retarded, or prolonged the one or the other, whence it followed that whereas the biennial cycle was most clearly seen in each several locality, the seasonal

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curve was best defined in the death-rate of the whole country. Dr. Munro, from a consideration of these facts and the results of his efforts in 1889, was convinced that those medical officers of health who believed that all attempts to stay the progress of an epidemic of measles were futile, and that no good could follow from its notification, were in error. Compulsory notification was an essential condition of action. If this were given promptly, and all children from infected houses excluded from the schools, further steps might not be necessary. If, however, from six to ten new and independent cases had occurred within one week in an average-sized school, the infant department should be at once closed; in the senior departments, where the children had passed the age of greatest susceptibility and a large proportion had probably already had the disease, close personal supervision and exclusion of any giving the least ground for suspicion would in most cases suffice. At the same time the infected houses should be indicated to the managers of all Sunday schools, who should be induced, as at Jarrow, to carry out the like exclusion of all suspected children.—Dr. WILLOUGHBY having for twenty years been connected with public elementary education, considered Dr. Monro's paper one of the highest scientific and practical importance. In the recent discussion of the question at the Society of Medical Officers of Health he had stood almost alone in urging the notification of measles from a school standpoint, and he had in the columns of the *Schoolmaster* indicated the same mode of dealing with children from infected houses, with the further recommendation that the Education Department should be induced to extend to cases of individual compulsory absence the same allowance for enforced non-attendance made in the event of closure of an entire school. He suggested that the biennial recurrence of epidemics might have some connexion with the two years' average stay of children in the infant school, after which those who had escaped were in the upper schools "diluted" by being mixed with insusceptible or less susceptible children, and their places in the infants' school entirely filled by other and highly susceptible individuals.

After some remarks by other members, Dr. SISLEY read a short note on the Prevalence and modes of Propagation of Influenza as observed in the Epidemic of 1889–90 in this country.

OBSTETRICAL SOCIETY OF LONDON.

On Visceral Hæmorrhages in Stillborn Children; an Analysis of 130 Necropsies, being a Contribution to the Study of the Causation of Stillbirth.

A MEETING of this Society was held on Wednesday, June 3rd, Dr. J. Watt Black, President, in the chair.

Dr. HERBERT R. SPENCER read a paper on the above subject, in which he gave a detailed account of a consecutive series of 130 necropsies on fresh, mostly stillborn, fœtuses, in so far as congestion of and hæmorrhage into the viscera were concerned, together with tables of the more important organs affected, and a description of the naked-eye and microscopic appearances of the various viscera as regards congestion and hæmorrhage. The causation of the hæmorrhage was discussed, and the following practical conclusions were drawn: 1. In children stillborn, or dying shortly after birth, congestion or œdema, and hæmorrhages are usually found in various important viscera. 2. These hæmorrhages occur in cases delivered naturally or by version or by forceps through normal and abnormal pelves; in primiparæ and multiparæ; with large and small children; in "easy" and difficult, rapid and prolonged labours. 3. The hæmorrhages are, however, most frequent and most severe in children subjected to much pressure by the parturient canal or instruments or the hand of the attendant, especially when delivered by the lower extremity. 4. Cerebral hæmorrhage is more frequently found in stillborn children delivered by the forceps than in those born by the breech, and in these latter more frequently than in those born naturally by the head. 5. Hæmorrhage into most of the other viscera is more frequently met with in pelvic than in cephalic presentations. 6. These hæmorrhages and the accompanying injuries are in many cases the cause of stillbirth, and, when not immediately fatal, may be followed by the gravest consequences. 7. They are most likely to be avoided by preventing premature rupture of the membranes, by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and by preferring cephalic to podalic version in cases suitable for the former. 8. The use of the forceps should be absolutely limited to cases in which there exists some pressing danger to mother or child, and it should never be employed merely to shorten the time of labour. 9. In breech presentations, examination of the genital organs of the child should be carefully avoided during delivery. As soon as the child's limbs are born they should be wrapped in a thick layer of antiseptic wool (which keeps the child warm and prevents the hand from slipping, and protects the limb from pressure). If traction be necessary, it should be made over wool wrapped around the child's limbs or pelvis; it should never be made by the hand around the child's waist. 10. In delivering the after-coming head care should be taken that the sterno-mastoid muscles are not unduly stretched or pressed upon. When the after-coming head is in the pelvis, where there is even slight difficulty, resort should be had to the forceps.

Dr. HERMAN said it was impossible to controvert Dr. Spencer's carefully observed and recorded facts, but he could not agree that the forceps should never be used to shorten labour. In cases in which there was no pelvic deformity, nor disproportion between the child's head and the pelvis, the os uteri was fully dilated and delivery was slow simply because the pains were too weak. To quickly overcome the resistance of the pelvic floor he thought the use of forceps to shorten labour would be good practice. He thought accoucheurs all over the country used the forceps for this condition more frequently than for any other, and that they did not find harm resulting to the child. He agreed in recommending the forceps for the delivery of the after-coming head. That injuries to the brain were more common in forceps-delivered children than in those born naturally was due, he thought, to the fact that the forceps was used in the worst cases, and so the condition which rendered forceps necessary had produced the injuries.

Dr. PETER HORROCKS related three cases in which, after podalic version and delivery by traction, the children had made no attempt at respiration, although the heart was beating. In one of these an attempt was made to catheterise the trachea, but the catheter passed down the œsophagus and the stomach was filled with air. So tracheotomy was performed, and the child's heart was kept beating for an hour and a half. No effort at respiration, however, was made, and a post-mortem examination showed hæmorrhage into the fourth ventricle of the brain. In the other two cases there was also hæmorrhage into the fourth ventricle, and in one on the surface of the brain also. He had considered the total absence of all efforts at respiration to be due to pressure on, or damage to, the respiratory centre in the medulla oblongata or bulb.

Dr. DAKIN thought that many children who survived suffered from visceral hæmorrhages, some of them, as, for instance, into the muscles and cellular tissue, did not, perhaps, materially affect the child's welfare. He asked if these extravasations were, as thought by some, a cause of the milder cases of jaundice, by the absorption of their blood pigment into the general circulation, and consequent staining of the tissues. He noticed that out of twelve or thirteen cases which survived over three days only two were jaundiced. He thought the intestinal and uterine hæmorrhages would explain many of those cases in which bleeding took place from the rectum in male and from the vagina in female children.

Mr. ALBAN DORAN thought that many children were born with visceral hæmorrhages which did not kill, but which set up diseases. Large subcutaneous extravasations of blood caused by violent blows were sometimes followed by the development of a sarcoma.

Dr. LEWERS suggested that some morbid condition of the vessels might have caused the hæmorrhage in some of the cases. Considering the fact that so many children that afterwards throve had been delivered by forceps, it seemed improbable that the forceps skilfully used would often cause visceral hæmorrhage in healthy fœtusee.

Dr. JOHN PHILLIPS alluded to parturition in hæmophilic women. He had never met with a case. He related two cases of visceral hæmorrhage in newly born children; one a breech case, with hæmorrhage into the liver; the other a normal labour, with hæmorrhage from the stomach. He agreed that many so-called "asphyxial deaths" were really due to internal hæmorrhage.

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Dr. HERBERT SPENCER, in reply, thought that the question of the use of forceps could not be decided by an appeal to practice, or by the statistics of stillbirths. He thought that many slight muscular or mental disabilities in after life might have their origin in these injuries. Careful observations of the after-histories of difficult forceps deliveries were very desirable. He thought many of the cases of head injury which he had recorded were clearly due to the forceps, and not to the conditions which had led to their use. He recommended the use of the forceps to the after-coming head when it was in the pelvis, and there was difficulty in extraction. He thought hæmorrhage into the sterno-mastoid muscles was frequently overlooked. He had seen cases similar to those described by Dr. Horrocks, and had found hæmorrhages in the medulla, but not in the respiratory centre. He did not approve of tracheotomy in Dr. Horrock's case. He recommended catherisation of the trachea, which he had often performed. He agreed with Zweifel that the majority of jaundice cases were due to extravasated blood, with subsequent changes and absorption.

Specimens.—Dr. W. H. KELSON: Acardiac and Acephalous Monster.

Dr. LEWERS: Polypoid Endometritis, with Blighted Ovum.

Mr. ALBAN DORAN: Water-colour Drawings of (1) Case of Congenital Auricular Sinus; absence of External Meatus on Opposite Side; Cutaneous Sinus over Sacrum; (2) Cervical Auricle.

Dr. PETER HORROCKS: (1) Multilocular Ovarian Cyst Fibroma of the Opposite Ovary; (2) Brain showing Thromboses in Cerebral Veins and Hæmorrhage into Internal Capsule in a case of Ingravescent Hemiplegia during Pregnancy and Parturition.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of this Society was held on May 8th, Mr. H. E. Armstrong, President, in the chair.

Sanitary Legislation.—Resuming the consideration of recent and prospective sanitary legislation, the Society approved, with a few alterations, the amendments to the Public Health (London) Consolidation and Amendment Bills, formulated by the Council. Among these were the inclusion of bakehouses, marine stores, brickfields, and the storage and removal of offal and manure among trades for which the County Council may issue by-laws; the extension of the Smoke clauses to private houses when these interfere with the health and comfort of the public; the repeal of all provisions for the recovery by the Asylums Board of the cost of their maintenance from the patients themselves; the exemption of existing appointments from the conditions of Section 35, 1 of the Amendment Bill; the accordance of liberty to the local sanitary authority to make extraordinary and temporary appointments (35, 9) without the sanction of the Local Government Board, and the withdrawal of the clause (35, 2) requiring the medical officer of health to reside in or within a mile of his district. This arbitrary and needless condition would, it was urged, have the effect of deterring men of high professional standing from seeking appointments to the worst districts, where the services of such men were most needed. In the Consolidation Bill, Section 55, 1*a*, they recommended that a certificate of efficient disinfection be received from the medical officer of health only, and not from any medical practitioner; and that the clauses of the existing Factories and Workshops Acts (including bakehouses), and of those now before Parliament, placing the sanitary control of the same in the hands of the sanitary authority, be incorporated into this Bill, with the proviso that all fines &c. be paid to the sanitary authority. The amendment standing in the name of Mr. Gaisford Bruce, M.P., restricting the practice of medical officers of health in the metropolis, provoked a warm debate, some members deprecating any such interference, but others maintaining that while it was highly desirable that, provided they enjoyed adequate salaries and fixity of tenure, they should be debarred from engaging in medical, or at any rate from general practice, no restriction ought to be imposed on them as to holding professorships, acting as visiting physicians to fever hospitals, or as experts and consultants in medico-legal and public health questions. Much uncertainty existing as to the precise wording of the amendment, several members approved of it if *medical* practice only were precluded; but on the assumption that it would be taken as a precedent for the whole country, it was denounced *in toto* on behalf of the holders of small provincial and rural appointments, who formed the majority of the Society, and sanitary service.—Mr. KEITH YOUNG, F.R.I.B.A., next gave a description from a model of a "Cremating Furnace specially designed for the Destruction of Hospital Refuse," which he had, with the assistance of Mr. Brophie and the resident medical officer of Middlesex Hospital, erected at that place, in which advantage was taken of the properties of incandescent perforated firebricks and of valves automatically directing the air currents in alternate directions for the complete destruction of the products of combustion. The cost of the apparatus was £150; it was very compact and perfectly free from smell.—Dr. SERGEANT considered it too complex, and maintained that where the work to be done did not require one of the size of Fryer's destructor, it might be efficiently performed by a simple reverberating furnace such as was employed at Sheffield and Blackburn.—Mr. ROGERSON, M.R.C.V.S., then, at the invitation of Dr. Sykes, made some remarks on Influenza in Horses, as observed by him in the stables of the Midland Railway Company at St. Pancras.

MANCHESTER PATHOLOGICAL SOCIETY.

A MEETING of this Society was held on May 13th, the President, Mr. G. A. Wright, F.R.C.S., in the chair.

Ununited Fracture of the Tibia in a Child.—Mr. F. A. SOUTHAM showed a specimen of ununited fracture of the tibia and fibula from a boy aged six years. When two years old "the bones had been broken" for the correction of a deformity due to bowing of the leg. The fracture was not, however, repaired, and, though another operation was afterwards performed, it remained ununited. Four years subsequently, when he came under Mr. Southam's care, there was wasting and marked shortening of the leg, with complete absence of union at the junction of the middle and lower thirds. Two osteo-plastic operations were performed at an interval of six months, bone-grafts, taken first from the femur of a rabbit and afterwards from the foot of a healthy child, being inserted between the ends of the tibia. No unison resulting, the leg was amputated, as it was quite useless. Examination of the bones after removal showed mere fibrous union; the grafts had disappeared, and there was no attempt at new formation of osseous tissue. Attention was directed to the rare occurrence of non-union after fracture in children, and also to the unsuccessful results of operative interference when this defect is met with at an early period of life, reference being made to the observations of Sir James Paget on this subject in his recent work, entitled "Studies of Old Case-Books."—Mr. G. H. BROADBENT asked what had been done with the periosteum, whether it had been left on the grafted bone or had been detached, and suggested that it might be advisable to retain a large portion of it, even allowing it to project over the edges so as to allow of it being sutured to each end of the periosteum of the part operated upon, so as to encourage the formation of bone.

Acromegaly.—Dr. BURY exhibited a Brain and Thyroid Gland taken from the body of a woman aged twenty-three years. She had lost strength and suffered from severe headache for three years, and eighteen months before death her sight began to fail. When admitted, under Dr. Ross, the following symptoms were observed: Great prominence of the orbital arches; a low retreating forehead; enlargement of the nose, lips, tongue, and body of the lower jaw; the voice low-pitched and monotonous, the speech slow and deliberate; the right lobe of the thyroid unduly prominent; the hands, feet, and digits greatly developed, the increase in breadth and thickness being the most marked; kyphosis and slight scoliosis of the cervical and upper dorsal vertebræ; the abdomen enlarged and its walls thickened; the limb muscles soft and flabby, but no paralysis. With the exception of severe headache starting in the left temple, no sensory disturbance. Reflexes normal; taste, smell, and hearing unaffected. The left eye nearly blind, temporal hemianopsia of the right eye. Sugar in the urine, and death from coma. At the necropsy a large pulpy tumour at the base of the brain excavating the sella turcica and extending from the optic chiasma (which with the optic tracts was much compressed) to the cerebellum. Microscopically, it had the appearance of a glioma. Each

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lobe of the thyroid was enlarged and contained a cyst. Some pendant masses of tissue attached to the front of the pericardium, similar to pieces of a persistent thymus, showed only fat cells under the microscope. The heart and the liver were enlarged. The uterus was infantile; there were small cysts in each ovary.—Dr. BURY reviewed the clinical history and morbid anatomy of acromegaly, and discussed its affinities. It is noteworthy that in both acromegaly and cretinism the thyroid gland is either diseased or atrophied. Persistence of the thymus, hypertrophy or a neoplasm of the pituitary body, are less constant features of acromegaly. Nevertheless, it is a significant fact that the anterior lobe or glandular portion of the pituitary body originally develops from the mouth cavity; and that in acromegaly the posterior part of the mouth—viz., the palate, the tonsils, and uvula—is usually increased in size. —Dr. HUTTON expressed the opinion that it was impossible to distinguish between the symptoms due to the disease itself and those dependent upon the cerebral tumour; and that, in the absence of any post-mortem examination of the bones, it was not safe to conclude that the case was purely one of acromegaly.

Extensive Ulceration of the Leg.—Mr. A. W. HARE exhibited a specimen of Ulceration of the Leg which had persisted for twenty-six years, ultimately attacking the bones and giving rise to spontaneous fracture. Microscopic examination of the floor of the ulcer showed that it was the seat of epitheliomatous change.—Mr. G. H. BROADBENT asked what was Mr. Hare's experience in reference to the popular belief that the healing of long-standing ulcers was liable to be followed by serious results. From his own observations he believed that there were good grounds for such popular beliefs. He was not inclined to agree with Mr. Hare that the great increase of weight which the patient had gained since the operation was altogether a favourable sign, and he would like the subsequent history of the case brought before the Society at some future time.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on April 9th, Mr. W. Dale James, M.R.C.S., President, in the chair.

Cross Paralysis.—Dr. PORTER showed a brain from a patient who had been under his care at the infirmary with cross paralysis. There was a small tumour in the left half of the pons, the nature of which had not then been investigated. The patient, a man aged forty, was admitted with right hemiplegia and paralysis of the left side of the face and internal strabismus of the left eye. There was never any contraction of the pupils. There was no anæsthesia and no affection of the fifth. The knee-jerks were exaggerated on both sides, but especially so on the right, and ankle-clonus was very marked in the right foot. The speech was slurred, and latterly the tongue inclined slightly to the right on protrusion. There was a family history of both cancer and tubercle. No syphilitic history. The diagnosis was lesion of the pons. The patient died comatose seven weeks after admission and about four months from the commencement of the symptoms.

Mammary Tumour.—Dr. MARTIN related a case of mammary tumour which he had removed. He had first seen the case three years before, when there was retraction of the nipple and some puckering of the skin. The patient was aged fifty, and delay was then advised by his colleagues. When she again presented herself in February last there was a well-marked tumour, which he removed. It was apparently scirrhus, but there was no involvement of glands, no cachexia, or loss of flesh.

Eye Disease.—Mr. SNELL introduced a man who had sustained a blow on the face some months ago with a shovel. The malar margin of the orbit was driven in, and the anterior chamber of the eye was filled with blood. When the hæmorrhage had cleared away it was seen that the lens was cataractous and dislocated into the vitreous, the greater part of the iris being also carried away. The orbital margin was irregular at its outer part in consequence of the fracture. Mr. Snell also showed a young woman aged twenty-one, a file-cutter, in whom symptoms of headache and sickness dated back some months, and in whom there was palsy of the external rectus of two weeks' duration. There was well-marked papillitis in both eyes, but vision was normal. Mr. Snell discussed the connexion of plumbism with the condition found in the patient. In her trade she had been exposed to the deleterious influences of lead, and though there was an absence of some symptoms, a blue line on the gums was evident. Much in her case suggested migraine, and she came from a neurotic family.—Dr. White and Dr. Burgess made remarks on the case.—Mr. WIGHTMAN showed sections of three eyes mounted in glycerine jelly, each containing a glioma growing from the choroid. In one case, that of a child aged two, in whom the tumour had been noticed only about a month or so before it was removed, a very long section of the optic nerve was made, the nerve being divided about half an inch from the globe. A microscopic section of the nerve showed a large number of scattered small round cells very much like the cells found in the tumour.

Obscure Skin Eruption.—Dr. SIDNEY ROBERTS showed a case of skin eruption, in which the diagnosis lay between a tubercular and a syphilitic origin. He intended trying the effect of an injection of tuberculin with a view to diagnosis.

Circumcision. — Mr. ARTHUR JACKSON read a paper entitled "A Few Notes on Foreskins," calling attention to the ancient origin of the operation of circumcision, its sanitary object, and the evil results of its being given up. He attributed the frequency of hip-joint disease, of affections of the spinal cord, of hernia, of epilepsy in young subjects, to the neglect of the condition of the prepuce, and adhesions of the labia minora in female children, and urged more frequent attention to these parts in long-continued diseases.

Obstetric Notes and Queries.—Dr. MARTIN read a paper thus entitled, in which he discussed in the first place the question of early manipulative interference in cases of lingering abortion; next, the question of the early application of the forceps in cases of labour in which there was full dilatation of the os, strong labour pains, and no progress for several hours; finally, the question as to the length of time the patient ought to be kept in the recumbent position after delivery. With regard to the first question, he was of opinion that there existed too great a tendency in the present day to interfere, and that such interference ought not to be undertaken too lightly. He believed that manipulative interference of any kind was attended by possibilities of no small danger to the patient, and that the risks should be thoroughly considered and explained to the patient's relatives before anything was done. The early application of the forceps in the second condition, and under the circumstances described, he regarded as a measure for conserving the patient's strength and securing a favourable convalescence. In reference to the third point raised, he believed that prolonged rest in the recumbent posture favoured complete involution, and advocated a period of at least three weeks in that position, and the exercise of caution for a further period of ten days or two weeks.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on April 15th, Mr. C. Haydon White, M.R.C.S., President, in the chair.

The Treatment of Cancer from the General Practitioner's Point of View.—Dr. LOWE, the writer of the paper, dwelt upon the importance and interest of this disease to general practitioners as distinguished from consultants, specialists, and hospital surgeons, as the former dealt with it in its earliest as well as its latest stages, whereas the latter met with it only for the most part when fully developed. He urged the importance of more fully and precisely recording the details of each case in the certificate of death for the information of the Registrar-General. He also insisted upon the duty of general practitioners to obtain early treatment either in hospital or private, according to the status of their patients, at the same time advising the avoidance of over-zealous surgical and medical treatment, so as to interfere as little as possible with the patients' general comfort and utility.—Dr. BROOKHOUSE expressed a distrust of specialists in the treatment of such diseases as cancer, and a disbelief in the bacterial origin of the disease.—Mr. WOOD gave an unfavourable opinion of operative treatment, based upon twenty years' experience.—Dr. RANSOM stated that coccidia described as peculiar to cancers were discoverable in almost all epithelial growths.—Dr. BOOBBYER dis-

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cussed the somewhat startling cancer statistics published by the Registrar-General in his annual report for 1889, which, with all possible allowance for error, went to show an undoubted recent increase in the prevalence of malignant growths.

Extensive Disease of Viscera.—Dr. BROOKHOUSE showed the Heart, Spleen, Kidneys, and Bladder removed from a man aged about fifty, admitted under his care into the General Hospital for retention of urine. Three weeks previously he had a "stroke," suddenly falling back and becoming unconscious. When admitted he was aphasic, and there was some loss of power on the right side, frequent desire to micturate but inability, pain in back, urine foul, alkaline, sp. gr. 1010, with deposit of pus and phosphates. He died exhausted about twenty-four days after admission. At the necropsy there was found wasting of the brain cortex in the Rolandic area, the brain vessels being soft and somewhat atheromatous; heart wall of left ventricle thin, vegetations upon mitral valve; large infarct in spleen; pyonephrosis of right kidney, cortex wasted; there was a black irregular-shaped stone, with rough surface, the size of a nutmeg, in the pelvis, which was much hypertrophied, as also the ureter; the left kidney had dots of pus studded all over the cortex, and the capsule was rather adherent; the bladder wall was enormously thickened, the cavity small, the mucous membrane congested and blood-stained; prostate uniformly enlarged.

A meeting was held on May 6th, Mr. C. Haydon White, President, in the chair.

Double Empyema.—Dr. HANDFORD showed a boy, aged seven years and a half, who after a three weeks' illness was found to have pus in each pleural cavity. On the left dulness reached to the fourth rib, and on the right to the fifth, and behind on each side to the middle of the scapula. The respiration was 56 per minute. On Feb. 13th the left chest was opened under chloroform in the sixth space in the posterior axillary line, three-fourths of an inch of rib being removed. The patient became somewhat cyanosed under the anæsthetic, but the breathing was much relieved by opening the chest, possibly by allowing the mediastinum to bulge over to the left, and thus giving more room to the right lung. Ten days later the right chest was opened in the seventh space below the angle of the scapula, and one inch of rib removed. Many large fibrinous coagula and much pus were removed. Both tubes were finally left out at the end of nine weeks. Three weeks later both wounds were healed by sound cicatrices, and respiration was normal over the whole of both lungs. The boy had gained half a stone since he was weighed on first getting up.

Extensive Ganglionic Swelling.—Mr. ANDERSON showed a man, aged fifty-six, whose right hand and wrist commenced to swell a year ago. There was distension of synovial sheaths of very complex character, involving those of both flexor and extensor tendons, and extending from front to back between the carpal bones. There was undue mobility of the carpus, but no grating. No bare bone could be felt. Various remedies having failed to cure it, amputation was now proposed.—Mr. TRESIDDER showed a similar, but less severe case, in a woman aged seventy-two.

Water-supply in Rural Districts.—Dr. J. S. TEW read a paper on this subject, and referred to the great amount of attention which the water-supplies, especially of large towns, have received both from the general public and also from the medical profession during the last decade, and reviewed the improvements which have been made and which are contemplated in the water-supply of such towns as Manchester, Liverpool, Birmingham, &c., pointing out the benefits derived from such supplies, not only for the towns for which the schemes were specially designed, but also for the country districts around, and through which the conduits pass. The distribution of other local water-supplies was also described, and several recent instances given of the spread of infectious disease by means of drinking water. He also gave an analysis of enteric fever cases personally investigated during the year 1890, which numbered 102, and which gave a proportion of 1 case among 510 persons, an average age of thirteen years and a half of those attacked, a death-rate of 0·36 per 1000 living, and a case mortality of 18·6 per cent. Among these cases, 5 per cent. were without reasonable doubt traced to specially polluted water, while in from 20 to 25 per cent. the water was either of inferior quality, or was liable to pollution. The subject of the lowering of the ground water, as measured by the neighbouring surface wells, in relation to the autumnal prevalence of enteric fever, was also entered into at some length, and the ground water theory of the spread of this fever was upheld. A chart for the year 1890 showed that two-thirds of the cases of enteric fever occurred in the months of August, September, October, and November, and a tabular collection of cases distributed over five years showed that 189 occurred in those months out of a total of 341 cases. It was also considered that in most of those cases where epidemics of enteric fever appeared, while the ground water was rising, other more potent factors were agents in its production—usually drinking water directly polluted by sewage or personal contact,—and it was urged that in investigations into the causes of this fever the water-supply and drainage should receive primary attention, but that inquiries into the fruit, vegetable, and meat supplies were also of increasing importance.—The PRESIDENT and Mr. WILLS discussed the subject.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the section of Pathology was held on May 8th, Dr. E. H. BENNETT, President, in the chair.

Epithelial Tumour of Neck.—Dr. GRAVES showed a rare tumour of the neck, removed in the City of Dublin Hospital by Mr. Wheeler. It was separable from the skin, and was very hard; it was completely surrounded by a fibrous capsule, which sent trabeculæ in between the masses of horny epithelium of which the tumour was composed. He was unable to give it a name, but he believed, as it had been growing all the patient's life, that it was a fœtal enclosure of epithelium in the cleft of the neck.—Mr. WHEELER, at the request of the President, stated that he had removed the tumour referred to by Dr. Graves last Thursday week from a boy aged twelve years. The tumour was situated in the posterior-superior triangle of the neck on the left side, was very painful, and the history of the case revealed that it was present at birth; it appeared before removal to be an atheromatous tumour, or rather three tumours, for there was a distinct separation, and the skin was invaginated into the divisions. After removal the specimen was handed to Dr. Graves, the pathologist of the hospital.—Drs. M'WEENEY and BEWLEY also spoke.

Polyserositis with Moist Gangrene of Lower Limbs, and Septic Infarcts in Kidneys and Spleen.—Dr. M. A. BOYD exhibited the heart, kidneys, liver, spleen, and also portion of arteries and veins of lower extremities of a patient under his care in the Mater Misericordiæ Hospital, who died from general dropsy with moist gangrene of lower limbs. The dropsy was due to adhering pericardium, the result of pericarditis a year previously, and for which paracentesis of the pericardium had then been performed successfully. The adhesion was principally confined to the cul-de-sac in the neighbourhood of the right auricle and vena cava. Both lungs were found collapsed and carnified, the right one being intimately adherent to its pleura. There was a large infarct in the spleen, and the kidney was studded over with similar infarcts in its cortex. There were embolic plugging of both femoral arteries and thrombosis of the veins of both lower extremities. The peritoneum exhibited evidences of septic inflammation. The microscope showed numerous chains of cocci in the kidney infarcts. The thrombosed and inflamed veins of the enormously swollen lower limbs were regarded as the source of the septic infection of the blood, probably erysipelatous in character. The case was of interest as showing that thrombosis of the veins, no matter how severe, cannot *per se* produce moist gangrene without embolic plugging of the arteries existing at the same time. As there was no evidence of endocarditis or valvular disease to account for the embolic infarcts, they were regarded as due to septic cocci.—Dr. M'WEENEY said he had little to add to the details given about this curious case by Dr. Boyd. The liver was cirrhosed to a most unusual extent in so young a subject. The infection with cocci probably took place during the last few days of life, and was, in his opinion, the cause of the semi-purulent character of the serous effusions. He showed a slide of one of the kidney glomeruli under a $\frac{1}{12}$ oil immersion objective, showing the cocci in pairs and short chains lying between the capillary tuft and Bowman's capsule. There were also cocci in the fibrinous exudation on the pericardium, but in its superficial layer only. The sections were prepared by the Gram method as modified by Weigert, and by Kühne's universal methylene-blue car-

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bonate of ammonia method. Dr. M'Weeney showed microscopic slides exhibiting the septic emboli of Dr. Boyd's case.

A meeting of the Medical Section was held on May 22nd, Dr. FINNEY, President, in the chair.

Treatment of Chronic Eczema by Creolin.—Dr. PATTESON read a note on the treatment of chronic eczema by creolin. He had been led to adopt its use from the well-known value of tarry preparations in certain forms of eczema and psoriasis, and from its cheapness, which rendered it suitable for out-patient practice. He briefly referred to two cases of pustular eczema of the scalp—one of eight and the other of three years' standing—in which marked improvement and cure followed its prolonged use. It was applied as a wash or lotion in the proportion of one drachm to eight ounces of water. The value of such a powerful germicide in these cases seemed in favour of Unna's contention as to the parasitic nature of eczema.—The PRESIDENT congratulated the Academy on the additional remedy for chronic eczema which Dr. Patteson had brought under their notice. His communication, however, did more, and that was, that it emphasised the importance of perseverance in the treatment for eczema which had been found temporarily useful.

The Etiology of Cheyne-Stokes Respiration.—Dr. M. A. BOYD read a paper on the etiology of Cheyne-Stokes' respiration, in which he reviewed all the physiological explanations of this phenomenon offered by writers on the subject since Stokes' time to the present day. He particularly pointed out the very rational explanations offered by Traube and Filehene, who regarded the respiratory derangement from the altered nutrition of the respiratory-centre point of view; and of those of the Dublin School, including Hayden and Little, who regarded it primarily from the cardiac point of view, and complimented the Dublin School as offering by far the best evidence, both clinically and pathologically, in explanation of the phenomenon. Having alluded to the marked rhythmical irregularities between the heart pulse and respirations in this affection, Dr. Boyd drew attention to a point which heretofore in the literature of the subject, so far as he was aware, had not been previously alluded to—namely, that the latter portion of the forced respiratory phase of the Cheyne-Stokes' cycle is chiefly an expiratory one, in contrast to the first portion of it, which is an inspiratory one; and that this forced expiration had a most important bearing on the weak ventricles of the heart, by helping them to squeeze the blood on the one side into the pulmonary artery, and on the other into the dilated and inelastic aorta. In proof of this he exhibited sphygmographic tracings showing that it was only during this expiratory portion of the respiration that arterial tension was raised in the arteries, and that this tension continued through the apnœal period following, during which time the respiratory centre was fully supplied with arterial blood and the weak and degenerated left ventricle resting. He regarded the apnœal period, during which time respiration was suspended, as only an effort on the part of the higher automatic centres to rest a heart the ventricle of which is either too feeble to charge an arterial system, the aorta of which may be dilated and inelastic, or the vaso-motor control of which may be defective, and whose own blood supply may be rendered insufficient in consequence, and its nutrition enfeebled. After the intrinsic muscle of the heart has been fed by this increased arterial tension of the expiratory and apnœal periods, forced inspirations begin again, and the heart contractions are stronger, but they fail to fill the dilated aorta, until the forced expirations, by making pressure on the ventricles, come to their aid again. The most typical and pronounced forms of Cheyne-Stokes' respiration were to be met with in alterations of the heart and aorta produced by degeneration and disease. The form of it met with in cerebral disease or injury, and in apoplexy and uræmic coma, without any primary engagement of the heart, he regarded as due to direct interference with the respiratory centre in the medulla, either by pressure or poisoned blood, and the phases of it were never so well marked as in those cases of the affection depending primarily on alterations in the heart. Owing to its dual origin in this way comes the differences of opinion as regards its pathology. As regards its treatment, Dr. Boyd found so much improvement following the inhalation of oxygen in all the cases where disease or degeneration of the heart produced it, that he urged a trial of this remedy in all such cases, and ventured to suggest, from his experience of the remedy, it should be tried not alone in this affection, but in all cases where degeneration of the heart existed from any other cause.

Notices of Books.

The Microbe has his Rights. By GEO. T. CHAPMAN. New York: Wm. R. Jenkins. 1891.—Mr. Chapman is a man with an idea which may or may not be good, and with a specific which he does not, however, tell us much about. He has an idea that in cases of malaria the inhaled microbes (he does not specify what these microbes are) are too numerous, but that in consumption they all find legitimate employment. "In malaria they feed on the material which the stomach and liver have prepared from the food and assorted to nourish the nerves and blood, and so the malarial patient is left somewhat impoverished; hence his lassitude and its attending nerve-wearing annoyances. But in the case of a consumptive we have nearly the opposite condition. The irritation which is occasioned by want of certain materials creates disturbance, and, like all such distress, results in partial congestion; but if the irritation is prolonged a congestion will occur which, if not arrested, creates inflammation, the product of which is pus. As soon as pus appears nature sends a little army of feeding germs to take care of it. The peculiar headache of a malarial patient, which sometimes accompanies this inflammation, is like that caused by prolonged slight hunger." Need we quote more? Is it necessary to make any comment? Three years after finding the "true cause of malaria" the writer discovered his specific; if the specific is anything like his "true cause of malaria," &c.——But this matter must not be taken too seriously, and we refer anyone who wishes an hour's amusement to Mr. Chapman's discussion on the rights of the microbe; he will get some wonderful information and some fine philosophical sentiments. What more can the heart of man desire?

The Barbarity of Circumcision as a Remedy for Congenital Abnormality. By HERBERT SNOW, M.D., Surgeon to the Cancer Hospital. London: J. & A. Churchill. 1890.—We must confess to sympathy with the main contention of this *brochure*, which is that circumcision is a relic of barbarism which has survived in certain races because elevated into a religious rite. Its origin in barbarism is seen by its being practised by many of the least civilised peoples on the face of the globe. But it is the surgical argument which is of most interest, and while we cannot go with Dr. Snow to the extreme to which the zeal of the advocate has led him, we are inclined to endorse most of what he says. The prepuce is not the valueless or mischievous appendage that some would represent it to be, nor is its removal so entirely harmless as some would have us believe. The great fact, however, on which we would lay stress is the rarity of any necessity for circumcision for the relief of congenital phimosis. Non-separation of the prepuce from the glans penis is constantly mistaken for phimosis, and while the latter requires some kind of operative treatment, the former never does in infants and little boys. The forcible retraction of the prepuce (very slight force is really needed), and the daily repetition of this for a short time, brings about in a perfectly harmless and only slightly painful manner a better result than the operation of circumcision effects.

On the Use of the Oil of Eucalyptus Globulus, combined with other Antiseptics, in the Treatment of Scarlet Fever and all Infectious Diseases. By J. BRENDON CURGENVEN, M.R.C.S. London: H. K. Lewis. 1891.—This is a reprint of a paper which was read at the Epidemiological Society, and

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published in the Transactions of the Society. The author's aim is to show that by a careful mode of disinfection many of the infectious diseases may be treated in the patient's own homes. He relies mainly upon eucalyptus oil together with thymol and other camphors and aromatic antiseptics. An interesting summary is given of the various plans by which the risks of infection have been hitherto met, and then in some detail the author's system is described, with illustrative cases. The protective influence of the oil of eucalyptus and the other aromatics employed appears to merit serious consideration, although many may think that the sanguine views expressed should be controlled by further experience.

John Kenneth Mackenzie, Medical Missionary to China. By Mrs. BRYSON. London: Hodder and Stoughton.—A young man who, after leaving school at fifteen and becoming a clerk in a business house, has the energy and perseverance to study medicine for the express purpose of becoming a missionary, and to carry out that purpose so thoroughly as to spend the last thirteen years of his short life in China, leaving a name highly honoured not only by missionary friends and grateful patients, but by both European and Chinese officials of high rank, must have had "something in him"—something, too, over and above the "religious enthusiasm" with which missionaries are wont to be credited even by their detractors. Dr. Mackenzie's life is well worth reading. It gives incidentally a good insight into many of the peculiarities of the Chinese character, and it recounts the story of the wonderful way in which, at a time of considerable difficulty and discouragement, the cure of a Chinese viceroy's wife paved the way for the establishment not merely of a hospital, but of a surprisingly efficient medical school. These were of course, in Dr. Mackenzie's view, to be looked upon mainly as answers to prayer and means to the great end for which he gave up his life—that of bringing natives of China to a knowledge of Christ. That he was successful in this as well as in his surgery, of which he did a great deal—several hundred operations in a year,—the pages of the deeply interesting memoir before us are evidence.

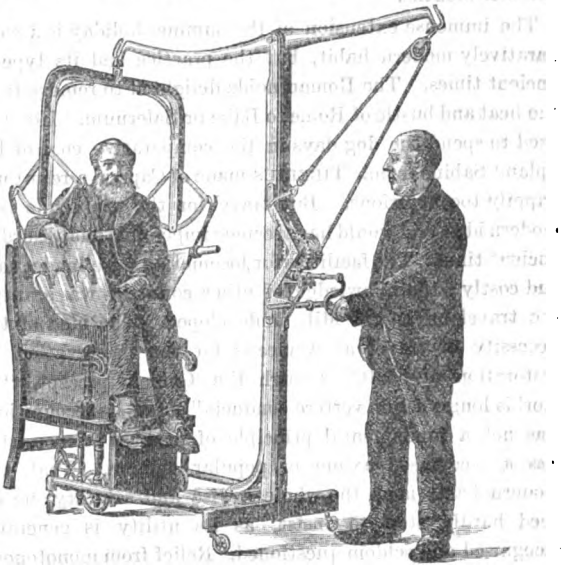
The Elmira Reformatory. By ALEXANDER WINTER, F.S.S. London: Swan Sonnenschein and Co., Paternoster-square. 1891. — For the benefit of any readers who may not be familiar with the system of criminal reclamation employed at Elmira, New York State, we may here note that its essential principle consists in the commutation of an original sentence, no matter what its duration, on reasonable proof that the criminal has learned to appreciate the advantages of order and honest work. As a rule he can, if diligent and well-conducted, earn what is practically release in from one to two years. Then follows a period of six months' "parole" under supervision, then absolute freedom. His dietary during detention, though plain, is good, even too good, for prison fare, and superior to that of many industrious workmen. Meat, bread, milk, tea, coffee, cocoa, and butter are freely allowed, and such luxuries as fruit are not entirely out of reach. The inmates are drilled, schooled, instructed in technical work, in some cases work for a wage by way of training in the duty of self-support, attend lectures, and have access to an excellent library. Finally, on returning to the outer world, they are assured some form of profitable employment. There is no doubt much in this scheme to attract an evil-doer to better courses, though it is certainly open to the suspicion that it may tempt lazy or indigent persons to the commission of crime in order to secure comfortable quarters and good fare. The fundamental idea, which is to obliterate a prisoner's past and to aid and guide his will in shaping life afresh, is certainly a worthy one. The plan pursued, however, is, to our mind, too purely philosophic, too Utopian. It is also noteworthy that religion, though represented by platonic discussions, appears to take no very definite form within the walls of Elmira. We are told, however, that the system has effected something—on an average about 80 per cent. of recoveries from the tendency to crime. If this measure of improvement may be regarded as a permanent condition, the experiment certainly cannot be said to have failed. Its future developments will, in any case, be watched with interest.

Minor Surgery and Bandaging, with an appendix on Venereal Diseases. Arranged in the form of questions and answers. By EDWARD MARTIN, A.M., M.D., Instructor in Operative Surgery, University of Pennsylvania, author of "Essentials of Surgery," &c. Eighty-two Illustrations. London: H. K. Lewis. 1891.—This is very similar to several other manuals of minor surgery. The descriptions are terse and correct, and the illustrations serve their purpose.

New Invention.

IMPROVED BED-LIFT.

WE have had the opportunity of testing this ingenious apparatus, made by the firm of Alderman, Johnson, and Co., 140, Charing-cross-road, with the most satisfactory results. The machine, which is constructed of exceedingly strong and durable materials, consists of an upright bar fixed in a horseshoe-shaped stand, moving on large special castors, and having a long lever at the top. To one end of the lever an iron cradle is attached, as shown in the illustration, and this is raised or depressed by the simple action of an Archimedian screw turning a cog-wheeled roller. It is so easily worked and so powerful that by its aid a very heavy



person can be raised by a child. When the patient has been so raised, the attendant can then wheel him from his bed and place him on a chair or couch, or, if required, from one room to another. The importance of such an apparatus will be at once obvious. The heaviest helpless patient can be raised while either in the sitting posture or lying at full length, and the machine can be adapted to the case of persons recovering from disease attended by want of power in the legs, or to that of patients suffering from, say, typhoid fever, and requiring to be put into a bath without being moved from the prone position.

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THE LANCET.

LONDON: SATURDAY, JUNE 20, 1891.

WITH the advent of genuine summer weather the question of holidays becomes a practical one. The increasing tendency of late years among a large and influential section of the community to postpone the holiday season to the end of summer and the beginning of autumn finds its explanation, probably, rather in social reasons than in any natural fitness of things. September is an excellent month for those who prefer continental travel, and October and November are often very charming on our southern coast, but July and August are the real crown of summer, and must remain for large classes, and especially for the young, the natural period for rest, recreation, and change. It is then that sea bathing can be best enjoyed, that yachting presents its maximum of pleasure, and that mountaineering can be pursued with least apprehension of fog. The long day permits the prosecution of out-door occupation to a late hour, and saves the holiday-maker from the *ennui* which is apt to overtake him in the autumnal evening spent in hotel, pension, or lodging-house. Then, while September is on the average one of our finest months, our proportion of warmth and sunshine is such a moderate one that we can ill afford to leave unutilised that which falls to our share in the more strictly summer months.

The immense extension of the summer holiday is a comparatively modern habit, but the practice had its type in ancient times. The Roman noble delighted to remove from the heat and bustle of Rome to Baiæ or Salernum. HORACE used to spend the dog-days in the comparative cool of his upland Sabine farm. TIBERIUS made of Capreæ a resort unhappily too notorious. But travel for the multitude is a modern idea, and would have seemed impossible and absurd in ancient times. The facilities for locomotion were inadequate and costly; the knowledge of other countries was scanty; the travel habit was still undeveloped. The idea of the necessity of travel as a means for the preservation or restoration of health, though the Galenic precept, "in morbis longis solum vertere conducit" shows its recognition, was not a fundamental principle of medical science, still less a recognised axiom of popular opinion. That the modern habit is on the whole a wise and salutary one we need hardly stop to insist, as its utility is generally recognised and seldom questioned. Relief from monotonous drudgery, rest, escape from the smoke-laden air of great cities to the pure breezes of sea or mountain, change of habit, diet, amusement—all these things are involved in a suitable holiday, and it hardly needs demonstration that on the whole they make for health. Nevertheless, it is possible to make too much of a fetish of even a good practice, to ignore its dangers, and to be indifferent to the rules by which it must be regulated if benefit is to result. Travel and change of air are not to be recommended haphazard even for the healthy, still less for the ailing. Experience shows that, while benefit is often obtained, it is not rare to meet with persons who return from a holiday wearied rather than refreshed in body, and mentally exhausted rather than recreated. The most common errors are either to plan a holiday without regard to the individual's peculiar needs and capabilities, or to carry it out with infringements of the general laws of health and common sense. If an individual who pursues a strictly sedentary life for eleven months in the year spends his holiday month in climbing the Alps or the mountains of Norway, in severe rowing or prolonged pedestrian excursions, he need hardly be surprised if he overstrains his soft muscles and flabby heart, and returns worse rather than better for his trip. He must learn that violent physical exercise requires training, and is not to be attempted with impunity by persons unaccustomed to it. Hardly a summer passes without a story reaching us from Switzerland of some elderly gentleman attempting some difficult ascent, and either fatally injuring himself or laying the foundations of permanent organic mischief. Age, it need hardly be said, is an important element in these cases, and the young may attempt with comparative impunity feats that are fraught with the gravest dangers to the middle-aged and elderly. A similar error is that of the man who was a vigorous swimmer in his youth, and who thinks that, after perhaps years of disuse of the practice, he can with impunity attempt great swimming feats in his maturer years. It is now generally recognised that many of the cases of sudden collapse while swimming which are usually reported as "death from cramp" are really due to syncope from cardiac failure.

Errors in diet are another fruitful source of a spoiled holiday. The absolutely eupeptic individual, the man who can eat anything and everything with impunity, is rare; and most of us have at some period in our lives to put ourselves under dietetic rule. It often happens, however, that the man who is a prudent eater at home throws all rules to the winds when upon his holiday. Sometimes, such is the effect of change, fresh air, and unwonted exercise, this ignoring of accustomed rules is followed by no penalty; but this is a result that cannot be reckoned upon. Foreign cookery is frequently made to bear the odium which should rather attach to the indiscretions of the individual. It is no doubt consoling to the tourist who has eaten and drunk more than is good for him, and much more than he would dream of attempting at home, to lay the blame upon "greasy German cookery," or "sour Rhine wine," or "French kickshaws," but the more experienced traveller will know where the real source of the mischief has lain.

To sum up the general principles of travel is not easy, as every case requires its own rules, but certain leading ideas are sufficiently clear. The over-worked and physically exhausted man must remember that rest should be *his* watchword; the man of sedentary habits must realise that he cannot safely adopt the practices of the trained athlete simply by exchanging London for the Alps; the dyspeptic must bear in mind that while on

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foreign travel he still carries with him his functional weakness; the man on the wrong side of fifty must lay aside the enterprises of youth.

EARLY last year M. MARIE published in the *Revue de Médecine* an account of a disease somewhat resembling acromegaly, but differing from it in certain important particulars, one of these being its association with disease of the lungs or pleura. He showed the importance of this etiological factor by adding the adjective "pulmonic" to the term "hypertrophic osteo-arthropathy." Early this year M. RAUZIER wrote on the same affection, also in the *Revue de Médecine*; and examples of the disease, more or less clearly marked, have been observed and described by ERB, FRIEDREICH, SAUNDBY, and others, though not placed in a separate group by themselves. Dr. ALBERT LEFEBVRE, a late interne of the Paris hospitals, has just published a very careful monograph on this subject, to which we would refer our readers for fuller details than we can give here, and also for detailed accounts of cases.

The most characteristic feature of the disease is enlargement of the hands and feet. This, however, is not uniform, involving all parts of the hands and feet equally, but is especially marked in the last joints of the fingers and toes. The terminal phalanges become broad and thick, not lengthened, giving to the fingers and toes a curious bulbous appearance. The nails become enlarged laterally, curving round the sides of the finger and over the end, forming segments of spheres; they are also ridged longitudinally, thinner and more flexible than normal. The middle and proximal phalanges are enlarged to a smaller degree, and the metacarpus and metatarsus appear hardly, if at all, affected. But at the wrist the hypertrophy of the bones becomes again very marked, and the lower fourth or third of the forearm assumes the size of the upper third of the forearm. The enlargement affects both the bones, and gradually subsides above. In the lower limb the same changes in the lower part of the tibia and fibula have been found, the malleoli becoming greatly thickened, giving a clumsy appearance to the part. The knees and hips, the elbows and shoulders, may be the seat of a similar osseous enlargement, but it is never so marked as in the more distal parts of the members. The pelvis and shoulder-girdle are little altered, the outer end of the clavicle, and the spine and acromion process of the scapula have been enlarged in some of the cases, and the iliac crest is occasionally a little thickened. Kyphosis of the lower dorsal and lumbar regions may cause a notable deformity of the trunk and some diminution of height. The upper jaw is the only bone of the head and face ever involved, and here the hypertrophy is limited to the alveolar arch. The movement of the affected joints is gradually limited, full extension particularly becoming impossible, the muscular power becomes less, and these impairments of function, added to the great increase in size of the part, make the movements of the hands and feet clumsy. The disease may progress very gradually and evenly, but more often the course is interrupted by acuter exacerbations of the swellings accompanied by pain, followed by subsidence of the swelling and relief from pain. The general symptoms of the disease, if any, are marked by those of the preceding or associated pulmonary disease, such as chronic empyema or pulmonary tuberculosis, and these usually lead to a fatal termination. At present this remarkable disease has been met with only in the male sex. The two affections it most resembles are acromegaly and osteitis deformans. MARIE and LEFEBVRE maintain that it is clearly separated from both of these. They point out that in acromegaly the face and lower jaw are largely involved in the enlargement, while the alveolar arch of the lower jaw is not hypertrophied; that deformity of the spine is constant, abrupt, and seated in the upper dorsal region. In acromegaly there is general and uniform enlargement of the hands and feet, quite unlike the localised hypertrophy of the lower ends of the bones of the leg and forearm, and of the terminal phalanges. In place, too, of the large over-curved nails of pulmonic osteo-arthropathy, those of acromegaly are abnormally small, and almost concealed by the swelled overhanging edges of skin. Osteitis deformans is distinguished by the symmetrical enlargement with curving of the long bones, by the great enlargement of the bones of the head, and by the disease coming on late in life, and almost invariably being associated with malignant disease of the bones.

Pulmonic hypertrophic osteo-arthropathy is limited to the male sex and to patients in adult life. It chiefly comes on after chronic suppurative disease of the lungs or pleura, and while no satisfactory explanation of this has been advanced, the fact is undoubted. Dissection shows that the bony thickening is caused by deposit of firm bone around the pre-existing bone, which is very vascular, as is shown by the large number and size of the vascular foramina on the surface of the bone. The articular cartilages are entirely unaffected. The chief changes in the urine in hypertrophic osteo-arthritis are an increase in organic compounds and of phosphate of magnesia, and a diminution of the phosphate and carbonate of lime. The enlarged bones when submitted to analytical examination show a considerable increase in the fat, and also in the other organic constituents. M. LEFEBVRE has collected eighteen cases of this disease, sixteen of which have been observed on the Continent. Now that attention has been markedly called to it other examples of it will no doubt soon be forthcoming here, and a careful study of a larger number of cases will serve to bring out other clinical and pathological features by which the disease which is the subject of these remarks is to be distinguished.

THERE seems no doubt that a notable increase of cases of suicide is in progress among civilised nations. Comparative statistics are hard to obtain, and are often open to question, but that the present century has witnessed a steadily increasing proclivity to suicide in Europe seems indisputable. A recent writer computes the suicides of Europe at 60,000 annually, and believes that while this number represents the recognised cases of suicide, we should require to double it in order to reach the true figure, and to include secret or unrecognised cases. Germany affords the largest relative proportion of cases, France and England follow next in this order, while Spain, Ireland, and Portugal are very little given to suicide. The Sclavonic race is the least suicidal in Europe. As a general rule, suicide is relatively more

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frequent among the civilised and cultured than among the ignorant and barbarous. The list of notable suicides is a long one, and includes men in the very front rank of literature, science, art, politics, and war.

The causes of suicide are numerous and obscure. Probably no question opens up more diverse or more abstruse problems in sociology than the inquiry into the reasons that tend to make men weary of life. Racial idiosyncrasy (itself a very obscure subject, and capable no doubt of further analysis), degree and quality of the civilisation attained, type of intellectual development, religion, the severity of the struggle for existence, disease—all these play their part in determining whether a larger or a smaller proportion of persons of unstable brains will elect "to bear the ills they have" or "fly to others that they know not of." Alcoholism is alleged to be the chief obvious cause of suicide in Northern Europe; but before we can admit this doctrine we should require to investigate the causes of alcoholism itself, to determine how far it is itself a symptom of nervous instability, or an index of misery, over-pressure, or boredom. No error in sociological inquiry has been more widespread or pernicious than the tendency to accept alcoholism as an ultimate fact, requiring no further explanation or analysis, and to trace to the fact of alcoholism all the deplorable evils which follow in its train, without regard to the predisposing causes or the associated conditions. The same hereditary or racial peculiarities that incline one individual to alcoholism *minus* suicide may incline another to alcoholism *plus* suicide.

It is very striking that absolute want and destitution do not seem to be frequent causes of suicide. The abjectly poor and the utterly ignorant do not in any considerable numbers seek to terminate their misery by self-destruction. To incline to suicide there would seem to be required a sharp disparity between either the present and the past social condition of the individual or between his desires and his attainments. The hereditary or chronic pauper, however miserable his state, rarely thinks of violently terminating his sufferings, probably because he has become accustomed to them, or has only a vague realisation of the difference between what is and what might be. On the other hand, the man who has fallen from comfort and social consideration to utter need is in danger, because he vividly realises the contrast between the present and the past. Somewhat parallel is the fact that it is the more intellectually gifted races that are most prone to seek refuge in suicide. The intellectual German or the sprightly Frenchman incline to self-destruction, whereas the phlegmatic Slav has no such inclination. It is in this connexion that the very unwelcome fact of the tendency of education and culture to increase the proclivity to suicide finds its explanation. Education, while immeasurably increasing the usefulness and enlarging the enjoyments of the individual, also multiplies his wants, and if those wants cannot be reasonably satisfied, irritation and unrest ensue, and may predispose to suicide. We must recognise this fact, and it need occasion no surprise. The man whose mind has been expanded by science, art, or letters cannot be satisfied like ignorant Hodge with a hunk of bread and cheese, a pipe, and a quart pot. The former has aspirations which cannot be stifled without danger, and the gratification of which may be beneficial, not only to himself, but to his fellows. The enormous benefit of education is that the new wants which it creates are in the main intellectual, and that their legitimate satisfaction tends to wean the individual from the gratification of the senses. The conclusion to be drawn is, not that the perils of education outweigh or even seriously detract from its advantages, but that as education spreads adequate provision must be made for the satisfaction of those new wants which this spread involves.

We are apt to attribute the growing tendency to suicide to the nervous wear and tear of an age of over-pressure, to the railway, the steamboat, the post, the telegraph. This has become one of the commonplaces of the day, but it is only one side of the question. Suicide is common in stagnant China, whether from religion, misery, boredom, or that weariness with life which seems one of the inevitable concomitants of an ancient civilisation. There is under-pressure as well as over-pressure. Legitimate and normal development is foreign to both.

We have mentioned religion, and no account of suicide would be at all adequate which neglected this essential factor. Every classical scholar knows how profound is the difference between the ancient and the modern mind on this subject, and this difference is due mainly at least to the teachings of Christianity. The ancient Greek and Roman saw nothing wicked, but rather everything meritorious, in voluntarily terminating a life which had been robbed of all happiness and value by domestic, personal, or national calamity. ARISTOTLE, DEMOSTHENES, CATO, SENECA, and HANNIBAL sought refuge in suicide from overwhelming misfortune, and their example, so far from being condemned by heathen writers, was held up to admiration and imitation. Christianity, however, from the first put its darkest stigma on self-murder, and contributed powerfully to the dissemination of that sentiment of horror which now surrounds—probably very salutarily—the subject of suicide.

DURING the past week some important meetings of those interested in the formation of a Teaching University have taken place, and others will immediately follow. The Lord President of the Council has written to King's and University Colleges asking that their case be presented at the Privy Council Office on or before the 22nd inst., and it is reported that he has fixed the 29th inst. for the hearing of counsel. He has also written to the University of London, to the Royal Colleges, and to the other petitioners against the proposed Charter of the Albert University, informing them that if they still desire to be heard in opposition they must also present their case, and, where possible, a joint one, by the 22nd inst. The teaching colleges are known to be ready to go on with their case, and have instructed Mr. RIGBY, Q.C., and Mr. CUNYNGHAME as counsel in their behalf. The Royal Colleges have asked for further time to consider their position, and have been supported in this by the London medical schools; but this demand has been refused by the Lord President. It is, however, likely that a question as to this may be put in the House of Commons before Monday next. The com-

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mittee of the Senate of the University of London is stil intent on endeavouring to bring about a closer relation between the University and the Royal Colleges and the medical schools—evidently on the basis of a joint Examining Board for the Pass M.B. degree,—and of associating the teachers in the medical schools in Boards of Studies. We can hardly believe that the Senate will be induced to sanction such a proceeding, although it has the power to do so. The formation of two classes of degrees with different examining boards—one not under the absolute control of the University—will certainly prove distasteful to Convocation, and may lead to another expression of their opinion to that effect. It would merely be a piece of patchwork, and not stop the formation of a Teaching University, although it might for a time hinder its full development on the medical side. As this is the only opposition to a new University with power to grant degrees in Arts and Science, its formation, at any rate in these two Faculties, may be considered as certain. In this case, the Albert University will follow the precedent set by the Victoria University, and, as in the case of this University, powers to grant degrees in Medicine are sure to be asked for, and cannot be long refused. The Royal Colleges as Examining Boards find themselves in the position of being offered seats on the Council of the proposed new University, but without any power in the assemblies of the Faculties. As the promoters of the new University have always insisted that examinations should follow teaching, it is difficult to see how the Faculty of Medicine can embrace representatives of the Royal Colleges without being constituted on a line different from, indeed fundamentally opposed to, that of the Faculties of Arts and Science. Moreover, it is expressly laid down in the Charter that each teacher is to assist, with an external examiner, at the examination of his own students, as at the Scotch Universities and the Victoria University, so that independent examining bodies have no place in the scheme. It is thought by some that the Royal College of Surgeons will decline to take any part in such n University, but the Royal College of Physicians, which has passed resolutions in favour of a Teaching University in London, will hold another comitia to-day (Saturday) before coming to a final decision. This will evidently depend to a great extent on how far the proposed new University will accept the examinations of the Conjoint Board in England in place of its own. A clause in the Charter provides for the acceptance of the examinations of other Universities, but says nothing about the medical corporations. Another important clause makes the degree purely academic and not a licence, but there is some doubt as to whether a self-denying clause like this will be sustained by the Privy Council. The point is obviously of the gravest moment to medical corporations. The medical schools are chiefly concerned as to their relative representation in proportion to the Medical Faculties of King's and University Colleges. At a conference held on Wednesday between the Standing Committee of the Councils of King's and University Colleges and delegates from the other London medical schools, it was definitely stated that, either directly or indirectly, there would be ten places on the Council for the representatives of medicine, and that the Teaching Colleges had no special wish to take part in the decision as to how they should be allocated, as to whether the Royal Colleges should or should not be represented, or as to how the medical schools should be grouped for representation. One-third of the seats on the Council would be given to medical representatives in any case. We think this is a very reasonable offer, and that the London medical schools would under such circumstances be ill-advised in offering opposition to a scheme which holds out fair hope of a remedy for the "medical grievance."

Annotations.

"Ne quid nimis."

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE approaching election at the Royal College of Surgeons of England will afford to the Fellows of the College a very favourable opportunity for acquiring an increase in their privileges and a proper influence over the affairs of the institution. At the present time the sole constitutional function of a Fellow is the annual exercise of the right of voting for three out of twenty-four members of the Council, a proportion far too small to be of any kind of check upon the autocratic powers wielded by that irresponsible body. Spontaneously the Fellows of the College are never consulted by the Council at all—they have no manner of control over the expenditure or the policy of the Council,—and when consulted through the exercise of external pressure, they are consulted in association with the Members, who outnumber them by about twelve to one, and very likely at a time when any decision of a combined meeting of Fellows and Members cannot produce any appreciable effect, because the issue has already been settled by the Council of the College. In point of fact, the Fellowship is valuable only as a surgical distinction, which secures a certain amount of professional consideration for those who possess it, and is useful in competition for surgical appointments; and that it is esteemed chiefly on this ground is shown by the apathy which prevails in the constituency in regard to the elections at the College. Not half of the Fellows apply for voting papers, and of those who do a considerable number do not take the trouble to fill them up when they have been obtained. It might be supposed that the Fellows of the College of Surgeons of England would view with concern the low constitutional status of their body, which is one of marked inferiority to that of the Fellows belonging to the other professional colleges in the United Kingdom, where the Fellows are actually or virtually masters of the policy and purse, and that they would give the warmest support to any organised movement in their ranks to raise their position to its proper level. Hitherto, however, the response to the reform movement has been conspicuously disappointing, not so much from real antagonism as from secondary influences which distract the attention of the Fellows from the main issue and lead them to bestow their votes on candidates who may be secretly opposed to any change in the mode of government at the College. This being so, it is often a positive advantage to candidates for seats on the Council not to state their views on current questions, if they possess any, for by their reticence they at once conciliate the support or disarm the opposition of those who are well content with things as they are. These considerations should suffice to prevent the indulgence of any over-sanguine spirit in regard to the issue of the approaching election, and should stimulate all Fellows who desire to

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see their body exerting its due influence over the affairs of the College to record their votes in favour of the progressive candidates supported by the Association of Fellows, which has been working with a single eye to the promotion of the interests of the Fellows and the good of the College.

THE ROYAL COLLEGE OF PHYSICIANS.

AN Extraordinary Comitia of the Fellows of the College of Physicians was held on the 16th inst., the President, Sir Andrew Clark, Bart., in the chair. It was announced that Dr. Pye-Smith had been nominated Lumleian lecturer for 1892, and Dr. Sidney Martin, Gulstonian lecturer. A letter from the Secretary for War was read, detailing the points conceded as to relative rank of officers of the Army Medical Department. The President pointed out that all the matters urged by him had been gained except the formation of a Royal Medical Corps. The sanction of the College was obtained to the postponement of the delivery of the Croonian lectures by Dr. Burdon Sanderson to November. On the motion of the Senior Censor, seconded by Dr. Priestley, it was resolved to permit the Council to confer with persons not Fellows of the College respecting the five years' curriculum. The Comitia then proceeded to consider the subject of the proposed new Teaching University of London, and ultimately adjourned to the 20th inst.

THE LAUNDRESS AND HER GRIEVANCES.

THE demand of the laundresses for protection under the Factory and Workshops Act is one that will have to be complied with sooner or later, and the sooner the better. There are no doubt many objections to it. It will cost money, to be paid by the already groaning taxpayer of the country; it will involve an extension of that ever-widening functure of the State, the paternal function; and it may be objected with much force that women are already becoming very independent and capable of fighting their own battles. The time is coming, then, when the State may have to care a little less anxiously about women, or, at any rate, when women will be able, without the help of the State, to combine and to organise their labour in such a way as to protect themselves. But we are nevertheless disposed to think that Mr. Matthews cannot long resist the demand to bring laundries and the work of laundresses under the protection of the Factory and Workshop Act. And this for two very simple reasons: First, there seems good reason to believe that women, though becoming more and more indispensable and independent in the labour market, are still not sufficiently so to make it right to deny them some protection, and to give the conditions under which they work some investigation. The nature and the conditions of their work are both special. They have to do a week's work in three or four days, and they have to do kinds of work which involve considerable personal risk. Another equally or more potent reason is that it is of high importance to the public that the work done in laundries should be done faithfully and under proper sanitary conditions. We believe there are many laundries where work is already done under such conditions. These need not fear inspection, and have everything to gain by it. But if half the accounts be true of the close and confined rooms in which laundry work is done, of their drainage or want of drainage, and of the absolute absence of all provisions for treating infected or suspected clothes separately and disinfectively, then it cannot be doubted that in laundry work as done at present we have a fruitful source of ill health to the workers and risk to the public, and an ample case for legislation. All this being admitted, it will be well for washerwomen to know that more depends on themselves than on any special legislation in their behalf. There is ample work for them to do, and they are paid better for doing it than some other classes of workpeople. Clean linen is becoming more and more a note of all self-respecting people. It is a costly element in modern civilisation, and if laundresses are true to themselves they will improve their own status more surely than many classes have succeeded in doing.

CHARGE AGAINST A MEDICAL MAN OF FALSE CERTIFICATION.

SOME members of the profession seem very slow in learning the danger of signing certificates of death in cases where they themselves have not seen the patient, but where the sole attention paid has been given by an unqualified assistant. This kind of case arises week after week, and at every meeting of the General Medical Council. A practitioner was recently prosecuted at the instance of the Registrar-General, and has been judged by the magistrates to have unlawfully and wilfully made a false certificate or declaration under the Births and Deaths Registration Act of 1874. The case had been seen and attended by an unqualified assistant, but not by the practitioner, who yet signed a certificate to the effect that he had attended the child, and it had died of inanition. The solicitor who defended boldly maintained that his client had done nothing wrong. The magistrates considered two statements in the certificate obviously incorrect: that he had attended the child, and that he saw him alive on April 24th, he never having seen him alive. The Bench did not feel justified in imposing a lighter penalty than £3 and costs. We deeply regret that a practitioner of standing should place himself in so wrong a position; but we are glad to see the Registrar-General vindicating the law by taking legal proceedings against those who break it.

EXPERIMENTS ON ANIMALS.

THE return made to the House of Commons by Dr. G. V. Poore, the inspector under the Act 39 and 40 Victoria, has just been issued. The report gives the names of all persons who have held licences or special certificates during the year 1890, and the total number of experiments performed by them. The total number of licensees is 110, of whom thirty-three performed no experiments. There were forty-eight licensing places in thirty-three different institutions in England and Scotland. The return shows that licences and certificates were granted and allowed only upon the recommendation of persons of high scientific standing, and that the licensees were persons who by their training and education were fitted to undertake experimental work and to profit by it. The total number of experiments performed in 1890 was 2102, and they are subdivided in the tables according to the nature of the experiments. Thus there were 920 in which the animal suffered no pain, because complete anæsthesia was maintained from before the commencement of the experiment until the animal was killed. In 857 other experiments the pain was trivial, simply a hypodermic injection or inoculation, it being a condition of the certificate granted in such cases that the animal shall be killed if pain result. In 316 cases the animal was anæsthetised during the operation, but was allowed to recover, care being taken to ensure the painless healing of the wounds by antiseptic dressings. The inspector states that in his visits to the various licensed places he has never seen a single animal which appeared to be in bodily pain. "As regards the nature of the experiments, 765 were physiological, 976 were pathological, and 361 were therapeutical or pharmacological. ..... In the domain of pathology investigations have been made concerning tuberculosis, cancer, diphtheria, pneumonia, tetanus, acute necrosis, malaria, lead poisoning, rabies, dis-

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temper, grouse disease, anthrax, 'black quarter,' 'pink eye,' &c. In the department of physiology the questions of animal heat, circulation, respiration, secretion, and the action of the central nervous system have been investigated; while among the therapeutical questions which have been here examined are the action of chloroform, morphia, nicotine, salicylic acid, strophanthus, and many other bodies which are new or less widely known, together with investigations into the protective and other powers of bacteria and ferments." Dr. Poore refers to his appointment in the spring of 1890 to succeed Professor Erichsen in the office of inspector, and the appointment in August of Dr. J. A. Russell of Edinburgh as assistant inspector. Dr. Thornley Stoker furnishes the report for Ireland, where three persons hold licences, and they performed seventy-eight experiments, of which fifty-nine were physiological and nineteen therapeutic.

FINES UNDER THE APOTHECARIES ACT.

THE Apothecaries Act still does good service, if somewhat fitful, in promoting the prosecution and punishment of those who presume to prescribe medicines contrary to the Apothecaries Act. John T. Jackson, of Beaucroft-road, Castleford, and H. J. Horner, of Welbeck-street, Castleford, according to the *Yorkshire Post's* report of the case in the Pontefract County Court, had prescribed for a deputy lodging-house keeper, diagnosing his ailment to be Russian influenza. Mr. Ward appeared for the Apothecaries' Company. The offence was admitted. His Honour said he had no power to mitigate the fine, and gave a judgment of £20 and costs.

THE MEDICO-MILITARY HISTORY OF JAMAICA.

WE doubt whether any more striking illustration of what can be effected by the application of sanitary principles could be adduced than that which Brigade-Surgeon S. E. Maunsell has set forth in a late contribution of a very elaborate kind to the medico-military history of Jamaica. Time was when the amount of sickness and mortality among the European troops was so excessive as to seem almost incredible. Contrasted with the present state of things it is difficult to realise that the stations in the island, as they are now known to us, could have been the scenes year after year of such high rates of sickness and mortality. What was ignorantly attributed to climate—such as severe fevers and other zymotic diseases—was in reality due to neglect, not of one, but of all of those laws which are now recognised as indispensable to health, especially in hot climates. The barracks were bad in construction, foul, dirty, unventilated, and overcrowded to an extent calculated to raise the eyebrows of astonishment, as the Germans say. The night soil was collected in large open cesspits, which were seldom emptied; there was no accommodation provided for the troops in the hills, the clothing was quite unsuitable for the climate, no attention was given to the water-supply, and the food was bad and mainly consisted of salt rations. Where there was a complete disregard arising out of total ignorance of the laws of life, it is needless to add that there was a neglect of all personal hygiene, and intemperate habits were the rule instead of the exception. Much of the intemperance was no doubt attributable to the poisoned atmosphere in which the men lived, the fear engendered by the great sickness and mortality, and the *ennui* of their lives. Brigade-Surgeon Maunsell, who has looked as far back as the records of 1655, says that sometimes our countrymen died at an average rate of 140 a week, and that, in some years later, out of 800 who arrived two-thirds died in a fortnight. From 1817 to 1836 the statistics show that every man in the force was twice in hospital annually; that 121 out of every 1000 died annually; that of these deaths no less than 101·9 were caused by fever, and 20 from other causes. It is stated that in Tobago, where the barracks were the best in the whole command, the men had only 250 cubic feet per man; that they slept in hammocks packed as closely as possible; and that each man had a space of only 22–23 inches in breadth, whereas now the European troops get 800 cubic and 75 superficial feet per man at Newcastle, while at Port Royal they get 1000 cubic feet and 80 superficial feet per man. We have not the space to allude to the succession of epidemics which have visited Jamaica and the West India commands since our occupation of these stations. Yellow fever and fevers generally, cholera, and dysentery were the chief diseases. The medical history of our troops in the West Indies, is it not written in the printed reports of the late Deputy Inspector-General Marshall and Captain Tulloch, and in those of the late Surgeon-General Balfour? During the twenty years before 1836 the fever mortality averaged, as we have said, 101·9 per 1000; during the ten years ending 1889 the mortality from all causes was only 11·36 per 1000, and for fevers 4·39 per 1000 in Jamaica; and in 1889 it was 8 per 1000, and for fevers *nil*. Brigade-Surgeon Maunsell may well say that these results teach in unmistakable language how largely the fate of man is in his own hands. The very class of diseases which were formerly so fatal and occasioned the highest rate of mortality, both absolute and relative, is that which seems most dependent upon removable conditions and habits.

A NEW NURSING SCHEME.

THE committee of the Queen's Hospital, Birmingham, are about to inaugurate a department for the training and supply of nurses which, if successful, will open a fresh field for enterprise to the existing hospital system. It is proposed—and the sanction of the governors has just been obtained to the proposal—to establish an external nursing department, the training being given in the hospital to probationers during the first two years. At the end of this period they will be entitled to a certificate stating the bearer to be fully versed in the ordinary practice of the nurses' art. When this is obtained, such of them as remain, and are willing, will continue under the management of a separate committee, and act as staff nurses, or will be sent out as private nurses at fixed charges, according to experience and requirements, the surplus being added to the funds of the hospital. By this means it is hoped that better nurses will be obtained for the hospital, more employment will be found for the nurses themselves, and more popularity accrue to the hospital from a public point of view. The demand for nurses having outgrown the supply from present sources, the committee look forward with confidence to the movement being successful. As an insurance against possible failure, a guarantee fund amounting to £500 has been raised, and it now remains for the experiment to be brought into working form, and for the test of time as to the result.

THE FLORENTINE "GUARDIA MEDICO-CHIRURGICA."

THE time-honoured brotherhood of the Misericordia is not the only medical charity of Tuscany or its capital. The institution known as the "Medico-Chirurgical Guards," to which we drew attention at its initiation some months ago, is another example which Florence sets to her Italian sisters. Its object, it will be remembered, is, by day and night, to render surgical, obstetrical, and medical aid to those of the less favoured classes who are too poor to pay a professional fee. It has its headquarters and its outposts where consultations are given, operations performed, and medicines dispensed, on every application—these services being rendered gratuitously by able and skilled

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practitioners, assisted by advanced students, who mount guard at headquarters or outpost by turns, relieving each other from time to time in awaiting calls or responding to them. The Commendatore Egisto Fabri, a munificent promoter and subsidiser of medical study in Florence, supplied the funds, the accommodation, and the materials necessary for the start, and after seven months of life the institution has rendered an account of itself in a *Bollettino* just issued. The editors, Drs. Bacci, Signorini, and Roster, after an introduction setting forth the constitution and regulations of the "Guardia," give a detailed narrative of the visits paid at the houses of the patients, and of the maladies or lesions taken in hand, of the surgical operations performed, and of the consultations held at headquarters. From May 20th to Dec. 31st, 1890, the assistance rendered at patients' houses included 325 cases; that in the headquarters and outposts, 131; while the consultations amounted to 1397. In medicine proper the consultations numbered 161; in surgery, 132; in ophthalmic diseases, 531; in gynæcology and midwifery, 118; in neuropathology, 41; in electrotherapy, 23; in syphilis, 61; in dermopathy, 23; in aural disease, 122; and in pædiatry, 78. As for the medical or surgical service vouchsafed at the patients' homes, or on the premises of the "Guardia," the *Bollettino* says: "During the months of May, June, &c., up to December, we attended, in response to appeals *di urgenza*, 466 patients—310 males and 156 females,—136 being received at our premises, and there cured or relieved; while in 305 cases we repaired to the remoter quarters of the city, conveying all the apparatus, medicaments and comforts most urgently required—not only so, but in 25 cases we extended our journey beyond the city walls, especially where the absence of medical practitioners during the night is most keenly felt." This is a most gratifying result, and the first campaign of the "Guardia," and there is every prospect of a still more gratifying "report of progress" in the current year. Comparing the first four months of 1891 with the last of 1890, the records of the "Guardia" show an increase of 138 in the consultations, while the medical or surgical assistance rendered at headquarters was augmented by 84, and that rendered at the patients' homes by 112. So sensible are the Florentines of the blessing conferred on their city by this noble army of medical volunteers, that private munificence now goes hand-in-hand with municipal largess in promoting by every means—by money or gifts in kind—the efficiency of the institution.

LITERATURE FOR THE BLIND.

MUCH has been done in recent years to ameliorate the condition of the blind, and in no respect, perhaps, does the problem of their education better or more easily yield to solution than in that of teaching them to read by means of raised characters. But although the means of bringing literature within their reach have long been available, the bulk and cost of books intended for their use have greatly militated against their production in large numbers, and have in point of fact kept down the library of the blind to a comparatively small number of volumes. To supply in some measure this defect a monthly magazine has been produced under the title of *Santa Lucia* since March, 1889, which is printed in Braille type, and deals in magazine fashion with current topics. The magazine is, as we understand, produced by the domestic industry of some ladies at Richmond, and supported by the literary contributions of a very competent staff of writers, who for the most part give their work free of charge. Thus written and printed, it comes upon the market at a minimum of cost, and is sold at two shillings a copy—a price which should ensure its wide circulation, and enable many to whom the ordinary means of reading are denied to find amusement and instruction in its pages. To those of our readers who are interested in the blind and their relief we commend this kindly and useful enterprise as a matter well worthy of support. The magazine is published by the Misses Hodgkin, of Childwall, Richmond-on-Thames.

DAMP BEDS.

THE mischief wrought by damp beds unfortunately does not usually react upon its heedless originators. The sole sufferer is the luckless occupant, who, forgetful of the buyer's *caveat* and all that it implies, buries himself within the chill of the half-dried bedclothes. In a recent instance, in which the law was appealed to, the tables were turned. The plaintiff, who, with his family, had for several days occupied a room in a seaside restaurant, was then told that the apartment was let, and he must accept another. Here the trouble began. Illness, with its expenses, followed, and the final cost incurred in consequence by his too unceremonious host amounted to £150. An action so unusual and a verdict so consonant with sanitary principles deserve to be kept in remembrance. It is to be hoped that their obvious teaching will not be forgotten by any who live by housing their fellow men. As regards the latter, however, the maxim which inculcates prevention is still the best. Not even a money fine will always atone for the injury done by avoidable illness. *Caveat emptor*, therefore, notwithstanding. Let the traveller, however weary and inclined to sleep, first be careful that his bed is dry. In any case of doubt the use of an efficient warming-pan, or, if needful, even a change of bedding, should be insisted on, and the further precaution of sleeping between blankets rather than sheets is in such cases only rational.

HOSPITAL STATISTICS.

THE letter from Mr. C. Knox Bond, which appears to-day in our correspondence columns, relates to a matter which stands probably much in need of discussion. He points out that the mortality of hospitals is, as matters stand, recorded with much diversity in the methods adopted at various institutions for dealing with the facts. The method which our correspondent favours is that of ascertaining the mortality as a percentage upon the mean number of cases under treatment. Thus, if more cases are admitted during a given year than pass out by discharge and death, taken together, so that the number remaining in hospital under treatment is greater at the end of the year than at its beginning, he includes in his figures only one-half of the added number in his total; and, similarly, if the number of patients has been reduced during the year, he corrects his total by deducting from it a number equal to one-half of the number so lost. Now, for the purpose of producing a serial record, this method has great and manifest advantages. It produces no doubt a slight error in the percentage of every several year, unless it happens that the admissions have been exactly equal in number to the exits; in which case there would, of course, be no adjustment of the figures. In any other case—that is to say, if the number remaining in hospital at the end of the year is either greater or less than the number remaining over at its commencement from the preceding year, the correction produces, as we say, a slight error in the resulting figures, because the mean number assumed in the calculation is not the number actually coming under treatment. But these errors are not cumulative. On the contrary, the same conditions which cause the error to be an error in excess in one year will cause it to be an error in deficit in the next year; and therefore when a series of years is taken the errors tend to cancel one another, and rectify the record.

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The percentages may all be wrong, but their average will be right. This merit is, however, purchased at the cost of detailed accuracy, since any given year is, as we have pointed out, caused by this method to yield a more or less inexact result. But, on the other hand, a special difficulty besets the attempt to deal rigorously with the figures of a particular year; because, although the figures may lend themselves to rigorous treatment, the facts will not. It is, for instance, easy to say that cases remaining under treatment from a previous year shall be treated as admissions. But they are not admissions in point of fact, and they comprise, and necessarily, a certain proportion of convalescent cases which would not be proper subjects for admission. Again, the cases remaining to the next year cannot properly be distributed under the heads of discharged and dead, nor can they properly be passed without distribution into either of these classes. It is plain, therefore, that an accurate statement of mortality can only be arrived at by shutting out both these groups of patients and confining the examination to those cases which began and ended their stay in hospital within the year. Mortality percentages founded upon such a treatment of the materials, though irreproachably accurate so far as they went, would obviously leave a part, and in some cases a large part, of the hospital work wholly untouched; and they would therefore present a view of the whole as inadequate as the other was incorrect. The truth seems to be that no possible way of exhibiting hospital statistics is equally suited to every purpose for which such records are compiled and consulted. The method recommended by our correspondent is probably as generally useful as any that can be suggested, but we incline to think that the more excellent way is to keep it exclusively for the compilation of figures intended to represent the work of considerable periods of time, and to adopt for the examination of the statistics of single years some more rigorous method, even though the more rigorous method deals only with a part of the available materials.

CALCUTTA SANITATION.

MR. BALDWIN LATHAM has submitted a very important and exhaustive report on the drainage system of Calcutta to the chairman of the Corporation of that city. It would be impossible, within the limits of space at our disposal, to touch on all the points discussed by Mr. Baldwin Latham. While he recognises that the sewerage works are kept in as good a state as could be expected, he says these works are placed under a disability owing to defects in their original design. Mr. Baldwin Latham was particularly struck with what he himself observed as to the number of men engaged in removing deposit from the sewers, and with the facts he gleaned from the engineer's annual report. These demonstrate that the sewers of Calcutta at the present time are not self-cleansing, and that solids have to be collected and removed from the sewers which should either be carried off by the ordinary flushing arrangements or should never have been permitted to enter the sewers. The present pumping machinery is barely sufficient to deal with the dry weather flow of the sewage, and quite inadequate to deal with storm or the present flush water. All the inverts of the sewers of varying characters at the point of juncture have been made level or nearly level, so that when the sewage ceases to run parallel with the invert of the sewer the velocity and discharge of the sewers are greatly retarded. This error in design was pointed out to the Calcutta authorities at the time the drainage was about to be constructed. With reference to the large sewers of Calcutta, Mr. Baldwin Latham is of opinion that they can best be treated by a system of sectional flushing; or a series of flushing gates should be introduced into them, and the flush water and sewage dammed up, the gates being then opened from below upwards in regular succession. The minor sewers require additional flushing power. Flushing tanks should be constructed at the head of every sewer and at such other points as experience indicates. Mr. Baldwin Latham, in his report, deals with the surface drainage, the disposal of storm water, the construction of additional sewers, the remodelling of the present pumping station and provision of additional machinery in connexion with the introduction of drainage works into the amalgamated area, and the inclusion of certain districts around Calcutta in the system of water and sewerage arrangements provided for the city. He concludes by a reference to the health statistics of Calcutta and to the carefully prepared and exhaustive reports of Dr. Simpson, from which it appears that while enormous benefit to health has accrued from the supply of good water to the city, but little improvement seems to have followed the construction of the works of sewerage. After inspecting these works, Mr. Baldwin Latham declares that he should have been surprised if any sanitary advantage could have arisen from them; but he is as emphatically of opinion that with a proper system of drainage in Calcutta, and with the remedy of the defects he has pointed out, as good results to health would be obtained in Calcutta as have followed in any other town that has been efficiently drained.

THE SALE OF POISONS BY UNQUALIFIED PERSONS.

THE crusade against the employment of unqualified assistants by the so-called drug companies is to be credited with a decisive victory. At the instance of the Council of the Pharmaceutical Society of Great Britain four unqualified assistants have been sued to recover penalties incurred by selling laudanum, contrary to the provisions of the Pharmacy Act, 1868. This Act provides for a fixed penalty of £5 for every such offence, and it was not disputed that the defendants, though unqualified persons, had sold poisons on various dates. An appeal for mercy was not entertained, the judge holding that the employers ought to pay the penalties, since it was clearly, by the requirements of the Pharmacy Act, intended to safeguard the public against the employment of "cheap servants." The penalties, for which judgment was given, amounted in all to £40, with costs. It was explained, in the course of the proceedings, that the drug companies employed a properly qualified chemist to manage the shop, but that when the sales were made the qualified manager was unfortunately away. A few such prosecutions and judgments ought to do much to diminish the dangers of drug stores, and to check the employment of the unqualified assistant.

THE ARTIFICIAL PRODUCTION OF DENTAL CARIES.

FOR the past year Mr. Sewill, following other experimenters in the same field, has been endeavouring to produce caries in extracted teeth; and certainly the microscopical appearances presented by the sections shown at the Odontological Society differed but little from those of natural caries. He found that the best mixture of organic substances for the purpose was one part of bread to eight of saliva. Meat with saliva remained alkaline, and if a small quantity of acid were added became again rapidly alkaline. Albumen, whether as white of egg or other forms, acted in the same way. Saliva and starch produced little acid, which was soon exhausted. The teeth were immersed in the mixture in glass-stoppered bottles, and kept at a temperature of about 35° to 37° C. The bottles were unstoppered about once a day for examination; this, of course, admitted air, and if the mixture became putrid, it at once showed

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an alkaline reaction, in which case the teeth were taken out, well washed, and the mixture renewed. The mixture became rapidly acid, and remained so (unless putrefaction to a large degree supervened) for from three to five weeks. The acids present were acetic and lactic; of the former 5 per cent. and of the latter 0·5 per cent. were found after three weeks. The effects upon the tissues were precisely the same, both macroscopical and microscopical, as in natural caries. As in natural caries, the decay was found to commence most readily in places where there was ill-formed enamel or flaws or fissures which allowed access to the dentine, in which tissue the caries progressed more rapidly than in enamel. Cementum resisted longer than enamel, but at length yielded, and allowed the dentine beneath to be invaded. Discolouration was often present, and it was found that carious dentine readily took up stains from such substances as are often admitted to the mouth in medicines or articles of food. Microscopically the translucent zone is well shown, also the "pipe-stems" appearance in transverse sections, and the dentinal tubes are filled with micro-organisms, just as in natural caries. The conclusions that Mr. Sewill draws from these experiments, and from the facts that caries takes place in natural teeth which are used as artificial substitutes, are, that caries is entirely due to external agents, and that vital action in no way modifies the disease.

THE LONDON POLICE-COURT MISSION.

IF words must be used to commend the purpose and the practice carried on by such agencies as the London Police-court Mission, they need not be many. A brief recital of the work accomplished by this Association—a branch, be it known, of the Church of England Temperance Society—ought to satisfy all candid persons that its claims to their support are based on no mere sentimentalism, but on grounds of solid principle and on evidence of past success. That work is manifold in its applications. It is at all times a work of rescue and prevention, and we may add of education also, since, by ever holding open a door of hope, it teaches the outcast and criminal the possibility, the duty, and advantage of healthy moral life. Its agents meet the time-expired men on their exit from prison, find them work, and help them to reform. The Mission rescues boys in like manner, if possible before conviction and imprisonment have begun their hardening work—a point the importance of which can hardly be over-estimated. It provides occupation and sometimes a home for these and for outcast women; it encourages the spirit of self help, and in every possible way seeks to arrest and to cure the moral ravages of vice and of crime. Not the least useful of its efforts is that illustrated in its "cottage system" of treating habitual inebriates, a method of which the remedial value is already generally admitted. These few details will suffice to indicate the scope of an undertaking which is described with far more interesting fulness in the annual report just published by the Society, but which, as we have already said, need only be sketched in outline in order to exhibit its justly close relation to what is best in public charity.

DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

BEFORE the last Session of the General Medical Council passes from memory, and before the turmoil of new elections occurs, there is a short breathing-space in which it is convenient to review the position and work of the direct representatives. It cannot be said that their labours have been always warmly welcomed by those with whom they have been associated; still, it has been gratifying to note that they have not allowed themselves to be overawed or silenced by their new surroundings, or even by an occasional reminder of their inexperience, a factor which has less weight with every successive session of the General Medical Council. The direct representatives appear to have felt called upon to justify their existence, and although their recommendations have not invariably met with the cordial approval of their colleagues, it has been impossible not to trace the influence of a new element in the course of the debates. That their work has been largely appreciated by the profession is shown by the following resolution which was adopted at the annual meeting of the South-eastern Branch of the British Medical Association on the 10th inst.: "That this meeting desires to record its unqualified approval of the conduct of the elected representatives on the General Medical Council during their term of office, and its high appreciation of the valuable services which they have rendered to the profession. It begs to offer them very grateful thanks and the assurance of cordial support at the ensuing election in November." It is to be hoped that this feeling of satisfaction is general, and that no mere desire for change will interfere with the work that has been so well commenced. By re-election of the present representatives their position will be strengthened. Well-directed experience is of greater value sometimes than new blood.

THE SANITARY STATE OF SHETLAND.

THE action recently taken by the County Council for the area in which Shetland is included seems to be the first intimation of the existence of a sanitary law or of public health administration which has been received by the crofters inhabiting that portion of Great Britian; and it is stated, in consequence, to have created no little commotion. But the need for bringing public health regulations to bear upon this community is abundantly shown by the details published as to the existing state of things. Calves, sheep, or pigs were found occupying the dwelling houses in twenty cases in the parish of North Mavine; communication direct or indirect often existed between the dwelling house and the byre; manure was found heaped up against the walls; and the burial ground of Hillswick was densely packed with human bodies, only twelve to twenty-four inches of soil covering the coffin-lids. Few things tend more to the degradation of a people than to live under such circumstances of filth and sanitary neglect, and it is to be hoped for the sake of at least the next generation of Shetlanders that the action of the County Council will soon turn such discoveries as have been made into matters of past history.

RELAPSE AFTER OPERATIONS FOR THE RADICAL CURE OF HERNIA.

DR. WILLIAM T. BULL of New York has published in the *New York Medical Journal* of May 30th a paper he read at a recent meeting of the New York Surgical Society. The material for the paper was collected at the Hospital for Ruptured and Crippled during the past three years, and it threw light upon the frequency with which relapses of hernia occur after operations for so-called radical cure. The total number of cases of relapse observed was 119, and in seventy-three, details of the method of operation employed were obtained. The result of this inquiry shows that relapse occurred after all the recognised modern operations. It is especially worthy of note that in some cases the relapse did not occur for more than two years, in one case not until three years and four months after the operation. It is clear therefore that no case must be spoken of as a "cure" that is not free from any sign of relapse at least five years after operation, and certainly for this length of time a light, well-fitting truss ought to be worn. Dr. Bull's figures lend no support to the view that a scar obtained after suppuration and granu-

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lation is stronger than that arising from primary healing of the wound, and he is firmly persuaded that primary union of the wound should always be aimed at. These statistics seem to fully justify Dr. Bull in urging surgeons not to speak of radical "cure" of hernia, and to concentrate their attention upon guarding their patients against relapse rather than upon a brilliant primary result. It is only right to add that in all the cases in which a truss had been worn after the operation, the patient's condition was decidedly better than before operation, which could not, therefore, be looked upon as wholly useless.

THE INSTRUCTION OF DEAF-MUTES.

AFTER a somewhat chequered history the development of the oral system of instructing deaf-mutes in the use of language has achieved that general recognition to which, as a scientific method, it is fully entitled. Its progress in this country, though recent and by no means so marked as in some foreign countries—notably, in Germany, Switzerland, and Italy—has not been insignificant. In the metropolis it has decidedly taken root, and occupies the field of education unopposed. Among other proofs of its vitality we may mention the existence of the Association for the Instruction of the Deaf and Dumb, the report of whose proceedings for 1891 now lies before us. Founded in 1871, under the auspices of the Baroness Meyer de Rothschild, and with the active co-operation of Sir William Dalby, Dr. Dasent, and others, the Association has proved its earnestness of purpose by its increasing literary activity, and by the still more practical efforts of which its Normal School is the result. According to the report already mentioned, thirty-six boys and fourteen girls have during the year attended the school, while seven teachers have received instruction there during the same period. The committee of the Association observe with satisfaction the growing ascendency of the purely oral system in this country, and they appeal for public aid in promoting the objects of the Association, which include, first, the establishment of the oral method; and secondly, as a means to this end, the formation and maintenance of a training college and school at present represented by the institution in Fitzroy-square. In view of the importance of these objects it is needless for us to further commend the work of this deserving society.

THE HOWARD SOCIETY'S WORK.

A BRIEF summary which has just been published reminds us of the valuable service rendered to that union of all duties which we call morality by the Howard Association. It is hardly needful that we should relate afresh these proofs of its fidelity to a great example. It has deserved well of the Legislature, the executive, the press, and the public. Its energy and vigilance have been powerfully exerted in the cause of order and the repression of crime, and have acted as a useful check upon possible abuses in prison management. Its literary efforts have been equal to its more practical activity, and, grounded as they are in the findings of experience, entitle its utterances in reference to preventive reforms to an attentive hearing. Not the least important among its productions is one by Mr. W. Tallack, "Penological and Preventive Principles," which compares the reformative methods known in this country with some of those pursued in America, notably that of Elmira. We will not say that the sweeping condemnation bestowed upon this latter system should be unreservedly approved, though it presents us, as its English critic says, with a rather luxurious aspect of criminal detention. Release on parole after one or two years of good conduct, industrial work, and school training, even in cases of aggravated crime, appears in our ideas a result somewhat too easily earned. At the same time we are pleased to recognise as its guiding principle the conviction that crime, like disease, can be extirpated, so that the criminal may be expected to return to the ranks of the morally sound. The means employed is also similar—namely, encouragement of the *vis medicatrix naturæ*, which is in this case the intelligent will-power.

THE PHYSIOLOGICAL ACTION OF KOLA NUT.

DR. KOTLIAR, wishing to elucidate the action of kola nut, which, as is well known, has been recommended for increasing the power of the body to undergo a severe strain of work, has made a series of observations in Professor Manassein's clinic in St. Petersburg on the alteration of the chemical processes of the body when under the action of the drug. The observations were made on seven healthy young men, each being observed for two consecutive periods of five days. In some the drug was given during the first period, and the subject was kept at rest from work. In others the subjects worked hard, and the drug was given during the second period. The quantity of powdered kola nut taken per diem was a drachm. From careful analyses of the food and excreta it was found that under conditions both of rest and work kola increased the assimilation of phosphorus and sulphur. That of chlorine was increased during rest, but was not altered by kola under conditions of work. The metamorphosis of chlorine was diminished by kola both under conditions of rest and work, especially in the latter case. The metamorphosis of phosphorus was diminished both at rest and at work, but more especially during rest. The same may be said of sulphur. Finally, the breaking up of phosphorus and sulphur compounds both during rest and work, as compared with that of nitrogenous compounds, was diminished. The paper referred to is published in the *Vrach*, No. 19, 1891.

THE BACILLUS OF LEPROSY.

A TELEGRAM from Simla, dated June 12th, contains an important announcement, which points to a distinct advance in the bacteriology of leprosy, due to the researches of the members of the Leprosy Commission. It is to the effect that Drs. Rake and Buckmaster have succeeded in cultivating the leprosy bacillus in serum. They were assisted in their researches by Surgeon-Major Thomson.

MONKEY TALK.

A STORY has reached us from the other side of the Atlantic that the phonograph has been applied in order to unravel the secrets of monkey talk. Herein, if the story be true, lies a curious study for our psychological brethren, and a new experimental series of research. The experiments hitherto accomplished are elementary, but if sustained are of singular import. The phonograph is brought to bear on the monkey, which is led to utter sounds in its own *patois*, within the recording range of the merciless instrument. Its speech is in this manner taken down phonetically, and is then recited, *totidem verbis*, to other monkeys that have not been present at the time when the recording instrument was at its duty. According to the character of the speech so the effect. If the observations be of a violent and threatening kind, the monkey listener is seized with sudden fear and flies from the place to seek safety or protection. If the conversation be of an appetising character, the listener responds by indicating his desire for food. These and sundry other manifestations of intelligent intercommunication by monkey linguistic skill are reported, and soon we are promised a complete literature of this next but one, and he a missing link, to man. Do not let our readers suppose that we are dealing too lightly with

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this subject. The question whether lower animals have a speaking language has occupied the attention of man for ages. The Koran describes King Solomon as listening to, learning, and interpreting the language of ants; and it may be that language of different kinds passes between animals for expressing different wants and indications of danger. "Animals have a voice, men speak" has, up to this day, been the common belief. Now, for the first time, we have a means of discovering whether the voice of the animal is or is not a definite, however elementary, form of speech. Do monkeys, for instance, talk intelligibly? All do not, we know, but do some?

UNIFORM HOSPITAL ACCOUNTS.

THE accountant of Guy's Hospital has attended before the Lords' Committee upon Metropolitan Hospitals, and explained the error in the published accounts of that institution for the past year. It appears that the error in question was not passed by the auditor, having crept in during the printing operation, and after the passing and signing of the revised proof. It is a little strange that after the passing of the proof *without correction*—and we understand this to have been intended by Mr. Williams's evidence—anybody should have been suffered to meddle with the type; but that is an affair of the printer's office, with which obviously the hospital authorities and the auditor have nothing to do. We are glad to be able to record so satisfactory an explanation of an error which while unexplained gave strong colour to the suspicion that there was laxity not only in the printer's, but probably also in the accountant's office.

THE PUBLIC HEALTH OF ITALY.

THE Consiglia Superiore di Sanità at its recent sittings had a quite satisfactory account to give of the health of Italy during the February, March, April, and May, of 1891 as compared with that of the corresponding four months in previous years. Measles, indeed, and influenza, were more than usually prevalent, but all the other infective diseases marked a notable decrease. This was eminently the case with small-pox—the decline of which is steady and progressive in proportion as vaccination and revaccination cover an ever-increasing area of the population, aided by the vigilantly regulated supply of the purest lymph secured by the "Istituto Vaccigeno dello Stato," or State Institute for the Provision of Vaccine. Among the causes of the improved health conditions of the peninsula, the Council make mention of the skill and energy of that provincial medical service; the care bestowed by the communal and municipal authorities on the water-supply, whether as to quality or quantity; and the surveillance exercised over the dispensaries, fixed or migratory (*ambulatori*), which are attached to the local pharmacies. To bring the practice of these dispensaries under the sanitary law of the country has long been a most desirable innovation, and, now that it is *un fait accompli*, the results already attained are such as to give gratifying earnest of the good effects it has yet in store. In a few years such panics as a cholera explosion too often produces in the provinces, or even in urban centres of which better things might have been expected, will no longer paralyse the medical staff, and, by turning the populace against their natural protectors, assist the spread of the malady.

PATHOLOGY OF TRIGEMINAL NEURALGIA.

THE pathology of trigeminal neuralgia may be regarded as one of the unsettled questions in medicine; for whereas some look upon it as a central nervous change, and adduce specimens to support their contention, others regard it as consisting essentially in a peripheral change. Dr. C. L. Dana, in a recent contribution to the subject, has expressed the opinion that the condition is the result of an obliterating arteritis of the nutrient vessels of the nerves. His reasons for this view are that the disease occurs at a time of life when degenerative changes begin in the arteries, and that it follows a certain fixed vascular distribution. He also states that he has examined the superior maxillary nerves removed in typical cases of tic-douloureux, and in none of them did he find any noteworthy change in the nerves, whereas in three of them there was striking evidence of vascular disease of the character referred to, while in the other two cases no bloodvessel was present in the specimens examined. Therapeutic experience he also regards as favouring this view, and he points especially to the effect of aconite, which lowers tension in this condition, and also to the occasional immediate relief afforded by nitro-glycerine. As removal of the peripheral nerve sometimes undoubtedly effects a cure, Dr. Dana concludes that the disease is peripheral and the result of some local peripheral irritation, and he mentions recent researches by MM. Quenan and Lepars which indicate the existence of a closer and more extensive relationship between the nerve trunks and bloodvessels than has hitherto been supposed, and in which they suggest the possible dependence in some cases of neuralgia upon vascular changes.

THE CAVENDISH LECTURE.

WE doubt very much whether the *rationale* of the purgative and diuretic treatment, that has formed so large a part of medical prescription from the earliest times, has ever been so lucidly and happily expounded as it is by Dr. Lauder Brunton in the lecture we publish to-day. He brings home to us by the use of the simplest of analogies the meaning of accumulation of effete material within the system, and the importance of attention being paid to its efficient elimination. There is wide scope for the investigation of the various disordered states of the economy that may be traceable to defects in the due performance of this important function; and it is well to have a broad and comprehensive view of what is entailed by its failure. The homely style of Dr. Brunton's address, and the practical details with which it abounds, are balanced by the vein of scientific reasoning that pervades it all, thus illustrating the truths that knowledge illumines even the smallest matters, and that the practical and the scientific in medicine are indissolubly bound up together.

REPLACEMENT OF BONE AFTER TREPHINING.

DR. WEIR, in relating in a recent number of the *New York Medical Journal* some particulars of a patient suffering from traumatic epilepsy, and on whom he had operated, takes the opportunity of giving his experience with regard to the replacement of bone after trephining. At the first operation trephining was performed over the frontal region, where there was a marked bony depression and the inner table was found driven in angularly. A great improvement followed, and then the patient was lost sight of, but returned in 1887 with a relapse in his fits and a condition of mania, with severe pain over the forehead. On operating a second time, three 1 in. trephine holes were made, and the opening further enlarged with bone forceps. Some pus was found in the frontal sinus, but the brain and membranes were healthy. The three discs of bone were returned, having been kept in a warm antiseptic cloth, and the interstices filled up as far as possible with the chips. Everything healed up without any trouble, and the fits were much reduced in number. The patient recently returned to hospital on account of a burn, and thus afforded an opportunity of seeing the result of the replacement of bone four years after it had been done. It

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was found that the whole bony surface was somewhat sunken, but no irregularities could be felt, and the author has no doubt that all the rough places are soon made smooth, and that there is nothing to fear, as he was inclined to do, from irritation by the fragments of the underlying cortex. At one point in the depressed bone a slight pulsation was visible, due, Dr. Weir thinks, to partial absorption of the bone, and he mentions a similar condition occurring in a case in which he removed a sarcoma from the brain, afterwards replacing the bone, which formed a firm solid plug. Recurrence of the growth took place, and about two years and a half after the original operation pulsation appeared over the trephine opening, the reimplanted bone was pushed up, and gradually disappeared entirely. The fate of such pieces of bone is a very important point in cerebral surgery, and the greater the experience becomes the greater seems the boldness with which they are dealt, a boldness which is apparently justified by the good results which are obtained.

LONDON WATER-SUPPLY INQUIRY.

THE committee of the House of Commons which is dealing with the London Water Bills has found that the time at its disposal is insufficient for the consideration of such questions as the quality and quantity of water supplied from the existing sources, and has declined to receive evidence on these points. Under these circumstances the inquiry is practically limited to the question of constitution of the authority which will eventually own the London water-supplies, and which will, therefore, we presume, be the purchaser of the water companies' undertakings. We do not anticipate that the committee will hesitate to accept the proposals made by the London County Council and the Corporation of the City—viz, that the water authority should consist of a statutory committee of the Council, to which the Corporation would contribute a proportion of members; and further, that the authorities beyond the limits of the London County will themselves undertake all the arrangements in their own districts.

SMALL-POX IN LONDON.

FOR some time small-pox has shown a tendency to spread in London, and cases have occurred in a number of districts, particularly in Rotherhithe, Deptford, and Bethnal-green. During the last two or three weeks the number of fresh cases has diminished, and it may be expected that the disease will disappear during the summer months. This is the usual behaviour of small-pox, and it is safe to predict that this year will not be exceptional. At a meeting of the Metropolitan Asylums Board held last Saturday, Mr. Scovell, chairman of the Ambulance Committee, it is reported, "contended that the metropolis had been saved from an epidemic of small-pox only by the care of the Board and its officers, and suggested that no thanks were due to the local authorities that the disease had not spread." We do not know on what grounds this statement was made, but it affords further reason for hoping that the Public Health (London) Bill will become law during the present session. There is no subject to which the London County Council could more usefully devote its attention than the prevention of epidemic disease. A recent experience demonstrated the advantages to London of the coöperation of the Council with the district authorities in the suppression of an outbreak of typhus fever. In regard to small-pox, the Council some months ago urged upon sanitary authorities the desirability of prompt information being given to the vaccination officer concerning all cases of small-pox which become known to the medical officer of health through the Notification of Infectious Diseases Act. If Mr. Ritchie's Bill should pass, the London County Council's administration would be brought definitely into relation with this subject matter, and the Council would no doubt by watchfulness over epidemic disease-prevalence in the metropolis be able to render useful services in ensuring that all needful precautions were taken. We hope Mr. Scovell has less foundation for his observations than he appears to think, but we none the less hope that the London County Council's hands will be strengthened without delay.

BACTERIOLOGY OF GLANDERS.

DR. FINGER of Vienna has investigated the subject of immunity, selecting the bacillus of glanders as being a microbe whose properties have as yet been very little studied. After a long series of researches he has arrived at the following conclusions[1]:—1. Successive local injections of the bacilli of glanders into animals susceptible to the poison produce with each injection symptoms of gradually diminishing virulence—that is to say, the first injection only produces the typical nodules, the later ones causing an abortive type of the disease. 2. The constitutional symptoms of glanders after intravenous injection of virulent cultures produces an incomplete local immunity, and an abortive course after subsequent local injections. 3. Intravenous injection of virulent cultures quickly causes death in some animals—sometimes in a few hours; in such cases post-mortem examination fails to discover any local manifestation of the disease. 4. Intravenous injection of a sterilised culture of the bacilli of glanders produces in rabbits an immunity against the infection from pure cultures which lasts from three to six weeks. Local manifestations, however, occasionally appear, these being of an incomplete nature and not followed by any constitutional symptoms. At the end of the above-named period, however, the injections are followed by a typical and rapidly fatal disease. 5. Rabbits which have survived an ordinary attack of the disease enjoy afterwards complete immunity. Repeated local injections simply produce a transitory local affection, constitutional symptoms never following. 6. This immunity does not appear to be able to be transferred to the offspring—that is to say, does not become hereditary. 7. The injection of sterilised cultures of the bacilli or of their chemical products produces poisonous effects, generally mild in character, but sometimes so severe as to kill the animal. Post-mortem examination reveals the same lesions as are seen in the primary disease, localised mainly in the portal system. 8. Injections of sterilised cultures produce an immunity, though not always complete, against intravenous injection of virulent cultures. 9. If sterilised and virulent cultures are injected at the same time, the disease produced is exceedingly rapid and fatal. 10. The bacilli when introduced into the tissues of susceptible animals exhibit great activity, multiplying rapidly, growing into long threads, and apparently defying the action of the phagocytes. 11. In the tissue of non-susceptible animals, such as white mice, the bacilli show no signs of activity; they rapidly die and disappear. There seems, however, to be no intervention of leucocytes. 12. In rabbits which have been rendered artificially proof against the poison the bacilli seem to take longer in disappearing. There is rapid collection of leucocytes, with some exudation. 13. The rapid death of the bacilli in the white mice is probably to be referred to an active power of destruction possessed by the organism. 14. The slower disappearance in other animals is to be referred to the action of the leucocytes, which appear to play a special *rôle*, as first described by Metschnikoff under the term of "phagocytosis." But, in addition to this, Dr. Finger considers that the fluid of the tissues themselves plays a prominent part in the destruction of the microbes.

[1] Wiener Medicinische Wochenschrift, No. 19, 1891.

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FOREIGN UNIVERSITY INTELLIGENCE.

Buenos Ayres.—Dr. Sicardi has been appointed Professor of Clinical Medicine. Dr. Castro has been appointed Acting Professor of Clinical Surgery.

Geneva.—Dr. Haltenhoff has been promoted to be Extraordinary Professor of Ophthalmology.

Vienna.—Dr. v. Frankl-Hochwart and Dr. Lorenz have been recognised as *privat docenten* in Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. L. Lorenz, a well-known physicist at Copenhagen, at the age of sixty-three.—Dr. A. Babukhin, Professor of Histology in the University of Moscow.

WE have been asked to state that it has been arranged to hold the annual general meeting of the Association of Fellows of the Royal College of Surgeons of England at the Medical Society's rooms, Chandos-street, W., on Thursday, June 25th, at 5 P.M., instead of at 20, Hanover-square, as announced last week.

AMONG the sequestrations effected by the Italian health officers under the authority given them by the new code are numerous counterfeit specimens of mineral waters. These, as exhibited for sale in grocers' shops and even pharmacies, were found to be simply water, more or less pure, "medicated" into some semblance of the liquid obtainable from one or other of the natural sources—"Uliveto" in particular. Non-Italian waters, also counterfeited, have been seized in large quantities.

DURING the recent cholera epidemic at Prome among the Indian hill coolies (says an evening contemporary) several sick men tried to throw themselves from the hospital flat into the river, owing to the intense heat. One patient succeeded in doing so, and was being rapidly carried away by the strong current of the Irrawaddy, when Surgeon Waller, of the Medical Staff, who was in charge of the hospital, jumped into the river and rescued him.

AT the Senate House of the University of Cambridge on Tuesday last the degree of Doctor of Science (*honoris causâ*) was conferred on Mr. W. H. Flower, C.B., F.R.S., and Dr. Elias Metschnikoff.

METROPOLITAN HOSPITAL SUNDAY FUND, 1891.

In addition to the returns published in our last issue giving the amounts collected in aid of the Metropolitan Hospital Sunday Fund, we have received notification of the following amounts. The returns are, of course, as yet incomplete, and we only publish particulars of the larger amounts collected. The total sum received at the time of our going to press on Thursday evening amounted to £33,000.

Donations.	£	s.	d.
Sir Saville Crossley, Bart., M.P.	1000	0	0
Theodore Lloyd, Esq.	26	5	0
G. W. Medley, Esq.	20	0	0
Messrs. Peak, Frean, and Co.	25	0	0
Church of England.			
St. Jude's, South Kensington (Rev. Preb. Forrest, D.D.)	1800	0	0
St. Michael's, Chester-square (Rev. Canon Fleming, B.D.)	1200	17	6
The Temple Church (The Very Rev. Dean Vaughan)	175	8	9
St. Marylebone Parish Church (Rev. Canon W. Barker)	110	17	3
Quebec Chapel (Rev. E. B. Ottley)	166	2	7
St. James's, West Hampstead (Rev. C. M'Anally)	203	2	1
Curzon Chapel, Mayfair (The Rev. T. J. F. Bennett)	209	8	0
St. Stephen's, South Dulwich (Rev. J. Meek Clark)	142	13	0
St. James's, Piccadilly (Rev. Preb. J. E. Kempe)	274	10	3
St. Mary's, Kilburn (Rev. J. Robertson)	107	10	2
St. Margaret's, Westminster (Archdeacon Farrar)	274	10	0
St. Matthew's, Brixton (Rev. N. A. Garland)	102	4	6
St. James's, Clapham Park (F. A. C. Lillingston)	130	9	5
St. Mark's, North Audley-street (Rev. J. W. Ayre)	176	6	5
St. Mary Abbotts, Kensington (Hon. the Rev. E. Carr-Glyn)	518	19	2
Westminster Abbey (Rev. Canon Furse)	174	8	10
St. Barnabas, Addison-road (Rev. G. R. Thornton)	133	2	4
Holy Trinity, Sydenham (the Rev. H. Stevens)	236	12	11
St. Augustine's, Queen's Gate (Rev. R. R. Chope)	109	4	2
St. Bartholomew's with St. Matthew's, Sydenham (Rev. Canon Yeatman)	138	3	5
St. Stephen's, Castle Hill, Ealing (Rev. B. S. Tupholme)	106	9	0
All Souls', Langham-place (Rev. W. Hay Chapman)	125	18	0
Christ Church, Hampstead (Rev. G. F. Head)	203	18	10
St. Matthew's, Bayswater (Rev. J. F. Sullivan)	139	14	1
St. Nicholas, Chislehurst (the Rev. F. H. Murray)	270	4	8
St. Anne's, Highgate Rise (Rev. C. T. Ackland)	21	3	2
Berkeley Chapel, Mayfair (Rev. Canon T. Teignmouth Shore)	41	5	0
St. Andrew's, Stockwell	24	5	5
St. Paul's, Camden-square	60	9	10
Grosvenor Chapel, South Audley-street	75	7	10
Holy Trinity, Paddington (Rev. Preb. D. Moore)	223	5	2
Brunswick Chapel, Upper Berkeley-street	42	10	8
Hospital Chapel of St. Mary and St. Thomas of Canterbury, Ilford	48	15	5
St. George's, Hanover-square (Rev. Canon Capel Cure)	181	0	2
Church of the Annunciation, Chislehurst	39	15	7
St. Saviour's, Ealing	34	3	0
Acton Parish Church with St. Andrew's Mission	38	1	8
St. John's, Upper Norwood	33	0	2
Rosslyn-hill Unitarian Church, Hampstead	68	14	7
St. Mary's, Lewisham	40	10	0
St. Margaret's, Lee	49	4	3
St. Michael and All Angels, Blackheath Park	72	17	0
St. Mark's, Kennington (Rev. Gerald Bowman)	51	1	11
St. John the Baptist, Kingston-vale	22	4	3
Finchley Parish Church	45	14	0
Monken Hadley Parish Church	34	5	0
St. Paul's, Clapham-park	42	2	4
All Saints', Clapham-park	46	7	5
St. John the Baptist, Leytonstone	22	13	1
Church of the Good Shepherd, Lee (Rev. J. G. Rogers)	20	7	3
St. James-the-Less, Westminster	26	2	4
St. Paul's, Knightsbridge (Rev. H. M. Villiers)	422	3	3
St. Mary's, Graham-street	30	3	5
All Saints' and St. Andrew's, Carshalton	32	0	0
St. Saviour's, Highbury	30	17	7
Christ Church, Brondesbury	51	14	9
St. Andrew's, Holborn	25	11	9
St. Luke's, Redcliffe-square	42	2	10
Wandsworth Parish Church and Holy Trinity	66	7	0
All Saints', West Dulwich	23	9	6
St. Mark's, Regent's-park	21	18	9
Streatham Parish Church	78	1	1
Chislehurst Chapel	30	2	10
St. Gabriel's, Warwick-square	78	11	5
Wimbledon Churches (Rev. Canon Haygarth)	181	12	8
Emmanuel Church, Wimbledon	61	14	6
St. Peter's, Bayswater (Rev. C. M. Moore)	146	3	9
All Saints', Margaret-street	70	10	0
Holy Trinity, Anerley	50	5	2
Hornsey Parish Church, Chapel, and Mission Hall	53	7	8
Fulham Parish Church	33	14	0
Immanuel Church, Streatham-common (Rev. G. S. Streatfield)	117	7	7
Harrow Weald Church	26	0	0
St. John's, Redhill	20	14	9
St. John Divine's, Kennington (Rev. C. E. Brooke)	55	0	4
St. Mary's, Hornsey-rise	45	8	11
St. James's, Holloway (the Rev. E. A. Stuart)	101	16	6
Holy Trinity, Wandsworth	47	13	0
St. Stephen's, Wandsworth	54	1	3
St. Mildred, Lee	25	16	10
St. Lawrence, Catford	25	11	9
St. Saviour's, Brixton-hill	23	0	9
All Saints', Kensington-park	45	5	10
Christ Church, Highbury	34	9	2
Church of Ascension, Balham (the Rev. Herbert Curtis)	91	7	11
St. Michael's, Battersea	25	5	0
Church of Immaculate Conception, Farm-street	29	17	1
St. Saviour's, Fitzroy-square	40	10	0
Christ Church, East Greenwich	48	1	9
Carmelite Church, Kensington	28	0	0
St. Mary's, Bryanston-square (Hon. and Rev. Canon Leigh)	100	0	0
Trinity Church, Hampstead	37	7	8
St. Anne's, Highgate-rise, and Mission-room	21	3	2
St. Saviour's, Denmark-park	32	6	9
St. Mary Magdalene, Munster-square	26	12	2
Congregational.			
Clapham Congregational	52	15	7
Upper Norwood	34	13	0
Union Chapel, Islington, Rev. H. Allon, D.D.	100	1	5
Baptist.			
Heath-street, Hampstead	60	1	9
Presbyterian.			
Colebrooke-row	30	15	6
St. John's, Kensington (Chas. Molnet, M.A.)	92	0	0
Regent-square (the Rev. John MacNeil)	207	17	2
Park Church, Grosvenor-road	27	0	0
Marylebone	53	4	10
Various.			
The Theistic Church, Swallow-street (the Rev. C. Voysey)	105	3	6
Dutch Church, Austin Friars	25	8	2

Other subscriptions have been received, and will be announced in our next issue.

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THE ROYAL SOCIETY CONVERSAZIONE.

SIR WILLIAM THOMSON received a distinguished company at the conversazione held at Burlington House on Wednesday last. Among the most interesting of the exhibits was a new electrical influence machine, consisting of two plain glass discs without sectors. Mr. Wimshurst also showed a small electric motor of considerable power worked by alternating currents from one of his machines. In the same department of science, Professor J. J. Thomson produced a discharge through a gas without the use of electrodes by surrounding the discharge-tube with a thick coil of wire, which acts as the primary of an induction coil, the highly exhausted gas itself forming the secondary coil. This discovery has a distinct bearing on the use of electricity as an adjunct to medicine, as by passing a current through wire coiled *round* the part under treatment rapidly alternating currents could be produced without any shock.

Professor Crookes showed some very beautiful examples of the phosphorescence of precious stones under the bombardment of molecules caused by the electric discharge *in vacuo;* and also illustrations of the volatilisation of infusible metals at ordinary temperatures by the same means. An interesting demonstration of the extinction of the magnetic properties of metals by heat was given by Mr. Shelford Bidwell.

That most remarkable body, nickel-carbon-oxide [$Ni(CO)_4$] was exhibited by Mr. Ludwig Mond. It is a colourless liquid, produced by passing carbon monoxide over finely divided metallic nickel. It is highly poisonous, and has, when injected subcutaneously in very small doses, an extraordinary power of reducing the temperature of animals. The substance decomposes, on heating its vapour to 180° C., into nickel and carbon monoxide, and articles can be plated with the metal by simply exposing them to the vapour.

A method of personal identification by means of finger prints was explained by Mr. Francis Galton, who gave evidence of the persistence of the patterns formed by the papillary ridges in their essential details, however minute, from infancy to old age. Captain Abney exhibited an apparatus for the registration of colour by referring any mixed colour to a single wave-length and a percentage of white light, and also demonstrated the greater sensitiveness of the eye to different colours. A curious optical illusion, consisting of two rotating discs covered with spiral patterns, enabled Professor Sylvanus Thompson to disprove the theory of M. Javal (director of the Ophthalmological Laboratory of the Sorbonne), that the complementary subjective illusions of motion are due to involuntary slipping of the muscles of the eyeball. They cannot slip radially in all directions at once. An ingenious cup-micrometer for measuring the rate of growth of a plant was shown by Mr. Francis Darwin. Mr. Walter Gardiner, with another apparatus, demonstrated the phenomena of root-pressure and the transpiration current.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Soothill Upper Urban District.—As a rule we avoid noting vital statistics relating to short periods, such as one month, and particularly in respect of districts having only small populations, where they become especially misleading. But the announcement by the medical officer of health of Soothill Upper that a rate for the month of April of 24·8 per 1000 per annum is "what may be called a fair average death-rate" can hardly pass without notice. The rate itself for such a period may have absolutely no significance whatever; but we sincerely hope, for the sake of this little Yorkshire district, that it is greatly in excess of any annual average. The mean death-rate from all causes during the ten years 1880–89 in the twenty-eight large cities and boroughs of England and Wales was 20·8 per 1000, and any mean rate beyond 16 per 1000 which may exist in Soothill Upper should lead to the adoption of instant inquiry with a view to eliciting its causes and to the prevention of that excess of death by which such a rate is brought about.

St. Olave.—According to Dr. Wightwick the corrected death-rate for this metropolitan district during 1890 was 20·2 per 1000. The notification system has evidently facilitated measures of prevention, for out of 109 cases notified 71 were removed to hospital; but as regards the notification of erysipelas, the health officer's comment is adverse, for diseases which cannot be regarded as infectious are often returned under that somewhat indefinite heading. Last year typhus fever was traced out and dealt with in this district; it is therefore satisfactory to learn that no such case has occurred since November, 1889.

Hackney.—In Hackney the death-rate last year was 20·3 per 1000, and the notified diseases were 1171 in number. The increased information thus obtained has led to an increase of sanitary work, and this especially in the matter of disinfection. One additional piece of work is naturally resented by Dr. Tripe—it is that of giving certificates to owners of dwelling-houses under the Customs and Inland Revenue Act, 1890. By these certificates the owner is distinctly benefited, and yet no fee can be demanded for the work of inspection on which they are based.

Leicester Urban District.—Another of the excellent series of reports issued by Dr. Henry Tomkins has reached us, and at the forefront stand two recommendations that may well be borne in mind by so rapidly increasing a borough, a district, indeed, as to which even further extension is contemplated. The first is as to the need for open spaces in the ever-increasing mass of bricks and mortar; and the other urges the abolition of at least the worst of the slaughter-houses in the densely crowded parts of the town. Both are important; and as regards the second we hope the day will soon come when the killing of animals and the retention of human food in intra-urban slaughter-houses will be condemned by the demand of public opinion. The death-rate for 1890 is calculated as 17·8 per 1000, and the zymotic rate as 2·1 per 1000. In reference to notification, Dr. Tomkins again explains that the cases of erysipelas—207 in number—have no significance from a public health stand-point. The infectious hospital received 480 patients, and it is significant of the value of notification that no less than 400 patients out of a total of 516 known to have been attacked with scarlet fever should have been removed to hospital. No case of small-pox was received during the year; but it is well to remember, in view of the attitude adopted in Leicester as to this disease, that their hospital is admitted to be unsatisfactory in point of construction and arrangement. The water-carriage system is now rapidly displacing the pail closet system, and further extension in this direction is advocated in the interests of health and freedom from nuisance. A full account of the work done in the health department under Dr. Tomkins' supervision cannot be attempted in our comment, but the multitudinous subjects dealt with in this year's report show how the welfare of the inhabitants is cared for, and how the demands on the time and abilities of the health officer must be increasing.

Bilston Urban District.—After giving some detail as to occurrences of infectious diseases during the past year, Dr. T. R. Bailey reminds his sanitary authority that whilst the adoption of the system of notification materially increases his information as to what means of prevention are needed, the district lacks the required power of isolating first cases of infection owing to the inadequacy of the cottages now possessed as a hospital for infectious diseases. Estimating the population at 23,000, the death-rate for 1890 was 21·3 per 1000. Both measles and scarlatina were somewhat prevalent, and nineteen cases of the latter disease were removed to the cottages referred to.

Barnsley Rural District.—Dr. M. T. Saddler received 101 notifications of infectious disease last year, and use was made of the excellent Kendray Hospital in isolating such cases as called for removal. Whilst progress is still going on as to the provision of means of drainage and of water-supply, a number of places still stand in need of further improvement, especially as to water; and a hope is expressed that, by the aid of the County Council, steps may also be taken to prevent the serious pollution which arises in the River Dearne before it enters the district. The offensiveness arising from the river has been considerable, although some changes for the better have resulted in consequence of altered methods of dealing with trade refuse &c. With

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the exception of one-half of Roystone, the whole district has been provided with pipe sewers since 1873, and the benefits consequent on this action concern a population of 24,670 people. The death-rate for 1890 is estimated at 20·4 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6391 births and 4293 deaths were registered during the week ending June 13th. The annual rate of mortality in these towns, which had been 30·9 and 28·3 per 1000 in the preceding two weeks, further declined to 23·8 last week. The rate was 23·3 in London and 24·2 in the twenty-seven provincial towns. During the first ten weeks of the current quarter the death-rate in the twenty-eight towns averaged 27·9 per 1000, and considerably exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 14 in Brighton, 16 in Plymouth, 17·1 in Derby, and 17·5 in Bradford; the highest rates were 30·9 in Preston, 31·4 in Liverpool, 32 in Halifax, and 37·6 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 357 and 359 in the preceding two weeks, declined again last week to 313; they included 118 from whooping-cough, 77 from measles, 35 from diarrhœa, 34 from diphtheria, 26 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. No deaths from these diseases were recorded in Bolton or Huddersfield; in the other towns the zymotic rates ranged upwards from 0·5 in Brighton and in Norwich to 2·5 in Preston, 2·6 in Liverpool and in Leicester, and 2·9 in Portsmouth. The greatest mortality from measles occurred in Hull and Portsmouth; from scarlet fever in Halifax; and from whooping-cough in Manchester, Birmingham, Salford, Leicester, and Cardiff. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. The 34 fatal cases of diphtheria included 21 in London, 3 in Manchester, 2 in Salford, 2 in Oldham, and 2 in Bristol. One death from small-pox occurred in London, but not one in any of the twenty-seven provincial towns; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 859, against numbers declining from 927 to 885 at the end of the preceding three weeks; the patients admitted during the week were 61, against 88 and 66 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 620 to 547, further fell last week to 453, but were nearly double the corrected weekly average. The causes of 79, or 1·8 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Wolverhampton, Oldham, and in four other smaller towns; the largest proportions of uncertified deaths were recorded in Bristol, Sheffield, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·3 and 25·3 per 1000 in the preceding two weeks, declined again to 24·2 during the week ending June 13th, but was 0·4 above the mean rate that prevailed during the same period in the twenty-eight large English towns The rates in the eight Scotch towns ranged from 11·8 in Perth and 19·7 in Dundee to 25·3 in Glasgow and 37·4 in Paisley. The 623 deaths in these towns showed a decline of 28 from the number in the preceding week, and included 26 which were referred to measles, 22 to whooping-cough, 14 to diarrhœa, 10 to scarlet fever, 5 to "fever," 2 to diphtheria, and not one to small-pox. In all, 79 deaths resulted from these principal zymotic diseases, against 67 and 74 in the preceding two weeks. These 79 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 1·4 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 23 and 27 in the preceding two weeks, were last week 26, of which 16 occurred in Glasgow and 7 in Paisley. The 22 deaths referred to whooping-cough were within 3 of the number in the previous week, and included 6 in Edinburgh, 5 in Glasgow, and 5 in Dundee. The 14 deaths from diarrhœa showed a further increase upon the numbers in recent weeks. The fatal cases of scarlet fever, which had declined from 7 to 3 in the preceding three weeks, rose again last week to 10, all of which were recorded in Glasgow. The 5 deaths referred to different forms of "fever" exceeded by 2 the number in the previous week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 173 and 142 in the preceding two weeks, further declined last week to 139, but exceeded by 41 the number in the corresponding week of last year. The causes of 53, or nearly 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·8 and 21·1 per 1000 in the preceding two weeks, further rose to 27 during the week ending June 13th. During the first ten weeks of the current quarter the death-rate in the city averaged 24·4 per 1000, the rate for the same period being 25 in London and 21·3 in Edinburgh. The 183 deaths in Dublin during the week under notice showed an increase of 47 upon the number in the preceding week, and included 4 which were referred to diarrhœa, 3 to whooping-cough, 2 to "fever," and not one either to small-pox, measles, scarlet fever, or diphtheria; in all, 9 deaths resulted from these principal zymotic diseases, against 1 and 3 in the preceding two weeks. These 9 deaths were equal to an annual rate of 1·3 per 1000, the rate from the same diseases being 1·7 in London and 2 in Edinburgh. The 4 fatal cases of diarrhœa exceeded the number recorded in any week since February last. The 3 deaths from whooping-cough and the 2 fatal cases of "fever" exceeded the numbers returned in recent weeks. The 183 deaths in Dublin last week included 35 of infants under one year of age and 45 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked increase upon those recorded in the preceding week. Eight inquest cases and 5 deaths from violence were registered during the week, and 56, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or more than 11 per cent., of the deaths last week in the city were not certified.

THE SERVICES

INDIAN MEDICAL SERVICE.—*Bengal:* Surgeons to be Surgeons-Major (dated March 31st, 1891):—Francis Frederic Perry, Pultoney William Dalzell, Stephen Little, M.D., George Hart Desmond Gimlette, M.D., Christian Bernard Hunter, and Julian Carter Carington Smith.—*Madras:* Brigade Surgeon Charles Edwin McVittie to be Deputy Surgeon-General (dated March 7th, 1891); Surgeon-Major Henry James Hazlett to be Brigade Surgeon (dated March 7th, 1891). The Queen has approved of the restoration of the undermentioned Officers from the Half-pay List to the Effective List:—Surgeon Edward Donald Da Costa (dated April 6th, 1891); Brigade Surgeon William Smyth Fox (dated April 18th, 1891); Surgeon-Major Mark Robinson (dated June 11th, 1891).—*Bombay:* Brigade Surgeon Abraham Nickson Hojel (dated April 30th, 1891).

NAVAL MEDICAL SERVICE.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Inspector-General of Hospitals and Fleets James Nicholas Dick, C.B., has been placed on the Retired List of his rank.—The following appointments have been made at the Admiralty:—Fleet Surgeon Anthony Gorham, M.D., to the *Rodney* (dated June 15th, 1891); Staff Surgeon Herbert E. Marsh to the *Impregnable* (dated June 15th, 1891). Surgeons: Herbert Canton to the *Gannet* (dated June 15th, 1891), and J. Dowson to the Portsmouth Division Royal Marine Light Infantry (dated June 25th, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Cornwall (Duke of Cornwall's) Western Division, Royal Artillery: John Alfred Fox, Gent., to be Acting Surgeon (dated June 13th, 1891).—3rd Volunteer Battalion, the Welsh Regiment: Surgeon and Surgeon-Major (ranking as Major) J. L. W. Ward resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated June 13th, 1891).—2nd Volunteer

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Battalion, the Essex Regiment: Honorary Assistant Surgeon W. G. Gimson, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated June 13th, 1891).—17th (North) Middlesex: Horace Sanders, Gent., to be Acting Surgeon (dated June 13th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Glasgow Division: Captain George Thomas Beatson, M.D., from the 1st Lanarkshire Artillery Volunteers, to be Acting Surgeon (dated June 13th, 1891).—Infantry: South Wales Brigade: Brigade Surgeon John W. Mulligan, from the Severn Infantry Volunteer Brigade, to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated June 13th, 1891).

Correspondence.

"Audi alteram partem."

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—With your permission I should like to say a few words in regard to my candidature for a seat in the Council of the Royal College of Surgeons of England. If I had followed my own feelings and judgment, I should have abstained from coming forward this year, when only one absolute vacancy has occurred, and should have been more than content to leave Mr. Lawson Tait, who polled more votes than I did last year, to be the representative of the Fellows who desire to see their constitutional status raised to a level with that of the Fellows of other professional colleges. As, however, it was the wish of those with whom I have been working for the attainment of this end that I should stand again, I consented to do so, and I cannot but think that the moderate proposals embodied in the temperate circular just issued will commend themselves to all Fellows who think and act independently in regard to what are called College politics, and who have the welfare of the College at heart.

It may be as well to explain that my active connexion with the Association of Fellows did not commence till June, 1889, when I accepted office as a member of the committee, because I felt that it was only by combined action that desired improvements could be effected. For the policy of the Association prior to that date I am not responsible, but with all that has been done by the committee during the last two years I have been closely identified, working steadily with my colleagues to secure for the Fellows those privileges the concession of which would, in our opinion, materially conduce to the good of the institution and of the profession at large. I took part in that deputation of the Committee of the Association to the Council last year, which commended itself to Sir Spencer Wells, and joined in urging upon the Committee of Council the expediency of occasional consultation of Fellows of the College separately from the Members, granting to the Fellows a common room, modification of restrictive regulations in regard to the use of voting papers at the election of councillors, and submission of the proposed scheme of conjoint examination for the medical degrees of the University of London to the Fellows before its final ratification by the Council. This action of the Association was not without success, for an authoritative legal opinion has been obtained favourable to separate meetings of Fellows; a common room will doubtless be set apart for the Fellows in due time, for some of the members of Council expressed themselves as favourable to the proposal; our suggestions in regard to voting papers were only lost in the Council by the bare majority of one; and everyone admits that if the Fellows are to be consulted at all, it is the best course to consult them before instead of after the final ratification of any new proposal. If the Fellows of the College agree with me in thinking that it would be for the good of the College that they should be a more homogeneous, united, and influential body than they are at present, and think that if elected to the Council I could help to advance this object, I should esteem it a honour to have the opportunity of serving them to the best of my power. I am, Sirs, yours &c.,

Finsbury-square, E.C. WALTER RIVINGTON.

PROPOSED INCREASE IN THE NUMBER OF DIRECT REPRESENTATIVES ON THE MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—May I, through your columns, ask medical practitioners heartily to take up the petition, which I forward to you for publication, to the Privy Council, asking for an increase in the number of direct representatives of the medical practitioners in the United Kingdom from five to eight? We have in accordance with the Act of Parliament petitioned the General Medical Council last year to move in securing the above increase. But the Council has not moved. Our next step is to petition the Privy Council. If a sufficient number of petitions are sent in, there is little doubt but that our prayer will be granted. If we do not send sufficient in, then the cry will be raised that the profession is careless, and does not want any increase. It will be remembered that although the Medical Act (1858) provided for the formation of the Medical Council, yet no direct representation was granted until the Medical Act of 1886 was passed. Dr. Waters, Mr. Wheelhouse, Dr. Leech, and Dr. Wade were the chief workers in securing for us such representation. Further, it is evident that the draftsmen of the Act of 1886 clearly saw a time would come when the growth of the profession would be such as to require an increase of direct representatives. That time has come. It seems very strange that although the income of the Medical Council is chiefly obtained from the registration fees of medical practitioners, the said practitioners have up till 1886 been given no voice whatever on the Council. It seems even stranger that, although twenty universities and medical corporations are represented on the Council, not one penny is given to the Medical Council by these bodies. This is still more palpable when it is further stated that we practitioners actually pay each university and corporation representative about £170 a year. The case stands thus: The university representatives are paid by us, but their universities do not contribute to the income. The medical practitioners pay for all, and are only *allowed* five representatives. Further, it certainly seems strange that although the Privy Council is given the power to elect, and does elect, five representatives on the Council, not one farthing is contributed by the Privy Council to the income of the Medical Council. Here, again, medical practitioners are given the pleasure of paying for those who do not represent them. In political life it is a maxim that if the Government is represented on a body, and is given part control over the actions of that body, then the Government must contribute. This is seen in educational, poor-law, and sanitary legislation. Why not in ours? The Government has as great a right to make an annual grant for the part defraying of the expenses of the Medical Council as it has to make a grant to the Council of Education. The Medical Council is a body acting purely and simply in the interest of the public. It does not, certainly, act in the personal interests of the profession. Further than making a grant in aid, many of us hold that the Privy Council would do good service if it from time to time elected as one of its five representatives on the Medical Council two members who represented truly the great mass of the profession. All along the Privy Council has in reality nominated those who represent the universities and colleges. Those who read the reports of the proceedings of the Medical Council must notice the genuine work performed by our direct representatives, more especially that of the English. If we had three additional representatives, I believe our Medical Council would become a truly national institution, and cease to be a representative of diploma-granting bodies.

I would urge that the different Medical and Medico-Ethical Societies pass a resolution in favour of granting an increase in the number of direct representatives, and forward such resolutions to the Privy Council. If, further, a deputation to the Lord President took place, it would greatly tend to ensure success. It has been said that the twenty representatives of the universities and corporations represent the graduates of these bodies; but I find from replies that the *councils* of the universities and corporations, and not the *mass* of the graduates, elect the above twenty.

I am, Sirs, yours faithfully,

Liverpool, June, 1891. ROBERT REID RENTOUL.

To the Right Honourable Viscount Cranbrook, Lord President, and the Right Honourable the Members of Her Majesty's Privy Council.

The petition of the undersigned registered medical practitioners of and its vicinity, humbly sheweth—

1. That the Medical Act, 1886, Section 8, provides for the election of

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five direct representatives by the registered medical practitioners in the United Kingdom, while Section 10, Subsection 1, paragraph c., of the same Act provides the power for returning by the registered medical practitioners additional direct representatives to the General Council.

2. That petitions have been presented to and received by the General Council on November , 1890, urging the General Council to represent to the Privy Council that such increase in the number of direct representatives be provided for, and that the President of the General Council stated the proposal was one which would have to be "actually judged and decided upon by an authority outside and superior to the Council itself, to which authority, indeed, it would be more profitably addressed."

3. Your petitioners further beg to state that the registered medical practitioners since 1859 have paid no less than £155,985 as registration fees, and that the Universities and medical corporations represented on the General Council by twenty representatives do not contribute to the income of the said Council, although their representatives are paid for their services out of the above income.

4. That in 1875 the number of registered medical practitioners on the Medical Register was 22,715, while in 1890 the number had increased to 29,163, thus showing the necessity for an increase in the number of direct representatives.

5. Your petitioners would call your lordships' attention to the valuable help already given to medical education by the direct representatives on the General Council.

Therefore your petitioners humbly pray that your lordships will exercise the power vested in the Privy Council by Section 19 of the Medical Act of 1886, and direct that the registered medical practitioners in each of the three parts of the United Kingdom be given by your lordships the power of returning an additional direct representative for each of the three divisions of the United Kingdom. And that effect will be given to the prayer of your petitioners before November, 1891, when the next quinquennial election of direct representatives will take place.

And your petitioners will ever pray.

Name.	Qualification.	Full Address.

TERRIBLE VISITATION OF LOCUSTS IN THE PUNJAB.

To the Editors of THE LANCET.

SIRS,—The enclosed extract from a letter just received from Rawul Pindi is so interesting and so graphically and tersely describes a probable cause of disease, at all events a great pest in another sense, that I send it to you for your next number if you think it worth publishing.

Rawul Pindi, May 25th, 1891.

The Punjab has this year had a terrible visitation of locusts, the worst there has been for many years. An army of about ten miles wide of unfledged locusts was passing through the station for five days. They have, of course, done much damage; but fortunately the crops were so nearly ripe that they were able to be cut in advance of the invasion, but unless some properly organised attack is made upon the eggs before next year a disastrous visitation is anticipated. Millions I should say have been destroyed in the station of the unfledged insects, so that in many places the smell from the dead bodies is very bad, and in the district a great many wells have been polluted by the numbers of locusts fallen into them. The trains have several times been delayed for some hours by the inability to make way over the greasy masses of locusts crushed on the rails. I believe the authorities are thoroughly alarmed, and steps are being taken, it is said, to organise throughout the Province a methodically planned raid on the eggs.

I am, Sirs, yours truly,

Wimpole-street, June 15th, 1891. J. FAYRER.

A CRUISE IN THE MEDITERRANEAN.

To the Editors of THE LANCET.

SIRS,—I have recently returned from a cruise in the Mediterranean in one of the steamers that are advertised to make yachting cruises, and I have derived so much benefit from various trips, in the same vessel, that I am anxious that others should benefit by the same course. I was very much broken down in health when I made my first trip in the early part of last year. Since then I have been again to the Mediterranean, to Norway, the North Cape, and up the Baltic. The sea air, the variety of changes, the pleasant company one meets in the course of these cruises, all tend to the restoration to health of those who have suffered from various causes—from depression of spirits, nervous affections, attended by loss of appetite and want of sufficient sleep. Men coming on board with every appearance of a general break down of their constitutions in a few days begin to pick up, recover their spirits, join in such amusements as can be obtained on boardship, recover their appetites, and again begin to enjoy life, the change in them becoming very marked; and I know no more rapid means of recovery from sickness of any sort as the patient obtains fresh air, enjoys the advantages of change of scene, without undergoing any fatigue, and, when visiting the various ports, has all the advantages of a home, as he returns to the ship to all his comforts, instead of being in an hotel or having to undergo the fatigue of long railway journeys. I think if medical men knew of the great benefits to be derived from these sea trips, they would often advise their patients to seek this form of recovery to health and spirits, instead of sending them long railway journeys to Scotland, or again to the Continent. The amount of bad weather and rough sea is very small while on the trips to Norway. The sailing is entirely in smooth water in the fiords, and the air is most bracing and invigorating. I have derived such great benefit myself from these trips to sea that I am anxious that others should benefit in a like degree, and therefore address myself to you as being the best way of spreading the knowledge of this experience both to medical men and through them to their patients.—I am, Sirs, yours faithfully,

GEORGE H. RAY, M.D.,
June 15th, 1891. Surgeon-General (retired).

WHOOPING-COUGH AND MEASLES.

To the Editors of THE LANCET.

SIRS,—A few years ago I submitted the question in the medical journals whether whooping-cough ought not to be included in the term "contagious disease," as used in the Public Health Act, and whether persons suffering from the malady were not liable to prosecution under the Act if exposing themselves in public. It was quite clear to me that the time had come for the profession and the public to realise the importance of this question. As it has now been again raised in THE LANCET, it may be allowed me to strengthen your remarks by drawing attention to the mortality caused by whooping-cough, measles, and scarlet fever during the five years 1885–89. It will be seen from the Tables of the Registrar-General's Reports that the mortality from whooping-cough exceeded that of measles and scarlet fever respectively.

Mortality in England caused by Whooping-cough.

	Whooping-cough.	Measles.	Scarlet fever.
1885	13,106	14,495	6355
1886	12,936	12,013	5986
1887	11,251	16,765	7859
1888	12,287	9784	6378
1889	12,225	14,732	6698

I am disposed to think that a large number of infants die from whooping-cough, whose deaths are attributed to other causes, from the reason I pointed out some years ago, that infants do not whoop.

I am, Sirs, your obedient servant,

Savile-row, W., June 10th, 1891. ROBERT LEE.

THE HOUSING OF THE WORKING CLASSES IN RURAL DISTRICTS.

(FROM A CORRESPONDENT.)

THE first inquiry in a rural district under the Housing of the Working Classes Act was held at Ixworth, Suffolk, on Monday last (June 15th), by Lord Francis Hervey, M.P., on behalf of the West Suffolk County Council. The formal notice convening the meeting set forth that, the Thingoe Rural Sanitary Authority having applied to the County Council for a certificate for the adoption of Part III. of the Act, Lord Hervey had been directed to hold a local inquiry, and that all persons interested in the scheme might attend and give evidence. Ixworth is an agricultural village with a population of 951, and contains 224 inhabited houses (Census, 1891). In an article which recently appeared in a London paper it was stated that "for insanitation and general decay it would be hard to find so many cottages as bad in any rural area in England." This, however, is an exaggeration, for unfortunately there are many villages in which the average dwelling of the agricultural labourer is far inferior to those at Ixworth. It must be admitted that there are many cottages in Ixworth which are really unfit for human habitation—old cottages built of lath and plaster, and covered with straw thatch, both walls and thatch being defective; some with only one bedroom, and that in the roof; floors of brick, damp and uneven; windows and doors rickety; privies with large cesspools near the houses and the wells; many without gardens and others without back doors. Notwith-

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standing these serious defects, the sanitary authority does not seem to have taken any steps to improve matters until roused to action by the Labourers' Association. In February last, however, Mr. Kilner, the medical officer of health, reported that certain houses were overcrowded and dilapidated, and the rural sanitary authority took the necessary step to have the cottages condemned and closed. A further difficulty now presented itself: there was not a single available cottage for the families about to be displaced to move into, and the authority was petitioned not to carry the closing orders into effect until suitable accommodation had been provided. The owner of three-fourths of the land in the parish and many of the dilapidated cottages, having refused to erect any houses, pressure was again brought to bear upon the rural sanitary authority to adopt and put in force the Housing of the Working Classes Act, and it ultimately requested the County Council to grant it the necessary powers. At the public inquiry the authority tendered no evidence beyond the reports of their medical officer. The Labourers' Association, through their solicitor, had secured the services of a barrister, Mr. Theodore Dodd, and of Mr. Millington and Dr. Thresh. A systematic inspection of the cottages in the village had been made, and Mr. Dodd brought forward a number of witnesses to prove that many houses were unfit for habitation, that others were seriously defective in accommodation, that much overcrowding as a consequence existed, and that the health of the inhabitants suffered from the prevalence of these conditions. Evidence was also adduced showing that there was no probability of private enterprise providing the required accommodation. Mr. Millington and a local builder deposed that twelve cottages (three blocks of four each) could be erected for £1500, or for £1750, including half an acre of land to each cottage. These could be let for £6 per year, a sum more than sufficient to pay the interest on the investment. Assuming that this amount were borrowed and the repayment of the loan extended over forty years, the balance to be raised by a rate over the whole Union would be less than one-tenth of a penny in the pound. The inquiry, which was held in the evening in order to enable the labourers to be present, was largely attended, and not concluded until midnight.

This being the first inquiry under the Act, it is of much more than local interest, and it is sincerely to be hoped that the difficulties which have so often been stated to render the Act impracticable will be found to be more imaginary than real. As urgency was also pleaded, we may not have to wait until after the next election of guardians in April, 1892, before further steps are taken. Whatever may be the result, the march of events in the little out-of-the-way village will be watched with the greatest interest, not only by the medical boards of health in our rural districts, but also by all who have the welfare of the working classes at heart. The provision of better cottages and larger gardens will tend to keep the agricultural labourer in the villages and decrease the exodus into the already overcrowded towns, greatly to the advantage of both the rural and urban districts.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Dame Margaret's Home.

THE convalescent ward at Washington Hall (so generously presented by Sir Lowthian Bell a short time ago, and in future to be called "Dame Margaret's Home") was opened yesterday. The main portion of the building is intended for poor children—"waifs and strays"; but the ward set apart for children convalescent from the Royal Infirmary, and I hope other institutions, is likely to prove of great utility also.

Death Certificates by Unqualified Assistants.

A case of some importance came before the county magistrates at South Shields yesterday, in which an unqualified assistant was charged at the instance of the Registrar-General with giving a death certificate. It was shown that defendant, who lived at a branch practice four miles from his principal (who was also his father), gave the certificate, which had been signed in blank by his father, a qualified surgeon. For the defence a technical plea of guilty was put in, but it was urged in mitigation of penalty that the defendant was not like an unqualified person introduced to conduct the practice, but that he had assisted his father for three or four years, though he had not qualified, and that he had now retired from the practice and was preparing himself by study for examination. The Bench said they were not disposed to treat the case lightly, but as there were so many circumstances which to some extent palliated the offence, they would deal leniently with defendant by inflicting a fine of 20s. with costs.

Stockton and Middlesbrough.

It is stated that the hospital collection made on Sunday last in the various places of worship at Stockton amounted to over £100. The friendly societies of Stockton had a demonstration on Saturday in aid of their new Convalescent Home which is being built at Grange-over-Sands, and which it is fully expected will be ready to open in September next. The cyclists had a parade at Middlesbrough on Saturday last, when more than one thousand wheelmen attended; a collection taken *en route* for the Nurses' Home realised over £100.

Scarborough and Whitby.

I have good authority for stating that the outbreak of influenza which occurred at Scarborough and district a few weeks ago has subsided as rapidly as it rose, and the death-rate now is remarkably low. Very few cases have occurred during the past fortnight, and the town is regarded as being now in its usual healthy condition. The same applies to Whitby and Saltburn, there being a larger number of visitors at both these places than is usual at this time of year. The weather on the Yorkshire coast during the early part of this week has been showery at times, with gleams of pleasant sunshine, and the temperature has risen, allowing a good deal of out-door exercise to be taken.

Death of a Medical Coroner.

I regret to note the death of Dr. Charles Grabham of Pontefract, which took place on Saturday last from the effects of influenza and bronchitis. Dr. Grabham, who was in his fifty-third year, was a distinguished graduate of the University of London (M.B., Honours, and First Class, 1860); he had been coroner since 1872 for the Borough and Honour of Pontefract. Dr. Grabham contracted influenza a few weeks ago, and had almost recovered, but caught a chill on the 1st of this month in attending a funeral. Congestion of the lungs and bronchitis soon followed, to which he succumbed. Dr. Grabham retired from practice a few years ago.

Cumberland and Westmoreland.

The report of the Inspector of Mines for Cumberland shows that during the year there were ten accidents involving as many deaths. There were no fatal explosions of fire-damp, but three persons were injured by explosions in the county. From falls of roofs and sides four lives were lost. In the entire district there were 298 non-fatal accidents. There were five deaths in the metalliferous mines in the county. Kendal and district have suffered severely from the influenza, and at the last meeting of the sanitary authority the chairman and several of the officers and members were unable to attend, while most of the members present had been sufferers from the epidemic.

The treasurer of the Cumberland Infirmary, Carlisle, has received upwards of £500 towards the fund for the proposed enlargement of the accommodation for nurses in that institution. Under the will of the late Miss Nelson of Moorrow, Wigton, the infirmary becomes entitled to £1000 free of legacy duty.

Newcastle-on-Tyne, June 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Health of Edinburgh.

AT the meeting of the Public Health Committee it was reported that during the month of May there were 438 deaths, making the death-rate 19·08 per 1000, as compared with 17·51 per 1000 during the preceding five years. As regards age, 33·10 per cent. of the total number were under five years, 23·74 per cent. between thirty and sixty years, and 26·02 above sixty years of age. Diseases of the chest

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accounted for 37·44 per cent. of the whole, and zymotic diseases for 10·95 per cent. The birth-rate was 27·22 per 1000. During the month 453 cases of infectious disease were intimated; 107 patients were admitted into the City Hospital, 94 were discharged, and six died, and there remained at the end of the month 188. The cases at present in the hospital include 1 of typhus fever, 24 of enteric fever, and 44 of scarlatina. During the month 52,086 lb. of unsound meat were seized or delivered up in the city. The mortality last week was 108, making the death-rate 20 per 1000. Diseases of the chest caused 50 deaths and zymotic diseases 10, of which 6 were due to whooping-cough. The intimations for the week were: typhoid fever, 5; scarlatina, 11; measles, 74. In Leith the number of deaths was 27, and the death-rate 20·60 per 1000.

Scottish Universities Commission.

At the meeting of the Commission on Monday evidence with regard to instruction in mental diseases was heard from Dr. Clouston and Dr. Yellowlees; and with regard to a proposed chair of Pathology in Glasgow University from Professor M'Kendrick and Dr. Joseph Coats.

Hospital Transactions in Edinburgh.

There has been some talk of late regarding the starting of Transactions both at the Royal Infirmary and the Royal Hospital for Sick Children, and it appears there is a prospect of this being realised, and that the two hospitals will publish a conjoint volume. Should this be done, much valuable material will be permanently preserved instead of, as at present, being only used for the temporary purposes of clinical lectures and ward instruction.

The British Association.

At a public meeting held in Edinburgh on Monday it was decided to recommend that the British Association, which meets in Edinburgh next year, should meet in the end of September.

The Infectious Diseases Notification Act.

The Police Commissioners of Paisley have unanimously resolved to adopt the Notification Act, to come into force on Aug. 1st.

Death of Dr. Smith-Shand.

Dr. J. W. F. Smith-Shand, Regius Professor of Practice of Medicine in Aberdeen University, died on the 12th inst. of apoplexy. He was physician and lecturer on clinical medicine at the Royal Infirmary, Aberdeen, and whilst of a singularly amiable disposition, was possessed of the professional experience and skill which made his advice much sought after in the north of Scotland.

Royal Infirmary, Dundee.

Mr. Thos. Maitland presided at the annual meeting recently held of the governors of this institution. The treasurer reported that the financial position (including an extraordinary expenditure of £1384 13*s.* 7*d.*) showed an excess over revenue of £1486 19*s.* 10*d.* The chairman, in moving the adoption of the report, stated that the work of the infirmary during the past year had been the highest on record. He at the same time intimated that a considerable sum would annually be required as extraordinary expenditure to supply, from time to time, modern and improved appliances. The report was approved.

A scholarship, affording free education at the Edinburgh School of Medicine for Women and at Leith Hospital, is offered by a lady to a suitable candidate wishing to devote herself to work as a medical missionary. Candidates are to send in their names to the secretary of the school, and the selection will be made by a committee of ladies.

June 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS)

Royal College of Surgeons.

ON Thursday, the 18th inst., the Council will elect an additional Examiner in Ophthalmology and an Examiner for the diploma in Dentistry. Mr. Theodore Stack will be a candidate for the Vice-Presidency of the College next June.

Regius Professor of Surgery: University of Dublin.

The recent meeting of the Academic Council to appoint a successor to Mr. William Colles has been adjourned to next Monday.

Royal University of Ireland.

Her Majesty has appointed The O'Conor Don and Sir Patrick Keenan members of Senate of this University, in the room of Sir Robert Kane, M.D., deceased, and Rev. Dr. Woodlock, who has resigned.

The late Staff Surgeon Rae, R.N.

A marble tablet has been placed in Dungarvan Parish Church in memory of the late William Masters Rae, Staff Surgeon of Her Majesty's ship *Serpent*, lost on the coast of Spain in November last. The deceased gentleman, who was thirty-six years of age, belonged to Dungarvan.

Rabies.

An outbreak of rabies has occurred in Carlow among the deer at Oak-park, and the animals destroyed exceed 100 head. Before the rabid dog attacked the deer it bit three children, who have been sent to the Pasteur Institute at Paris for treatment at the expense of the Carlow guardians.

Cork North Infirmary.

Dr. E. Magner has been elected extern physician in the vacancy caused by the resignation of Dr. Cremen, and Dr. Richard Dalton has been unanimously appointed assistant physician to the extern department.

Mr. Malone, solicitor, has been elected coroner for the baronies of Dungannon.

Sir Charles Cameron has been elected President of the Irish Medical Association for the ensuing year.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Prophylactic Value of Early Excision of Hard Chancres.

THE advisability of excising a hard chancre at an early stage of its development is a moot point, some asserting, with M. Jullien, the utility of the measure as a means of preventing further infection of the system; while others—and these certainly form the majority—agree with our own Hutchinson, who maintains that the operation "can rarely be productive of good." M. Mauriac of the Hôpital du Midi believes with the English authority that any hopes of preventing the appearance of secondary manifestations of syphilis by an early excision of the primary sore are illusory. In support of this view of the question, M. Mauriac has recently given the details of a case in which a three days' old Hunterian chancre was excised, there being at that period no sign of glandular infection. On the morrow a fresh preputial chancre, harder even than the original one, appeared at some distance from the site of the latter. It was, in its turn, thoroughly excised twenty-four hours after its discovery. The two wounds healed kindly, but at the base of the cicatrices a characteristic induration developed, and the adenopathy, doubtful at the time of the operations, revealed itself in a very unambiguous form. Fifty-three days from the appearance of the first chancre, the patient was seized with nocturnal cephalalgia, rheumatic pains in the intercostal and diaphragmatic regions, together with vesperal fever and night-sweats. These symptoms were shortly succeeded by the appearance of a generalised papular syphilide on the body. An experiment of this kind being of more value than any amount of theory, I have, for that reason, deemed it worthy of record in the pages of THE LANCET.

Hysterical Chorea.

MM. Debove, Comby, and Chantemesse have already called our attention to the existence of the hysterical form of chorea, presenting all the classical characteristics of the typical "choréé de Sydenham," as St. Vitus's dance is frequently denominated in this country. At a recent meeting of the Société Médicale des Hôpitaux (June 12th) M. Laveran—well known as the discoverer of the parasitic micro-organisms supposed to be peculiar to malarial blood—reported two cases in which the symptoms of hysteria and chorea were so interwoven as to suggest a common origin. The first case is that of a quartermaster-sergeant, who, having much pressing work to do, sat up all one night to get through it, assisted by copious libations of strong coffee. On the following morning, having discovered an act of disobedience

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on the part of one of his subordinates, he became furiously enraged, and was there and then seized with an attack of hysteria, with transitory aphasia. A little later there supervened choreic movements of the elbow and arm, these movements subsequently involving the lower limbs. The aphasia gave way to hysterical stammering with generalised hyperæsthesia, and hysterical attacks recurred at frequent intervals. This man had never previously exhibited signs of hysteria. In the second case, a wine-grower, who had but recently joined his regiment, was admitted into the Val-de-Grâce Hospital with the history of having suffered for the last two or three years from occasional involuntary movements of the limbs. The attack commences with a sensation of constriction of the chest and neck, and this is followed, without unconsciousness, by movements of the arms resembling those employed in the act of rowing. These movements last a few minutes, and are repeated several times during the attack. Hysterical stigmata are present in the shape of incomplete left hemi-anæsthesia and narrowing of the visual field in the left eye. From the study of these cases, and a careful analysis of the records of the Val-de-Grâce Hospital archives, M. Laveran arrives at the conclusion that male hysteria is decidedly on the increase. He states that there are at present in his wards at the Val de-Grâce Hospital three well-marked cases—a large proportion, considering that all his soldier-patients are drawn from the ranks of the working-classes. MM. Raymond and Ballet, on the other hand, deny the increased frequency of hysteria in the male, opining that the apparent increase is really due to improved diagnostic methods. M. Ballet tells us that he has in his wards at the present moment about fifteen male hysterics. With regard to the nervous origin of chorea, MM. Perret and Devic have recently published the statistics of 235 cases of the disease tending to prove that rheumatism is not so common a starting-point as is generally supposed. They regard chorea as an essentially nervous affection in the majority of instances, and they believe that when met with in young girls, it may be merely a form of hysteria.

The New Medical Bill before the Senate: the State of Medical Education in France.

This new Bill, already passed by the Chamber, and the provisions of which I have already transcribed for the information of your readers, was duly presented to the Upper House on June 8th. A committee was forthwith appointed to report on it, this body comprising Professor Cornil (chairman) and eight other senators. The committee proceeded to the discussion of the article dealing with the abolition of the *officiat de santé*. Four of their number pronounced in favour of the maintenance of the second-grade diploma, while three others voted for its suppression. It was ultimately decided, at the suggestion of M. Cornil, to proceed to an inquiry on the subject, the opinion of the County Councils being taken thereon. *Apropos* of the suppression of the *officiat de santé*, the Association des Professeurs de Écoles de Médecine de France has just signed a petition to the Senate, urging upon that august body the inexpediency of the proposed measure and the necessity of preserving intact and further fostering the preparatory schools of medicine scattered through the country. In protesting against the tendency to further centralisation, these gentlemen contend that at their schools, free as they are from the overcrowding inherent to metropolitan hospitals affiliated to faculties of medicine, clinical instruction is cheaper and more complete, and the despised *officier de santé* emerges from his *alma mater* armed with more practical and useful knowledge than the generality of "swell" M.D.'s. In their petition they draw a melancholy picture of the state of things at a large Faculty: of the scarcity of subjects for dissection, the aimless wanderings of the medical fledgling from amphitheatre to amphitheatre, the crowd around the patient at the hospital, those composing its rear guard craning their necks in their desperate efforts to cull information regarding the case, &c., &c. They make a strong point of the general absence of control over the studies of the aspirant at the Paris and other Faculties, and contrast this indiscipline with the order prevailing at humbler schools, where each student is personally known to his teachers. They state that last year no less than 150 foreign doctors were compelled to shake the dust of Paris off their feet and repair to Berlin, because the defective organisation of the Faculty of Medicine deprived them of the opportunities for study they had been led to expect at such a centre of learning. That the accusation formulated by the petitioners is in great part well founded is sufficiently proved by the fact that the creation in Paris of a Municipal School of Medicine independent of the unwieldy Faculty has for some time past been a subject much discussed. I propose on some future occasion to enlighten your readers on the methods actually in operation of conducting examinations at the Paris Faculty. Reform in this direction is urgently needed, and the arguments I shall adduce will, I doubt not, conquer the suffrages of those of your subscribers who have, irrespective of nationality, the true interests of medical education at heart.

Paris, June 16th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Fermentations and Infectious Diseases.

A LITTLE treatise on fermentations and infectious diseases, with special reference to Koch's treatment of tuberculosis, has recently been published by Dr. Eugen Dreher, formerly private lecturer at the university of Halle. The author, who is not a medical man, but a student and teacher of natural science, discusses not only Koch's method, but also the kindred methods of Pasteur, Behring, Kitasato, Brieger, and Karl Fraenkel, and the theory of vaccination. He traces the history of the theory of fermentation, stating the views of Berzelius, Mitscherlich, and Liebig, and dwelling on the important service to this branch of science rendered by Schwann and Pasteur, who discovered and determined the part played by organisms in fermentation. After referring to the resemblance between the phenomena of fermentation and those of the infectious diseases, he discusses the various theories of vaccination. As a Darwinite, he favours the view of Paul Grawitz, according to whom the immunity conferred by vaccination is due to the victory gained by the cells over the weakened virus, which victory strengthens the cells against the virus even in its unenfeebled form. Dreher accordingly opposes Koch's hypothesis of the manner in which tuberculin acts—namely, by coagulation necrosis. According to Darwin, kindred species often have qualities of the same kind, only stronger in some of them than in others. Dreher therefore suggests that inoculation with kindred bacteria of a less virulent nature might confer immunity against the germs of infectious diseases. I may add that the same author has recently published "three psycho-physiological studies," entitled "Darwinism and Archigony," "Debility, with reference to Hypnotism," and "Colour-Sensation and Colour-Blindness."

The Bethany Hospital.

Dr. Hans von Steinau-Steinrück, one of the ablest of the younger Berlin practitioners, has been elected to succeed the late Dr. Goltdammer as chief of the medical department in the Bethany Hospital here.

German Death-rates.

The death-rates of the principal German cities in the week which ended on the 16th ult. were as follows: Aix-la-Chapelle, 23·9; Altona, 17·2; Barmen, 23; Berlin, 19·9; Bremen, 16·5; Breslau, 28·7; Chemnitz, 28·5; Cologne, 20·3; Dantzic, 18·9; Dresden, 24·2; Düsseldorf, 23·5; Elberfeld, 18·7; Frankfort-on-the-Maine, 21·9; Hamburg and suburbs, 22·2; Hanover, 17·2; Königsberg, 24; Krefeld, 19·4; Leipsic, 20·2; Magdeburg, 21·8; Munich, 25·4; Nürnberg, 30·4; Stettin, 29; Stuttgart, 18·1. The death-rate of Amsterdam in the same week was 24·9; of Copenhagen, 24·1; of Dublin, 25·5; of Liverpool, 29·8; of London, 26·1; of Paris, 23·9. Of the Berlin deaths in the said week, one was due to scarlet fever, one to influenza, two to erysipelas, two to quinsy, two to puerperal fever, two to articular rheumatism, five to poisoning (including one suicide and two cases of delirium tremens), eleven to gastro-intestinal catarrh, twelve to whooping-cough, sixteen to diarrhœa, twenty to diphtheria, twenty-two to decrepitude, twenty-five to diarrhœa accompanied by vomiting, twenty-five to cerebral apoplexy, forty-two to pneumonia, and 102 to pulmonary consumption. Twelve persons committed

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suicide. The population of Berlin at the end of that week was 1,596,865.

Dr. Richard Lemon, private lecturer on anatomy in the University of Jena, has been appointed professor.

Berlin, June 15th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Fordyce Barker.

THE death of Dr. Barker removes from medical circles a somewhat notable figure. He began his career in New York as the Professor of Obstetrics in the New York Medical College (a school long extinct), and subsequently was transferred to the Bellevue School. Owing to a laryngeal affection, he early lost his voice, and therefore was obliged to discontinue attempts at giving courses of lectures. He occasionally gave clinical lectures, but with great difficulty. He was a very genial man, who won a large circle of friends both in and out of the profession. As a consulting obstetrician his advice was much sought. His work on "Puerperal Diseases" has always been very popular. Dr. Barker annually visited Europe, in the capitals of which he was widely and favourably known.

Endowment of Medical Schools.

There is an increasing and gratifying tendency in the direction of the endowment of universities, the benefits of which extend to the medical departments of these institutions. The Vanderbilt endowment of the College of Physicians and Surgeons has been followed by an act of incorporation of that school into Columbia College, which is now assuming the proportions of a university. The University of the City of New York is about to remove to a locality in the suburbs, where it can expand to its full proportions under the stimulus of recent endowment funds. This change will accrue to the benefit of the medical department, which will remain in its present advantageous position, but may become more closely connected with the university scheme of expansion. The medical department of the University of Pennsylvania has received contributions towards an endowment fund, which promises to take on large proportions. These are a few of the indications of growing interest in a more thorough system of medical education in this country.

Restrictions on Immigration.

The new law providing for the elimination of undesirable immigrants is now being applied with great stringency. The insane, the crippled, and feeble, who have no means of support, as also the criminals and those coming under contract for labour, are intercepted at the immigrant depôt, and at once returned to the ships which brought them to this port. The steamship companies are compelled to support these immigrants while in port, and to take them back on the return trip of their ships. This action of the Government has led steamship companies to enforce rigid rules in regard to the emigrants applying for passage. Since the enforcement of the law against the landing of dependent immigrants at this port it is surprising that so many insane and helpless have been found on every incoming ship.

The Marine Hospital Service.

Surgeon-General Hamilton has resigned his position as the head of this service, and accepted a professorship in the Rush Medical College at Chicago. During his incumbency of the office Dr. Hamilton devoted much time to sanitary matters pertaining to quarantine. His successor is Dr. Walter Wyman, who has been connected with the service for many years.

Death of Professor Joseph Leidy.

In the death of Professor Leidy the profession has lost one of its most distinguished members. His rank among scientific men was very high, especially in the field of comparative anatomy. He devoted his long life exclusively to teaching in the medical department of the University of Pennsylvania.

New York.

PHARMACEUTICAL SOCIETY OF IRELAND.—The following have obtained the licence to act as registered druggists:—Jno. H. Dudgeon, Thomas Jno. Field, Edgar S. Kee, James Mahon, William Miskelly, Thomas Spratt, Samuel Suffern, David S. Thomson, and Thomas G. Wilkinson.

Obituary.

HENRY GAWEN SUTTON, M.B. LOND., F.R.C.P.

BY the death of Dr. Sutton, to which we briefly alluded last week, the medical profession has lost one of its most remarkable members, and the London Hospital one of the most valued of its staff and teachers. Dr. Sutton was born at Middlesbrough, in Yorkshire. He came of a family of shipowners, and wished to follow a sailor's life. Deference, however, to his mother's great wish induced him to adopt the medical profession. He began his medical education at King's College, and took the degree of Bachelor of Medicine at the London University in 1858, never proceeding to the higher degree. Shortly after qualifying he began his medical career in general practice at Holloway. This, however, was not to his taste, or, rather, he had a craving for scientific work. He found the opportunity of prosecuting this at Guy's Hospital, where, both in the wards and in the pathological department, he diligently worked for some years. He found his greatest interest in the study of pathology, to which he devoted himself for the remainder of his life. At Guy's Hospital he was thrown much into contact with the late Dr. Barlow, Sir William Gull, and Dr. Wilks. With the two latter he afterwards kept up a close friendship. Much of his work was published in conjunction with Sir William Gull. The two men had much in common in their breadth of view on pathological questions, but it is well known that the main work which was published in their joint name was the laborious and individual achievement of Dr. Sutton. Besides Sir W. Gull, two other men appear to have exercised a permanent influence on his mind. To the teaching of Dr. Todd must in some measure be attributed his belief in the value of alcohol in the treatment of disease, and which he carried into practice to a degree which some would regard as bordering on excess. To Dr. Wilks he was indebted for the basis of his pathological knowledge, and his independence of thought in the study of disease.

Dr. Sutton became a Member of the Royal College of Physicians of London in 1863, and was elected a Fellow in 1870. He was for some time assistant physician to the Victoria-park Hospital for Diseases of the Chest, where he did much valuable clinical and pathological work. He became medical officer of health to the parish of Shoreditch, and retained this office up to the time of his death. His appointment as Pathologist to the London Hospital in 1866 marked an important epoch in his life, and gave him the opportunity of carrying out his favourite study under the most advantageous circumstances, with a practically unlimited material at his disposal. He came to the hospital just at the time of the last cholera epidemic, which, it will be remembered, was mainly restricted to the East-end of London. In the post-mortem room and wards of the hospital, and at a temporary cholera hospital in Commercial-street, Whitechapel, of which he was placed in charge, he had a most valuable field of observation, which he utilised to the fullest, and embodied his researches in communications to the reports of the medical officer to the Privy Council, and in the London Hospital Reports. Shortly after his appointment as pathologist, Dr. Sutton was elected assistant physician to the hospital, and threw himself actively into all departments of work. Though not, at that time, entitled to beds of his own, some of his senior colleagues gave him full opportunities of clinical work. It was at this time that he pursued his inquiries on the expectant treatment, or rather natural history, of rheumatic fever, which were subsequently published in conjunction with Sir William Gull. At this period of his career his enthusiasm, activity, and power of concentrated work were only limited by time. He would frequently visit the wards at 9 A.M., remain for a couple of hours, go home to see a few patients, return to the hospital to lecture on pathology at 12.30, see out-patients from 1.30 to 3, make post-mortem examinations from 3 to 5 or 6, and then, after a frugal meal in a room over the post-mortem room, set to work again, writing out or dictating notes of the post-mortems he had made, and working with the microscope until late at night, and sometimes even till the small hours of the morning. He practically spent his day at the hospital. He continued this for many years, but increasing practice in later years did not

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allow of such undisturbed clinical and pathological work, though to the end of his career he devoted a large share of his time to the hospital. In 1876 he became full physician, but this did not materially affect the scope of his work, whilst it freed him from out-patients' duty. For some years he visited the wards regularly every Sunday morning, with a few of the more ardent resident officers and visitors from other hospitals. At such times he was seen at his very best as an exact observer and inspiring clinical teacher. Some of his then followers, who are now distinguished members of the profession, state that they received the most valuable and enduring part of their medical education on these Sunday mornings. For some years Dr. Sutton conducted all the pathological work of the hospital, which, owing to the great size of the latter, is exceptionally heavy, alone. Afterwards for many years he had the valuable coöperation of Mr. McCarthy, and later of Dr. Charlewood Turner. Three years ago the department was reorganised, and Dr. Sutton retained a merely nominal connexion with it. His pathological experience was enormous, and as a demonstrator he has rarely been excelled. The simple but impressive way in which he explained to the assembled students the conditions present in the dead body, and the processes which had brought about these changes, was quite remarkable; and, as a distinguished occasional visitor to the hospital observed to the writer since Dr. Sutton's death, "he seemed to make the organs live again." Few besides those who actually worked with him have any idea of the continuous, careful, and exact manner in which he prosecuted his researches, or can form any conception of the years of labour which preceded the publication of his investigations on Arterio-capillary Fibrosis, and the changes in the nervous system occurring in that condition. Received at first with a degree of scepticism which amounted to hostility in some quarters, they were based on a solid foundation of ascertained facts, and he lived to see them confirmed by independent workers, and accepted amongst the standard doctrines of pathology.

As a lecturer, Dr. Sutton was most impressive. The lectures were delivered extempore; his style was exceedingly simple, but he was at times very eloquent. His teaching was characterised by great breadth of view and poetic feeling, and at the same time that he inculcated broad principles he conveyed a large amount of detailed and practical information. His "Lectures on Medical Pathology," published in 1886, do scant justice to his teaching. His style was more fitted for oral delivery than for reading without much more literary correction and attention than the published lectures received. To some, indeed, they appear barely intelligible; but to those who are familiar with his mind and manner they recall, though imperfectly, his inspiring thoughts, and "the sound of a voice that is still." Full they are both of practica information and philosophical thought, inspired by a noble and poetic mind. For a few years Dr. Sutton gave the systematic lectures on the Principles and Practice of Medicine, but he found this less congenial than pathology, and he reverted to the chair of Pathology, which he held to the time of his death. Dr. Sutton was as noteworthy as a clinician as a pathologist. He was a most patient bedside investigator, and one of the most accomplished diagnosticians of our time. It is remarkable that, though somewhat deaf, he was a most accurate auscultater. He said he had to take more trouble to listen than other people, and certainly his efforts were rewarded by success. He was one of the earliest to recognise and publish observations on the presystolic mitral murmur, and on tricuspid bruits. In dealing with hospital patients he always respected the dignity of the sufferer, and in so doing exercised a valuable influence on the minds of the students trained under him. Just as he made his pathology essentially clinical, so he carried his pathology to the bedside and made the observers with him see in mind the changes working in the body. His writings, though not numerous, are each of them valuable contributions to medicine. He wrote the article on "Abscess of the Brain" in Russell Reynolds' "System of Medicine," and an important article on "Fibroid Degeneration of the Lungs" in the Medico-Chirurgical Transactions. His other important publications have been incidentally alluded to, but space does not allow their just discussion. His name will remain most associated with the subject of arterio-capilary fibrosis, and most fittingly so, as his writings on this topic display his three great characteristics—wide clinical experience, extensive pathological grasp, and patient, detailed work.

At one time Dr. Sutton took an active share in the management of the Medical School of the London Hospital, and was one of the powerful causes in its increased prosperity in recent years. It was mainly through his influence that the present College Board which governs the school, and is composed of six members of the house committee (laymen) and six members chosen from the staff and lecturers, was established, and which has been found to work most advantageously in the interest both of the hospital and school. Dr. Sutton, however, was by nature more fitted for inspiring and promoting undertakings than for practical administration, and he ceased after a time his connexion with the board, whilst retaining the greatest interest in all that concerned the real welfare of the students. Dr. Sutton was one of the physicians appointed to attend the nurses when sick. He most conscientiously and self-denyingly performed the duties devolving upon him, visiting the hospital daily to see urgent cases. In person, Dr. Sutton was of small stature. His features, especially in the upper part of his face, were delicately and beautifully chiselled, his eyes were bright, and his face usually wore a winning smile. He was somewhat shy and retiring in disposition, and this was increased by the deafness already alluded to. This infirmity shut him out to a great extent from general society and medical gatherings. Though retiring, he was by no means timid, and could be very outspoken when occasion required. His nature was extremely affectionate and sympathetic, and he exercised a most powerful and permanent influence on all, in and out of the profession, who were thrown into close association with him, obtaining not only their respect, but their loving regard. Actuated himself by lofty ideals, he exercised an ennobling influence on his associates. His reading in his earlier and middle life was extensive in range rather than in amount, but in his later years his literary appetite was voracious. He was a great reader of poetry, both in verse and prose, Shakespeare, Burns, and Ruskin being his favourite authors, and he had highly artistic sympathies. He was a great lover of nature, and, as in the case of many gentle natures, his favourite recreation was fishing. It was not so much for love of the sport as for the environment angling secured him. To show how greatly he was influenced by nature, a quotation from his "Medical Pathology" will suffice: "Whilst endeavouring to feel my way into the rhythm of the world I one day stood near a running brook and waited until my senses were governed by its rhythm; then I found I was inwardly, and in a little while outwardly, moving to it. The brook got me into tune, and away I could go. As I got into tune and time and rhythm with the brook, my heart's and other muscular movements were toned, agreed accordingly. My senses were governed by the mighty, undeviating rhythm, and my heart and limbs moved marvellously 'easy,' the government of the great being the easiest government." There was a curious mixture of the mystical and the practical, and a delight in paradox, in the organisation of Dr. Sutton's mind. The mystical element, which made him difficult to understand to many, increased upon him in his later years. He was essentially a deeply religious man, but his religion had nothing sectarian in it. It inspired his life and influenced his work. Whatever he did was done with the noble aim of helping poor, struggling, suffering humanity; and he might most suitably have borne as his own the motto of his hospital—"Homo sum: humani nihil a me alienum puto." Dr. Sutton's constitution was severely shaken about thirteen years ago by the illness and death of his daughter, Mrs. Pantin. Though in the course of some years he regained his health, he was never quite the same man afterwards, and never again slept in his house in Finsbury-square, where she died. He had built himself a house, beautifully situated, at Sevenoaks, and went backwards and forwards to town daily to his work. His last illness was a short one. He was attacked by influenza, which was followed by bronchitis, and probably broncho-pneumonia. He knew he was to die, and was glad to feel he was going to be at rest. His old friend Dr. Wilks came to see him several times at his own request. Miss Lückes, the matron of the hospital, superintended the nursing, whilst the immediate nursing was, at his own desire, committed to Nurse Brewster. He had the devoted care of his son-in-law, Dr. Savage. His

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daughters were at his bedside, and his end was peace. He died at the early age of fifty-five. Dr. Sutton leaves a widow and two married daughters, not so much to deplore their loss as to feel grateful that he is peacefully at rest after such a useful life. Though no invitations or notices of the funeral were sent out, and many of his friends did not know even of his illness, a considerable number of his colleagues, friends, and old and present pupils assembled to pay the last tribute of respect to the remains of a truly great and worthy man.

"An Old Pupil" submits the following tribute to the deceased physician:—In the late Dr. H. G. Sutton we have lost one of the most original of the medical thinkers of the day, and one who, owing to his retiring habits and indisposition to write, was less widely known than he deserved. He will, however, live through the influence he exerted on his pupils, whose characters he did much to form. Many old London Hospital students to-day, though they may differ from him in some matters, yet reckon his example as having an important share in forming their medical habit of mind. He possessed a rare insight into bodily—and, indeed, mental—processes, and used his knowledge of morbid anatomy, which has perhaps been seldom equalled in its range, with a full sense of the difference (sometimes overlooked) between morbid results and morbid action. The command of the mortuary at the London Hospital during many years gave him vast opportunities, and his manner of conducting and demonstrating a necropsy was most admirable. With an easy colloquial delivery, he would show the why and wherefore of each phenomenon, and draw upon his stores of experience to illustrate and explain. His teaching was characterised by great simplicity. Pathology was reduced, in his annual courses of lectures, to its simplest elements; the language was such as a child might almost follow, and abstruse terms and long names were sedulously avoided. To him the processes of disease seemed to be mentally visible, and he taught his hearers to see them in like manner. Above all, he taught his pupils to think, and both in the deadhouse and the wards, and in consultations in private, he would use the same simple Socratic method of discourse, observing facts and drawing his inductions from them. The writer well remembers a discussion in the post-mortem room one afternoon many years ago between Dr. Sutton and another distinguished physician still living, on the relative merits of the inductive and the deductive method, Dr. Sutton arguing for the former. In his philosophic tone of mind Dr. Sutton bore an obvious resemblance to the late Sir W. W. Gull, with whom he was associated in some of the very scanty writings he has left. It was a saying at his own hospital in regard to these—I know not with how much truth—that in their joint work, "Sutton loaded the gun and Gull fired it." From another aspect a comparison might be drawn between Dr. Sutton and Dr. Matthew Baillie, nephew to the Hunters. Both were devoted to morbid anatomy, and based their medical practice upon it, becoming very skilful diagnosticians, and therefore sound and successful in treatment; but both had a limited range of therapeutics and little of that wealth of varied resource which generally marks the popular practitioner. And although in temperament they differed much, yet both were sensitive men, of little bodily vigour, of retiring habits, and without ambition to attract the public gaze. Had Dr. Sutton, like Baillie, written early in his career a work on pathology, it is not improbable that his profound knowledge of the subject would have won for him a fame little less than that of his great predecessor. Long will his memory linger in the living thought of many of his old pupils as that of a great teacher to whom they owe much of what they are.

BRADFORD EYE AND EAR HOSPITAL.—The annual report for 1890 shows that 3462 cases of diseases of the eye and 490 cases of diseases of the ear, a total of 3952 cases, had been treated during the year; 1935 came from Bradford and 2017 from other places. The attendances of out-patients were 14,749, the number of in-patients 424. The average stay in the hospital was 17·72 days. 432 major operations were performed, of which 70 were extraction of senile cataract. In nearly all these cases preliminary iridectomy was done about six weeks before the extraction. There was not a single case of suppuration after operation. The mastoid antrum was opened with Schwartze's chisel five times. The finances of the hospital are in a satisfactory condition. The annual expenditure was £1983.

Medical News.

ROYAL COLLEGE OF SURGEONS.—In our list last week of gentlemen who received the Fellowship of the College, Mr. A. W. Hughes should have been described as M.B.Edin., not as L.R.C.P.Lond.

AN AMERICAN MEDICAL TEMPERANCE ASSOCIATION has been started at Washington. Dr. Nathan S. Davies of Chicago is the president. Its object is "to advance the practice of total abstinence in the medical profession, and to promote investigation as to the action of alcohol in health and disease."

HANDWRITING IN PRESCRIPTIONS.—It is stated that the Austrian Minister of the Interior has recently issued an ordinance that the burgomasters of all communes must exercise strict supervision over the medical men practising within their jurisdiction in the matter of legibility of prescriptions. They are charged to see that every prescription is clearly and legibly written in all its parts, so that there may be no doubt as to the remedy, the dose, or the signature.

PRESENTATIONS.—A few days ago, at a dinner of the editorial staff and others connected with the *Medical Press*, Mr. A. A. Tindall was presented with a portrait of himself, to commemorate the twenty-fifth anniversary of his management of that journal.—Mr. Rowland Smith, M.R.C.S., of Cobham, Surrey, has been presented by the members of Court Hand and Spear, A. O. Foresters' Club, after thirty-one years' service as surgeon of the court, with a gilt ormolu clock and a purse.

QUEEN VICTORIA NURSING INSTITUTION.—The second annual meeting of the supporters of this institution was held last week at the Town Hall, Wolverhampton. The Archdeacon of Stafford occupied the chair. The annual report for the past year showed that the institution was making satisfactory progress. There were on the staff sixteen fully trained nurses. In the course of the year nurses had been supplied to 121 families, representing 434 weeks of nursing. The demand for nurses was so pressing that steps were being taken to augment the staff, to meet future requirements. The cash statement showed a balance in hand of £528 1*s.* 6*d.*

ST. BARTHOLOMEW'S HOSPITAL.—A meeting of those interested in the foundation of a memorial to the late Dr. Matthews Duncan was held in the Great Hall at St. Bartholomew's Hospital on Thursday last, Sir Sydney H. Waterlow, Bart., in the chair, when the following resolutions were adopted:—(1) "That a gold medal or other prize for proficiency in Obstetrics and Gynæcology be founded at St. Bartholomew's Hospital, to perpetuate the memory of Dr. Matthews Duncan, and that it be named the 'Matthews Duncan Medal' (or Prize)." (2) "That a copy of the bust by Mr. Bainsmith, now in the possession of Mrs. Matthew Duncan, be obtained and placed in the library of the Medical School." (3) "That those present form a committee, with power to add to their number; and that Sir Sydney H. Waterlow be requested to act as chairman, and Mr. Bruce Clarke and Dr. Griffith as honorary secretaries."

IRISH MEDICAL ASSOCIATION. — The following office-bearers have been appointed for the ensuing year:—*President:* Sir C. Cameron. *Vice-Presidents:* H. MacDonnell, *F. G. Fitzgerald, P. J. MacNamara, J. R. Kinkead, H. G. Croly, W. Carte, S. Gordon, the President, and Vice-President of the College of Physicians. *Council:* Drs. Ashe, Sir J. T. Banks, A. Benson, W. Bennett, R. Browne, Burne, Burnside, Chapman, *Delahoyde, T. Donnelly, *Falkiner, Franks, Foy, Gibson, E. Hamilton, R. Hayes, *Hepburn (hon. sec. to the council), *A. H. Jacob, W. G. Jacob, Dillon Kelly, J. B. Kelly, J. Kenny, R. Leeper, C. McDowell, G. Mackesy, *Meldon (chairman of council), *H. Muichin (hon. treasurer), Olpherts, *Oulton (hon. sec.), P. C. Smyly, *Stoker, Sir Wm. Stokes, W. Thomson, Usher, and W. J. Wheeler. *County Council:* Drs. Gray, Stawell, Caldwell, MacNamara, Greene, Warnock, A. Douglas, Purcell, Gunning, Fletcher, Falvey, Johnson, T. Browne, Pentland, Gelston, G. Thompson, Wilson, Moore, O'Connor, Ringwood, Tabuteau, White, Laird, Morton, Duncan, Cutler, Kerrigan, G. Greene, and Bleakeley. (*Committee of council.)

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HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.—Lord Robartes, in presiding at the annual meeting on Saturday afternoon, and moving the adoption of the annual report, alluded to the fact that an anonymous gift of £1200 had enabled the committee to purchase the unexpired ten years' lease of the building.

THE SANTA CLAUS HOME, HIGHGATE.—This Home was opened last week by Lady Lucy Hicks-Beach. It is in connexion with the Santa Claus Society, and intended chiefly for cases of hip and spinal diseases, and for children who require slight surgical treatment and nursing, cases which are frequently ineligible for convalescent homes.

SICK NURSING AND MOTHERS' HELP SOCIETY, STALYBRIDGE.—This charity is making satisfactory progress in its usefulness. The ninth annual report shows that in the past year 150 new cases were tended and 4719 visits paid. The mothers' help department commenced in 1884, and has proved a great boon to the poor recipients of its benefits. The cash statement shows a small balance in hand.

NEW INFIRMARY, HALIFAX,—At a meeting of the General Committee held on the 12th inst., an outline was submitted of the internal modifications of the adopted plans, as approved by the executive committee. A resolution was carried approving of the scheme. The total amount of capital promised up to that date was £55,000. Of this, £15,000 has been expended in land. The estimated cost of the buildings is £50,000.

COTTAGE HOSPITAL FOR MIRFIELD.—Mr. Charles Wheatley, J.P., of Sands House, Mirfield, is about to erect at his own cost a cottage hospital for this township. It will be a memorial of the late Mrs. Caroline Wheatley, wife of the late Mr. Richard Wheatley, of Royds House. The site of the building is central and eligible, and the coöperation of the local medical practitioners in the prospective usefulness and benefits of such a hospital has already been made known.

SUICIDE OF A MEDICAL PRACTITIONER.—An inquest was held on the 3rd inst. by the borough coroner, Portsmouth, concerning the death of Mr. William Luard Wright, L.R.C.P., of Pendennis-street, Southsea, aged twenty-nine. It appeared that the deceased was not in practice, and resided with his father. He had lately laboured under certain delusions and depression. On the previous day he was found in his room in an insensible condition, and a glass measure which had contained prussic acid was lying near him. The medical testimony was that poisoning by that acid was the cause of death.

GENERAL HOSPITAL, LAUNCESTON. — The annual report for 1890 shows that the hospital and its management are in a more satisfactory condition than at any previous period since they have been under the control of the board. To meet a long-felt requirement a dental department has been formed. An important and desirable addition has also been made in the arrangements by setting apart special wards for sick children. The need of a convalescent home in connexion with the hospital is severely felt. The statistics of the patients for the past year show that the admissions were 888, discharges 790, and deaths 68. Chloroform had been successfully administered 155 times during the year.

MEDICAL NOTES IN PARLIAMENT.

The Alleged Death from Vaccination.

IN the House of Commons, on Thursday, the 18th inst., Mr. Herbert Gladstone asked the President of the Local Government Board whether he would endeavour to ascertain whether the case of Emily Maud Child, who died at Leeds on the 1st July, 1889, according to the coroner's jury, "from syphilis acquired at or from vaccination," had been the subject of further medical investigation by the Royal Vaccination Commission; and whether such investigation had confirmed the view that the disease from which the child died was due to vaccination.—Mr. Ritchie said: The case of Emily Maud Child has been the subject of further investigation by a medical man appointed by the Royal Commission on Vaccination, and I am informed that he reported that there was no evidence of syphilis in either of the parents, and no evidence of inherited or acquired syphilis in either of their two elder children; and that the accounts he obtained of the deceased child, Emily Maud, did not suggest to him that it was the subject of inherited syphilis. I may add that the case is still under investigation by the Commission.—Mr. Summers asked whether the report would be published.—Mr. Ritchie said that the report had been furnished to the Commission, and he understood that the gentlemen who made it would undergo examination at the hands of the Commission.

Influenza.

Mr. Howard Vincent asked the President of the Local Government Board when the report in preparation by the scientific officers of his department upon the recent epidemic of influenza would be laid upon the table.—Mr. Ritchie: The report on the influenza epidemic of the past year has been la'd on the table of the House. The report is in type and the printing is being proceeded with. I have requested that this may be expedited as much as possible.

The Consumption of Opium.

Mr. Samuel Smith asked the Under Secretary of State for India whether his attention had been drawn to a paragraph in the 25th Statement, with reference to the enactment of new rules for regulating the production of opium, and whether the Government would draw the attention of the authorities in other parts of India to the desirability of closing the shops where prepared opium is smoked on the premises, as has already been proposed in the Punjab.—Sir John Gorst said the Local Government had reduced the opium smoking licences, and was considering further reductions. The attention of the Government of India would be invited to the question of the hon. member. He would be happy to show the hon. member the new opium rules, and he could then consider whether it would be necessary to lay them on the table.

Royal British Nurses' Association.

Mr. Paulton asked the President of the Board of Trade whether the application of the Royal British Nurses' Association for permission to omit the word "Limited," if registered under the Companies' Act, had been refused by the Board of Trade; if so, whether he would state the reasons for that refusal, and whether he would reconsider the decision.—Sir Michael Hicks-Beach said he had given careful consideration both to the application and the representations made in opposition to it, and he was not prepared to reconsider his decision.

THE METROPOLITAN HOSPITALS INQUIRY.

Uniform Hospital Accounts.

AT the Committee on Monday, Mr. Williams gave evidence on the part of the committee of management of Guy's Hospital. He came to explain a statement made in the evidence of Mr. J. W. Gordon concerning two items that appeared in Guy's Hospital report as £587 17*s.* 19*d.* and £818 18*s.* 13*d.* Mr. Williams explained that the "19*d.*" and "13*d.*" were misprints, the mistake being attributable to the printers. He produced a letter from the printer acknowledging the mistake. He further produced the original documents signed by the auditors to show that these figures did not exist in them. In answer to Lord Cathcart, the witness said it was a very odd and stupid blunder.

Poor-law Infirmaries.

Dr. Bridges, Poor-law Inspector for the Metropolitan District, was next examined. He explained the internal organisation of Poor-law infirmaries, and expressed the opinion that it would be a great advantage if the services of an honorary medical staff could be obtained for infirmaries, as in the case of hospitals. The difficulty of opening the infirmaries to an honorary staff was that in most cases the infirmaries were situated at such great distances that it would be difficult for the leading consulting physicians and surgeons to attend. He mentioned several infirmaries where the matrons were not hospital-trained nurses. In these cases the subordinates knew more about the profession than their superintendents. Such a state of matters destroyed the influence of the matron, inasmuch as the trained nurses looked down upon her. Altogether about 888 nurses were employed in those infirmaries. Within the last ten years the prejudice against the employment of a trained matron and of trained nurses had very much diminished, and he had no doubt that if all the untrained matrons were to disappear to-morrow, almost all the boards of guardians would elect trained matrons; but unfortunately they were saddled with the old officers. The Poor-law infirmaries served the purpose of treating chronic cases after they had been discharged from the hospital, and who would otherwise die for want of care. He had thought a great deal about how the Poor-law dispensaries might be linked with other charities. He thought that every facility ought to be given for making attempts in that direction. Where a Poor-law infirmary was situated not very far from a general hospital—as, for instance, in the case of the Whitechapel Infirmary and the London Hospital, which is nearly opposite to it, or in the case of St. George's Hospital and the Chelsea Infirmary, or of the Lambeth Infirmary and St. Thomas's Hospital—in such cases as these he thought it would be possible to have some arrangement by which the assistant physicians or surgeons—that is, the honorary staff of the general hospitals—could go at certain definite times and consult with the medical superintendent as to the more serious cases, bringing, possibly, with them a certain number of senior students.

Mr. Charles Gross, medical superintendent of St. Saviour's Infirmary, East Dulwich, which contains 786 beds, expressed himself in favour of having trained nurses as matrons in the infirmaries. It was not necessary for people to become paupers before being treated in the infirmaries. The cases were mostly those which could not be taken into a general hospital. The patient may be earning good wages, as much as 30*s.* a week, and be suddenly stricken down with an accident, and he comes into the infirmary. He would not be taken into the hospital because his case might not be serious enough or interesting enough.—By Lord Thring: The effect of these infirmaries in regard to the curing of the disease is greatly to tend to pauperise the people.—Yes, and prevents them from going into provident clubs.—Lord Thring: Yours is very startling evidence. Take the case of a gas stoker earning 30*s.* a week; if the man were thrown on his own resources, as he would have been in former days, he would not have got out-door relief; he would have gone on credit, and his doctor would have managed him on credit; and now you say, quite justly, that though the man is destitute in one sense, he would be able to pay it back in a week, and under those circumstances the man comes into the hospital.—The Witness: Yes; several times we have a case of delirium tremens,

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and we know the man is in good work. The man comes in for a fortnight, and is sent away perfectly well, and he has done nothing at all for it. Sometimes money may be found on the patients, and that is used to defray the cost of his maintenance. Only the other day a man came into the hospital with £9 in his pocket.

The London Throat Hospital.

Mr. Frank Horne, secretary of the London Throat Hospital, situated in Great Portland-street, stated that the hospital had been established in 1886. It had not yet received any grant from the Hospital Sunday Fund, but an application would be made this year, he hoped successfully.

Central London Ophthalmic Institution.

Mr. William Abraham, secretary of this institution, in 238A, Gray's-inn-road, was next briefly examined. The hospital was founded about fifty years ago. Last year it received £62 10*s.* from the Hospital Sunday Fund and £41 1*s.* from the Hospital Saturday Fund.

The Committee then adjourned.

Wormwood Scrubbs.

On Thursday, Mr. R. Lunn, F.R.C.S.Ed., medical superintendent of the Poor-law Infirmary at Wormwood Scrubbs, was examined, and gave evidence on the manner in which the Poor-law system of relief was worked, generally confirming the statements made by previous witnesses. He objected to students attending these institutions except under their instructors, who might demonstrate the cases to them. The out-patient department supplied all the material generally met with in these infirmaries. Asked whether it was the fact that the general hospitals, established for the poorest of the poor, really did not receive the poor, and whether that was not opposed to the principle of charity, the witness replied that that was the fact. Some of the cases were of so loathsome a character that the sufferers were not taken into a general hospital, and came to the Poor-law infirmaries.

Bethnal-green Workhouse.

Dr. Knox, medical officer of Bethnal-green workhouse, which was built about fifty years ago, was next examined. He said that the hospital contained 495 beds, the tenants of which were attended to by a day staff consisting of one superintendent, eleven nurses, two male and two female imbecile attendants, and three infirm ward nurses. The night staff was composed of eight ordinary infirmary nurses, one male and one female imbecile attendant, and one female infirm ward nurse. The matron had not received any hospital training, and only one of the nurses held any hospital certificate. He contended that the system of pauper help was a crying evil. They had as many as eighty paupers employed during the winter. He computed that each nurse had about four wards to look after, and in some cases as many as six on different floors. The average number of beds to each ward was nine or ten.—Lord Cathcart: I suppose you enjoy at Bethnal-green the repute of being the very worst establishment of this kind in the metropolis?—Yes, I believe so.—And the whole thing ought to be amended, or abolished, or reconstituted to-morrow, if that were possible?—Abolished, my lord. I think it would be impossible to amend it.—In fact, the whole thing is a crying and a notorious evil, is it not?—That is so, in my opinion. Continuing, the witness said he had performed serious operations, such as amputations and laparotomy, successfully in that hospital, with such assistance as he provided himself. With regard to a site for a new infirmary, the guardians had been looking out for one ever since he had been appointed some eleven years ago. In his opinion it was a pity that the guardians had not been able to secure that space of forty-two acres known in the district as the "Poors' Land."

Paddington Infirmary.

Dr. Thomas Savill, medical superintendent of Paddington Infirmary, said that the administration, discipline, and management of the infirmaries generally were very good, but there were two exceptions. The matrons were not always hospital-trained nurses. Although the matron in Paddington Infirmary was hospital trained, perhaps not twelve out of the twenty-four matrons had had any such training. The medical staff was insufficient. Comparing the infirmary with St. Mary's Hospital, which was almost of the same size, he said the medical staff consisted of nine residents and nine visitors, whereas in the infirmary there were only three residents. He had not alluded to the numbers of students who help in the surgical cases. The hospital had many surgical cases but few nervous cases, while the reverse was the case in the infirmaries. It had been suggested that the infirmaries should coöperate with the hospitals and that the staff of the hospital might assist by coming and seeing the cases at the infirmaries. That kind of help was not what was required. The medical staff of the hospital had enough work to do already, and there were a great many men disconnected with any institution who ought to be considered. They required more residents who would do the drudgery of taking notes of the cases. The medical officers did not want any more masters, they required more servants, more senior students to investigate cases and carry them into effect the treatment prescribed by the officer. They also required true consultants who would come when called upon and see difficult cases. There were at present 12,170 beds (not including the sick wards) in the twenty-four infirmaries in London, which means 50,000 patients in a year. The whole of that material is practically wasted so far as medical education is concerned. Regarding the quality of the cases, he maintained that they were just the kind of cases with which men ought with profit to become acquainted. The patients were all ill, bedridden, and not of the same type at all as those met with at the out-patient department of a general hospital—cases of rheumatism, bronchitis, and all stages of nervous diseases; and students might with very great advantage give their services in return for the advantage they would derive from these institutions. It had been argued that this would lead to increase in the expenditure, and that the patients did not like it, but at Paddington the experiment had been tried. It was the only infirmary which had tried the experiment of teaching from the cases, and the lessons learned from the experiment were that the patient did not mind the examination by students, that it increased the interest of the medical staff, and that the cases were properly investigated.

The Committee then adjourned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 16th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	159	53	4	32	..	248	445
North-Western Hospital	110	32	..	12	..	160	142
Western ,,	132	18	..	12	1	163	224
South-Western ,,	135	22	..	10	1	168	340
South-Eastern ,,	122	13	..	11	2	148	462
Northern ,,	155	11	..	..	..	166	180
Totals	813	149	4	77	4	1053	2391

SMALL-POX.—*Atlas* hospital ship, 5.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

APPLEGATE, J. W., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Dewsbury and District Infirmary.

BEHRENDT, M. R. J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Scunthorpe Urban Sanitary District of the Glandford Brigg Union, vice Mecredy.

BLAIKIE, A. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Oswestry Incorporation.

BROWNING, B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Melcombe Regis District of the Weymouth Union, vice Tizard, deceased.

CARTWRIGHT, J. P., M.R.C.S., has been appointed Medical Officer for the Town District and the Workhouse of the Oswestry Incorporation.

CHAPMAN, C. W., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Farringdon General Dispensary (corrected notice).

CROMBIE, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer and Public Vaccinator for the Blyth District of the Tynemouth Union.

DAVIS, A. N., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent of the Plymouth Borough Lunatic Asylum.

GAY, WILLIAM, M.B., C.M. Edin., has been appointed Medical Officer for the Boxmoor Sanitary District of the Hemel Hempstead Union.

GEORGE, C. F., M.R.C.S., has been reappointed Medical Officer for the Blyborough District of the Gainsborough Union.

GORE, W. R., M.B., B.Ch. Irel., has been appointed Medical Officer for the Hanmer Sanitary District, Salop, vice Bookey, deceased.

GRINDROD, J. A., M.R.C.S., has been reappointed Medical Officer, Norden, Rochdale.

HALL, ARTHUR J., B.A., M.B. Cantab., L.R.C.P. Lond., has been appointed Joint Lecturer on Physiology and Demonstrator of Practical Physiology at the Sheffield School of Medicine, vice Dr. Theo. Thomson and Mr. F. Harrison, resigned.

HARRISON, EDWARD, M.A., M.B. Cantab., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Hull Royal Infirmary.

HOWDEN, JAS. C., M.D. Edin., has been reappointed Medical Superintendent of the Royal Lunatic Asylum, Montrose.

JONES, W. R., M.D., C.M. Glasg., has been reappointed Medical Officer for the Devynnock District of the Brecon Union.

KARKEEK, P. Q., M.R.C.S., has been reappointed Medical Officer of Health for Torquay and St. Mary Church.

KINGDON, E. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third District and the Workhouse of the Holsworthy Union, vice Symons.

LIVINGSTON, J. L., M.D., C.M. Irel., has been appointed Medical Officer for the Workhouse and Sanitary District of the Hursley Union, vice Chapman, resigned.

MACDONNELL, LUCIUS G. A., M.B., B.Ch. & B.A.O. Univ. Dub., has been appointed Assistant House Surgeon to the Halifax Infirmary.

MCDOUGALL, H. A. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Wincanton District and the Workhouse of the Wincanton Union.

MACGILL, GEORGE, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for Wuerdle-and-Wardle.

MACGREGOR, ALEX., M.B., C.M. Aberd., has been appointed Medical Electrician at the Royal Infirmary, Aberdeen.

MARSDEN, R. S., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Malton Rural and Urban Sanitary Districts, vice Young.

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REES, D. V., L.R.C.P. Lond., M.R.C.S., has been reappointed District Medical Officer of the Brecon Union.

RIDDELL, JOHN S., M.B., C.M. Aberd., has been appointed Assistant Pathologist to the Royal Infirmary, Aberdeen.

ROCKLIFFE, WM. CRAVEN, MA., M.B. Cantab., M.A., M.D. Dub., M.R.C.S., L.S.A., has been appointed Honorary Ophthalmic Surgeon to the Hull Royal Infirmary.

ROWLEY, C. O., M.R.C.S., has been reappointed Medical Officer for the Second Sanitary District of the Barnsley Union.

SCOTT, WALTER, M.B., C.M. Edin., has been appointed Medical Officer for the Bewdley District of the Kidderminster Union, vice Webster, resigned.

SKARDON, C. C., L.S.A., has been appointed Medical Officer for the Evershot District of the Beaminster Union, vice Weir, resigned.

SMITH, ROBT. ARTHUR, has been appointed Assistant House Surgeon to the Rotherham Hospital and Dispensary, vice H. G. L. Allford, M.R.C.S., L.R.C.P., resigned.

SMYTH, W., M.B., C.M. Edin., has been appointed Medical Officer for Amble, Alnwick Union.

SOUTAR, ROBT., M.B., C.M. Aberd., has been reappointed a Medical Officer of the Royal Infirmary, Montrose.

STAUNTON, M. C., M.B., C.M. Irel., has been appointed House Surgeon to the Mater Misericordiæ Hospital, Dublin.

STENHOUSE, THOS., has been appointed Public Analyst for the Borough of Clitheroe.

STEPHENSON, S. H. A., M.B., F.R.C.S. Edin., has been reappointed Medical Officer of the Ophthalmic Central London District School, Hanwell.

STONE, VALENTINE, M.D. St. And., L.R.C.P.L., F.R.C.S. Edin., has been reappointed a Medical Officer of the Royal Infirmary, Montrose.

SUCKLING, C. W., M.D. Lond, M.R.C.S., M.R.C.P., has been appointed Consulting Physician to the Children's Hospital, Birmingham.

TAYLOR, SHEPHARD T., M.B. Lond., L.R.C.P., M.R.C.S., has been reappointed Medical Officer for Cromer.

THOMPSON, A., M.D. St. And., M.R.C.S., has been reappointed Medical Officer for the Grange-over-Sands Urban Districts.

WALSH, ROBERT W., M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Hulme Dispensary, Manchester.

WARD-HUMPHREYS, HERBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Cheltenham Children's Hospital.

WAYMAN, C. P. S., M.R.C.S., has been appointed Medical Officer for the Third District of the Aylsham Union.

WEIR, A. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Malvern Sanitary District.

WEIR, G. W., M.D., C.M. Irel., has been appointed Medical Officer of Health for the Garrow Urban Sanitary District of the South Shields Union.

WHITAKER, G. H., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Loddon and Clavering Union, vice Johnston, resigned.

WHITE, WALTER, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Darton Sanitary District of the Barnsley Union.

WHYTE, AND., M.D., C.M. Aberd., has been reappointed District Medical Officer of the Brecon Union.

WILSON, GEORGE, M.R.C.S., has been appointed Medical Officer of Health for the Midsomer Norton Urban Sanitary District of the Clutton Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BEDFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—Resident Surgeon. Salary £100 per annum, with apartments, board, and washing.

BOROUGH OF BLACKPOOL.—Medical Officer of Health for the Borough. Salary £300 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Anæsthetist.

COUNTY OF CAITHNESS.—Medical Officer of Health. Salary £300, with £50 for travelling and other expenses, except forms and official stationery and postage. (Apply to the County Clerk, Thurso.)

DORSET COUNTY ASYLUM.—Assistant Medical Officer at the Second Asylum. Salary £120 per annum, with board and furnished apartments.

DERBYSHIRE ROYAL INFIRMARY.—Resident Assistant House Surgeon for six months. Salary £10 for the first six months. If re-elected, £25 for the second six months. Separate apartments, board, and washing provided.

EAST LONDON HOSPITAL FOR SICK CHILDREN, Shadwell, E.—House Surgeon. Board and lodging provided.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary £100 per annum, with board, washing, and lodging.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary £100 per annum, with board, washing, and lodging.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, Westminster.—Physician.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

LUNATIC ASYLUM, The Coppice, Nottingham.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, attendance, and washing.

Mr. G. RAYNOR, 132, Cheapside, E.C.—Medical Officer for the North-west Coast of Africa. Salary £80 for the first year, £100 second year. Board and apartments provided. Passage paid out and home.

METROPOLITAN DISPENSARY, Cripplegate.—Resident Medical Officer. Salary £50 per annum, with residence and an allowance for coals and gas.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—House Surgeon and Secretary. Salary £120 per annum, with board and lodging.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer.

OLDHAM INFIRMARY.—House Surgeon. Salary £80.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House Surgeon. Salary £50, with board, lodging, and washing.

VICTORIA UNIVERSITY COLLEGE, Liverpool.—Holt Professorship of Physiology. Salary £375 per annum, plus share of students' fees.

YORKSHIRE COLLEGE, Leeds.—Lecturer on Sanitary Engineering. Stipend £200, and certain fees.

Births, Marriages, and Deaths.

BIRTHS.

EDGE.—On June 16th, at Netley, Hants, the wife of Surgeon Major John Dallas Edge, Medical Staff, of a son.

DAVIDSON.—On June 10th, at White House, Teddington, the wife of Harold Davidson of a son.

COCKEY.—On June 15th, at The Limes, Little Waltham, Chelmsford, the wife of Dr. Percival Cockey of a son.

FROSSARD.—On June 12th, at Mortimer House, Bishop's Lydeard, the wife of Emilien E. Frossard, M.R.C.S., L.R.C.P. Lond., of a son.

HUME.—On June 8th, at 423, Kingsland-road, N., the wife of Dr. David Hume, Hanbury-street, E., of a daughter.

JONES.—On June 5th, at Merton House, Plantation-road, Oxford, the wife of Arthur Wentworth Jones, B.A., F.C.S., M.R.C.S., L.R.C.P., of a son.

MACDOWEL.—On June 12th, at the Mall House, Sligo, the wife of Effingham MacDowel, M.D., of twin sons.

PEAKE.—On June 15th, the wife of W. Pemberton Peake, M.R.C.S., L.R.C.P., of Wyggeston House, Leicester, of a daughter (Lily).

SHORE.—On June 15th, at Hornsey, N., the wife of T. W. Shore, M.D. Lond., of a daughter.

TIRARD.—On June 10th, at Weymouth-street, Portland-place, the wife of N. Tirard, M.D. Lond., of a son.

WHITELOCKE.—On June 9th, at Banbury-road, Oxford, the wife of R. H. Anglin Whitelocke, M.B., M.R.C.S., of a son.

MARRIAGES.

AITCHISON—STAVELEY.—On June 16th, at Ifield Church, Crawley, Sussex, Robert Swan Aitchison, M.B. Edin., to Jessie Georgina Annie Staveley, second daughter of the late George Augustus Pepper Staveley, B.C.S., of Woldhurstlea, Crawley.

BARKER—CLARKE.—On June 10th, at Christ Church, Sandown, Isle of Wight, Henry Martyn Barker, M.B., M.R.C.S., son of the late T. Herbert Barker, M.D., F.R.C.S., of Bedford, to Edith Emily, daughter of the Rev. Henry Clarke, Rector of Savanna la Mar, Jamaica.

BOXALL—LUCAS.—On June 10th, at St. Paul's, Clifton, Robert Boxall, M.D., M.R.C.P., of Weymouth-street, Portland-place, W., eldest son of the late Henry Boxall, F.R.C.S., of Wisborough-green, Sussex, to Eva Maud, youngest daughter of George William Lucas, of Netley House, Clifton.

CHILDE—SMITH.—On June 10th, at St. Mary Magdalene's, St. Leonards-on-Sea, Charles Plumley Childe, B.A., M.R.C.S., Southsea, eldest son of the Rev. G. F. Childe, M.A., St. Leonards, to Margaret, widow of the late Dr. A. J. Smith, of Kurseong, Bengal.

SNAPE—HAHM.—On June 3rd, at Marylebone Church, Ernest A. Snape, L.R.C.P. Lond., of Welbeck-street, W., to Mary, only daughter of the late F. Hahm, of Mexico, and of Mrs. Hahm, York-terrace, Regent's-park.

WACHER—FREND.—On June 11th, at St. Margaret's Church, Canterbury, Sidney Wacher, F.R.C.S., to Margaret Caroline, only daughter of the late George Royle Frend, of Canterbury.

DEATHS.

ATKEY.—On June 11th, at Walton Lodge, Worthing, William Thomas Atkey, L.R.C.P. Lond., aged 36.

BROWN.—On May 26th, at St. Sidwell's Villa, Exeter, Louie, the wife of Martin Luther Brown (in childbirth).

GRABHAM.—On June 13th, at his residence, Rochford House, Pontefract, Charles Grabham, M.B. Lond., M.R.C.S., J.P., aged 53.

LYON.—On June 5th, Felix William Lyon, M.D., King's College, Aberd., M.R.C.P. Lond., of North Charlotte-street, Edinburgh, aged 87.

SAWER.—On June 9th, at Fairlea, Northam, Bideford, Thomas Sawer, M.R.C.S., late of Clifton, Gloucestershire, aged 77.

SMITH-SHAND.—On June 12th, at 17, Albyn-place, Aberdeen, James W. F. Smith-Shand, M.D., Regius Professor of Practice of Medicine, University of Aberdeen. Friends are requested to accept this intimation.

STRUTHERS.—On the 6th inst., at 39, Charlotte-street, Leith, James Struthers, M.D., F.R.C.P.E., aged 69 years. Friends will kindly accept this (the only) intimation.

WHYLOCK.—On June 12th, at Folkestone, Brigade-Surgeon Watkin Sandom Whylock, late 38th South Staffordshire Regiment, son of the late Major-General James Whylock.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, June 22.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. W. Arbuthnot Lane: Inflammation of the Middle Ear and its Complications (No. 1).—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Strabismus.

Tuesday, June 23.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyslop: Legal Relations of Insanity.—Hospital for Skin Diseases, Blackfriars (the lecture will be delivered at the Examination Hall, Victoria Embankment): 5 P.M., Mr. J. Hutchinson: Elephantiasis and Allied Affections.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—9 P.M. Conversazione.

Wednesday, June 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Adherent Pericardium, with Clinical Cases.—Royal London Ophthalmic Hospital: 8 P.M., Mr. J. B. Lawford: Paralysis of Ocular Muscles.

Thursday, June 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. W. Arbuthnot Lane: Inflammation of the Middle Ear and its complications (No. 2).—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. Victor Horsley: Surgery of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. Ed. Weakes: Mastoid Disease.

Friday, June 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Thoracic Aneurysm, with Clinical Cases.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Rabies, Tetanus, Glanders, Swine Fever, Septicæmia of Mice, Rabbits, and Birds (Sections of Septicæmia of Mice and various Cultivations).—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Malignant Growths.

ROYAL INSTITUTION.—9 P.M. Professor Dewar will deliver the Faraday Commemoration Lecture.

Saturday, June 27.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. Hyslop: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 18th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
June 12	30·38	N.E.	52	49	107	67	49	..	Overcast
,, 13	30·38	S.W.	58	54	119	79	50	..	Hazy
,, 14	30·23	W.	60	56	103	73	54	..	Cloudy
,, 15	30·03	W.	60	54	106	71	55	..	Hazy
,, 16	30·07	N.W.	62	55	115	72	52	·03	Cloudy
,, 17	30·30	S.W.	64	57	111	79	55	..	Hazy
,, 18	30·34	S.W.	68	62	111	77	60	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

LUNATIC ASYLUMS IN THE UNITED STATES.

THE "Census Bulletin" (No. 62) says:—"The total number of insane persons treated in both public and private institutions during the year 1889 was 97,535, while during the year 1881 there were 56,205 treated, showing an increase in the nine years of 41,330, or 73·53 per cent. This percentage of increase, when compared with the percentage of increase of population in the last decade—namely, 24·26 per 1000—does not indicate an increase in the proportion of insane persons to population, but rather a great increase in the amount of asylum accommodation provided, and a willingness on the part of the public to make full use of all the facilities thus provided. In 1889 there were thirty-eight private institutions in the United States for the treatment of the insane: twenty-five located in the North Atlantic States, twelve in the North Central States, and one in the South Atlantic States."

Mr. J. J. A. Raye.—Our correspondent undoubtedly exhibited great courage and self-sacrifice; but we must deprecate the hazarding of valuable lives in a procedure which can hardly ever be useful, and which, from the nature of the disease, nearly always fails in its object.

Mr. A. W. Harker should apply for information to the Secretary of the Pharmaceutical Society, Bloomsbury-square, W.C.

ON CLEANING MICROSCOPE SLIDES AND COVER-GLASSES.

To the Editors of THE LANCET.

SIRS,—Bacteriologists and others who find themselves with accumulations of microscope slides may be glad of the following hint for cleaning them. It is not given in any text-book that I can discover. Instead of warming the slides one by one over a flame, pushing off the cover, and then scraping away the balsam and cleaning with alcohol, I put all my slides together into a saucepan with a lump of washing soda, and boil them. The heat of boiling is enough to soften most cements and all ordinary resins used for mounting, and I then fish out the cover-glasses one by one, push off the covers, and put them back. The action of the soda is to convert the balsam or other resin into a grumous mass, which is easily wiped off with a little rinsing. Cover-glasses can also be recovered for future use in the same way if desired. I think this method may be of service to laboratory attendants. Neither do I find anything on the surface of new covers and slides which will resist the action of hot water and soda; and so I prefer this way to the use of strong sulphuric acid and alcohol, or the other methods given in the text-books. The exact quantity of soda to be used is immaterial; a piece about the size of a mandarin orange to half a pint of water will do.

I am, Sirs, yours faithfully,

Brook-street, W., June 4th, 1891. J. B. NIAS, M.B., M.R.C.P.

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HOMES FOR THE DYING.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of last week you referred to an appeal for refuges for dying patients. These are, indeed, sadly wanted, and we must all sympathise with, and wish success to, the proposed scheme. I should not, however, have troubled you with a letter upon the subject but for one reason. That appeal, if it be the one I have seen, implies, if it does not actually assert, that no such institution had existed in London till, a very few years ago, a small house was established under the name of "Freidenheim." This is not correct. The Hospital of St. John and St. Elizabeth, 50, Great Ormond-street, was founded as long ago as 1856, for the very purpose of receiving patients suffering from incurable diseases that must end in death, and those nearest to death are the first selected for admission. Patients of another class are, indeed, also received—viz., those who have disease of so protracted a character that ordinary hospitals cannot keep them, but the dying have always been specially chosen. There are fifty beds, and fully half are usually occupied by the very class for whom the present appeal is being made. Of course, from twenty-five to thirty are a small number; but even so, the amount of suffering relieved during these many years may well be imagined. There is a medical and surgical staff attached to the hospital, while the fact of the nursing being in the hands of Sisters of Mercy may be taken as a guarantee that all that kindness and gentleness can do is done. The sisters are Catholic Sisters; but patients are received of any religion, and with no interference whatever with their belief and practices. The existence of this institution may be a starting-point for the movement now proposed; at least, it has the experience of many years, and I am sure the Sisters will give any information that will assist in this charitable work. As one of the surgeons and treasurers of the hospital I ask your insertion of this letter. I remain, Sirs, your faithful servant,

Jermyn-street, June 15th, 1891. EDW. TEGART.

ASEPTIC HYPODERMIC SYRINGE.

To the Editors of THE LANCET.

SIRS,—We notice a letter in your issue of May 23rd referring to the simple aseptic hypodermic syringe issued by us according to the suggestions of Dr Abraham. In this letter a statement is made that the syringe referred to by Dr. Abraham is not new in principle, but an infringement of Messrs. Arnold and Sons' patent. We would beg to point out that the only feature coming within the meaning of Messrs. Arnold and Sons' patent specification is that the needle itself fits directly on to the pointed end of the glass barrel. The important features of the simple aseptic syringe do not depend upon the point covered by Messrs Arnold's patent specification. Immediately we learned that the fitting of a needle directly on to the glass tube of a hypodermic syringe was part of a patent specification belonging to Messrs. Arnold and Sons, we arranged to pay a royalty for use of the same in connexion with the simple aseptic hypodermic syringe as suggested by Dr. Abraham. Although we have arranged to pay this royalty, we find that Dr. Koch's syringe, which anticipates the feature claimed by Messrs. Arnold and Sons, was illustrated in the catalogue of Mr. H. Windler with the needle fitted on to the glass barrel of the syringe in 1888, or two years before the date of Messrs Arnold and Sons' patent for Dr. Pearse's suggestion. It would appear therefore that this suggestion for a needle to fit on to the glass barrel of a hypodermic syringe is not new, but has been used both in this country and on the Continent for several years without question. We have always scrupulously avoided trespassing upon either the legal or moral rights of other manufacturers; and if Messrs. Arnold and Sons have either legal or moral right to the exclusive use of the system of fitting the needle directly on to the glass barrel, we shall respect their rights. We are, Sirs, yours very respectfully,

London, June 10th, 1891. BURROUGHS, WELLCOME, & Co.

HOSPITAL STATISTICS.

To the Editors of THE LANCET.

SIRS,—I should be glad to elicit opinions as to the most suitable method of calculating hospital mortalities. I find that, simple as this matter would appear to be, considerable variation exists in the methods of calculating the annual mortality for purposes of statistical reports. Following the Statistical Committee of the Metropolitan Asylums Board, I have adopted the method of the Registrar-General, i.e., "Divide the deaths multiplied by 100 by half the sum of the admissions, discharges, and deaths for the year." Some, however, state the mortality on "cases admitted" during the year alone, others calculate it on "cases treated" during the year, and so on. Uniformity on this point is desirable, some value probably attaching to reliable hospital statistics. I should like to obtain your views and that of any of your readers interested in statistical matters on this point.

I am, Sirs, yours faithfully,

City Hospital South, Liverpool, May, 1891. C. KNOX BOND.

"A WARNING."

To the Editors of THE LANCET.

SIRS,—The person referred to by Dr. Nias in your last issue as having represented himself to be my son is a swindler and impostor. I trust the police will soon get hold of him.

I am, Sirs, yours faithfully,

Dublin, June 17th, 1891. C. A. CAMERON.

"THE INFLUENZA AS AN ADVERTISING MEDIUM."

To the Editors of THE LANCET.

SIRS,—Our client, Dr. G. M. Lowe, C.M., M.D., late County Analyst, Lincoln, has consulted us with reference to the statement which appears in your issue of the 13th inst. under the above heading. We are instructed to inform you that the handbill you refer to was not only not issued by Dr. Lowe, but was issued entirely without his permission or knowledge. The bouillon was sent by the Company to Dr. Lowe for analysis, and was analysed by him in the usual way, and he had not the remotest idea that such analysis was to be used in the obnoxious manner in which it has been. The issue of the handbill has caused Dr. Lowe very great annoyance, and as soon as the matter was brought to his notice he at once telegraphed to the company to stop any further issue of the handbill, which they promised to do. You will therefore see that your strictures on Dr. Lowe are altogether uncalled for, and we must request you to insert this letter in your next issue.

We are, Sirs, yours faithfully,

New Road, Lincoln, June 16th, 1891. H. A. BURTON & SCORER.

*** We have great pleasure in giving insertion to the above disclaimer, and sympathise with Dr. Lowe in the annoyance to which he has been subjected. Our criticism was founded on the actual handbill, which was before us.—ED. L.

ONE OF THE EFFECTS OF THE MORNING COLD BATH.

To the Editors of THE LANCET.

SIRS,—In the past few years several patients have come to me complaining that they from time to time, especially in winter, in the early part of the day, have expectorated mucus tinged with blood. In each case there was no family history of phthisis, the temperature was normal, there were no bacilli discoverable in the sputa, there was no loss of strength or weight, and the chest-sounds were healthy. The men, however, were not of a vigorous type, and they were all accustomed to have a cold bath summer and winter. It seemed likely, especially in winter, that the sudden application of intensely cold water to the whole surface of the skin too suddenly raised the internal blood-pressure, and hence the oozing of blood through the walls of the capillary vessels lying beneath the lining membrane of the throat or the larynx, or possibly the lungs. In any case, whatever the true explanation may be, the fact stands out that the unpleasant symptom disappeared as soon as the temperature of the icy cold water was reasonably increased. The practice of taking a cold bath is so universal nowadays that it is perhaps as well to know that although the strong man may indulge in it with unmixed benefit, it may cause in the weak man a symptom which fills him with anxiety.—I am, Sirs, yours faithfully,

Chelsea, June 15th, 1891. THEODORE HEBB.

Mr. J. M. B. (L.S.A. 1887).—The main question put to us is a legal one. Speaking professionally, it would not be satisfactory to commence practice. Our correspondent does not seem to have been treated very liberally. But the contract was one that was very difficult to work. It is ill defined, and was not perfectly expressed on the door-plate to the public. Such arrangements are sure to work unsatisfactorily to both parties. If matters cannot be adjusted on an amicable and well-defined basis, it will be better to relinquish the whole arrangement.

PROPHYLAXIS OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I think I can bring forward two facts which give colour to the idea that taking quinine and arsenic affords some protection against influenza. The first is that last year I gave a mixture containing those two drugs to some dozens of people as a prophylactic, and this year to a smaller number, and on neither occasion did any of them, I believe, contract influenza. The second fact is that in a family of nine children all were attacked last month by influenza but one, and he was taking at the time an arsenical mixture for an affection of the skin. He was nearly of the same age as several of the others, and living in the same rooms and under the same conditions. It seems, I think, reasonable to suppose that quinine and arsenic, two such powerful antiseptics, might prove inimical to the development of the microbe which probably causes influenza, perhaps the more so as there appears to be some similarity between that disorder and certain malarious affections, and also reasonable to expect that those drugs would fortify the system against the disorder. I am, Sirs, yours truly,

Finchley-road, N.W., June 13th, 1891. EDW. G. GILBERT.

Gamma.—The questions are strictly legal ones, and we hesitate to answer them positively; but we should be disposed to answer all of them in the affirmative. Legal proceedings, over small amounts, are to be much avoided; but we cannot help thinking that our correspondent has been hardly used, and has a substantial claim to more than mere assistant's pay, considering that he did full work at a time of high pressure, and, in doing so, contracted a dangerous and infectious disease.

Xara (Edinburgh) will be much obliged if any of our readers will inform him where he can obtain the past examination papers of the Indian Medical Service, and the books that should be read for the same, especially in connexion with the Natural Science Branch.

C. H. should consult his medical adviser.

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PARAFFIN LAMPS.

To the Editors of THE LANCET.

SIRS,—The danger of these lamps has been brought before the public lately. I should like to find out through your columns what is the experience of others as to the working of patent extinguishers, or whatever the apparatus is called, which is supposed to act automatically and put out a lamp if upset. All my lamps are fitted with some safety apparatus, and when the lamps are just lit they go out easily if the safety apparatus is touched; but after a lamp has been long burning I have worked the lever like a pump handle to get the lamp to go out. The flame seems out, or half out, and then when the lever is worked in the other direction it will flare up again and again. It may be that the metal swells with heat, or it may be owing to the trimming. Anyhow, if a lamp long lit was upset, I doubt its going out always. As to the reservoirs, transparent glass ones in a position where they can be well seen are certainly more likely to be filled up than metal ones, but that may not counterbalance other disadvantages.

I am, Sirs, yours truly,

June 16th, 1891. M.D. EDIN.

ERRATUM.—In a short abstract of the Bishop of Bedford's sermon, published in THE LANCET second Special Supplement in aid of the appeal made on Hospital Sunday, the seventh line contains a misprint which, though obvious enough to the careful reader, is calculated to mislead. The words "a remarkable fact that the Vicar of the parish (the Rev. J. F. Kitto) was unable to plead for the fund" should read "a *regrettable* fact," &c.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, London; Mr. J. B. Browne, London; Mr. Birchall, Liverpool; Mr. Burridge, London; Mr. Buller, Beverley; Mr. Bannatyne, Leeds; Mr. Blewitt, London; Mr. Barford, Berks; Mr. G. S. Bigg, London; Mr. W. Cheyne, London; Sir C. Cameron; Mr. Chavasse, Birmingham; Dr. Cruise, Dublin; Mr. Collingham, Hull; Dr. J. M. Clarke, Clifton; Mr. C. Campbell, Saddleworth; Dr. Calder, Forbes, N.S.W.; Mr. Carr, Edinburgh; Surg.-Major Dobie, London; Mr. M. Dobbs, London; Mr. S. Dawson, Cockermouth; Mr. H. R. Davies, London; Mr. Day, Bristol; Dr. Davies, Ebbw Vale; Mr. Erskine, Glasgow; Dr. Eccles, London; Sir J. Fayrer, London; Dr. Francis, Wandsworth; Dr. J. A. Fleming, London; Rev. C. E. Few, Sevenoaks; Mr. Gubb, London; Dr. Gilbert, Hampstead; Mr. Gravatt, Cheapside; Mr. Grün, London; Mr. Heard; Messrs. Hewlett and Son, London; Mr. Hornibrook, London; Surg.-Major Hoysted; Mr. T. Hebb, London; Mr. Jack, London; Mr. T. Jones, Manchester; Messrs. Keene and Ashwell, London; Messrs. T. H. Lloyd and Co., Leicester; Mr. W. A. Lane, London; Messrs. Lee and Martin, Birmingham; Mr. Mantin, Paris; Dr. McDougall, Arin; Dr. Mattison, Brooklyn; Dr. S. Mackenzie, London; Messrs. Mitchell and Co., London; Mr. Mackenzie, Intake; Dr. Nason, Nuneaton; Mr. Potter, Collumpton; Dr. Parsons, Dover; Dr. Perigal, New Barnet; Mr. R. Russell, Haslemere; Mr. W. Rivington, London; Messrs. Riddle and Co., London; Mr. Ryan, London; Dr. Ridge, Enfield; Mr. G. Q. Roberts, London; Mr. Robinson, Sheffield; Mr. Stamford, Tunbridge Wells; Mr. Sayer, Brighton; Dr. N. Smith, London; Mr. Stillwell, Lambeth; Mr. Stables, Ashby-de-la-Zouche; Messrs. Tannin and Co., Dublin; Mr. Thorpe, London; Mr. Thomas, Caerphilly; Dr. Bezly Thorne, London; Mr. E. Tegart, London; Mr. Taylor, Derby; Dr. A. Thompson, Ulverston; Mr. Wand, Leicester; Enquirer; Morris Tube Co., Haymarket; A. B., London; M.S., H. P. N.; Secretary, Norfolk County Asylum; Comus, London; M.D. Edin.; Secretary, County Asylum, Hants; National Sanatorium, Portsmouth; Secretary, Earl's Court; L.R.C.P. & S.Ed; L.R.C.P., M.R.C.S.; House-Surgeon; *Times* Office, Blackpool; Subscriber.

LETTERS, *each with enclosure*, are also acknowledged from—Mrs. Asinelli Geneva; Mr. Butler, Nether; Mr. Brown, Exeter; Mr. Baron, North Lincolnshire; Dr. Bottentuit, Plombière; Dr. Berry, Shepherd's Bush; Miss Booth, Kensington; Mr. Butcher, Brussels; Mr. Cornish, Manchester; Mr. Cochrane, Wigtonshire; Mr. Davidson, Teddington; Dr. Deely, Blackpool; Mr. Diver, Dunmow; Mr. Deack, Newmarket; Dr. Drake, Manchester; Messrs. Eckersky and Co., Manchester; Mr. Ely, Abergavenny; Mr. Foster, Knowle; Mr. Finlay, Longford; Mr. Gibson, Worcester; Dr. Godfrey, London; Miss Green, Huddersfield; Mr. Galbraith, Norfolk; Mr. Harper, Bath; Mrs. Hitch, St. Leonards-on-Sea; Dr. Hinde, Southwold; Mr. Hutchinson, Upper Sunbury-on-Thames; Dr. Hargreaves, London; Mr. Heywood, Manchester; Mr. Hubbard, Cheshire; Mr. Leith, London; Mr. Lockwood, Huddersfield; Mr. Logan, Glasgow; Messrs. Mawson, Son, and Co., Newcastle-on-Tyne; Mr. Meier, Redhill; Messrs. Maclean and Sons, Edinburgh; Mr. MacMahon, Cork; Mr. Madden; Mr. Maddick, London; Mr. Macdonald, Glasgow; Dr. Nesfield, Manchester; Mr. O'Meara, Loughborough; Dr. Orr, Godalming; Mr. Osborne, Stockport; Mrs Osborne, Edgeley; Mr. Polson, Sutherlandshire; Mr. Plummer, Durham; Dr. Packman, Rochester; Miss Powell, Finsbury-park; Mr. Robson, Acton; Mr. Ross, Belfast; Dr. Renton, Edinburgh; Messrs. Rowntree and Co., York; Dr. Roberts, Peckham Rye; Dr. Suzuki, Tokio; Mr. Shore, Hornsey; Messrs. Stronach and Co., Aberdeen; Mr. Smith, Manchester; Messrs. Squire and Sons, London; Dr. Sankey, Salop; Mr. Tyte, Minchinhampton; Mr. Tully, Hastings; Mr. Tate, St. Neots; Mr. Twigg, Rotherham; Mr. Taylour, Preston; Mr. Thomas, Newport, Mon.; Mr. Thin, Edinburgh; Mr. Ure, Oldham; Dr. Windle, Halifax; Mr. Walker, Canada; Mr. Williamson, Lincoln; Dr. White, Bombay; Mr. Walker, Ashton-under-Lyne; Mr. Warde, Hants; Mr. Weatherby, Hull; Mr. Wilkie, Great Clacton; Dr. W., Hull; M.A., London; Kensington, London; Secretary, General Hospital, Staffs; E. A., London; Jeyes' Sanitary Compounds Co., London; Secretary, General Hospital, Notts; Dahl's Agency, London; Golf, London; G. P., Clapham; Devon and Exeter Hospital; C. E. S., Bradford; Senex, London; Secretary, St. Mungo's College, Glasgow; Self Reliance, London; Publisher, *Staffordshire Sentinel*; J. R., Leicester; W., London; S. L., London; Stockport Infirmary; F. G. W., London; Physician, Leeds; Superintendent, London; M. S., London; A. B. C., Bath; J. W. B., London; M. S., Birkenhead; A. C. (Forceps), London; Medicus, Halifax; B. T. W., London; Kappa, London; F. V. D., London; Pax, London; Beta, London; Suburb, London; G., South Norwood; Fides, London; H. E., London; P. G., London; Invicta, London; Alpha, London; Tennis, London; Johannes, Norwich; Colocynth, London; M.O.H., Liverpool; Physician, London; H. T., London.

NEWSPAPERS.—*Albany Journal (N.Y.), Yorkshire Post, Liverpool Daily Post, Bristol Mercury, Scottish Leader, Sunday Times, Builder, Broad Arrow, Manchester Guardian, Dundee Advertiser, City Press, Chemist and Druggist, West Middlesex Standard, Dorset County Chronicle, Law Journal, Spectator, Pharmaceutical Journal, Surrey Advertiser, Saturday Review, Mining Journal, Architect, West Middlesex Advertiser, Hobart Mercury, Brisbane Telegraph, Glasgow Herald, Scotsman, Le Temps (Paris), Herefordshire Mercury, Windsor and Eton Express, Reading Mercury, North British Daily Mail, National Bulletin, Sheffield Daily Telegraph, Weekly Free Press and Aberdeen Herald, Daily Standard Union (Brooklyn), Insurance Record, Windsor and Eton Gazette, Western Mail, Guy's Hospital Gazette, Croydon Chronicle Times of India, Midland Evening News, Essex Telegraph, Lincolnshire Chronicle, Citizen, Shrewsbury Journal, Rock, Derbyshire Advertiser, Isle of Man Times, Leighton Buzzard Observer, Kendal Mercury, Peterborough Express, Batley Reporter, Tonbridge and Tunbridge Wells Free Press, Walsall Advertiser, European Mail, Clonmel Chronicle, Ormskirk Advertiser, &c.*, have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 65, Rue Caumartin, Paris.

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ABSTRACT OF A

Lecture

ON

THE TREATMENT OF PHTHISIS BY PROFESSOR KOCH'S METHOD.

Delivered to the Post-graduate Class at the Brompton Hospital,

BY C. THEODORE WILLIAMS, M.A., M.D.,
SENIOR PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—Koch's treatment of phthisis has been selected for my present lecture partly because a considerable number of cases have been for some time under this treatment in the hospital, and some estimate may therefore be formed of its specific action in consumption, and partly because it is a subject which lends itself specially to clinical demonstration; and, as the ten cases under my charge have been carefully recorded with a view of testing the method, you will be able, after examining the patients, to form your own judgment on the matter. Moreover, a visit to Berlin[1] last December enabled me to investigate a large number of cases under the Koch treatment in the German hospitals, and specially those in which it had been carried out under the personal supervision of Professor Koch himself, and to take note of any necessary hints or precautions. In his further communication Professor Koch informs us that tuberculin is a glycerine extract of pure cultivation of tubercle bacilli in which the parasites have been killed. His general conclusions may thus be summed up:—1. That the hypodermic injection of tuberculin in tuberculous patients is followed in a few hours by a reaction, characterised by rigors, fever, pain in limbs, languor and great fatigue, often vomiting, increase of cough and expectoration, and occasionally by an eruption like measles, the reaction lasting from twelve to fifteen hours, and the patient returning at the close of it to his ordinary state. 2. That the tuberculin penetrates to, and causes necrosis of, the tubercular tissue wherever situated in the body, but does not necessarily destroy the tubercle bacilli themselves, and that its penetrative action is extremely valuable for diagnostic purposes, but that it has no effect on necrotic cheesy masses. 3. That patients in the first stage of phthisis, after being under treatment for from four to six weeks, were free from every symptom of disease, and might be pronounced cured. 4. That patients with cavities not too highly developed improved rapidly and were almost cured. 5. That only in those whose lungs contained many large cavities could no improvement be found objectively, but even in these the expectoration diminished, and there was subjective improvement. Professor Koch concludes that he is led to suppose that phthisis in the beginning can be cured with certainty by this remedy, though he admits that the cure cannot be considered lasting until longer time has elapsed. The clinical evidence as to the action of Koch's remedy in phthisis has been abundant. Professors Gerhardt, Leyden, Senator, and Ewald have spoken, but not on the whole favourably—nay, in many cases the reverse; but the most important evidence which has as yet been furnished is the pathological, supplied in sundry and valuable communications of Professor Virchow, the greatest living pathologist, who examined sixteen phthisical patients, who had died at the Charité Hospital whilst undergoing the Koch treatment. The results appear to be: (1) Colossal hyperæmia of the pia mater and brain substance, with tubercular meningitis, in a boy aged two years and nine months, after four injections; (2) intense reddening of the granular layers on the surface of old phthisical cavities and swelling of lymphatic glands; (3) caseous pneumonia, induced, as appeared in five out of sixteen necropsies, in one case after six injections; (4) a characteristic form of catarrhal pneumonia in seven cases, termed by Virchow "injection catarrhal pneumonia"; (5) eruption of miliary tubercles. He also noted that there was no necrosis of individual tubercles throughout the body, but they generally remained unaffected. Our own series of patients included cases of early tuberculisation, softening, and limited cavity, in which the injections have been carried out for many weeks, and in some cases for two months and a half, which can only be given here in barest abstract.

CASE 1.—S. S——, male aged eighteen. Cough, expectoration, and loss of flesh two years. Hæmoptysis half a pint a week ago. Physical signs show tubercular consolidation of the upper third of the left lung. Sputum contains a few tubercle bacilli, but no lung tissue. Injection of tuberculin was begun Dec. 9th with 0·001 cc. doses, which was gradually raised to 1 cc., reaction commencing after 0·005 cc. After fifteen injections the number of tubercle bacilli, which had been large, diminished, and lung tissue appeared in the sputum. Physical signs showed the formation of a cavity in the upper left lobe. The patient had thirty-three injections in two months and a half, and ceased to react during the last fourteen days. He gained 10 lb. and generally improved. Cough and expectoration less, latter still containing tubercle bacilli. Well-marked cavity in upper left lobe.

CASE 2.—W. S——, male aged twenty-six. Cough, loss of voice and flesh six months. Hæmoptysis two pints five months ago. Tubercular consolidation of upper right lobe, with commencing softening; old tubercular ulcer of right vocal cord. Sputum contains tubercle bacilli and lung tissue. Injections were begun Jan. 25th, 1891, with 0·001 cc., and this being followed by very marked reaction the dose was very slowly increased to 0·003 cc., and then diminished as the reaction continued. The patient had twelve injections, and lost two pounds and a half in weight. Cough and expectoration lessened; tubercle bacilli remained present, and lung tissue was no longer detected. Physical signs showed a well-marked cavity in the upper right lobe, with a spread of tuberculisation in the middle lobe.

CASE 3.—F. T——, male aged thirty-two. Incipient phthisis. Hæmoptysis one pint two years ago, followed by cough and loss of flesh. On admission to hospital no signs were present, but later on crepitation was heard above the right scapula, and the expectoration was found to contain tubercle bacilli. This patient had eleven injections and reacted strongly, and lost a pound and three-quarters in weight. The sputum always contained tubercle bacilli. The physical signs showed considerable spread of the lung tuberculosis and the formation of a cavity at the apex.

CASE 4.—W. W——, male aged thirty-four. Cough, expectoration, loss of flesh, and occasional hæmoptysis for four months; tuberculisation of left upper lobe; expectoration contained a number of tubercle bacilli. Injections commenced Dec. 9th, 1890, with 0·001 cc., and were gradually increased to 0·1 cc. After the second 0·002 cc. he reacted slightly, and the bacilli increased largely in the sputum. After eight injections a cavity was detected in the left lung, and later on lung tissue was found to be largely present, and tubercle bacilli slowly disappeared from the expectoration. The patient had altogether twenty-nine injections, and appeared much improved since the formation of the cavity. He gained a pound in weight; cough and expectoration nearly ceased, and lung tissue disappeared again from the sputum, tubercle bacilli being only occasionally found.

CASE 5.—Nathan R——, aged twenty-three. Cough, night sweats, and wasting for several years; worse lately. Extensive tuberculisation of left lung, with cavity at apex; laryngeal tuberculosis; sputum contains numerous tubercle bacilli. Injections were begun on Dec. 11th, 1890, and patient reacted strongly after the first one, and there was increase in the physical signs. The reactions continued up to the fourth injection, after which the dose was gradually increased to 0·1 cc., and well borne. He had in all thirty-one injections in two months and a half, and gained 3½ lb. in weight, and improved generally. The sputum contained lung tissue in considerable quantity, and tubercle bacilli. The cavity increased in size at first, and at a later date showed signs of contraction, the chest wall becoming flattened and the heart's impulse raised.

CASE 6.—John H——, aged forty-five. Cough, expectoration, loss of flesh for ten months, and slight aphonia. Tertiary syphilis twenty years ago. Right vocal cord thickened. Cavity in left upper lobe. Sputum contains abundant tubercle bacilli, but no lung tissue. He was injected with 0·001 cc., and had slight headache without pyrexia, though the pulse was quickened. He, however, reacted completely after an injection of 0·002 cc. Tolerance

[1] Brit. Med. Jour., Dec. 20th, 1890.

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was soon established, and he had thirty-five injections in all, the dose being gradually increased to 0·08 cc., and as this was always followed by slight reaction more was not given. The expectoration for a long period contained abundant lung tissue, but latterly this disappeared. There were always tubercle bacilli. The patient improved slightly in general health, and gained a little flesh. The cavity at first considerably enlarged, but towards the end of his stay it began to contract, the chest becoming flattened and the heart's impulse drawn up.

CASE 7.—Thomas D——, aged thirty-seven. Cough, hæmoptysis, loss of flesh, two years; scattered tuberculisation of right lung; cavity in upper lobe; sputum contains a few tubercle bacilli. He was injected, but showed no reaction until the fifth (0·005 cc.), when a moderate reaction occurred, with large increase of tubercle bacilli. Later on lung tissue appeared in the sputum. All reaction then ceased, and the dose was gradually increased to 0·1 cc. He had altogether twenty-nine injections in two months, and improved in appearance, with slight gain of weight. Cough was moderate, expectoration copious, always containing abundant tubercle bacilli, but eventually no lung tissue. A cavity in the right lung became considerably enlarged, and fresh tuberculosis was detected in the dorso-axillary region, doubtless from reinhalation of secretion from the cavity.

CASE 8.—W. B——, male aged twenty-three. Cough, expectoration, and loss of flesh fifteen months following pneumonia. Hæmoptysis (three pints) on several occasions. Cavity in upper right lung. Sputum contains abundant tubercle bacilli with some lung tissue. The patient had altogether seventeen injections, but owing to the strong reactions, chiefly in the form of pyrexia and headache, the dose was never increased beyond 0·002 cc., and generally was 0·001 cc. Cough and expectoration increased, the latter generally containing both tubercle bacilli and lung tissue; his breath became shorter, the injection was often followed by shivering and difficulty of keeping warm. The cavity in the right lung extended, and fresh tuberculisation was detected in the lower right chest; the injections were then stopped, and the patient put on the ordinary treatment of the hospital, upon which he improved, gaining weight and losing the pyrexia.

CASE 9.—William P——, aged forty-seven. Cough, expectoration, and wasting, and night sweats for one year, following the influenza. Cavity in left lung, with tuberculisation around. Some tuberculisation of upper right lobe, slight afternoon pyrexia. Had altogether eleven injections of 0·001 cc.; complained first of headache and then of shivering after each injection, though the temperature rarely exceeded 100·5° F. The patient became decidedly worse and the injections were discontinued. The sputum always contained abundant tubercle bacilli and some lung tissue. The left upper lobe became rapidly excavated and there was extension of tuberculisation in the upper right lung.

CASE 10.—George D——, aged twenty-one. Cough, expectoration, with night sweats, wasting, and short breath, after chill two months ago. Tubercular consolidation of the right apex; sputum contains no tubercle bacilli. He had two injections (0·001 cc. and 0·003 cc.) without reaction, but after the third of 0·005 cc. there was marked reaction, and lung tissue appeared in the sputum. He had in all, fourteen injections, the last seven being without reaction. Cough slight, expectoration diminished and contained no lung tissue or tubercle bacilli; physical signs of right apex unchanged. Some injections were followed by urticaria. Patient improved slightly, but more so after injections were suspended.

In addition to the above hospital cases I have used the treatment on some private patients, four of whom were phthisical, and I will give a brief summary of them. The first was a young lady aged twenty-five, who had lost her mother and two sisters from phthisis, and had been herself affected with consumption for about four years, during which time I had seen her several times. In December, 1890, she was brought up to town by her relatives to try the Koch treatment, and when I examined her with Mr. Kaye Smith I found her greatly wasted, with pyrexia, severe cough, and night sweats. The expectoration was purulent, about two ounces in quantity, and contained abundant tubercle bacilli. Cavities were detected in both upper lobes, being most distinct on the left chest, and tuberculisation was noted at the base of the left lung. There was also laryngeal disease. On Dec. 21st the treatment was commenced, and in the course of eight days three injections of one milligramme each were given. After each there was a well-marked reaction, shown in rise of pulse, respiration, and temperature, the latter reaching 103° F. on each occasion. The chief result was the large increase in expectoration, from 2 oz. to 6½ oz. and 7¾ oz., which contained after each injection a large amount of lung tissue, and tubercle bacilli were abundant as before. The patient was so exhausted after the third injection (though the smallest dose was administered), and the fever kept up for so many days, that the treatment was discontinued, and she returned very much to her former condition, with one exception—viz., that the physical signs showed the existence of a fresh cavity at the base of the right lung in addition to the old apical ones, and that the sputum contained on several examinations abundant lung tissue. The injections seemed to have no effect on the larynx, and the formation of the basic cavity was accompanied by improvement in the cough and expectoration.

The second was the case of a young lady aged twenty-three, whom I saw with Dr. Montgomery of Maidenhead in September, 1890, with a history of nine months' phthisis, the disease having advanced rather rapidly lately, and there being softening of both apices. Under cod-liver oil and maltine and various tonics she showed no improvement, but lost weight; distinct cavities formed at each apex, and at her father's and medical adviser's wish I consented to cautiously try the Koch treatment, which was commenced on Dec. 18th. The temperature, pulse, and respiration showed some degree of pyrexia, and the sputum contained abundant tubercle bacilli, but no lung tissue previous to the treatment. The patient reacted decidedly after the first injection of 0·001 cc. in December, the temperature rising to 102·2°, and the pulse to 110, the reaction subsiding in ten hours. They were proceeded with three or four times a week, and as they were tolerated well the dose was gradually increased, reaching 0·065 cc. on the eighteenth injection. At this date (Jan. 5th, 1891) the patient's temperature, during the reaction only, reached 100·8 F., the pulse was 96, and the respiration was 18. The cough was troublesome, the expectoration was abundant, and contained a large amount of lung tissue and swarms of tubercle bacilli. The physical signs showed, in addition to the old cavities, that a new one had formed in the right lung, which gave rise to loud cavernous sounds in the lower part of the interscapular region. The patient reported herself better, but she had lost 4lb. in weight. Two days later, after the twentieth injection of 0·5 cc., a smaller one than some proceeding ones, she had a rigor, and the temperature rose to 104·2°, the pulse and respiration became rapid, and the patient was slightly cyanosed. Crepitation was detected in the lower lobe of the left lung, a region hitherto free from abnormal signs. The injections were at once stopped, and stimulants and expectorants and antipyretics given, with the result that the unfavourable symptoms, including the pyrexia, slowly subsided, and after an interval of three weeks the patient was able to get up, and to return home on Feb. 4th. Her condition then was: she had lost flesh considerably, cough was moderate, expectoration less, but contained lung tissue and a large number of tubercle bacilli. The physical signs showed: (1) great dryness and absence of rales throughout the lungs; (2) the presence in the right lung, in addition to the original apical ones, of two cavities, one the interscapular one mentioned above, and another freshly formed in the axillary region, probably through reinhalation of bacilli-laden secretion from the apical cavity; (3) there was contraction proceeding of the left apical cavity, and flattening of the chest walls, with displacement of the heart and neighbouring organs; also (4) fresh tuberculisation at the base of the left lung. Here we can scarcely come to any other conclusion than that tuberculin caused breaking down of old tubercle in the right lung and the formation of a cavity in the upper part of the lower lobe. The formation of the dorso-axillary cavity may or may not be attributable to this cause, but the tuberculisation of the left lower lobe, accompanied as it was by marked constitutional symptoms, and following immediately after the last injection, can hardly be attributed to any other cause. We must conclude that the effects of the tuberculin injections were disastrous in this case.

A third case was a young lady aged fifteen, whom I

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saw with Dr. Archer of Avenue-road, first on Dec. 15th. She was of Hindoo extraction, and of very studious and sedentary habits, suffering from incipient phthisis. Cough and expectoration had persisted for six weeks, with some loss of flesh, and dulness and crepitation were present above the right scapula; the expectoration contained tubercle bacilli in small numbers, but no lung tissue. The case seemed favourable, and at the urgent solicitation of her relatives I consented to try the Koch treatment, and injections were commenced on Jan. 23rd, 1891, and carried out by Dr. Archer under my occasional supervision. After the first dose of 0·001 cc. she reacted slightly, the temperature reaching 100° F., and pulse and respiration being quickened. She had twenty-two injections altogether, and as she always reacted with a small dose, it was continued, and never exceeded 0·002 cc., and generally 0·0015 cc. was given. The cough increased, the expectoration became profuse, and contained abundant tubercle bacilli and quantities of lung tissue, and the physical signs showed evidence of cavity formation at the left apex, and, moreover, of its considerable extension; so that before the close of the treatment the whole upper and part of the middle lobes of the right lung were excavated. The reaction temperature, instead of diminishing after a number of injections, ran up constantly to 101°. and 102° F. After the twenty-second injection, the same solution of lymph being used all through, she suffered pain at the base of the left lung, and some pleuritic friction was detected. The temperature rose to 102·4° F., the pulse was 100, and the respiration 20. The injections were discontinued, but the pyrexia was persistent for weeks afterwards, though otherwise the patient seemed fairly well. Here the injections caused rapid excavation of the right lung, and judging by the extension of the physical signs in the right lung, by the increase in the number of bacilli, and by the persistent fever after the injections—judging also by the pleurisy in the left lung, evoked apparently by the last injection—it would appear that the treatment had given rise to fresh lung tuberculisation in the manner described by Virchow. This was in every way a promising case, and quite within the category of Koch's curable cases, but the result was most unfavourable.

A further case was that of a married woman, aged thirty-three, a schoolmistress, sent to me by Dr. Pocock of North Kensington, with one year's history of phthisis, preceded by bronchitis for several winters. Cough was troublesome, and expectoration moderate in amount and nummular, containing a fair amount of tubercle bacilli. The physical signs were — Right: Crepitation above clavicle and scapula. Left: Dulness and crepitation to third rib cavernous sounds in first space and above clavicle and scapula.

The first injection of 0·001 cc. was given on Jan. 21st, 1891, and was followed by great pain in the upper right chest, headache, and langour, but by no rise of temperature. The second injection of 0·002 cc. raised the temperature to 100°, and caused quickening of pulse and respiration, but the third (same amount) caused a marked reaction five hours after. The temperature rose to 101·6°, and was followed next day by a similar rise, pulse and respiration being both quickened. The patient complained of headache, shivering, pains in left chest and in back and legs, and the reaction lasted three days. The area of crepitation increased in the right lung; the expectoration contained more tubercle bacilli and a certain amount of lung tissue. Five days later cavernous sounds were heard on the right side in the first interspace, and more lung tissue was found in the sputum. The injections were continued and steadily increased in amount, and we reached the fourteenth with a dose of 0·013 cc. without further reaction. On the dose being augmented to 0·017 cc., the temperature rose to 100°, but it was soon tolerated, and no further reaction occurred till the nineteenth injection of 0·02 cc, when there was a rise to 102°. After this injections of 0·016 cc. and 0·017 cc., and eventually of 0·02 cc., were tolerated without reaction, and the patient has had altogether twenty-two injections, and neither lost nor gained in weight. Cough lessened and expectoration diminished. The bacilli and lung tissue decreased. The physical signs showed well-marked cavity at each apex, but disappearance of nearly all surroundng crepitation and rales. The patient's subjective condition was improved, and she reported herself able to do her work more easily. During the whole treatment she followed her occupation of schoolmistress, except on the occasion when the reaction lasted three days. This is a more satisfactory case than the preceding, the injections having caused, as usual, fresh excavation; but this process, as in Cases 1 and 4 of the hospital cases, was followed by general and local improvement.

Let us now summarise the results of the treatment in these fourteen patients. We must bear in mind that five were first stage or tuberculisation cases; in one softening had commenced, and the rest were patients with cavities, five with single cavities, and three with double cavities, though of limited extent.

General condition.—Six improved, of whom three improved greatly, seven deteriorated, and one remained in a stationary condition.

Of twelve patients whose weights were recorded, four gained in weight, the greatest gain being 10 lb., five lost, and three were stationary. Loss of weight is almost invariable if there is much reaction, and we must bear in mind that all these patients reacted at one period or another of the treatment.

Influence on pulse, respiration, and temperature.—As a rule, during a reaction there was a simultaneous rise of pulse, respiration, and temperature, and a corresponding fall to the normal at the close of it, but this was not invariable, for in some of the slighter reactions there was a rise of pulse and respiration, accompanied by headache and languor, without any elevation of temperature. In the pyrexial cases, such as Case 6, and in two of the private patients, the effect of the tuberculin was to intensify the pyrexia, raising the temperature by several degrees. In some of these cases, where fresh tubercular and pneumonic changes followed the injections, the pyrexia remained more or less persistent for weeks. Where, however, extensive excavation took place, there was a tendency to subsidence of fever. The patients described as improved all stated that they could breathe more easily after the treatment. The remedy seemed to have no permanent effect on pulse rate or respiration rate.

Digestive organs.—The patients, as a rule, lost appetite, and in two cases diarrhœa came on, but there was no suspicion of its being due to intestinal ulceration.

Skin and kidneys.—No special effect was noticed on the kidneys, although some observers have noted the presence of albumen in the urine after injections. In two patients affected with night sweats these occurred during the reactions.

Blood.—The blood was carefully examined in two patients during the reaction for tubercle bacilli, but with negative result.

Cough and expectoration.—Cough, as a rule, increased after the first injections, and occasionally there was slight aphonia; after a while cough diminished, unless the lung condition showed advance of the disease. Expectoration invariably increased in quantity, in some cases threefold, was generally purulent, and contained often caseous material visible to the naked eye. In the hospital the sputum was examined for tubercle bacilli by our able assistant medical officer, Dr. Allden, before the treatment commenced, and examinations were carried on every other day during its continuance. All observers of any experience have come to the conclusion that no great stress can be laid on the variations in the number of tubercle bacilli in the sputum, and that they are often dependent simply on the quantity of expectoration; so that their increase does not always mean increase of disease, especially where cavities exist, nor does their diminution mean arrest of disease.

Professor Koch lays great stress on their diminution under the treatment, stating that it takes place when the expectoration begins to present a mucous appearance. Out of thirteen cases in which they were detected they diminished in one case, increased at first and diminished afterwards in two cases, remained abundant throughout in four, increased and then diminished in two, and increased in six. In many cases the injections appeared to be immediately followed by increase in the number of tubercle bacillus.

Lung tissue.—The appearance of lung tissue in the sputum seemed to be the most direct result of the injections. It was found in all but one case at some time or other of the treatment, and generally after the first few injections. In the favourable cases it disappeared later, but in the unfavourable cases it was detected throughout the treatment. It was generally abundant, and presented not only the

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h ooklets, but often almost complete sections of pulmonary alveoli. It is a curious feature in the clinical records of the Berlin consumption cases under the Koch treatment in the hospitals that, while the observations on the numbers of tubercle bacilli are most carefully recorded, little or no mention is made of the presence or absence of lung tissue in the sputum, assuredly a most important item in determining the progress of lung change.

State of the lung as evidenced by physical signs. — Among the five tuberculisation cases, cavities formed in four, and in three extension of tuberculisation took place. In the case of softening, a cavity formed rapidly, apparently with great relief to the patient. In the other eight the old cavities either extended or fresh cavities formed, in many cases in regions not commonly the seat of cavities, such as the right middle lobe. The conversion of an apical tubercular mass into a cavity was generally a rapid process, taking place often in three or four weeks, as in Cases 1 and 4 and the third private case. The formation of secondary cavities was also rapid, as occurred in the first and second of the private patients. The extension of old cavities was well marked in two cases. With regard, therefore, to excavation, we must bear in mind that it either took place, or extended, in no less than thirteen out of fourteen cases. In three of the patients contraction of the cavities was noted to be proceeding at the time of our last record, even though extension had originally taken place. As to spread of tuberculisation, it took place in six cases, and generally proceeded by continuity, but in two cases infection of the lower lobe appears to have commenced by re-inhalation of cavity secretion. In one case there was tubercular spread without excavation.

Larynx.—Three of the patients had tuberculosis of the larynx, but curiously the lesions appear to have been unaffected by the injections.

And now it will be seen that the evidence of the cases narrated does not confirm Professor Koch's conclusions, but like those of Professor Virchow, Ewald, and Dr. C. J. Nixon,[2] they point out some of the difficulties and dangers of the treatment. There is no doubt about the penetrative action of tuberculin, and possibly if something were combined with it this remarkable power of selecting tubercle might be turned to account; as it stands at present in phthisis, its effect is to convert tuberculous masses, which may be perfectly quiescent, into cavities, and the process is by no means always a safe one. As regards the condition of our patients after treatment, all we can say is that they fared worse than the ordinary run of similar consumptives, and, moreover, that several of them improved considerably when transferred from Koch's system to the ordinary treatment of the hospital. There may be, and indeed there are, cases of phthisis in which the promotion of excavation is desirable, and for such the Koch method is indicated; but they are, I take it, exceedingly rare, and for the great mass of consumptive patients it is certainly not indicated. I close this lecture by the following conclusions: (1) Professor Koch's fluid has a strong affinity for tubercular material, which it appears to penetrate, and to produce inflammatory changes in and around all parts of the body; (2) that the changes in the lung set up seem to be partly necrotic—i.e., destruction of tissue,—but partly infective, producing fresh tubercles; (3) that the effect on tubercular consolidations is to cause their softening and excavation, and subsequent removal by expectoration or absorption; that this process of elimination of tubercle by excavation leads to extensive destruction of lung tissue and to the formation of a large number of cavities in lungs formerly the seat of quiescent tubercle, which may give rise to septic infection; (4) that this process is also at times accompanied by fresh tuberculosis in the neighbourhood either by infection of fresh tracts through tubercle bacilli passing down the bronchi, or by their penetrating into neighbouring alveoli; (5) that, on the other hand, the removal of the tubercular masses by excavation is occasionally followed by fibrotic changes in the lung, which cause contraction of the cavities thus formed, and in this way conduce to arrest of the disease, but that such favourable changes cannot be predicted beforehand; (6) that there is no proof of the possibility of the cure of phthisis by this method within the periods mentioned by Professor Koch, and that, as at present administered, its results are less favourable than those of the ordinary methods in use.

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CAN INJURY PRODUCE LOBAR PNEUMONIA?

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(Concluded from page 1369.)

CASE 5. *Penetrating wound involving lung structure.*—L. D——, a young man, was stabbed in the left side of the chest. He fell at once in a state of syncope, but there was no external hæmorrhage, only transitory dyspnœa and hæmoptysis. The knife had entered the third intercostal space about one inch and a half outside the sternum. There was no pleural effusion, and his pulse was of good character. The wound was closed antiseptically. Twenty-four hours after the injury he complained of a chilly feeling, had a frequent pulse (110), temperature 101°, and slight hæmoptysis, but no dyspnœa. On auscultation there were heard loud bronchitic râles, partly perhaps from hæmorrhage; also some fine crepitant râles at the left summit, loudest in front. On the day following the hæmorrhage had entirely ceased, but there were dry cough, rusty sputum, and feverishness. Temperature 101°; pulse 100; respiration 30. Crepitant râles over superior lobe of lung, but without marked dulness. For the following three days his condition remained unchanged, when on the sixth day from the injury the temperature began to fall, and by the tenth the fever had completely disappeared. The lung conditions cleared up gradually, and he made a good recovery.

Direct enough one might think the evidence in these cases as to the relationship between injury and pneumonia, and so it appears; but it is only by a careful consideration of their leading features that we can come to anything like a conclusion as to the nature of the lung changes. In connexion with the first case, a leading thought must be, What light, if any, does it throw upon the production of pneumonia by pulmonary concussion, and is this really a possible result of such a traumatism? My own impression, and this I incline to extend to the large majority of cases in which the association occurs, is that in this instance the lung inflammation was *not* the direct result of the injury—indeed, as the accident happened it could not well be,—but was probably the outcome of the condition of an otherwise sound lung having, through excess of work, become more than ordinarily congested, and of the sanitary surroundings of the patient, which, unfortunately, were not of the best. His left side was terribly bruised; its movements were for a time languid and imperfect. The comparative feebleness of the vesicular murmur and the dyspnœa were evidences of imperfect respiration and retarded circulation on the injured side; and as of necessity the same amount of blood was passing through the right heart, and the same demands were being made for its chemical transformation, it could not fail that the sound lung should be called upon for extra labour, and that in endeavouring to perform this its bloodvessels should become overcharged. This condition of hyperæmia is one especially favourable for the development of those organisms in which I believe lobar pneumonia ordinarily has its origin; and in this way I am inclined to think there was brought about, in the only case of its kind I have known, a true "pneumonic fever," the apparent outcome of shock to the chest walls. My experience enables me to confirm the conclusions of Mr. Le Gros Clark, that serious functional derangement without organic lesion may result from contusion or concussion of the chest, and that such trouble generally subsides spontaneously.

Some of the cases reported as cases of pneumonia following blows on the chest seem to me to have other sources of origin, for the kind of blow described is not one which in the naturally elastic condition of chest wall and lung substance is likely to produce an emphatic "commotion." I take it that when such a result does follow a trivial injury in some constitutional predisposition or chronic functional disturbance must be found the starting point of the pneumonia, and not in the sequence of a traumatism. It has been argued that in our knowledge of the effects of head injuries we readily find an expectation of such results, but surgical experience proves that the after effects of contusion of the skull are usually found in affections of the meninges, and not of the encephalon itself. Pleurisy, which in dealing with such an argument we may bracket

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with meningitis, is, we know, a not infrequent sequel of blows upon the thoracic walls, and although pneumonia in its traumatic form does unquestionably occur in such circumstances, it is not only uncommon, but is the outcome usually of such violence as writes its record immediately and profoundly. I have been astonished, in witnessing the effects of very severe blows, received especially over the root of the lung, of the urgent and alarming symptoms and anomalous physical signs they produced, and the manner in which, within a few days, and without any marked evidence of harmful reaction, their effects have completely passed away. I well remember a man under my care in the Cumberland Infirmary who, while in a stooping position, received from the end of a heavy plank, which had fallen from some height, a blow between the body of the left scapula and the spine. He was admitted in a condition of most urgent dyspnœa; the left chest moved in a very impeded way, and although percussion dulness was normal, there was an almost entire absence of vesicular murmur; while on the right the respiration was intensely puerile. On the following day the percussion note on the left was not clear, as if from some pulmonary congestion, but there was now audible distinct vesicular murmur, and the dyspnœa was somewhat less. Under means employed to reduce the fulness of the pulmonary circulation his condition was relieved, and the respiration on the injured side was at the end of three days so fully re-established that he was practically well. His temperature, subnormal for the first twenty-four hours, never rose beyond a normal point. This, however, is not always the history; and that a lung—remaining as this man's left lung did for nearly three days in a state of paresis, with its nerve force more or less inhibited and its bloodvessels probably in a state of dilatation—should become mechanically the seat of an active congestion, or, pathologically, the nursery of an organism, is readily understood, but such an event is assuredly not the rule. A fact, I remember in this connexion, and of which I made a note, was that, during the War of the Rebellion, there passed under treatment 11,549 flesh wounds inflicted by gunshot, of which in the course of its last year there were 3970 of the thoracic parietes. Of the grand total, 131 died, and among the recorded causes of death only six were returned as due to pneumonia. All surgeons recognise the confusing power of gunshot injury and its often grave secondary results, and it seems strange that if pneumonia be a frequent sequel of injuries to the chest wall it should not figure more prominently in such a list, drawn in war time, with all the trying vicissitudes it ever brings alike to the active and to the maimed.

In the second category of contusion with pulmonary laceration we find, so far as my experience guides me, the most frequent association of pulmonary congestion with traumatism; but the doubt remains whether this is often, indeed ever, a lobar pneumonia. Take Case 2 as an example, for it occurred in a man of fine physique, who rallied quickly from the shock of his injury, and whose cardiac force was soon re-established. He was, unfortunately, at some distance from me, and I did not see him upon the second occasion until thirty-six hours after his accident. But the statement of his attendants was that the increased difficulty of breathing had come on gradually, that the fever appeared without any shivering or chilly feeling, and that it had lasted for about twelve hours before my visit. Then the condition was unmistakably that of great pulmonary congestion, brought about probably by shock and injury to the lung having produced a certain amount of blood stasis, to which condition was unhappily superadded sudden increase in vascular pressure. That there was actually fluid effusion into the alveoli is possible, for there was a notable absence of vesicular murmur, but that all the morbidity present was simply mechanical, the result of his treatment, I think, proved. A free bleeding gave immediate relief to his pulmonary congestion, and, as his general state was but symptomatic of this local condition, his pulse and temperature fell quickly, and in twenty-four hours after the venesection he was convalescent. The little clinical knowledge that is mine, of bloodletting in true pneumonia, is that it is capable of affording an almost miraculous relief in circumstances of urgency, but that, notwithstanding this relief, the disease continues its march, and may end in recovery or it may end in death.[1] A very similar pulmonary condition to that witnessed in this man, but naturally affecting both sides, is known to me as capable of being produced by exposure for many hours to a biting cold wind, a condition equally speedily relieved by bloodletting; but that such treatment cuts short a lobar pneumonia I have grave doubts, and this despite the characteristically able and ingenious argument of Professor Hamilton.[2]

Lobar pneumonia does not attack the whole of an organ at once; it spreads from one point; whereas in the case of A. H——, within twelve hours of the time his temperature rose, the greater part of his lung was involved. And I can recall, as bearing on and throwing a certain amount of light upon this condition, the case of a man over whose chest the wheel of a waggon passed, fracturing several of his right ribs and lacerating his lung, and who, never properly rallying, died in forty-eight hours. On post-mortem examination the whole of the injured organ was found so congested as to be little crepitant. With vital functions at so low an ebb, this must surely have been largely a mere mechanical effect. Case 3 is a good example of traumatic pneumonia characterised by slowly rising temperature—a temperature which was a fairly exact index of the amount of lung involved—by slow defervescence, by very gradual clearing of the pulmonary dulness, and, above all, by the residual changes attendant upon a more or less chronic and interstitial process.

The two cases in the last category are fair, perhaps happy, examples of the results of penetrating wounds, when the large vessels and larger air-tubes escape perforation. The first man recovered rapidly, and the inflammatory harm he had was limited to the immediate neighbourhood of his injury; while, in the other patient, it is difficult to decide how much the primary pulmonary hæmorrhage had to do with the inflammatory state. Unfortunately, I have no record of the condition of the upper part of the lung when he was first seen, but we know that he had free hæmoptysis when his injury was inflicted, and that this reappeared in close sequence to the rigor which ushered in his pneumonia. Examined at once when this declared itself, there were found loud bronchitic râles and fine crepitant râles at the summit. Some of these may have been in existence before the temperature rose, and it is therefore impossible to avoid their consideration. A febrile attack of variable duration is a frequent occurrence after an attack of hæmoptysis, and signs of pulmonary consolidation may certainly follow it. In this instance there was probably a double element—the wound and the hæmorrhage; but be the explanation of origin what it may, the pneumonia was unattended by any very pronounced physical evidence of condensation, and its symptoms and its signs disappeared, as they do in very many such cases, slowly and gradually.

Such seem to me to be the most notable features in the lung condition of those four cases of pulmonary traumatism, and the further question arises: How do they comport themselves when ranged beside those which characterise lobar pneumonia? Let us look at them at various points in their history. If there be one feature which, as a rule, marks emphatically pneumonic fever, it is the sudden sharpness of its origin—a rigor, with or without vomiting, and a temperature the height of which is quickly attained, and which, with the exception of the usual diurnal variations, remains high for several days—all this without possibly any sign, it may be without any distinctive symptom of pulmonary harm, and even if the physical condition be recognisable, its extent is no measure of the temperature elevation or of the gravity of the general condition. The development of physical signs is in a large proportion of cases speedy, and the manner in which they extend themselves indicates a more or less rapidly spreading process, a process which may involve a whole lung, or a considerable part of both lungs. When this extension has reached its limits—or, rather, when the disease has run its course—the crisis which denotes this is as sudden as was the commencement, and although for some days after there are to be recognised the auscultatory phenomena of hepatisation, in a wonderfully short space of time these usually disappear, and they leave no lasting evidence of their existence; indeed, a great clinician has written that "pneumonia has no sequelæ." It is somewhat otherwise with the traumatic form of the affection. This may be ushered in by a sudden perturbation, but it is generally even then easy to find in lung changes its true causation. In other instances the temperature rises slowly and gradually, and, its maximum

[1] Of this I have written somewhat fully in the International Journal of the Medical Sciences for July, 1887, "On the Remedial Value of Bloodletting."

[2] The Pathology of Bronchitis, pp. 110 to 129.

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once attained, is usually in direct proportion to the amount of lung implicated, while its fall—like the resolution of the pulmonary harm upon which it depends—is equally gradual. In such cases the area of consolidation is a comparatively limited one, and even in the more sthenic and acute form—so far as my experience goes—the uninjured lung is *never* affected.

Abscess, as Mr. Erichsen points out, is not an uncommon termination in traumatic pneumonia, and although at times, as he further indicates, the presence of a foreign body may determine such a result, there may be in the nature of the morbid process itself this natural tendency. Such an event is rare in croupous pneumonia; so rare that some authorities doubt the possibility of its occurrence.[3] The origin of phthisis in acute pneumonia is also questioned by many, but I take it that not a few surgeons can call to remembrance instances of tuberculosis which seem to have had their beginning in an injury of the lung.

Two other phenomena in very frequent and very close association with lobar pneumonia are herpes and albuminuria, but I have never seen either as the accompaniment of a traumatic pulmonary inflammation. My belief, therefore, is that although in a certain proportion of cases the very acuteness of the signs and symptoms attendant upon such lesions may simulate closely pneumonic fever, they have their origin in a mechanical interference with the pulmonary circulation, and that in their progress, and especially in the results they give when treated by free depletion, they differ very widely from croupous pneumonia. The less acute forms have features of their own possibly more readily recognisable, the most telling of which is the tendency they have at times to leave behind them such changes as may, if simple, be quiescent and long enduring, but which at other times do undoubtedly tend to pulmonary disintegration. While holding these views I admit that croupous pneumonia may, perchance, at times follow injury, and this is but what we might expect in accepting the modern pathology of the disease, for if the diplococcus of Fraenkel be the chief agent in producing the pulmonary inflammation, and if it exists, as taught by Sternberg, as a normal denizen of the buccal secretions, it is easily understood how, when once inhaled and implanted upon a soil prepared alike by local injury and by lowered vital force, it should flourish and show forth its fruits.

Experience in antiseptic surgery prepares me to accept with less hesitation the doctrine that no form of spreading inflammation is due merely to the reaction of the body against a local injury, and therefore there probably exist various organisms capable of producing a pulmonary inflammation. Erysipelas is, I know, one of these, and as in times past its close association with pulmonary injuries was greater than it is happily likely to be now, it is possible that under the cloak of a rapidly developed lobar pneumonia there was really the march of a specific germ disease (streptococcus erysipelatosus). This on the one hand and on the other the possible effects of blows and strains in "finding out" and bringing into quick recognition a developing pneumonia. This is so clearly put, in to my thinking the very ablest monograph we possess on pneumonia, that I am glad to quote it here. Sturges and Coupland thus write: "The final conclusion in regard to the alleged traumatic origin of the disease seems to be this: lobar pneumonia does undoubtedly sometimes follow injury either immediately or with a short interval. In some instances this sequence is accidental, the inflammation not being caused by the injury, but only brought to light through its agency. In others there is a real but indirect relationship; the pneumonia arises, that is to say, not from any harm done immediately to the lung, but from the nervous shock which bodily injury, whether of the chest or elsewhere, is apt to produce, and which is common with fatigue, destitution, and alcoholic excess, predispose the individual to such attacks."[4]

My belief as to a possible etiological connexion goes rather further than this, but that it is not inflexible is best evidenced by the fact that, as the years have run and my experience has widened, I feel more and more inclined diffidently to rank myself with those—and among them are some of the wisest and best of physicians—who regard lobar pneumonia as an essential fever.

Cannes, France.

[3] To this opinion, however, I am unable to subscribe, as it has happened to me to treat successfully by direct incision and drainage a pulmonary abscess the sequel of an undoubted lobar pneumonia.

[4] Pneumonia, second edition, p. 327.

CASES OF INTESTINAL OBSTRUCTION TREATED BY LAPAROTOMY.

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(*Concluded from page 1371.*)

CASE 4. *Intestinal obstruction; laparotomy; recovery.*—G. C. W——, aged fourteen, was taken suddenly ill on Sunday, April 13th, 1890. He complained of severe pain in the abdomen, which was referred to the left lumbar region. The attack was regarded as one of colic, due possibly to some radishes and lettuces of which he had partaken freely. Some relief was obtained from some whisky administered by the father. On the following day the bowels acted after the administration of a dose of castor oil. There were two solid motions, one being small and thin. The pain did not subside. He was now seen by the family medical man, Dr. Jordan of Heaton Chapel. The abdomen became gradually distended, and symptoms of peritonitis declared themselves. Temperature 102°. For the next two days he remained about the same, the pain being very severe at intervals. Six days from the commencement of the attack Dr. Dreschfeld saw him in consultation. The abdomen had become very distended, and there had been no action of the bowels since the day after the onset of the attack. An enema of oil and glycerine was administered, with no result. Two days later an action of the bowels followed the injection of oil and glycerine; the motion consisted of hard fæces, with masses which looked like half-digested milk.—April 21st: Vomiting commenced; the vomited matter dark-green at first, then stercoraceous; some improvement followed; the abdominal distension, however, remained the same. Three days later passed several loose motions, which were of a buff colour and most offensive.—29th: There was a considerable improvement in his condition; the abdominal distension had largely subsided; he had passed several large motions and flatus freely. In the evening of the same day he was as bad as ever; he suffered from severe spasmodic abdominal pains every few minutes, and had to be kept under the influence of morphia. These symptoms continued for some hours, then abated, and the next day the lad was so much better that the father returned to his business. Towards evening, however, the spasmodic pains recurred and continued during the night, and for their relief morphia had to be freely administered.—May 1st: Passed a small piece of fæcal matter; the next day another piece the size of the stem of a clay pipe; it was of a pale buff colour, and very hard. The pain continued; a simple enema came back with some mucus, and emitted a most offensive odour; in the water were some portions of mucous membrane, which looked gangrenous. It was now determined to seek surgical aid. I saw him with Dr. Jordan early on Sunday morning, May 4th, three weeks from the commencement of the illness. The abdomen was greatly distended, and everywhere tympanitic. The spasmodic pains, which came on every few seconds, were distressing to a degree. There was no vomiting, and for two days the constipation had been complete. It was very evident that a fatal termination was impending if no relief could be obtained by an operation. This was fully explained to the parents, who readily gave their consent to any procedure which we deemed advisable. With Dr. Bain's assistance I performed laparotomy, Dr. Jordan administering the anæsthetic. The surface of the abdomen was cleaned with the perchloride solution (1 in 1000), and a median incision made. On opening the abdomen, distended small intestines presented, also some omentum, which protruded, and gave trouble. It was returned, and kept within the cavity by a flat sponge. The left index and middle fingers were now introduced, and passed downwards on each side towards the iliac fossa, but nothing abnormal was detected. They were then passed backwards between the distended coils towards the spine, and immediately a hard, knotty mass was detected, which proved to be some adherent small intestines. Two coils were firmly attached—indeed, blended—by some old adhesions, and one of them fixed down posteriorly by some recent lymph. In the immediate vicinity of these fresh adhesions the gut was very much injured. It was very dark, and appeared to be severely bruised. It looked

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as if it were on the point of giving way. The appearances presented were very similar to those observed in a gut released after it has been strangulated for some time. This appeared to be quite sufficient to account for the symptoms, so, after removing some of the recent lymph from the surface of the intestine, the abdomen was closed, with silk sutures passed through skin and parietal peritoneum on each side. The liberation of the coils of intestine was no easy matter. It had to be conducted with the greatest gentleness owing to the condition of the gut; undue traction would have most assuredly caused a rupture, and so add immensely to the risks. During this part of the operation some coils of intestine had to be drawn outside and wrapped in soft linen dipped in a warm saturated solution of boracic acid.

There was no immediate improvement. The abdominal distension continued, as also did the spasmodic pains. It was feared that the cause of the obstruction had not been removed; and yet considering the state in which we found the gut, the non-action of the bowels, and the continuance of the symptoms, were not to be wondered at. We ventured to predict that some time would elapse before the parts had so far recovered as to render a restoration of function at all possible. A natural free action of the bowels occurred on the eighth day, which was preceded by the passage of flatus on the seventh, and was speedily followed by a subsidence of the symptoms, and a subsequent restoration of the usual health. It is worthy of note that the operation wound did remarkably well; the temperature, which had reached 100° on the evening of the seventh day after operation, being generally normal. For some days alimentation was carried on by injections of milk and beef-tea and by nutrient suppositories.

CASE 5. *Circumscribed suppurative peritonitis; pseudo-intestinal obstruction; laparotomy with evacuation and drainage of the abscess; recovery.*—A. W. W——, aged eighteen, son of a medical man, seen in consultation with Drs. March and Hodgson of Rochdale, Jan. 18th, 1890. It appears from the history subsequently obtained that the boy was taken ill on Friday night, Jan. 10th, directly he got into bed, with a severe pain across the abdomen. He had experienced a similar pain when at school in Edinburgh four years previously. He was in bed a day or two, but the pain did not finally disappear for a week. On the night of Jan. 10th, when the attack recurred, he could obtain no sleep, tossed about, and was very hot. For the following four days the pain continued with scarcely any abatement. It was alleviated somewhat by hot applications. He was fed with fluids, and complained of being hot and thirsty. On the afternoon of the fourth day the pain gradually ceased, and that night he had unbroken rest. The next morning, feeling all right again, he had a breakfast of an egg, bread-and-butter, and tea. About the middle of the morning, without the slightest warning, he was again seized with griping pains, which made his condition very serious. Some relief was obtained by the administration of morphia hypodermically. Sickness now commenced, and after this, in his own language, every drink he took appeared to fill him more and more. It should be mentioned that on the fifth day of the illness he had a rigor which lasted twenty minutes. When seen on Saturday, Jan. 18th, the abdomen was considerably distended, and on the right side towards the lower part, near the median line, there was an elastic swelling, which Dr. March could also feel through the rectum, reminding him, he said, of a tense ovarian cyst. The abdomen was opened by a median incision, and as soon as the cavity was entered old adhesions were encountered; the omentum was also adherent to the anterior abdominal wall. A finger was introduced, and some more old adhesions discovered, principally in the lower part on the right side. While gently separating these fluid escaped, at first clear, then decidedly puriform and ill-smelling. The cavity was washed out with a sublimate solution (1 in 5000); then a drainage-tube was introduced into the cavity through a fresh opening made at the lower part immediately over the situation of the purulent collection, and the median incision closed in its entire length. It will have been noticed that the position of the pus-containing cavity corresponded with the situation of the elastic swelling discovered before operation. He was sick in the afternoon of the day of operation. The pain ceased almost immediately, but his progress towards recovery was very slow. At first he was fed by the rectum, then food began to be administered by the mouth, at first in small, then in gradually increasing, quantities. The pus cavity gave us no anxiety. The discharge continued to emit an offensive smell for some days, although the temperature indicated no fever. The cavity was washed out with a saturated solution of boracic acid. The patient was seen on May 20th, when he was looking strong and well. The sinus had long ceased to discharge; no trouble with his bowels; appetite and sleep good.—June 18th, 1891: Mr. W—— called and expressed himself as being in a most satisfactory condition. He has passed through an attack of influenza and made a good recovery. The bowels act regularly, and beyond the scars on the abdomen he bears no evidence of his serious attack eighteen months ago.

Manchester.

LUPUS OF THE MOUTH, PHARYNX, AND LARYNX.

BY GILBERT BARLING, B.S., F.R.C.S.,
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THE frequency with which these lesions exist in association with skin lupus is not generally recognised, and as the matter is of some practical and pathological importance, it seems worth while calling attention to it. Its practical importance lies in this, that if not recognised when treatment by tuberculin is resorted to, and the dose correspondingly modified, the constitutional disturbance produced by the injection may be such as to cause anxiety, and possibly the local reaction in the larynx may give rise to symptoms of obstruction where none previously existed, and commonly difficulty in swallowing will arise from the soreness produced in the passages by the local reaction. Lupus in these parts is very interesting pathologically, because the features of the disease are much less variable than those of lupus of the skin; interesting, too, as resembling those lesions of similar parts which are often spoken of as chronic tuberculoses. During the last three months thirteen cases of lupus have been admitted to the hospital for treatment, and through the kindness of my colleagues I have had an opportunity of examining all these, with the result that in six of them lupus has been found on either palate, pharynx, or larynx, sometimes on all three, though in only two were there symptoms pointing to implication of these parts. Although these cases were not selected in any way, it is probable that the proportion in which these mucous membranes were affected is considerably higher than generally obtains, for the reports of other observers, made on a larger number of cases, makes the proportion vary between 10 and 20 per cent. All are agreed, however, that females suffer more than males, and this is brought out to a singular degree in my cases: of the thirteen patients six were females and seven males; five of the females, but only one male had lupus of the oral and adjacent cavities. The condition of those affected is illustrated by the following cases:—

CASE 1.—Female aged thirty, the subject of lupus of the nose and cheek for five years, during which time erasion has been done thrice, but without permanent improvement. When admitted, Jan. 21st, 1891, in addition to the diseased areas mentioned above, it was found that the surface of the hard and soft palate was reddened, mammillated, and granular, with superficial ulceration in patches over the hard palate; the uvula was as thick as the index finger, excoriated and papillary; epiglottis uniformly red, swollen, and on its upper margin granular; its thickness was about a quarter of an inch, and this obscured the interior of the larynx, so that only the inter-arytenoid fold could be seen, and this was swollen and partly covered with adhesive secretion. It should be mentioned that the lupus on the cheek and nose was rather of the erythematous type, and that the septum nasi was considerably involved. The patient did not know that there was anything the matter with the palate and adjacent parts.

CASE 2.—A girl aged seventeen. Was admitted on Feb. 16th, 1891, with lupus of the left side of the face and neck, and a patch on one knee and shoulder. She complained also of difficulty in swallowing. In addition to a history of hip-joint disease in an aunt, her father suffers from lupus. The skin lesion of the neck commenced about eighteen

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months ago, when some glandular abscesses broke in that region. On the right side of the hard palate was a patch three-quarters of an inch long and half an inch wide, raised, papillary, and reddened. The posterior half of the soft palate and the pillars of the palate were in a similar condition, but here there was some actual ulceration, whilst the uvula was deformed and papillary; the posterior wall of the pharynx on the right side was also affected. The epiglottis was much thickened and rigid, and on its posterior margin slightly mammillated, both ary epiglottic folds were swollen and rather granular, and the ventricular band on the left side was œdematous and nodular, so that the left cord was almost entirely hidden.

CASE 3.—A girl aged sixteen. Was admitted on Dec. 30th, 1890, with lupus of the nose, ulcerating and covered with an enormously thick scab; there was lupus also of the conjunctiva of the upper eyelid and a tubercular nodule of the iris. The nose had twice been erased. On the margin of the soft palate and uvula, on the left side, there was a crenated scar, whilst both pillars of the palate on the same side were swollen, papillary and superficially ulcerated.

CASE 4.—A girl aged thirteen. Was admitted on Feb. 26th, 1891, with lupus of the nose of two months' duration, of the forearm of eighteen months' duration, and of the eyelid of five years' existence. There was also tubercular osteitis of several phalanges and tubercular disease of the left elbow-joint. On the left margin of the soft palate was a small bright red patch, over which were seated tiny white nodules, and this condition extended on to the surface of the left tonsil, but here there was a tendency to papillary formation. It should be mentioned that both tonsils were considerably enlarged, but the lupus patch on the left was easily recognised as distinct from the ordinary hypertrophy. The mucous membrane over both arytenoids was red and swollen.

CASE 5.—A boy aged fourteen. Was admitted on Jan. 22nd with lupus of the nose, very similar in appearance to that in Case 3. It had existed two years. On the soft palate was a small patch, reddened and excoriated, and on this base were tiny white spots having much the appearance of tiny corneal ulcers. On the upper surface of the epiglottis to the right side was a reddened area also bearing some of the white spots above mentioned, and in addition some small reddish nodules.

CASE 6.—The condition of this patient was fully described in THE LANCET of Feb. 28th, 1891. She was shown at the Midland Medical Society on Jan. 14th, 1891, as an example of lupus of palate and larynx without skin lupus; but when she was admitted later for treatment a single nodule, the size of a small pea, was discovered on the right cheek; and at this time the destruction of the gums in front and behind was loosening the teeth.

From the above descriptions it will be seen that the disease was exhibited in all gradations, from the very slightest in Case 4 to a very advanced stage in Case 6; yet anyone examining the whole series would not hesitate to regard the disease as essentially the same in all. The earliest condition appears to consist in a bright-red area, well defined at its edges, with tiny white spots seated on it, and with a loss of surface which is too superficial to be described as ulceration; later, these white spots disappear, and a surface sometimes granular at others quite papillary or mammillated is presented, superficial ulceration being seen side by side with this. The ulceration may extend until it involves almost the whole thickness of the mucous membrane—for instance, of the palate,—but it does not appear to perforate or to destroy bone, though, like lupus of the skin, it does not respect cartilage, for the epiglottis may suffer severely, as in Case 6. The tendency to ulceration is more marked where there is most exposure to friction, as on the hard palate, whilst in such parts as the larynx, apart from the epiglottis, it occurs only exceptionally. Cicatrisation happens spontaneously sometimes, and if it does not the progress of the disease is very slow, and is not very much influenced by such local treatment as the use of lactic acid and by general tonics. In his work on Diseases of the Throat, second edition, Mr. Lennox Browne figures a remarkable case of stenosis of the larynx from the cicatrisation of lupus, in which there was an opening for the passage of air which would only admit an object the size of a goosequill.

There is no one special variety of lupus with which the disease in these cavities is associated, and, as I have already mentioned, there is much less diversity in the appearances presented by the mucous membrane lupus than is seen in the skin affection. Mr. Hutchinson, in his recent lectures on Lupus, insisted strongly upon exposure to the influence of cold as a potent factor in the production of the disease; but this can hardly apply when these mucous surfaces are affected. It might be suggested that the affection of mucous membranes is due to extension by continuity of tissue, from the nose for instance; but this could only hold good in one of my cases; in the remaining five the skin and oral lesions were absolutely discontinuous. In all the cases injection of tuberculin had quite as pronounced effect on lupus of the palate, pharynx, and larynx as it had on the lupus of the skin, and the local reaction was similar to that of ordinary laryngeal tuberculosis after injection, though there was not the same tendency to rapid necrosis. The remedial value of the injections appears to be as considerable in the mucous surfaces as in the skin. This has been especially the case in the deep ulceration over the hard palate in Case 6. This is the more interesting as pointing to the relation between lupus and ordinary tuberculosis, because if the ulcer just mentioned had been placed alone on such a part as the tongue, it would by most observers have been regarded, from its characters, as an ordinary tubercular ulcer.

Birmingham.

THE USE OF ACETANILIDE IN THE TREATMENT OF ACUTE AND CHRONIC BRONCHITIS.

BY E. F. GRÜN, M.R.C.S., L.R.C.P.

HITHERTO the malady known as catarrhal bronchitis has been regarded as a disease of the bronchial mucous membrane, produced in the majority of cases by a chilling of the general surface of the body and quite independent of any specific infection. It will be my endeavour in the following remarks to prove that bronchitis is the direct outcome of infection by a specific organism. My attention was first drawn to the existence of the organism, which observation has led me to believe to be the actual cause of bronchitis, during the examination of sputum for the bacillus tuberculosis. Many cases of catarrhal bronchitis were sent to me to examine in view of the possibility of the bacillus tuberculosis being present in them. In a very short time the constant presence of a bacillus of regular form and characteristic appearance was evidenced to me. Having assured myself of the presence of the organism in every case of bronchitis which had hitherto come under my notice, my next endeavour was to isolate the organism by the gelatine plate cultivation process. In this I succeeded without difficulty. Next a series of subcultures was made, with constant testing as to the purity of the subculture by further plate cultivation. What I propose is, first, to describe the nature of the organism; next to give the experiments carried out in cultures and inoculations; and then to describe the substances which have been found capable of destroying the organism within and without the body.

THE BACILLUS OF ACUTE BRONCHITIS.

On examining the sputum of any case of acute bronchitis, the expectorated matter is found to consist of pure mucus, embedded in which are pus cells, epithelial cells, leucocytes, and granular material of a highly refracting nature, probably oily. In and among the pus cells, upon the epithelial cells, and lying free in the mucus, are a number of bacteria. When not contaminated by secretions from the mouth these bacteria consist of one easily distinguishable species, constant in size, shape, and peculiarity of staining. This bacterium is a bacillus, in that its length is about twice its breadth, and from observation in cultivations appears to give off spores. Its length is very constantly about two micro-millimetres when met with in preparation from sputum. On cultivation, however, alterations take place in its morphological character, which will be subsequently described. The organism is constricted in the centre very like bacillus fluorescens. The two parts on either side of the constriction are rounded. The organism stains readily with gentian violet and methylene blue; it occurs singly, in pairs, and in clusters or zoogloea,

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as before remarked, lying free, and in the substance of leucocytes, in many of which the organism can be seen, apparently causing some coagulation of the leucocyte protoplasm around it. Some leucocytes have more than one bacillus in their interior, a coagulation of the protoplasmic matter taking place around each bacillus and causing the leucocyte to split up, each surrounded bacillus forming a cell, impossible to distinguish from a pus cell, and ultimately losing itself in a granular degeneration. The leucocytes thus absorb a certain number of the bacilli; the absorbed bacilli cause a coagulation of the protoplasm of the leucocyte, and presently a granular destruction of the leucocyte. Upon epithelial cells the bacilli produce no change, but are simply collected in numbers upon the surface of the cell.

Organisms when mounted on cover-glass, with a little gentian violet to colour, exhibit active movements under one-twelfth of an inch. The movements seem to consist of contraction and expansion of organism; a mobile movement in varying directions; a swaying movement, one end of the organism being fixed, a twisting movement on the long axis of the organism giving a screw-like outline to the organism. Cultures a month old exhibit the organism somewhat altered in character, and give rise to a suspicion that the culture might not be quite pure; but plate cultivation gave a reversion to the original form of organisms as seen in sputum and as seen in the tube cultures of twenty-four hours' growth. The alteration in form consisted in an increase in length of the organism and a loss of the characteristic central constriction in a large number of the individual bacilli of the thirty-day-old culture. The reaction of the scum produced is strongly alkaline.

Cultivation.—The organism grows readily upon nutrient gelatine and agar-agar, at a temperature between 5° C. and 40° C. A temperature above 40° C. retards growth; above 50° C. the organism is destroyed; while a temperature below 5° C. appears only to arrest the growth, for on the temperature being raised it resumes its growth with unimpaired vigour. The growth takes place upon the surface of the nutrient media as a flocculent film, but gradually penetrates the interior of the agar-agar nutrient. The surface of the medium upon which the organism grows gives a strong alkaline reaction; a gas of a sour and most offensive odour is given off. The growth is apparent twelve hours after inoculation of nutrient media. When grown upon nutrient gelatine the gelatine is liquefied.

SUBSTANCES USED FOR ARRESTING GROWTH UPON NUTRIENT MEDIA.

One decigramme of each of the following substances was added to a tube of nutrient agar-agar and also to a tube of nutrient gelatine. The tubes were then inoculated from a subculture of the organism; other tubes were inoculated as control experiments, with the results tabulated below.

Iodoform	Free growth in 7 days.
Carbolic acid (½ %)	,, in 7 days.
Do. (1 %)	,, in 10 days.
Do. (2 %)	,, in 28 days.
Do. (10 %)	,, in 50 days.
Menthol	,, in 3 days.
Thymol	No growth.
Boric acid	Slight growth after 10 days.
Aniline chloride	Free growth in 4 days.
Acetanilide	No growth after 40 days.
Untreated tube	Free growth in 24 hours.
Liq. hydrargyri perchloridi...	No growth after 60 days.

It was thus found that a free growth of the organism took place upon tubes of nutrient material to which iodoform, carbolic acid, menthol, and aniline chloride had been added in considerable quantity. But tubes to which acetanilide and liquor hydrargyri perchloridi had been added gave no growth even when kept for a long period. Of these agents capable of checking the growth acetanilide alone was available for internal administration, and this agent appears to possess antiseptic powers equal almost to those of perchloride of mercury, while being perfectly innocuous, odourless, and tasteless. Further, when administered as an internal remedy it appears to possess the power of cutting short acute catarrhal bronchitis in a striking and rapid manner, twenty-five consecutive cases being treated with the remedy with unvarying successful result in arresting the disease within comparatively a few hours. This statement, taken with the fact, which is open for any observer to test, as to the power of arresting bacterial growth in nutrient media, should lead to an extended trial of the remedy. To produce a beneficial effect doses of some magnitude must be given, such as five grains at alternate hours.

CLINICAL OBSERVATIONS.

The experiments were commenced by taking selected specimens of sputum from cases of bronchitis, and by obtaining cultivations of the organism from these specimens. Three typical cases will be quoted which will serve as a type of the remainder.

Names of cases: L——, E——, C——, R——, and B——. Control experiments: B——, G——, and S——.

L——.[1] Case of acute bronchitis, supposed to have arisen from a chill. Patient had a temperature of 103° F., with the usual symptoms of acute bronchitis. The sputum examined at the commencement of the illness consisted of mucus-pus cells and epithelial cells; in the sputum were large numbers of the bacilli. A sterilised platinum needle was dipped in the sputum and then a tube of nutrient gelatine inoculated with the needle; another needle was dipped in the inoculated tube and then transferred to another tube, forming a first attenuation. The content of this tube was then poured out into a Petri glass dish and placed in the incubator; at the end of twenty-four hours the growth was apparent upon the surface of the gelatine, which rapidly coalesced to form a scum over the surface of the gelatine. Immediately on perceiving the commencement of the growth a nutrient tube was inoculated and the first subculture thus started. On microscopic examination the organism grown on the gelatine was found to resemble in appearance that found in the sputum. The growth was apparent in the subculture in twenty-four hours; another tube was then inoculated, and so on until ten subcultures were obtained. The patient recovered under the influence of poultices, and at the end of four days no organism was to be found in the sputum.

E.—A patient also suffering from bronchitis of about fourteen days' duration. The organism present in large numbers. Same cultivation made down to tenth subculture, with similar results. Patient treated with acetanilide; arrest of symptoms in twenty-four hours.

C.—This patient presented herself with severe cough. Sputum examined for bacillus tuberculosis; none found, but a large number of the bronchitis organisms present. Cultivations made, with result as detailed in case L——. Patient treated with acetanilide. Rapid arrest of cough and disappearance of organisms from sputum.

R.—This patient was seized with severe bronchitis in the middle of the night. Seen early in the morning, bronchitis organisms were present in large numbers. No pus cells; pure mucus and epithelial cells. Temperature 100°. Patient given acetanilide every two hours with marked benefit. All symptoms of bronchitis absent at the end of twenty-four hours.

B.—Chronic cough. Bacillus bronchitis present in great quantity; cough present for some years. Treated with acetanilide, eight grains three times daily. At the end of fourteen days the degeneration of the organism was plainly to be discerned in specimens of the sputum examined by the usual method.

Three control experiments were made. The sputum of three individuals suffering from cough, probably pharyngeal, was taken, and with it inoculations of tubes of nutrient gelatine were made. No special organisms could be detected in the sputum, which consisted of mucus with epithelial cells and leucocytes loaded with carbonaceous particles, and although the tubes of nutrient media have been preserved in a temperature similar to that in which the growing tubes were placed, no growth has hitherto taken place either of the bronchitis organism or of any other organism. These experiments tend to establish the fact that the human economy is not so full of organisms as some writers on bacteriology would have us believe.

GENERAL CONCLUSIONS.

From a consideration of the evidence thus brought together, it becomes apparent that bronchitis can no

[1] The whole details of the cultivation method will be given with this case, but with the other cases this will not be necessary.

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longer be regarded as a manifestation on the part of the bronchial tube of a simple chilling of the blood circulating in the capillaries of the skin, although there can be very little doubt that it is from this cause that cases of bronchitis arise in an indirect manner. No doubt the chilling of the blood causes an alteration of the conditions governing either the entrance of the bacteria into the bronchial tubes, or their destruction and elimination when entrance has been obtained by them into the lung. As an hypothesis we may assume that possibly the cilia of the tubes act less readily after chilling, although this has not been proved at present as far as cilia within the body are concerned. Cilia without the body do certainly require some particular temperature, at present undetermined, but none the less certain, for the proper exercise of their powers; it may be that as the chilling is more or less intense, so do the organisms penetrate deeper into the lung tissue, and give rise to symptoms of greater or less gravity. Or there may be defective power of destruction of bacteria after chilling. From examination of sputum it appears probable that the presence of bacteria or other foreign substances, such as carbonaceous particles, attracts to the surface of the mucous membrane leucocytes, phagocytes, or other wandering forms of cell life, which, under ordinary conditions, destroy in their own manner bacteria, or carry off solid inorganic particles incapable of destruction to parts less sensitive to their presence. When, however, the numbers of bacteria are very great, the exudation is for a time not sufficiently rapid to effect the necessary clearance of the irritating substance, and further help is required. Help gradually arrives, in many cases aided by poulticing and local stimulation, and presently the difficulty is overcome, or the individual succumbs in the effort.

Putney, S.W.

ON BRUIT DE DIABLE IN CHLOROSIS.

BY ADOLPHUS J. RICHARDSON, M.D.,
ASSISTANT PHYSICIAN, SUSSEX COUNTY HOSPITAL.

THE paper lately read by Dr. Bewley renders opportune the following notes on bruits de diable in chlorotic patients. The percentage of cases in which these murmurs are found seems to diminish with each fresh observer. Thus in healthy young females Dr. Herbert Davies gives 85 per cent., whereas Dr. Bewley says only 61·5 per cent., while my own investigations give but 51·4 per cent. in patients, all of whom are chlorotic. The difference between my figures and those of others arises, I believe, from my having invariably used a binaural stethoscope, with which lighter pressure can be applied than is necessary to maintain a wooden one in position, and from my having used in each case a chest-piece small enough to be applied flat without any pressure. I must also note, with all deference, that neither Dr. Davies nor Dr. Bewley used a hæmoglobinometer in their cases, and after a large experience with that instrument, I am convinced that many cases of anæmia cannot be diagnosed by the most careful examination of the lips, conjunctivæ, nails, or soft palate. In a patient with 50 per cent. or more of hæmoglobin, these means of diagnosis are frequently useless. My figures are derived from the consideration of 180 typical cases of chlorosis. All were unmarried women over fifteen and under twenty-seven years of age, in whom the amount of hæmoglobin, as determined by Gowers' hæmoglobinometer, was below 50 per cent. of the normal amount in the adult male. No continuous venous hum was heard in the neck in 89 cases, a hum on the right side only in 60, on the left side only in 11, and on both sides in 20; or put into percentages:—

No venous neck hum	49·4
Venous hum on right side only	33·3
" " " left " "	6·1
" " " both sides	11·1

The following table shows some details about these groups, the second vertical column representing all the cases in which the hum was heard. The hæmoglobin was estimated a second time five or six weeks after the patient's first attendance, the initial percentage subtracted, the difference divided by the number of weeks of attendance, and the quotient is called the weekly improvement.

—	No venous neck hum.	Venous hum present.	Hum on right side only.	Hum on left side only.	Hum on both sides.
Age of patient	19·1	19·0	19·0	19·3	18·9
Initial percentage of hæm.	26·6	20·9	22·45	19·54	17·5
Percentage of basic bruits	80·5	74·7	70·2	63·6	94·7
Percentage of headaches	81·1 (74)	95·1 (82)	94·5 (55)	100·0 (9)	94·4 (18)
Average weekly improvement	4·03 (47)	5·2 (61)	5·05 (38)	5·7 (8)	5·34 (10)
Percentage of œdematous legs	66·0 (78)	75·5 (88)	75·6 (71)	75·0 (72)	—

Note.—The last three lines being based on smaller numbers than the upper three, I have written under each number upon how many observations it is based.

From these figures it would appear that, given a certain degree of anæmia, the age of the patient does not make much difference in the production of these bruits. There is a well-marked difference between the initial percentage of hæmoglobin in the first and last columns; so, too, with respect to systolic bruits heard at the base of the heart, for the most part loudest at the pulmonary area. That the cases with bruits improve faster than those without bruits I believe to be solely due to the initial percentage of hæmoglobin being lower. The more anæmic a patient is, the more readily is the percentage of hæmoglobin improved, as shown by the following:—

21 cases averaging	13·5	initial p.c. of hæm.	improved	5·78 p.c. per week.
24 "	19·4	"	"	5·14 " "
24 "	24·2	"	"	4·29 " "
22 "	33·6	"	"	3·8 " "

Thus by writing the initial percentages of hæmoglobin as ordinates and the corresponding average improvements as abscissæ may be constructed a curve of improvement.

The percentage of œdema of the legs may appear somewhat high; but I have written down as œdematous all cases in which I could pit the legs ever so little. Very few were considerably œdematous, a large proportion denied all swelling.

The neck bruits are nothing like so persistent as the heart bruits; thus, a typical case under treatment ran:—

Oct. 2, 1890:	Hæmoglobin	14.	Systolic basic bruit.	Venous hum right side.				
Nov. 13, 1890:	"	60.	"	"	"	No venous hum.		
Feb. 5, 1891:	"	70.	"	"	"	"	"	"

the systolic bruit being still well marked, although the patient had lost all the ordinary signs of anæmia. I have definite notes of relapses in twenty-seven cases of these, eighteen had a venous neck hum on their first attendance—i.e., 66 per cent., a considerably larger proportion than in the whole series. Is it not possible that the presence of these bruits may be an aid to prognosis? In twenty-six relapses on their second appearance alterations had occurred from the initial condition in thirteen cases as to neck bruits, and in only nine as to basic bruits. It is very noticeable in these relapses how every patient has apparently a fixed degree of anæmia, which drives her to the hospital, and how this degree varies from patient to patient—thus, one presented herself on Jan. 28th, 1888, with hæmoglobin 36, on Oct. 20th, 1890, with hæmoglobin 36; whereas another came on Feb. 23rd, 1889, with hæmoglobin 15, on Sept. 29th, 1889, with hæmoglobin 16, and on Jan. 22nd, 1891, with hæmoglobin 20.

Considering forty-two cases in which the bruits have been listened to for some time after the beginning of treatment, the venous hum has disappeared thirty-seven times coincidently with an improvement in the amount of hæmoglobin; in two a two-sided bruit had become one-sided, in three they were unaltered, but in these the last estimation of hæmoglobin all yielded under 46 per cent. These figures are surely conclusive that anæmia is a factor in the production of these bruits—a very moderate position, from which, however, some wish to drive us. In fifty-six cases with a systolic basic bruit on first visit I have noted its disappearance in thirty-eight; in eighteen it persisted at the last observa-

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tion. In one case a systolic bruit appeared with an increased percentage of hæmoglobin, but this proved to be the herald of a serious relapse, which occurred during the continuous administration of iron.

Brighton.

INFLUENZA WITH ACUTE NEPHRITIS.

BY JAMES W. FRASER, M.D., C.M., M.R.C.S.

THE following case resembles that published by Dr. Mansel Sympson in THE LANCET, May 10th, 1890, though there are points of difference between them; thus, though the inflammation, judging by the amount of albumen passed, was more severe than in Dr. Sympson's case, and the amount of urine passed was very small, yet there never was any dropsy; and, further, there was not in this case any family predisposition to kidney disease.

Leonard P——, aged nine years, is one of a family of eight children, all of whom have suffered from influenza during the first three months of this year. One other case was severe, being followed by pneumonia, but the rest had mild and ordinary attacks. On March 2nd the case here reported commenced with the symptoms of influenza of ordinary type, except that it was accompanied by epistaxis. On the 3rd he was better, but worse again on the 4th, when his urine was noticed to be very scanty, and of an appearance described as "like beef-tea." He remained in much the same condition until the 7th, when he was seen for the first time. On that day he was in bed with headache, but no pain in the back, or any swelling of the body or limbs. The urine was very scanty, and smoke-coloured. It contained albumen, the amount being estimated by Esbach's tube at 0·2 per cent. Microscopically, the deposit was seen to consist of blood and granular casts, and fatty epithelium from the bladder and pelvis of the kidney. On the 8th his temperature had risen to 101·8°, which depended apparently on the commencement of an attack of bronchitis, showing itself by stethoscopic signs, and by pain and oppression in the chest. There was trifling œdema of the ankles. The urine, still very scanty, was acid in reaction, sp. gr. 1026, and contained 0·1 per cent of albumen and a deposit of blood, hyaline and epithelial casts. Some of the deposit was stained and examined for bacteria, numerous micrococci being found. On the 9th his temperature had fallen to 98°, and his pulse was weak, and accompanied by a thrill. He had little cough and no pain, and his chest condition had improved. The urine, however, contained much more albumen, it being estimated at 1·1 per cent. Esbach's tubes are not graduated to show such large amounts, and the estimation being made with undiluted urine, the quantity stated is only an approximation; it was, however, certainly very large, standing far above the graduations of the tube after twenty-four hours' settling. A curious property of the albumen was noted on that day, but was absent on other occasions. If a drop of nitric acid was added to some of the urine in a test tube, and the mixture boiled, very little precipitate was produced; but if the tube was put on one side for twenty-four hours, its entire contents gelatinised, so that it could be inverted without spilling. The smallness of the precipitate first produced is easily explained; some of the albumen was converted, no doubt, into syntonin by the acid, which body is not precipitated by heat; but why did it gelatinise on cooling? If the urine were first boiled, and then a drop of nitric acid added, a dense precipitate was produced, which amounted after settling for twenty-four hours to one-half of the column of urine. Microscopically the deposit from this day's urine consisted of blood and urates. On the 10th the patient's temperature had risen again to 99·8°, his pulse was 88 and had lost its thrill, and he had no pain except in a swollen cervical lympathic gland. The urine contained 0·35 per cent. of albumen by Esbach's tube, or about one-third of the column by heat and nitric acid. The albumens were more carefully examined on this day, and were found to consist of 0·3 per cent. of serum albumen, 0·05 per cent. of serum globulin, and a trace of peptone. The deposit consisted of urates, hyaline, and blood casts, with a few granular casts and some epithelium. On bacteriological examination only a few micrococci were found, and plate cultures in gelatine peptone gave rapidly liquefying colonies, which appeared to consist of the micrococcus ureæ. On the 12th his temperature ran up again to 100·2°, and his pulse to 96, but in all other respects he was better, having no pain or cough. The urine contained rather more than 0·1 per cent. of albumen or about one-sixth of a column. On the 13th his temperature fell to 98·6°, and on the 14th to 97·2°; it then remained subnormal until the 19th. The urine contained only traces of albumen, which finally disappeared, and on the 28th he was considered quite well. The urine was natural in amount and appearance, and has remained so since. The treatment adopted was rest in bed, poultices across the loins from the 7th to the 21st, and to the chest from the 8th to the 12th. The diet was strictly milk from the 7th to the 22nd, when meat was allowed. On the 8th he had a mixture containing aconite, bromide, and acetate of potash, and continued to take this until the 10th, when it was changed to one of hamamelis and lithia, which seemed rapidly to reduce the loss of albumen. Cases of nephritis following influenza appear to be rare. Among all the reports of the late epidemic in THE LANCET, in only four cases is albuminuria mentioned as being present, and in two of these it is not stated that it depended on actual nephritis. The two cases with nephritis are the one above mentioned, reported by Dr. Sympson, and one from Kustendjie, Roumania, reported by Dr. Irwin Bolton;[1] the two with albuminuria only are reported one by Dr. R. Sisley[2] and the other by Dr. Ewart.[3] This rarity may justify the publication of a fifth. There are two or three points in the case to which attention may be called. The great rise in the amount of albumen excreted when the bronchitis came on is interesting when viewed in the light of Schrieber's experiments,[4] in which he showed that compression of the chest in young people was capable of producing albuminuria. It appears as if the bronchitis, acting on an already diseased kidney, had produced a similar effect.

With regard to the trace of peptone found on the 10th, it may be stated that there was no doubt as to the nature of the body found. Dr. Kirk[5] appears to deny the existence of a true peptonuria, and to state that the precipitate usually reported as peptone is really mucin. There is, however, a ready way of settling the true nature of the precipitate, to which Dr. Kirk does not refer. If, after precipitating all albuminoids possible by heat and slight acetic acidulation, after the method of Sir W. Roberts, the filtrate from this precipitate be further acidulated with acetic acid and boiled with a few drops of freshly prepared solution of ferric acetate, the filtrate from this precipitation will be freed from all proteids except peptones, and any precipitate produced in the clear filtrate by metatungstic acid or potasso-mercuric iodide will consist of peptones.[6] Frequently urines are found which, remaining clear on boiling and acidulation, yet give a precipitate with potasso-mercuric iodide. This precipitate is either mucin or peptones, and its true nature can be decided by the above treatment. The source of the peptones found in the above instance appeared to be the digestion by the pepsin normally present in the urine[7] of some of the excreted albumen. The urine was acid, and was retained for a long time in the bladder, only being passed once or twice in twenty-four hours. There was therefore every opportunity for the formation of the peptones found. It has been shown that this action takes place outside the body, if albuminous urine be kept at the blood temperature.[8] The bacteriological examination was undertaken in the hope of finding the pneumococcus, which had been found in the urine of influenza patients by Dr. Jolles.[9] This microbe may have been present among those stained in the preparations examined on the 8th, but certainly was not the organism cultivated on the 10th, as the colonies produced were very different from those obtained from the pneumococcus in the case reported by the author.[10]

Hull.

[1] THE LANCET, vol. i. 1890, p. 108.
[2] Ibid., p. 12.
[3] Ibid., p. 1182.
[4] Ibid., vol. i. 1887.
[5] Ibid., vol. i. 1890, p. 959.
[6] On the Proteids of the Germinating Seed Green, Phil. Trans., vol. xiii., 1887.
[7] Sahli confirming the results of Brücke and Grützner, Archiv für die gesammte Phys., Band xxxvi., p. 209.
[8] Mya Gazz. delle Cliniche, No. 17, 1888.
[9] THE LANCET, vol. i. 1890, p. 262.
[10] Ibid., p. 1118.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASES OF DISLOCATION OF THE LOWER END OF THE ULNA AND SUBLUXATION OF TIBIA.

BY WM. HORROCKS, M.B., F.R.C.S.,
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CASE 1. *Crushed forearm.*—Robert D——, a checker, aged sixty-six, said two months ago his left forearm was caught between two heavy boxes when in a position similar to that when examined—i.e., extreme pronation. The left forearm was much wasted, the hand being in a position of extreme pronation. The elbow, wrist, and fingers were somewhat flexed, and could not be straightened without pain. The lower part of the forearm was much narrower than natural, and presented an oval, oblique prominence over the back of the radius. When this was examined it was continuous above with the ulna. The styloid process was separated some distance from the cuneiform bone. The head of the ulna was freely movable and quite separable from the radius, whose inner articular surface was easily mapped out. Above the lower end of the radius was some slight thickening and irregularity. Under chloroform the dislocation was reduced, but the deformity readily reproduced itself. Writers differ as to whether the deformity should be called a dislocation of the radius or ulna. As both bones are equally distant from the spine, Mr. Hulke suggests that the more movable bone—i.e., the radius—should be said to be displaced. It seems more reasonable to say that the bone is dislocated which is displaced most from its normal position, and the head of the ulna is the part whose relations are most changed. Sir Astley Cooper, Malgaigne, and Hamilton so denominate this injury. The cause of the dislocation is any twist or force with the forearms in a position of extreme pronation. Lately a patient was seen with both forearms showing this condition, the injury being caused by a fall on the palms with both wrists pronated — an accident which usually causes Colles' fracture. Sir Astley Cooper mentions that the radius is not usually broken, but Mr. Hulke says that fracture is not uncommon. In the case described it is doubtful whether the radius had been broken, but in the double dislocation there was certainly no fracture.

CASE 2. *Subluxation outwards of upper end of the tibia.*—Edward H——, a labourer, aged thirty-eight, said that two hours before being seen he was wheeling a barrow on a wet plank, eight feet above the ground. He slipped, his right leg, which was slightly in-kneed, bending under him. On admission, the right knee was slightly flexed and the foot everted. On the outer part of the joint behind, the tendon of the biceps made a prominent vertical ridge. In front of this was a hollow bounded by the prominent outer edge of the patella, which reached beyond, and was firmly fixed against the outer edge of the trochlear surface of the femur. The outer condyle of the femur was not felt, but below this the upper border of the tibia, lying in an oblique position, was felt with difficulty. Above this an oblique rim, parallel to the upper surface of the tibia, the external semilunar cartilage, was readily made out and easily pressed inwards. The under surface of the external femoral condyle could be distinctly felt. There was no œdema of the foot; pulsation of the posterior tibials on the two sides was about equal in force. Reduction was effected without chloroform by fully flexing the knee, hooking the left forearm under the knee, applying pressure inwards over the head of the tibia, while extension was made at the ankle. After a period of rest the patient recovered, with a perfectly useful knee. The presence of genu valgum predisposed to dislocation. The fixation of the limbs at the time of the injury, and the fact that the joint was not afterwards weakened, indicate that the crucial ligaments were not torn. In a case given in Sir Astley Cooper's work slight permanent lameness followed.

Bradford, York

THERAPEUTICAL VALUE OF VENESECTION.

BY JOHN MACKENZIE, L.R.C.P., L.R.C.S. EDIN.

THE similarity between a case reported by Mr. Gay in THE LANCET of May 23rd tempts me to submit the following, the more so since both of us in our treatment appear to have been guided by the discussion on Dr. Ogle's article which appeared in THE LANCET of May 9th of the present year. Recently I was called to see an old lady aged sixty-eight, said to be suffering from a "weak heart and bronchitis." On examination, I found her actually suffering from chronic Bright's disease, mitral regurgitation, and considerable œdema of the lungs. One evening I had an urgent message that the old lady had a "stroke," and was dying. On my arrival she was semi-comatose, face livid, breathing irregular and slow; speech gone, eyes closed, pupils even, and sensitive to light. The right side of her face was flaccid and motionless, the left side strongly contracted; the right arm cold, clammy, and powerless; temperature in the axilla subnormal; heart's action feeble, but regular. She passed motions unconsciously while I was present. From those symptoms—aphasia, paralysis of the face and arm—I diagnosed rupture of one of the branches of the middle cerebral artery, involving Broca's convolution and the motor centres for the face and arm. My prognosis was very grave indeed; but I was constrained "to do something" to satisfy the anxious friends, and recollecting the remarks of Mr. Jonathan Hutchinson, at the Medical and Chirurgical Society on Jan. 27th, 1891, on Dr. Pye-Smith's paper—"that a very simple measure gave all the advantages of venesection, and that was placing the patient's feet up to the knees in a bath of very hot water for a considerable period: this local determination of blood appeared to act just as efficiently as venesection in cases of head and chest injury,"—I determined to use counter-irritation to the nape of the neck, and ordered the feet up to the knees to be covered with poultices, changed every two hours till morning. The awkwardness of placing such a patient's feet in hot water is obvious. To my surprise next morning she was able to speak—though imperfectly—and complained of pain in the left side of her head. Gradually the face resumed its normal shape, and motion returned into the arm. In less than a week not a trace of either paralysis or aphasia was present. In the words of Mr. Gay, "she made an excellent recovery." Evidently I erred in my diagnosis. This was another instance of how closely the apoplectic attack, due to functional disturbance of the brain, may simulate that due to hæmorrhage. It seems to me that the advantage of venesection in the aged is doubtful when the abstraction of an ounce or two of venous blood relieves the congested area. A corresponding relief can be easily obtained by changing the determination of blood as directed by Mr. Hutchinson, who, by the way, confesses to have alternately denounced and recommended venesection. Moreover, have we not a double advantage in his method—e.g., congestion due to a torpid condition of the cerebral circulation? (*a*) By the dilatation of capillaries there is an increased flow of blood to the part, thereby changing the determination of the vascular engorgement; (*b*) by reflex action, stimulating to action not only the cerebral circulation, but cerebral tissue as well.

Intake.

BLOODLETTING; SLOW PULSE.

BY ARTHUR PERIGAL, M.D., C.M. ED.

THE excellent paper by Dr. Seymour Taylor recalls forcibly to my recollection the following case, illustrative both of the happy action of bloodletting and the (sometimes) hereditary nature of slow pulse. Some years ago I was asked to see a man who had been thrown from his horse. He appeared about twenty years of age, was quite insensible, pupils dilated, skin cold and moist, had vomited and passed urine. There was a bruise of the vertex, but no wound of scalp or any part of body, no bones broken, no bleeding from nose or ears. He had been in this state some hours; and, as no consciousness returned after four hours, I asked Dr. Stovin to see him, and we agreed to take a few ounces of blood from his arm. Before we had drawn four ounces he became quite conscious, expressing a wish to remount

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and ride home. He was kept quiet in bed under the usual treatment. His pulse, however, never rose above 50, so he was kept in bed. Mentioning this to his mother as the only bad sign, she replied, "We have all slow pulses." I felt her pulse, and found it to be 46. Her daughter, aged eighteen, had a pulse of 50. The rest of the family I did not see, but was informed by the mother that another daughter and two brothers had slow pulses, also that her father (my patient's grandfather) had a slow pulse. I thought these notes might be interesting.

New Barnet.

A CASE OF SUB-PAROTID AND RETRO-PHARYNGEAL SARCOMA; OPERATION; RECOVERY.

By JAMES WILSON, M.D., F.R.C.S.

MR. G. S——, aged thirty-eight years, came under my care in March, 1890. Two years ago the patient noticed a swelling beneath the right ear, which was painful and tender to the touch. Iodine was applied, which gave him relief. Nine months afterwards, while drinking, he felt something giving way in his neck, and then for the first time he discovered a swelling in his throat. The substance in the pharynx gradually increased, his voice became thick, his respiration difficult, and there was marked snoring at night. During mastication he had pain and repeated attacks of hæmorrhage, from wounding of the mucous membrane by the teeth. He stated that drowsiness and disturbed sleep had troubled him for the last few weeks. The posterior wall of the pharynx was pushed forward by a growth, the soft palate was stretched, and the uvula turned to the left side. Below, the tumour was in contact with the tonsil, was continuous above the hard palate, and reached nearly across the pharynx. On the patient opening his mouth and taking a deep breath, a finger-like process was seen extending from the lower margin of the growth. The pharyngeal mucous membrane was vascular and freely movable. Beneath the ear and behind the ramus of the lower jaw was another tumour, which was evidently connected with that in the pharynx, as there was apparent fluctuation between them. On April 3rd the patient was put under chloroform by Dr. Stamper, and with the assistance of Messrs. Williams and Tuck the following operation was performed. A preliminary laryngotomy was rendered necessary, as during the administration of the anæsthetic the breathing became laboured and stertorous, the face livid, and the pulse feeble. Mr. Durham's tube was used. When air was admitted freely to the lungs the general condition of the patient rapidly improved. An incision was made over the anterior border of the sterno-mastoid muscle, beginning at the pinna of the ear and extending downwards for five inches, its centre being over the tumour. When the sterno-mastoid was reached and drawn backwards, the glistening capsule of the tumour came into view. The growth was readily separated from its connexions with the finger, but there was profuse hæmorrhage from laceration of a large vein. This portion of the growth rested on the posterior belly of the digastric, the stylo-hyoid muscles, and the carotid sheath, in relation above with the parotid gland and in front with the ramus and angle of the lower jaw. The tumour was now found to pass between the ramus of the lower jaw and stylo-maxillary ligament, and to reach the prevertebral fascia between the external and internal pterygoid muscles. The pulsation of a large vessel, apparently the internal maxillary, was felt above it. The pharynx was now plugged with a sponge. The jaws were widely separated by a screw gag, and, in order to gain still further room, the structures of the cheek were freely divided. The facial artery was previously compressed by a harelip pin. Having thus gained a clear view of the pharyngeal portion of the growth, an incision was made, carefully exposing the capsule in its entire length. The finger was again introduced, and the remaining attachments were readily separated. The entire tumour was now removed from the mouth by firm traction. The incisions were united by deep silver and superficial silk sutures. The sponge was removed from the pharynx. The operation lasted two hours and a half. The tumour on removal was dumb-bell shaped, and enclosed in a firm capsule. The pharyngeal portion of it was lobulated and about the size of an orange, the superficial portion that of an hen's egg. Mr. Jacobson examined the tumour microscopically, and found it to be a mixed glandular sarcoma, resembling in structure the parotid gland. The laryngotomy tube was removed fifteen minutes after the operation was completed. The patient for the first twenty-four hours was fed per rectum, but subsequently took liquid food without inconvenience.

The case calls for no detailed account, as it made an uninterrupted recovery. The highest temperature was 101·5°, and the wounds healed by first intention. The patient still continues well after a lapse of fourteen months.

Haverfordwest.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

TWO CASES OF VAGINAL EXTIRPATION OF THE UTERUS FOR CARCINOMA; RECOVERY.

(Under the care of Dr. HAYES and Mr. A. BOYCE BARROW.)

THESE cases are good examples of the performance of the operation of kolpo-hysterectomy for malignant disease, which in both appeared to be limited to the uterus. Careful examination of the patients before and during the operation showed no signs of extension of the disease either to neighbouring glands or to the surroundings parts. The growth had not attained to a large size in either patient, and the duration of the operation was about an hour and a quarter in each. Silk ligatures were applied to the broad ligaments in preference to clamps, as recommended by Greig Smith, Richelot, Muller, Landau, Péan, and others, and the result was as satisfactory in most respects as could be desired. The fact that secondary hæmorrhage occurred in the first case on the tenth day does not tell against the ligature, for more severe hæmorrhage has followed the use of instrumental compression. It will be noted that the cut edges of the vaginal mucous membrane approximated in each case to a slight extent. The prospect of complete recovery for these patients appears a good one; the disease was apparently quite removed, and, according to Fritsch, recurrence after removal by total extirpation is less frequent than after similar removal from any other part of the body. We have not space to consider the arguments for vaginal extirpation or for supra-vaginal amputation in cancer of the lower segment of the uterus; the opinion in favour of a full removal of the disease by total extirpation has at present most advocates, not only on the Continent but also in Great Britain. The primary mortality continues steadily to diminish and the ultimate results to improve. There are many causes for this: improvement in the method of operating, the more careful use of antiseptics, and the earlier stage at which the operation is performed being the most important. Dr. Cullingworth places the mortality from supra-vaginal amputation as over 7 per cent., and that of total extirpation as only 5 per cent. We would refer our readers to his paper on the subject read before the Obstetrical Society and to the discussion to which it gave rise.[1] For the notes of these cases we are indebted to Dr. Willmott H. Evans, registrar.

CASE 1.—A. B——, aged thirty-two, married, was admitted into the Royal Free Hospital on Feb. 2nd, 1891, complaining of "losing blood, with pain in the lower part of the abdomen." In her family history the only noteworthy point was the fact that her father's sister was said to have died of "cancer of the womb." Her personal history has always been good. The catamenia appeared at the age of fifteen, and have occurred regularly every four weeks since, but the loss has always been excessive. She was married at twenty-

[1] THE LANCET, vol. i. 1890, pp. 860-1073.

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one, and has had five children, the youngest of whom is now two years and eight months. All the labours were fairly easy, and instruments were never used. During her third pregnancy (seven years ago) she menstruated every three weeks until "quickening" at three months and a half. During the fourth pregnancy also menstruation occurred every three weeks until quickening. At the end of May, 1890, menstruation was delayed two weeks beyond the usual time, and did not cease after a week, as was generally the case, but she continued to have a discharge of blood until August. There were no "floodings," but the discharge was continuous. In August the discharge ceased for two weeks, but then recommenced, lasted a week, and ceased. In about three weeks' time it reappeared, lasted a week, and stopped. On Oct. 27th she passed without pain several large clots, with some discharge. On the following day some more clots were passed, and the patient was examined by a medical man, who said that "there was nothing wrong with the womb." She stayed in bed a fortnight, and during the latter part of this time the discharge ceased, but severe continuous aching pain came on in the back, beginning at the sacrum, and extending up to the back of the neck. On getting up again the discharge recommenced, and was offensive in smell. Since Nov. 11th the discharge of blood has been continuous, except during the last two weeks, when it has stopped for a day or two, being replaced by a very offensive whitish discharge. At the same time as the discharge of blood recommenced she began to have a pain, which she described as "scraping," in the hypogastric region, and a pain "as after confinement" over the lower lumbar and sacral region. She has had no sudden attacks of pain and no floodings. From the commencement of her present illness she has got much thinner, her appetite has been very poor, and sleep has been bad. She has had no pain on micturition or defecation. The patient is fairly well nourished; the mucous membranes are rather pale. Dr. Hayes examined her, and reported as follows: "The anterior lip of the cervix is much elongated compared with the posterior, the latter being much shortened and thickened. The anterior lip, to the extent of rather less than half an inch, is reddened and raised and, as it were, curled back; there are several little bleeding points all along it. There is some redness near the margin of the posterior lip. The os uteri is widely patulous, and would admit two fingers. An ulcerated, sloughy surface can be seen inside. The uterus seems quite movable, and the broad ligaments quite free." There is a watery vaginal discharge, slightly coloured with blood; it is very offensive. The organs of the chest and abdomen seem quite healthy. A warm vaginal douche of carbolic acid (1 in 40) was ordered twice a day. Early in the morning of Feb. 8th the patient was seized with a very severe pain in the left iliac region, extending down to the hypogastrium; she described it as feeling like a strong labour pain. A few hours later some blood-clots and coloured watery discharge were passed, measuring in all 13 oz. From this time to the day of operation the patient had a reddish discharge in varying amount, with pain in the hypogastrium and in the sacrum, extending up the back.

On March 10th Mr. Barrow performed vaginal hysterectomy. The bladder having been emptied by a catheter the patient was anæsthetised and placed in the lithotomy position. The vagina was washed out with perchloride of mercury solution (1 in 2000), and a carbolised sponge with silk attached was passed up into the posterior fornix. Retractors were used to hold open the vagina, one posteriorly and two laterally. The cervix was seized with volsella forceps and drawn forwards, and a transverse incision (after removing the sponge) was made through the junction of the vaginal mucous membrane with the posterior surface of the cervix, the pouch of Douglas being thus opened and the intestines clearly seen. The cervix was then drawn backwards towards the perineum, and a similar incision made anteriorly, two small arteries being caught with Wells' forceps and ligatured. The bladder was then separated from the uterus with the finger and a sound passed into the bladder. The cervix was then drawn first to the right side and then to the left, allowing the lateral mucous membrane to be cut through. Four silk ligatures, each threaded on a blunt-pointed handled needle, were passed through the lower part of the right broad ligament and firmly tied; and the same thing was done on the left side. The broad ligaments were then cut through with scissors close to the uterus, as far up as the ligatures extended. There was slight bleeding on the right side, a small vessel having to be ligatured. The uterus was pulled out through the vagina until the fundus was visible. The right broad ligament was ligatured in its upper part by three strong silk sutures passed on handled needles, and snipped through with scissors close to the uterus, with which the right Fallopian tube and ovary remained attached. The left broad ligament was ligatured and cut through in the same way; the left tube and ovary also remained attached to the uterus. The lower part of the peritoneal cavity was sponged out with salicylic acid wool sponges, dipped in perchloride of mercury solution (1 in 4000). The edges of the mucous membrane were brought together with two catgut sutures. Six pledgets of wool soaked in eucalyptus, iodoform, and glycerine were packed into the vagina, and a pad of salicylic wool applied externally. There was very little hæmorrhage during the operation, which lasted an hour and twenty-five minutes. On making a section of the uterus, one found the growth (to judge by the naked eye) extending up only to the internal os, but involving the whole of the cervix. In the afternoon of the day of operation the patient vomited slightly at intervals, and complained of severe pain in the neighbourhood of the umbilicus; for the relief of the pain morphia was given hypodermically and hot fomentations applied to the abdomen. These lessened the pain. The diet consisted of three pints of milk and one pint of beef-tea.

March 11th.—Pain and vomiting continue. One teaspoonful of milk is given every half-hour.

12th.—The pain and vomiting are much less, but the retching is troublesome, so she is fed by nutritive enemata.

13th.—The temperature till to-day has not been above 99·6°, but this evening it is 100·2°. Four of the pledgets were removed from the vagina and replaced by two fresh ones. The vomiting still continues, and she is fed entirely by nutritive enemata. She has a sharp pain in the umbilical and epigastric regions.

14th.—Vomiting has ceased; the abdomen is quite flaccid; the pain is gone. She is again fed by the mouth. The pledgets were removed from the vagina, and a vaginal douche of perchloride of mercury was administered.

15th.—There is a slight coloured discharge. The temperature has each day risen to 100° F., but this evening it was 100·8° F.

16th.—Temperature has fallen to normal. Patient feels well. The discharge is dark and rather fetid. The vagina is syringed with iodoform and glycerine after the douche.

18th.—Patient is doing well. At 10 P.M. she was transferred to another ward. Temperature 100° F.

19th.—At 2 A.M. patient was found to be losing blood freely from the vagina, altogether amounting to fifteen ounces. A hypodermic injection of one-third of a grain of ergotin was administered, and ten minims of tincture of opium given by the mouth. The pelvis was raised on a pillow and the head lowered, and the vagina was plugged with pledgets of wool soaked in eucalyptus, iodoform, and glycerine. The pledgets were changed, and the vagina douched at noon; there was no fresh hæmorrhage. The temperature rose in the evening to 101°. A grain of opium was ordered twice a day. The temperature continued irregular till March 22nd, when it was 100·6°, but after this it did not rise above 100°.

26th.—There is still slight vaginal discharge with a slightly fetid smell. The opium was discontinued, and a tonic was ordered.

April 2nd.—On examination the peritoneal opening was found to be almost closed.

17th.—Patient sat up to-day, but fainted.

25th.—She can now stand alone. She continued to improve steadily, and on May 1st went to a convalescent home.

CASE 2.—C. H——, aged fifty-five, married, was admitted into the Royal Free Hospital on March 25th, 1891, suffering from a discharge from the vagina and pain in the hypogastrium. There was no family history of malignant disease. Her personal history was good, except that she was "delicate" as a child. She menstruated first at nineteen; the catamenia have been regular since, but there has been some dysmenorrhœa at times, and she used to pass blood-clots. She married at twenty-seven, and has had only one child; the labour was easy and no instruments were employed. She has never had a miscarriage. The menopause occurred eight years ago, when she lost a large quantity of blood. Three years ago she noticed some trouble in micturition, which gave her great pain. With this she had a slight yellow, stringy discharge from the vagina. For this she was

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advised to syringe the vagina, but without benefit. About eighteen months ago she was examined by a medical man, who could find nothing wrong. About a year ago she had pain in the hypogastrium and bearing-down pains in the rectum, and she was an out-patient at St. Bartholomew's Hospital for three months. In June, 1890, she was admitted into St. Thomas's Hospital. A small piece of the cervix was removed and examined microscopically, and she was advised to have the whole uterus removed, but she refused. Since leaving St. Thomas's Hospital she has suffered from the pain and discharge as before, but to a less extent. Occasionally a little blood is mixed with the discharge. Six weeks ago she had much pain, and passed a "piece of flesh"; since then she has been better. She had become very thin and weak; but for the last nine months she has gained flesh, and is also stronger. The discharge at no time has been offensive. The patient is a delicate woman in appearance, and rather emaciated. The abdomen is flaccid, and there is slight tenderness on palpation in the left iliac fossa. On examination the cervix is found to be slightly enlarged, but shortened; and the whole cervix, with the lips, seems to be replaced by a sprouting tuberculated smooth growth. The tubercles are numerous, somewhat elongated, about one-eighth of an inch in diameter. The uterus seems fairly movable. There is some thickening in the right broad ligament. The other organs are healthy. The patient continued in about the same condition, with a varying amount of pain in the hypogastrium and sacrum, until May 19th, when Mr. Barrow performed vaginal hysterectomy.

The patient was anæsthetised with A.C.E. mixture, and then put in the lithotomy position. The vagina was syringed out with hot perchloride of mercury solution (1 in 1000). Volsella forceps were put on the cervix; it was pulled down and a ligature of Chinese silk passed through it. A duck-bill speculum was used posteriorly and a retractor on each side of the vagina. The mucous membrane between the posterior wall of the vagina and the hinder part of the cervix was cut through. The mucous membrane anteriorly was similarly divided. Then five strong silk ligatures, threaded on blunt-handled needles, were put into the broad ligament of the right side and tightly tied. The right Fallopian tube and broad ligament were cut through with a pair of blunt, pointed scissors, a few small arteries being seized with Wells' forceps and tied. Then the uterus was turned towards the right side and the same thing done on the left side. The uterus was separated by the finger from the bladder, a sound having been introduced into the bladder. All remaining attachments having been cut through, the uterus was removed; the vagina was then sponged out with carbolic lotion (1 in 20), and a stitch put in between the anterior and posterior edges of the mucous membrane, approximating them. The vagina was plugged with three plugs soaked in eucalyptus, iodoform, and glycerine, and then a pad of salicylic wool was applied to the vulva. The operation lasted about an hour and a quarter.

During the following night the patient retched much and vomited a few times. She was given milk with soda-water and ice by the mouth. There was a great deal of pain in the hypogastrium.

May 20th.—The pain is less, but comes on at intervals in a severe form. She seems to suffer much from flatulence, and for this capsicum and carbonate of ammonia were ordered. She sleeps fairly well with the aid of mild hypnotics.

21st.—The attacks of pain are less frequent and less severe, and are relieved by brandy. The superficial plugs were changed.

22nd.—The pain is less. She has solid food.

24th.—Slept very badly last night, and was in much pain. She was ordered three drachms of castor oil with fifteen minims of tincture of opium. The pain was but little relieved, and fifteen minims more were given. The bowels acted very freely, but the pain was not much relieved.

25th.—Pain last night was rather worse, but is now better. The temperature rose on the 23rd and 24th to over 99° F., but has since fallen to normal. In the evening the plugs were changed, and a douche of warm boracic was ordered for each day.

26th.—About noon severe pain was felt in the vagina and bladder; the patient said that it felt as if there was something there which could not be passed. In the evening the temperature rose to 101° F.

27th.—Temperature is nearly normal. There is frequency of micturition, and great pain before each time urine is passed, but the pain is relieved by micturition. The application to the vulva of an ointment of equal parts of compound petroleum ointment and zinc ointment diminished the frequency of micturition and relieved the pain.

From this time she steadily improved; the pain diminished and then disappeared. The dysuria ceased, and she was in much better health. From the vagina there was a slight yellowish discharge, for which a eucalyptus injection was ordered.

June 5th.—She got up to-day for the first time, and on the 11th she left the hospital apparently well.

ESSEX AND COLCHESTER HOSPITAL.

DISUSE OF LIMBS AFTER SEVERE DISEASE: A PSEUDO-PARALYSIS.

(Under the care of Dr. ALEX. WALLACE.)

THE account of this case is that of a condition but rarely met with, but of which Dr. Wallace has already recorded other instances.[1] There is a kind of false paralysis without loss of sensation, but with wasting of the voluntary muscles of the body, which are no longer capable of performing their functions. It must be distinguished from the general paralysis of hysteria from that of progressive muscular atrophy, from a form of infantile paralysis, or a true paraplegia due to myelitis. The other cases published by Dr. Wallace are those of females aged from twelve to thirty, in whom there was a somewhat similar history of illness, necessitating confinement to bed, followed by loss of power and general wasting of some two to twenty months duration; in some this illness was said to have been rheumatic fever, in others it was not known. All recovered under appropriate treatment.

J. W——, a girl aged twelve, was admitted into the Colchester Hospital on March 2nd, 1891. The history given was that she had not walked for ten months, during which time she had been seen by three medical men. Her illness began with weakness and loss of appetite; some cough. She was said to have had hemiplegia, with paralysis of the left side, for three months prior to admission. She can now swallow food. The bowels are regular, and both sphincters act normally. She has pain in the left side; also a blood-stained discharge from the nose, mouth, and right ear; no bedsores. Family history good.

March 3rd.—She has slept well, and has no cough. Discharge from mouth and nose is slightly stained. Bowels normal; urine passed normally, sp. gr. 1035, very acid, pale, no albumen. Skin perspiring very freely about face and body. Quite conscious and answers questions properly. States she has pain in her head at the vertex. There is slight strabismus. Sensation is good everywhere. There are slight movements of the left arm and leg. The head wobbles about; she has no power to keep it fixed. Lumbar and dorsal spines both show curvatures, but there is no spinal tenderness; no cardiac murmur. A general limp condition is noted of all the muscles of the body, which are all much wasted; the muscles of the right half, being used the most, are not so wasted. Reflexes normal. Temperature normal. While lying in bed she lifted each hand; she also elevated the legs and flexed the knees.

6th.—Sleeps well. Appetite fair. Has been sponged all over with tepid water and rubbed dry. She was now accustomed to her attendants and willing to be treated, so she was ordered an ounce of wine and an egg daily with milk diet, and to take two minims and a half of the tincture of the perchloride of iron and one minim of the liquor strychniæ, three times a day. Sponging and rubbing to be continued. She weighed 4 st. 4 lb. Can now feed herself. Urine: sp. gr. 1026, dark-coloured, no albumen. Skin less moist; pulse improving. Can now move her left arm and leg somewhat.

17th.—Urine: sp. gr. 1016. Appetite good. Can now sit up. Weight 4 st. 9 lb. To have, besides her steel medicine, the interrupted current, to take a teaspoonful of cod-liver oil twice a day, and to have mutton diet. Can walk feebly when assisted by a nurse helping on each side, but by supporting her weight with her hands on a table she went round very easily. In the erect position the spine is free from curvature.

[1] St. Bartholomew's Hospital Reports, vol. xxv., p. 201.

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24th.—Sleeps well. Gets up each day and walks about the ward without assistance. There is some oozing of coloured fluid from the nose and mouth. The tonsils and pharynx, being found congested, were ordered to be treated with glycerine and tannic acid. The muscles of the limbs are in much better condition. She had a ball given her to play with. Weight 4 st. 11 lb. Mutton diet.

April 13th.—Discharged quite well with full use of all her limbs, with muscles well nourished and firm.

Remarks by Dr. ALEX. WALLACE.—Whatever may have been the ailments of this case during the ten months prior to my seeing her, and she was reported to have been more or less insensible for four months during her illness, and to have had hemiplegia, she must have had a severe wasting illness to be so reduced and emaciated. Her condition was one of extreme limpness, with constant profuse perspiration. Our first efforts were not to frighten her, but to encourage her with accounts of children similarly affected to herself that had been cured by us. In a day or two I began treatment by attempting to check perspiration by tepid sponging and rubbing; this, at first unpleasant, she soon learnt to like, and then we began with the battery. This also she soon got accustomed to. Eight days after admission she could support her head (which on admission fell about anywhere over her shoulders), and began to sit up. In fifteen days' time she began to walk, and then rapidly regained power. She left us with full use of all her limbs after a stay of six weeks.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Treatment of Squint by Advancement of the Recti Muscles.—Detachment of the Choroidea.—Temporal Hemianopsia of Left Eye and absolute Blindness of the Right.

AN ordinary meeting of this Society was held on June 11th, the President, Henry Power, M.B., F.R.C.S., in the chair.

Dr. ADOLPH BRONNER (Bradford) read notes of fifty cases of strabismus treated by advancement of a rectus muscle according to the method advocated by Schweigger. In this operation the muscle is thoroughly freed from its connexion with the sclerotic and with Tenon's capsule, and then attached, in a new position, to the superficial layers of the sclera and the conjunctiva. Most of the cases were operated upon without general anæsthesia, cocaine only being used. Dr. Bronner drew attention to the large number of cases of convergent strabismus, in which the external rectus was thin and atrophic. He thought it was of the greatest importance that the size and condition of the muscle should be ascertained before the advancement was performed. In many cases tenotomy of the antagonistic muscle was necessary, and in some tenotomy or advancement of the muscles of the fellow eye had to be done. In all cases of divergent strabismus tenotomy of the external and advancement of the internal rectus were necessary, and the immediate effect of the operation should be slight convergence. In no case should the same muscle be tenotomised more than once. The author thought that advancement of the muscle should be performed in all cases in which the squinting eye was amblyopic, and in which the angle of the deviation measured more than 30°. The advantages of advancement of a muscle over an ordinary tenotomy were that the danger of a subsequent strabismus in the opposite direction was much less, and that the operation aimed at strengthening a weak muscle instead of weakening a muscle previously strong.—The PRESIDENT said that his experience of tenotomy had been favourable, and that he rather preferred the simpler operation, in most cases. He had met with but few undesirable results. The cases he found most difficult to deal with were those of very slight squint with extremely troublesome diplopia.—Mr. JULER thought that the plan of tying two sutures was likely to set up a good deal of irritation. He preferred a modification of Critchett's operation, and with it had had good results. He thought that advancement of tendons in cases of strabismus was a method not fully appreciated by English surgeons.—Mr. EALES (Birmingham) described the method he adopted; he frequently performed advancement of tendons in strabismus.—Mr. EDGAR BROWNE (Liverpool), after referring to the older methods of treatment, described the plan he adopted himself. He considered the operation was simplified by introducing the sutures in the reverse way to that usually done—that is, to attach the thread to the conjunctiva or sclera at the point of fixation first, and subsequently to the tendon or muscle. He insisted on the importance of accurately correcting any astigmatism in cases of strabismus.—Mr. JESSOP had found that advancement of a rectus muscle without tenotomy of its opponent was of little value. He preferred to do the tenotomy by Landolt's method before advancing the weakened muscle.—Mr. COWELL said that in the operation described he recognised an old friend under a new name. It used to be known as readjustment. He had treated many cases of secondary divergent strabismus by this method, occasionally converging the eye during the first day or two after the operation by a suture passed through the skin of the bridge of the nose.—Mr. LANG pointed out that the terms readjustment and advancement of a muscle had different meanings. He thought it important in this treatment to endeavour to restore binocular vision at the time of the operation.—Mr. DOYNE (Oxford) and Mr. STORY (Dublin) thought that binocular vision after operations for strabismus was an exceptional result, and one which few operators seriously sought to obtain.—Dr. BRONNER, in reply, affirmed that Schweigger's method of operating maintained the normal lateral movement of the globe. He had long given up thinking about the restoration of binocular vision in cases of strabismus.

Mr. STORY (Dublin) described a remarkable case of Detachment of the Choroidea in a man aged twenty-nine, who had been for more than two years under his care. When a child the patient was kicked by a horse on the right eyebrow and nose, and some years later was struck by a stone at the outer angle of the left orbit. These injuries seemed to have no connexion with the loss of sight, which occurred rather gradually in his right eye at the age of twenty, and in his left about a year before coming to hospital. During the two years he has been under observation no important changes have occurred in the state of the eyes, slight variations have taken place in the extent of the detachment, and his vision has remained pretty constant for fingers at two metres in the right and fingers at four metres in the left eye. Tension normal, or at times slightly subnormal; media clear except for a nebula on the left cornea, and opacities in both vitreous chambers; discs slightly hazy and marked perivascular thickening about all vessels. In the right there are two hemispherical detachments of the retina alone—one at the macula lutea, about three times the diameter of the papilla, and one at the inferior nasal periphery of a larger size, and extending to the extreme periphery of the fundus. Except at these two places, the choroidal stroma is everywhere as distinctly visible as the retinal bloodvessels, and everywhere requires exactly the same glass to observe it by direct ophthalmoscopic examination. The refraction of different portions of the fundus is as follows in the right eye: Disc centre − 1, edge + 1. Retinal detachment at macula with irregularity of lamina limitans interna + 8. Choroidea and retina at temporal end of horizontal meridian + 12 (a slight retinal detachment more peripherally + 13). At nasal end + 12, and large retinal detachment more peripherally + 18. Retina and choroidea at both ends of vertical meridian + 8. Left eye disc + 0·5. Macula + 1·5. Retina and choroidea at nasal end of horizontal meridian + 8, and on another occasion + 12, at temporal end + 12. At upper end of vertical meridian + 7 and again + 4, at lower end + 5. Mr. Story referred to the cases of detachment of the choroidea already published, and showed in what a remarkable manner the present case differed from all those which have been previously observed.

Mr. STORY also gave a further history of a case of Temporal Hemianopsia of Left Eye and absolute Blindness of Right, (not yet published) which he had brought before the Society in 1887. A girl aged nineteen came to him in 1885 with the right eye absolutely blind, and with complete hemianopsia of the left, the line of demarcation passing through the fixation point. The other symptoms were violent pains in the head, giddiness, vomiting, amenorrhœa, and tendency to corpulence. Since then these distressing symptoms have mostly subsided, but her field of vision remains unaltered, and central vision has considerably deteriorated. Vision, which was in 1885 = $\frac{6}{9}\cdot\frac{6}{5}$, is now only = $\frac{6}{9}$ (?).

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Careful examination has completely failed to exhibit the hemianopic pupillary reflex. Mr. Story suggested that the case might be one of a tuberculous growth in the region of the chiasma, which had now for some years ceased to increase. Charts of the field of vision, taken at various times during the last six years, were exhibited.

The following cases and card specimens were shown:—

Mr. TATHAM THOMPSON (Cardiff): Emphysema of Conjunctiva.

Mr. STEPHENSON: Two Cases of Peculiar Retinal Pigmentation.

Mr. TREACHER COLLINS: Epithelial Implantation Cyst.

Mr. COWELL: Congenital Fissure of Upper Eyelid.

Mr. DOYNE (Oxford): Coloboma of Iris and Choroid, with Bulging of Corresponding Portion of Circumference of the Lens.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on May 1st, T. Gunton Alderton, Esq., President, in the chair.

Pathological specimens were shown by Dr. CLEMOW.

Chronic Rheumatic Arthritis.—Dr. S. ECCLES read a paper on this subject, under which title he included all forms of chronic arthritis not due to joint wound or bone disease, believing that whatever might be the predisposing cause, the exciting cause, was the same. Exposure to cold and damp after fatigue was shown to influence the chemical and physical state of joints and muscles. Acidity in excess was thus produced, and so favoured the deposition of uric acid, as shown by Dr. A. Haig, whose views on the etiology of rheumatism were supported by the clinical features observed in over one hundred joints affected by chronic arthritis. For such cases in which there was no evidence of suppuration or advanced destruction of tissue the indications for treatment being the alleviation of pain, the removal of the inflammatory products, and the restoration of healthy nutrition, Dr. Eccles employed a combination of massage, stabile galvanism, and exercises with appropriate constitutional remedies.—Dr. A. HAIG said he was particularly interested in the observations of Dr. Eccles on the effects of cold and damp following fatigue. Under such a combination of circumstances the alkalinity of the blood would be diminished and tend to precipitate the urate on the joints and other fibrous tissues, as suggested by Dr. Eccles. In acute disease the lesions thus caused might be repaired in a few days; but if the urate were present for more than a few hours, extensive irritation was set up which might smoulder in the tissues, even after the removal of the urate, eventually producing effects which were called rheumatoid. The treatment was, first, to foster the removal of the urate and prevent its reprecipitation, and this was best carried out by diet; and for the treatment of the damaged structures he knew nothing more likely to restore their healthy nutrition than the massage and galvanism so ably employed by Dr. Eccles.—The discussion was continued by Drs. Thorowgood, Thudichum, Savill, and Lloyd, and the author replied.

Appendicitis.—Dr. LUNN narrated two cases. Case 1: A boy aged eight had been quite well till two days before he was seen, and the bowels had acted naturally. On Jan. 10th the abdomen was greatly distended, dulness and tenderness with a sense of resistance were well marked in the right iliac fossa. It was decided to watch the case. On Jan. 20th a muco-purulent discharge was passed from the anus; the patient was collapsed, but the dulness completely disappeared. The boy rallied, and made an uninterrupted recovery. Case 2: A cabman aged fifty-eight was admitted suffering from obstinate vomiting and constipation and intense abdominal pain, chiefly in the right side, the flank being dull, while the rest of the abdomen was tympanitic. Abdominal section was performed thirty-four hours after admission. The right colon was found to be gangrenous and adherent to the belly wall. While search was being made for the appendix vermiformis fæces suddenly began to pour out from a perforation; this was clamped and stitched to the abdominal wall, a false anus being made, but the patient became collapsed, never rallied, and died twelve hours after the operation.

Dietetic Treatment of Obesity.—Dr. TOWERS SMITH, in the course of his remarks on this subject, said that in the initial stage of the treatment, lasting fourteen days, purely nitrogenous food only was given; in the second stage an addition of 25 per cent. of carbo-hydrates; and in the third 50 per cent. were allowed, all largely diluted. In cases treated eighteen months and two years previously, on returning to ordinary diet, always avoiding sugar and beer, the reduction in weight and bulk remained the same as effected by the treatment.—Drs. Clemow, Savill, and Campbell Pope took part in the discussion, and the author replied.

Reviews and Notices of Books.

The Watering-Places of the Vosges. By HENRY W. WOLFF. London: Longmans, Green, and Co. 1891.

THIS volume gives a clear, concise, and interesting account of a district still comparatively little known to the British tourist and health-seeker. This district is known to our French neighbours as "The Vosges," though it includes resorts not in the immediate vicinity of that range of mountains, and amongst its chief sanatoria may be enumerated Contrexéville, Plombières, Bourbonne, Luxeuil, Vittel, Martigny, and Bussang. The above are all either upon the western slopes of the Vosges mountains or upon the neighbouring plain, and are all in French territory. On the eastern side of the range in German Alsace we have the less known names of Niederbronn, Sulzbad, Bühl, Kestenholz, Sulzmatt, and Wattweiler. Speaking generally, these resorts are characterised by a moderate elevation above the sea-level (from 1000 to 2000 feet), an abundant supply of somewhat weakly mineralised water of varying temperature, the most important constituents of which are lime, soda, magnesia, lithia, and iron; moderately bracing air, considerable simplicity of life, and (with one or two exceptions) moderate charges. These resorts are all very accessible, and can be reached by rail from Paris in from about seven to ten hours. The scenery is described as very attractive, the Vosges being characterised by "their fresh, green, smiling valleys, their unusually tall vines festooning the hillside, their magnificent sombre forests, and their quaint, neat villages." The hotel accommodation is described as excellent in the chief resorts, and as rapidly improving in the more primitive places. Of the Vosges watering-places, Plombières, which owed so much to the favouring patronage of Napoleon III., is the favourite. It is situated in a well-sheltered valley running north-east to south-west, at an elevation of 1310 ft. above the sea, and has a fine, invigorating climate, although the heat is often great. The surroundings are very attractive, and ample provision is made for the amusement of visitors. Plombières is emphatically a bathing spa, and the baths are on a magnificent scale. There are twenty-seven different springs in use, and the daily yield of water is estimated at 6750 cubic feet. The temperature of the various springs varies from 68° F. to 158° F., and the intermediate temperatures are well represented. The springs are only feebly mineralised (the chief ingredients being sulphate of soda, silicate of soda, bicarbonate of soda, and bicarbonate of lime), and belong to the category of "indifferent thermal" waters. Drinking the waters is not largely practised at Plombières, but there is a mild chalybeate and a mildly laxative spring which are partaken of. In addition to the baths, the *étuves*, or hot vapour baths, are a feature of Plombières. Massage and douching are largely practised. The maladies treated most successfully at Plombières are dyspepsia, neuralgia (especially of rheumatic or gouty origin), chronic rheumatism, migraine, lumbago, eczema, and chlorosis. Plombières is fashionable, and living is somewhat expensive.

Contrexéville is situated in the undulating country at the foot of the Vosges, its elevation being 1100 feet. The sur-

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roundings are somewhat tame, but the efficacy of the waters is great. "Qui dit Contrexéville, dit gravelle," as the French saying is, and stone, gravel, and gout are the maladies for the relief of which this spa has acquired such celebrity. The principal spring is the *source du Pavillon*, which is only slightly mineralised, the solid constituents being 2·5 parts in 1000, and the chief ingredients sulphate of lime, carbonate of lime, sulphate of soda, sulphate and carbonate of magnesia, with traces of arsenic and fluoride of calcium. The temperature of this source is 53° F. According to a statistical table which Mr. Wolff quotes from Dr. Debout d'Estrées, of a hundred patients who go to Contrexéville on an average 37 suffer from gravel, 22 from gout, 19 from vesical catarrh, 19 from gouty diabetes, 7 from hepatic colic, and the remaining 10 from other diseases of the kidneys, the bladder, the liver, or the stomach. "The main boast of Contrexéville," says Mr. Wolff, "is the singularly solvent action of its water upon calculi; . . . on this peculiar virtue, and on the benefit in cases of gout rests the main reputation of Contrexéville." Cases of rheumatism and heart disease are advised not to go to Contrexéville.

Vittel lies near Contrexéville, and its waters bear a close resemblance to those of the more famous spa. Martigny-les-Bains, also close by, contains more magnesia and less lime than Contrexéville, and less magnesia and more lime than Vittel. It also sets much store on its possession of lithia, which the other two spas lack. Bourbonne differs materially from the resorts already considered. Its springs are strongly mineralised, and very hot. The chief mineral constituents are common salt, chloride of lime and magnesia, carbonate and sulphate of lime, bromide of sodium and chloride of lithium. The diseases most successfully treated at Bourbonne are chronic rheumatism, obstinate neuralgia, muscular atrophies, scrofulous diseases of glands, bones, and joints, malarious fevers, visceral engorgements of the abdomen, &c. Luxeuil is chiefly remarkable for its excellent chalybeate spring, in which the iron is combined with manganese and arsenic, and rendered digestible by the amount of carbonic acid present. It is said to have great efficacy in anæmia, hypochondria, rheumatism, neuralgia, &c. Bussang, lying at an elevation of 2000 feet, has a bracing climate and several chalybeate springs, and is recommended as a suitable place at which to conclude "the cure" begun at the other spas.

We have not space to notice the smaller spas on the German side of the Vosges. They are comparatively undeveloped, but seem to possess great natural advantages, and living is very cheap.

We can recommend Mr. Wolff's book. He writes well, and manages to convey much valuable information in an interesting manner. While frankly laudatory of the Vosges resorts, his commendations are discriminating; and on the purely medical questions he wisely relies mainly on professional authorities. His book will certainly stimulate interest in a region too little known in this country.

The Medical Digest. By RICHARD NEALE, M.D. Lond. Third Edition. London: Ledger, Smith, and Co. 1891.

THIS unique work bears on its title-page the essential reason of its compilation. It is therein styled the "busy practitioner's vade-mecum, being a means of acquiring information upon the principal contributions to medical science during the last fifty years." Its scope and tenour could hardly be more succinctly described, and the work itself must by this time be thoroughly well known to and appreciated by the profession. The first edition was issued several years ago by the New Sydenham Society, the Council of which recognised the merits and utility of such a compact and complete work of reference, not as being a mere bibliography, but as presenting in a manner never before attempted a classified synopsis of the facts, theories, and opinions stated by contributors to the leading medical journals upon every branch of medicine and cognate subjects during half a century. There is no doubt it supplies a place which is one of great value and importance, not to the literary student and journalist alone, but to every active practitioner. For without having necessarily to look up the original papers, a task made perfectly easy by the plan here adopted, the reader can often glean all the information he wants by the mere reference, which extracts for him the essence of each subject. Its claim then to be a "digest" is fully substantiated, and its utility to the "busy practitioner" is self-evident. Dr. Neale is entitled to the gratitude of the whole profession for so thoroughly and faithfully fulfilling his self-imposed task, at the cost of immense labour and sacrifice of time. It is, however, surely too much to expect of him that he will be able to continue the preparation of new editions or supplements which the progress of years must demand; and we would suggest that, when Dr. Neale from any cause finds himself unable to carry on this important work, it should be made a permanent one, and continued by some responsible medical society on the same lines and method as that laid down by him. Could this be managed, there would be secured for future generations the same facilities and advantages that we of to-day are enjoying, thanks to the indefatigable industry of a single man.

THE BRITISH DENTAL ASSOCIATION.

ON Saturday last the Southern Counties Branch of the British Dental Association held a very successful meeting at Hastings. Over fifty gentlemen, most of them members of the Association, assembled, and after a delightful ride to Battle Abbey, accompanied by the learned local antiquarian, Mr. T. H. Cole, M.A., who gave them a lucid description of that most interesting historical spot, returned to luncheon at the Queen's Hotel, and afterwards devoted the afternoon to scientific work in the board-room of the Hastings, St. Leonards, and East Sussex Hospital. Some preliminary business—including the election of Sir John Tomes, Dr. B. W. Richardson, Sir Edwin Saunders, and Mr. Smith Turner as honorary members—over, the new President, Mr. George Henry of Hastings, delivered a brief but admirably prepared address, in which, in terse and eloquent language, he dwelt with honest pride on the greatly improved position held by members of the dental profession as compared with that held by them a generation ago. The President spoke with fine feeling on the good relationships now maintained between the medical profession and that which he had the honour to represent; and, passing to the progress of dental science, he touched on a few of the latest and best advances. Papers were afterwards read by Mr. Leslie Maxwell, of Hastings, on "Pulpless Teeth," and by Mr. De Courcy Dickenson and Dr. Holloway on a case of Hæmorrhage after Tooth-extraction. Spirited debates followed each of these papers, and in the evening the members dined together, several representatives of our own profession taking part as visitors, and experiencing a hearty reception. Dr. Richardson proposed the toast of the evening, "Prosperity to the British Dental Association," to which Mr. Smith Turner responded. Dr. Trollope replied to the toast of "The Medical Profession," and Dr. Bagshawe, in singularly graceful terms, proposed "The Health of the President," Mr. Henry, who had won "the high esteem of his fellow-townsmen and of the members of the medical fraternity." His Worship the Mayor of Hastings, Alderman Bradham, in response to the toast of "The Mayor and Corporation," said, in commenting on the low death-rate of the place (a fraction over 11 per 1000 in a population of upwards of 60,000), that many would attribute this to the healthy situation of the town, its sea air, and the management of the Corporation, but he thought due credit ought to be given to the excellent medical skill of the professional men he saw around him and to their brethren in the locality.

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THE LANCET.

LONDON: SATURDAY, JUNE 27, 1891.

THE profession, in its various associations, would do well to consider more seriously the question raised in a letter we published last week from Dr. RENTOUL on the proposed increase in the number of direct representatives on the Medical Council. The constitution of the Council may be looked at from two points of view—from the professional point, or from that of the public. In the weary years preceding the grant of direct representation members of the Council were never tired of saying that it did not exist for the profession, but for the public, and leaving it to be inferred that the then constitution of the Council was the best possible one. The right of the universities and corporations and their most distinguished members to solely constitute the Medical Council seemed as much a matter of faith with the happy holders of this pious opinion as the good old doctrine of the divine right of kings. It was assumed with delightful confidence that the only men who could guide the State and the public right in regard to the education and registration of the profession were those who taught medicine. Those who merely practised it were regarded as a lower order of beings altogether, and quite incapable of giving advice. This pleasant doctrine had an equally delightful corollary—that the universities and corporations should not pay anything towards the expenses of the Medical Council, but that all the expenses should be paid by the members of the profession. What so fit as that those who could not advise should pay those who could? Even the Crown nomination, which was originally meant to secure some representation of the plodding, paying profession that was to be supervised, was entirely alienated from this purpose, and given without exception to men, distinguished indeed and worthy, and capable of conferring lustre on the Council, but men of the official type, already highly over-represented in the Council, and bound hand and foot by the traditions and the interests of the bodies of which they were distinguished members. It is in this constitution of the Medical Council that the Lord President will find the explanation of its somewhat tepid and ineffective handling of great public medical questions. In regard to such questions, each of the twenty representatives of existing corporations and universities has to be satisfied that there is nothing in any given proposal to offend the *amour propre* of "his body," to imperil the interests of teaching and examining bodies, or to recognise a wealth of teaching power, outside the schools, in men engaged in practice, in workhouse infirmaries, and in dispensaries. Only when he thinks that the proposal is harmless does he bend to an obviously reasonable demand. The recent discussions on a larger training in practical midwifery and a larger use of workhouse infirmaries in Ireland were striking illustrations of what we are saying as to the faulty constitution of the Council and the over-representation of teaching and examining bodies. The Scotch Universities almost *en masse* resisted any demand for a proper clinical experience in midwifery, for the simple reason that the students wanting it would have to find it in other schools. It is only by the persistent action of the direct representatives that the scandal of attendance, anyhow, on six midwifery cases as a complete practical training in midwifery, has been slightly removed. Schools that were too large to feel this objection sympathised with schools that did feel it, and accepted the pleasant doctrine that that was no question for the Council of Medical Education, but for individual schools, which of course require what is convenient. If an accurate observer like Lord CRANBROOK can find time to watch the working of the Medical Council and the divisions on important questions, he will be satisfied of the substantial accuracy of our views. There are two remedies for this admitted evil, and the Council will never give satisfaction to critics till they are applied. The one is to reduce the number of representatives of corporations and universities by combining them. Bodies are conjoined now for examining purposes. There is no reason why they should not be conjointly represented on the Council. The other is by increasing the number of direct representatives, who would act with more independence and with less care about the bearing of every reform on every particular school or examining body. Pending these reforms the Government would do much good by giving the Crown nominations, or a considerable proportion of them, as they occur to men representing medical practitioners, and unconnected with the official cliques of the profession.

WE have received a "Manifesto of the Right and Liberty Defence League," which raises certain considerations as to the proper limits of that interference with individual liberty which is claimed in the interests of public health. The immediate cause of the manifesto is the adoption by a Midland Corporation of the provisions of the Infectious Disease (Prevention) Act, 1890, including the power to detain in hospital persons whilst suffering from infectious disease who shall have been removed there, and empowering the authorities to detain in such hospital, except for the purposes of burial, the bodies of any persons who may have died there of infectious disease. A number of points are raised in the manifesto. Power of removal to an infectious hospital under the Public Health Act, 1875, is objected to, and the uselessness and alleged cruelty of several other enactments are referred to; but typical amongst them, in so far as public health is concerned, stands the first provision we have quoted from the Act of 1890, and which, it is pointed out, converts "the infectious hospital into a prison."

We assume that it will be admitted that most of our laws involve some interference with the complete liberty of the subject to act entirely, and without any hindrance, upon his own opinion, and that all reasonable persons will concede the desirability of some controlling enactments. And if so, the main point that calls for consideration is the question whether our public health laws transgress in the sense of going beyond the limit that should rightly control interfer-

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ence by a central or a local governing body which is concerned with the protection and promotion of the public health. The special powers to which we have adverted are very similar to other measures of interference with the individual which are already in force, and some of these will serve to illustrate the point under discussion.

JOHN STUART MILL maintained the right of every man to his own opinions, whatever they may be; but when he came to ask himself whether an equal liberty should be accorded to every man to act on those opinions, he only consented to discuss the point in so far as this liberty could be exercised by men "at their own risk and peril." He added that no one could pretend that actions should be as free as opinions, and he further laid it down that "the liberty of the individual must be thus far limited—he must not make himself a nuisance to other people."

But HERBERT SPENCER may perhaps be looked upon as the greatest champion for such views as are set forth by the more extreme of those who sympathise with the views of the Right and Liberty Defence League. He is no supporter of what he terms "impatiently agitated schemes for improving any sanitary condition by Acts of Parliament,' and he argues that "if sanitary administration by the State be wrong ..... then is sanitary administration by municipal authorities wrong also." And yet, even this writer admits that it is "evident" that it comes within the proper sphere of Government to repress "nuisances," and he adds that "he who contaminates the atmosphere breathed by his neighbour is infringing his neighbour's rights." Curiously enough, the term "nuisance," used by both these writers, and the term "injurious to health," are made interchangeable for the purposes of our public health legislation, and we may hence easily test the propriety of the provisions referred to in the manifesto in the light of the views expressed by the authors whom we have quoted.

And as to these provisions, we would, in the first place, point out that the power of compulsory removal to hospital is very strictly guarded under the Public Health Act. It can never be exercised except under the order of a justice, and he can only act on the certificate of a legally qualified medical practitioner; and further, unless the person suffering from infectious disease is lodged in a room which is actually occupied by members of more than one family. The removal from any room to a hospital can only be effected on proof that the sick person is "without proper lodging or accommodation." And surely if, according to HERBERT SPENCER, interference by authorities is permissible when a man contaminates the atmosphere breathed by his neighbour, and so becomes a nuisance to that neighbour, such interference cannot be uncalled for when it is proved to a justice that the contamination in question gives to the air, which is common property, a harmful and deadly character, or when the nuisance in question becomes one which is not only injurious to health, but even inimical to life itself. The manifesto we have referred to talks of the removal of "patients from commodious houses, where the sufferer and his friends [have] already every advantage of isolation. Our answer is that no such provision is embodied in any general statute in this country, and that the actual provision in force is so curtailed and safeguarded that it can only deal with wrongs towards neighbours and friends which involve the grossest violation of liberty, and which no man has a right to claim the right to perpetrate, to the obvious detriment of his fellows. The other clauses referred to in connexion with infectious hospitals are of a like sort. When those who are sick of infectious fevers are removed to hospitals which have been erected and maintained at the public expense, it is for the protection of the public health that such a step is taken; and it would indeed be intolerable if all this costly protective action could be frustrated merely because some convalescent claimed the right to diffuse the contagium of his disease amongst his fellows the moment he found himself capable of again walking about amongst them, or because it pleased the fancy of people to carry back to the very houses and tenements from which the danger of infection had been removed, bodies of the dead still capable of spreading fatal disease to those coming in contact with them. And yet claims of this sort are made on the ground of so-called "right and liberty."

GYNÆCOLOGY has unfortunately ever been the fertile field of fads and fashions, and sometimes even the battle-ground of antagonistic methods of treatment. We need scarcely refer to many of the fashionable procedures which, for a time, held sway in gynæcological practice. The history of the slitting up of the cervix uteri, which was for many years considered an essential operation in all cases of sterility, is well known. Then followed the sewing-up operation, which became the rage amongst a class of practitioners. Both of these have, however, declined in favour, and are performed but seldom by scientific gynæcologists. Nor need we direct attention to the discussion going on in certain quarters as to removal of the uterine appendages, the use of electrolysis in uterine fibromyomata, or to the emulation manifested in several societies devoted to diseases of women in devising varieties of pessaries and other gynæcological instruments which are considered so necessary by some practitioners and discarded with equal vehemence by others.

We willingly admit that practitioners in this particular department are filled with a desire to improve the health and ameliorate the sufferings of women, and that the best feelings of humanity urge them on to devise new and improved methods of treatment for the welfare of their patients. Very often, however, the methods recommended are highly empirical, being destitute of any scientific basis, and, indeed, are often founded on very doubtful hypotheses. For many of the methods splendid results are claimed, and elaborate series of statistics are produced to demonstrate their efficacy. Those who employ any narrow system of therapeutics apply an amount of misdirected activity to the prosecution of their work without exercising their judgment as to the various factors that contribute to the result. They impute their success to the drugs employed or the methods of treatment directed to the generative system, forgetful of the circumstance that the majority of their patients possess a strongly marked susceptibility or affectability of the nervous system, and that much of the satisfactory result may be accounted for through the influence of mental impressions. We must, therefore, in all such cases remember

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the teaching of BACON, that it is necessary to "observe patiently, experiment cautiously, and generalise slowly." This caution, we think, is necessary at present in reference to the subject of masso-therapeutics in gynæcological practice. We have received from many quarters, especially from the Continent and America, very glowing reports as to the efficacy of this treatment in "producing the catamenial flow," "in diminishing the suffering attendant upon dysmenorrhœa," and "in cases of sterility." It is also stated to be very efficient "in prolapsus uteri, sub-involution, chronic peri- and para-metritis, and uterine displacements." Quite recently, the reader of a paper at one of our societies, in giving the results of treatment in about 200 cases of diseases of the uterine appendages, remarked that "pelvic adhesions may be frequently broken down by a system of massaging the parts." We do not wish to scoff at these claims, but, while frankly admitting the efficacy of active and passive movements in many surgical and medical cases, we think a word of warning is needed in regard to its too extensive and indiscriminate use in gynæcology, especially in cases in which a vagueness exists as to the exact pathological condition present, as we have observed in many of the records of reputed cures by this method of treatment. In this, as in all narrow systems, too much is claimed for it. As we have indicated, it is lauded as of extraordinary efficacy by its enthusiastic adopters in nearly all diseases of women having a pelvic origin. It has also been employed "with great benefit" in many of the unaccountable affections which were formerly supposed to have a uterine source—as the term *hysteria* itself implies—and in which there is found that common combination of neurotic phenomena included under that designation. Because of this too extensive claim made for massage of the pelvic organs scientific gynæcologists have been rather cautious in adopting it even in certain cases, where it is doubtless an agent of some utility, requiring, however, special study and experience for its proper employment; and we can easily understand the unwillingness of some to follow a system which in its details is somewhat tedious, and in many respects disagreeable to the patient and difficult for the physician, or even their readiness to sneer at it altogether when they find among the directions given for the treatment of chronic catarrh of the uterus such instructions as "breech beating—standing, trunk rotation—astride sitting," &c. We feel certain that all careful practitioners of gynæcology in this country are disposed to accept assistance in the treatment of their patients from any therapeutic system having a scientific basis, but it seems, we are glad to say, doubtful if gynæcological massage, even to a limited extent, will for any length of time be in fashion amongst us.

THE hearing of the promoters of, and of those who are opposed to, the formation of a Teaching University for London, with powers to grant degrees in Arts, Science, and Medicine, has been fixed for Monday next before a committee of the Privy Council. This question, which has been dragging along for the past five years, is therefore about to be settled. The only opponent to the case of King's and University Colleges to form the basis of a Teaching University in London, so far as Arts and Science are concerned, is the existing University of London, and as the Senate and Convocation of this University have failed to agree on any scheme for a Teaching University under their control, there will probably be but little difficulty in the Teaching Colleges obtaining a Charter so far as these degrees are concerned. The medical problem is much more complicated. The London medical schools (outside those of King's and University Colleges) have presented a case, insisting on their adequate representation, but as ten seats on a council of thirty are to be placed, either directly or indirectly, at their disposal, we cannot see that anything more liberal can be offered on their behalf in the proposed Charter. The real difficulty is in the position of the Royal Colleges of Physicians and Surgeons, to whom have been allocated six seats on the Council in the Charter of the proposed Albert University, should they elect to become a constituent part of the proposed University. This will leave four for the direct representatives of the medical schools. As the promoters of the Albert University insist on an adequate representation of teachers on the Council, and that these should consist of active London teachers only, it would seem to be difficult to admit the Fellows of the Royal College of Physicians and the Council of the Royal College of Surgeons—who represent various interests other than those of the teachers of the London Medical Schools—to a representation in the Faculty of Medicine, inasmuch as the Faculties of Arts and Sciences will be composed of London teachers only. If the Royal Colleges could arrange, in conjunction with the medical schools, to send as representatives of the Faculty of Medicine only those members who were actively engaged as teachers in the London schools of medicine, it would seem that a desirable compromise might be arrived at. The cases for and against the proposed Albert University have been submitted to the Privy Council, and we sincerely hope, as the result of the hearing next week, that the Lords of the Privy Council will adopt a workable scheme which will relieve the London medical student from the disadvantages under which he is now placed. The Royal Commissioners have declared that the present position "is injurious not to the men themselves only, but to the public;" and it is of the utmost importance to the profession that the jealousies of the various bodies interested should not be allowed to impede a proper settlement. We trust that the Privy Council will embrace this opportunity, which seems to us the only method of remedying the "medical grievance," and will be able to arrange on a just and equitable basis the various claims of King's and University Colleges, as institutions dealing with Arts and Science as well as with Medicine, the London Schools of Medicine and the Royal Colleges as licensing corporations; but the whole question, in regard not only to London, but to the provincial schools and the existing Universities, will be argued by counsel during the forthcoming week.

AT a meeting of the managers of the Central London School District, on the 8th inst., Mr. Sydney Stephenson was, on the motion of Mr. Lile, C.C., reappointed for one year to the charge of the ophthalmic cases in the school at Hanwell, W. At the same meeting Mr. Stephenson's report for the past year was read, and ordered to be printed for circulation.

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Annotations.

"Ne quid nimis."

DIET AND ANIMAL TEMPERATURE.

A QUESTION has been put to us by a correspondent—Mr. Walter Fentem—whether the animal temperature of persons who subsist on a vegetable diet is lower than that in animal or mixed feeders. The inquiry has never been investigated in the human species on a sufficiently comprehensive scale to be of any value, but such comparative facts as throw light on the matter tend to indicate that vegetable feeders, amongst the lower creation, have a high temperature. Dr. John Davy, brother of Sir Humphry, and one of our keenest physiological observers of a past day, was amongst the first to make comparative observations of the temperature of different animals in their normal state; and to a certain extent John Hunter, Pallas, Despretz, and Samuel Metcalfe carried out the same research. In 1869 Dr. B. W. Richardson, in one of his lectures on Experimental and Practical Medicine, classified the results of most of these previous authors, and tested them by a new series of direct observations. His table of mean results showed that vegetable feeders have a high temperature. The sheep gave a temperature of 104°; the goat of 104°; the pigeon of 108°; and the common fowl of 108°. The rabbit showed 103°, whilst the dog and the cat, animal or mixed feeders, showed 102°. But some herbivora were comparatively low; the ox, for example, 101°, and the horse 100°. The differences here stated were supposed by the last-named observer to depend on the cutaneous covering of the animal more than on any other cause. In the case of the pigeon, on which this author made ninety-four observations, the high temperature was attributed to the non-conducting character of the feathers, a marvellous protection to a swift-flying animal in a cold atmosphere. In man, from 100 observations, he came to the conclusion that in a strictly natural state 98° F. was the truest standard. These researches are useful as comparative studies; still, it is an open question whether in man, or in any species of animal that can live on a mixed diet, there is a variation of temperature, according to mode of diet; and it would be a good work to inquire on a large scale if, under a purely vegetable form of dietary, the temperature in man is reduced. Our correspondent informs us that in him (a healthy man) and in his wife (a healthy woman), both in the prime of life, the temperature now ranges from 96° to 97·4° F. He for three years and a half, and she for two years and a half, have been total abstainers from alcohol, and have subsisted on fruit and vegetables, with addition of "butter, cheese, milk, eggs, and a little fish." Previously to adopting this system his temperature had never fallen under 98° "in so far as he remembers," and he therefore is inclined to the view that under his new regimen he lives as healthily as before, at a lower expenditure of energy. If such prove to be correct, and if it should be demonstrated that a minimum animal diet (for our correspondent, be it observed, is not strictly a vegetarian) will support life efficiently under reduced combustion and reduced waste of material, a valuable as well as curious fact will be added to our practical knowledge. Evidently there is here open a fine field for a patient, perfectly unbiased, and truthful investigator.

THE POST OFFICE BILL.

THE Postmaster-General has introduced a Bill into Parliament with the object, as he explains, of making certain concessions to the public and to the newspaper interest in relation to the business of his department. The point of greatest public interest in his measure is the proposed abolition of the charge for redirecting letters. This is a boon which will appeal directly to the public, since everybody is liable at one time or another to be the recipient of a redirected letter. Less widely appreciated, though scarcely less important, will be the proposed new regulations concerning the transmission by post of newspaper supplements. But with characteristic official zeal Mr. Raikes proposes to make the granting of these small concessions the occasion of taking power to fix the maximum weight of a newspaper which may be transmitted at newspaper postage ratio at a figure to be settled by himself and the Treasury. We are glad to see that the very strong expression of opinion which was uttered by the deputation that on Tuesday last waited on the Postmaster-General has not been without its effect. It is now officially announced that no attempt will be made this session to pass a Bill on the subject containing controversial matter, and inasmuch as the proposed limit upon the weight of a newspaper, even though fixed for the present at 1 lb., will undoubtedly afford material for abundant controversy, we may take it, as we hope, that no attempt will be made to force this clause through Parliament.

INFLUENZA IN THE SHEFFIELD WORKHOUSE.

A REPORT has been prepared by Dr. Lewis Hunt on the prevalence of influenza in the Fir Vale Workhouse, Sheffield. Between April 11th and May 29th no less than 492 cases were under treatment there, but 193 of these cases were admitted from outside. After giving some account of the prevalence, Dr. Hunt gives prominence to four points. First, the large number of people attacked simultaneously; secondly, the wide separation of centres of origin; thirdly, the absence of any marked period of incubation; and fourthly, the rapidity with which the poison was eliminated from the system. And, apparently basing his view on the first three points adverted to, he comes to the conclusion that the disease was not contagious, but was due to some atmospheric or miasmatic influence. This question of origin is one of the most prominent at the present moment, and it is therefore interesting to look back to the data on which the view enunciated is based. It appears that on April 11th two persons sickened. Two days subsequently—namely, April 13th—three more came under treatment, but only two of these belonged to the workhouse; and on April 14th three boys sickened. This group of six workhouse attacks in the period from April 11th to the 14th was scattered over all parts of the workhouse. By the end of the week there were 105 under treatment, but how many of these belonged to the 193 outsiders is not stated. If influenza, as some allege, has a brief period of incubation, we hardly see, in these data, proof of an absence of personal infectiveness, and this the more because isolation in any strict sense was not carried out; indeed, we are told that the nurses mingled freely with the other inmates. Then, as regards simultaneous attacks, we find the greatest number involved in any one day was twenty-five on May 11th. But this is a month after the prevalence within the workhouse had commenced; it was, indeed, a date when more than twenty-five could easily be conceived as having received the poison otherwise than through some atmospheric condition. And lastly, the report does not contain the evidence on which the view as to the absence of a period of incubation is based; neither does it explain that the first attacks which came under treatment had no opportunity of coming into contact with antecedent attacks outside. Whilst we are, as yet, by no means prepared to deny that some general aerial diffusion of the contagium of influenza may be in operation, it seems evident that the very decided

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attitude adopted by Dr. Hunt as to the absence of personal infectiveness must be largely based on data which are not embodied in the report he has issued.

LIBEL OF A LOCUM TENENS AND ITS CONSEQUENCES.

THERE is need of much patience and mutual respect between the practitioner who goes out for a much-needed holiday and the *locum tenens* whom he engages. Where these feelings are not in the ascendant the consequences are apt to be disagreeable and inconvenient. An illustration has just occurred in an action heard before Mr. Justice A. L. Smith, in the Queen's Bench Division of the High Court of Justice, in which Dr. Edward Semple, of Park-street, Grosvenor-square, W., was the plaintiff, and Mr. James William Orr, of Wollaston, Northamptonshire, was the defendant. Dr. Semple had accepted duty as *locum tenens* for Mr. Orr, but, after a week's work, declined to continue it owing to the discomforts of the defendant's house. He thereupon telegraphed to the defendant to that effect, and also to a medical agent for a substitute. Thereupon the defendant wrote letters to the agent reflecting on Dr. Semple's competence and conduct. The expressions were so strong that Dr. Semple naturally felt bound, in self-vindication, to commence an action for libel. In the course of the trial an arrangement was happily come to by which the defendant admitted having written under a sense of irritation, and thinking the statements true. He allowed that he had been mistaken, and unreservedly withdrew every imputation, which he regretted having made, and expressed his willingness to submit to a verdict and judgment for £125 and costs. The judge expressed himself impressed with the singularly good way in which the plaintiff had given his evidence, and added, amid the applause of the court, that he left the court without the slightest taint on his character either as a gentleman or a professional man. The action will not be without its uses at the commencement of the holiday season if principals and their substitutes study it and get from it mutual lessons.

OPERATION FOR CEREBELLAR TUMOUR.

IN the *Boston Medical and Surgical Journal* a case is recorded in which Drs. Bullard and Bradford made an attempt to remove a tumour of the cerebellum, an attempt which, unfortunately, was not successful. The patient was a child aged six years and a half, who during the year previous to the time at which she came under observation had suffered from attacks of vomiting, occurring at various intervals, but usually at the rate of about three a week. These attacks were preceded by dizziness. During the last three months of the year referred to she had been considerably worse than before, the change in her condition being coincident with an attack of influenza about Christmas, 1889. For six weeks she had been gradually losing power in her right lower extremity. When first seen, in April, 1890, there was no objective appearance noted of any consequence except a staggering gait and somewhat dilated pupils, which, however, reacted to light. When the patient was next brought to the hospital by the mother, a history was obtained of transient and varying paralysis of the right arm, and of a passing paresis of left arm on the previous day, with, for the first time, inability to feed herself. On admission to the hospital there was no evident paralysis either of motion or sensation. No examination of the optic discs seems to have been made until a fortnight after her admission, when papillitis was discovered in both eyes, more marked in the right. During the next few weeks her condition became gradually worse, until finally there was complete blindness in both eyes, paresis of both upper extremities, more marked in the right than in the left, although the left showed a greater amount of incoördination, and weakness of both lower extremities (right more than left), with ankle clonus and exaggerated knee-jerks. Operation was performed two months after the child's admission, but the patient died of hæmorrhage from an opening, apparently congenital, in the occipital bone communicating directly with the torcular Herophili, before the operation could be completed. On trephining after death over this point and afterwards enlarging the opening with bone forceps a tumour mass was found apparently in the right lobe of the cerebellum, which was found to be tubercular in structure; but as a necropsy was not permitted, a full examination of the diseased organ was impossible. The case is an important one, being one among the few cases of cerebellar disease in which operation has been attempted, and its importance is even emphasised by its unfortunate *dénouement*, as it shows a new, although it is to be hoped a rare, danger in head operations. It is to be regretted, however, that the authors do not go more into detail as to localisation in this case. The subject of cerebellar tumour is certainly discussed at considerable length at the conclusion of the report of the special case; but it seems to us that it would have been of greater interest if we had been informed where it had been intended to trephine had the unforeseen not happened, for in our present ignorance as to cerebellar localisation every case in which an attempt is made to determine the locality from symptoms, more especially if this is followed by surgical measures undertaken for the purpose of removal of the tumour, should be fully recorded. So far as we can gather from the report the tumour in this case was found on the right side—the incompleteness of the examination is, of course, a great misfortune—and the paresis was more marked on this side; yet in the general remarks which are appended by the authors we are informed that the symptoms due to pressure on the pyramidal tract are usually hemiplegic, and that the weakness is on the side of the body opposite to the lesion. If the tumour exerted its effects as if it were on the left side—we note that it did extend forward and to the left—although it was accessible superficially only from the right, it is important to recognise this fact, especially if the general statement referred to be accepted, and it is with reference to this point especially that the report is wanting in that completeness which is desirable.

FOR HOW LONG CAN DEPRIVATION OF SLEEP BE ENDURED?

THE nature and cause of sleep are still a mystery. We say it is due to exhaustion of the nervous system, which requires rest in order that repair may be effected; but why should not this be accomplished during the waking state? Some parts of the nervous system require no such thing as sleep. The movements of respiration, the action of the heart, the peristalsis of the intestines continue throughout the most profound slumber. Why, then, should the brain require in health five or six or more hours of absolute repose to make up for lost energy? Dr. Caffie considers that storage of brain energy is its final cause. But it might be urged that those who want most sleep are the dullards of the race, not the active and the alert; the gentleman who retires to his couch at ten, and, rising at nine, does nothing all day; not the Hunter who works till midnight and rises at five. Preyer thinks the oxygen of the blood is used up in the waking hours, and that we require sleep to obtain new stores of that potent stimulus. Others think it a cosmic process associated with the eternal alternation of light and darkness. Whatever may be the explanation we give of the supervention

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of sleep, it is certain we cannot do without it; and though patients and nurses often say they have not slept a wink all night, or have heard every quarter strike, we may be sure that such a state of watchfulness cannot be maintained for more than a night, or perhaps two. Lord Brougham once experimented on himself to test how long he could do without sleep, and commenced, if we remember rightly, on a Monday morning, went through his professional duties, sat up through Monday night, resumed his work on Tuesday, and got through the day pretty well. At night, however, he felt sleepy and tired, and to keep himself awake determined to dictate to an amanuensis. He began walking about the room, but on seating himself instantly fell asleep. That which overcame so hard-headed a Scotchman as Brougham, meaner men may reasonably acknowledge as their conqueror. A similar experiment has recently been reported from Detroit, where six men entered into a competition to test their endurance of deprivation from sleep for seven days, commencing at noon on Monday, March 30th. Four of them dropped out or off before Thursday; two continued till Sunday. One of these, Townsend by name, a long-distance walker, began to weaken at ten on Sunday morning; he walked like a man asleep, and reeled about the floor. An hour later he complained that the floor had all at once grown very steep, and that he could not keep on climbing. He stuck to his task, however, till midnight, when he leaned against the wall for a moment's rest. He was so tired that he fell to the floor. The shock roused him, and he begged the watchman to keep him awake, but it could not be done. A few minutes later he threw himself on the floor and instantly slept heavily. The last competitor, Cunningham, was left alone with a twelve hours' vigil before him, which he occupied with walking, singing, dancing, and shouting. Many spectators assembled to see the last hour pass. "Why did you stop the clock?" he shouted, as the minutes slowly passed. At length it was over, and he was conducted to the stage and introduced, but before the introduction was over he was sound asleep. Cunningham lost eight pounds and Townsend six in the match. The men were allowed to sleep in fifteen-minute naps at the conclusion of their several vigils, and are said to have suffered no permanent ill. Deprivation of sleep is an old Chinese punishment, and it is evidently a severe trial. In insanity prolonged vigilation is not an uncommon symptom, and probably many cases are known to alienists whose experience upon the point it would be interesting to obtain.

THE POISON OF DIPHTHERIA.

THE subject of diphtheria has lately occupied a large share of attention, especially in regard to its etiology and its pathology. The unity of croup and diphtheria is becoming more and more accepted amongst English observers, although French and German authorities have long classified them as one disease. An interesting paper on the diphtheritic poison and its mode of action by Professor Oertel appears in the *Deutsche Medicinische Wochenschrift*, No. 45, 1891. He maintains that the therapeutics of diphtheria ought to find a scientific basis in the bacteriological discoveries concerning the etiology of this disease. Having inoculated some animals in the muscular tissues with diphtheritic membrane, Oertel found that the animals generally died in thirty or forty hours. The lesions discovered on post-mortem examination consisted in a hæmorrhagic inflammation of the muscles, infiltration of small round cells in the viscera, and small hæmorrhages in the serous membranes. He did not, however, succeed in finding the characteristic bacilli in the tissues or organs of the animals experimented on. Oertel concluded from this that in the case of the general diphtheritic infection the poison is not produced in the tissues and organs by the pathogenic bacteria, but that it is derived from without, and that when it has once entered the organism it is reproduced by means of fermentation, and by a metamorphosis of certain organic combination. According to Oertel the diphtheritic poison always produces like effects, and there is no occasion to distinguish a local infection from a general one. The results of an injection of diphtheritic poison varies according to the quantity and strength of the dose administered, and according to the site and structure of the organs selected. The first effect of the poison consists in the destruction of cells. The second effect is the formation of a hyaline material at the expense of the cells. When the virus is introduced into the deeper tissues necrotic foci are formed, which unite with the superficial lesions, so producing considerable infiltration in the tonsils, uvula, and the soft palate. As in the false membranes, notably in those occurring in the trachea and bronchi, the specific organisms do not develop, and the poison rapidly loses its pathological activity, owing to the chemical changes which it undergoes in the tissues. In the cervical and bronchial glands the same alterations are produced as in the mucous tissues, and similar changes may also be noticed in the spleen, stomach, intestine, and mesenteric glands. When the disease has been very acute, the lungs, heart, liver, and kidneys do not present these characteristic lesions; they are simply the site of local inflammation, hæmorrhages, and collections of small round cells. The researches of Oertel have been confirmed by those of Löffler, Roux, Yersin, and Brieger. Oertel supports the treatment introduced by Roux and Yersin, by carbolic acid in the form of inhalations.

THE LEPROSY COMMISSION.

DR. BEAVEN RAKE and Dr. G. A. BUCKMASTER, members of the Leprosy Commission now in India, have been working during the past months in the Bacteriological Laboratory at Simla, which was specially built for the use of the Commission by the Indian Government. The greater number of the pathogenic bacteria have been artificially cultivated; but with reference to the bacillus leprae, both HANSEN, who discovered the organism in 1880, and NEISSER, who verified this, failed in this direction. Among subsequent observers, Bordoni-Ufreduzzi claims to have succeeded in culture experiments on salt, glycerine, peptone, serum, and glycerine agar; on gelatine and potato his results were negative. Dr. Rake and Dr. Buckmaster commenced their experiments at Almora on April 14th, using the fluid of a blister over a leprous tubercle of the forehead as bacillary material, and blister fluid from normal skin of the back of the same leper as a cultivating medium. This was kept in sealed vaccine tubes at a temperature of 98° F. Continuing this experiment at Simla on May 2nd, a turbidity and growth of leprosy bacilli were obtained. The original tube was now used to inoculate bouillon gelatine and agar-agar. On all these media the bacillus freely flourishes at a temperature of 70° F. Lastly, these observers state that the bacillus leprae is motile—at any rate, in its period of early growth. Experiments in animal inoculation are in progress.

THE OUT-PATIENT ABUSE AT GUILDFORD.

THE out-patient abuse is everywhere, but it has a special development at Guildford. It involves the paying of home visits to patients. We reported a few weeks ago a sharp difference of opinion on the merits of this system, as shown by the almost equal division of a special committee on the question of its continuance. The report of this committee has led to a very animated discussion of the question in a special court of governors. The result has been a compromise, which, however, contemplates the abolition of the

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home visiting of patients at the end of five years. This is too long a time to give an admitted evil. But the objectors to it must be satisfied, on the whole, with the result. There is something in the historical fact that the hospital absorbed the Guildford Dispensary and undertook its obligations. We congratulate all the friends of hospitals, who are at the same time favourable to the cultivation of the self-respect and independence of the working classes, on the prospect of an end being put to a bad arrangement. These classes have no more reason to depend on charities for their ordinary medical attendance than for their daily food and clothing. By its clubs, by provident dispensaries, and by moderate charges the medical profession adapts itself to their case, and is at their service night and day as no other profession is. It should be their care to see that the profession is decently, if not adequately, paid for its indispensable work. The hospital ought to be reserved for severe cases, medical and surgical.

THE TREATMENT OF ANTHRAX.

PROF. KOSTURIN and Dr. KRAINSKI publish in the *Vrach*, in the form of a preliminary note, an account of some experiments they have made on the treatment of Siberian sore or malignant anthrax by means of the toxines of putrefying fluids. They had previously published somewhat similar researches on the effect of certain toxines on tuberculosis, and felt sufficiently encouraged by their results to proceed with the experiments on anthrax. Most of these were carried out on rabbits. The anthrax virus was obtained from a professor of the veterinary institute in the form of a mother culture, from which fresh cultures were obtained as required by sowings on meat-peptone agar, and mixture with sterilised broth, until the latter became quite turbid. About half a cubic centimetre of this injected under a rabbit's skin always caused the animal s death in from thirty-five to fifty-five hours. The substance used as an antagonist to this virus was the extract or broth of fresh meat, allowed to putrefy at a temperature of 16° C. for from fifteen to forty-five days without the free access of air. This putrefying broth when injected under the skin of a healthy rabbit in the proportion of 1-850th of the animal's weight produced a marked rise of temperature, 40·8° C. being the maximum, which lasted for about two days, after which the normal condition was regained. The general result of the experiments was that the injection of putrefying broth five or six hours after the introduction of anthrax virus in all cases retarded death, and in some, especially where the dose of virus had been a small one, and when that of the remedy was repeated two or three times at intervals of a few hours, entirely prevented a fatal result, the animals recovering completely. Two experiments were made with sheep, 0·2 cc. of the culture of the anthrax virus being introduced into each and also into two rabbits for purposes of comparison. Three hours afterwards sheep No. 1 was given 0·5 grm. putrefying infusion of meat a fortnight old, and sheep No. 2 a similar quantity of broth a fortnight old. Rabbit No. 1 was not treated; rabbit No. 2 was given 0·1 grm. of the broth. The results were as follows: rabbit No. 1 died in 60 hours, rabbit No. 2 in 136 hours, and sheep No. 1 in 100 hours, and sheep No. 2 in 66 hours. The necropsy of all the animals showed that they had died from anthrax. The unsatisfactory result here is ascribed by the authors to the very small quantity of putrefying broth injected. In the case of rabbit No. 2 the good effects of the treatment are apparent, but as it was kept in the same hutch as No. 1 it is very probable that it became reinfected. From this and some other experiments it was evident that animals undergoing treatment must be kept in separate cages. It is a pity that further experiments were not made with sheep; still, enough has been done to indicate a possibility of success, especially as the remedy does not appear to be of itself a very serious source of danger. Some attempts were made to test the effects of pure cultures of sarcinæ and of putrefactive bacteria, but entirely negative results were obtained; consequently the authors think that the antagonistic effects of putrefying broth or infusion of meat to anthrax, and perhaps other infectious diseases, do not depend on the bacteria contained in them, but rather on toxins or chemical products of putrefaction. Another important observation was made—viz., that when the putrefaction was allowed to go on with free access of air, the product had little or no power of arresting the progress of anthrax. In order to show the antagonism of putrefaction extracts to anthrax, cultures of the latter were mixed with putrefying broth, and though the anthrax still continued to multiply just as it ordinarily does, injections of this culture were found to be innocuous. The authors are now engaged in testing the effect of putrefaction toxines on the diphtheritic process, and a further paper on the subject may be looked for.

SOME RISKS OF RAILWAY TRAVELLING.

NOTWITHSTANDING assurances to the contrary, such accidents as the recent collapse of a bridge at Norwood Junction cannot but arouse in the minds of travellers an uneasy suspicion respecting the stability of other similar structures on the Brighton and other lines. This in itself is an evil. No doubt there are many persons of too steady nerve to be disturbed by such considerations, but there are many more to whom such dread is, in the circumstances, a constitutional and injurious necessity. The journeys by rail with which the days of so many business men begin and end are probably not the least trying of their occupations. The hurried rising, the hasty morning meal, the rush to catch a train, the same hurry in the evening, cannot fail to add materially to the nerve strain imposed by the numerous and anxious duties of a busy life. Thus it must often happen that the freshness of country air so desirable in the interests of a young family is purchased at somewhat heavy cost by the harassed parent. Railway companies, it must be allowed, have done and are doing much to relieve, by compensatory additions to personal comfort, this unavoidable nervous tension. It is almost needless to point out the incompleteness of all such compensation so long as the vital condition of security remains in doubt. We therefore learn with satisfaction that the Brighton Railway Company, while confident of the practical safety of their line, have agreed to establish the same confidence in the public mind by adopting the recommendations made to them at the recent Board of Trade inquiry.

THE AFTER-CARE ASSOCIATION.

THE object aimed at by this Association, that of befriending poor women discharged from lunatic asylums, may fairly be classed among the deserving purposes of public charity. They include the formation of a convalescent institution and of cottage homes for persons recently recovered from mental illness, assistance in the form of money or clothing, and aid in obtaining suitable employment. In the circular issued by the Association regret is expressed that no single convalescent home is specially designed and available for persons recovering from mental derangement. We are rather of opinion that the Association would not be wisely guided in seeking to make good this omission. The return to health of a diseased brain is but too apt to be retarded by such half-sound companionship and kindly-meant sympathy as a home of

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this description would afford. Bracing, but not ungentle, contact with active work, and with minds occupied in daily duty, would be much more likely to refresh and energise a still feeble intellect. Not aggregation, but dispersion—by boarding out, for example,—is here called for. It is obvious, too, that grants of money and clothes must be shrewdly administered. We sincerely hope that the Association will treat such matters as these with due consideration, and will so direct its meritorious purpose as to prevent all possibility of perversion and abuse. Seeking, as it now does, but a very moderate contribution from the national alms givings, it should not plead in vain for that help which has long been freely rendered to the victims of purely physical suffering.

TESTIMONIAL TO DR. LIÉBEAULT.

DR. LIÉBEAULT having announced recently his intention of retiring from active professional work, and of taking a well-earned repose, it occurred to many members of the profession in various countries that that occasion would afford a suitable opportunity of offering some testimony of their admiration for, and recognition of, his valuable work. An appeal was accordingly directed to all those medical men who had benefited by the instruction imparted by Dr. Liébeault, and was signed by many medical men in England and Holland as well as in his native land. Dr. Lloyd Tuckey of London had charge of the subscription list in this country. May 25th was appointed for the presentation, and a large gathering of medical men took place at Nancy on that occasion. In the morning Dr. Bernheim gave a demonstration of the doctrines of the Nancy school of hypnotism, and in the evening M. Dumontpallier, physician at the Hôtel Dieu de Paris, presided at a banquet in honour of Dr. Liébeault. He presented Dr. Liébeault, in the name of the International Committee, a magnificent bronze ornament (David and Goliath), and also handed to him an album containing the photographs of the subscribers to the testimonial fund. A considerable sum of money remained in the hands of the committee; and Dr. Liébeault having expressed the desire of using it for some scientific work, it was decided to found a periodical prize in aid of works published on hypnotism, to be called the "Prix Liébeault."

A NEW THEORY OF CHLOROFORM SYNCOPE.

DR. KIRK of Glasgow read a paper last year before the Medico-Chirurgical Society of Glasgow, in which he advanced what purported to be a novel explanation of heart failure occurring during chloroformisation. This lecture has now been enlarged and issued in book form with Dr. Kirk's views elaborated. Prefacing his own investigations by a review of the work of others, he divides the contending factions in the chloroform arena as those who, like Syme and Simpson taught, "give the patient good chloroform and plenty of it," and "put the patient as quickly as possible under a strong and overwhelming dose of the poison"; and those who see extreme danger in such a plan, and would court safety in dosimetric methods and minimal doses secured by the use of a drop bottle. Dr. Kirk's theory starts from the hypothesis that there must be an effect produced by chloroform vapour upon the mucous membrane covering the pulmonary area, and that this action is associated with the effects directly due to the chloroform dissolved in the blood and floating in the circulation. If there be this action on the pulmonary tissue, the chloroform may be regarded, we are told, as two forces acting upon two several points, one without, the other within the circulation, and the phenomena occurring during the administration of the anæsthetic are to be ascribed to the action and reaction of these forces, and to the varying degree of intensity with which they operate at different stages of the inhalation. The first force, or that due to chloroform's action upon the pulmonary mucous membrane, soon attains its maximum of intensity. This action is the ordinary anæsthetic effect of the agent, and causes retardation of the blood-flow. Dr. Kirk compares it to the effect produced by shutting off a large vascular area by a tourniquet. There is, however, we are taught by the new theory, a corresponding reaction in the case of either force, so that when the vapour is withdrawn, the effects (retardation of blood stream, diminished heart's action) are suddenly reversed—"a violent rebound or whirl of the circulation terminating in its most pronounced form in syncope.' This, according to Dr. Kirk, is the way in which primary heart failure under chloroform is brought about. It cannot be said that there is any satisfactory experimental proof of these statements, and this Dr. Kirk freely concedes; but he thinks two experiments made by him on a cat lend strong corroborative testimony to his views, and he further believes that careful observations upon patients when chloroformed will also substantiate his position. The deductions at which Dr. Kirk arrives, whether his theory be right or wrong, are that since dangerous reaction follows when the effects of the vapour upon the pulmonary mucous membrane are reversed, it is perilous to lessen the quantity of chloroform given until the blood is so far saturated as to bring about a kind of equilibrium between the "external force" and the "internal force." This being so, we are urged to maintain a deep anæsthesia by using "plenty of chloroform." It will be seen that Dr. Kirk, although a disciple of Syme, differs from the conclusions of the Hyderabad Commission in that he believes most thoroughly in the existence of primary syncope, and explains its absence in the cases dealt with at Hyderabad by the fact that they were chloroformed after the manner of Syme, who used "plenty of chloroform." He, however, repudiates the conclusions, and says, "The Commission has made matters worse than before, for they have declared that death from chloroform is certainly preventable without having in the least shown how this consummation is to be attained." Dr. Kirk proposes to remedy this omission by directing the chloroformist to use his narcotic with no niggard hand, and to accept pallor rather as an indication for "more chloroform" than the usual view of its meaning, the danger of an overdose.

DIET FOR INVALIDS.

THE importance of a suitable and sufficient dietary even in health is too obvious to require assertion. In sickness it is a no less essential condition of endurance and recovery. The scope as regards variety may be more limited, but there is practically no limit as to nicety in preparation. The primary object, prevention and repair of tissue waste, is attained by skilful attention to details of cookery as much as by judicious choice of materials. Appetite has to be tempted, digestion suited, assimilation and elimination maintained effectually and without irritation—in short, nutrition and satisfaction are as needful to success in treatment as they are often difficult of attainment. At the same time it is well to note that great elaboration is seldom requisite or advisable. Simplicity, care, and common sense are supreme in the invalid kitchen. Where they control operations, and means allow due scope for their exercise, as happily they do in many households, the patient may congratulate himself at least on some degree of personal comfort. It is otherwise with the poor. Here, indeed, thrift and judgment will accomplish much, but these unfortunately are not to be relied upon. The

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simplest kitchen rules, the plainest things in diet, are only too liable to misunderstanding and misuse. Rough and ready are the methods, equally rough but unready and unappetising the product, unsuccessful the nutritive result. It is not poverty alone which must be blamed for this; ignorance has even more to do with the matter. A teacher is needed, and one possessed of some patience and judgment. Here is an opportunity for district nurses, most of whom, it is satisfactory to note, have some skill in the preparation of invalid food. District visitors, church relief committees, and others engaged in similar work, would also do well to instruct their local poor in this most useful form of knowledge. Without such aid the visiting practitioner will often advise in vain, and lose (as he now does) by mere starvation lives which careful feeding would have saved.

POPULAR EDUCATION IN HYGIENE.

WE understand that the Devonshire County Council, coöperating with the National Health Society, are sending trained teachers and lecturers through Devonshire with a view to extending among the poorer population the knowledge of the means of preventing common ailments, and the selection and preparation of wholesome food. We do not doubt that good will result from this effort to educate the people. It is impossible to over-estimate the mischief which now results from ignorance, but if the ordinary means of prevention of disease and the laws of health can be made general knowledge, a great advance will be made. We shall watch the results of this effort with much interest, and we trust that the attention of other County Councils will be directed to the action of the Devonshire Council. We believe that Mr. Acland, M.P., has been instrumental in initiating this work.

CORPORA AMYLACEA IN THE LUNGS.

THE occurrence of the objects known as "amyloid bodies" in the sputum is rare. Friedreich was the first to observe them in 1856, and he ascribed their origin to the remains of old hæmorrhages in the lungs. A very complete account of these interesting bodies is given in *La Presse Médicale Belge* for May 10th of this year by Dr. F. Curtis. He describes two cases in which corpora amylacea were found in the lungs. They presented a typical appearance, occurring as oval or circular grains, but when separated from the surrounding tissues by teasing they were found to be almost geometrically ellipsoidal in shape. The longest diameter was from 125 to 150μ in the largest specimens, varying to 16 or 20μ in the smallest. They were composed of a vitreous-looking substance, stratified in irregular layers around a central nucleus, which differed in appearance from the peripheral layers, which were so arranged as to present a radiated formation. The central portion was sometimes scooped out so as to form a small hollow, from which shallow fissures extended, and sometimes was filled up with a material which was of a different composition to the rest of the grain. In some of the bodies the nucleus was represented by a small granular mass; in others by a cylindrical one, folded upon itself. Some of the grains were enclosed in a thin crystalline envelope of a black colour. In fact, all the varieties were found which had previously been described by Friedreich and Zahn. The chemical reactions were equally characteristic, and especially so in those specimens which had been preserved in Muller's fluid. A solution of iodine in iodide of potassium produced a deep-blue colour, and this tint became almost black on the addition of sulphuric acid. The nucleus was stained yellow by the iodine, a fact previously noted by Friedreich. Methyl-violet caused the same reaction as in amyloid disease generally, colouring the grains red, whilst the surrounding tissues assumed a blue tinge. Methyl-green failed to cause any special colouration. Picro-carmine had a peculiarly selective action, staining the bodies a deep red. Lastly, methylene blue was tried and results obtained which have been noticed by no previous observers. The nuclei of cells were coloured blue as usual, but the corpora amylacea assumed an emerald-green colour. In amyloid disease of the liver, the tissue is stained blue throughout when similarly treated, the diseased portions only taking up the green colour, when a drop of a solution of picrate of ammonia is added to the dye. As regards the pathological significance of these amyloid concretions, many diverse theories have been suggested, the two principal being those of Friedreich and Langhans. The former considered that these bodies were derived from hæmorrhages in the lungs; in all his cases there was a history either of recent hæmorrhagic infiltrations or traces of past inflammation. His theory was that a small clot formed locally, thus constituting the nucleus, and that fibrin was deposited in layers around it; that this formation underwent modifications, of what kind is at present unknown, which caused the bodies to assume their characteristic appearance and properties. Langhans, on the other hand, assigned to the corpora amylacea a cellular origin. In this he has but few supporters, and moreover the bodies described by him do not agree in all particulars with those now under consideration. The observations of Jurgens and Zahn corroborate those of Friedreich, and Dr. Curtis has arrived at similar conclusions from the cases which he has observed.

ALCOHOL AND LONGEVITY.

DR. RIDGE'S letter, which appears in another part of our impression, deals with a subject of great public interest and importance, but in a way which leaves something to be desired. Underlying the whole of his argument from the published figures of the United Kingdom Temperance and General Provident Institution is the assumption that the two sections into which the members of that society are divided—i.e., the Temperance Section and the General Section are substantially on the same footing in reference to such matters as bear upon longevity save in the one particular of the use or renunciation of alcohol. On this assumption the figures are both striking and significant, for they show that over a long period of years the mortality rate in the Temperance Section has been consistently and markedly lighter than in the General Section, and therefore, to use Dr. Ridge's words, "the use of alcoholic liquors produces degeneration of the tissues and shortens life." But is the assumption of parity between the two sections in all other material respects than the use of alcohol a sound one? We believe not. It has been frequently stated, and never to our knowledge denied, that those members of the society who, having entered in the Temperance Section, cease to practise total abstinence, are thereupon passed from the Temperance Section into the General Section. Thus the ranks of the latter are constantly receiving recruits from the former, and a moment's reflection will show that these recruits must be of an undesirable class. Not only are they brought in without medical examination, but even by a process of selection which obviously works against the office. In many cases failing health is the cause of recourse to alcohol; and a sensible proportion probably of these transferred risks are cases of persons in this plight. If so, it is manifest that the process must entirely destroy the comparative value of the resulting mortality figures. The mortality of the Temperance Section is relieved by the withdrawal of more or less moribund members, and the mortality of the General Section is aggravated by the accession of the same individuals. To what extent this affects the result it is obviously impossible to

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say; but as most of the Life Assurance offices which publish their mortality are able to show as the result of medical selection a sensible reduction in the number of actual claims as against expected claims on a general business, the General Section of the United Kingdom Society would seem to be below par, and we strongly suspect that the explanation is what we have suggested. But the point is one that stands greatly in need of elucidation, and if those who have command of the very large statistical data which must have accumulated in the United Kingdom office would make a full disclosure, they would certainly produce a result not of merely statistical interest, but also of great public value.

THE CHAIR OF MEDICINE AT ABERDEEN.

WE understand that among the candidates for the vacant professorship of medicine at the University of Aberdeen is Dr. D. W. Finlay, physician to the Middlesex Hospital and lecturer on forensic medicine and hygiene. Dr. Finlay, who also holds the appointment of physician to the Scottish Corporation and to the Royal Caledonian Asylum, is a graduate of the Glasgow University, but has hitherto passed his professional life in London. His qualifications for the office are of a high order, and his contributions to clinical medicine have been numerous. At the present time Dr. Finlay is one of the hon. secretaries to the Clinical Society of London, which is itself evidence of the appreciation in which he is held in the metropolis. In our Scottish correspondents' letter the names of other candidates for the appointment will be found.

HYDATID CYST OF THE BRAIN.

DR. T. ESCHER, surgeon to the Spedale Civico in Trieste, has published a case of hydatid cyst in the right cerebral hemisphere which was under his care in 1888, and for which he operated. The patient was a child eleven years of age who had suffered for eight years from epileptiform convulsions and other symptoms of a tumour involving the right cerebral hemisphere. A preliminary exploration with a syringe established the diagnosis of hydatid cyst, and Dr. Escher therefore trephined the skull and exposed a very large cyst containing many daughter cysts involving the greater part of the right frontal and parietal lobes; these were removed. The patient never recovered consciousness after the operation, and died in a few hours in a violent attack of convulsions.

UNQUALIFIED PRACTICE IN LEICESTER ILLUSTRATED BY INQUESTS.

JURIES seem to take a very light view of deaths of children in Leicester, though unattended by registered practitioners. The *Leicester Chronicle and Mercury* contains a report of nearly a column on the deaths of two children attended by "a Mr. Anderson," living in Johnson-street, and resorted to as "the nearest doctor." The mother of the second child said she sent for "Dr. Anderson, as he had treated neighbours' children." She thought Mr. Anderson was registered. Mr. Anderson described himself as "a medical assistant out of a situation," not a registered practitioner, but having gone through the full curriculum at Dublin College. The first case was apparently a very grave disease of the cheek; the second, an insured child, suffered from convulsions. In both cases, as the child got worse, Mr. Anderson betrayed anxiety to have a regular practitioner called in, and in the second case to send for Dr. Grandison. That gentleman did not see the first case till after death. He said in his evidence as to the first case that he saw nothing in Mr. Anderson's medicine (salines and sanitas ointment) to harm the child; and in the second case—a child cutting its teeth—he went even a little further, and said the medicines—glycerine and bromide of ammonium—were "not inappropriate." We must express decided doubt as to the propriety of such easy vindications of unqualified practice by qualified men as were expressed in this case, and which seem to have satisfied the coroner and the jury. The coroner advised Mr. Anderson to be a little more explicit as to his non-qualification in dealing with poor people, but he made a very singular remark—that Mr. Anderson "had of course a perfect right to practise as a medical man if he liked, provided he did not infringe the law on the matter." We record elsewhere the case of persons fined £20 for practising as apothecaries. We cannot see any essential difference between these cases and that of Mr. Anderson. Be this as it may, it is unsatisfactory to hear coroners speak so lightly of "practising as a medical man." Dr. Grandison's position here too requires more elucidation. It is noticeable that he was called on in both cases—in the second on Mr. Anderson's suggestion; and that in both he made some apologetic remarks on the treatment, whereas it is by no means clear that with different treatment the result might not have been different. Infantile deaths in Leicester are not likely to get less numerous for such inquests as these, on which we have felt it our duty to comment.

ROYAL CORNWALL INFIRMARY.

WE understand that there are some local difficulties with regard to the position of a physician at Truro in connexion with the working of the Royal Cornwall Infirmary. If more suitable arrangements as to the position of a consulting physician could be determined on there would probably be no lack of suitable candidates for a post which offers many advantages.

THE WATER-SUPPLY OF FILEY.

IT is satisfactory to learn from a letter to the *Yorkshire Post* by Mr. C. G. Wheelhouse, F.R.C.S.Eng., now of Filey, and Mr. Hugh Orr, medical officer of health for Filey, that ample additions of very pure water have been made to the water-supply by the directors of the water company. Besides other additions, they have sunk an artesian well almost 400 feet, the water of which, in quantity practically unlimited, is beyond all reach of taint. Filey is deservedly considered one of our most valuable health resorts on the east coast. It is well for its own sake, and for the unusually numerous visitors that may this year be in need of helps to convalescence, that it has put itself right in this essential matter. Last year, like many other places, Filey suffered from a short water-supply. The letter of Mr. Wheelhouse and Mr. Orr is a sufficient guarantee that such a defect will not be likely to occur again.

DISSEMINATED RINGWORM.

DR. DUBREUILE points out (*Annales de la Policlinique de Bordeaux*, 1891, No. 5) that ringworm of the scalp may be overlooked owing to its occurrence in a diffuse rather than a circumscribed form—a condition which he terms "trichophytie disséminée." In such cases there is some general pityriasis, as in seborrhœa; but close scrutiny reveals isolated hairs having the characteristics of those in patches of ringworm, and the diagnosis is readily established by microscopic examination. In these cases there is but slight falling of hair, and as there are no bare patches, the condition attracts no attention. Hitherto he has only met with it in young girls with dark hair, possibly, he says, on account of the greater difficulty in its recognition among the blonde. If there be an unequivocal case of ringworm in one member of a family, he invariably searches for this dis-

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seminated form amongst other members, often with success. He has never met with it in boys, and he notes as a feature of the affection that it tends rather to occur about the age of sixteen or seventeen, the period when ordinary tinea tonsurans is comparatively rare. He refers to observations of Pellizani, who noted that there was a tendency for this disseminated form to run in families, a fact confirmed by Dr. Dubreuile. Difficult in its recognition, it is especially difficult to treat, in view of the age and sex of the subjects of it, since the most thorough measures would involve the sacrifice of all the hair. In these circumstances, he is content mostly to prescribe antiseptic soaps and lotions—e.g., corrosive sublimate—and to rely largely on spontaneous cure. At the same time he commends, as securing the most certain and rapid means of cure, the plan recommended by Alder Smith of applying croton oil to each diseased follicle, a plan which, he remarks, necessarily entails much care and patience.

THE RIVER LEA.

WE note with much satisfaction that during the summer months the Lea is not to be polluted by the Tottenham and Wood Green sewage, but that this sewage will be admitted into the main drainage system of the metropolis. We believe that this is the only really satisfactory way of dealing efficiently with this question, and we would gladly see permanent arrangements made by which the Lea could be freed from this source of pollution. It is stated that much satisfaction has been given to the inhabitants of Hackney by this arrangement.

PURE CHLOROFORM.

WITHIN the past two or three years investigations have been made for the purpose of discovering some process by which chloroform can be manufactured in an absolutely pure condition, and the efforts of chemists in this country towards this object have been attended with considerable success. Thus "Warrington chloroform" is interesting as being obtained by a special process from ketones, and as being entirely free from any of the impurities mentioned in the British Pharmacopœia. M. Raoul Pictet is stated to have invented a process of manufacturing pure chloroform by which he is able to reduce the temperature to 130° Celsius below zero.

ST. ANDREWS GRADUATES' ASSOCIATION.

THE members of the St. Andrews Graduates' Association, instead of holding their usual dinner or conversazione, met this year at 11, Chandos-street, W., to hear a lecture on Greek Tragedy, by the Rev. Dr. Lewis Campbell, the distinguished Professor of Greek in the University of St. Andrews. The Professor first delivered a short discourse on the history and special character of the Greek drama, and then, from his own translations of their works, gave readings, assisted by Mrs. Campbell, of portions of the plays of Æschylus and Sophocles, concluding with a splendid delivery of "The Death of Ajax." In the spaces between the readings Mr. John Thomas, harpist to Her Majesty, played appropriate music, which added greatly to the richness of one of the most refined and classical meetings the Association has ever held. The lecture was attended by Sir Andrew and Lady Clark, Professor and Mrs. Tweedy, Surgeon-General Gordon, Sir Joseph and Lady Fayrer, Dr. and Mrs. Bullen, the President of the Royal Society of British Artists—Mr. Wyke Bayliss—and Mrs. Bayliss, and a large and brilliant audience. The President of the Association, Dr. Richardson, F.R.S., occupied the chair.

MR. GLADSTONE'S HEALTH.

UPON inquiry before going to press Sir Andrew Clark informs us that Mr. Gladstone took cold again about a week ago and had a renewed bronchial attack with fever. He is now, however, recovering, and it is to be hoped will be able to go down to Lowestoft at the end of the week.

THE CONTAGIOUSNESS OF INFLUENZA.

IN a paper read before the Epidemiological Society on the 20th ult., Dr. Richard Sisley contended that the current opinion as to the spread of influenza being mostly too rapid and sudden to be accounted for by contagia, a view so ably propounded by the late Sir Thomas Watson, requires reconsideration. He points to features in the spread of the recent epidemics in confirmation of the much older doctrine of its contagiousness, which, indeed, several of the records of various visitations support, and he concludes with the following propositions:—1. There is no doubt that the disease is contagious. 2. Isolated cases precede a general infection of the community. 3 The part played by contagion in the spread of the disease is most important. 4. There is some evidence in favour of spread of influenza by goods. 5. Influenza is not spread in England by a preliminary "contamination of the atmosphere," but the atmosphere is contaminated by individuals who suffer from influenza.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Goldscheider has been recognised as *privat-docent*.

Leipsic.—Dr. Theodor Kölliker has been appointed to an Extraordinary Professorship.

Prague.—The candidates for the chair of Forensic Medicine chosen by the Professorial Senate are Dr. Paltauf of Vienna and Professor Kratter of Innsbruck.

URUGUAY, largely colonised from Italy, has (an Italian correspondent writes) been severely visited by typhoid fever, diphtheria, and small-pox, particularly in its chief town, Montevideo. Small-pox prevails to the extent of from sixty to eighty cases a day, the deaths being from fifteen to twenty of either sex, and of every condition. The sanitary authorities have adopted the most stringent hygienic measures. Gratuitous vaccination is practised on hundreds of the people daily, and the Legislative Chamber has at present under consideration a Bill to render vaccination and revaccination compulsory on every one of the inhabitants.

ONE of the chief events of the medical year in Italy is the Congress of the "Associazione Medica Italiana" which, with the "Esposizione d'Igiene," or Sanitary Exhibition, which invariably accompanies it, is held at one or other of the great seats of learning. Siena is the place of meeting for the next—that is, the fourteenth—Congress, and September the month in which it assembles. Concurrently with this will be held, also at Siena, a Congress for Children's Diseases, a department of medicine in which Italy has recently contributed good work.

THE Special Committee appointed to inquire into the sanitary condition of the House of Commons will include the First Commissioner of Works, Sir Guyer Hunter, Sir Henry Roscoe, and Dr. Farquharson, and will meet in about a fortnight.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Mr. J. D. Pratt has been elected an Examiner in Dental Surgery and Mr. Maxwell an Examiner in Ophthalmology.

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THE ORIGIN OF INFLAMMATION.

BY DR. THEODOR LEBER.

(*Concluded from page 1329.*)

IN our late notice of Professor Leber's work on "Inflammation" we gave an account of the phenomena he observed after the injection by puncture of the spores of aspergillus fumigatus into the cornea. In the next section of this treatise, Professor Leber proceeds to consider the intimate nature of the changes already described, and endeavours to give some explanation of them. In the first place, he observes two points are worthy of notice—that the action of the fungus spreads far beyond its proper seat, and at the same time that its action differs in the more remote parts from that which is observed at the seat of its introduction into the cornea. At the point where it is inserted it causes necrosis of the tissue. At the more distant part it causes inflammatory reaction and suppuration, the latter of which only secondarily invades the dead part. It is only, he observes, in a non-vascular and transparent part like the cornea that this difference between the present cause and the remote effect can be clearly followed in life. Professor Leber agrees with Cohnheim in thinking that the pus corpuscles found around and in the necrosed region immediately in contact with the seat of puncture are of extraneous origin, and do not proceed from proliferation of the fixed corneal corpuscles. He believes them to be leucocytes, and to come from the conjunctival sac, whilst the cells forming the ring of infiltration surrounding the necrosed part are, on the other hand, derived from the migration of corneal corpuscles from the peripheral vessels of the cornea, and the processes of mycelium may be observed to shoot into the clear corneal tissue, and to become surrounded by what Hibbert has well termed a leucocyte mantle, or investment which encloses the foreign body, and arrests its growth. Professor Leber remarks that the study of these phenomena has led him to form the conclusion that the remote or distant effects of the development of the fungus in the cornea admit of no other explanation than that the fungus forms or excretes some materials injurious to the organism, which being soluble and diffusible, spread to the surrounding vascular parts, in which by their action on the vascular walls and the blood they excite hyperæmia, inflammatory exudation, and emigration of white corpuscles. The toxic effect is really double, producing necrosis on the one hand and exciting inflammation on the other. In that part where the poison, or phlogogenetic substance, as he terms it, is concentrated—i.e., in and around the puncture—the anatomical elements of the tissue are killed, as is shown by the loss of the epithelium and of the endothelium, and the disappearance of the corneal corpuscles, with suppurative infiltration and throwing off of the whole mass; whilst in the more remote parts, where the phlogogenetic substance is more diluted, inflammatory reaction is alone excited. The nerves, and any influence exerted through them, may be put out of court, since section of the fifth, by which alone the cornea is supplied, produces no effect, as Snellen has shown, provided the eye be protected from desiccation and from traumatic lesions, such, for example, as the lodgment of micro-organisms. Careful consideration of the action of the poison on the vessels seems to show that it causes some change in the vascular walls, such, for example, as enlargement of the pores, allowing, in the first instance, sero-fibrinous exudation to take place, and subsequently the escape of the white corpuscles; and this action is best shown when the spores come into very close proximity with the vessels—as, for example, when they have been injected into the anterior chamber and have settled on the iris, for then the exudation of fibrin and leucocytes is most intense.

Professor Leber points to the movement of the leucocytes towards the injured part, and also to the pushing forth of vessels in the same direction, as evidence of the existence of an attractive influence which, however, is difficult to explain. The function of the white corpuscles themselves is to eliminate from the system the parts which have become necrosed by the action of the poison. Experiments made with the staphylococcus aureus and albus presented phenomena essentially similar to those following injection of the aspergillus fumigatus.

In support of the above-mentioned theory, that the action of microbes in the economy is to be regarded as essentially of a chemical nature and due to the generation by them of a poisonous substance or substances Leber adduces further evidence, for he found that suppurative inflammation could be excited in the eyes by the injection of extracts of putrefying material, the micro-organisms of which had been killed. Inflammation so produced, however, gradually subsided, because the exciting material was removed from the eye by absorption, and, of course, the living germ being absent no further poison was produced. These experiments and conclusions, though original so far as Leber is concerned, were only corroborative of similar, but antecedent, observations of Pasteur, who found that his "microbe générateur du pus" could, when dead cause suppuration similarly to the living microbe, but with the difference that the pus cells in the latter case contained living germs, and in the former case were free from them; but he did not either from these or his other researches draw the conclusion, which Leber claims as his own, that the effects of pus-generating micro-organisms were due to the elimination by them of a poisonous substance. Researches, the results of which were published in 1888 in a short provisional communication to the *Fortschritte der Medicin*, enabled Leber to state positively that the dry residue of a watery extract of staphylococcus aureus, as well as the alcoholic extract, when injected into the anterior chamber of the eye excited violent suppurative inflammation. From these cocci he obtained a crystalline substance, possessing characteristic chemical and physical properties, and capable of exciting intense inflammation leading to necrosis. To this substance he applied the term "phlogosin," though he was unable to give precise directions by which it could be obtained in a state of purity. Chemical investigations made at this time by Brieger led to the isolation of a series of such poisons which he named "toxines," and the poisonous agency of pure cultures of bacillus prodigiosus and of bacillus pyocyaneus when dead was demonstrated by Grawitz and De Bary, Steinhauss and others. In Leber's own experiments the extract of the pure culture of aspergillus fumigatus and other fungi was made with great care. The fungus was first killed by being immersed in pure alcohol, then transferred into sterilised vessels containing boiled distilled water. The alcohol was now driven off by a gentle heat, and the fluid evaporated to a small bulk. The injection of such solutions, after neutralisation with sodium carbonate, into the anterior chamber of the eye was painful, and as early as an hour after its injection into the cornea-vesicular elevations of the epithelium occurred with great congestion and swelling of the surrounding conjunctiva. This was followed by more or less extensive necrosis of the cell elements. The periphery of the cornea was infiltrated to a moderate degree with leucocytes. In the course of twenty-four hours the aqueous humour was mingled with many pus corpuscles and exhibited spontaneous coagulation, but after the lapse of four days spontaneous coagulation no longer occurred, though the amount of albumen present was increased. No germinating spores could be discovered. The region around the puncture was killed and ultimately thrown off, and with the occurrence of vascularisation regeneration commenced, and had proceeded to a considerable extent in the course of about a month, though it was not perfect even after the lapse of three months. The injection of the extract into the anterior chamber quickly excited rather violent inflammation. Additional researches made on the effects of injection into the cornea of the extract of putrefying muscle satisfied him that in putrefying muscle substances soluble in water are formed, which, when introduced into the living body, cause at the point of introduction suppurative inflammation and necrosis. These effects, though of less intensity, are very similar in their character to those produced by mycotic inflammation, especially in regard to the ring of infiltration caused by the migration from the periphery towards the centre of a number of leucocytes.

Our space will not permit us to give the details of experiments recorded in a quarto of upwards of 500 pages, and which include observations upon the action of gold and silver, glass, iron, copper, mercury, arsenious acid, and various organic substances, such as gamboge, croton oil, turpentine, cantharidin, thiodiglycolchlorid, jequirity, indigo, uric acid, oil, and starch, when introduced into the eye. We may, however, state very briefly a few of the more interesting points. The results of such penetration, it may be remarked, differ strikingly from each other—pure

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gold, for example, although being to the naked eye entirely destitute of the power of exciting inflammation, yet after some weeks causing proliferation of the endothelium, giant-cell formation and emigration of leucocytes, which are visible under the microscope, a point that is of importance in relation to De Wecker's suggestion of establishing a drainage in tense eyes by the insertion of a loop of gold through the sclerotic. Spicula of glass in a similar way, though to a more perceptible extent, even when quite clean, are not quite harmless, but after some time injure the integrity of the retina, causing increase of the neuroglia and of the pigment epithelium, thickening of the vascular walls, and atrophy of the nervous elements. The changes in these cases extended far beyond the retina, and were not limited to the point of contact of the foreign body with the membranes of the eye. They were even strongly expressed in the neighbourhood of the papilla. In regard to steel fragments, Leber found that a portion of a needle seven millimetres in length thrust through the clean lamellæ of the cornea horizontally, so that a small portion of the middle was probably exposed to the action of the aqueous humour, though it was otherwise completely buried in the cornea, excited very little irritation, the metal appearing in position and quite bright at the expiration of three months. One hundred days after its introduction it freed itself by dropping into the anterior chamber, leaving only a brown stria in the cornea indicating its former position; the loosening of the tissue in this and other instances was effected by leucocytes. Fragments of iron introduced into the lens invariably caused cataract, with peculiar and characteristic discolouration of the lens, but were otherwise well borne. The entrance of such particles into the vitreous was attended with much more serious consequences, the injury leading to shrinking of the vitreous and to detachment and rupture of the retina. Nevertheless, the inflammation produced by the foreign body was comparatively slight, and only in the track of the lesion. In regard to copper, he found that sharp copper needles driven through the cornea into the anterior chamber, however carefully sterilised, excited aseptic suppuration, which was in strong contrast with the absence of any effects in similar experiments with needles of gold, silver, steel, and glass. The asepticity—that is, the absence of microbes in such suppurations—has an important bearing in practice, since it removes any fear of sympathetic inflammation, and permits efforts to be made to preserve the eye that would otherwise be given up for early enucleation. The observations on lead call for no special remark. In the case of mercury he found that when injected into the anterior chamber through a wound of the cornea made with a sharpened point of a glass syringe, with all antiseptic precautions, this metal proved an irritant, and that as early as twelve hours after the injection the droplets were surrounded by purulent exudation, which soon increased in quantity, and in the course of a fortnight or three weeks filled the entire chamber. Vascularisation of the periphery of the cornea occurred, and after some time pus appeared between the lamellæ; and, finally, as in some of the experiments with iron and copper, perforation of the cornea took place, with evacuation of the metal. Mercury oxide and mercury iodide when introduced into the anterior chamber excited a very intense necrotic power, preceded by a rather restricted area of suppurative inflammation. When the mercury was injected between the lamellæ of the cornea it excited, as might be anticipated from the above observations, necrosis and suppurative inflammation.

In regard to the application of the salts of mercury, Leber remarks that, as with those of copper, the persistent action of very weak solutions did much more harm to the tissues of the eye than a short application of the salt in a much stronger solution. Thus, painting the cocainised cornea with a 5 per cent. solution of corrosive sublimate for a quarter of a minute, which caused the appearance of a white spot five or six millimetres in diameter and detached the epithelium, only caused some conjunctivitis for a few days, after which the spot vanished; and even the application of the same solution to a superficial wound only produced a greyish-white spot, which did not appear to interfere with the regeneration of the tissue. The effects of injection of mercury and mercurials salts into the vitreous are especially described in detail, because the appearances presented resemble in many points of view those of chronic chorio-retinitis pigmentosa with calcified cataract.

Arsenious acid is characterised by its very intense necrotic action upon the tissues with which it is brought into contact. It is itself highly antiseptic, but its necrotic effects open the door to the entrance of many micro-organisms, especially in experiments which extend over some time, and in which the acid has had time to be removed by absorption. Introduced into the anterior chamber with antiseptic precautions, it causes no fibrinous coagulum, and if the grains of the acid are placed upon the iris they may remain in position for days without causing any noticeable exudation in their vicinity, a circumstance that must be regarded as very remarkable with arsenic.

In the concluding sections of his *magnum opus* Professor Leber proceeds to consider the causes of the migration and accumulation of leucocytes in the cornea and other parts after lesions have been inflicted upon them. The whole of his researches, he remarks, support the view of Cohnheim that the leucocytes proceed from the blood, and are not derived from the proliferation of the connective tissue corpuscles situated in the region affected by the injury. As evidence he cites an experiment in which he injected simultaneously, under thorough antiseptic conditions, a drop of mercury into the anterior chamber of the eye of a frog, and some cinnabar into the dorsal lymph sac of the animal. Very shortly inflammation appeared in the immediate vicinity of the mercury, and on examination it was found that nearly all the leucocytes which formed the inflammatory ring contained particles of cinnabar. Neither Cohnheim nor Leber, it must be remembered, deny the proliferation of connective tissue elements or of epithelium in inflamed parts, but only aver that the pus cells are not derived from this source. The products of the proliferation of the cells of either connective tissue or of epithelium are not pus cells, but epithelium and granulation tissue, the cells forming which are quite different from pus cells in size and form and in the characters of their nuclei.

In attempting to explain the peculiar mode of grouping presented by the pus corpuscles at the seat and around the seat of lesion, Leber thinks it is impossible to admit that the immigration of leucocytes is irregular and lawless, but that, on the contrary, it is easy to show that it is the result of quite definite actions and influences of the excitants of inflammation on the corpuscles. There are two hypotheses that may be advanced to explain the phenomenon, one of which he names the "paralysis" and the other the "attraction" hypothesis. The "paralysis" hypothesis is the simplest. According to this view the leucocytes escaping aimlessly from the vessels wander on all sides towards the lesion, but those which approximate this point experience a paralysing and ultimately a necrotic action, which interferes with their further movement, and as they accumulate they become fixed and immobile. If the action of the toxic influence is weak, the leucocytes may reach the very centre of the lesion before their movements are inhibited, and a central abscess results; if strong their movements are earlier arrested, and a zonular infiltration of pus cells is observed. That such a paralysing influence is really exerted by the products of microbe life may be shown by the circumstance that, on the addition of a small quantity of the extract of the aspergillus fungus, the movements of leucocytes are immediately arrested, their processes being retracted, and other phenomena of their death being exhibited.

The "attraction" hypothesis holds that the leucocytes are drawn towards the site of the lesion. It is possible that a weak solution of the poisonous agent is a stimulant to that side of the leucocytes on which it acts, and consequently produces more active amœboid movements on that side which would necessarily lead to movements directed towards the lesion. But this fails to account for the clear region of cornea between the cerebral abscess and the more peripherally situated zone, and Leber is hence inclined to admit both the "attractive" and the "paralysing" action; so that, taking the case of the aspergillus fungus, it would appear that the fungus kills the tissues at the point where it attacks, and that its excreta, or those of other microbes which develop on or in the necrosed spot, exert a toxic influence on the leucocytes in the vicinity, first attracting them and then killing them, so that at some distance a zone is formed, the inner margin of which is sharply defined, whilst the outer border is shaded off.

Professor Leber next discusses the causes which lead to the escape or migration of the leucocytes from the blood-vessels, and considers it likely that this is to a certain extent due to

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the chemical affinities of the leucocytes. He refers to the important observations of MM. Massart and Bordet, as well as to those of Buchner, from which it appears that the leucocytes have not only direct sensibility or irritability in regard to external agents leading them on contact to invest certain bodies and enclose them in the substance of their bodies, but also a more subtle perception of the chemical nature of certain substances which cause them to respond in a definite manner; for in repeated experiments, when these bodies were placed in little tubes and introduced into the abdominal cavity of frogs, they became full of leucocytes, whilst in control experiments similar tubes containing substances which exerted no attractive power on the leucocytes remained free from leucocytes. For such effects Leber invents a term that, so far as we know, is new—Chemotaxis. Thus, whilst various substances, such as kreatin and urea, possessed no chemotactic influence, such action was observable in glycocoll, and was strongly marked in gelatine and alkali albuminate. The consideration of these results led Professor Leber to question whether the same causes which directed the movements of the corpuscles when once outside the blood-vessels might not exercise an attraction upon them in the interior of the vessels as well as favour their escape from them, especially since the substances are capable of diffusion, and his experiments, which have been both numerous and troublesome, have led him to the conclusion that the leucocytes can be withdrawn from the blood current by the introduction into the current of substances capable of exciting inflammation. Thus, in one instance, a minute conical tube containing a bead of mercury at the pointed end, and otherwise filled with normal saline solution, was introduced with antiseptic precaution into the jugular vein of a rabbit, and after a time, the circulation being in the meanwhile perfectly restored in the vessel, and the bead of mercury remaining in position, the little tube was found to be filled nearly to its orifice with leucocytes, from which it is evident that a true formation of pus can take place directly from the blood itself. The absence of a clot or of a white thrombus in this experiment is explained by the smoothness of the tubelet. The escape of the leucocytes from the vessels Leber of course explains, on Cohnheim's original view, that they actively penetrate and traverse the vascular walls, and that the process is not in any way to be regarded as a mere filtration of clumps of colloid substance effected by the pressure of the blood. Professor Leber gives a very careful *résumé* of the observations of the writers and experimenters, too numerous even to mention, who have discussed the process of inflammation, and we recommend the study of the numerous experiments he has recorded, as well as the conclusions he has drawn, to our readers, who will find in them many facts highly suggestive as affording an insight into the process of inflammation.

CONVERSAZIONE OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE premier Medical Society of the country has not infrequently been twitted with a certain want of hospitality and sociability; but whatever justification there may have been for this charge has been completely removed by the magnificent entertainment which the President, Council, and Fellows provided for their guests on Tuesday last. The Society's new house, which we may safely describe as the finest of its kind in London, is now completely finished, and the occasion was something of the nature of a house-warming. About 2600 invitations were issued, and a much larger proportion of these than is usually the case was accepted. The fact that it was impossible, under the circumstances, to invite ladies probably accounts for the phenomenal promptitude of the guests, for although nine o'clock was the announced time of beginning, many guests arrived as early as half-past eight. The handsome rooms were brilliantly illuminated with the electric light, and festoons of many-coloured electric lamps had a wonderfully beautiful effect. A profusion of palms and flowers completely transformed the appearance of the library. The large number of guests expected made it impossible to make an extensive show of the table exhibits which form so common a feature of entertainments of this kind, but what there was was of the choicest and best. Any deficiency in this direction was, however, more than made up for by the truly magnificent display of pictures which Mr. MacAlister, with characteristic energy, had got together at very short notice. Sir Henry Thompson's Tademas alone were well worth a journey to see. Below we describe some of the exhibits, and, as some evidence of their value, they were insured for the occasion for £20,000. The Carnival band, conducted by Mr. Godard, discoursed sweet music, and performed its part of accompanying the conversation with tact and skill. At intervals during the evening Mr. Orlando Harley, the eminent American tenor, sang brilliantly, and Mr. Charles Collette amused and delighted the audience with his inimitable monologues. The faithful few who remained to the end were abundantly rewarded by a marvellous exhibition of sleight-of-hand and card tricks by Mr. Burr Mackintosh, whose skill can only be accounted for by the suggestion that the "black art" is not yet a thing of the past. We believe we are right in saying that there is but one opinion as to the entire success of this new departure of our premier Society, and we trust that the good beginning thus made will lead to an annual event of a similar kind, though, probably, on a smaller scale. There is a widely expressed and strong feeling that it would be an immense gain to the Society if its Fellows had more frequent opportunities of meeting together in an informal and social way, and only at the last annual meeting Mr. Holmes, in his Presidential Address, expressed a hope that the Council might find means of supplying this want. We heartily congratulate Mr. Holmes, the President, and the members of the Conversazione Committee (Dr. Cheadle, Mr. Clinton Dent, Dr. Norman Moore, Mr. R. W. Parker, Mr. Knowsley Thornton, Dr. Samuel West, Dr. Frederick Taylor, and Mr. Warrington Haward) on a success the credit of which is largely due to Mr. MacAlister's energy and power of organisation.

Sir Henry Thompson sent some of the finest paintings from his well-known collection. Among others there were Millais' well-known portrait of Sir Henry himself; four Alma Tademas, notably his "Cleopatra" and his "Roman Garden"; two beautiful paintings by Medley, one of these possessing a double interest as a portrait of Sir Henry's mother when a child (this picture was exhibited in the Academy of 1795); one of J. Maris' best works; a lovely bit of colour called "Spring," by J. W. Inchbold; two fine studies by Etty; and last, but by no means least, three pictures by Sir Henry himself, all of which in their time had found places in the Academy and in the Salon. Sir Richard Quain also sent a considerable number of pictures: Maclise's well-known "Snap-apple Night" was quite a centre of attraction; two fine Landseer's, along with a second proof inscribed by the artist himself of that master's famous "Monarch of the Glen"; a charming landscape by Danby, with figures introduced by Poole; the original sketch for O'Neil's celebrated "Eve of Waterloo"; an Etty; and a masterly sketch by Holman Hunt. Among the engravings sent by Sir Richard Quain was a copy of one of the rarest and most beautiful of Cousin's works "Surprised," after Dubuffe. Mr. J. A. Bostock, C.B., one of the treasurers of the Society, was well represented by some charming works, including paintings by Teniers, Van der Werf, Peutman, Bassano, Telbin, M'Kewan, and several extremely clever pictures by Mr. Bostock himself. Mr. MacNeil Whistler generously entrusted to the committee a portrait of his mother, said to be his best work. Mr. Bruce Joy kindly sent some charming specimens of his art in the shape of busts of his father (the late Dr. Bruce Joy), Mr. Gladstone, Lord Salisbury, and Miss Mary Anderson. Mr. T. B. Kennington lent his last year's Academy picture "Outcasts." Mr. Edwin Ward sent striking portraits of Mr. Burnand, Mr. Labouchere, and Mr. John Tenniel. Mr. Tourrier sent three charming little paintings, and Mr. Seymour Haden sent as a specimen of his art a wonderful etching of "A Lancashire River." Dr. Hermann Weber contributed a valuable group of small bronze antiques, including a very fine and perfect specimen of the Egyptian Æsclepias. He also sent a fine marble statuette of Æsclepias, a Greek work of the second century. Mr. Clinton Dent sent a fine Greuze with Pettie's well-known "Threat," in addition to an interesting exhibit of antiquities and photographs. We may specially allude to a silver pen and ink case, used for writing prescriptions, of French workmanship, and evidently very old, but the date is unknown. Sir Richard Quain, in addition to the pictures

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contributed by him, sent a pair of very handsome silver "Loving Cups" of Irish workmanship. Sir Somers Vine sent a unique collection of savage implements, weapons, ornaments, and articles of clothing from all parts of the world. Mr. Victor Horsley, assisted by Mr. Hawksley, exhibited his new trephining instrument worked by a small motor and a portable battery. We have only space to give a list of the other exhibits, interesting or beautiful, as most of them are already pretty well known. Dr. Braxton Hicks: Tassie's Intaglios and Medallion Portraits.—Mr. Francis Galton: "Thumb Markings."—Dr. George Harley: Comparative Collection of Calculi and Pebbles.—Dr. Theodore Williams: Photographs.

Mr. Edison's Phonograph was, as always, a great attraction, and was rendered specially interesting on this occasion as the company, with characteristic enterprise, made some fresh records on Tuesday morning from some uncommon cases at Guy's Hospital.

THE CONTAGIOUS DISEASES ACTS.

THOSE who are interested in the results of the Contagious Diseases Acts in reducing venereal diseases in general, and syphilitic diseases in particular, will remember that these Acts were in force, with less or more stringency, from the latter half of the year 1864 to May, 1883. In that month the periodical examinations of the prostitutes in the subjected districts were suspended, and as this was always regarded by the officials of the army and navy and by the metropolitan police officials employed in these districts as the most valuable part of this legislation, it was felt certain that the result of this suspension would be an increase of disease. In 1885 the Acts were wholly repealed. A sufficient interval has therefore elapsed to enable us to study three sets of statistics: (1) those showing the prevalence of venereal diseases prior to the passing of the first Act—that of 1864; (2) those showing the various ratios of disease at the fourteen stations under the Acts compared with those of fourteen stations never under the Acts and with those of all the stations never under the Acts; (3) those showing the ratios of disease since the suspension of the periodical examinations and the repeal of the Acts. Dr. F. J. Mouat, the President of the Royal Statistical Society, having wished that an authentic relation of the facts shown by these returns, which may be regarded as a most interesting experiment on public health, should appear in the journal of the Society, invited Dr. Robert Lawson to prepare it. This was done in a most exhaustive paper (accompanied by a very elaborate diagram), which was read by Dr. Lawson at a meeting of the Society on Jan. 20th, 1891. Full details of this, so far as related to the army, were given in THE LANCET of Feb. 7th, pages 319 and 320, and in that of Feb. 14th, pages 377 and 378. In the present article it is proposed to give the returns showing the influence of the Acts on the prevalence of the different forms of venereal affections in the Royal Navy; and the progress of syphilis among the civil population, both of which were also dealt with in Dr. Lawson's admirable paper.

In the "Statistical Report on the Health of the Navy for 1881" there is a table detailing the strength and admissions for primary venereal sores, and secondary syphilis and gonorrhœa, year by year from 1860 to 1881, in the various ships at the ports on the home station where the Acts were in force, and at those which were never under them. Dr. Lawson added to these the results for 1882 from the report of that year, so as to complete the period like that for the army (Table III.) already given. The ports referred to are: Those which came under the Acts—Dartmouth, Plymouth, Portsmouth, Southampton, and Queenstown; those never under the Acts—Hull, Liverpool, Kingston (Dublin), Greenock, and Leith. How very unequally the force was distributed between these two groups may be judged by the fact of 87 per cent. of it being at places under the Acts, and only thirteen at those never under them. Therefore the points of contact with the unprotected population being so few and the numbers at them so limited, much greater irregularity must be looked for than was found in the army returns under such different conditions.

The naval returns included primary venereal sores and secondary syphilis under the same heading from 1860 to 1865 inclusive; afterwards they were shown separately. It had been the practice in the navy not to enter slight cases of gonorrhœa on the sick list until the discussions on the Act arose and attention was drawn to the subject, when instructions were issued for all to be included; this seems to have taken place about 1870. In the appendix to Dr. Lawson's paper is a table (V.) which embodies the details for the twenty-three years 1860 to 1882, arranged in a similar manner to that of Table III. for the army, formerly noticed, but the conditions just mentioned will show that the analysis of the results cannot be expected to be so close as was found in the army. Proceeding on the same plan, however, Dr. Lawson compares the period 1860 to 1863, before any restrictive measures were in force, with that of 1870 to 1873, when they were in full operation; 1864 to 1869, being a transition period, may be omitted, as was done with the army. The following shows the relative frequency of primary sores and secondary syphilis taken together, and gonorrhœa in the force, under the Acts and not under them, in the two periods:—

Period.	Under Acts.		Not under Acts	
	Syphilis: Primary and Secondary.	Gonorrhœa.	Syphilis: Primary and Secondary.	Gonorrhœa.
1860–63. No Act in force....	74·9	26·5	70·2	29·5
1870–73. Acts in full operation.....	45·6	62·0	106·8	50·4
Difference between 1860–63 and 1870–73	− 29·3	+ 35·5	+ 36·6	+ 20·9
Percentage of fall or rise....	− 39	+ 134	+ 52	+ 71

"Had the increase of 52 per cent. of the syphilitic disease at the stations never under the Acts been due to greater epidemic incidences, the improvement under them would have amounted to 39 + 52, or 91 per cent." This remark of Dr. Lawson shows how careful he is to credit the Acts with exactly as much as they deserve, neither more nor less. "But," he observes in continuation, "as shown by the army returns, there was a sensible decrease of epidemic influence over the country in the latter period; and in face of this it is probable that the large increase of 52 per cent. was due to some of those irregularities presented by small numbers. All that can be proved by this comparison, then, is that where the restrictive measures were in operation a material reduction of disease took place. As to gonorrhœa, the remarks made above obviate further comment."

A very remarkable and significant circumstance is that in the next period, 1874 to 1879, where the stoppage of pay deranged the admission rates in the army, there was no such interference with those in the navy. The results from the same table (V.) are these:—

Period.	Under Acts.		Not under Acts.	
	Syphilis: Primary and Secondary.	Gonorrhœa.	Syphilis: Primary and Secondary.	Gonorrhœa.
1860–63. No Act in operation	74·9	26·5	70·2	29·5
1874–79. Acts in full operation	36·7	62·4	88·8	50·3
Difference between 1860–63 and 1874–79	− 38·2	+ 35·9	+ 18·6	+ 20·8
Percentage decrease or increase	− 52	+ 135	+ 26	+ 70

The percentage of reductions in syphilis has here increased from 39 in 1870 to 1873 to 52 at the protected stations; but it has fallen from 32 at the former date to 26 at the latter, at those not under the Acts, corresponding with what took place among the troops in duration, though not so closely in quantity.

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In the years 1880–82 the following were the results:

Periods.	Under Acts.		Not under Acts.	
	Syphilis: Primary and Secondary.	Gonorrhœa.	Syphilis: Primary and Secondary.	Gonorrhœa.
1860–63. No Act in operation	74·9	26·5	70·2	29·5
1880–82. Compulsory examination still in force ..	53·4	75·4	148·9	69·6
Difference between 1860–63 and 1880–82	21·5	48·9	78·7	40·1
Percentage, decrease, or increase	- 29	+ 185	+ 112	+ 136

The decrease at the protected ports in 1880–82 as here shown was still 29 per cent. of that between 1860–63, notwithstanding the much greater prevalence of syphilis over the country at large, as is obvious from the military experience, as well as that of the navy, in the general Tables III. and V. for the respective services. The naval returns did not give the force at the protected stations and at those never under the Acts separately after 1882, but the strength and admission for the whole force at home last year are given in Table V. in the appendix to Dr. Lawson's paper. From this it appears that syphilis reached its highest point in 1884, the same year as in the army, though the ratios in the latter were much higher than in the former, being for primary sores 124 per 1000 and for secondary syphilis 30·2, while for the navy they were 83·2 and 26·9 only. Subsequently to 1884 the disease diminished considerably though irregularly, but contrasting remarkably in these respects with the large and more regular fall in the army. From all these Dr. Lawson finds that syphilitic affections are considerably more frequent among the troops than among the seamen at the protected stations than would have been expected. Thus the admissions per 1000 for primary venereal sores, secondary syphilis, and gonorrhœa were at these stations for the undermentioned periods:—

Periods.	In Army.			In Navy.		
	Primary Sores.	Sec. Syphilis.	Gonorrhœa.	Primary Sores.	Sec. Syphilis.	Gonorrhœa.
1870–73..	52·5	20·3	100·3	32·6	13·0	62·0
1874–79..	38·7	23·0	67·6	26·9	9·8	62·4
1880–82..	75·6	26·6	99·0	38·7	14·7	75·4

"This immunity may be due," Dr. Lawson suggests, "in part, at least, to the seamen living on board ship a large portion of their time, and so being less exposed to sources of infection than soldiers, who are always on shore, and possibly, to some extent, to their employing ablution earlier after such exposure than is customary among soldiers. Under any circumstances it is worthy of note."

The prevalence of syphilis among the civil population and its increase or decrease in recent years would be most interesting and valuable information could it be obtained. But it cannot. Lock hospitals in the United Kingdom are so few and far between that they could be easily counted upon the fingers of both hands. Lock wards, too, exist in only a very small proportion of general hospitals, and contain very few beds. Hospital statistics, therefore, could only relate to a few districts so far as in-patients are concerned, and the statistics of out-patients would be hardly reliable. There are, however, some returns available—viz, those of the Registrar-General, which give the deaths registered from syphilis. As, however, deaths from this disease are often registered under some other heading, the record must be very far from perfect. Still they furnish some approximation to the truth, and some years after the passing of the Contagious Diseases Acts it was found that there was a considerable difference between the number of deaths from syphilis in those of the Registrar-General's districts which comprised the protected stations and those which did not. Dr. Lawson has given these and other details in Tables VI. and VII. of the Appendix to his paper, from which we give the following extracts. From 1860 to 1889 there died from syphilis 56,551, of whom 41,828 were children under one year of age; of the remainder, 3955 were between one and five years of age, and 10,768 above five years, being respectively very nearly 74·7 and 19 per cent. of the whole. Table VII. gives the distribution of the deaths from syphilis among the civil population of the different divisions of the Registrar-General, which have been arranged so as to throw the whole country into five continuous groups, the metropolis forming one of them, the period being for the six quinquenniads from 1860 to 1889. The first, being a transition one, has been passed over as affording no secure basis for generalisation. The second (1865 to 1869) embraces the first introduction of the Contagious Diseases Acts, and with those that follow enables the influence of these Acts on the frequency of deaths from syphilis to be traced. The deaths per million living in each of these groups in the respective quinquenniads were as under:—

Periods.	England and Wales.	Districts.				
		I.	II. & V.	III., IV., & VI.	VII. & XI.	VIII., IX., & X.
1865–69 ..	80	144	68	67	44	85
1870–74 ..	80	127	62	72	49	88
1875–79 ..	85	128	60	77	58	97
1880–84 ..	84	127	55	75	56	96
1885–89 ..	73	112	55	61	51	83

That the beneficial action of the Contagious Diseases Acts was not confined to the troops and seamen, but had reduced the mortality from syphilis among the civil population in the districts where they came into operation to a material extent since 1870, will be seen by the following facts. Ten of the twelve protected stations in England are in the counties south of the Thames and Bristol Channel, constituting the second and fifth divisions of the Registrar-General; one station, Woolwich, is in the first or metropolitan division, and one, Colchester, is in the fourth division. Taking the quinquenniads 1865-69, 1870-74, and 1875-79, the mortality at all ages from syphilis in the second and fifth divisions was 68 per million living in the first period, declining to 62 in the second and to 60 in the third, a reduction of 12 per cent. In the third, fourth, and sixth divisions, extending from the east coast to the Welsh border, immediately north of the second and fifth divisions, the mortality from syphilis in 1865–69 was 67 per million, almost the same as in the two southern divisions; but, instead of falling in the next quinquenniad, it rose to 72 and to 77 in the following one, a rise of 15 per cent. In the next group to the north, comprising the seventh and eleventh divisions, the deaths from syphilis in 1865–69 were 44 per million, rising to 49 in the following quinquenniad and to 58 in 1875–79, a rise of 32 per cent. In the remainder of England, to the north, the deaths rose from 85 in 1865–69 to 88 in the succeeding period, and to 97 in 1875–79, an increase of 14 per cent. London presented the only exception to the general rise; this, with the neighbouring county, comprised in the first division, had a mortality of 144 per million from syphilis in 1865–69; this fell to 127, or 12 per cent., in 1870–75, and virtually remained at the same rate. From all this it is clear that the Contagious Diseases Acts diminished materially the mortality from syphilis, not only in the immediate localities where they were enforced, but to a large distance around them; while in London there had been a smaller reduction, and in the rest of the country a very marked increase. In the quinquenniad 1880–84 there were indications of a commencing change, which went on to the great decrease observed in the country generally in 1885–89, and in every group of divisions as well. The fall in 1880–84 was much accelerated in the second and fifth divisions, where the compulsory examination was continued until May, 1883.

Those who have defended these Acts through evil report and through good report will now have the satisfaction of seeing that they do not deserve the reproach of being class legislation for the benefit of soldiers and sailors. Their beneficial results extended also to the civil population of the districts where they were enforced and to a large distance around them. Had their application been as general as it was limited the results would have been perceptible

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apart altogether from the Registrar-General's returns. The persistent efforts of a factitious opposition led to their repeal, and so the United Kingdom must continue to bear the reproach of being almost the only civilised country in which the hospital accommodation for venereal diseases is, comparatively, *nil*, and no other steps are taken to prevent the spread of these loathsome and deadly diseases.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following were among the principal amounts received at the Mansion House up to Thursday last in aid of this Fund. The total sum received at that date amounted to nearly £38,000:—

	£	s.	d.
St. Paul's, Onslow-square (Rev. H. W. Webb-Peploe) ..	322	19	8
St. Peter's, Vere-street (Rev. W. Page Roberts)	230	0	11
St. John's, Paddington (Rev. G. S. Karney)	153	1	6
Stamford-hill Congregational Church (Rev. J. M. Gibbon)..	84	0	9
St. James's, Clapham (Rev. F. A. C. Lillingston)	134	4	5
St. Augustine's, Highbury	64	5	4
All Saints', Child's-hill	20	16	0
F. G. D. (a further)	25	0	0
Chapel Royal, Savoy	20	0	0
Julian Senior, Esq (a further)	25	0	0
Blackheath Congregational Church, including £29 from G. Edwards, Esq. (Rev. C. Wilson, M.A.)	117	19	9
Chapel Royal, St. James's	51	4	0
St. Mary's, Balham, and St. John's, Bedford-hill	60	3	2
E. S. L.	20	0	0
Holy Trinity Church and Emmanuel Mission, Blackheath..	39	16	7
St. Barnabas', Pimlico	30	6	6
St. Matthew's, Upper Clapton	68	19	9
Friends' Meeting, Wanstead..	51	14	1
Upton Baptist Chapel, Lambeth	21	2	2
St. Dunstan's, East Acton	33	9	10
Metropolitan Tabernacle (Rev. C. H. Spurgeon)	166	0	0
North Finchley Congregational Church	25	0	0
Finsbury Park Congregational Church	31	0	1
St. John's, Downshire Hill	47	11	0
Magdalen Hospital Chapel, Streatham	33	6	6
Brockley-road Baptist Chapel	20	0	0
St. John's Wood Presbyterian Church (Rev. J. Munro Gibson, D D.)..	92	3	5
All Saints', Camberwell	34	11	5
Trinity Presbyterian Church, Notting-hill	31	0	11
St. Peter's, Eltham-road, Lee	20	18	9
St. Thomas's, Regent-street	51	18	4
St. Paul's, Beckenham (Rev. Chas. Greene)	99	7	5
Christ Church and St. Barnabas', North Finchley	21	2	0
St. Peter's, Paddington	23	8	4
Christ Church, Chelsea	20	14	2
Central Hill Baptist Chapel, Upper Norwood	28	10	7
Christ Church, Beckenham	41	15	0
St. Luke's, Westbourne-park	75	12	4
Westbourne-park Baptist Chapel	33	6	0
St. Martin-in-the-Fields (Rev. J. F. Kitto, M.A.)	114	11	0
St. Saviour's, South Hampstead	22	15	7
Lock Hospital Chapel	29	11	4
Streatham-hill Congregational Church	44	15	3
St. Alban's, Streatham-park (Rev. S. M. Ranson)	104	6	0
St. Mary Magdalene's, Paddington	56	13	3
St. Paul's, Hamlet-road, Upper Norwood	33	18	0
St. Michael's, Stockwell	32	14	0
St. John's Presbyterian Church, Forest-hill (Rev. W. Martin, M.A.)	76	0	0
Aldenham Parish Church	41	0	0
W. T. Blanford, Esq. (a further)	20	0	0
St. Saviour's, Upper Chelsea (Rev. C. C. Walford)	81	11	0
St. Stephen's, Clapham-park	28	0	7
St. Thomas's, Stamford-hill	34	11	2
Thames Ditton Parish Church	25	11	2
St. Mary the Virgin, Primrose-hill	48	6	8

Other subscriptions have been received, and will be announced in our next issue.

THE PUBLIC HEALTH MEDICAL SOCIETY.

THE annual meeting of this Society was held on the 15th inst. at the offices, 101, Great Russell-street, London. Professor W. R. Smith, M.D., presided.

The report for the year shows that the Society maintains the confidence of diplomates in Public Health. Sir Charles A. Cameron was unanimously re-elected President, Dr. Allan Hon. Secretary and Treasurer, and the following gentlemen were added to the Council:—Surgeon-Major Compigne, Drs. F. W. Alexander, Herbert Goude, C. A. James, Crauford Maclearn, H. C. Tweedy, and Fallon P. Wightwick. The Society has lost during the year three members of its Council—viz., Drs. W. W. Day, Henry Smith, and W. E Steavenson, gentlemen whose services to the Society had been of the greatest value from its very inception. Attention was called to a letter from the Local Government Board to certain London vestries, calling upon them to appoint their newly elected medical officers of health for a period of twelve months only, unless they were prepared to devote themselves entirely to the duties of the office. It seemed to the meeting to be more conducive to the independence of the office that, with the exception of general medical practice, he should not be precluded from other work, and that the insistance by the Local Government Board of this condition will have the tendency to make the officer a mere vestry official. It was resolved that the President of the Local Government Board be memorialised on the unsatisfactory state of affairs.

The annual dinner of the Society will be held on Wednesday, August 12th.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighton Urban District.—On the basis of the Registrar-General's estimate of the population the general death-rate of Brighton for last year was 17·8 per 1000; and, so far as phthisis records can be regarded as comparable for different periods, it is noteworthy that the rate per 100,000 living has continuously gone down from 295 in 1861–70 to 164 for the past three years. There remain, however, conditions in Brighton the removal of which might be expected to be followed by a still further lessening of this mortality. Enteric fever never showed a smaller rate of death than last year, and it is evident that the zymotic rate is largely kept up by measles and whooping-cough, as to which no precautions are taken by parents. The sanatorium, though by no means a building such as Brighton requires, received 162 cases of scarlet fever and 22 cases of other diseases. Schemes are in view for improving the housing of the poor, sanitary inspections are actively maintained, and the general record of current work is one with which Dr. Newsholme may well feel satisfied.

Lowestoft Urban District.—A very careful report has been issued by Dr. W. A. S. Wynne on the need for the provision of a new isolation hospital for Lowestoft. He states that the main objections to the present hospital are its inability properly to receive simultaneously cases of more than one disease in both sexes, the absence of proper accommodation for the staff, and the structural unfitness of the buildings to resist alternations of cold and heat. In short, the existing hospital presents many of those features which act as a deterrent to the use of an infectious hospital, and thus defeat the very object for which they have professedly been provided—namely, the protection of the public from risk of infection by the prompt isolation of first attacks of the infectious fevers.

Liverpool.—The discussion which is going on as to the true population of Liverpool necessitates caution in accepting the death-rate for 1890 as 23·3 per 1000, and it must leave many statistical considerations as undecided. The notification system revealed last year, amongst other diseases, 1975 cases of scarlet fever, 251 of enteric fever, 39 of typhus fever, and 79 of diphtheria; and the three isolation hospitals included amongst their patients 997 cases of scarlet fever, 201 of enteric fever, 80 of typhus fever, but only 4 of diphtheria. There is a mortality chart for enteric fever and typhus fever; but, now that the localisation of attacks is possible, it is a pity that only fatal cases are shown, and this the more since the residences of people who mainly died at a hospital away from their homes has but little interest etiologically or otherwise. The mass of material issued under the heading of the Liverpool Sanitary Amendment Act, and which specifies the back-to-back houses, the court tenements, and other unhealthy dwellings included in the tenth presentment made in this matter, may be uninteresting reading outside Liverpool, but it indicates an amount of labour and of advance in the matter of improved dwellings the value of which it would be difficult to overrate, and we are glad to find that Dr. Taylor presses on systematic progress in this respect; for it is work which, above all other, will tend to free Liverpool of typhus fever, and to lower the general mortality.

Oldham Urban District.—Dr. James Niven always con-

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trives to add to a general account on the sanitary state of this borough some special information as to advance in preventive medicine and general sanitary administration. The special subjects which are dealt with in the report for 1890 relate to refuse destructors, influenza in man and horses, and the etiology of consumption and pneumonia; the chapter on consumption being especially interesting in regard to the relation of that disease to antecedent attacks in households, age, trade, occupation, &c. The statistical part of the report is also very complete, and the annual rate of mortality from all causes is recorded as 21·5 per 1000. The admissions into the Westhulme Hospital included 127, 23 being of typhoid fever. Diphtheria has for some years been on the wane in Oldham, the number of cases coming under notice having steadily diminished year by year from 127 in 1887 to 11 in 1890. The general work done in the borough, together with an account of analyses of food, meteorological observations, and the like, go to make up a volume of much interest; and such a series of reports cannot fail to be of great value for local as well as, in some respects, for general purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5859 births and 4161 deaths were registered during the week ending June 20th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 30·9 to 23·8 per 1000, further fell to 23·1 last week. The rate was 23 in London and 23·1 in the twenty-seven provincial towns. During the first eleven weeks of the current quarter the death-rate in the twenty-eight towns averaged 27·5 per 1000, and considerably exceeded the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns were 14·2 in Plymouth, 15·1 in Leeds, 15·3 in Brighton, and 16 in Derby; the highest rates were 27·7 in Blackburn, 29·3 in Liverpool, 30·8 in Bolton, and 30·9 in Wolverhampton. The deaths referred to the principal zymotic diseases, which had been 359 and 313 in the preceding two weeks, rose again last week to 325; they included 111 from whooping-cough, 59 from measles, 43 from diarrhœa, 38 from scarlet fever, 37 from "fever" (principally enteric), 36 from diphtheria, and 1 from small-pox. These diseases caused the lowest death-rates in Brighton, Norwich, Birkenhead, and Bristol, and the highest rates in Manchester, Leicester, Bradford, and Liverpool. The greatest mortality from measles occurred in Portsmouth and Huddersfield; from scarlet fever in Derby, Bradford, and Wolverhampton; and from whooping-cough in Sheffield, Sunderland, Manchester, Liverpool, and Leicester. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. The 36 fatal cases of diphtheria included 28 in London and 2 in Portsmouth. One death from small-pox occurred in London, but not one in any of the twenty-seven provincial towns; 4 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 872, against numbers declining from 927 to 859 at the end of the preceding four weeks; the patients admitted during the week were 84, against 66 and 61 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 620 to 453, further fell last week to 439, but were nearly double the corrected average. The causes of 62, or 1·5 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Sunderland, Cardiff, and in six other smaller towns; the largest proportions of uncertified deaths were recorded in Bradford, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·2 and 24·2 per 1000 in the preceding two weeks, further declined to 23·2 during the week ending June 20th, but slightly exceeded the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 11·8 in Perth and 18 in Greenock to 25·2 in Glasgow and 28 in Dundee. The 597 deaths in these towns showed a decline of 26 from the number in the preceding week, and included 24 which were referred to measles, 19 to whooping-cough, 11 to diarrhœa, 6 to "fever," 4 to diphtheria, 3 to scarlet fever, and not one to small-pox. In all, 67 deaths resulted from these principal zymotic diseases, against numbers increasing from 67 to 79 in the preceding two weeks. These 67 deaths were equal to an annual rate of 2·6 per 1000, which exceeded by 0·8 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 27 and 26 in the preceding two weeks, further declined last week to 24, of which 18 occurred in Glasgow and 4 in Paisley. The deaths from whooping-cough, which had been 25 and 22 in the previous two weeks, further fell to 19, and included 9 in Glasgow, and 3 each in Edinburgh, Dundee, and Leith. The 6 fatal cases of "fever" showed a slight further increase upon recent weekly numbers, and included 4 in Glasgow. Of the 4 deaths referred to diphtheria, 3 occurred in Edinburgh. The 3 fatal cases of scarlet fever showed a decline of 7 from the number in the preceding week, and were all recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined in the preceding three weeks from 173 to 139, rose again last week to 143, and exceeded by 33 the number in the corresponding week of last year. The causes of 62, or more than 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 18·8 to 27 per 1000 in the preceding three weeks, declined again to 25·1 during the week ending June 20th. During the first eleven weeks of the current quarter the death-rate in the city averaged 24·5 per 1000, the rate for the same period being 24·8 in London and 21·2 in Edinburgh. The 170 deaths in Dublin during the week under notice showed a decline of 13 from the number in the preceding week, and included 5 which were referred to diarrhœa, 4 to "fever," 1 to whooping-cough, and not one either to small-pox, measles, or scarlet fever; in all, 10 deaths resulted from these principal zymotic diseases, against 3 and 9 in the preceding two weeks. These 10 deaths were equal to an annual rate of 1·5 per 1000, the rate from the same diseases being 1·8 both in London and in Edinburgh. The 5 fatal cases of diarrhœa exceeded the number recorded in any week since October last. The deaths referred to whooping-cough, which had been 1 and 2 in the preceding two weeks, further rose to 4 last week. The fatal cases of diphtheria, which had been 2 and 3 in the previous two weeks, declined to 1 last week. The 170 deaths in Dublin last week included 21 of infants under one year of age and 45 of persons aged upwards of sixty years; the deaths of infants showed a marked decline, while those of elderly persons corresponded with the number in the preceding week. Two inquest cases and 2 deaths from violence were registered during the week, and 73, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths last week in the city were not certified.

THE SERVICES

MILITIA MEDICAL STAFF. — Surgeon-Major F. Armstrong, M.D., 4th Battalion, the Border Regiment, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated June 8th, 1891).

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Fleet Surgeon Matthew F. Ryan to the *Nile* (dated June 30th, 1891). Staff Surgeons: Alexander G. P. Gipps to the *Pallas* and Everard H. Saunders to the *Boscawen* (both dated June 30th, 1891); John Mackie to the *Serapis* (dated June 23rd, 1891). Surgeons: George M'Shane to the *Nile*, Hamilton Meikle to the *Tartar*, George H. Foote, M.D., to the *Indus*, Chas. B. d'E. Chamberlain to the *Vernon*, and James H. Dawe to the *Gossamer* (all dated June 30th, 1891); Mr. George Newstead, M.D., to be Surgeon and Agent at Blyth Haven dated June 24th, 1891).

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VOLUNTEER MEDICAL STAFF CORPS.—*Rifle:* 2nd Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Acting Surgeon J. P. A. Gabb, M.D., resigns his appointment (dated June 20th, 1891).—2nd (South Middlesex): Lawrence Patrick Joseph Finegan, Gent., to be Acting Surgeon (dated June 20th, 1891) —2nd Volunteer Battalion, the Manchester Regiment: Surgeon L. H. Jones, M.D., resigns his commission (dated June 20th, 1891).

Correspondence.

"Audi alteram partem."

NOTIFICATION OF DISEASE AND MEDICAL OFFICERS OF HEALTH.

To the Editors of THE LANCET.

SIRS,—Your severe strictures on the conduct of certain medical officers of health with regard to notifications brought before them having been reproduced in a provincial paper, I beg to lay before your readers certain facts which show a different aspect of the case. The district with which I am connected may be divided into four divisions of nearly the same population; from one division, however, I get as many notifications as the other three put together throughout the year. This being a colliery district, the houses are so constructed that the street door opens directly into the bedroom, whilst the back door opens into the kitchen or living room; and it has happened that I have been confronted with the patient notified. Our orders are to visit every house where disease is notified, and to report on the state of the premises, and as to drainage &c. Now, from casual inquiries which have been made on visiting houses, I have been surprised at the information which has been supplied to me without any investigation or direct examination. A case of inflammation of lacrymal sac was notified as erysipelas. Dental abscess was notified as erysipelas. A man with inflamed hand was out for a walk when I called; notified as erysipelas. A newly vaccinated child with inflamed lymphatics; notified as erysipelas. An inflamed breast notified as erysipelas. Abrasion of the fingers from flying a kite notified as erysipelas. A girl with her arms dyed from wool, not ill enough to leave her work for an hour; notified as erysipelas. A woman with bronchitis two weeks after confinement was seen sitting at her bedside nursing her baby; notified as having puerperal fever. A child notified as having scarlet fever was dead when I visited the house. The certificate of death was shown to me, and was marked pneumonia, and nothing else. The people of the house knew nothing about any fever being there. A case of typhus fever was notified to me, and happening to enter the sick room, I was told by the mother that her daughter had no fever. An investigation into this case seemed absolutely necessary, and I then discovered that the patient had a normal temperature, a pulse of 80, and without any kind of a rash. She appeared unable to protrude her tongue, and was supposed to have paralysis of the right arm and leg, and refused food. My diagnosis in this case was hysteria. A case of diphtheria which was notified proved to be follicular tonsillitis. Many cases of what I believed to be simple catarrh were designated as a "touch of scarlatina," and notified as scarlatina, but the people of the house were astonished to think that this meant fever.

The sanitary board on being informed of these shady kinds of notification gave directions to have cases investigated when we thought proper; and this was done, with the result of finding many more wrong notifications. The whole matter was then laid before the Local Government Board, who gave instructions that no case was to be investigated unless we had reason to believe that the medical practitioner was not acting *bonâ fide*.

It would be unwise to leave it to the health officer to prove the want of *bona fides* on the part of a medical practitioner, yet something should be done to preserve the usefulness of the Notification Act; and to remove all friction between members of the same profession, I cannot think of a better plan than for the sanitary board to have power to call in the assistance of a Government inspector, who should make a thorough investigation into any alleged false notification, and report to the Board.

I am, Sirs, yours obediently,

EDW. JEPSON,
Medical Officer of Health.

June 10th, 1891.

*** Dr. Jepson's letter obscures the points at issue. He cites a number of instances of so-called "erysipelas" which he considers did not come within the meaning of erysipelas in the Act. This difficulty has occurred elsewhere, but it was essentially scarlet fever, and not erysipelas, that led to the correspondence which was submitted to the Local Government Board, and which elicited the official answer that Dr. Jepson had no duty to go behind the certificates of his fellow practitioners unless their *bona fides* was in question. Moreover, in some of the cases in question, Dr. Jepson will do well to explain what is the boundary line between diphtheria and "follicular tonsillitis" and between other affections having similar close kinship.—ED. L.

LITERATURE FOR THE BLIND.

To the Editors of THE LANCET.

SIRS,—My attention has been called to a paragraph in your last issue on the above subject, in which you dwell on the importance of extending and cheapening as far as possible the supply of books in raised type (and especially in the Braille type) for the use of the blind. Will you permit me, as a member of the Council of the British and Foreign Blind Association, founded by my late friend Dr. T. R. Armitage, to point out to your readers how far we have already succeeded in this effort, how greatly we are in want of aid in it, and how, as we think, that aid can best be supplied? The paragraph in question would almost lead a reader unacquainted with the subject to think that the magazine of which it speaks is the only—or at least the chief—effort to provide the blind with literature in the Braille type. On the contrary, although it is unquestionably true, as you say, that "the bulk and cost of such books have greatly militated against their production in large numbers," yet a perusal of the enclosed paper will show that the number of books printed by our Association from stereotyped plates in the year 1890 was over 6000, that the number of *sheets* written by blind writers by hand was considerably above 50,000, and that about 160 ladies are at present giving voluntary aid in writing books; also that the sale of books and music has gradually risen from £311 per annum in 1879 to £1264 in 1890. Further than this, we have, from the noble munificence of Dr. Armitage, a house rent free, and a clerical staff free of cost. Anyone, therefore, who either feels the desire to assist the blind in the way you point out, or wishes to show respect to the memory of a man dear to many of us, and once of singular promise in medicine (a promise which was only frustrated by his loss of useful vision), cannot do better than contribute to the Armitage Memorial, the bulk of which will be devoted to promote this part of the work of the Association. The particulars given above are extracted from the prospectus of the Armitage Memorial, which can be obtained, together with any further information required, at the office of the Association, 33, Cambridge-square, Hyde Park. It remains only too true that the cost of producing these books, whether written or printed, is and must be very considerable, and therefore, as the circular shows, the Association, whose work is constantly extending, is always in need of fresh supporters.

In illustration of the extent of our work, I may mention that we have recently commenced to supply sheets of the Koran in Braille type for the blind in Egypt, many of whom are thus enabled to earn a livelihood as public readers of that volume. We publish two magazines for the blind, and the Association, since its foundation in 1868, has embossed the works of over 1500 different authors in English, and works in Latin, Greek, French, German, Hebrew, Arabic, and Maratti. We are now preparing plates in Urdu for the blind in India.

I cannot ask you to publish the circular, but I hope many of your readers will send for a copy.—I am, Sirs, your obedient servant,

TIMOTHY HOLMES.

Great Cumberland-place, June 24th, 1891.

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THE ADMINISTRATION OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—In your number for June 13th a case of death following the administration of chloroform is published by Dr. Thomas A. Dodd, Newcastle-on-Tyne. The case is a suggestive one, pointing as it does in such very clear terms to the conclusions of the Hyderabad Commission. There is here the early effect of chloroform narcosis on the respiratory centre, "his breathing suddenly stopped," and after recourse to artificial respiration the re-establishment of the respiratory function. The death subsequently, "evidently from cardiac syncope, having never regained consciousness," shows how closely the case was watched. It has always appeared to me that in the controversy raised since the issue of the Hyderabad Commissioners' report, the two sides assumed by the opposing controversialists have to a large extent been due to misunderstanding. For myself, I think the position taken up by the Commissioners is the one that will in the end prove to be correct. One of the main conclusions arrived at by the Commissioners after the postulate, that *deaths following chloroform administration occur from failure of the respiration*, is this, that chloroform causes great fall in the blood pressure. Is not this sufficient to account for the pallor and the loss of pulse at the wrist, quite enough to suggest cardiac syncope until some other cause could be assigned for these phenomena? It appears to me that this conclusion will be irresistible, and one cannot but hope that it will be reached without mixing personal matters in what is, after all, a purely scientific inquiry. In the case under consideration one hour and a quarter elapsed before death took place; the patient breathed again regularly, but did not regain consciousness. This result seems to be accounted for only on the hypothesis of lowered blood pressure reacting on what were doubtless already weakened vital powers, the central nervous system being starved for want of blood. The only other question to discuss here seems the treatment. If the blood pressure is lowered by the chloroform, is alcohol indicated? Would not the subcutaneous injection of digitaline be more rational? I have not experienced the loss of a patient under chloroform. Four cases of threatened complications have occurred to me; in each case failure of the respiration has been the first indication of danger; all revived and got over the crisis. I enclose my card, and am, Sirs, yours truly,

June 16th, 1891. INQUIRER.

To the Editors of THE LANCET.

SIRS,—A case is reported in your issue of June 13th of a recent death from chloroform at Newcastle-on-Tyne, from which I think a useful practical lesson may be learnt. As you say, the operation was one of necessity, and both it and the administration of the anæsthetic appear to have been carried out carefully and skilfully; but I think, in all fairness, a criticism may justly be made, and that is, with regard to the anæsthetic employed. I think, in spite of the conclusions arrived at by the Hyderabad Chloroform Commission, that there must be many who believe as I do, after two years almost daily administration of anæsthetics, that chloroform does exercise a depressant effect upon the heart centre in the medulla oblongata, as it also undoubtedly depresses the respiratory centre; in fact, it seems hardly possible that a powerful agent of the nature of chloroform can affect the respiratory centre so powerfully without also affecting in some degree and in like manner the cardiac centre, which lies so close to it. Had ether been the anæsthetic employed in the case under consideration, one cannot help thinking the unhappy calamity would probably have been avoided. Ether, we know, stimulates the heart's action, and I believe it also stimulates the respiratory system. Now, when there is so large a quantity of pus in the pleura as a quart, compressing the lung and most seriously interfering with the circulation of blood through the lung and embarrassing the heart's action, must it not be in the highest degree dangerous, and rather unfair to our patient, to administer an anæsthetic which may even possibly depress the heart still more when we have at hand an anæsthetic like ether, which we know stimulates the circulation. Another point in the case which is most interesting is that when the patient's breathing had stopped artificial respiration was done, and all seemed well until the chest was opened and a quart of pus evacuated, when the pulse was noticed to be failing. The reason of this I take to be that as it was a tolerably recent empyema, and the lung was probably not much bound down, on the withdrawal of the fluid there was a sudden expansion and rush of blood to the lung. This sudden detraction of blood from the heart and brain caused the failure of the heart's action, from which, in the opinion of the medical attendants, the patient died. The case shows clearly that there was first failure of respiration, which was recovered from, and then failure of the heart, from which death took place. The lesson to be learnt is that ether should be the anæsthetic always employed when operations are performed for the removal of large quantities of fluid from the pleura, unless there is any special circumstance in the case which contraindicates its use, and that we can by no means disregard the heart, or never bother our heads about the pulse when giving chloroform, as a recent correspondent in THE LANCET suggests we may do.—I am, Sirs, yours faithfully,

June 15th, 1891. HOUSE SURGEON.

ALCOHOL AND LONGEVITY.

To the Editors of THE LANCET.

SIRS,—The annual report of the United Kingdom Temperance and General Provident Institution, in which the expected and actual claims for the year 1890 are given, affords another opportunity of testing the comparative longevity and vitality of total abstainers and drinkers of alcoholic liquors. The weight and conclusiveness of this test increase with every year. The twenty-fifth return is as follows:

	Expected claims.	Actual claims.
Temperance section	314	225
General section	382	389

This shows 71·6 per cent. in the temperance section and 100·2 per cent. in the general, a difference of 28·6 per cent. in favour of the abstainers. This is a little higher than the averages of the whole twenty-five years, which are 69·9 and 96·6 per cent. respectively, a difference of 26·7 per cent. The advantage of total abstinence is shown by the following five quinquennial returns:

—	Temperance Section.		General Section.	
	Expected claims.	Actual claims.	Expected claims.	Actual claims.
1866-70	549	374	1008	944
1871-75	723	511	1267	1330
1876-80	933	651	1485	1480
1881-85	1179	835	1670	1530
1886-90	1472	1015	1846	1750
Total	4856	3386	7276	7034

This table shows that while in the general section the deaths have fallen short of the expected number by 242, in the temperance section the deaths are 1470 fewer. The fact that in the general section the deaths are below the healthy male average proves conclusively that the difference between the two sections is not due to excessive drinking on the part of any considerable number of the general section. The comparison, therefore, is fairly between abstainers and moderate drinkers—rather more moderate than the average middle-class picked lives,—and shows conclusively that the use of alcoholic liquors produces degeneration of the tissues and shortens life.—I am, Sirs, yours truly,

J. J. RIDGE, M.D. Lond.,
Hon. Sec. British Medical Temperance Association.

Enfield, June 8th, 1891.

THE GENERAL MEDICAL COUNCIL AND INCREASED REPRESENTATION.

To the Editors of THE LANCET.

SIRS,—It is to be hoped that this suggestion of Dr. Rentoul with regard to increasing the number of the members of the General Medical Council will not be carried out by the Privy Council. It is difficult enough now for the work to be accomplished in each session owing to the number of "voices" which require to be heard on each subject which arises for discussion. Instead of adding to their number, it would be almost worth considering by the Privy Council whether grouping of smaller corporate bodies, such as the Apothecaries' Companies in England and Ireland, and the various faculties of physicians and urgeons, and

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giving each group a representative, would not be greatly to the advantage of the profession generally, and the Council in particular. Whilst the present system obtains it would be adding to the difficulties already met with by increasing the number of even the direct representatives. Large committees are notoriously unmanageable, and great loss of time results from the fact that each member of the Council has to "do something" for the "constituency" he represents. I should imagine that the funds of the Council would also seriously suffer by such an addition to the current payment of new members. The present direct representatives have done their duty most excellently, and the interests of the profession at large can safely be left in their hands; remembering as we ought that although the other members of the Council are not *directly* elected by the profession, yet it would be almost, if not entirely, impossible for us to find better representatives were the election in our own hands. If any alteration is required in the Council it is a lessening in its numbers, not an addition, and this lessening can best be gained by the grouping I have suggested above. I venture to hope that medical men will think, not twice, but many times, before signing the petition to the Privy Council. I remain, yours faithfully,

A. GEORGE BATEMAN.

Constitutional Club, S.W., June 20th, 1891.

EUCALYPTUS OIL IN THE TREATMENT OF SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—As being the first person to bring before the notice of the profession the method of treatment of scarlet fever by inunction of eucalyptus oil in combination with other essential oils and camphors, allow me to point out to Dr. Knox Bond that his treatment of scarlet fever by eucalyptus oil was not after the method recommended by me in a paper to be found in the Transactions of the Epidemiological Society, and which has been republished by Lewis in a separate form. I am not astonished that his trial failed, and could have told him that it would if he had communicated with me. I and my son and many medical men have during the last two years treated all scarlet fever cases by inunction of Tucker's Eucalyptus Disinfectant with uniform success, shortening the duration of the fever, enabling the patients to mix with the rest of the family after ten days, requiring no isolation, and preventing all serious sequelæ. He will see in my paper that I condemn all greasy preparations for inunction, but the essential oils and camphors composing the disinfectant are all highly volatile, and are in no way greasy. I should like also to inform him that most of the eucalyptus oil of commerce does not possess the antiseptic qualities that are absolutely necessary for its successful use in infectious diseases. I have for some years tested experimentally the different eucalyptus oils, as well as other essential oils, and hope one day to make known the results of my inquiries, for there are some of these oils that are more powerful antiseptics and germicides than the oil of eucalyptus globulus.

I am, Sirs, yours obediently,

June 11th, 1891. J. BRENDON CURGENVEN.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Census Returns of Liverpool.

THE census returns of this city showing a considerable falling off in the population since 1881 has surprised many persons, being the very reverse of what they had expected, and yet on reflection there were several reasons why this reduction should not surprise us. Whole streets of houses have been demolished and their sites remain howling wildernesses, no other houses having been built to replace them. This is a defect which it is to be hoped the authorities will soon rectify. Much has been done for the working man; but in Liverpool, as elsewhere, he wants, and must always want, a home near his work, where, for the same rent which he formerly paid for a wretched insanitary dwelling, he can have a real home with every means for himself and his family to live in decency.

Liverpool and the Cheshire Side.

There is another fact which may account for the alleged reduction in the population of Liverpool. The Mersey Tunnel Railway has been extremely popular, and has brought Liverpool and New Brighton within twenty minutes' journey by any ordinary train, some doing the journey in a quarter of an hour. In other words, persons can leave the overcrowded city and be in a charming seaside resort, with a totally different climate, in half an hour. There are also Hoylake, West Kirkby, Egremont, Seacombe, Rock Ferry, and Bebington, all on the Cheshire side, with residences to suit all classes. It would be quite contrary to reason were advantage not taken of these opportunities of sleeping out of the crowded city, and the probabilities are that Liverpool will grow westward on the Cheshire side, the growth north, south, and east having almost reached its extreme limit.

The Weather and the Influenza.

Although the weather is now intensely hot, cases of the so-called influenza still occur and assume a very severe type. Members of the profession have suffered more or less severely, while some have escaped.

The Magistrates and the Temperance Advocates.

The meeting of the city magistrates to-day was attended by a deputation of citizens, who came in such large numbers as to fill all the vacant space of the somewhat large room. The deputation comprised clergy, doctors, and laymen, who urged upon the magistrates the importance of reducing the number of public-houses. Dr. Carter described the shocking sights seen in Liverpool hospitals on a Saturday night, and all agreed in urging the magistrates to encourage temperance and to discourage intemperance. Unfortunately, Liverpool is suffering to-day from the actions of magistrates of a bygone age, who, fearing to encourage a monopoly in drink, granted licences to every applicant, the result being a jump from the frying-pan of monopoly into the fire of a legion of public-houses. The question is a very difficult one; but in the face of recent legal decisions there seems no reason why new applicants should not be refused if more public-houses are not required.

Liverpool, June 24th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Gynæcological Congress at Newcastle.

THE Gynæcological Congress at Newcastle last week was very successful. As a meeting the attendance was good, and the interest of the papers and discussions was well sustained. At the banquet at the Assembly Rooms the honorary president, Dr. R. Barnes, presided. Dr. Oliver, in speaking to the toast of "The British Gynæcological Society," said that the success of the Society's gathering on that occasion was to be attributed to the activity of Dr. Benington, the local secretary, and to Dr. Murphy, of Sunderland. The President, Dr. Grigg, thanked the profession in the north for the reception accorded them, and alluded to the splendid accommodation afforded by the Durham College of Medicine, which, as a building, far exceeded most of the London schools. On Saturday the gynæcologists broke away into the country, making an excursion to the Roman Camp and other objects of interest on the North Tyne, and finally made "a raid" (by arrangement) on Swinburn Castle, where they were received by Dr. Wm. Murray with his usual hospitality.

Consett Public Park.

It is arranged that the handsome public park granted to and laid out for the district by the Consett Iron Company will be ready for opening by July 11th, and a demonstration will take place by the friendly societies, trades unions, and other public bodies of the district.

Durham.

Mr. J. J. Robinson, a *littérateur* and formerly editor of the *Durham Chronicle*, has been appointed editor and manager of the *West Sussex Gazette*. Mr. Robinson was highly respected in Durham, and was best known in the north to the profession as the organiser of the Friendly Societies' Convalescent Home; while the beneficent scheme itself, now an accomplished fact, was originated by Dr. William

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Robinson of Stanhope, county Durham, a distinguished graduate of the University of Durham.

Death of Dr. Lewis George Broadbent of Bamburgh.

I regret to note the death of Dr. L. G. Broadbent of Bamburgh, which took place at his residence on Monday last, after an illness of only a week. Dr. Broadbent, who was highly esteemed in the district, was in his sixty-seventh year. He was medical officer to the Castle Dispensary, under Lord Crewe's charity, and medical officer of health for the Belford Union. A movement was on foot to present Dr. Broadbent with a testimonial, and towards that object a sum of about £150 had been subscribed by friends in Bamburgh and neighbourhood. It had been intended by the donors to make the presentation on July 1st next, which would have been his sixty-eighth birthday.

Sudden Death of a Newcastle Student.

An inquest was held here on Monday last upon the body of a medical student who was found dead in his bed at his lodgings on the previous morning. It was stated that the deceased, named Reynard Moore, was a native of South America. He was a noted amateur runner, and had lately suffered from an attack of rheumatic fever, his heart being thereby affected. The jury found that the cause of death was heart disease.

The Influenza Epidemic.

The epidemic of influenza has now subsided in the north-eastern counties, but it is reported to be still rife in the north-west. Lancaster and district have felt it severely, and up the Lune valley as far as Middleton-in-Furness it is also prevalent

The Population of Northumberland and Durham.

The increase in the population of Northumberland and Durham—viz., 72,000 and 150,000 respectively in the last decade—has been fully expected, but the increase of Newcastle-on-Tyne from 145,000 to 186,000, being at the rate of 28·2 per cent., was scarcely to be looked for. Durham city, like many other cathedral cities, has been almost stationary—at least the increase noted is only 350. Berwick, on the other hand, has decreased 2400. Barnard Castle has increased 1200. It has been pointed out as a general rule that wherever there are coal mines or ironworks the population has increased; where these do not exist it has practically remained stationary, or has declined.

Newcastle-on-Tyne, June 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medico-Chirurgical Society.

A SPECIAL MEETING of this Society was held last week for the exhibition of patients and pathological specimens. The patients included some very interesting nervous cases shown by Dr. John Thomson and Dr. A. Bruce, two cases of very successful result in excision of the wrist, performed according to Dr. P. H. Watson's method by Mr. A. G. Miller, the feature of the operation being that it is performed by one incision along the ulnar aspect of the wrist. Dr. James showed a man with displacement of the heart to the right side, and Mr. Caird exhibited a young man in whom the thyroid had been removed successfully by him, and was followed by a diminution in the symptoms of exophthalmos, which had been markedly present before the operation. Dr. W. Russell showed a series of casts illustrating diseases of the lung and liver.

Death of Dr. Donald of Paisley.

Paisley and the west of Scotland have lost a well-known and highly esteemed practitioner in the death of Dr. Donald at the age of fifty-nine. He had been in practice in Paisley for thirty years, and had been medical officer of health for six years. In the latter office he devoted himself with much spirit—often to his loss privately—to the carrying out of many sanitary reforms. His last scheme was to have the infirmary for general cases separated entirely from that for infectious diseases, insisting on the building of a new infirmary for the former, leaving the latter to be treated in the present buildings. The scheme is on a fair way towards realisation. Dr. Donald's funeral took place on Tuesday. It was a public funeral, attended by the magistrates and council and by large numbers of the general public. Traffic was suspended, and all shops closed along the line of route. As Dr. Donald had been an ardent volunteer for many years, the coffin was carried on a gun-carriage, and a large firing party of the Argyll and Sutherland Highlanders was in attendance, with their band and pipers. The ceremony was the most touching and impressive that has been witnessed in Paisley for many years, and gave striking evidence of the loss the community is sensible of having sustained

Loch Katrine Water and Lead.

Some uneasiness has been caused lately by the revival of an old and delicate subject, one which was hotly contested when it was proposed to bring Loch Katrine water to Glasgow, and which even delayed the passing of the Bill for a year in the Houses of Parliament—namely, the action of our domestic water-supply on lead. Distinguished chemists have taken opposite sides, and have shown most clearly that lead may be found in Glasgow water every day it is tested for. The usual arguments about the formation of a protective coating, the action on bright lead and on dull lead, and so on, have been laid anew before the public, much to its bewilderment. The only fact which has not been driven home as it ought to have been is that, whether the water contain lead or not, lead-poisoning is absolutely unknown in Glasgow, except in the cases of those who have been exposed in some special way, such as painters, plumbers, and other lead workers. The public may therefore drink its Loch Katrine water with undiminished confidence.

Public Health: Influenza.

Dr. Russell reports that the death-rate in Glasgow was 25 per 1000 last week. Influenza is still present; five deaths have been ascribed to it, one a child of five years, the others aged from fifty-three to seventy-three. Of the aged persons, two were inmates of the Old Men's, and one of the Old Women's Homes. This was the first indication of anything like a local incidence in the city. There were five cases of the disease in these institutions.

Small-pox in Glasgow.

The outbreak of this disease announced a fortnight ago has been happily stamped out, the prompt and energetic measures taken by our sanitary authorities having proved signally successful. The first cases beyond those originally found have been discovered, and the city has been saved the calamity of a small-pox epidemic. Vaccination and revaccination were the weapons employed. The whole staff of attendants in the Sailors' Home (where the outbreak occurred) were revaccinated; all the boarders were examined, and as many revaccinated as seemed to require it; the families of two servants who boarded at home were also revaccinated. Altogether fifty-eight persons were so treated in connexion with the outbreak, which seems to have originated in some mild and unobserved case among the seamen boarders.

The Mull Fever Scare.

This case, which was mentioned in THE LANCET a fortnight ago, seems to be having the effect of keeping visitors away from the island of Mull this season. Dr. Maxwell of Tobermory writes to the daily papers that the nearest cases of typhus fever were about twelve miles from Salen and twenty-two from Tobermory, and that these occurred more than three months ago. There is no typhus fever in Mull at present. Tobermory "is well drained, has an abundant supply of pure water, and scenery and climate equal to the finest in Europe."

New Park and Hospital for Glasgow.

The Town Council have acquired ground on the estate of Ruchill on the north-west outskirts of Glasgow for the purpose of providing a park for this crowded portion of the city. The ground measures about ninety acres, and is situated in a beautiful and elevated position commanding a magnificent view. During the deliberations of the Council on the matter it became evident that the eastern slopes of Ruchill were particularly suitable for what has long been felt to be much wanted—a hospital for infectious diseases similar to the admirable institution at Belvidere, which has now become as large as is consistent with proper administration and efficiency. About thirty-eight acres will be set apart for this purpose. The determination to erect a new hospital is a wise one, in view of the immense working-class population in the north-west of the city, and in view, also, of the approaching extension of the city boundaries. Further, for many years complaints have been numerous about the great distance to which infectious cases have to be con-

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veyed for treatment, Belvidere being situated quite on the extreme east of the city. The Council is to be congratulated that at last this question of hospital accommodation for the northern and north-western quarter of the city is about to be solved.

The Chair of Medicine in Aberdeen University.

For the chair of Practice of Medicine in the University of Aberdeen, now vacant by the lamented death of Dr. Smith Shand, there are three local candidates—viz., Dr. Angus Fraser, now senior physician to the Aberdeen Royal Infirmary; Dr. Alexander MacGregor, junior physician to the Aberdeen Hospital for Sick Children; and Dr. P. B. Smith, physician to the Aberdeen Royal Infirmary. It is also said that Dr. James Rodger, assistant physician to the Aberdeen Royal Infirmary, is a candidate. Besides these local gentlemen a long list of "outsiders" appeared in one of the papers yesterday as probable candidates. Among those mentioned were Dr. Middleton, Glasgow; Dr. A. Bruce, Edinburgh; and Dr. Bruce, Dingwall.

The Medical Officership of Aberdeenshire.

The following three gentlemen form the leet chosen from the large number of candidates for the post of medical officer for the county:—Dr. James Watt, Edinburgh; Dr. Wilson, Old Deer; and Dr. Milne, Accrington. The appointment is to be made early next month.

Health of Aberdeen.

The following is the return of cases of zymotic diseases notified during last week:—Scarlet fever, 4; diphtheria, 4; typhoid fever, 1; whooping-cough, 13; erysipelas, 1; total, 24, an increase of 1 over those of the previous week.

June 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Dublin: Conferring of Honorary Degrees.

THE Senate will, on Thursday next, the 25th inst., confer a number of degrees *honoris causâ*. Among others, H.S.H. Prince Edward of Saxe-Weimar, Lord Ardilaun, and Lord Iveagh will receive the degree of LL.D., while the new degree of Doctor of Science will be conferred upon Dr. J. Emerson Reynolds, professor of chemistry; Dr. J. Malet Purser, professor of the Institutes of Medicine; and Dr. Cunningham, professor of anatomy; all three holding office in the medical school of the University of Dublin. The authorities of the university had a meeting on Monday, which had been adjourned from a previous date, in reference to the election of a Regius Professor of Surgery, in the room of Mr. Colles resigned. This second attempt also proved a failure, none of the candidates receiving a sufficient number of votes, and it is stated that the matter will be referred to the Chancellor for his decision. It may be noted that of the six candidates no less than five are ex-presidents of the Royal College of Surgeons.

Poisoning by Strychnine.

A gentleman named Rogerson committed suicide last week in the county Dublin by swallowing a quantity of strychnine. He took no less than two drachms, and died within fifteen minutes. This substance usually acts very rapidly, the shortest fatal period known having been ten minutes, and the longest six hours.

The Sanitary Condition of the Law Courts.

One of the jurors in the Nisi Prius Court last week, while a case was being tried, observed that the place where he was sitting was almost unbearable owing to an escape of gas; but one of the officers of the court explained that there was no gas in the building, and that the smell complained of was due to some other cause. Mr. Justice O'Brien, who presided, said that the condition of the law courts appeared to have baffled the best experts. The unpleasant odours, which from time to time were attributed by some to the escape of gas, others considered were due to defective sewerage, and latterly it was thought that they were caused by the back flow of the river Liffey when there was a full tide. It is a remarkable fact that although the effluvium from the river Liffey—into which the drainage of the city runs—is most disagreeable, especially during the summer months, yet statistics go to show that the mortality among those resident along the quays is less than in other parts of the city.

Death of Brigade-Surgeon Davidge.

Brigade-Surgeon (retired) George Davidge died on Tuesday morning at his residence, Grosvenor-square, Dublin, after a short illness, aged fifty-two years. The deceased, who obtained his medical education in Dublin, joined the Army Medical Department at an early age, and saw a good deal of foreign service, principally in India. Kind, courteous, hospitable, and strictly honourable in every transaction, he leaves a widow and four children to mourn his untimely decease. His eldest son is a student in the Schools of Surgery, Royal College of Surgeons.

Another Open Space for Dublin.

The Lord Mayor of Dublin formally opened last week a new recreation ground, known as the City Basin, on the north side of the city. The ground is walled in, and contains some three acres, in the centre being the "basin," a kind of lake surrounded by a promenade and grounds planted with shrubs. About £600 has been expended on this additional recreation ground for the use of the citizens.

June 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Ocular Bacteriology.

THE science of bacteriology grows apace. At our present rate of progress not only must the whole teaching of pathology, as well as our views on the etiology of all disease, undergo revision, but even our tenets on the phenomena of tissue change, such as are in themselves commonly associated with advancing life, and usually accepted as unattended by any appreciable disease in the ordinary acceptation of the term, threaten to be subverted by the bacteriologist. Moreover, phenomena hitherto plausibly explained by some physical or abnormal peculiarity, and never suspected of bordering the pale of microbic influence, are about to be claimed by the bacteriologist as within his ken. These comments were prompted by reading a communication recently made to the Academy of Sciences by MM. Galippe and Moreau, on what may be abbreviated into "Some Points in Ocular Bacteriology." According to these observers, the old explanation of the books of muscæ volitantes will no longer hold good. Instead of owning a physical or neurotic cause, MM. Galippe and Moreau express their belief—and are almost prepared to show—that in the production of the phenomena of muscæ volitantes the microbe is here as elsewhere paramount. Again, starting with the theory—a theory largely supported by some antecedent experiments—that the calcification of pathological tissues is due to a microbe, the authors of the communication prosecuted their inquiries with a view of determining whether, in a crystalline lens affected with cataract, and about to undergo a calcareous change, the presence of a micro-organism could be detected. In nearly the whole of the cases which they submitted to this research a microbe was present. And not only so, but the calcareous concretions of lost eyes displayed the constant presence of a micro-organism as well. In short, MM. Galippe and Moreau, without attributing an exclusive *rôle* to these parasites in the opaque change in the lens, are of the conviction that they must be reckoned with as a powerful factor in its production. As a result, they urge that in cataract, sympathetic ophthalmia, and other ocular affections in which the microbian theory has been established, antiseptic treatment and precautions, both extra- and intra-ocular, should be rigidly practised.

Chloride of Ammonium in Influenza.

At the last meeting of the Academy of Medicine, M. Marrotte advocated the use of chloride of ammonium in the treatment of epidemic influenza, in preference to sulphate of quinine as urged by M. Gellié of Bordeaux in his recent paper read before the Academy. M. Marrotte speaks very highly of the results obtained by chloride of ammonium, the advantages of which over quinine he claims to be that it is much cheaper, more rapid in its action, and brings about a more complete and definite cure. It is more especially in those forms of the disease which are complicated by pulmonary congestion or inflammation that chloride of

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ammonium will be found serviceable. From fifty to eighty grains may be given in twenty-four hours in the form of eight-grain powders, which may be conveniently concealed in a wafer. As the treatment of influenza is unfortunately, like many other therapeutic problems, a very open question, perhaps some of your readers on your own side of the Channel, whose opportunities just now are only too unlimited, might put the drug to the test and record their experiences.

A Plea for the Muzzle.

Nine persons were bitten by a single mad dog a few days back at Méry-sur-Oise, and have since been admitted to the Pasteur Institute. The owner of the dog, who ran after the animal through the streets, is amongst the number of the patients, as well as three members of his family. A little boy was bitten on his head, the remaining victims principally on their arms and legs. So far they are all progressing satisfactorily and have already been inoculated several times. There is every reason to hope no fatal result will occur. Here is matter for the opponents of muzzling to ponder over. In a conversation which I recently had with M. Pasteur, he remarked on the diminution in the number of cases which came from the United Kingdom within the last year as compared with the year before, a diminution which he attributed largely to the salutary effect of the muzzling order, and he cited the example of Berlin, where the order is still rigorously in force, and in which city hardly a single case of rabies has been recorded for some time past.

Pharmacists and First Aid.

When an accident occurs in a public thoroughfare and someone is seriously injured, the custom which obtains in this city, as elsewhere, of taking the injured person to the nearest pharmacy for a first dressing seems a very natural one. A medical man may not be within immediate call, and it is quite conceivable that serious results to the patient may ensue from delay in the application of intelligent first aid; therefore the pharmacist should know how to apply this. But as a rule he does not, for the simple reason that he has never been taught. His education as a "pharmacien" ignores first aid. This is hardly as it should be, and I submit the suggestion to your English St. John Ambulance Society. The Ambulance Society of Bordeaux has recognised the defect, and has organised a series of lectures to the local pharmaciens on first aid, which are being numerously attended.

Paris, June 23rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Scanzoni.

SCANZONI VON LICHTENFELS, one of the founders of modern gynæcology, died a few days ago at his country seat, Schloss Zinnenberg, in Upper Bavaria. He was born in Prague in 1821, graduated there in 1844, worked for five years as physician in the women's wards of the General Hospital there, during which time he wrote his "Lehrbuch der Geburtshilfe" (Compendium of Obstetrics), was appointed Kiwisch's successor as professor of obstetrics in the University of Würzburg in 1850, and taught there till 1887. Besides the Lehrbuch and the seven volumes of "Beiträge" (Contributions), which form a rich treasury of gynæcological knowledge, he wrote "Krankheiten der weiblichen Sexual-organe" (Diseases of the Female Sexual Organs), edited Kiwisch's posthumous works, and continued his "Klinische Vorträge" (Clinical Lectures). In the sixth decade of this century Scanzoni's clinic in the Julius Hospital at Würzburg was one of the chief centres of gynæcological instruction in Germany, and students flocked to it from all parts of the world.

Koch's Institute for Infectious Diseases.

One of the most interesting feantures of Koch's new Institute for Infectious Diseases in Berlin is the building for disinfection and necropsies. In it the rooms for infected articles are so effectively separated from those for clean linen &c. that even the attendant cannot go from the former to the latter except through a bath-room, in which he must take a bath and change his clothes. Another of the precautions is the careful sterilisation of fragments of the patients' meals. The scientific department of the institute is in an old building not far from the hospital. It contains working rooms, laboratories, rooms for animals, incubating rooms arranged partly after the model of Pasteur's in Paris, a department for micro-photography, a library, store-rooms, several dwellings for the officials, &c.

Dr. Richard Pfeiffer.

Dr. Richard Pfeiffer, who is to be at the head of the laboratory in Koch's new institute, became widely known in medical circles only about three years ago, when he joined Karl Fraenkel, now professor in Königsberg, in editing "A Micro-photographic Atlas of Bacteriology," which has gained a wide circulation. Pfeiffer has also published important investigations concerning the cholera bacillus, undertaken with a view to testing the assertion of Gamaleia, that the vibrio Metschnikoff can be transformed into Koch's cholera bacillus. The establishment of the fact that pigeons enjoy immunity from cholera is also partly due to Pfeiffer. For some time past he has been Koch's first assistant in the Hygiene Institute, and he established himself as a private lecturer in the university some weeks ago.

Professor Virchow.

A portrait medal of Rudolf Virchow is to be struck by Anton Scharff of Vienna in honour of the great pathologist's seventieth birthday on Oct. 13th next. An admirable portrait of Virchow by Hans Fechner, jun., is now to be seen in the International Art Exhibition here.

The German Congress of Physicians and Surgeons.

The nineteenth German Congress of Physicians and Surgeons was opened yesterday at Weimar by Dr. Graf, Privy Councillor in Sanitary Affairs, of Elberfeld. Dr. von Conta, Privy Councillor in Medical Affairs, greeted the assembly in the name of the Grand-ducal Government, and Burgomaster Pabat in the name of the town. Ninety-five delegates, representing 148 societies, were present.

A Model Brewery.

The Experimental Brewery here, which serves also as a school for brewers, was visited the other day by the Free Association of Hygienists. Privy Councillors Pistor and Tobold, Drs. Weyl, von Esmarch, and Pfuhl of the Hygienic Institute, and Professor Ritschel, Dr. Hartmann, and the engineer Herzberg, of the Technical Academy, were of the party. The arrangements for keeping the beer free from noxious bacteria were inspected with special interest.

Berlin, June 23rd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

University of Toronto Notes.

A SPECIAL CONVOCATION was held on May 6th, when forty-eight were admitted to the M.B. degree, one to that of M.D., and nineteen received the D.D.S. The Medical Alumni Association held their annual meeting the same day, transacted general business, and elected officers. The dinner was held in the evening, and proved a most successful affair.—The plans for the library have been approved by the Senate and the site chosen. The main entrance will be from the drive on the east side of the lawn; the style will be Norman, in keeping with the College buildings. Accommodation will be provided for 120,000 volumes, in a stack room 38 by 59 ft., with the books arranged in three storeys. This portion of the building will be made absolutely fireproof, and cut off from the other portion by double fireproof doors. The reading-room will accommodate 200 readers. The approximate cost is 65,000 dols., the greater portion of which has been already subscribed.—Sir Daniel Wilson will visit Europe during the summer, leaving the latter part of June.

General Hospital, Montreal.

Additional buildings are to be erected at a cost of more than £20,000. A new amphitheatre containing receiving and examining and waiting rooms for out-patients, and a new operating theatre, with two pavilions each of two storeys, and giving space for 112 beds, are the chief improvements. The new wards will be for surgical cases only.

Ambulance Instruction to Police.

The first class of our city police to receive instruction as prescribed by the St. John Ambulance Association was recently formed, and the examination held a week ago. Of

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twenty-eight competitors seven received first-class certificates. We trust that the classes will be continued until most if not all of the force of 300 men have received instruction in "first aid."

Provincial Board of Health for Ontario.

Dr. Covernton presented a report on the abattoirs of Berlin, an inspection of which he made last year. Drs. Cassidy, Covernton, and Bryce were appointed delegates to the seventh Congress of Hygiene and Demography, to be held in London, England.—The report of the Board's Committee on Epidemics has been issued. It alludes, among other things, to the management of municipal hospitals for consumptives and of sanitaria. It states that there can be no logical reason why municipal and State Government aid should not be given to hospitals specially appointed for treating consumption.

Obituary.

SIR PRESCOTT HEWETT, BART., F.R.S.

SIR PRESCOTT HEWETT, one of the Queen's Sergeant-Surgeons, and one of the acknowledged chiefs of British surgery, has passed away, after a lingering illness, in his seventy-ninth year. He had for the last eight or nine years practically retired from active practice, and his friends had for some time been aware that his life was only a question of days or weeks. Still our readers will not the less mourn for the extinction of a light which has so long shone among us, and the death of a man whose services were equally valued in the palace and the cottage.

Sir Prescott Hewett was a pupil and intimate friend of Brodie, and carried on at St. George's Hospital the great traditions of the school of Hunter, Home, Brodie, and Cæsar Hawkins. And he was worthy of such illustrious predecessors, for he was a devout student and an ardent practitioner of the art of surgery; he was fondly attached to the interests of the hospital with which his family was already connected, through the presence on the medical staff of his half-brother, Dr. Cornwallis Hewett; and he was one of the fittest men in the world to instruct students, for he had all the lucidity of exposition which is required to convey the knowledge of subjects teeming with difficulties of detail, his ready pencil could illustrate the most complicated anatomical descriptions, and his stores of experience could furnish cases in point in all discussions. Thus he was an admirable anatomical and surgical teacher. But, far above all this, he was a man of that high character and lofty sense of honour which readily find a response in the bosoms of the young, and give to its possessor an influence over them which no merely technical excellence can ever bestow. The early life of young Hewett was passed for some years in Paris, and there he acquired that perfect familiarity with the French language in which he excelled most living Englishmen. There he also worked in the painters' studios, and, it is said, contemplated the practice of art as a profession. Indeed, though he relinquished (if he ever entertained) the idea of making art his profession, he never abandoned its practice. His vacations were passed in Wales, or at Swanage, or somewhere in the country, in the midst of scenes which it was his delight to spend whole days in painting, and from which he made those delightful and exquisitely elaborate drawings which were the wonder of his friends, and some of these were exhibited last year in the board-room of St. George's Hospital amongst the other productions of a society of members of the hospital school. Of that society he was President. Its members will suffer a grievous blow by his decease; but it would be a good work on their part, and would gratify his numerous friends, if they could obtain the consent of their late president's family to exhibit in the same way (i.e., to his friends and pupils at the hospital) a collection of his excellent drawings. It will be seen from this that Mr. Hewett, when he entered the profession, was no mere drudge of the dissecting-room. He had, however, as much zeal in the prosecution of his medical studies as if he had had no pursuit or taste in life beyond his profession; in fact, probably more, for we believe it is perfectly true that the man of merely one idea, however hard he may drudge, never makes so good a student or attains so high a standard as one who has other pursuits on which to unbend his mind. At any rate, when young Hewett came over to London he soon showed that he was an accomplished anatomist and a skilled pathologist, and the authorities of the school, of whom Brodie was by far the chief, soon saw that he was too good a man to be lost. So when he was offered an appointment in the East India Company's service they intervened and persuaded him to act as demonstrator of anatomy in the school and as curator of the museum. Anyone who will examine the post-mortem records which Sir Prescott Hewett commenced in those early days, and which have been kept on the same pattern ever since, will see how good a choice the school authorities made, for he has provided St. George's Hospital with a series of valuable pathological material which for duration and completeness is probably unmatched, reaching as it does in unbroken continuity from 1844 down to the present day. The museum of St. George's Hospital does not of course contain Hunter's preparations, but it is rich in those of Brodie—many of them put up by Hewett's hands,—and to these he added in after years many more of the greatest surgical interest from his own practice. In due course he became anatomical lecturer, and the practical head of the school. In this latter respect he was unwearied, and the renewed prosperity of the school (which had much declined after the withdrawal of Sir B. Brodie) soon testified to the efficiency of his management. As a lecturer, both on anatomy and afterwards on clinical surgery, he was excellent, an unfailing mastery of his subject being joined to a ready elocution, a power of clear exposition, and a wealth of illustration which enchained the most languid attention and penetrated the dullest apprehension. And afterwards, when he was called on to take on himself the responsible duties of the hospital surgeon, the same high qualities were shown in a still stronger light. Sir Prescott Hewett might not, perhaps, be a highly original theorist, but as a practical surgeon he had few equals. He studied his cases minutely. He did not shrink from any operative procedure, however severe or dangerous, when he had persuaded himself of its necessity, and he never came to a difficult operation without having, as it seemed, rehearsed the whole matter in his mind; so that he was never taken by surprise or flurried, and all went on with that matter-of-course smoothness which veils the most perfect surgical art. And in another way Sir P. Hewett realised the perfect ideal of a surgeon—namely, in the way in which he identified himself with his patient. He thought nothing troublesome, and nothing trivial, by which the success of a case—i.e., the safety and ease of the patient—could be promoted; and many will remember the heartiness with which he would shake hands with a man as he gave him his discharge from the hospital after a long and doubtful struggle for life. This kindly sympathy and unwearied solicitude for their welfare naturally endeared him to those whom he met as private patients, many of whom still survive to bless the memory of him to whom they owe limb or life, such as the great artist whose right hand he saved from amputation after a gun accident, and succeeded in restoring it to bewitch more than one generation with its marvellous work. Yet, though no one was more popular among his patients than he, nor more deservedly so, and though he had several friends in very influential positions, it yet remains a fact that his success in private practice was slow, and that while men far inferior to himself came rapidly to the front, he had to endure a long and bitter struggle with comparative failure, before he could look on his position as being established. Once, however, that his great merits had become as well known as those of contemporaries more skilled than he cared to be in the subtle art of becoming famous without advertisement, he rose rapidly in public estimation, and then in the favour of royalty. The death of Sir W. Fergusson gave an opportunity for his promotion to the rank of sergeant surgeon extraordinary, and, that of his old friend and teacher, Mr. Cæsar Hawkins, to that of sergeant-surgeon. By this time he had gained all the prizes which the profession has to offer, and, as he was not the man to lag on the stage till his juniors should push him off, he began to contemplate retirement. He was of singularly active habits—more able to endure fatigue at the age of seventy than most men of sixty; an enthusiastic lover of the country, and one to whom the beauties of Nature furnished an inexhaustible mine of subjects for his pencil. So that it is

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no wonder that he should have retired from London while his health was yet unbroken and his eye undimmed. In 1882 he accepted a baronetcy, and changed his residence to Horsham. But he was often in London, and was ever ready to assist his old hospital or his old friends with advice and assistance in any worthy undertaking; and few men, we are happy to think, ever had less reason to regret having abandoned their more active occupations. The close of his life was a period of severe trial—first, in consequence of the sad illness of one of the nearest and dearest of his family, and then the most painful affection (probably malignant disease of the stomach) which gradually prostrated his own strength, complicated by an attack of influenza with pulmonary congestion. All this he endured with the uncomplaining fortitude which was part of his nature; but his friends witnessed the agonies which he did his best to conceal, and may well feel that it is better for him that he is not stretched out longer on the rack of this tough world. Few men have ever left the world with a more stainless record of duty honestly done and of success won by no ignoble means.

Sir P. Hewett was not a voluminous writer—in fact, he seemed to have a dislike of seeing himself in print. No persuasion would induce him to publish the profound and admirable lectures on the surgical affections of the head which he delivered at the Royal College of Surgeons; and this is a real loss to surgical literature, for the researches on which they were based were most extensive, and the results were of the highest value for practical surgery. And his other contributions, scattered through the series of the Royal Medical and Chirurgical, Pathological, and Clinical Transactions, the St. George's Hospital Reports, and the medical journals are more remarkable for their value than their number. The article on "Injuries of the Head" in "Holmes's System of Surgery" is perhaps the most complete product of his pen, and gives an admirable view of the subject, as far as its practical conclusions remain unmodified by modern advances in operative surgery. We may regret (and those who knew best Sir P. Hewett's knowledge of surgery will regret the most) this scantiness of his literary productions; but it was part of the man's nature. He hated display, and despised puffing, and so he shrank, perhaps too much, from publishing his experience or opinions. It would have been better for us had it been otherwise; but the world does not seem likely in the present day to suffer much from any morbid dread of advertising, and few will repeat Hewett's error. It is the only error we can point out in one of the noblest and brightest careers in the surgical world of our time.

ROBERT MACK, L.R.C.S.I., L.S.A.

WE regret to record the death of Mr. Robert Mack, which occurred at his residence, 28, St. Paul's-road, Canonbury, on the 8th inst. Born at Lisburn, Antrim, of an old Ulster stock, in 1829, he received his medical education in Dublin. After acting for a time as house surgeon and house physician at the Richmond and Whitworth Hospital, he came to London in 1851. In 1857–58 he held the post of surgeon to the Tower Hamlets Dispensary, and settled as a general practitioner in Canonbury in 1858. Here he acted for many years as surgeon to the Holloway and North Islington Dispensary. He was also a member of the Islington Medical Society and the Æsculapian Society. A man of much intelligence and energy, Mr. Mack enjoyed the reputation of being one of the most successful practitioners in his district. In him the medical profession in Islington has lost a much and justly valued member. There were traits in his character which, above and beside his mere professional knowledge, must command respect and admiration wherever men are found. It is, in fact, the possession of what we call character which made his presence when alive an unmistakable personality, and has rendered his absence in death a conscious loss to all who knew him. The shrewd penetration, the firm will, the scorn of baseness, the love of right and of good, the kindly native humour, and the helpful spirit which never turned away from a friend's need, will ever be associated with the form which many can so well remember; and the record of much and skilful work, which for the most part found no larger audience than the circle of his professional neighbours, will remain with them as a memorial of his insight, his resource, and his manly self-reliance.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman having passed the necessary examination, and having conformed to the by-laws and regulations, was at an extraordinary meeting of the Council on Thursday, the 25th inst., admitted a Member of the College:

Brown, Frederick James, L.S.A., Bradford-street, Bolton.

UNIVERSITY OF OXFORD.—At a recent congregation the following degrees were conferred:—

M.D.—Arthur M. Jackson, Queen's; and Frederick A. Dixey (Fellow), Wadham.

M.B.—Edward T. Withington, Balliol; Alexander B. Roxburgh, Exeter; George Jones, Oriel; Alfred M. Gossage, Magdalen; Charles P. Lovell, St. John's; Lewis E. Parkhurst, Jesus; Edward J. Moore, Christ Church; and Frederick H. Burton-Browne, Magdalen.

UNIVERSITY OF CAMBRIDGE.—At a congregation held last week the following degrees were conferred:—

Doctors of Medicine.—Lawrence Humphry, Trinity; William Arthur Foxwell, St. John's; Charles Eardley Dumbleton, Peterhouse; Walter Knowsley Sibley, Pembroke; George Fuller Ashbridge England, Walter Horace Goddard, Gonville and Caius; and George Hutchinson Milnes, Downing.

Bachelor of Medicine.—Ernest Henry Richmond Watts, St. John's.

Bachelors of Medicine and Bachelors of Surgery.—Andrew Hallidie Smith Hallidie, King's; Stanley Lewis, St. John's; William Robson Carter, Robert Hardwick Hall, Cecil Latter, Pembroke; Hugh Kerr Anderson, Charles Simmons Bennetts, Gordon Calthrop, Herbert Thomas Crosby, James Lea, Herbert William Nix, John Charles Ryder Richardson, Edward Ernest North Surridge, Joseph Henry Wilks, Gonville and Caius; Alexander Miller, Queen's; Stamford Grant Felce, Jesus; George Wilkinson, Emmanuel; William Lawrence Woodward Buss, Sidney Sussex; William Henry Beaumont, Charles Stuart Pethick, Albert Francis Richards, Downing; Robert Stephen Earl, John Fisher, Karl Cardwardine Gimson, Charles Gordon Roberts, and Horace Savory, Cavendish Hostel.

THE INTER-HOSPITAL CUP TIE.—At Richmond Cricket Ground on Monday last the semi-final of the inter-hospital cup tie was played by the representatives of the Charing-cross Hospital and those of King's College. From the results of the game it is obvious that King's men were most unequally matched with their competitors from Charing-cross. Some heavy scoring took place on the part of the Charing-cross men—Wright making 85, Escombe 54, Agnew 45, Russel 32, and Thomas 16, the result of the whole innings amounting to 276 runs. On the side of King's College the highest scorers were—Robardt 23, and Adams 16. None of the other players reached double figures, and the innings terminated with a score of 92 runs. This result bodes well for Charing-cross Hospital players in the final cup tie, which has yet to be played against Guy's Hospital.

UNITED HOSPITALS ATHLETIC SPORTS.—The twenty-fifth annual meeting of the United Hospitals Athletic Club took place on the Stamford-bridge course on Tuesday, June 23rd. Despite the threatening weather and a very small attendance, the sports proved a great success. The performances were in most cases distinctly above the average, the hospital record being broken in no less than three events—namely, the Long Jump, the Mile, and the Three Miles. The Challenge Shield was, for the seventh time, won by St. Bartholomew's, with seven first prizes and two second, B. C. Green being the principal contributor. Mrs. W. Anderson distributed the prizes from the pavilion, and the meeting closed with the usual cheers. The following are the events and the winners:—Half-mile Challenge Cup: A. Hay, St. Bartholomew's (time, 2 min. 4½ sec.). Hundred Yards, final heat: B. C. Green, St. Bartholomew's (time, 10¾ sec.). Putting the Shot: J. Rolfe, London (distance, 32 ft. 10 in.). 120 Yards Hurdle Race, final heat: B. C. Green, St. Bartholomew's (time, 16¼ sec.). Long Jump (hospital record, 21 ft. 2½ in.): B. C. Green, St. Bartholomew's (distance, 21 ft. 10 in.). 220 Yards, final heat: B. C. Green, St. Bartholomew's (time, 23 sec.). Throwing the Hammer: J. S. Mackintosh, St. Bartholomew's (distance, 89 ft. 11 in.). One Mile Challenge Cup (hospital record 4 min. 36½ sec.): H. A. Munro, Guy's (time, 4 min. 34½ sec.). High Jump: S. Langton, St. Mary's (5 ft. 5½ in.). 440 Yards Challenge Cup: W. G. Richards, St. Bartholomew's (time, 51¾ sec.). Three Miles Challenge Cup (hospital record 15 min. 52 sec.): H. A. Munro, Guy's (time, 15 min. 47½ sec.). 220 Yards Open Handicap, final heat: W. Basan, L.A.C. (2 yards).

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SUPERANNUATION GRANT.—Mr. Thomas Damant, L.R.C.S. Edin., lately medical officer for the third district of the Aylsham Union, has been granted a superannuation allowance of £20 per annum.

BENEFACTION TO MANX CHARITIES.—Mr. Henry Bloom Noble, of Douglas, Isle of Man, who a few years ago presented the town of Douglas with a hospital, at the cost of £10,000, has, through the Dean of Norwich, presented another sum of £10,000 to the island—£5000 of which is to be appropriated to the formation of a Convalescent Hospital.

IN MEMORIAM.—A handsome memorial window to the late Drs. Matthew and Alfred Jackson (father and son) has been erected in the south aisle of the parish church of Market Weighton by members of the family and several friends. The deceased had practised in Market Weighton and the neighbourhood for upwards of fifty years.

BEQUESTS.—Mrs. Jackson Browne bequeathed £50 to the Adelaide Hospital, Dublin.—The Rev. P. Segrave bequeathed £300 to Jervis-street Hospital, Dublin, and £200 to each of the following Dublin charities: Female Blind Asylum, the Deaf and Dumb Institution, and St. Vincent's Hospital.

DISTRIBUTION OF PRIZES.—The distribution of prizes and scholarships to the successful students of the *Middlesex Hospital* Medical School will take place on Tuesday next, the 30th inst. at 3 P.M. Earl Spencer, K.G., will preside on the occasion. At *Guy's Hospital*, on Wednesday, July 8th, at 3.30 P.M., J. A. Shaw Stewart, Esq., will distribute the prizes; and at *Charing-cross Hospital* that function will be discharged on Wednesday, July 1st, by the Right Hon. the Lord Carrington, at 4 P.M. precisely.

MEDICAL PRACTITIONERS' UNION.—A meeting of the executive committee of the Union was held at the offices, Threadneedle-street, on the 17th inst., at which twenty-five registered practitioners were elected members. It was resolved to convene a general meeting of the members at Exeter Hall (council room) on July 7th, for the purpose of discussing the general question of hospital management and the reforms which are called for in the interests of general practitioners, to all of whom the meeting will be open on presentation of card.

ORDER OF ST. JOHN OF JERUSALEM, COMMEMORATION SERVICE.—The annual commemoration service of this Order was held yesterday—the festival of St. John the Baptist—by permission of the Queen, in the Chapel Royal, Savoy. A considerable number of knights, ladies, and associates, wearing the insignia of the Order, were present. The sermon was preached by the Rev. Teignmouth Shore, Canon of Worcester. Sir Edmund Lechmere, the Chancellor of the Order, presided at the luncheon at the Albion Tavern, and at the general assembly, which by the kind permission of the Rev. Canon Elwin, Master of the Charterhouse, was held in the Governors' Room of that venerable institution.

NEW CHILDREN'S HOSPITAL, EASTBOURNE.—This town was *en fête* on Saturday, on the occasion of the Prince and Princess of Wales (accompanied by two of their daughters) formally opening the new Children's Hospital at Meads, and also the wing for juvenile patients recently added to the Princess Alice Memorial Hospital. The former building adjoins All Saints' Convalescent Home, at the foot of Beachy Head Slope, and has been erected in memory of the late Harriet Brownlow Byron, foundress of All Saints' Community of Sisters of the Poor. The Princess received purses from ladies towards the funds of the institution. Later the Prince opened the new Children's wing of the Princess Alice Hospital.

PRESENTATIONS.—Mr. Rowland Hills, M.R.C.S., L.F.P.S.Glag., of Conisborough, Rotherham, on his leaving that village, where he had been in practice for twenty-five years, to undertake the medical officership of the Infant Orphan Asylum at Wanstead, and also that of the Forest Schools, in union with King's College, at Walthamstow, has been presented by the inhabitants of Conisborough and district with a silver salver, silver tea kettle, and silver salt-cellars as tokens of esteem.—Mr. Edward Pope, M.R.C.S., of Tring, Hertfordshire, on his retirement from the profession, has been presented by the members of the Loyal Sincerity Lodge I. O. O., Tring, with a handsome zebra-wood spirit stand, in appreciation of his forty-eight years' services as lodge surgeon.

LINCOLN COUNTY HOSPITAL.—At Lincoln, on Saturday, Mr. Joseph Rushton, the High Sheriff of the County, laid the foundation stone of a new ward, as an addition to the County Hospital, which will provide accommodation for children (a long-felt want). Mr. Rushton has generously undertaken to defray the entire outlay, estimated at about £4000.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON.—This charity has now been in existence twenty-two years, and from its commencement in 1869 has been constantly enlarging the area of its usefulness. During the year 1890 there had been a considerable increase of in- and out-patients. The financial position was satisfactory. Although to this point successful and progressive, there is a new demand on the resources of the institution. Its increasing work is cramped for room, even in the present large building, and alterations and improvements, affording more accommodation, had almost become an imperative necessity.

MEDICAL NOTES IN PARLIAMENT.

Royal British Nurses' Association.

IN the House of Commons on the 18th inst, Sir Michael Hicks-Beach, in reply to Mr. Paulton, said that, after careful consideration of the application of this Association, he had been unable to satisfy himself that the means proposed to be adopted by the Association were adequate to carry out its objects. He was not aware of any grounds for reconsidering the matter.

New University for London.

On the 19th inst., in answer to Sir Walter Foster, the Vice-President of the Council said: "A joint representation has been received from the Royal Colleges of Physicians and Surgeons asking for an extension of time for lodging their case in the matter of the petition of University College and King's College for the grant of a charter to establish a Teaching University for London, and they have been informed that it is not desirable that any further delay should take place. The petition and draft charter have been before the Privy Council and the public for nearly four years, the whole question has been considered and reported on by a Royal Commission, and a month's notice was given to all parties to prepare their cases." After some other questions, Sir W. Hart Dyke invited hon. members to talk the matter over with him at the Treasury, in order to see what could be done to extend beyond the 22nd inst. the time allowed for lodging objections.

National Institute of Preventive Medicine.

In the House of Commons on the 20th inst., Sir H. Roscoe asked the President of the Board of Trade whether he had decided to grant the application of the committee of the National Institute of Preventive Medicine to become incorporated under the Companies Act, with the omission of the word "limited," in view of the amended proposals which had been placed before him.—Sir M. Hicks-Beach: The amendment of the proposed memorandum of association referred to by the hon. member (by which it is made clear that the grant of the licence now asked for would not in any way imply approval by the Board of Trade of experiments upon living animals, or of any application to the Home Secretary for a licence for that purpose) is, no doubt, an important change in the proposals of the institute, and will probably meet the objection stated to the deputation which lately waited upon me. There are, however, one or two other points requiring consideration, but I hope shortly to be able to arrive at a decision on the subject.

Disinfection.

On the 24th inst. Mr. Stephens asked the President of the Local Government Board whether, as the value of certain of the powers of the Public Health (London) Bill depended upon the efficacy of processes of disinfection, and as there existed no clear understanding of the word, he would include in the "interpretation of terms" used in the Bill a reasonable indication of the processes of purification or attempted purification referred to by "disinfection."—Mr. Ritchie: I think that it would be very undesirable to attempt to set out in an Act of Parliament the different processes of disinfection, which it is obvious must vary to a considerable extent according to circumstances.

The Leeds Vaccination Case.

In the House of Commons on Thursday, June 25th, Mr. Summers asked the President of the Local Government Board whether he would lay upon the table of the House a copy of the report of Dr. Ballard, Medical Inspector of the Local Government Board, on the case of Emily Maud Child, who died at Leeds on July 1st, 1889, of vaccino-syphilis.—Mr. Ritchie replied that it was not the practice of the Local Government Board to give publicity to the reports of their inspectors, which had always been regarded as of a confidential character, but he had thought it right to submit this particular report to the Royal Commission on Vaccination now sitting, and he understood that the report had been under their consideration, and that the question of the relation of the death to vaccination is still under investigation by the Commission. Mr. Summers asked whether it was not the fact that this report had been submitted to the Royal Commission in confidence, and that they had no power to publish it.—Mr. Ritchie replied that if the Royal Commission desired to insert this document in their report, they would be perfectly able to do so.—Mr. Summers: Will the Local Government Board make no objection?—Mr. Ritchie: No.

Another Vaccination Case.

Sir William Harcourt, Mr. Morton, and other members questioned the Home Secretary as to the case of a woman named Lydia Cook who, in respect of an offence against the Vaccination Act, had been sentenced by the Southend Bench of Magistrates to a fine of 1*s.* and £1 3*s.* 6*d.* costs, or, in default, to seven days' imprisonment.—Mr. Matthews said that the woman had objected to the vaccination of her

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child on the ground that her husband did not wish it because their family was consumptive. The Bench found there was no evidence as to the suggestion of consumption, and the medical officer had reported that the child presented a proper and desirable case for vaccination. He had recommended the Bench to remit the costs.

THE METROPOLITAN HOSPITALS INQUIRY.

THE Committee resumed its sittings on Monday last, and continued to take evidence on the condition of the hospitals under the management of the Metropolitan Asylums Board.

Metropolitan Asylums Board.

Mr. Mann, clerk of the Asylums Board, in the course of his evidence, stated that he did not think the fact that clinical instruction is imparted at these hospitals was very widely known. They had had as many as fifteen students during the past session, coming chiefly from St. Bartholomew's Hospital. The system had been so shortly initiated that it was difficult yet to say whether students were likely to take advantage of it. After giving details of the staff, he quoted figures illustrative of the amount of work undertaken by these asylums. During the ten years ending 1889, 34,433 fever cases were under treatment, and 26,857 cases of small-pox. The numbers showed considerable variation; thus in 1880 the fever cases numbered 2464; in 1887 6537, and in 1889 5772, including 722 diphtheria cases. The particulars of small-pox also showed a marked variation. Thus from 1879 the figures were in each year, 1982, 8551, 1799, 598, 6363, 6146, 99, 56, 62, and in 1889 only 5 cases were under treatment. The witness attributed the great decrease to the entire removal of the small-pox treatment to the small-pox ships on the river. The cost of the various institutions varied according to the locality. Thus the Eastern Hospital with 300 beds cost 3s. 6d. a bed on the daily average, whereas the South-Western with 140 beds cost 4s. 4d. The Northern Convalescent Fever Hospital with 412 beds cost 2s. 6d. per bed daily.

Bethnal Green Infirmary.

Mr. William Tullet Howard, clerk of the Guardians of Bethnal Green parish, admitted that for several years the workhouse had been very much overcrowded, but the question of building a new one had been before the guardians for the last six or seven years, certainly not more than ten years, the delay having been due to the difficulty of obtaining a site. The Chairman: Dr. Knox was asked the following question:—I am afraid that you enjoy at Bethnal Green the reputation of being the very worst institution of the kind, and he answered that that was the case, and that the whole thing ought to be abolished. Are you of that opinion? Well, you see we have no separate infirmary. It is a workhouse, and it has been built for forty or fifty years, and I daresay it is not up to the present date.—Lord Kimberley: It appears by Dr. Bridge's evidence that you have space for 495 beds, and that sometimes you have as many as 596 inmates. Do you suppose that there is any workhouse or infirmary in London in that disgraceful condition? I do not know.—Do you think it likely? It is possible, I think, but not to the same extent.—Do you not think it is a very crying evil? I think not.—Is it the opinion of your guardians that it is not an evil? Oh, we all admit that.—I ask, is the present state of things not disgraceful? (The witness did not reply.) I may take it that the opinion of your board is that such a state of things is not discreditable? The opinion of the board is that they want a new infirmary, that they are overcrowded, but we cannot refuse to take people in and let them die at their homes.—That is our difficulty. The Guardians, perhaps, take it in this way, that it is a discreditable state of things, but that it is not their fault?—Yes, that would be their argument. By Lord Thring: He did not know anything about the internal arrangements of the workhouse, and therefore could neither affirm nor deny the statement of the medical officer that there were eighty pauper women assisting in the nursing. Pauper nurses had not been recognised by the board. Dr. Knox had never made any official complaint as regards the scanty nursing, or anything of the kind.

Whitechapel Union.

Mr. William Vallance, clerk to the Whitechapel Union, was the next witness. His evidence was generally of a similar nature to foregoing witnesses. In his opinion it was very desirable indeed that there should be a clear understanding as to what class of cases was suitable for admission into the general hospital and into the poor-law infirmary respectively. He had often felt that it would be advisable to have some qualification of disease for admission to general hospitals, without any reference to poverty at all, by which the cases from the infirmary could be transferred to the general hospital.

Poplar Hospital.

Mr. F. M. Corner, M.R.C.S., a general practitioner from the East-end of London, and surgeon to the Poplar Hospital, said that the practitioners in that district of London felt that great abuses existed, especially in connexion with the out-patient department of hospitals. He supported the agencies which were formed in that district under the supervision of the Charity Organisation Society of dealing with such cases. Doctors' shops had multiplied very greatly within the last ten years—such dispensaries as charged 6d. for consultation, including medicine. He had no serious objection to them, because in one sense he thought they did good, and had abolished the practice of druggists prescribing for patients. He did not think that the patients got value for their money.—The Chairman: Still, as regards the right—a man has as much right to start a doctor's shop as he has to start a shop for any other purpose?—I am afraid the feeling on that point varies. If medical men were to come to an understanding among themselves, it would be quite easy for them to get double the fees they now get.—Lord Kimberley: They want a doctors' union!—In 1889 325 patients were brought into the Poplar Hospital under the influence of drink, and in 1890 493 cases occurred. A great many assault cases came there also, probably due to the same cause—in 1889 710 cases, and in 1890 676. This statement showed that a large amount of the earnings of these patients went in the consumption of drink.

Westminster Ophthalmic Hospital.

Mr. F. Beattie Campbell, the secretary, gave evidence to the effect that this hospital was founded in the year 1816. Patients came to it from every part of London. So far as Charing-cross Hospital was concerned, there was coöperation between them in regard to ophthalmic cases. The hospital contained thirty beds, but the attendances at the out-patient department would number about 10,000 per annum. The expenditure last year was £2169, and the income £2272. From donations they received £940, from annual subscriptions £670, Hospital Sunday Fund £116, and from the Hospital Saturday Fund £124, dividends £341, and incidentals £82. Last year they had not received a single legacy. This was the first hospital to establish the principle of relieving the poor without letters of recommendation. Patients came to them from almost all the hospitals in the town. Last year fifty-eight students attended the hospital; fifty-one were qualified practitioners, and seven students unqualified.

The Committee then adjourned until Monday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARNARD, J. H., M.D. Paris, M.R.C.S., has been appointed Honorary Physician to the Paris Branch of the Girls' Friendly Society.

BATELY, JOHN, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gorleston District of the Great Yarmouth Union.

BLACK, GEO., M.B., C.M. Aberd., has been appointed Medical Officer for the Burrowby-cum-Gueldable Townships.

BLAKISTON, A. A., M.R.C.S., has been reappointed Medical Officer of Court Central Somerset, No. 3604, A.O. Foresters.

BRYANT, J. H., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

CARPENTER, A. B., M.B. Oxon., L.R.C.P. Lond., has been appointed Medical Officer to the Croydon General Hospital.

CARRUTHERS, CHAS. L., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Visiting Surgeon to the Gaol at Bilocla, near Sydney, Australia.

CHAPMAN, CHAS. WM., M.D. Durh., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to the Farringdon General Dispensary.

COLBY, J. G. E., M.B., B.S. Oxon., L.R.C.P. Lond., F.R.C.S., has been appointed Medical Officer of Health for the Malton Rural and Urban Sanitary Districts, vice Young, deceased.

COOMBE, RUSSELL, M.A. Cantab., F.R.C.S., has been appointed Surgeon to the West of England Institution for Deaf and Dumb Children, Exeter, vice Tosswill, resigned.

CRANSTONE, W. L., M.R.C.S., has been appointed Public Vaccinator for the Swan Hill District, Victoria, Australia.

DREW, HENRY W., F.R.C.S., has been appointed Surgeon to the Croydon General Hospital.

FORSBROOK, W. H. RUSSELL, M.B. Lond., M.R.C.S., has been appointed Consulting Medical Officer in London to the Government of the Cape of Good Hope.

FORSTER, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Second Division of the Hougham District of the Dover Union.

GADDES, THOMAS, M.D., L.D.S. Eng. & Edin., has been appointed Lecturer on Dental Histology and Microscopy in, and Dean of the Faculty of, the Dental Department of the University of Denver, Colorado.

GIBBENS, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Barking, vice Lee, resigned.

GIBSON, C. P., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Wetherby Rural Sanitary District.

HARRIS, FRED. S., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator in South Australia.

HEALE, ALFRED L., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for the District of Gisborne, New Zealand.

HEMBROUGH, J. W., M.D. Durh., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Tynemouth Union.

HERRON, R. T., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer of the Union Workhouse, Armagh, and Consulting Medical Officer of Health for the Armagh Rural District, vice Frazer, deceased.

JACKSON, ARTHUR, M.R.C.S., has been reappointed Honorary Surgeon to the Sheffield General Infirmary.

KEMBLE, ARTHUR C., L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Poole District, vice F. C. Compton, resigned.

KENDALL, TH. M., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Water and Sewerage Board, Sydney, New South Wales.

KINGSFORD, EDWD., F.R.C.S. Eng., has been reappointed Medical Officer for the Shepperton Sanitary District.

KITCHING, C. M'G., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

LAING, ROBT., L.R.C.P. Edin., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer of Health for the Cowpen Sanitary District.

LAKEMAN, THOS., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Parishes of Ugborough and North Huish, vice Harris.

LEA, A. W. W., M.B., B.S. Lond., has been appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester, vice Westmacott.

LEAKEY, C. M., L.S.A., has been appointed Medical Officer for the Second Caistor District of the Caistor Union.

MACLEOD, D. T., M.B., C.M. Glasg., M.R.C.S., has been appointed a Public Vaccinator in South Australia.

MARRIOTT, C. W., M.D., M.R.C.P. Lond., F.R.C.S. Ed., has been appointed Honorary Consulting Surgeon to the Warneford Hospital, Leamington.

MOLONEY, PATRICK J., L.K.Q.C.P. Irel., has been appointed Acting Government Medical and Health Officer for Geraldton, Queensland.

MORCOM, A., L.R.C.S., L.M. Edin., has been reappointed Medical Officer for the Luton Rural Sanitary District.

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MORRISON, GEO. E., M.B., C.M. Edin., has been appointed Resident Surgeon to the Ballarat Hospital, Victoria, Australia.
NURSE, J. S. M., M.B., C.M. Edin., has been appointed Medical Officer of Health for Anguilla, West Indies.
OLIVER, MATTHEW J., M.B., C.M., D.P.H. Edin., has been appointed Medical Officer for the County of Roxburghshire.
PENNY, HENRY J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Public Vaccinator for the Port Fairy, Victoria, Australia.
POWNE, L., M.R.C.S., has been reappointed a District Medical Officer of the Crediton Union.
RICE, BERNARD, M.D. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Warneford Hospital, Leamington, vice Dr. Marriott, resigned.
SCOTT, A. W., M.D. Brussels, M.R.C.S., has been appointed Medical and Vaccination Officer for the Handsworth Urban Sanitary District.
SMALE, MORTON A., M.R.C.S., L.D.S., has been appointed Dental Surgeon to St. Mary's Hospital, Paddington.
SNELL, SIMEON, L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Ophthalmic Surgeon to the Sheffield General Infirmary.
STEVENS, T. G., M.B., B.S. Lond., has been appointed House Surgeon to Guy's Hospital.
STEWART, HUGH GEO., M.B., C.M. Glasg., has been appointed a Public Vaccinator in South Australia.
SWIFT, HARRY, M.D. Camb., M.R.C.S., has been appointed Honorary Assistant Physician to the Adelaide Hospital, South Australia.
TAYLOR, FRANK, M.A., M.B. Cantab., has been appointed Medical Officer to the Crystal Palace Gas Company, vice W. H. Brunton, resigned.
TAYLOR, S. T., M.B. Lond., L.R.C.P., M.R.C.S., has been reappointed Medical Officer for the Erpingham Rural Sanitary District.
THOMPSON, J. A. B., M.D., L.M., F.P.S. Glasg., has been appointed Medical Officer for the Fourth District of the Ongar Union.
TINDALE, W. R., M.B., C.M. Aberd., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for Hampton Hill, of the Kingston Union.
WARD, GEO. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Stevenage Urban Sanitary District of the Hertford Union.
WARREN, SYDNEY, L.S.A. Lond., has been appointed a Public Vaccinator in South Australia.
WATKINS, ERNEST POWELL, L.R.C.P., has been appointed Resident Medical Officer to the Nottingham Friendly Societies, vice F. C. Wood, resigned.
WEBSTER, TREVOR, M.R.C.S., has been appointed Medical Officer of Health for the Bewdley Urban Sanitary District of the Kidderminster Union.
WELLFORD, F., M.B. Cantab., has been appointed House Surgeon to Guy's Hospital.
WESTMACOTT, F. H., M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester, vice R. O. Bowman, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BLOOMSBURY DISPENSARY, 22, Bloomsbury-street, London, W.C.—Dispenser. Salary £100 per annum.
BOROUGH OF BLACKPOOL.—Medical Officer of Health for the Borough. Salary £300 per annum.
CAMBRIDGE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Stipend £120 a year. (Apply to the Secretary, 20, Mawson-road, Cambridge.)
CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Anæsthetist.
CUMBERLAND INFIRMARY, Carlisle. Assistant House Surgeon for one year. Salary £40 per annum, with board, lodging, and washing.
DORSET COUNTY ASYLUM.—Assistant Medical Officer at the Second Asylum. Salary £120 per annum, with board and furnished apartments.
DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £100 a year, with board and lodging.
EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum, board, lodgings, and washing allowed.
GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, lodging, and washing.
GUY'S HOSPITAL, S.E.—Five Assistant Dental Surgeons.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.
HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.
LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer. Salary £100 a year, with board, apartments, attendance, and washing.
METROPOLITAN DISPENSARY, Cripplegate.—Resident Medical Officer. Salary £150 per annum, with residence and an allowance for coals and gas.
MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Junior Resident Medical Officer. Salary £30 per annum, with board, attendance, and washing.
NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—House Surgeon and Secretary. Salary £120 per annum, with board and lodging.
ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant to the House Surgeon. No salary, board and rooms provided.
ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, S.W.—Demonstrator of Physiology. Salary £100.
TUNBRIDGE WELLS GENERAL HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, furnished apartments in the hospital, gas, firing, and attendance.
WANDSWORTH AND CLAPHAM UNION AND INFIRMARY, St. John's-hill, near Clapham Junction.—Junior Assistant Medical Officer for six months. Board, lodging, and washing provided, and £25 at the end of the term.
WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Second House Surgeon. Salary £50, with board, residence, and attendance

Births, Marriages, and Deaths.

BIRTHS.

BOURKE.—On June 20th, at Redcliffe-square, S.W., the wife of Isidore Mac William Bourke, M.D., of a daughter.
CLARKE.—On June 22nd, the wife of Thomas Furze Clarke, M.R.C.S., of Horsmans-place, Dartford, of a son.
DEANE.—On June 19th, at Pennant, Abermule, Montgomeryshire, the wife of Surgeon W. Deane, I.M.D., of a daughter.
DINGLEY.—On June 21st, at 11, Upper Woburn-place, W.C., the wife of Allen Dingley, F.R.C.S., of a son.
HORSLEY.—On June 18th, at 33, Seymour-street, the wife of Victor Horsley, F.R.S., of a son.
HOWARD.—On June 14th, at Queen Anne-street, Cavendish-square, the wife of R. J. B. Howard, F.R.C.S., of a son.
SNOW.—On June 19th, at Gloucester-place, Portman-square, the wife of Herbert Snow, M.D. Lond., of a son.
SMITH.—On June 18th, the wife of Gerard Smith, M.R.C.S., Craigholm, Upper Clapton, of a daughter.
TUKE.—On June 20th, at Chiswick, the wife of T. Seymour Tuke, M.A., M.B., of The Manor House, Chiswick, and Albemarle-street, W., of a son.

MARRIAGES.

BROWN—FULTON.—On June 17th, at St. Mary's Church, Acton, James Brown, M.B., of Tring, son of the late Andrew Brown, M.D., of Weymouth, to Katharine Anne, youngest daughter of the late Hamilton Henry Fulton, of Bedford House, Chiswick.
GAYE—ADYE.—On June 20th, at All Saints', Margaret-street, Arthur Charles Gaye, Brigade-Surgeon Medical Staff, to Ellen, younger daughter of the late Major-General Goodson Adye, of Leamington.
MILNER-BROWNE—COLLINGBOURNE.—On June 10th, at Holy Trinity, Coventry, by the Rev. F. M. Beaumont, Vicar, Charles Milner-Browne, M.B., B.S., of Kirkdale, Sydenham, S.E., to Maude Marion, youngest daughter of W. P. Collingbourne, Fernielee, Coventry.
OASTLER—BEDDOES.—On June 23rd, at St. James', New Brighton, by the Hon. and Rev. C. F. Cross, M.A., Vicar of Shortwick, assisted by the Rev. G. R. Sandars, of New Brighton, James Oastler, M.D., of Glasgow, to Norah, only daughter of the late Rev. T. L. Beddoes, LL.D., Rector of St. Mary's, Manchester.
WADE—WOOD.—On June 18th, at St. Mary's, Sawbridgeworth, by the Rev. Horace Rackham, Vicar of High Wych, assisted by Rev. H. Lipscomb, Newton Wade, M.R.C.S., L.R.C.P. Lond., of Ashwick Court, Oakhill, Bath, to Alice Mary, younger daughter of the late James Wood, of Ankerhills, Atherstone.

DEATHS.

ANDREWS.—On June 21st, at 11, Addison-terrace, Notting-hill, W., Louisa Augusta, wife of Henry Charles Andrews, M.D., and daughter of the late John Lord, Esq., of Calcutta and Hobart Town.
ARMSTRONG.—On June 19th, at Lincoln, Benjamin Armstrong, L.M., L.R.C.S. Irel., late of Barkwith House, Wragby, Lincolnshire, aged 39.
DONALD.—On June 20th, at Innellan, James Turner Donald, L.R.C.S. Edin., of Paisley, aged 59.
HEWETT.—On June 19th, at Chesnut Lodge, Horsham, Sir Prescott G. Hewett, Baronet, F.R.S., in his 79th year.
WOOLLEY.—On June 18th, at Heanor, Derbyshire, T. Starkey Woolley, M.R.C.S. and L.S.A., aged 53 years. Friends will kindly accept this the only intimation.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 23rd, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	175	51	2	35	—	263	442
North-Western Hospital	115	35	..	14	..	164	448
Western "	146	19	—	8	1	174	224
South-Western "	143	21	..	11	1	176	340
South-Eastern "	128	11	..	11	2	152	402
Northern "	144	15	..	..	..	159	430
Totals	851	152	2	79	4	1088	2391

SMALL-POX.—*Atlas* hospital ship, 4.

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BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Paris.
De l'Exercice chez les Adultes. Par le Dr. F. Lagrange. 1891.

ALLMAN & SON, New Oxford-street, London.
Outline of a Course of Lectures on Human Physiology. By Ernest A. Parkyn, M.A. pp. 167.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Subjective Noises in the Head and Ears; their Etiology, Diagnosis, and Treatment. By H. Macnaughton Jones, M.D. 1891. pp. 152.

BAILLIÈRE, J. B., ET FILS, Paris.
Le Vegetarisme et le Régime: Végétarien Rationnel Dogmatisme, Histoire, Pratique. Par le Dr. Bonnejoy. 1891. pp. 341.

CHATTO & WINDUS, Piccadilly, London.
Glimpses of Nature. By Andrew Wilson, F.R.S.E., F.L.S. Illustrated. 1891. pp. 247. Price 3s. 6d.

CHURCHILL, J. & A., New Burlington-street, London.
Outlines of Medical Treatment. By S. Fenwick, M.D., and W. S. Fenwick, M.D., B.S. Lond. Third Edition. 1891. pp. 576.
St. Thomas's Hospital Reports. New Series, edited by Dr. Hadden and Mr. Anderson. 1891.

DETRE & BLACKBURN, North Seventh-street, Philadelphia.
Philadelphia Hospital Reports. Vol. I. 1890. Edited by C. K. Mills, M.D. pp. 353.

GRIFFIN, CHAS., & CO., Exeter-street, Strand.
A Text-book of Human Physiology, including Histology and Microscopical Anatomy. By Dr. L. Landois. With Additions by W. Stirling, M.D., Sc.D. Illustrated. Fourth Edition. Vols. I., II. 1891. pp. 558.

HIRSCHWALD, AUGUST, Berlin.
Atlas der Krankheiten der Mund und Rachenhöhle. Von Professor Dr. J. Mikulicz und Dr. P. Michelson. Probe—Heft. 1891.
Klinische und Experimentelle Studien aus dem Laboratorium. Von Professor V. Basch. I. Band. 1891.

JARROLD & SONS, Paternoster-buildings, London.
Jarrolds' Holiday Series. The Handbook to the Rivers and Broads of Norfolk and Suffolk. By G. C. Davies. Eighteenth Edition. pp. 173.

KEGAN PAUL, TRENCH, & CO., London.
Saturn's Kingdom; or, Fable and Fact. By C. M. Jessop. 1891. pp. 294.

LECROSNIER ET BABÉ, Paris.
Les Fonctions du Cerveau. Par Jules Soury. 1891. pp. 464.

LEWIS, H. K., Gower-street, London.
Illustrations of the Inductive Method in Medicine. By W. Murray, M.D., F.R.C.P. Lond. 1891. pp. 158.

RICHARDSON & CO., Great Russell-street, London, and Friar-lane, Leicester.
Oysters, and all about them. By J. R. Philpots, L.R.C.P. & S. Edin. Parts I. and II. 1890 and 1891.

SAMPSON LOW, MARSTON, & CO., St. Dunstan's House, London.
The Nursing Record Series, No. 2. Norris's Nursing Notes: a Manual of Medical and Surgical Information. By Rachel Norris, R.R.C. 1891; price 2s.—No. 3: A Manual of Practical Electrotherapeutics. By A. Harries, M.D., and H. N. Lawrence, M.I.E.E. With Photographs and Diagrams. 1891; price 1s. 6d.—No. 4: Massage for Beginners. By Lucy Fitch. 1891; price 1s.

The Limits of Competition; by M. Praschkauer, F.S.S. (published by the Author, 109, Fenchurch-street, London, 1891). — The Hahnemannian Monthly, March, 1891; edited by Drs. Bartlett, van Lennep, and van Baun (published at 1506, Girard-avenue, Philadelphia, by Gould & Son, London).—North London or University College Hospital: Report of the Surgical Registrar for 1889 (J. Truscott & Son, London, 1891).—Importanza della Zooparassitologia Medica e Specialmente degli Zooparassiti come Fattori di Malattie; dal Dott. Prospero Sonsino.—Notes on Perspective Drawing and Vision; by Dr. P. H. Emerson and T. F. Goodall (Warren Hall & Lovitt, Camden-road, 1891); price 6d. — Where to go for a Healthy Holiday, Summer or Winter: the Holiday Number of the London Medical Recorder, 1891 (W. H. Allen & Co., Waterloo-place, London); price 1s.—Inebriety and Criminal Responsibility: a Presidential Address; by Norman Kerr, M.D., F.L.S. (H. K. Lewis, London, 1891); price 1s. — Studien über die Seckrankheit; von Dr. O. Rosenbach (A. Hirschwald, Berlin, 1891). — Oeffentliche Nervenheilanstalten; von Dr. Th. Benda (A. Hirschwald, Berlin, 1891). — Uric Acid in Diseases of the Nervous System; by A. Haig, M.A., M.D. Oxon., F.R.C.P. — County Borough of Salford: Annual Report of the Medical Officer of Health for 1890 (W. F. Jackson & Sons, Salford). — Revue de Chirurgie; Onzième Année, 1891, No. 6, Juin, 1891 (Félix Alcan, Paris). — Revue de Médecine; Onzième Année, 1891, No. 6, Juin, 1891 (F. Alcan, Paris). — Medical Missions; by Dr. A. Neve, Srinagar, Kashmir (printed at the Oxford Mission Printing Works, Calcutta, 1891). — Index Medicus, Authors and Subjects, Vol. XIII., No. 5, May, 1891 (Trübner & Co., and Lewis, London). — Annales des Sciences Psychiques; Première Année, No. 1, Janvier-Février, 1891 (Félix Alcan, Paris). — Separatabdruck aus der Zeitschrift für Biologie; von Dr. A. Jaquet, Basel, 1890.—Pathologie et Traitement des Maladies de la Peau; par le Professeur Moriz Kaposi; Tome I. (G. Masson, Paris, 1891).—Report of the City Hospital, Birmingham, for the year 1890 (J. Jones & Son, Birmingham).—Memoranda of Modern Therapeutics ("Franz Josef" Company, Leadenhall-street, London, 1891).—— Magazines for July: Good Words, Sunday at Home, Leisure Hour, Sunday Magazine (Isbister); Boys' Own Paper, Girls' Own Paper (Religious Tract Society); Scribner's.

Medical Diary for the ensuing Week.

Monday, June 29.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M. Thursday, 9 A.M.
ST. PETER'S HOSPITAL FOR STONE.—4 P.M. Mr. Reginald Harrison: Varicocele.

Tuesday, June 30.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, July 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Lewers, Dr. Herbert Page, Dr Herbert Spencer, and others. Dr. Herman: Five more cases of Puerperal Eclampsia, especially illustrating the Temperature and Urine in that Disease.—Dr. Rutherfoord: Cysts of the Vagina, their Etiology, Pathology, and Treatment. — Dr. John Phillips: The Influence of Purpura Hæmorrhagica upon Menstruation and Pregnancy.

Thursday, July 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, July 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Annual General Meeting for the election of officers &c. Mr. Scott (Cairo): Perchloride of Mercury in Conjunctival Disease.—Mr. Jessop: (1) The Consensual Pupillary Reflex in cases exhibiting the Argyll-Robertson Pupil Symptom in one Eye; (2) Two cases of complete Blindness with good Pupillary Light Reflex; (3) On the Symptoms following Section of the Optic Nerve. — Mr. Sym (Edinburgh): Albinism, a curious family history.—Mr. Stephenson: Peculiar form of Retinal Pigmentation.—Mr. Snell (Sheffield): (1) Nystagmus in Compositors; (2) Immediate Loss of Sight after Head Injury.—Mr. Silcock: Epithelioma (?) of Upper Lid, Cheek, and Lip (living Specimen).

Saturday, July 4.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, June 25th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
June 19	30·30	W.	70	63	115	79	62	..	Overcast
,, 20	30·33	N.E.	62	58	120	75	57	..	Cloudy
,, 21	30·31	N.E.	58	55	115	74	53	..	Cloudy
,, 22	30·13	N.E.	64	59	122	78	57	..	Cloudy
,, 23	29·95	N.E.	59	58	102	65	57	·51	Cloudy
,, 24	29·91	E.	65	63	110	75	59	·02	Overcast
,, 25	29·85	S.W.	65	63	90	73	63	·05	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

POLLOCK AND BELLAMY MEMORIAL FUND.

WE are requested by Mr. Stanley Boyd to publish the following additional subscriptions received in aid of the above fund.

Miss Bellamy	£1	1	0	Montagu Lubbock, M.D.	£1	1	0
R. Baxter Booth	1	1	0	J. Biddulph Martin ..	5	5	0
James Cantlie, M.D. (Hong-Kong)	1	1	0	Stephen Nockolds	1	1	0
James Donald	1	1	0	Porters (Hospital and School)	1	1	0
Arthur Farr	1	1	0	Alfred Sangster, M.D. ..	1	1	0
H. H. Folker	1	1	0	John W. Taylor	1	1	0
W. H. Folker	1	1	0	C. S. Watkins	1	1	0
Sir W. Guyer Hunter, M.P.	3	0	0	Smaller sums	2	5	0
W. J. Haddock	1	1	0				
T. Lavers	1	0	0		£26	4	0

Bringing the grand total up to £124 11*s.*

M.B., &c.—The question is a legal one. We think the commission is due, and can be recovered, immediately the appointment is secured; but nothing can be claimed for costs until actual proceedings have been commenced.

Burman should communicate with the Secretary of the London School of Medicine for Women, 30, Handel-street, Brunswick-square, W.C.

"ON CLEANING MICROSCOPE SLIDES AND COVER-GLASSES."

To the Editors of THE LANCET.

SIRS,—The best method is to keep two one-ounce quinine bottles, one filled with rectified spirits of turpentine, and the other with dilute sulphuric acid (B.P.) and trichromate of potash. If a bad preparation is made, put the slide into the bottle of turpentine, which soon dissolves the balsam; the cover-glasses fall to the bottom of the bottle. When the first becomes full they are transferred to the acid solution. To cleanse them, empty the solution into another bottle, and wipe all the glasses with an old pocket handkerchief moistened with methylated spirit. If there is a greasy-looking one, it is washed with a little liquor potassæ B.P.

I am, Sirs, yours faithfully,

Hanley, June, 1891. JOHN SWIFT WALKER.

A CHILD'S IDEA OF INFLUENZA.

WE have no intention to trespass on the preserves of our excellent contemporary, *Mr. Punch*, and we are naturally averse to representing our profession in any but the most favourable light; yet we cannot refrain from placing on record the following:—*Esteemed Family Attendant* (to young patient convalescent from influenza): "Well, my dear, what did you dislike most about the influenza?"—*Ethel* (ætat seven): "The Medicine!"

Mr. T. Laffan.—The suggestion shall receive consideration.

THE COLCHESTER GUARDIANS AND DR. MAYBURY.

THE *East Anglian Times* contains a report of an inquest on the body of Elizabeth Childs, aged fifty-nine, whose death, it had been suggested by one of the guardians, might have been averted by the more prompt attendance of Dr. Maybury, medical officer of the second district, Colchester. It was soon shown that Dr. Maybury had no knowledge of the case being an urgent one. When he arrived he found the patient dead. The coroner and jury soon satisfied themselves that the evidence completely exonerated Dr. Maybury and passed a verdict to this effect, and finding that the patient had died from syncope. The poor woman, suffering from some lung complaint, had got up to dress with a view to going to the workhouse, and fainted. The chief lesson of the case is to critics of guardians to be a little more careful of the reputation of their medical officers, and to have accurate knowledge before condemning them.

Inquirer.—There is nothing illegal, of course, in a medical man attending his own wife in confinement or in other cases. It is very much a matter of taste and feeling, most medical men preferring to have little responsibility in advising those nearest and dearest to them. The answer to the second question is involved in the above answer to the first. There is nothing obviously improper in the conduct of the medical man stated in question 3. B. should be more careful, if reported correctly in "Inquirer's" question, in condemning a brother practitioner. Occasional cases of some kind of fever will arise in the best obstetric practice. They have to be treated antiseptically, and the practitioner has carefully to disinfect himself.

Mr. P. Parker (Bradford).—Yes.

"ASEPTIC HYPODERMIC SYRINGES."

To the Editors of THE LANCET.

SIRS,—With reference to a letter which appears in this week's journal respecting an aseptic hypodermic syringe, Messrs. Burroughs, Wellcome, and Co. have been most unfortunate in the principle selected for the construction of this syringe. First, they infringe our patent for the needle fitting on the glass barrel; secondly, the patent rights of Messrs. Scholler for asbestos plungers to syringes are infringed; and thirdly, the principle of tightening the plunger by screw arrangement was anticipated by us as far back as 1868, and will be found fully described on page 126 of our 1873 catalogue. We receive no royalty from Messrs. Burroughs, Wellcome, and Co., but Messrs. Müller of Berlin (who make these syringes for them) have entered into arrangements to pay us a small royalty for the privilege of introducing these syringes into this country, and we are further informed that this firm pay a royalty to Messrs. Scholler for a similar privilege. The catalogue of Messrs. Windler, referred to in the said letter, we do not possess; but, as it simply relates to Koch's syringe, we maintain that this syringe was unknown in this country until the introduction of Koch's lymph, and therefore Dr. Pearse's suggestion was new to England, for which the patent was granted. We may add that some time ago Dr. Bokenham suggested the use of asbestos, but on explaining to him this was a patent, Dr. Bokenham made experiments with other material, and at last succeeded with wood-pith.—We remain, Sirs, your obedient servants,

June 23rd, 1891. ARNOLD AND SONS.

PARAFFIN LAMPS.

IN reference to a letter on this subject published in our last, *Mr. P. MacEwan* kindly calls our attention to the fact that a blue-book (price 1½*d.*) was published in June, 1890, in which Colonel Majendie gives useful information such as is desired by "M.D. Edin."

INDIAN MEDICAL SERVICE EXAMINATION PAPERS.

To the Editors of THE LANCET.

SIRS,—Your correspondent "Xara" will be able to get the past examination papers of the Indian Medical Service by applying to Messrs. Bilney and Ashdowne, naval and military outfitters, Portsmouth. The natural science is not advanced, and can be read in any elementary text-books.

I am, Sirs, yours faithfully,

Portland, June 22nd, 1891. SURGEON, R.N.

"A WARNING."

To the Editors of THE LANCET.

SIRS,—The young man against whom a warning was published in your columns by myself and others is now in custody. Those who wish to recover their property or proceed in the matter should communicate with Detective-Sergeant W. Williamson, New Scotland Yard, S.W.

I am, Sirs, yours faithfully,

Brook-street, W., June 23rd, 1891. J. B. NIAS.

CLIMATE OF THE WEST INDIES.

To the Editors of THE LANCET.

SIRS,—Can any of your readers give me any information as to the climatology of the West Indies, more especially the Windward Islands, and if suitable for English children?

I am, Sirs, yours truly,

June 23rd, 1891. INTENDING MISSIONARY.

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DEATH FROM CHLOROFORM AT SWANSEA.

THE following particulars relating to the recent death under chloroform at the Swansea Hospital have been supplied to us by Mr. T. Campbell Grey, house surgeon to the hospital:—"The chloroform was administered on a Murray's inhaler by the anæsthetist to the hospital, Mr. J. Kynaston Couch. The patient took the anæsthetic well for about five minutes, but then began to struggle and get blue, whereon its administration was stopped for a few minutes. On recommencing the inhalation the patient, after a few inspirations, began to struggle, and more chloroform was put on the inhaler (say twenty drops). Soon after this the patient became quite rigid, the rigidity being succeeded in a few seconds by spasmodic movements of the limbs, lividity of the face, shallow respirations, and failure of the pulse at the wrist. Remedial measures were at once adopted, but were of no avail. The total amount of chloroform used was less than a drachm. Post mortem I found emphysema of the lungs, some slight thickening of the segments of the mitral valve, with commencing atheroma at the base of the aorta and early cirrhotic changes in the liver."

COMMUNICATIONS not noticed in our present number will receive attention in our next.*

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